Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs.

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Declaration

This thesis is being submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Education in the Faculty of Humanities, University of the Witwatersrand, Johannesburg. I declare that this thesis is my own, original work, and it has not been submitted before for any other degree, part of degree or examination at this or any other university.

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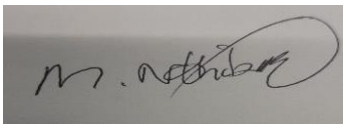

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Preface

A few years ago, when teaching in a South African school, a colleague spoke to me and other teachers about a conversation she had with a parent in her classroom. The child in question was known to be disruptive in class, and the parent had informed the teacher that the child had ADHD. Having studied inclusive education at Honours level at the time, it was refreshing to learn that the parent had been so open with the teacher, given the stigma that surrounds neurodivergence in South Africa. To my surprise, my colleague asked: "why can't she take responsibility and discipline her child?", adding that she only hears of ADHD from the parents of white children. This case represents a larger problem of misconceptions about neurodiversity in Africa. Similarly, ASD is still largely misunderstood, with many misconceptions surrounding neurodivergent identity in sub-Saharan Africa. There are many more misconceptions about ASD and ADHD, which this study corrects, while advocating for positive attitudes towards neurodivergent traits.

In my Masters research, I looked at the strategies for teaching students with ASD in South African schools, from which I co-authored an article (Nthibeli, Griffiths & Bekker, 2022). While conducting that research, I noticed that the few studies focusing on neurodivergent traits in this context rarely focused on higher education. It is important, when studying important issues such as inclusive education and neurodiversity, to consider them at different levels and different contexts. This study does this by highlighting the efforts to include students with ASD and ADHD in higher education in South Africa, thereby offering a unique, Global South perspective. It gives detailed accounts of the experiences of students with ASD and ADHD, and the work being done by Disability Units to include these students. As a researcher, I am not diagnosed with ASD or ADHD, but I am compelled to draw attention to individuals with the relevant experience, for them to be heard, appreciated, and for their concerns to be taken seriously. Now at the end of this project, I am positive that it was a good decision to undertake this journey as I learned a lot and believe it contributes positively to the goal of making education in South Africa inclusive and transformative.

Abstract

This thesis reports on a study investigating the strategies that Disability Units (DUs) implement to support students with Autism Spectrum Disorder (ASD) and Attention-Deficit Hyperactivity Disorder (ADHD) in South African universities. These strategies are outlined by staff members from DUs in 8 public universities, focusing on their views on neurodiversity, the principles and guidelines they follow, and the practical strategies they employ to facilitate the inclusion of students with ASD and ADHD. It also explores the experiences of students with the two conditions, regarding their overall participation in academic and non-academic aspects of university life. From the insights given by the staff members and students, the study determines whether the students are being included, based on learning development (support related directly to academic activities) and student services (non-academic support). With the understanding that inclusion should be holistic and intersectional, it was vital to ascertain whether there is balanced focus on these two areas as neglect on any can negatively impact the students' participation. The study adds a unique, South African and Global South perspective to neurodiversity, which addresses a significant research gap due to the lack of research on neurodiversity in the Global South.

This qualitative study implements an interpretivist approach, drawing on the experiences of both sets of participants to form meanings about the extent to which the universities include students with ASD and ADHD. Applying the theory of intersectionality and the cultural model of disability and reasonable accommodation as a principle, the study highlights the necessity for a more nuanced and locally relevant approach to the inclusion of neurodivergent students in higher education in South Africa. Phenomenological interviews and semi-structured questionnaires were used to collect data from DU staff members from nine different universities (10 DU staff members in total), and university students diagnosed with ASD and/or ADHD (14 students in total). A blended thematic analysis approach was taken, using *apriori* and emergent themes. The findings show that there is a lack of awareness about neurodiversity, and that universities are not inclusive communities for students with ASD and ADHD. Moreover, in analysing DU strategies for supporting students with ASD and ADHD, the findings show a limited focus. DUs are focusing mostly on assessment concessions, with psychological issues and negative attitudes in the broader community neglected. These concerns are confirmed by students' experiences, as they mostly indicate that they face challenges related to interactions with neurotypical students and staff that

lack knowledge of their conditions. This causes the universities to be inhospitable environments as students with ASD and ADHD continually deal with sensory overload, negative attitudes and a lack of support regarding other factors besides tests and examinations. Another major finding is that the built environment in universities is not suitable for students with ASD and ADHD, as the design of the physical university infrastructure adds to sensory overload and lacks suitable spaces in which they can learn and live comfortably.

Key terms: *Neurodiversity; Reasonable Accommodation; Autism Spectrum Disorder; Attention-Deficit Hyperactivity Disorder; Neurodiversity; Higher Education; South Africa*.

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List of abbreviations

ADHD – Attention-Deficit Hyperactivity Disorder

ADD – Attention-Deficit Disorder

ASD – autism spectrum disorder

CRPD - Convention on the Rights of Person with Disabilities

DHET – Department of Higher Education and Training

DU – Disability Unit

FOTIM – Foundation of Tertiary Institutions of the Northern Metropolis

HEDSA - Higher Education Disability Services Association

TVET – Technical, Vocational Education and Training

UD - Universal Design

UNESCO – United Nations Education, Scientific and Cultural Organisation

Definition of key terms

The following terms are central to the study, and their definitions are taken from relevant literature that is relevant to the study:

Table 1: Definition of key terms

Neurodiversity	"The full range of variations in cognition, learning, behaving and interacting that exist among individuals" (Accardo et al., 2024, p. 1)
Autism Spectrum Disorder	A neurodevelopmental condition that involves differences in cognition, social interaction, obsessive and repetitive behaviours (American Psychiatric Association, 2022).
Attention-Deficit Hyperactivity Disorder	A neurodevelopmental condition "characterised by inattention, impulsivity and hyperactivity" (Schulze et al., 2020, p. 3)
Intersectionality	An approach to social justice which holds that marginalisation happens at the intersection of various axes of oppression. It asserts that in addressing issues of oppression and inequality, the analysis should consider different factors such as gender, socio-economic status, and race (Crenshaw, 2013). For example, the experiences of students with ASD and/or ADHD in this study are analysed beyond just the diagnosed condition, but also in terms of other identity markers on which they face exclusion in the university.
Cultural Model of Disability	A positive view of difference that promotes the celebration of diversity and prioritises context in addressing difficulties faced by people presenting different forms of functioning (Waldschmidt, 2018).
Reasonable Accommodation	Providing required support for equal participation of students that face challenges due to impairments, without unfairly disadvantaging other students without known impairments (Conradie, 2024).

CHAPTER ONE: INTRODUCTION AND BACKGROUND

This thesis reports on an investigation of the strategies of DUs for supporting students with ASD and ADHD in nine South African public universities[1]. In addition to investigating support strategies, the study investigates the experiences of students with these neurodivergencies in the same universities in relation to social and academic life. This introductory chapter outlines the focus of the thesis, its objectives and positionality as well as its relevance and envisaged contribution. In this chapter, I provide brief details about the meaning of inclusive education in the South African higher education context. The chapter also gives a brief overview of the history of research in South Africa pertaining to inclusive education, and in the process identifies the gaps in research that the study addresses. I specifically focus on ASD and ADHD, as they have yet to be thoroughly contextualised in the Global South, including South Africa (Abubakar et al., 2016; Topkin & Roman, 2015). In this regard, Kassous (2023) states for instance, that "in the Global South, autism is viewed differently" and "awareness has taken time to spread due to certain beliefs and practices" (p. 1). This implies that ASD will not be reliably understood in the Global South unless more studies document experiences from this context. Similarly, Chowdhury (2024) state that "legal and academic interventions for ADHD are well-established in developed countries, but there is a significant gap in addressing the needs of children with ADHD in developing countries" (p. 90). Notably, this study acknowledges that there is some research on ASD and ADHD in the Global South. However, its concern is to assess whether, in the higher education system in South Africa, there are practical steps taken to facilitate the meaningful participation of students with ASD and ADHD. It is also worth noting that the focus is on both ASD and ADHD, and neither is more prominent than the other in the study's focus. Therefore, throughout the thesis, I name the two neurodivergencies alongside each other, therefore mentioning one first in any instance should not be taken as an implication of any sort of hierarchy of focus.

[1] All government-owned universities are known as 'public universities', which includes four different types of universities. One of these categories is also called 'public universities', unless there is a reference to the total number of government universities (26), the term public universities in this study refers to that specific category.

1.1 Introduction

Inclusive education is globally recognised as a means towards the development of more inclusive and equal societies. With an inclusive approach, educational opportunities can be made accessible to all people regardless of race, social standing, age, gender or disability (UNESCO, 1994). Importantly, education is a fundamental human right through which the international community aims to develop thriving communities (UNESCO, 1994). Globally, human rights are promoted under the auspices of the United Nations Declaration of Human Rights (United Nations, 1948). The right to education is particularly vital as it is connected to other important rights such as the rights to employment, food security and bodily integrity (UNESCO, 1994). This is expressed by Blessed-Sayah and Griffiths (2024), who describe education as a 'multiplier' of other rights because its security extends into other necessities for human wellbeing. By ratifying the Convention on the Rights of Persons with Disabilities (CRPD) (United Nations, 2006), South Africa expressed commitment to providing educational opportunities without any discrimination (Hussey et al., 2017). With its apartheid past[2], South Africa is globally recognised for the restoration of human rights and freedoms when democracy was introduced in the country in 1994 (Van der Walt, 2014). With democracy in place and a new Constitution leading the way for policy reform, the country set on a different course towards equality (Government of South Africa, 1996).

Apart from being racially discriminatory, the apartheid regime was functionalist (Taylor, 1989). Functionalism asserts that all members of society have a specific role to play to fulfil the common goals of that society (Rusu, 2020). Shapiro (1982) adds that functionalism "has a preoccupation with social order" (p. 158). By establishing common agendas, little regard is given to individuality and agency for people to exercise their rights, which is a common critique of functionalism (Althusser, 2006). Furthermore, apartheid ideology marginalised people who were considered unable to contribute to the economic objectives of the country, such as people with disabilities (Taylor, 1989). Howell et al. (2006) add that people with disabilities "were seen as people who were sick or in need of care, rather than as equal citizens with equal rights and responsibilities" (p. 48). So, although most of the marginalisation and injustices during apartheid were racial, there

[2] The system of governance prior to democratic rule in South Africa, when the population was divided along unequal racial lines in terms of residence, economic opportunity and overall social status.

were also subtle forms of discrimination such as the exclusion of people with disabilities from mainstream society. Mitra (2008) states that all people with disabilities faced discrimination regardless of their race. Likewise, Du Plessis (2013) states that learners with disabilities were marginalised by not being allowed to attend mainstream schools. However, race still determined the extent of marginalisation. Howell et al. (2006), for instance, argue that the experiences of Black disabled people were markedly different to those of their White counterparts, reflecting the general state of inequality during the apartheid era. Likewise, Moodley (2017) states that during apartheid, "exclusion of persons with disabilities on the basis of race in special needs education was also evident" (p. 285). Though all people with disabilities were taught in special schools, the best of these schools were only attended by White learners (Department of Higher Education and Training, 2018). Since these and other factors underscored oppression during the apartheid era, an intersectional approach is needed to address the exclusion of marginalised groups in South Africa. This study highlights neurodivergent students as a marginalised group which still experience exclusion. On this background that shows that the development of an inclusive education system in South Africa has been narrow, the study draws attention to students with ASD and ADHD among those groups that have received little attention in research. I make the argument in greater detail in the literature review that educational transformation has been almost entirely focused on racial concerns in South Africa, and that this allows non-racial forms of oppression such as marginalisation of students with ASD and ADHD to continue.

In the current South African context, education is an indicator of the nation's freedom, having been used as an instrument of segregation and oppression in the country's past (Christie & Collins, 1982). This segregation was done through the enactment of laws and policies that partitioned the nation mainly along racial lines. For instance, through the Bantu Education Act, Black people (including Indians and Coloured people) were systematically placed on the fringes of society through ensuring they could only access an impoverished basic education (Fiske & Ladd, 2004). The Act contributed to unequal employment opportunities in order to benefit White people over other races by providing different levels of education to the different races (Moodley, 2017). Having studied under a weaker education system, Black students were usually denied access to higher education as they would not meet academic requirements, neither were they able to secure good employment opportunities (Giliomee, 2009). They were mostly taught physical, vocational and language skills rather than specialised academic content as the government considered it

unnecessary to give them an education preparing them for positions they could not occupy at that time (Christie & Collins, 1982; Shepherd, 1955). Given that apartheid education perpetuated oppression, educational reform is vital to South Africa becoming an inclusive, equal, and harmonious society.

Beyond educational inequality (which worked in tandem with economic and social forms of segregation) during the apartheid regime, exclusion was also based on other forms of oppression such as the exclusion of people with disabilities (Moodley & Graham, 2015). Therefore, the transformation of South Africa and its education system could not be achieved without considering the inclusion of people with disabilities. The democratic government thus started an initiative of inclusive education centred on "redressing past imbalances" (Department of Education, 2001, p. 11). Redressing past inequalities includes improvement of access to educational opportunities for people with disabilities and other marginalised groups (Department of Education, 2001). This aim of an inclusive education system, as demonstrated later in this thesis, has been pursued partially in South Africa, and even less in higher education. I state this because while the basic education[3] sector has policies in place to achieve inclusivity (though the effective use of the resources and policies is lacking), the higher education sector receives insufficient attention regarding the development of inclusive education (Mutanga, 2018). Early evidence of this neglect of higher education is in the findings of the research commissioned by the Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM) assessing awareness and support for students with disabilities in South African higher education. The study found that "traditionally, limited attention has been placed on addressing issues of access, retention, progression and participation of students with disabilities in the South African tertiary education environment" (FOTIM, 2011, p. 10). As the inclusion agenda ultimately points to transforming societies, inclusive education, rightly implemented, should encompass all levels of learning (see Göransson & Nilholm, 2014; UNESCO, 1994). Nunan et al. (2000) suggest that "education is ultimately about the ideal balance between the rights and responsibilities of individuals and of society which are expressed through individual and collective action" (p. 70). Specifically alluding to the South African higher education system, Abed and Ackers (2020) argue that "HEIs *(higher education institutions)* are locally mandated by

[3] Basic education refers to childhood education, which is compulsory in South Africa from ages 7 to 15 under the South African Schools Act (Department of Education, 1996).

the South African Department of Higher Education and Training (DHET) to redress inequalities experienced by previously advantaged individuals through transformation of the education sector" (p. 871, emphasis added). Along this line, this study specifically focuses on the inclusion of students with ASD and ADHD in South African universities. This focus is prompted by my realisation that neurodevelopmental conditions get less research attention than physically observable impairments such as limb deficiencies, visual impairment and hearing loss (Adams, 2024; Topkin & Roman, 2015). Moreover, ASD and ADHD are among the most prevalent, yet poorly understood neurodevelopmental conditions and more research is needed on them (American Psychiatric Association, 2022). More specifically, the Global South and notably sub-Saharan Africa are among the most uninformed regions in relation to ASD and ADHD (Bakare et al., 2022; Topkin & Roman, 2015). This study, therefore, raises awareness about ASD and ADHD, while also highlighting the importance of inclusive education in South African higher education.

In raising awareness about ADHD and ASD, one should consider their conceptualisation in the context of inclusive education and in connection with current trends such as the neurodiversity movement. Neurodiversity is the conceptualisation of neurological differences as natural variations in human cognition. This is a positive view of difference, which rejects the framing of ASD, ADHD and other neurodivergences as disabilities. Taneja, Viswanathan and Rajan (2024) for example, state that "the problem with traditional education is that it pathologises differences. We label certain behaviours as 'problems' instead of recognising them as potential strengths" (p. 3). The recognition of strengths associated with neurodiversity is a key feature in this research, drawing from the neurodiversity approach as an inclusive way to conceptualise neurological differences. A positive view of ASD and ADHD, I argue, aligns with inclusive education principles, among which is the recognition of the acknowledgement that educational environments have become diverse, therefore educational institutions must respond to diverse needs of students (Gibbs et al., 2025). Inclusive education initially focused on the rights of people with disabilities to attend and participate meaningfully in mainstream schools (Davis et al., 2020). However, over the years, inclusive education has broadened to advocate for the rights of many other marginalised groups such as women, people of colour and gender minorities (Allan & Slee, 2008; Moodley & Graham, 2015; Schieble, 2012). Thus, inclusive education research has become broader and more relevant given evolving barriers to universal access to quality education (Besic, 2020). Along with the consideration of various marginalised groups, inclusive education is viewed differently by

different scholars, based on their view of what disability is. In line with the development of models of disability, contrasting views of what makes a condition a disability exist in academic circles (Bogart et al., 2019). Some of these perspectives are explained in full detail later in the literature review including an explanation of my choice of adopting the cultural model of disability.

Within the complexity of inclusive education, there is much debate regarding the understanding of neurodevelopmental conditions such as ASD and ADHD, either as disabilities or human cognitive differences (Powell, 2023). Here, the term neurodiversity has gained prominence in studies relating to neurodevelopmental disorders in health, education and psychological research, as well as human rights studies (Simplican, 2019). Neurodiversity refers to both the activist movement that promotes the idea of neurodiversity and the phenomenon itself. Neurodiversity advocates argue that the human race consists of different forms of diversity, and differences in cognition should be viewed positively as a part of human diversity, hence the term 'neurodiversity' (Austin & Pisano, 2017). However, definitions of neurodiversity tend to highlight only the forms of neurological variations that are affected by discriminatory societal attitudes. For instance, Hughes (2016) states that neurodiversity "is an umbrella term that encompasses neurocognitive differences such as autism, attention-deficit hyperactivity disorder (ADHD), Dyslexia, Tourette's syndrome, anxiety, obsessive compulsive disorder, depression, intellectual disability, and schizophrenia as well as normal neurocognitive functioning" (p. 3). In the current study, the neurodiversity movement provides valuable guidance on how the dignity and respect of people living with ASD and ADHD can be upheld, and how their uniqueness can be viewed positively. Notably, the neurodiversity movement aligns with the social model of disability (Acevedo & Nusbaum, 2020). The social model views disability as the result of society not responding to the needs of people with impairments (Oliver, 2013). Despite aligning with the social model of disability, some advocates of neurodiversity reject the classification of neurodevelopmental disorders as disabilities, arguing that the 'disability' labels lead to stigma (Accardo et al., 2024; Lollini, 2018). The rationale for choosing the cultural model rather than the social model despite incorporating neurodiversity into the study is explained in detail in the literature review and theoretical framework.

Though this study supports the stance of neurodiversity in advocating for positive views, it does not support the view that difficulties faced by neurodivergent people are entirely socially constructed. Some neurodiversity advocates, following the social model, argue that all difficulties

experienced by neurodivergent people are caused by the unwillingness of society to meet their needs. However, as I later demonstrate, there are social challenges that alongside neurodivergent traits, contribute to those difficulties, and support strategies must therefore be responsive to both. In this study therefore, neurodiversity is used as an identity marker and an expression of difference, but I do not use this term to suggest that there are no inherent attributes that lead to difficulties for those living with ASD and/or ADHD. Rather, I work with the cultural model of disability, which acknowledges difference and therefore, explanations of the aspects of a condition that cause difficulty (Waldschmidt, 2018). Commenting on the neurodiversity movement, Simplican (2019) argues that the insistence of neurodiversity advocates on acceptance of neurodivergence as difference tends to be made with ignorance of some challenging behaviours that neurodivergent individuals experience. In the educational context for example, hyperactivity, which is a common trait of people with ADHD, can negatively impact their ability to learn effectively and therefore necessitates support efforts (Tseng, 2021). While this should be acknowledged, it is also important to accept that ADHD is a form of difference. For the reasons stated above about the usefulness of neurodiversity in research involving neurodevelopmental disorders, I use words like 'disorder' and 'challenges' to refer to ASD and ADHD and the behaviours associated with them throughout this thesis. However, I do not refer to ASD and ADHD as disabilities. As such, using a disability model (cultural model), does not imply placing a disability label on these neurodivergencies but rather helps to explain why they should not be categorised as disabilities but as positive forms of difference.

1.1.1 Inclusive education and higher education in South Africa

There are several possible reasons why inclusive education has not been prioritised in South African higher education. Firstly, due to high academic standards, universities tend to be exclusive institutions by nature, thus any kind of drive to make them inclusive faces challenges, however, there are also non-academic causes of exclusion. Enrolment in higher education is significantly different from enrolment in basic educational institutions due to strict academic requirements, making it an exclusive and competitive environment. Moreover, attending university is voluntary, unlike primary and high school education, where attendance is compulsory for all children under fifteen years old in South Africa (Department of Education, 1996). Being in basic education mainly depends on age and is required by law, while securing higher education depends mainly on academic merit (Lynch & Macklin, 2020). To be accepted to study a particular degree, students

are required to have minimum grades in specific subjects, which automatically excludes many individuals. Selection criteria should not be removed because universities are academic institutions and therefore rightly subject to academic entry requirements (Rambe & Moeti, 2017). Rather, inclusion criteria should be established to ensure that all students who meet the academic requirements participate meaningfully. Because of strict academic requirements, Kivistö and Tirronen (2012) argue that "all universities can be considered to some degree elite institutions: they admit students of higher than average learning ability and talent, taught by teachers with difficult to achieve academic qualifications" (p. 71). This is at the core of the university system, and I do not intend to challenge academic admission criteria. Likewise, Pring (2005) argues that academic standards in higher education should not be replaced, but should be upheld along with inclusive practices for students that meet academic criteria. This study is concerned with addressing the exclusion of students that have fulfilled academic criteria, specifically those with ASD and ADHD. Pring (2005) further argues that the factors considered in rating a university should be broadened beyond just academic outcomes. Similarly, Veidemane et al. (2021) state that universities should also reach a high standard in relation to the inclusion of students from underrepresented groups, including students with disabilities and neurodivergent students. I acknowledge that the transformation of universities into inclusive institutions will require a radical change because they are by nature exclusive. To this effect, Nunan et al. (2000) state that "the current market-oriented environment of higher education is hostile to the development of inclusive education in universities" (p. 63). What inclusive education means then, in university, is the systemic reformation of institutions so that students who qualify academically, can have equal opportunities to succeed in the academic environment (Dolmage, 2017; Patterson, 2011). In South Africa specifically, Siwela (2017) observes that researchers have given less focus to issues pertaining to inclusion in higher education institutions. This is evident, for example, in South Africa's education policies. The South African Schools Act (Department of Education, 1996) is an emphatic piece of legislation which binds basic educational institutions, but an equally defined policy for higher education does not exist. Given that universities are autonomous and more academically inclined, they are not subject to strict policy imperatives such as those in basic education. Notably, legislation alone is not sufficient for inclusive education, and the lack of progress in basic education in this regard despite fairly progressive legislation is proof (Department of Education, 2016). Access to the best schools is still lacking for the general public, who can only

afford to send their children to public schools. Despite the removal of racial barriers, the inequality in the country is still reflected in differential access to quality education (Njoko, 2018). This implies that policy development alone is not enough to foster inclusive education and needs to be followed by pragmatic action from all stakeholders. Given their autonomy, the implementation of inclusion in universities can be realised using internal policies rather than government-enforced guidelines (Department of Higher Education and Training, 2018). To influence change, significant attitudinal and policy changes are necessary but before implementing change, the ongoing exclusion must be clearly understood.

For most people, higher education is the final step towards securing their lifelong wellbeing and improving their living conditions. At this crucial stage, it is important to ensure that opportunities to succeed are equally available. There are a range of types of post-school institutions in South Africa that one can attend to develop their professional skills, including colleges, Technical, Vocational Education and Training (TVET) colleges and universities. Of these institutions, universities are generally more esteemed and the most difficult to access, based on their high entry requirements (Lynch & Macklin, 2020). Originally, the different types of institutions were meant to promote skills diversity and not to establish a hierarchy among students. For example, TVET colleges in South Africa were established to provide "improved levels of educational attainment among youth and adults" (Department of Higher Education and Training, 2015, p. 8). These colleges achieve this by providing different competencies to those found in universities, therefore they diversify the country's skills and professional expertise (Siwela, 2017). However, these colleges are wrongly perceived as a second-grade option for students who are rejected by universities, further adding to elitist perceptions of university education.

Besides elitism, universities can discriminate by perpetuating ableist views and practices. Ableism is "the conscious and unconscious favouring of those perceived as 'able' over those perceived to be disabled" (Lynch & Macklin, 2020, p. 39). This leads to measures to try and align those considered less able towards being 'able-bodied' or 'normal'. Inclusion, on the other hand is adapting the environment to the needs of all people, including neurodivergent students (Florian, 2012). Research suggests that universities promote ableism which is fed by their academic competitiveness (Dolmage, 2017; Lynch & Macklin, 2020). Most universities worldwide have undertaken initiatives for transformation, particularly in making their physical infrastructure more

accessible. Despite this, Dolmage (2017) argues that "there is no more ableist institution than the university" (p. 7). Though universities are becoming structurally and administratively more inclusive in being open to receiving students with disabilities, they remain ideologically ableist (Lynch & Macklin, 2020). This study further investigates this claim, but within the South African context by looking at the general approaches that universities employ to cater for students with ASD and ADHD.

Despite the above-mentioned assertions that university education is elitist and ableist, the international community has pledged to develop inclusive higher education institutions. The main policy document for international implementation of inclusive education, the Salamanca statement states that "necessary provision should also be made for ensuring inclusion of youth and adults with special needs in secondary and higher education as well as in training programmes" (UNESCO, 1994, p. 9). In this study, South African universities are investigated regarding their capabilities and efforts to uphold principles of inclusive education in relation to students with ASD and ADHD. This is with the understanding that admitting neurodivergent students into the university does not, on its own, equate to full inclusion. Rather, what is done to afford students meaningful participation in all activities of their interest in the university demonstrates inclusivity. According to Göransson and Nilholm (2014), inclusive education is the development of educational institutions into communities in which all members participate meaningfully. Therefore, the main consideration of this study is to investigate whether the support strategies implemented by South African universities demonstrate inclusivity. In transforming the higher education system of South Africa, changes to the physical university environment are indicators of efforts to make the study environment more inclusive to groups such as students with disabilities. This can be in the form of ramps and special lifts in multi-storey buildings, the provision of audiobooks and braille, and other provisions mainly attributed to assist people with easily detectable physical impairments (Wenke & Mophosho, 2008). However, ASD and ADHD have not been integrated into the alterations to the built university environments in South Africa as the findings of this study show.

1.2 Background and delimitations

South Africa has the best higher education system in Africa, consistently having one of its universities ranked first on the continent and five regularly appearing in the global top 500

(Ndofirepi, 2017). With 26 public universities, South Africa also has one of the largest higher education systems on the continent, catering for a diverse student population from around the African continent and the globe (Mutanga, 2018). Universities are also relatively well-distributed in the country as each of the nine provinces has at least one university. Despite the pedigree of South African universities in Africa and to some extent globally, there is still limited access to higher education in the country (Ndlovu-Gatsheni, 2017). Moreover, socio-economic issues such as unemployment and inequality persist, and the remnants of the apartheid system are still visible considering inequality between different classes and races. South Africa is recognised as the world's most unequal country, with youth unemployment rising to a record 45.5% in the first quarter of 2024 (Statistics South Africa, 2024). With inequality persisting, more work is needed to turn the vision of an equal and democratic society in the Constitution into a reality, particularly considering educational opportunity (Constitution of the Republic of South Africa, 1996). Apart from being a human right, education is an emancipatory tool that can help inform people about their rights and how they can act against oppression (Biko, 1973).

Though educational reform on an administrative level took place as a result of democratic rule, it was used to enforce discriminatory principles and laws under apartheid. Higher education was affected by these influences as it was controlled by separatist apartheid ideology. Historically, university education in South Africa was racially divided, with the White minority enjoying significant state resources (Ndlovu-Gatsheni, 2017). Moreover, the legacy of disparities in funding of higher education under the apartheid regime remains in that the universities that were designated 'Whites only' institutions are still far ahead of those that were attended by other races (Ramaahlo et al., 2018). Given that the historical problems associated with higher education in South Africa revolved around unequal distribution of resources and opportunities, the same inequality should not be seen in a democratic dispensation. Unfortunately, South Africa still has a largely unequal education system, and this inequality worsened as a result of the Covid-19 pandemic, as economically disadvantaged students were most affected by lack of resources (Alaba et al., 2022).

Currently, in a democratic South Africa, historically disadvantaged groups of people are still fighting for recognition and equality in universities, and universities remain "sites of struggle" (Ndlovu-Gatsheni, 2017, p. 52). Most of the publicised struggles relate to racial discrimination and the call for the removal of Eurocentric education curricular. The culmination of this was the

emergence of protests under the #feesmustfall movement which also challenged economic disadvantage caused by high academic fees (Griffiths, 2019). Though they started relevant conversations about other inequalities such as gender and racial inequality, movements such as #feesmustfall did little to raise awareness about discrimination of some marginalised groups. Thus, Xaba (2017) argues that during #feesmustfall, students with disabilities were alienated from participating in the movement as most protests involved physical and violent actions. Students with disabilities, women, and others who were not physically able to bring physical force to the resistance against injustices in universities nationwide, were essentially erased from this struggle. Likewise, neurodivergent students were not advocated for by these movements and remain largely unknown in the higher education space. However, all forms of inequality must be addressed for the goal of a truly equal South African society to be realised (Göransson & Nilholm, 2014).

The primary focus of this study is to explore the strategies which universities have in place for the inclusion of students with ASD and ADHD, and to investigate the experiences of students in these two categories in the universities. Within this investigation, the understanding of the importance of making higher education inclusive is underpinned by human rights (United Nations, 1948). In seeking to improve livelihoods, the United Nations has adopted a human development framework to curb prevailing global challenges such as hunger, disease, crime, discrimination and other social problems by advancing human development. Education is seen as pivotal for human development because it can increase income generation, as "those with lower education are less likely to earn as much as others" (United Nations, 2019, p. 11). Thus, all people aspiring to get tertiary education should be given equal opportunities for success as this will increase their chances to develop their livelihoods. Being denied full participation will, in contrast, lead to lack of development, notably because tertiary education is directly linked to income generation as it is required for many employment opportunities.

1.3 Problem Statement

Education can aid positive social change if used effectively, but the opposite is also true because discrimination during apartheid was, in part, the result of educational policies implemented by the government (Gamble, 2021; Taylor, 1989). Interestingly, Dube and Baleni (2022) argue that the central role of being educated is human empowerment. This means that education can enable people to take charge and be active participants in their emancipation. Thus, lack of access to

educational opportunities hinders people's wellbeing and ability to resist oppression. All persons should be allowed to freely develop their knowledge at all levels of study, including higher education. Higher education is particularly vital for the improvement of living conditions because it is the last stage before settling into a career space, therefore opportunities to succeed should not be determined by marginalising, prejudicial means. Unfortunately, there are still many constraints preventing people with neurodevelopmental disorders from participating fully and succeeding in higher education (UNESCO, 2023). This is especially the case in developing countries, where most neurodivergent people live (Abubakar et al., 2016). With the lack of advancement of educational opportunities, poverty, underdevelopment and political instability remain. Inclusive education seeks to mitigate such problems and transform societies through educating people and advancing knowledge about human rights, and ultimately creating inclusive societies (UNESCO, 1994). Though the overall purpose of inclusive education is developing inclusive societies, educational transformation efforts in South Africa tend to only focus on basic education (Rambe & Moeti, 2017). It is worth mentioning however, that despite receiving more research and policy attention, South Africa's basic education system is still not inclusive (Engelbrecht et al., 2016; Nel et al., 2011). This lack of implementation of transformative agendas in the education system has resulted in continued exclusion in schools, and society at large (Carrim & Bekker, 2022). Higher education has rarely been included in research concerning inclusive education in South Africa, yet it is just as crucial to inclusive education as basic education (Ainscow, Slee & Best, 2014; UNESCO, 1994). The neglect of higher education in the transformation of South African society has a significant negative impact and should be addressed urgently. Considering that historical exclusion in South Africa affected all educational sectors, transformation efforts should be implemented system-wide (Christie & Collins, 1982). Higher education as a platform for inclusive education in South Africa is under-researched and the continuation of this is likely to keep conditions of inequality and exclusion prevalent. Of the few studies with a focus on inclusion in higher education, even fewer relate to the educational wellbeing and experiences of neurodivergent students, including those with ASD and ADHD (McKinney & Swartz, 2022). Since there is a lack of knowledge and research focus on neurodevelopmental differences in sub-Saharan Africa, this study focuses on ASD and ADHD as neurodiversity categories (Abubakar et al., 2016; Topkin & Roman, 2015). It raises awareness by reporting on the strategies used to include students with ASD

and ADHD and documenting the experiences of students with these neurodivergent traits in South African universities.

Another constraint to the development of inclusivity in South African higher education is the lack of policy guidelines on making universities inclusive for neurodivergent students such as those with ASD and ADHD. Clear inclusive education policies exist in basic education, such as Education White Paper 6: Special Needs Education-Building an Inclusive Education and Training System (Department of Education, 2001) and the Guidelines for Full-service schools (Department of Education, 2010). These serve as guides for schools to follow in including differently abled learners. In the case of basic education therefore, there is much policy focus, which can help teachers and other professionals to assist learners with special needs to participate meaningfully in school (Du Plessis, 2013). Despite the availability of relatively comprehensive policies regulating the inclusion of students with disabilities in basic education, South Africa is still far from being inclusive as exclusionary practices persist. There is considerable difference between the inclusivity expressed in the policies and the actual conditions and experiences of learners with special needs in schools (Donohue & Bornman, 2014; Engelbrecht et al., 2016; Swart et al., 2002). While the divide between policy and practice in basic education is concerning, the presence of detailed policies is at least a step in the right direction.

Contrary to basic education, there are no clear official binding policies to guide universities on inclusive education (Mutanga, 2017). Policies are important because they provide standards upon which the implementation of inclusive educational practice can be evaluated, hence Ramaahlo et al. (2018) assert that legislation and policy serve as good indicators of progress towards inclusion. For instance, the failure to achieve inclusion of learners with special needs in South African schools was clearly evident when the 20-year timeline for it expired in 2021 as stated in the White Paper 6 (Department of Education, 2001). Given that a clear timeline of action was set, a clear reference point was established, which was useful in assessing the progress made in transforming the basic education system. With the neglect of the higher education system in developing inclusive education policies and legislation, there is a lack of guidelines to align the goals of institutions with, and evaluate progress towards those goals (Mutanga, 2018). Lack of policy focus must be addressed at the national government level, but universities, given the autonomy they have, can take initiative to include neurodivergent students (Mbuvha, 2019). In the absence of

national policies, internal university policies are a potential pathway to inclusivity, thus it depends on the willingness of individual universities to make the necessary accommodations. Furthermore, South African universities may be lacking inclusive practices and attitudes because universities in general are elitist and exclusive institutions (Chudnoff, 2018). It is not the nature of universities to uphold policies of inclusivity because they operate as exclusive entities aspiring for prestige and high rankings, making them elitist institutions (Brezis, 2018). Without government directives, it is unlikely for inclusive education to be implemented at will by universities. University education is elitist, and much further from inclusivity than basic education (Kivistö & Tirronen, 2012). Therefore, neglecting universities in inclusive education goals will prolong exclusion. To ensure a system-wide implementation of inclusive education, the higher education system should establish clear standards of inclusive education.

Due to high academic acceptance requirements, universities are inaccessible to most people, as many do not meet admission criteria. By accepting high-performing students, exclusion has become embedded into university culture, in that regard, universities are not inclusive institutions (Morgado et al., 2016). Nevertheless, this study does not seek to critique the admission processes of South African universities. Instead, it focuses on the inclusion of neurodivergent students, specifically those with ASD and ADHD, who are already enrolled in universities. Therefore, given the elitism tradition, this study enquires whether the universities are, at least for enrolled students with ASD and/or ADHD, inclusive spaces. This is within the understanding that admitting neurodivergent students does not equate to full inclusion because "physical presence within a community does not guarantee greater social inclusion" (Abbott & McConkey, 2006, p. 276). The argument is that universities are unavoidably academically exclusive, but they should be inclusive in encouraging the full participation of all enrolled students. In investigating whether an educational institution is inclusive, continual participation beyond merely being given physical access should be considered, and this study does so at the level of South African universities.

1.4 Rationale

This study is made relevant and necessary by the following points. Firstly, there is limited focus on neurodivergent students in efforts to equalise opportunities in universities. Given South Africa's history of racial discrimination, government mainly focuses on increasing access of Black students to higher education institutions as this was the main point on which marginalisation was

propagated during apartheid (Howell, 2006). This, however, has resulted in the neglect of other 'marginalised groups such as people with disabilities and neurodivergent students (Moriña, 2017). Historical injustices have been cited as the reason for prioritising the reversal of racial discrimination over other forms of discrimination (Lomofsky & Lazarus, 2001). However, the history of discrimination in South Africa was not limited to racial prejudice as there was a range of factors at play during apartheid. For example, Moodley (2017, p. 291) argues that "there is a complex interaction between race, gender and age" in South African society. Proper focus on exclusion, therefore, shows that before and after democracy, race has never been an isolated cause of discrimination. This study explores if South African universities enable the full participation of students with ASD and ADHD, while highlighting the multifaceted nature of exclusion through an intersectional lens.

With the noted gaps in research on inclusive education in South Africa and the inclusion of students with ASD and ADHD explained, this study makes the following contributions. Firstly, the study ignites more conversations and action on the need to develop inclusive education practices in South African universities for neurodivergent students. It also brings light to the two fastest-growing conditions within the neurodiversity range; ASD and ADHD, in the South African higher education context and the need to ensure that students with these conditions are included adequately. By focusing on South Africa, the study brings an aspect that is lacking in literature, which is research on the perceptions and experiences regarding neurodiversity in the Global South, specifically sub-Saharan Africa. Another contribution is to share experiences of students with ASD and ADHD to show the strengths that they have, and encourage the focus on their strengths, with the use of the cultural model of disability and the neurodiversity paradigm. Moreover, the study draws from the successful strategies shared by the DU staff members to support students with ASD and ADHD as guidelines for including neurodivergent students. In this regard, the perspectives of the students with ASD and ADHD on the support they received will be the primary indicator of the effectiveness of the methods used as they will have seen the results or lack thereof.

1.5 Aims and Objectives

The main aim of this study is to investigate the strategies in place in universities to ensure the inclusion and full participation of students with ASD and ADHD. In this investigation, the principles guiding the strategies are explored and analysed in terms of the views of inclusive

education that influence them. For cases where there is a lack of strategies present to ensure meaningful participation, the reasons for the absence of inclusive practices is similarly analysed to ascertain the underlying reasons why inclusion is still lacking. Furthermore, the study seeks to find out the perspectives of whether the different universities involved are inclusive from the viewpoints of students with ASD and ADHD. This is to obtain first-hand accounts from the students themselves pertaining to their inclusion in the university space. In investigating the DUs, I focus on the two possible domains of support for students with special needs: student services and learning development. In making this distinction, Simpson (1996) explains that student services are personal assistive measures such as counselling services, healthcare, accommodation and other non-academic needs. Learning development is more academically concerned as it refers to "support in accessing the curriculum" (Howell, 2006, p. 169). In essence, student services include assistance offered outside academic confines, while learning development services provide epistemological access. Lotz-Sisitka (2009) describes epistemological access as what goes beyond mere physical exposure to the learning environment but involves giving an all-rounded and meaningful learning experience. This implies that epistemological access requires institution-wide changes, driven by policies in each institution emphasising the requirement of inclusive practices, further emphasising the need for both student services and learning development in developing inclusive study spaces. DUs were originally established to be responsible for student services, however, without proper academic support, student services accomplish little (Department of Higher Education and Training, 2018). This being a qualitative study, the experiences of those directly affected by the phenomenon under study is vital, and students with ASD and/or ADHD have the relevant experience (Merriam & Tisdell, 2015). Thus, the study also incorporates the students' experiences, along with those of DU staff members, to find out whether their experiences of the higher education system show evidence of inclusion or the lack of it.

1.6 Summary of the study's aims

Main aims

- To investigate the strategies that Disability Units in nine South African public universities use to cater for the needs of students with ASD and ADHD and ensure their full participation.

- To investigate the experiences of students with ASD and ADHD in relation to their inclusion based on the support strategies that are in place for their participation in the universities.

Specific sub-aims

To achieve the main aims of this study, the following sub-aims were specified:

- To investigate whether Disability Units provide student services, learning development services or both for students with ASD and ADHD.
- To investigate the experiences of students with ASD and ADHD in universities, based on academic and social aspects.
- To investigate the knowledge levels of DU staff in South African public universities on ASD and ADHD and how this impacts their abilities to assist neurodivergent students.
- To establish whether university DUs are instrumental in making universities more conducive for the education of students with ASD and ADHD.

1.7 Research questions

To address the stated research objectives, the following research questions have been formulated, including a main question and sub-questions addressing specific aspects related to the main question.

Main question

What inclusive strategies, if any, do South African universities employ to facilitate meaningful participation of students with ASD and ADHD in the academic space?

Sub-questions

- Which student services are available for students with ASD and ADHD in South African universities?
- What are the experiences of students with ASD and ADHD relating to access to the university curriculum?
- What are the guiding principles for DU staff members for supporting students with ASD and ADHD?

1.8 Overall argument

The overall argument of this study is that ASD and ADHD are natural forms of difference and students belonging to these identities should be recognised, respected and supported in terms of their academic and social needs in the university space. As part of the effort to make universities more inclusive for students with ASD and ADHD, a major component of my argument is that negative attitudes should be eradicated by better educating the university population about ASD, ADHD and neurodiversity in general. This includes correcting misconceptions that stem from cultural norms and beliefs as well as a lack of knowledge about neurodevelopmental differences. Lastly, I argue that for universities to become inclusive, the marginalisation of students with ADHD and ASD must be addressed using an intersectional lens, considering other forms of oppression such as racism, sexism, homophobia and ableism as mutual contributors to difficulties faced by students with ASD and ADHD.

1.9 Thesis overview

The thesis follows the structure below, with each chapter contributing to the overall argument. The individual chapters are briefly described below, giving the focus of each chapter.

Chapter 1

This chapter has provided the positionality of the study by giving an introduction that highlights the context, which is the South African higher education system, in terms of the history and current trends, focusing on progress towards inclusive education nationally, but more specifically in higher education. Additionally, the problem statement describes the issues that the study addresses, and the rationale explains why they are relevant. The chapter also states the objectives and research questions that the study addresses in the chapters to follow.

Chapter 2

This chapter reviews extant international and local literature about the inclusion of students with ASD and ADHD in universities. It includes extensive descriptions of ASD and ADHD, the characteristics they exhibit, as well as prevailing opinions about their causes and the misconceptions surrounding them. It also discusses models of disability, along with explanations of why ASD and ADHD are forms of human diversity and not disabilities as commonly thought.

Chapter 3

This chapter provides the philosophical lens with which the study analyses the issues at hand, making use of the theory of intersectionality, and the cultural model of disability as theoretical approaches for understanding and addressing the exclusion of students with ASD and ADHD, within a positive, neurodiversity outlook aiming to achieve standards for reasonable accommodation.

Chapter 4

In chapter 4, I provide a discussion of the research paradigm and data collection methods in terms of their relevance to the study and how they were applied. This also includes ethics procedures and explanations of the sampling techniques, and the subsequent data analysis methods.

Chapter 5

This chapter addresses the main research question, by analysing the strategies that DU staff members use to support students with ASD and ADHD. The strategies are analysed in detail to ascertain whether they promote attitudes of inclusivity, respect for neurodiversity, and transformation of the university as a whole into a neurodiversity-friendly environment.

Chapter 6

This chapter discusses and analyses students' experiences, to determine the extent to which they feel supported, recognised and valued as members of the university community and in relation to their meaningful participation in universities.

Chapter 7

In chapter 7, I provide an integrated discussion of the main findings drawn from chapters 5 and 6, in relation to the strategies for supporting students with ASD and ADHD and the experiences of students themselves. In this analysis, a close application of the conceptual framework is made to deduce the main contributions of the study in terms of its primary findings. Furthermore, I make concluding remarks and recommendations for further research that can build on the original contributions of the current study.

Conclusion

This introductory chapter has outlined the background to the study in terms of its area of focus namely the South African higher education system, referring to historic trends and forms of discrimination from the past. Along with an engagement with the introduction of democratic rule in South Africa, the chapter has also highlighted the shift towards the upholding of human rights post-1994. The field of focus has also been outlined as inclusive education, which has been positioned both globally and locally as a means for eliminating discrimination and fostering more tolerant and harmonious societies. Within the context of inclusive education, the neglect of South Africa's higher education system was identified and presented as the central focus of this study and as a basis upon which this kind of research is made necessary. Along with raising awareness about the need to implement inclusive education in universities, the chapter also explained that the main focus is the experiences of students with ASD and ADHD. The chapter also details the research questions, which focus mainly on universities in South Africa; notably what measures are taken to ensure that students with ASD and ADHD participate fully in their respective programmes of study. Another dimension that the questions cover is the experience of the students' overall university life on the levels of social aspects and academic aspects. This background and introduction chapter has thus set the foundation for the analysis of published literature on the developments in inclusive education locally and internationally, as well as making clearer conceptualisations of the concept of inclusion relevant to the study and the context in which it is carried out.

CHAPTER TWO: LITERATURE REVIEW

This chapter discusses the relevant literature for this study. It begins with a detailed discussion on the conceptualising of inclusive education. Furthermore, I take a stance on what inclusive education means in the context of the South African higher education system. As inclusive education is a global concept, this literature review begins by giving a comprehensive explanation of the origins of this concept and its global significance. Moreover, the local application is sought by clarifying the contextual nature of South African society and more so, South African higher education, as to why inclusion is a necessary goal. Further clarity is also given on how disability has been understood throughout history in South Africa and globally, and with this, a discussion of neurodiversity in relation to ASD and ADHD. Additionally, the chapter explains the two neurodivergencies that are centralised in this study: ASD and ADHD. This is to provide understanding of the causal factors that may lead to ASD and ADHD, the related characteristics, global and local prevalence rates, and the reasons why students displaying these neurodivergent traits need support. This literature review shows that there is a significant gap in the research. While there are a few studies highlighting the inclusion of learners with ASD and ADHD in basic education, the higher education context remains neglected. Furthermore, the literature review and the study contextualise the neurodiversity approach in the South African context. This is a significant contribution as neurodiversity has rarely been explored in the Global South, specifically sub-Saharan Africa. Much of the literature, as I show in 2.4 below, is of Western origin, so this study provides a locally relevant insight into neurodivergence, taking account of unique factors at play in the South African context.

2.1 Attempting to conceptualise inclusive education

Inclusive education is a subjective and dynamic concept with no single, incontestable definition. The differences in definitions of inclusive education can be attributed to a number of factors including context, culture and ideological biases (Göransson & Nilholm, 2014). While there are varying conceptualisations, the implementation of inclusive education is largely dependent on the narrowing of its application to the needs that arise in specific areas. Though there have been variable conceptualisations, the general views of the education of people with special needs was narrowed down significantly in the late 20th century. This was guided by specified common goals that were first proposed during the World Conference on Special Needs Education held in Salamanca, Spain in 1994. This event included more than 300 representatives from over 90

countries and international organisations, aiming "to further the objective of Education for All by considering the fundamental policy shifts required to promote inclusive education, namely enabling schools to serve all children, particularly those with special educational needs" (UNESCO, 1994, p. 2). The conference resulted in a statement and framework for action on the implementation of inclusive educational practices worldwide, relevant to the country or region in which an educational institution or system belongs (Ainscow, 2014). The Salamanca Statement thus recommends the treatment of inclusivity as context-dependent, stating that it should be implemented in accordance with the needs and forms of exclusion experienced in different parts of the world (UNESCO, 1994). Thus, in this study, I define inclusive education theoretically, followed by its positioning in a locally-relevant and meaningful manner, so as to avoid generic approaches that are influenced by Western trends and not relevant locally (Landsberg et al., 2005). Apart from being locally relevant, efforts towards inclusive education should be specific, with clear guidelines because unclear goals can lead to lack of progress. Defining inclusive education contextually is not only for clarity, but to enable effective steps to be taken. Here, Qvortrup and Qvortrup (2018) assert that it is crucial for a definition of inclusion that is clear and practical to be developed. According to Dixon and Verenikina (2007) the lack of specific terms for describing inclusive education increases the possibilities of politicians misappropriating it and hindering real progress towards inclusive education. This is consistent with Naicker's (2005) assertion that exclusion is fundamentally a result of the failures of political systems, and that the redress of exclusion is thus a political reform agenda and therefore, subject to the pronouncement of clear objectives. Research shows that there is a lack of specificity in the stated objectives for inclusive education in South Africa, resulting in stagnation in working towards this goal (Department of Education, 2016; Donohue & Bornman, 2014; Jacobs & Govender, 2020). This is not only an issue in South Africa but a global reality, and is outlined well by Allan (2010) who comments that researchers are still far from a practical understanding of inclusive education. Likewise, Haug (2017) argues that "it is not possible to find one universally institutionalised definition of inclusive education" (p. 207). While views will remain diverse, practicality is the greatest need in inclusive education development. Indeed, a universal approach to inclusive education is difficult to attain. However, one can argue that it is unnecessary to seek a single conceptualisation of inclusive education because the forms of exclusion experienced in different global regions differ and therefore cannot be approached in a single way. Instead of one-size-fits-all approaches, context

should be considered in defining and more importantly, implementing inclusive education. This is because inclusive education responds to specific challenges experienced by people in a particular country and at a specific time (UNESCO, 1994). Scholars and other stakeholders give wide-ranging definitions, which are influenced by their experiences, ideological biases and other factors which shape their views.

2.1.1 Origins of inclusive education

The origin of inclusive education is useful for guiding its implementation; it should be understood in terms of its origin, in relation to its intentions and the current trends in its development. It is difficult to pinpoint an exact event or occurrence for the origin of inclusive education because throughout human history, the quest for freedom has always been ongoing (Ndlovu, 2023). Nevertheless, some historical moments have contributed to the development of the discourse of inclusive education that exists in its various interpretations today. For example, Du Plessis (2013) remarks that inclusive education forms part of a greater struggle for human rights. Since inclusive education forms part of historic human rights discourses, the origin of human rights discourse is important, as it can act as a guide through which inclusive education can be traced and rationalised. The promotion of human rights originated, at least officially in the Universal Declaration of Human Rights in 1948 (United Nations, 1948). The declaration lists several essential components of human living which are vital for wellbeing, and which should be made available to all people without discrimination. Among them is the right to education, about which the declaration states "technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit" (United Nations, 1948, p. 7). This eliminates any justification for the denial of access to higher education on prejudicial grounds.

Merit-based accessibility, as mentioned in the previous paragraph is promoted to end discrimination, but it may itself lead to exclusion. To begin with, merit is defined differently by various scholars, influenced by a variety of worldviews. In this regard, Clarke, Hurst and Tomlinson (2024) argue that "merit is not an objective or neutral term but rather a socially constructed and malleable concept" (p. 637). The common view of merit for instance, is that judging applicants for a job or a place in a university should be based on how the candidates perform in the same standard evaluation instrument. This is aimed at ensuring that the position is granted fairly. Wikström and Wikström (2020) identify this as "procedural fairness", which is

"concerned with how applicants are treated and that the same rules are applied, and the same test or equivalent tests are given to everyone" (p. 35). The other view of fairness that Wikström and Wikström (2020) identify is substantive fairness, which "is concerned with how well a testing program functions, and in particular, how it functions for different groups of test takers" (p. 35). South African universities implement procedural fairness in that students are admitted based on their results obtained in standardised examinations in the last two years of high school. These are simply marks-based standards and do not take into consideration any diversity markers such as neurodiversity. Inclusive education is about structuring teaching and learning activities, including assessments, according to different needs in the student population (Veidemane et al., 2021). Substantive fairness, therefore, aligns more with the inclusive approach, due to its regard for how testing conventions take diversity into account. To promote inclusion in higher education, institutions should rethink their evaluative standards and incorporate differences in the student population.

Though inclusive education is largely concerned with human rights, the term 'inclusive education' did not gain prominence until the establishment of several international treaties and agreements at the beginning of the 21st century (UNESCO, 1994; United Nations, 2006). The Salamanca Conference is regarded as the beginning of the global movement for inclusive education (Ainscow et al., 2019). Nevertheless, earlier declarations such as the Universal Declaration of Human Rights and the World Conference on Education for All inspired many of the goals set by the Salamanca Statement (UNESCO, 1994). Conversely, Stubbs (2008) argues that Black Americans pursued inclusivity in fighting for equal educational opportunities as part of the civil rights movement. It is arguable that most attempts to locate the beginning of inclusive education only count as tracing the modern understanding of inclusion and not the idea of inclusive values. Inclusive values and attitudes have always been considered in different human eras and civilisations. In keeping with this view, Armstrong (2007) states that "inclusion means different things to different people" (p. 2). It can be added that the concept may have had different meanings at different historical points. Thus, Stubbs (2008) argues further that even indigenous African educational practices were inclusive in that they were meant to ensure that all children grow and play their role in building up their families and communities. Likewise, Masoga and Maoto (2021) affirm that ancient Bantu cultures were inclusive, oriented towards the development of harmonious communities whose members are all treated with respect. A good example is the principle of *Ubuntu*, an ancient

tradition of instilling values of caring, sharing, mutual respect, equity and assuming responsibility for the welfare of fellow community members (Howell et al., 2019). Such traditions are compatible with current values such as inclusive education, which similarly promote harmony, respect and appreciation of the role that all members of communities can play (Göransson & Nilholm, 2014; UNESCO, 1994).

2.1.2 Inclusive education as a 'South African' concept

In this subsection, I begin with a discussion on how inclusive education has been conceptualised in South Africa. From there, I outline what inclusive education means specifically in relation to this study. Having discussed its origins, a definition of inclusive education that is contextual and applicable to the overall specific aims of this study is developed below. The definition does not only relate to the aims of the study but is also relevant to the context of the study, which is the South African higher education system. This adaptation to context is derived from Waitoller and Kozleski's (2013) assertion that inclusive education has meanings that vary based on varying geographical locations. Thus, a South African interpretation and perspective of inclusivity should reflect the uniqueness of South Africa in its demography, history, and forms of exclusion that have existed and continue to exist in the South African education system and society. Accordingly, Qvortrup and Qvortrup (2018) argue that inclusive education means addressing both past and current inequalities and empowering students who find themselves on the peripheries of the education system. In implementing inclusive education, the forms of exclusion in an educational system or environment must be understood well because different societies have varying kinds and levels of exclusion and there is no universal way of eradicating exclusion (Lipsky & Gartner, 2012). In essence, the uniquely South African and current inequalities in the higher education should be addressed, and here this study particularly focuses on students with ASD and ADHD as part of the advocacy for inclusive higher education in South Africa.

This study supports the view of inclusive education in the South African higher education system as opening "access to a wide range of educational and social opportunities for all children, regardless of their position in society" (Besic, 2020, p. 112). This is to be done with the aim of developing the learning environment as an equitable environment with equal participation of all members of the learning environment, including students, educators, and parents. Though the definition above speaks of the inclusion of children, it is applicable beyond the basic education

system because ultimately inclusive education is aimed at transforming the entire education space, including higher education (Mutanga, 2018; UNESCO, 1994). Inclusive education is about extending opportunities to all people, despite their differences. Due to its high diversity levels, South Africa should strive to ensure the participation of all kinds of students in its higher education system. Bodhi et al. (2022) describe this educational provision as "the participation of all students with or without special education needs regardless of any individual differences, including race, ethnicity, disability, gender, sexual orientation, language or socio-economic status" (p. 382).

It is also worth mentioning that with the transformation of all levels of the education system, the chances of the society at large being transformed are increased significantly (UNESCO, 1994). By starting at early childhood years, inclusive norms and practices can be continued into higher education and importantly, in the societies that are served by the school, university or other educational institution. Grassroots training should equally be complemented and sustained by inclusive practices at tertiary education as well, but this has not been done in the South African education system because inclusive education has not been prioritised in higher education (Masoga & Maoto, 2021). By design, inclusive education serves a transformative view, and this is its main aim in South Africa due to it being a young democracy still moving away from hegemonic rule and large-scale oppression (Naicker, 2007). Given this background, educational development in South Africa should respond to immediate needs, which mainly pertain to the inequalities caused by the apartheid system. Mathebula (2009) expressed similar views, arguing that South African educational policies should be relevant to and contribute to the redressing of discrimination that was characteristic of the apartheid system. In assessing the progress towards inclusive education in South Africa, there should be attention to ensuring a marked difference between the current education system and the one that existed before democracy was introduced because inclusive education is a transformative concept (Department of Education, 1997, 2001). Transformation of an education system is an ongoing process of simultaneously redressing past oppressive practices while also addressing emerging forms of exclusion, and progress should be made in both areas. In contrast to the apartheid era, this should be an education system where youth with disabilities and other differences have equal access to higher education as any other students and are participating actively in the daily activities of their institutions.

In addition to educational transformation, inclusive education in South Africa aims for the transformation of the broader society, meaning that the impact of inclusive education extends beyond educational achievement (Department of Education, 2001). With this understanding, the improvement of students' livelihoods after university when entering the work environment can reflect the success of the quality of the education they received (Meredith, 2011). Moreover, the university itself functions as a community with different departments and a large number of people, and in order for a community to be inclusive, all members of the community should be afforded meaningful and equal opportunities to participate in the activities of the community. In line with the view expressed above that a university is a community, it can also be argued that the ability of an institution of higher learning to cater for a diverse student population and provide a meaningful educational experience for students with different needs is an important measure of its success that goes hand-in-hand with its academic record. The University of South Australia for example, has demonstrated this motivation as it has "committed to providing an educational environment in which inclusivity is a benchmark for excellence" (Nunan et al., 2000, p. 76). This view is further corroborated by Moses (2014)**,** who asserts that the functionality of a university can be seen in its willingness to transform and cater for diverse kinds of students, especially if the university is in a diverse country. South African universities, by that logic, should be versatile and accommodating of different cultures, creeds, religions, and ability levels, given that they serve one of the most diverse populations in the world. Put simply, based on the points made above, inclusive education in South African higher education institutions should respond to the needs of a diverse student population, which leads to the development of an equal, democratic, and inclusive society.

In this study, inclusive education is conceptualised based on whether neurodivergent students can participate meaningfully in the academic environment. Termed the 'community' definition, this view of inclusion argues that the person with an impairment should be treated as an active member of the learning community and not restricted from meaningful participation based on their condition (Göransson & Nilholm, 2014). Similarly, Naraian (2011) states that inclusive educational practice "is premised on the creation of classroom communities that can nurture the qualities of equity and care" (p. 956). In this view, the academic environment operates on human rights principles in which all members of the community are recognised and respected, and are given equal opportunities for academic success (Göransson & Nilholm, 2014). Coupled with the community definition is an understanding of inclusive education as a continuous process in which

challenges of exclusion are addressed as they arise, meaning that there is no clear point at which the goal for inclusion reaches its culmination. This is essentially a progressive view of inclusive education, and one that is not limited in its reach and relevance. Qvortrup and Qvortrup (2018) also advocate for progressive development of inclusive education systems, asserting that inclusion involves continually increasing the access, participation, and success of all youth in local community schools. With a higher education focus, the present study is still fitting for the application of this perspective as adults in university are also in learning environments that function as communities, and they would also benefit from principles of inclusion.

2.1.3 Some perspectives on inclusive education

Most countries have committed to implementation of inclusive educational practices, showing their commitment in laws and policies (Muskhanova et al., 2020). However, inclusive education remains a highly contested idea, and arguments persist over its applicability and feasibility. Various scholars oppose the notion of inclusive education, and their various perspectives are discussed below. According to Kauffman et al. (2002), the practice of special education of learners with disabilities in separate schools began as a response to the failure of mainstream education to meet their needs. They further argue that this proves that inclusive education has already been proven to be ineffective, and therefore, should not be pursued again as a path to achieving positive changes in society and academic outcomes. On the other hand, alternative views hold that the idea of inclusion is a noble and necessary one, but they argue that it just has not been satisfactorily implemented. For instance, Cornish (as cited in Allan & Slee, 2008) remarks that it is fruitless to attempt to include students with disabilities in regular schools or higher education institutions without putting the necessary resources in place. This, however, does not prove that inclusive education is impossible to achieve, but rather that the lack of resources is a constraint to it that should be addressed as part of the development of inclusive educational practices. In addition, some sceptics argue that including students with disabilities will negatively impact students without special needs (Davis et al., 2020). However, one of the central principles of inclusive education is catering for the needs of all students, including those without impairments (Naraian, 2011). Therefore, inclusive education is not fundamentally flawed, but its implementation has been ineffectively pursued, which necessitates more direct action as opposed to discarding the idea.

As highlighted earlier, inclusive education must be contextually defined and applied. Having discussed the range of perspectives on inclusive education, I now outline the unique perspective this study develops. For this research study, inclusive education is given a comprehensive definition, not limited to placement alone, but focusing primarily on participation. This view is expressed by Kozleski et al. (2015), stating that inclusive education entails all students "being included as active, engaged learners within their school communities" (p. 212). Active participation should be achieved in all aspects of university life, including those outside the classroom such as sports, clubs and other social activities. In this regard, Mitchell (2015) argues that inclusive education entails more than just placement in a mainstream learning environment, and covers aspects such as "vision, curriculum assessment, teaching, acceptance, access, support, resources and leadership" (p. 9). This view is holistic and truly inclusive and truly representative of inclusivity. The community definition of inclusion is also explained by Göransson and Nilholm (2014), as focused on ensuring that all students obtain meaningful participation. The present study, though recognising that inclusive education is subject to contextual application and subjectivities of various stakeholders, holds the same view that inclusion entails the placement and subsequent meaningful participation of all students in mainstream learning environments. Specifically, in investigating inclusion of students with ASD and ADHD in South African universities, the community definition of inclusive education is herein applied. Crucially, the uniqueness of the South African context is considered by this study. This is vital, as Dixon and Verenikina (2007) state that inclusive education should be defined, not only ideologically, but in accordance to systemic, socio-economic and cultural aspects of the context in which it is pursued.

2.2 Describing Autism Spectrum Disorder (ASD)

In this study, I focused on ASD and ADHD (see chapter 1 section 1.1 for details about the rationale for choosing these). In this section, I give an in-depth discussion about these conditions, including their epidemiology, impact on social life, as well as explaining their prevalence in South Africa. According to the American Psychiatric Association (2013), all neurodevelopmental disorders have their onset within the "developmental period" (p. 31), which is under the age of 3. Most diagnoses are based on how the child behaves compared to the expected level of functioning at their age and differences with the behaviours of other children, especially in relation to socialising and communication (Esposito & Venuti, 2008). Deviations from the expected functioning of children at a certain age in regard to speech, play, socialising and other related factors, indicate possible

developmental differences (Betz et al., 2008). ASD is the fastest growing neurodevelopmental disorder worldwide, and it can manifest through a range of symptoms with varying intensity (Jamero, 2019). These include three forms of difficulty, being "social reciprocity, non-verbal communicative behaviours used for social interaction and skills in developing, maintaining and understanding relationships" (American Psychiatric Association, 2013, p. 31). In addition to these criteria, the American Psychiatric Association recently updated their classification of ASD, stating that *all* three and not any of the three *'deficits'* should be exhibited for a diagnosis to be made (American Psychiatric Association, 2022). The update comes as a cautionary measure to avoid confusion as to whether the incidence of any one of the three forms of difficulty is enough to make a diagnosis (Chakrabarty et al., 2023).

Moreover, people with ASD have impairments based on executive functioning. According to Demetriou et al. (2018), executive function includes a wide variety of intentional neuropsychological attributes such as "goal-oriented behaviour, abstract reasoning, decision-making and social regulation" (p. 1198). Friedman and Sterling (2019) add that while some people with ASD lack executive function, there are variations in how these attributes manifest. Due to being centred on human interaction, the challenges associated with ASD cannot only be addressed on the individual level, because difficulties are experienced on the broad societal level too, that is in how the person with ASD interacts with other people (Cardon & Marshall, 2020). The involvement of non-autistic peers, relatives and community members is therefore, a crucial element in ensuring that people with ASD participate meaningfully in academic and social spaces. In highly social settings such as universities, students with ASD can struggle as they sometimes "don't know how to interact with others in a meaningful way" (Evans, Granson, Langford & Hirsch, 2023, p. 249). This complexity necessitates the need to address issues pertaining to the marginalisation of people with ASD in communities, rather than just at the level of affected individuals (Burchardt, 2004). Indeed, this is a necessity that aligns with the principle of inclusive education in general, which is to change how all people with impairments are treated by addressing negative attitudes.

Another issue is that ASD is still poorly understood, especially in terms of its epidemiology. Medical diagnoses of ASD are commonly attributed to genetics, but other causes might be present (Jick & Kaye, 2003). In fact, some scholars argue that genetical origins are only speculative and

not conclusive (Siegel, 2018). Due to its complexity and the lack of knowledge concerning its epidemiology, extensive research still needs to be conducted concerning the causes of ASD and more importantly on how those diagnosed with it can be included in society (Bakare & Munir, 2011). Not only do the causes of ASD need further investigation, but clearer articulation needs to be made of its prevalence, especially in developing countries where it is most likely to be underdiagnosed due to the lack of research and medical facilities, as well as knowledge about it (Ametepee & Chitiyo, 2009). Along with causative factors, psychological factors related to ASD require more research, especially in youth and adults because much of the conducted research tends to focus on children (Guntuku et al., 2019). It is, therefore, necessary that studies like the present one should be conducted to provide insight into ASD in adulthood, such as in tertiary education.

Given the range of difficulties associated with ASD, support is necessary in the academic space to ensure the best chances of learning because educational spaces are social spaces and people with ASD face challenges with social interaction. Notably, ASD is a lifelong condition, and new levels and environments of study bring different social and academic challenges (American Psychiatric Association, 2022). The transition from basic to higher education can therefore be difficult if the necessary support is not given. In higher education, students navigate academic and social aspects without constant monitoring and support, which they would have received during their high school and primary schooling years (Meiring et al., 2016). This transition into the university can be challenging. Supporting this, White et al. (2017) state that "programming to promote smooth transition from high school to post-secondary education may prove critical in the prevention of a host of adverse outcomes as well as promotion of success in college" (p. 3037). Though personal support given by a dedicated professional can assist people with ASD to improve their communication and interaction skills, community transformation is the key to improving their participation (UNESCO, 1994). In addition, universities tend to be less willing to provide support for individual students than basic education institutions, which adds to difficulties associated with ASD (Wilson & Dallman, 2024). With this dual nature of challenges based on lack of support and the university being a new social environment, efforts to create inclusive environments in universities should address both individual challenges and societal attitudes. Furthermore, university life is dynamic and fast-changing, which poses a challenge for students with ASD, most of whom are sensitive to abrupt changes in their routine or environment (Tissot & Evans, 2003).

This disadvantages them when extra support is not provided. Thus, considering the dynamism and complexity of university activities, students with ASD should receive support. In this regard, Gurbuz et al. (2019) argue that university life can be challenging for students with ASD, "more so than students without autism, especially considering combined social and academic demands" (p. 617). This further highlights the distinction of student services and learning development services having to be addressed in tandem to ensure full participation in an educational environment.

2.2.1 Early identification and ASD in the South African context

Early identification helps to mitigate the challenges associated with ASD. To determine and apply the support needs, it is ideal for the diagnosis to be made early (Guler, Seris & Shabalala, 2018). To achieve early identification, there must be set criteria for how different professionals can detect autistic traits (Causton-Theoharis et al., 2011). Unfortunately, many regions in South Africa lack clearly defined ways of diagnosing ASD. Wenke and Mophosho (2008) reported that even health centres in developed areas like Johannesburg lacked diagnostic protocols. This includes a limited array of professionals that take part in the establishment of diagnoses, which may sometimes result in misdiagnosis. Involving collaborating experts also opens platforms for different support strategies to be recommended and applied in supporting people with ASD (Forlin, 2010). Nonetheless, a completely certain detection of ASD is not always possible because "a definitive diagnosis can be difficult to achieve" (Pitney Jr, 2015, p. 178). This impacts on the willingness of institutions to provide support. With diagnosis contested, schools and universities may decline to provide additional support to students, citing insufficient evidence for a clear diagnosis.

Apart from undefined diagnostic criteria, South Africa also faces a lack of public knowledge about ASD. This is reflective of the wider region, as sub-Saharan Africa remains among the least informed parts of the world concerning ASD, possibly due to scarcity of resources for diagnosis and transmitting information to the public (Bakare et al., 2022). Along with lack of knowledge, late identification of children with ASD lessens their chances of adapting well to the environment as they grow older. In a UK study, Gurbuz et al. (2019) found that some students were only diagnosed after enrolling at university, this is even more likely in developing countries where resources are scarce. Students identified late may still be trying to understand their condition while settling into the complex university environment, which can cause more difficulty. Though most students with ASD are usually as capable as non-autistic students of handling academic content,

depending on the severity of impairment they may struggle with social aspects of education (Graetz, 2009). These are "communication challenges, executive functioning skills, low self-esteem, maintaining motivation for school, emotion modulation, self-advocacy and sensory overload" (Hillier et al., 2018, p. 20). Lacking proficiency in these areas of social interactions lessens the ability of students with ASD to participate fully in the university, which is a highly social space (Arum & Roksa, 2014). Research shows that ASD is not known and understood by most South Africans and that there is no reliable local data on its prevalence (Guler et al., 2018; South et al., 2017; Springer et al., 2013). This leaves many people living with ASD without awareness of the assistance they need to communicate. Moreover, claims that 'witchcraft' causes neurodevelopmental disorders exacerbate the stigmatisation of people with ASD in Africa because of superstitious spiritual beliefs (Bakare & Munir, 2011). Consequently, people with ASD in South Africa struggle to fit into a society that is unprepared to accept them as equal members of the community. To reiterate, addressing the difficulties of being autistic in the South African context requires not only helping the affected individuals to adapt to the society and environment, but also changing negative attitudes in society.

2.3 Describing Attention Deficit Hyperactivity Disorder (ADHD)

ADHD is described as "a neurodevelopmental disorder defined by impairing levels of inattention, disorganisation, and/or hyperactivity-impulsivity" (American Psychiatric Association, 2013, p. 32). People with ADHD also exhibit a lack of impulse control and may also be seen to lack motor activity. ADHD is one of the most common developmental disorders, with South-East Africa having one of the highest rates at 0.5% (Cortese et al., 2023). However, this may be lower than the actual prevalence, given the lack of resources and knowledge in this region about ADHD. Moreover, diagnostic classification differs across countries and regions. According to Hinshaw (2018), this may also contribute to varying prevalence rates across different parts of the world. However, developing countries are, lately, seeing sharp rises in cases of ADHD, possibly due to recent improvements in resources and sharing of information globally (Topkin & Roman, 2015). Most diagnoses of ADHD are of children and adolescents, but some people are diagnosed as adults because ADHD persists into adulthood and may be lifelong (Roshani et al., 2020). In fact, Quenneville et al. (2022) state that "ADHD persists at some level in adulthood in at least half of the cases" (p. 1). Though significantly prevalent in both childhood and adulthood, ADHD research on adults is scarce. Therefore, studies like the current one, investigating its impact in higher

education, are significant for a deeper understanding of the dynamics of ADHD. The persistence of ADHD throughout the lifespan highlights the need for measures of detection and analysis to be improved (Guntuku et al., 2019). The continuance of ADHD into adulthood leads to social, academic and professional functioning challenges (American Psychiatric Association, 2013). If the diagnosis is made early, the diagnosed person is better placed to go through all levels of schooling receiving appropriate assistance for their condition and better able to adapt into social environments such as educational institutions and ultimately the world of work.

Moreover, people with ADHD present some challenges in shared environments such as universities; this is because its main characteristics are related to human interaction, these are "impulsiveness, hyperactivity and inattention" (Guntuku et al., 2019, p. 1475). Inattention leads to missing important information, while hyperactivity may lead to the disruption of lessons, especially during childhood (Mayes et al., 2012). Therefore, those who interact with people with ADHD should be aware of the behavioural challenges involved, and provide the necessary assistance and accommodations to enable them to achieve positive social participation. Topkin and Roman (2015) argue that the challenge in South Africa is that teachers are poorly trained on strategies of teaching learners with ADHD, hence late identification occurs due to lack of knowledge from teachers as well as parents about the symptoms of ADHD. Lecturer efficacy in university is just as important, but providing support for students with disabilities usually forms no significant part of lecturers' training, therefore they also report lack of skills to teach students with disabilities such as ADHD (Molina et al., 2016). Similar to ASD, South Africa lacks officially documented prevalence statistics of ADHD and most people know little about it (de Milander, Schall, de Bruin & Smuts-Craft, 2020). Many challenges are therefore, left unaddressed because people with ASD and ADHD are neglected in government campaigns to introduce more inclusive practices in educational institutions.

2.3.1 The relationship between support and ADHD diagnosis

Having discussed ADHD characteristics, the kind of support offered to students with ADHD can be ascertained. Research shows that students with ADHD generally produce lower academic outcomes than those without ADHD (Garcha & Smith, 2023; Nash-Luckenbach & Friedman, 2024). Much of this research is done on young children in kindergarten, but a few other studies focusing on adolescents have come to similar conclusions. For instance, Daley and Birchwood

(2010) argue that "the negative impact of ADHD symptoms on academic attainment can be seen across the lifespan of children, *adolescents* and *young adults*" (p. 457. emphasis added). Due to impairments negatively affecting executive functions such as attention and good memory, ADHD students need support in university. However, like ASD, ADHD diagnosis is highly contested. One of the criticisms expressing doubt of ADHD as a real concern is the assertion that most diagnoses are exaggerated. Tseng (2021) reports that critics say that rather than being regarded as having ADHD, parents and teachers must work together to change the child's behaviour as they believe that the problem is how the child has been raised. Similar attitudes were reported by Greer, Sood and Metcalfe (2022) in their study on Swahili communities in Kenya, which showed that communities believed that neurodivergent traits such as ASD and ADHD "negatively reflects on the mother's style of parenting" (p. 2). This approach marginalises people with ADHD by regarding their unique traits as problems to be blamed on parents, rather than accepting them as part of human diversity (Koi, 2021). Rather than assigning blame and holding on to negative attitudes, relevant stakeholders must realise that students with ADHD need support to participate in university activities. ADHD is a recognised scientific phenomenon, needing accommodations for those affected to have full experience of social spaces, but the denial of diagnoses hinders the provision of these accommodations (American Psychiatric Association, 2022). The provision of appropriate support depends on recognition of the difficulties associated with ADHD, without this, relevant stakeholders are unlikely to be willing to provide support.

2.4 Neurodiversity and support for ASD/ADHD students

To reiterate, lack of knowledge and negative attitudes are some of the reasons people with ASD and ADHD struggle to be properly integrated into South African society, including educational institutions due to negative attitudes. To address negative attitudes, a way of thinking about neurodevelopmental disorders known as *neurodiversity* has gained research prominence (Austin & Pisano, 2017; Conradie, 2024; Powell, 2023) . In the developing world however, neurodiversity has not made much headway, as neurodevelopmental differences are still largely understood negatively. Besides dispelling negative stereotypes, knowledge production on neurodiversity in the Global South challenges the domination of the Global North on knowledge systems. To this point, Nair, Farah and Boveda (2024) note that "a decolonial lens is crucial when considering the current theoretical constructs of autism and neurodiversity as they have been exclusively viewed as emerging from the Global North" (p. 2). The participants in my study are proof that

neurodiversity is not a Western phenomenon as has been widely purported (Hirota et al, 2024). Neurodiversity first came to light in academic circles at the end of the twentieth century as an activist movement for the recognition of the rights of neurodivergent individuals (Accardo et al., 2024). The word 'neurodiversity' was first used by Judy Singer in a book titled *Neurodiversity*, which focused on the rights of persons with ASD (Singer, 1999). Since then, neurodiversity has become "a growing socio-political movement that promotes the recognition and inclusion of natural neuro-cognitive diversity" (Legault et al., 2021, p. 3) Due to its activist origin, Shields and Beversdorf (2021) similarly describe neurodiversity as an emerging aspect of identity politics. This description suggests that the neurodiversity movement not only raises awareness about the existence of neurodivergent traits, but also advocates for reforms in various academic, corporate, social and public institutions on the treatment of neurodivergent people. According to Lollini (2018, p. 74), " neurodiversity refers to a broad spectrum of cognitive, linguistic and learning functions and early-onset neurobiological conditions that impair the individual's capability for social understanding, social interaction, learning, and pragmatic and semantic communication". This definition, while recognising the broad range of cognitive characteristics in people, limits the phenomenon to impairment, thereby presenting neurodivergence in a deficit-laden image. Most neurodiversity advocates oppose the deficit-based conceptualisation because they feel that it encourages the spread of negative attitudes towards neurodivergent people. For instance, Manase (2024) argues that having a disability label results in the marginalisation of individuals that are ascribed those labels. Likewise, some neurodiversity activists challenge the deficit language by arguing that neurodiversity should be seen as an expression of difference across the human population, and not a shortfall from 'normality' (Constantino, 2018). Thus, in the neurodiversity framework, neurological differences are seen as another aspect to be embraced as part of celebrating human diversity, alongside race, gender, culture and other forms of difference (Nicolaidis, 2012**).** An example of a definition that embraces the non-deficit view of neurodiversity is that neurodiversity is "the full range of variations in cognition, learning, behaving and interacting that exist among individuals" (Accardo et al., 2024, p. 1). From this definition, neurodivergent traits, such as ASD and ADHD are seen as differences rather than deficits.

Although this study is not fully centred on the neurodiversity perspective, some of its tenets are useful for conceptualisation of ASD and ADHD. The first tenet of the neurodiversity paradigm seen as useful here is its emphasis on viewing neurodiversity positively because this addresses the

negative attitudes that dominate the limited understanding of these conditions in the Global South (Guler et al., 2018; Topkin & Roman, 2015). Secondly, by raising awareness about neurological differences, the neurodiversity approach enables the recognition of students who fall within minority neurotypes in institutions of higher learning so that their needs are catered for. Though this study shares the view of the neurodiversity movement that states that all people are unique in their neurology, it does not deny that there are inherent difficulties that accompany neurodivergence. In this regard, Conradie (2024) argues that there are levels of cognition that are in the minority that involve clear displays of difficulty. This is seen in the common specification of dyslexia, ASD, ADHD, dyspraxia and other conditions which are categorised as atypical forms of neurological difference and are associated with specific difficulties (Austin & Pisano, 2017). Some neurodiversity advocates also argue that the establishment of the labels 'neurotypical' and 'neurodivergent' contributes to marginalisation arguing that labelling some behaviours as typical suggests that those that fall outside of that threshold are abnormal and problematic (Waltz, 2020). However, I argue that the discriminatory attitudes towards neurodivergent individuals reflect people's lack of knowledge and awareness about neurodevelopmental differences, so the attitudes, not the categorisations must be addressed. Similarly, Taneja et al. (2024) argue that there should be an effort to encourage views of neurodivergent traits as "natural, valuable and in need of support" (p. 310). From this statement, the reference to the necessity of support implies an admission that people may experience difficulties as part of their unique, neurodivergent traits. Thus, the provision of support for neurodivergent individuals is not a deviation from the celebration of difference, but a measure to improve the experiences of neurodivergent people in specific spaces. However, there is a common misconception about neurodiversity, which is that providing support services for neurodivergent people contradicts the goal of embracing their uniqueness. Nevertheless, Kuder et al. (2023) argue that embracing uniqueness does not negate the fact that there are difficulties that people face due to being neurodivergent. Support in the educational context, therefore, does not equate to devaluing diversity but is meant to provide students with equal opportunities to succeed as any other student. Thus, the acknowledgement of neurodiversity as natural and positive does not negate the necessity of support, nor does it imply a negative attitude towards them. To reiterate, the provision of support is predicated on the fact that some difficulties in functioning do exist in neurodivergent people, such as those with ASD and ADHD (Shields & Beversdorf, 2021). For these reasons, while ADHD and ASD are sometimes

referred to in this thesis as disorders and conditions and the impairments that they entail are noted, there is a constant emphasis on upholding positive and inclusive views of the peculiarities that accompany them.

Moreover, the distinction between neurotypical and neurodivergent behaviours is useful for this study in that the categorisation is not just a label but a description of the unique characteristics and necessary support needed by people belonging to each category. Due to being in the minority, neurodivergent people tend to struggle with social interaction, therefore they need accommodations in various spaces such as universities to participate fully (Powell, 2023). In essence, I acknowledge that the recognition of neurodiversity does not nullify the need for support, but provides reasons for why the support is needed by people with unique neurodivergent traits. It is worth noting however, that while ASD and ADHD are acknowledged as existing disorders and conditions in this study, the term 'disability' is not accepted as a fitting description for them. The disability label, therefore, is not used in this study to refer to ASD and ADHD as it carries negative connotations promoted by the medical model, which this study opposes as I later explain. It should also be noted that the word 'disability' is not entirely omitted from the thesis, but appears due to it being part of the statements of participants and some literature sources that are relevant. Moreover, the positionality of the study is within the field of inclusive education, which includes studies about the meaning of disability (Smart, 2009). Therefore, the theoretical framing of what constitutes disability is addressed by the study. Thus, later in this chapter, there is a discussion of models of disability and their relevance to inclusive education, along with an explanation of the model of disability that aligns with the objectives of the study and my views of inclusive education. Within academic institutions, one can argue that negative attitudes may be perpetuated by the categorisation of neurodevelopmental disorders as disabilities (Sauermilch et al., 2024). Neurodiversity advocates argue that regarding people with ASD, ADHD and other neurodevelopmental conditions as disabled portrays them as helpless and needing the assistance of others to function at the level society deems normal (Whelpley & Woznyj, 2023). This pathologisation, according to neurodiversity advocates, should be eradicated because the mentality of trying to correct neurodivergent behaviour carries the assumption that that behaviour is a problem, which is discriminatory (Oliver, 1996). While the negative attitudes must be addressed, denial of the difficulties of being neurodivergent is not the way to achieve it. Hughes (2016) emphasises this reality by asserting that "while the neurodiversity movement is ultimately aimed

at changing society to be more inclusive and supportive of neurodivergent individuals, advocates stress that this goal cannot be achieved without acknowledging both challenges and strengths that come with neurodivergence" (p. 5). Both the changing of negative attitudes and the acknowledgement of challenges and strengths are vital in this study. This is because the study seeks to contribute towards efforts to make South African universities more inclusive of students with ADHD and ASD by addressing the challenges that come with lack of awareness of neurodiversity but also to highlight the strategies that are proving effective in helping students with these conditions to overcome challenges that are associated with being neurodivergent.

Furthermore, the need to address the conceptualisations of disability stems from the intention to ensure that the study is relevant to the South African higher education context. Notably, across the Education departments and other government departments such as Social Development and Justice, the wellbeing of people with ASD, ADHD and other forms of neurodiversity is considered a disability issue (Department of Education, 2001; Department of Women, Youth and Persons with Disabilities, 2021). This shows that there is generally an understanding in the South African context that ASD and ADHD are disabilities. Conversely, in Western contexts, there have been significant changes in understanding that have begun to result in neurodiversity being seen as not falling within the disability category (Austin & Pisano, 2017; Manase, 2024). This is not the case in South Africa, and in the higher education sector in particular, the disability categorisation is evidenced by the fact that the support and accommodations for students with ADHD and ASD are the responsibilities of 'Disability Units'. It is, therefore, necessary to interrogate the conceptualisations of disability in this study. In addition, most of the professionals that have the knowledge needed to raise awareness about ASD and ADHD are in specialised disability services departments such as Disability Units, therefore the work they have already started is a good starting place to further advance knowledge of the disorders.

2.5 Arguments for and against neurodiversity

Some criticisms have been levelled against the neurodiversity movement, which are relevant for consideration in this study focusing on the experiences of neurodivergent students. Regarding the stance of neurodiversity advocates on the pathologisation of neurological differences, critics argue that significant deviation from the normal human functioning "cannot be defined as anything other than pathology" (Lollini, 2018, p. 77). Furthermore, Lollini (2018) adds that critics add to this

argument that the diversity discourse which characterises the neurodiversity movement should only be applied to people who are close enough to 'normal functioning'. This presents a problem because it is difficult to determine who has the authority to determine what is considered normal and what can be regarded as near enough to normality to be viewed as positive difference. In the context of higher education, this 'othering' of students who do not exhibit behaviour that is considered normal leads to measures that are taken to 'fix' the neurodivergent student, which leads to ignorance on the need for the institutions to change and be more accommodating of differences. In the South African context, Mutanga (2017) states that many higher education institutions have ignored their needs in order to eradicate the legacy of apartheid and the perpetuation of barriers to the learning of students with disabilities.

The neurodiversity movement rejects pathologisation of neurodiversity because they feel that it promotes corrective thinking in which a person with ADHD for example, receives medical treatments and psychological interventions to align them with 'normal functioning' (Constantino, 2018). Employing the social model of disability, neurodiversity advocates argue that attempting to 'cure' and 'normalise' people implies that they are inadequate and unnatural, which is demeaning and therefore not in the best interests of the neurodivergent person (Austin & Pisano, 2017). In response to this view, sceptics argue that the neurodiversity movement poses a danger to people with neurodevelopmental disorders because avoiding pathologisation means they are discouraging neurodivergent people from seeking help in the form of professional treatment and guidance that may improve their quality of life (Lollini, 2018). In response to the scepticism on their stance on pathologisation, neurodiversity advocates argue that by avoiding pathologisation, they are not encouraging the rejection of medical treatment, but rather the attitude of seeing the condition itself as a deficit (Laitila, 2018; Lollini, 2018). Additionally, interventions are encouraged as a means to assist neurodivergent people to live independent and full lives with their neurodivergent traits, rather than attempting to 'cure' them. This is a useful approach because ASD and ADHD are lifelong conditions (Quenneville et al., 2022; White et al., 2017). However, people living with these conditions can benefit from medical attention and behavioural interventions. In essence, both the curing of neurodiversity and the rejection of interventions for those living with conditions like ASD and ADHD are not beneficial, so appropriate support and resources should be made available for students with ASD and ADHD in higher education institutions. This study therefore holds that healthcare and interventions for students with ASD and ADHD are necessary

and will investigate the extent to which universities make service available to ensure that students get opportunities to succeed and participate fully in tertiary education.

2.6 The educational history of South Africa and the introduction of new policies

As briefly discussed earlier, the historic discrimination in South Africa was promoted and instituted by official policies that the apartheid regime introduced. Among these were educational legislation that deliberately created an unequal society by teaching people according to their races (Christie & Collins, 1982). The Bantu Education Act (Union of South Africa, 1953) was such a legislative tool that ensured that employment would benefit White people over other races through giving only a watered-down basic education curriculum to the Black majority (Moodley, 2017). This shows that education can contribute to social inequality and oppression and the perpetuation of inequality in society (Althusser, 2006). Similar to how the Bantu Education Act segregated the basic education system, the Extension of University Education Act was used to racially manipulate higher education. According to Moulder (1975), this legislation mandated that from 1960, Black students would be prohibited from enrolling in public universities without government permission, while also designating various universities for specific racial groups. Essentially, educational policies such as the Extension of University Education Act contributed to the overall agenda of the government to divide the races economically and socially (Davies, 1996). Inevitably, the universities designated for White students got better treatment and resources from the government (Ndlovu-Gatsheni, 2017). With the fall of the apartheid regime, however, discriminatory laws and policies were needed, and the legislative instruments governing education were to be included in this process. Since 1994, significant change has been introduced to the methods and policies for acquiring access to university education in post-apartheid South Africa, particularly in improving access for Black people (Du Plessis, 2013; Mutanga, 2018). Race is no longer used as a criterion in determining what university a prospective student can be admitted to. This aligns with the Constitutional imperative that "everyone has the right to further education and training, which the state, through reasonable measures, must make progressively available and accessible" (Constitution of the Republic of South Africa, 1996, p. 12). Still, more efforts are needed to ensure that all students can participate fully in university life, including students with disabilities such as ASD and ADHD.

Since education was used to divide South Africa economically, the equalisation of the country's economic opportunities significantly depends on eradicating educational exclusion. Crucially, this must be a holistic reform of the entire education system (Causton-Theoharis et al., 2011). Regrettably, reform efforts have focused on race and neglected other forms of exclusion such as marginalisation of people with disabilities and neurodivergence (Moodley, 2017). Under the apartheid regime, inclusive education was not prioritised, rather, education was aimed at providing labour for economic growth (Christie & Collins, 1982). People with disabilities were regarded as liabilities and therefore received low-grade education, and hardly ever got employed. However, their exclusion was still subject to the hegemonic race relations across South Africa. Though all people with disabilities were taught in special schools, such schools were racially specific and the best of them were only attended by White learners. In order to reverse this historical segregation, the South African government aimed to ensure that all people, regardless of disability, are taught in the same inclusive environment (Department of Education, 2001). Little progress has been made towards this goal, and the majority of learners with disabilities are still taught in special schools (Department of Education, 2016). Where there has been research focus on inclusive education in South Africa, higher education gets less attention than basic education (Matshedisho, 2007; Mutanga, 2018). As discussed above, race was central to the discrimination during the apartheid regime, but now in post-apartheid South Africa, attention must be given to other forms of exclusion, including marginalisation of neurodivergent students.

Currently, inclusive education remains a theoretical concept in the South African education system. At the end of apartheid, the government commenced efforts to transform basic education into an inclusive system, and comprehensive policies were compiled to show that intent (Department of Education, 1996, 2001, 2010a, 2010b). However, higher education institutions mainly progressed towards racial inclusion while little else was prioritised (Howell, 2006; Njoko, 2018). This led to the neglect of other non-racial forms of discrimination that still persist, including the exclusion of neurodivergent students (Moodley, 2017; Moodley & Graham, 2015). Official guidelines were also not given on how the inclusion of students with disabilities should be instituted, which meant that universities and colleges operated on internal policies which were not subject to any clear national mandates (Department of Higher Education and Training, 2018). Internal policies are necessary as universities are more independent institutions which should not depend entirely on government-led transformation. However, it can be argued that to ensure the

transformation of the entire education system, centralised laws and policies are needed (Rambe & Moeti, 2017). Since the end of apartheid, there has been no official policy or guideline document for post-school institutions on inclusive education (Mutanga, 2018). To complement the implementation of White Paper 6 in basic education, the Department of Higher Education and Training developed the White Paper for Post-School Education and Training (Department of Higher Education and Training, 2014). Though this policy encourages the celebration of diversity and equal access of all persons in the education system, including students with disabilities, it lacks any focus on neurological diversity. Moreover, it is only a white paper and not an official legislative act, and therefore cannot be lawfully enforced; it is only a recommendation (McKinney & Swartz, 2022). Due to this status, Ntombela (2022) argues that individual institutions of higher learning have been allowed to interpret and implement the policy as they see fit, or not to implement it at all. Effectively, higher education institutions have remained free to determine for themselves how to accommodate disability, and to decide which impairments they could make provisions for.As early as 2011, the Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM) Report stated in response to the lack of guidelines for inclusive education in higher education that what was required was "a strong recommendation to promote standards and adherence is the formulation of a National Disability Policy and Strategic Framework for HEIs by relevant stakeholders which individual institutions may customise and adopt" (p. 11). This only materialised recently when the Department of Higher Education and Training launched the Strategic Policy Framework on Disability for the Post-school Education and Training System (Department of Higher Education and Training, 2018). Its prelude states: "until now, there has been no formal policy to address the inclusion of people with disabilities in the PSET *(Post-school Education and Training)* system" (Department of Higher Education and Training, 2018, p. i. emphasis added). It further emphasises that the previous lack of strict guidelines on the inclusion of students with special needs is now an important goal for the government with respect to higher education institutions. Given the delay in introducing this policy, it can be reasonably assumed that many universities in South Africa are still in the early stages of becoming inclusive, at least as this new policy instructs. It is also worth noting that in terms of guidelines for support, this policy is still lacking and needs further, more pointed instruments to put its imperatives into effect. This is argued by de Beer (2022), who assert that "many international and national policies and bills are available… what is now necessary is advocacy for what those policy parameters look like

within the context of higher education" (p. 8). The strategic framework is a platform on which these practical steps can be built, but is not itself a permanent solution for the policy vacuum on inclusive education in South African higher education. Thus, Zongozzi and Ngubane (2025) call for "recommendations and strategies that promote full inclusion and guarantee fair educational opportunities for all students" (p. 3). This speaks to the need for clarity in existing policies in the South African education system. At the recommendation of the FOTIM report in 2011, nine South African universities established the Higher Education Disability Services Association (HEDSA). This organisation serves as a platform for DUs from different universities to share information and agree on reasonable accommodation standards. While this is important, the need for detailed official policies on inclusion in higher education remains.

The lack of enforcement in implementing legislation is a major constraint to the development of inclusive education in South Africa, as seen in the basic education system. Though the White Paper 6 is hailed as a revolutionary policy on inclusive education, its lack of impact is indicative of a lack of commitment to take the necessary action to implement its goals (Jacobs & Govender, 2020). A significant amount of research has pointed out the slow transformation of the basic education system, despite the presence of this policy, highlighting that there is a disparity between the policy and practices in pedagogy, attitudes and governance in schools (Donohue & Bornman, 2014; Engelbrecht, 2006; Engelbrecht et al., 2016; Swart et al., 2002). McKinney and Swartz (2022) argue that this is due to the policy not being made legally compulsory, the "White Paper 6 remains a 'White Article'… it has not yet been adopted as a legislative Act and subsequently only serves as a guide and not enforceable by law" (p. 370). Likewise, Van Schalkwyk et al. (2022) assert that the transformation of education in South Africa is stalled because of the lack of implementation of existing policies. In effect, the policies that have been introduced have not been effective due to the lack of action that followed their introduction.

2.7 Global perspectives on support for neurodivergent students

Having discussed the historical exclusion of different groups in South African education and the lack of neurodiversity focus, I now provide an overview of the international developments in support for neurodivergent students. This puts into perspective how universities from different contexts support neurodivergent students, and how these strategies may be useful in South Africa, from where, as I have demonstrated thus far, there is a lack of published literature to this effect.

Firstly, I consider the Global North, as there has been more research focus and neurodiversity-friendly approaches have been tested for longer. Many studies have been conducted in Global North contexts, showing improvements in support strategies and resources over time, while some studies highlight what still needs to be improved. In a study on university experiences for neurodivergent and non-neurodivergent students in Australia and New Zealand, Kennedy, Richdale and Lawson (2025) found that neurodivergent students were highly reluctant to disclose their conditions to their universities. Despite there being sufficient resources to support them, these students still hide their diagnoses, mainly due to stigma. This demonstrates that even with the availability of support mechanisms, without broader positive societal attitudes, students may still experience marginalisation. This is consistent with McDowall and Kiseleva's (2024) review of supports for neurodivergent university students in the United Kingdom, which showed that some students struggled despite having access to modern support technology. They therefore point to "technology and infrastructure availability not equalling automatic mastery and skill" (p. 8). It is evident that the Global North is ahead in terms of technology and knowledge transmission about neurodiversity, owing to the relatively high research output. However, widespread positive changes in how societies in these contexts relate to neurodivergent people are yet to be realised.

Furthermore, studies in the Global North show that there is a relatively higher regard for neurological diversity in official spaces, with existing national policies and institutional mandates for respect for neurological diversity evident. For instance, Pineda and Mishra (2023) state that "there is a consensus that diversity is a common idea in the Global North, but it is still unclear whether it has become a part of a world culture that has also permeated to higher education in the Global South" (p. 866). To promote a similar regard for diversity in developing countries, more research and insights from individuals with relevant experiences need to be highlighted where strategies have been successful in including neurodivergent students in Global South universities. To this end, Gouws (2025), an ASD self-advocate, notes that "there is limited data and research available on the mental health and support of autistic individuals in the Global South, especially in South Africa" (p. 8). In India for example, Taneja et al. (2024) share that "a student who initially struggled to keep up with the lectures and group discussions blossomed when assigned an independent research project on a topic that deeply interested him" (p. 3). This is an isolated case, but there may be more like it in the South African context where strategies that may not require sophisticated resources have led to positive changes, and these must be highlighted. This study

seeks to respond to this Global South research gap by providing uniquely South African perspectives, taking into account cultural aspects from this context that underpin the ways in which students with ASD and ADHD in local universities are supported and treated. With the lack of change of attitudes in the Global North despite more extensive research on neurodiversity, this study does not seek to unquestionably adopt approaches from Global North research in the South African context. Rather, in this section I have shown that while there may be advances in technology, the North has not made much progress in developing positive perceptions of neurodiversity, and support strategies are likewise lacking. Thus, this study incorporates the changing of negative attitudes about neurodiversity as a central theme and strategy in the transformation of South African universities into neurodiversity-friendly spaces.

2.8 The impact of models of disability on inclusive education

Studies in inclusive education have followed trends which were largely influenced by models of disability (Shaw, 2021). Models of disability are ways of defining what constitutes disability and impairment, and also determining the approaches to be taken in accommodating people with disabilities in various spaces such as educational institutions, professional spaces and broader society (Smart, 2009). Dirth and Branscombe (2017) state that "models of disability go beyond a simple definition of disability and instead exist as an analytical frame from which to assess where disability comes from, what we should do about it and what it means to society" (p. 414). This shows the importance of models in that they are not only forms of thinking, but they also inform practical steps to create inclusive environments in social spaces such as educational institutions. Models play a significant part in developing the understanding of impairment, and thus, they are vital in advocating for inclusive education in the present era to discuss the ideological developments that led to current views of disability. Over time, with increased research and knowledge sharing, disability has come to be understood in different ways around the globe, from metaphysical understandings to scholarly theoretical conceptualisations (Haegele & Hodge, 2016). On the theoretical side, the move in conceptualising disability in recent history has been predominantly from the medical model to the social model (Burchardt, 2004; Masoga & Maoto, 2021). Thus, I discuss below these two main models that have impacted disability studies and inclusive education; the medical and social models and outline why I have adopted the cultural model instead. In doing so, I will highlight why the cultural model specifically fits into this study,

based on it being focused on neurodiversity, which is a phenomenon so intricate and multifaceted that it requires a versatile approach, such as the cultural model to analyse it fully.

2.8.1 The medical model

The medical model came into existence when medical practitioners rose in prominence above religious leaders in explaining social and biological aspects of human life (Haegele & Hodge, 2016). Its main perspective on impairment is that it is a result of deficiencies existing in the individual and seeks the 'correction' of the deficiencies (Beaudry, 2016). It therefore promotes a negative view of differences and not their acceptance. In the educational setting, the medical model has led to the development of the special education approach. This entails the establishment of special schools which cater for learners with specific disabilities, making use of teachers trained specifically to teach learners with disabilities (Engelbrecht et al., 2016). In a mainstream setting, the medical model leads to the establishment of separate special classes in which students with disabilities are taught, which, in the South African context, is a practice dating back to the colonial era (Naicker, 2018). The drive for inclusive education in South Africa has therefore, focused on placing learners of different abilities and learning styles in mainstream educational settings to eradicate exclusion. This is a move away from special education to inclusive education, but also a move from the medical model to the social model, hence inclusive education in policy guidelines in South Africa is framed using the social model (Department of Education, 2001, 2010).

2.8.2 The social model

The move from the medical model to the social model in South Africa is reflective of the global trends in disability studies. Most advocates of inclusion in one way or another, seek to move away from the ideology of the medical model because of how it limits meaningful participation of students with disabilities in education. It regards disability as a problem that resides in an individual who cannot fit into the broader society and therefore, the medical model takes a less-tolerant attitude towards difference (Oliver, 2013). In contrast, the social model defines disability as the result of the lack of willingness of society to provide accommodations for people with impairments, and the model differentiates between impairment and disability (Constantino, 2018). Impairment, from this perspective, turns into disability when the support needed by the person with the impairment is not given by society or the educational institution that the impaired person

belongs to (Lollini, 2018). The change that this model, therefore, aims for is to correct societal attitudes.

Importantly, the social model is based on human rights, specifically the right to education without discrimination. Human rights are central to educational transformation, especially in countries which experienced human rights violations in recent history, such as South Africa. Education in South Africa was influenced by the medical model, but now the democratic government has, at least in policy statements, chosen to use the social model as a guiding principle for the education of people with disabilities (Department of Education, 2001). The social model aims to change societal attitudes towards disability; rather than seeing the deficit in the person with a disability, it regards societal attitudes and shortfalls in providing adequate support to people with disabilities as the cause of difficulties that are experienced by persons with disabilities (Oliver, 2013). As stated in White Paper 6, inclusive education is aimed at transforming society towards the inclusion of people with disabilities (Department of Education, 2001). This is well in line with the social model, which does not seek to transform the affected individual, but to foster a more conducive social environment for them.

Considering human rights, the social model is also the preferred framework of conceptualising disability in international declarations and legislations (United Nations General Assembly, 2006; World Health Organisation (WHO), 1980). With local legislation following through with adherence to the social model, exclusion still persists around the world despite the promotion of this model (Nel et al., 2011). This may be indicative of the model's inefficiency to achieve inclusivity, and as will be argued later, the social model fails in speaking directly to and transforming the South African educational scene. Thus, a different approach needs to be taken, which will be relevant to the local context primarily by being sensitive to local issues, norms, and values. In this study, the cultural model of disability is adopted as a framework for conceptualising disability and dealing with prejudices around it (Devlieger, 2005). This study does not follow the common trend of weighing into the debate surrounding the medical and social models but seeks to show how the cultural model can address important aspects that disability models have so far neglected. The specific application of the cultural model is to conceptualise the acceptance of neurological difference and to address exclusion while maintaining relevance to the local context and the forms of exclusion prevalent specifically in the South African university space. Below is

a discussion of the impact of the use of the social model, which is the dominant model of disability for implementing inclusion in South Africa.

The social model is useful in that it identifies attitudinal barriers to inclusion, which is a major factor that leads to the exclusion of students with disabilities worldwide. In advocating for changed attitudes towards disability, Constantino (2018) argues that the accommodation of difference in people is essential to achieving equality in society. With its central claim being that disability is a result of how society treats people with disabilities, the social model offers little else but changing people's perceptions and treatment of individuals with disabilities (Terzi, 2005). What this has led to is corporations, industries, schools, universities and the international community at large, expressing the need for society to see and treat all persons equally, yet there have been little changes in the access to opportunities for people with disabilities (Shakespeare, 2006). To an extent, the popularity of this model has led to changes in ideologies on paper which do not really translate into positive change for people with disabilities. In essence, the social model has taken a major step by addressing negative attitudes towards disability, but this is not enough on its own to achieve inclusive education systems. To free people with impairments from discrimination, Shakespeare (2006) argues that "society will have to provide extra resources to meet the needs and overcome the disadvantage which arises from impairment, not just work to minimise discrimination" (p. 202). This opposes the notion of solely focusing on attitudes which the social model promotes, favouring a more proactive approach of changing attitudes while providing support for people with disabilities according to their specific needs and impairments (Oliver, 2013).

As stated above, the social model dominates research and legislation on the wellbeing of persons with disabilities. However, the effectiveness of this model is doubtful because negative attitudes still persist and people with disabilities remain on the fringes of society despite its application (Mutanga, 2018). One of the noted shortfalls of the social model is that it assumes that all the challenges of people with disabilities are the results of the unwillingness of society to accommodate them (Burchardt, 2004). The medical model is reductive in pathologising impairment as residing entirely in the person with an impairment, while the social model is reductive in suggesting that the only cause of difficulties experienced by people with disabilities is negative attitudes. Proponents of the social model argue that disability is entirely a social

construct and not an inherent attribute of a person, arguing that only impairment is a real bodily characteristic but the resulting difficulty is brought by society (Oliver, 1996, 2013). This approach is deemed overly simplistic by some researchers (Reindal, 2016; Terzi, 2005). Allan (2010) makes a similar assertion by stating that the social model's removal of the disabled body from disability studies is among the chief reasons why there has been little progress towards inclusivity. It should be noted that there have been positive changes such as the development of disability-friendly spaces in universities applying social model principles, but more can be achieved by thinking beyond just the changing of attitudes and altering of the physical environment. Acknowledging the physical, physiological aspect of disability is important in developing an understanding of the functioning of the human body with an impairment, therefore attributing all challenges of disability to social attitudes ignores an important aspect.

2.8.3 The cultural model

This study uses the ideas from the cultural model to guide its conceptualisation of disability. The cultural model, as argued below, can respond to the inadequacies of previous disability models. It advocates for the acknowledgement of difference based on disability and promotes a view of difference in a positive light, rather than as a reason for discrimination. Retief and Letšosa (2018) state that "while the medical model and the social model each focus on only one factor in their approach to disability, the cultural model focuses on a range of cultural factors" (p. 6). The narrow focus of the medical model is that of regarding all challenges of disabled people to stem from their deviation from the perceived normal functioning of a human being (Reindal, 2016). The social model on the other hand, oversimplifies challenges faced by people with disabilities by arguing that societal attitudes account for all the challenges to persons with disabilities (Terzi, 2005). The cultural model is broader and proposes the centralisation of culture in discussing social factors such as disability. Crucially, the conceptualisation of culture in this model is sensitive to the specific context in which the inquiry or analysis is made, yet being cognisant of how far culture can reach. For example, academia has a common culture of scientific enquiry that governs universities worldwide, such that while different universities are influenced by their locations, virtually all are subject to rules of scientific enquiry (Cloete & Maassen, 2015). The cultural model does not limit culture to norms and customs of a particular ethnic group or tribe as is commonly done. Waldschmidt (2018) explains that culture is "an interdisciplinary concept with a transnational linguistic history" (p. 71). Being interdisciplinary, a cultural view of disability and

the ideology it produces highlights how people with disabilities are affected in different areas of life. By highlighting the linguistic history, Waldschmidt (2018) shows the significance that the use of language can have on the lives of people, just as Foucault (1994) argued that discursive practices can reflect societal attitudes and shape people's realities. Language as a cultural tool can influence the treatment of unique groups such as people with disabilities.

South Africa needs a broad approach such as the cultural model due to its intricate and diverse society. Disability in South Africa touches on several other factors, therefore it cannot be properly understood in isolation. For instance, Moodley (2017) argues that "there is a complex interaction between race, gender and age in South Africa" (p. 291). One can face marginalisation because they are female, Black, or disabled; in some cases, all three factors may coexist, hence the need to take an approach that combines all contributing factors to exclusion. Besides race, gender and age, there are cultural and religious stereotypes against people with disabilities that have to be addressed as well to improve their wellbeing (Bakare & Munir, 2011). Discrimination is multifaceted and results from the interplay of societal norms and different points of perceived difference. Using the term intersectionality, Crenshaw (2006) argues that there are various ways in which racial and gender differences can interact. I further argue that even disability, when added to these forms of difference worsens the discrimination plight of students at universities.

By taking a cultural approach, this study has addressed the overreliance of South Africa's education system on Western ideologies to solve local problems. An increasing body of research attributes the slow progress of inclusive education in South Africa to the adoption of policies and teaching approaches that have little local relevance (Donohue & Bornman, 2015; Engelbrecht et al., 2016; Van Rooyen & Le Grange, 2003). Guided by the cultural model, the study defines constructions of what disability means in South Africa, namely in higher education, focusing on students with ASD and ADHD. In addressing exclusion in South Africa, this study focuses on universities due to the lack of attention they receive in inclusive research. South African universities were among the historical sites of the struggle against apartheid, most notably through the rise of student activist groups like the Black Consciousness movement (BC) (Morgan, 2020). Within this movement, race was upheld as the main cause of oppression to overcome, and it was understood by activists that the diminishing of racial prejudice would spell the end of oppression (Hirschmann, 1990). In essence, racial discrimination was prioritised over other forms of

marginalisation by BC and other activist movements. Gqola (2001) problematises this creation of a hierarchy for causes of oppression, arguing that it leads to the neglect of subtle forms of oppression of other marginalised groups. She states that:

> BC ideology rests on the unsatisfactory premise that race is the primary oppressive force for all those racially subjugated in South Africa…it pronounces a hierarchy of oppressions...exploring the primary oppression invariably leads to the repudiation of all other forms of oppression. (Gqola, 2001, p. 134)

Likewise, the recent #feesmustfall movement was criticised for overlooking other forms of oppression such as gender discrimination when fighting for free education and the decolonisation of higher education in South Africa (Ndlovu-Gatsheni, 2017). In the literature documenting both movements, what is missing is a critique that demonstrates that the struggles of people with disabilities have been ignored by organised student liberation movements. This suggests that the neglect of the rights of people with disabilities in universities both historically and currently is present in the administrative level of the institutions, as well as within student populations themselves. Despite this backdrop, an objective to transform South African higher education into a well-functioning, equal, and inclusive system still exists (Department of Higher Education and Training, 2018), but the possibilities of its realisation are increasingly low. Though policy expresses the goal of an inclusive higher education system, little effort has been put into this sector of education in comparison with basic education (Mutanga, 2018).

One of the factors that make universities more complex than basic educational institutions for implementing inclusion is, as discussed above, their elitist nature. Due to high achievement standards and competitiveness among universities, elitism has grown, and Kivistö and Tirronen (2012) argue that rankings have also contributed to this mindset. Moreover, according to Rambe and Moeti (2017), universities aspire for elite status, which results in their narrow admission criteria through which they try to obtain only the best students. Many applicants are rejected due to high academic requirements, making the university selection process elitist and exclusionary. This leads to the conclusion that "universities are among the most discriminating institutions" (Morgado et al., 2016, p. 639). Universities, as academic institutions need academic selection criteria because prior skills in specific study areas are needed for one to succeed in a university course. It is worth noting however, that the ambition of universities should not cause disadvantage

to students. Walker (2016) reports that universities insist on setting high standards of academic achievement with little regard for the extent to which this affects students' chances of success.

In investigating how universities cater for students with disabilities, this study makes a distinction on the kinds of services offered. As mentioned briefly in the introduction, services for students with disabilities can be separated into two categories: student services and learning development. As explained earlier, the former refers to non-academic provisions while the latter specifically entails services that are vital for the academic development of students (Howell, 2006). Generally, student services depend on the availability of funds for the provision of physical resources, and universities, with their large budgets, are relatively more able to provide these services than other educational institutions (Howell & Lazarus, 2003). These services are mainly the responsibilities of a Disability Unit within a university, and Matshedisho (2007) states that establishing Disability Units "depends on the availability of funding and the convenience with which support can be provided" (p. 687). Conversely, learning development depends on the willingness of the relevant stakeholders, including lectures and university management to develop a culture of support that enables neurodivergent students to participate meaningfully in the educational space.

2.9 The role of higher education in the transformation of South African society

Having discussed the impact that models of disability have had on the development of inclusive education, I now discuss the role that universities can play in transforming societies to be more inclusive. This is relevant to the objectives of this study because in investigating whether South African universities are inclusive, I can also highlight the responsibility of these institutions in the context of the need to instil inclusive practices and attitudes in the broader society. This section therefore highlights the influence of universities on societies globally, and more specifically on the South African society.

There are many other functions that a university can fulfil. Apart from the production of skilled labour to support the economy, universities also serve the role of transforming local societies through the education they provide (Kochung, 2011; Singh, 2004). In the South African context, transformation entails the enabling of the marginalised and economically excluded members of the population to access better opportunities as historically education served as a tool for social inequality (Department of Education, 2001). Moreover, education is connected to the context in which it is obtained and can be used as a tool for social change, this can happen at all levels of

education, but the higher education sector has been neglected in this respect in the South African context (Mutanga, 2018). The development of inclusive practices in this sector is crucial to ensure that it does not remain behind when lower sectors of education become inclusive. This would be inadequate in terms of achieving overall social justice. Inclusive practices in universities directly contribute to social justice and transformation because graduates can take taught values to their respective fields and communities (Price et al., 2021). Tertiary education, particularly university education, plays a key role in the political, economic, and broader social state of a country. On the global scale, universities are tasked with contributing to the Sustainable Development goals (SDGs), through innovation, entrepreneurial training and social transformation. One of the most important of the SDGs, and certainly the most relevant to this study is goal 4, which is to advance towards inclusive and equal education of the highest quality at all levels of study (World Bank, 2015). Higher education is a part of this drive, and as a relatively neglected sector, it should be given enough focus to enable lifelong opportunities for marginalised groups including people with disabilities, to succeed educationally. Much of the research done on inclusive education is produced at universities, which puts them in position to promote inclusive education by educating the public. However, universities should not only educate society about inclusion, but they should also become inclusive institutions themselves, setting an example.

Though inclusive education is a system-wide goal (UNESCO, 1994), it faces greater resistance in universities as higher education institutions are comparatively more autonomous than basic education institutions. This has been a reality for much of history, but political monopoly has taken effect in higher education in recent times, and according to Schubert and Kroll (2016), this was intensified by the heightened interest of politicians in the 1980s in tertiary institutions. The result of political interference is that universities have tended to reflect the prevailing political climate and ideologies dominating the spaces they occupy. Around that period, at the height of apartheid rule, South Africa, likewise, had a higher education system reflective of the separatism of the regime, with universities being attended according to race (Moulder, 1975). By implication, being in a democratic dispensation where all citizens have equal rights, including the right to education, South African universities should be inclusive environments with no marginalisation of previously disadvantaged groups. Conversely, the higher education system still bears the marks of exclusion, with students with disabilities still experiencing exclusion in the academic environment (Mutanga, 2018).

It is worth noting also that the influence on universities is not only from local society and government, but it also straddles international borders. The modern university is not only influenced by local politics, but international trends have a greater foothold as well due to interdependence between countries and education systems, because of globalisation. Globalisation of universities is explained by Zeleza (2002) as the "internationalisation of university personnel and programmes in terms of teaching, research, and public service" (p. 1). Essentially, the running and the modelling of universities is now shaped by the need to meet both local needs and global demands, and the healthy balance of both sets of demands is the challenge of all higher education institutions. This has proven to be complex due to the influence of elitism, which causes universities to prioritise global recognition over local issues and needs (Zeleza, 2002). A key role of universities is transformation of society by producing professionals who can contribute to social change and revolutionise industries. This is crucial in countries like South Africa where inequality was enforced as a matter of law through the education system during apartheid. In South Africa, rather than leading transformation of societies, universities perpetuated inequality during apartheid and continue to do so in the age of democracy to some extent. Cloete and Maassen (2015) argue to this effect that universities in developing countries have engaged in "recruitment of social elites – first for the colonial administration and later for the new political regimes" (p. 6). This might explain why, despite the sharp increase of black students in South African universities, they still occupy the lower levels of society and the economy.

As knowledge hubs, universities are well-placed to provide better understanding of social issues such as disability and help in bringing about positive change. Universities are not only producers of knowledge, but they are also platforms for existing forms of knowledge to be interrogated, and neurodiversity is one subject whose conceptualisation should be revisited. Impairment and disability, in the South African, and broader African context, is mostly understood negatively. Howell et al. (2019) therefore, argue that the common understanding of disability in Africa has an "inherent deficit discourse" (p. 1722). While it is true that there is generally negative discourse about disability in Africa, its common attribution to African culture is largely misguided. Many indigenous customs in most African cultures centre around the value of treating all persons with respect and dignity, including people with disabilities. Ndlovu (2023) argues that precolonial African society had both negative and positive attitudes towards disability, and that the positive attitudes instilled of old should also be alluded to in academic and public forums.

Further, current constraints to the betterment of the lives of people with disabilities are traceable to the colonial era. The existence of negative ideologies shapes the experiences of disabled people, who continue to experience marginalisation across the continent. Western ideas such as the medical model continue to dominate African educational, professional and social environments (Retief & Letšosa, 2018). In response, other Western worldviews such as the social model have also been imposed on African communities as solutions to exclusion without success (Oliver, 2013; Terzi, 2005). The models are not, by themselves worthless, but the approach of researchers and international bodies who have attempted to implement a one-size-fits-all approach across the world has proved ineffective (Waldschmidt, 2018). The continued lack of research on inclusion of students with ADHD, ASD and related neurodevelopmental disorders, results in the adoption of methods and principles from the West which may not be addressing local problems. Local universities have contributed to epistemic dependency on the West, and locally relevant knowledge is still lacking in South African universities (Andrews & Okpanachi, 2012). The dearth of focus on local issues and the dependency of the Global North contributes to the delay of much needed transformation of the local higher education system and the society it is supposed to help develop.

One of the main roles of education in general is the development of human livelihoods, not just to raise awareness about injustices, but to provide a way out of oppression. This is reflected on the global stage by the United Nations' human development agenda which seeks to improve income generation through providing high quality education, especially to people in developing countries, where most injustices and human rights violations still occur (United Nations Development Programme, 2019). Improvement of livelihoods can happen through teaching learners according to the challenges they experience at specific ages, to address relevant issues. In light of this, the development of inclusive education systems is not only to be focused on reaching all regions of the world, but also to make a positive impact on students at all levels of study (UNESCO, 1994). This includes tertiary education, which, despite receiving less attention from researchers and officials around the world, is a sector crucial for the development of practices that foster the inclusion of people with disabilities (Mutanga, 2017). The role of universities in human development is to prepare professionals for employment and the ways they go about training students has far-reaching implications (Olssen et al., 2004; Walker, 2016). Given the potential of education to develop lives, access to it or the lack of it can have a major impact on the general state of societies and countries. In emphasising the potential impact of developing inclusive

education, Salmi and D'Addio (2021, p. 1) state that "ensuring inclusive access and success is essential to achieve social justice and economic efficiency by encouraging the realisation of the full potential of all young people". This presents inclusive education as potentially beneficial to individuals as well as the country at large, which is reason enough for it to be treated as a priority. Moreover, since it serves a preparatory role for the professional and employment space, the deprivation of higher education to individuals or a particular population group can result in lifelong disadvantage. Here, Schubert and Kroll (2016) argue that the failures of an education system to equalise academic opportunities usually leads to an unequal professional society and, ultimately, an unequal economic environment. South Africa is a convincing case for this assertion because economic inequality and lack of access to higher education still persists in the country and can be linked to one another.

Not only is education a means towards redressing the injustices of the past in South Africa, but it can also be a vehicle for the advancement of the country. As already stated, higher education is crucial for human development as it increases the likelihood of employment or settling into a career space. Research shows however, that access to higher education remains unequal in South Africa, though there has been some improvement from the racial imbalances of the apartheid era. Salmi and D'Addio (2021) state however, that less than 1 in 5 black people acquire higher education qualifications, while 55% of white South Africans gain access to higher education programmes. Given these imbalances in enrolment in higher education, the economic inequality in the country is likely to continue to persist. Thus, for the socio-economic inequities to be redressed, the transformation of the higher education system to provide equal opportunities to all people is crucial.

In the South African context, educational provision is tied to human development and can be likewise considered as related to the improvement of people's earning ability, but transformation remains the foremost aim of educational development. This is well-highlighted in the various legislation and policies governing the country's post-apartheid education system (Department of Education, 2001, 2010a; Ministry of Education, 2001; South African Schools Act, 1996). Despite legislative documents advocating for transformation of the education system as a whole, there is a notable lack of emphasis on the role that higher education plays (Mutanga, 2018). This could have a negative impact because universities play a key role in the transformation and development of

communities, more so in the 21st century according to Waghid (2003). It can thus be reasonably inferred that the status of South Africa as the most unequal country in recent history is indicative of the collective impact of the unequal distribution of resources and opportunities in various sectors, including higher education (Francis & Webster, 2019).

A possibility for the neglect of higher education in research and government initiatives for inclusive education is the impact of discursive norms in international and local legislation. This stems from the focus of international organisations under the United Nations, which mainly position education as the right of children and not necessarily of all people regardless of age (UNICEF, 1989; United Nations, 1948, 2006). The impact of this is also evident on local fronts because South African inclusive education policies and laws are mostly guided by international declarations. For instance, the Convention on the Rights of Persons with Disabilities is a major influence on most of South Africa's inclusive education policies (Mutanga, 2018). These local and international policies most explicitly refer to the inclusion of children, with adults seldom mentioned. This leads to assumptions that inclusive education ends at the basic education level and while this may not in itself mean that there is no intention to make higher education inclusive, the lack of emphasis on inclusive education in higher education does prove it to be less of a priority in this educational sector. For higher education in South Africa to be transformed and for the inclusion of neurodivergent students to be made possible, there should be clear policy imperatives to that effect.

Conclusion

Using published literature in this chapter, I have discussed the concept of inclusive education, starting from the global context, and discussing its meaning in the South African context. A crucial aspect of inclusive education in the South African context, as I have shown in the chapter, is the history of marginalisation in South Africa, which mainly stems from colonial and apartheid ideology. Moreover, the laws and policies that have been put in place in the post-apartheid era have been discussed as they form the precedents for the development of an inclusive higher education and training system as part of a broader society characterised by tolerance, acceptance of difference and the upholding of human rights. I have also discussed inclusive education in South Africa, particularly the higher education system, in the context of models of disability, which continue to influence the educational provisions for students with disabilities in universities and

the broader education system. Starting with the medical model as the approach influencing practices during the apartheid era and the social model being the main approach guiding current discourses in inclusive education globally and specifically in South African educational policies, I proposed the cultural model as an approach to firmly define inclusive education in South Africa. The last section discussed the role that higher education can play in the overall transformation of South African society. In the next chapter, I further advocate for the cultural model as part of the conceptual framework of this study and provide the reasons for this choice.

CHAPTER THREE: CONCEPTUAL FRAMEWORK

In the previous chapter, I reviewed published literature on the key ideas and concepts from which this study stems. The literature review shows that there is a need to consider a different approach to understanding inclusive education beyond the medical and social models, as well as a more multifaceted approach to understanding the causes of exclusion in educational spaces. Along this line, in this chapter, I outline the main theoretical positions that inform this study in relation to the inclusion of students with ASD and ADHD in universities. This is done using a conceptual framework, which is guided by my research questions and the nature of my focus, which is inclusive education, a multidimensional phenomenon with much contestation (Kivunja, 2018). Firstly, Merriam and Tisdell (2015) state that a theoretical framework and a conceptual framework are "terms used interchangeably by many writers" (p. 82). However, some minor differences do exist; for example, a theoretical framework is the fundamental structure consisting of concepts or theories informing a research study (Merriam & Tisdell, 2015). Conversely, Jabareen (2009) states that a conceptual framework is "a plane of interlinked concepts that together provide comprehensive understanding of a phenomenon or phenomena" (p. 51). Notably, the components of a conceptual framework are not strictly theories but can be concepts, hence in this study, the conceptual framework includes for example, reasonable accommodation, which is not a theory. As mentioned above, the framework provides a way to understand phenomena, therefore the framework chosen must align with the objectives of the study and the nature of the phenomena under study. Based on the complexity of inclusive education, particularly in the South African context, I have adopted a conceptual framework which complements the intricacies of South African society based on diversity and the complex social environment in connection with global educational and social trends.

Due to the issues being investigated and the depth of analysis needed, I use a conceptual framework comprising of the cultural model of disability and intersectionality, working towards reasonable accommodation. This framework is useful not only in explaining concepts but also in the interpretation of data. In explaining the use of a conceptual framework, Mensah et al. (2020) state that "the conceptual framework consists of the ideas that are used to define research and evaluate data" (p. 59). Thus, the conceptual framework is not only an aggregation of theoretical ideas but there is a practical element to it, which is its use in analysing and drawing conclusions from data. On this basis, the main theoretical approaches that I explain below as components of my conceptual

framework (the cultural model and the theory of intersectionality) will feature significantly in the analysis and discussion sections later in the thesis.

As stated above, the theories making up the conceptual framework of this study are implemented only in so far as they address the objectives, research problems and questions of the current study. Beyond their relation to the inclusion of students identified in higher education institutions, I specifically highlight the relevance of the two theories to the South African university context. Worth noting is that in explaining these theories and their relevance to the current study, I provide evidence for my overall argument, which is that inclusive education and the raising of awareness about ASD and ADHD are necessary in the higher education sector, as part of encouraging system-wide educational transformation. By implication, using the cultural model to develop a locally relevant view of disability along with applying the concept of intersectionality to describe marginalisation in its various forms, this conceptual framework seeks a comprehensive outlook on the experiences of students with ASD and ADHD in universities in South Africa. I also provide a justification for intersectionality, which I combine with the cultural model as a theory that is applicable to inclusive education (as a field and way of thinking). Additionally, I prove its effectiveness in conceptualising multiple facets that feed into the marginalisation of people with disabilities in a country as diverse as South Africa. The diversity I refer to is not limited to demographics and culture but extends to the different forms of oppression that exist in South African society and how they can influence the experience of a person with an impairment, focusing in this study on ASD and ADHD.

With the background to the framework provided in the paragraphs above, I begin the chapter with a detailed discussion of the cultural model and intersectionality respectively and subsequently their complementarity within the conceptual framework of this study. Below, I explain, in detail, the cultural model of disability as a viable way to promote a positive view of impairment and to speak specifically to the South African higher education context in doing so. Besides positive attitudes, I included the cultural model in this framework because of its inclination to determine the meaning and approach to catering for people with special needs in ways that are relevant to local communities and are sensitive to the norms, values and challenges that are upheld in specific contexts (Waldschmidt, 2017). In essence, the theoretical approach presents the application of inclusive education which is relevant to the South African higher education context and also

cognisant of the complexity and multifaceted nature of the struggles that may be experienced by someone with ASD or ADHD in a South African university. Such a locally relevant view of inclusive education aligns with the recommendation that inclusive education should be framed according to the context in which it is implemented (UNESCO, 1994).

There are a large variety of ways in which inclusive education has been defined by many scholars, according to their different subjectivities and influenced by current trends and ideological positions (Haug, 2017). When researching on inclusive education, it is important to take a stance on what inclusion is understood to be, and what disability is as these aspects significantly influence the practices that can follow in actual teaching and learning (Smart, 2009). This study adopts the community definition of inclusion. This is the view that inclusive education is the development of learning environments into tight-knit communities in which every member plays a meaningful role and participates fully in the activities in that environment (Krischler et al., 2019). The community definition avoids oversimplified conceptualisations that are ignorant of the complexity of disability issues and the multifaceted nature of exclusion, especially in an intricate context such as South Africa (Göransson & Nilholm, 2014). With the development of classroom communities, transformation can be extended to larger communities and societies, in line with the goal of developing inclusive educational practices to contribute to the creation of welcoming communities (UNESCO, 1994).

3.1 Describing the cultural model

A major aspect of the study's focus as part of investigating the experiences of students with ASD and ADHD is evaluating how disability is conceptualised by different role players in universities as this has an impact on practices that lead to inclusion or exclusion. In the context of this study, this means that the approaches to supporting students with ADHD and ASD are reflective of the ideological influences on such perspectives. One of the main considerations in this regard is whether the DU staff have deficit views or positive views of ADHD and ASD, and how this influences the approach to accommodations made for the students. In consideration of this, the cultural model takes a position that the differences that exist must be approached with positivity, fostering positive self-image among those with impairments (Twardowski, 2022). In addition to positive attitudes, the cultural model argues that people with impairments must not be supported only by addressing perceived deficits, but that their strengths should be cultivated even more so

that they can have the opportunities in areas where they are most proficient (Jones, 2022). Therefore, the support services offered by the DUs should, according to the cultural model, be judged to be successful if they promote positive attitudes of neurodiversity among neurodivergent students and other members of the university community but also build on the strengths the students already have. As mentioned in the literature review, the conceptualisation of disability promoted by this study includes a description of the context where students with disabilities find themselves. This stems from the cultural model's argument that there should be local relevance in disability studies in contrast to applying global meta-narratives across different contexts without regard for local factors (Waldschmidt, 2018). This goes along with the need to acknowledge the extent of impairment a person has. and the strategies necessary to accommodate the impairment(s) and give the necessary support. Clouder et al. (2020) takes consideration of both the reality of impairment and the uplifting of strengths of neurodivergent students in higher education institutions in stating that "notwithstanding the fact that some impairments result in cognitive processing and impacts on an individual's capacity to engage meaningfully with wider society, many neurodiverse conditions bestow talents and benefits" (p. 758). Thus, in this section, I provide detailed discussions about the cultural model of disability, which I propose as a theoretical approach to disability which can bring much needed change in South Africa towards inclusive educational provision. Choosing this model is significant because of the cultural and ethnic diversity of South African society and the complexity and multiplicity of social challenges within the country. It can be used as a lens to assess whether there is recognition of ASD and ADHD as normal variations in human cognition, promote positive views of these variations, and also to encourage strengths-based approaches to accommodating students with ASD and ADHD in universities.

In this context (characterised by diversity), I argue that neurodiversity should be conceptualised with consideration of cultural practices because, being conditions that affect social interaction, understandings of ASD and ADHD are constructed differently within different cultural environments. In emphasising the importance of culture in conceptualising neurodiversity, Atherton et al. (2023) state that culture is very important in research raising awareness of neurodiversity, which encompasses different conditions such as ADHD and ASD in non-Western contexts. This is because the existing discourse on ASD, ADHD and other forms of neurodiversity is mostly of Western origin, lacking representation of voices from the Global South (Manase,

2024). With this lack of Global South voices in mind, I have adopted the cultural model as a theoretical tool to enable me to investigate the experiences of students with ASD and ADHD in South African universities. This is done in ways that show the uniqueness of the manifestation of these conditions in the South African context and the part played by culture.

Having highlighted the lack of progress subsequent to the social model's adoption in South Africa earlier in the literature review, I now argue for the adoption of the cultural model as a more in-depth view. I make this proposition acknowledging the social model's assertion that society contributes to the negative experiences of impaired people (Oliver, 2013). I, nonetheless, argue that this perspective alone is not enough to explain pr combat the exclusion of people with disabilities. This narrow view is a major point of criticism levelled at the social model by scholars, who argue that disability is more than just a socially constructed phenomenon but an inherent part of human diversity that brings with it challenges stemming both from social attitudes and elements relating to the natural condition itself (Burchardt, 2004; Norwich, 2014; Waldschmidt, 2018). However, I take the position that the critique of the narrow view should not mean the social model's critique of society's role in exacerbating difficulties as a result of impairment is invalid. I argue that it should be strengthened by considering the additional component of the cultural aspect, which provides a more nuanced analysis of the factors hindering the development of inclusive educational approaches. Correspondingly, Waldschmidt (2017) suggests that studies promoting inclusive education should first "acknowledge that disability is both socially and culturally constructed" (p. 24). This view is supported by Atherton et al. (2023), who state that the cultural model is needed because it reveals the influence of culture in the understanding of neurodiversity and the treatment of neurodivergent individuals. This means that the cultural model is a step further from what has been achieved by the social model in showing how society can contribute to the disablement of people with impairments (Oliver, 2013). The social model addresses disability, which it describes as difficulties placed on people by the society they live in, and distinguishes it from impairment, which it argues, does not inherently bring challenges (Dirth & Branscombe, 2017). Within this conceptualisation, the improvement of the experiences of impaired people is pursued by making adjustments to their physical and social environment, and not to them (Oliver, 2013). For instance, to mitigate the social interaction challenges experienced by neurodivergent students, a social model-aligned approach entails changing negative attitudes about neurodiversity (Constantino, 2018). This is an important component and one that this study covers at length, but

in conjunction with the changing of attitudes, strategies that focus on improving the students' social skills are just as important, hence the adoption of the cultural model. The cultural model contrasts the idea that disability is entirely socially constructed, arguing that some difficulties faced by people with difficulties are directly related to their condition (Waldschmidt, 2017). According to Twardowski (2022), "in the cultural model, impairment and disability are not treated as clearly separated categories that automatically lead to social discrimination against the affected person" (p. 52). Rather, it adds another dimension to understanding the exclusion of people with disabilities, which is reflecting on cultural influences (Atherton et al., 2023). Below is a detailed description of the cultural model as I further make the case for its relevance to neurodiversity and inclusive education.

The cultural model considers a wide array of factors that could contribute to difficulties experienced by people with disabilities, with the influence of culture as a major focal point (Devlieger, 2005). It incorporates the cultural norms in a specific society or institution, and crucially, avoids supposing that disability can be understood uniformly across regional and ideological contexts (Retief & Letšosa, 2018). This is a perspective that is adaptable to context and sensitive to the cultural and individual values where inclusion of people with disabilities is pursued. Therefore, in a study such as the current one aligning to the cultural model of disability, there is a dominant emphasis on contextual, local factors that specifically have an impact on the experiences of the groups under study. At its inception in the early 2000s, the cultural model challenged international conventions on defining disability categories, arguing that they did not consider contextual differences. One such convention challenged by the proponents of the cultural model was the International Classification of Functioning (ICF), for the reason that "it does not take into account countless differences between cultures" (Snyder & Mitchell, 2005, p. 9). To address this, the cultural model proposes a more comprehensive view of disability that is adaptable to different cultural context, addressing barriers to inclusion in their contextual environment.

As stated earlier, models of disability tend to be advocated for in opposition to, and an aim to replace pre-existing models, for instance, the social model was a response to the exclusion perpetuated by the medical model (Oliver, 2013). This was particularly in opposition to the notion of finding impairment to be entirely positioned in the individual and attempting to make them 'normal' enough to fit into society (Acevedo & Nusbaum, 2020). While the promotion of the social

model over the medical model was a good step towards human rights, my argument for the adoption of the cultural model is not meant to be an entire replacement of the social model but a response to its inadequacies. In a large body of global and local research on disability studies and inclusive education, the social model is highly prevalent and is seen as the effective approach to inclusive education systems (Hay & Beyers, 2011; Masoga & Maoto, 2021; United Nations, 2006). Certainly, in South Africa, the social model is the approach that guides government efforts and policies for the implementation of inclusive education (Department of Education, 2001). Nevertheless, inclusive education has not become a reality across the education system, despite the change from the medical to the social model (Department of Education, 2016). While the social model has had its successes, in terms of policy changes such as the White Paper 6 promoting inclusive education, the implementation of inclusive education in South Africa has yielded limited results. In response, I argue that the cultural model can further contextualise inclusivity to the South African context. To demonstrate the connectedness of the cultural model to the social model, Zaks (2023) states that "social model-inspired activities are sometimes "collectively referred to as the cultural model of disability" (p. 8). This is evident, for example, in the mutual emphasis of the cultural model and social model on changing attitudes towards difference (Oliver, 2013; Waldschmidt, 2018). The difference is that the cultural model is more pointed towards changing negative cultural perceptions. Thus, Zaks (2023) assert that for the cultural model, "the goal is to change cultural beliefs" (p. 9). The adoption of the cultural model in this study is for this reason; to assess how cultural norms and beliefs have contributed to negative perceptions of neurological differences and how negative stereotypes can be addressed.

Another aspect that the cultural model presents is a challenge to the categorisation of conditions as disabilities. This is especially relevant to this study because the neurodiversity movement advocates for the positive framing of neurodivergent traits, and disagrees with the notion of categorising of neurological differences such as those seen in people with ASD and ADHD as disabilities (Nicolaidis, 2012). In the present study, the relevance of this aspect is that the way that the condition is understood influences the attitudes towards those living with it, and the societal attitudes can also influence self-image and self-efficacy on the part of students with ASD and ADHD (Bodhi et al., 2022; Jenson et al., 2011). Self-efficacy is a positive view of oneself and one's abilities both in specific competences and general personality, and this positive attitude should be encouraged among marginalised groups, such as individuals with ASD and ADHD

(Cassidy et al., 2020). Considering oneself as disabled and at the mercy of those who are not disabled can lead to negative self-image, hence the need to highlight positive views of neurological difference (Alstete et al., 2024; Austin & Pisano, 2017). In the South African context, neurodivergent individuals such as those living with ADHD and ASD are classified as disabled. While the conceptualisation alone is not the focus of this study, it is of concern that the experiences of neurodivergent individuals are mostly negative across all sectors of South African education, especially basic education, which has received proportionately more research focus (Laitila, 2018). In essence, the cultural model directs more comprehensive engagement to the experiences of students with ASD and ADHD by taking a holistic view of both conditions, positioning them within the South African context, and seeing how the cultures espoused by the universities they attend contribute to their exclusion or inclusion.

3.2 The theory of intersectionality

Considering the multifaceted nature of marginalisation and discrimination, the conceptual framework of this study positions the cultural model alongside the theory of intersectionality. In the section that follows, I explain this theory and its relevance to the present study. Coined by Kimberlie Crenshaw in 1989, the theory of intersectionality "is an analytic sensibility, a way of thinking about identity and its relationship to power" (Crenshaw, 2015, p. 1). The sensibility of this framework is evident in its consideration of multiple forms of oppression that may coexist in the life of an individual of marginalised group. Intersectionality "promotes an understanding of human beings as *shaped by the interaction* of *different* social locations" (Hankivsky, 2014, p. 2, emphasis added). This presents a view to humanity in which an individual's experience is a result of the interplay of their social, personal, cultural and other identity markers. What this philosophical idea contributes to this study is an understanding of the interaction of factors that contribute to the conduciveness or lack thereof of the university to students with ASD and ADHD. At the end of this study, the knowledge uncovered will not simply be how ADHD and ASD impact the life of a university student, but also how the student's other facets of life, their background, age, gender, and other form of identity contribute to their overall university experience. This aligns well with the aim of inclusive education which is to identify and mitigate the norms and injustices experienced by those with a range of identities (Walton & Engelbrecht, 2022). It is worth noting that the range of identities is not only seen from person to person, but according to the intersectional approach, a variety of identity markers exist in an individual and a number of those

identity markers may be the basis upon which they get discriminated against (Besic, 2020; Goethals et al., 2015).

Intersectionality originated as a movement in which activist scholars, particularly black women in the United States sought to expose the scale of the oppression they were facing more firmly and protest the narrow view of the injustices against them (Al-Faham et al., 2019). Its focus is to show that women were not just marginalised because of their gender, but also in relation to their race, social status, and other factors; that multiple axes of identity resulted in multiple possibilities of oppression. Intersectionality argues that liberation could be realised if researchers and other stakeholders would analyse marginalisation "beyond simply analysing differences between groups" (Jordan-Zachery, 2007, p. 209). This was inspired by the understanding that oppression is the result of the intersection of several contributing factors and seeking to isolate one form of oppression from another would subsequently lead to limited engagement with inequality in society. In explaining this assertion, Collins (2000) states that injustice is effectively the product of multiple forms of oppression finding occasion in the life of an individual. It follows therefore, that, redress of injustice should take an intersectional approach to achieve far-reaching transformation in individual lives, and in the broader society. In this study, the problem addressed is the exclusion of students with ASD and ADHD, but the study takes an intersectional view in regard to the marginalisation of affected students as the result of a combination of factors. These factors may include gender, race, citizenship, social and financial status among other factors (Walton, 2022).

Furthermore, the relevance of intersectionality to this study is that it calls for the consideration of the interplay of different forms of marginalisation and their connections. In the South African context, challenges experienced by a person with a disability relate to factors such as race, gender, and culture, and an intersectional approach provides a wholistic view into the causes of exclusion and likewise, seeks solutions that are equally multifaceted (Walton, 2021). As in the case of race or gender being assessed without consideration of how they relate to other axes of oppression, neurological difference, if conceptualised in isolation, can be oversimplified (Nind, 2014). This would likewise result in inclusion efforts that end up perpetuating marginalisation due to being too narrowly focused. The contribution of intersectionality to inclusive research, according to Walton (2022), is to properly highlight the complexity of impairment and how it is connected to other aspects that make up one's identity. Likewise, Moodley and Graham (2015) state that

"intersectionality allows us to acknowledge the multiple identities of an individual and how these result in various experiences of disadvantage or advantages" (p. 25). Moreover, the present study, by focusing on neurodivergent university students, is probing their lives at a crucial stage where they have just left their homes and entered a complex academic and social environment in the form of a university. Given the variety of struggles at higher education systems, it is unreasonable to assume that the only form of difficulty or exclusion that a student with ADHD or ASD experience is that which relates to their neurodivergent condition. A more meaningful approach is to investigate the person holistically rather than in a single axis of identity, and intersectionality offers this kind of view.

Thus, the study takes an open view to understanding what shapes the experience of these students in universities, being open to the possibility that focusing on a single aspect of their lives such as living with ASD or ADHD will give a limited outlook on their lives. This is an important perspective to consider because in the South African context, ideological constructions of difference have previously and presently been shaped by the interplay of factors such as gender, race and economic status (Moodley, 2017). In addition, the early developments of inclusive education in South Africa highlighted the intricacies of barriers to learning. Swart et al. (2002, p. 181-2) comment that the following factors were identified as leading to barriers to learning in the South African education system at the beginning of the democratic dispensation:

- Socioeconomic factors such as poverty, or violence
- Barriers arising from impairments, including physical, cognitive, sensory, developmental, and learning impairments that need specific support.
- Negative attitudes to, and stereotyping of, difference.
- Inflexibility of the curriculum and teacher training.
- Language of teaching, learning and communication.
- Inappropriate and inadequate provision of support services to schools.
- Lack of parental recognition and involvement in learning, teaching, and support.

Evidently, most of these issues still persist over two decades having passed since inclusive education became a government objective in South Africa (Department of Education, 2016; Walton & Engelbrecht, 2022). This highlights the ineffectiveness of the redress initiatives that have taken place since the end of apartheid, and this study argues that the lack of collective

consideration of barriers to learning is a primary cause of the lack of progress. Conversely, an intersectional approach is presented as an alternative.

Thus, what disability is to a South African cannot simply be defined using a simplistic worldwide lens such as the medical and social models of disability (Devlieger, 2005; Waldschmidt, 2018). During apartheid, people with disabilities were treated as abnormal and unable to blend into society, and this resulted in lack of access to educational opportunities (Naicker, 2005). In a democratic South Africa, the social model has been the chosen approach, with limited results. By applying the cultural model, this study defines neurodivergence in line with the historical and present realities in South Africa, while also acknowledging that universities have distinct traditions that may negatively or positively affect neurodivergent students. Broadly speaking, a culture that is commonly associated with university environments is that of elitism as already highlighted. It is therefore important in investigating the experiences of students with ADHD and ASD to include an analysis of how academic cultures such as elitism affect the prioritisation or neglect of inclusive education in universities.

3.3 Reasonable accommodation

Having discussed the theoretical aspects, I now outline reasonable accommodation as a guiding principle for the implementation of inclusive educational practices, with specific relevance to the inclusion of students with ASD and ADHD in South African universities. The necessity for accommodations for students with ASD and ADHD has been explained in detail throughout this thesis. However, it is necessary to discuss the extent to which students should be supported, to avoid giving them an unfair advantage, understanding that inclusive education entails the equalisation of opportunities, without giving anyone an unfair advantage (Moodley, 2017). Therefore, efforts to include a marginalised group should not exceed necessary levels, thus putting other students at an unfair disadvantage. To avoid this, services for students with ASD and ADHD should be provided within reasonable levels in accordance with their individual needs. Several measures and guidelines both locally and internationally can be used to determine reasonableness in providing accommodations for students with ASD and ADHD. The international standard for reasonable accommodations is expressed by Article 2 of the Convention on the Rights of Persons with Disabilities (United Nations, 2006), which states that:

> Reasonable accommodation means necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms. (p. 4)

Although this international standard for reasonable accommodations exists, the local context should still be taken into consideration as different regions and countries have unique conditions and challenges that require specific accommodations. In 2011, the FOTIM report stated that the "the medical model remained predominant, but there was a move towards the recognition of other external factors required to ensure full inclusion, such as reasonable accommodation" (FOTIM, 2011, p. 11). Reasonable accommodation standards for universities are provided in HEDSA's *Guidelines on the establishment of a Disability Unit at a Post-School Education and Training Institutions*. This document states that "reasonable accommodation refers to necessary and appropriate modification and adjustments, as well as assistive devices and technology" (HEDSA, 2019, p. 6). Reasonable accommodation can also be inferred from the official guidelines of the National Strategic Framework on Reasonable Accommodation for Persons with Disabilities (Department of Women, Youth and Persons with Disabilities, 2021). The policy, has a similar definition of reasonable accommodation to the one above:

> Necessary and appropriate modification and adjustments, as well as assistive devices and technology, not imposing a situation, where needed in a particular case, to ensure persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms. (Department of Women, Youth and Persons with Disabilities, 2021, p. 106)

Though the definitions emphasise core values of inclusivity such as equality, human rights and fundamental freedoms, they are generic and not specific to sectors such as education or the workplace. This implies that the guidelines on reasonable accommodation still need further specification according to the sector in which they are applied and in accordance with the local context (Twardowski, 2022). For this study, it is important to define what reasonable accommodation translates into with regards to supporting students with ADHD and ASD in the university environment in South Africa specifically. The specification of the South African context follows the cultural model, which calls for the adaptation of any intervention strategies for students

with any kind of impairment to be sensitive to the context and relevant to the specific condition that the student lives with (Waldschmidt, 2018). In terms of government imperatives for reasonable accommodations for neurodivergent students in South Africa, there are no clear guidelines or regulations. This leaves individual institutions with the freedom to decide what accommodations can be made for students (Department of Higher Education and Training, 2018). However, I will use the international and local guidelines quoted above as a guide for reasonable accommodation. The central precept in these standards is that students should be supported in so far as it helps them to avoid being disadvantaged by circumstances and conditions beyond their control and because of their natural identity. Therefore, reasonable accommodation, in this study, entails efforts to ensure that students with ASD and ADHD can participate fully in the university on all fronts.

Conclusion

In this chapter, I have outlined the conceptual framework of the study, which is a combination of the theory of intersectionality with the cultural model of disability. I have shown how the connection between these approaches aids in understanding the challenges of students with ADHD and ASD more broadly and contextually. Intersectionality, as I demonstrated, helps us to investigate the challenges faced by these students by considering different dimensions of their lives, which may themselves be points on which they face discrimination. I've also justified my choice to combine these two approaches for a more nuanced understanding of the experiences of students with ASD and ADHD. It is worth noting that in the sections that follow, particularly in the data analysis, this conceptual framework is used as a lens with which to interpret the gathered data as well as to justify the methodological approaches that I have used throughout the study.

CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

This chapter explains the procedure with which the data was collected and subsequently analysed in this study. It begins by identifying the philosophical paradigm guiding the research, which is interpretivism, particularly the branch of phenomenology within it. I make a thorough explanation of the fundamental assumptions of the interpretivist worldview, along with the justification of the choice of this metatheory. The study employed a qualitative research design, which closely aligns with interpretivist research in its interest in people's experiences and how they shape their knowledge and views (Pham, 2018). Subsequently, the chapter outlines the research site, research methods, sampling criteria and strategies to maintain data quality.

4.1 Paradigm

According to du Plooy-Cilliers et al. (2014), a paradigm "describes a cluster of beliefs and dictates which for scientists in a particular discipline, influence what should be studied, how research should be done and how results should be interpreted" (p. 19). In essence, a paradigm is a collection of assumptions that rationalise, for a researcher, what they regard to be knowledge and, further, what they regard to be relevant knowledge that speaks to the questions they intend to answer in their research. A paradigm is divided into key aspects such as epistemology, ontology, methodology and axiology (Alharahsheh & Pius, 2020). Each of these aspects is explained below, along with justifying the choice of paradigm for this study. In addition, a paradigm determines the methods of data collection that can be used, along with the kind of data that answers the questions the researcher is looking to answer, and this will be done for the present study below.

The paradigm that informs this study is interpretivism, a view of knowledge associated with qualitative research (Merriam, 2015). In interpretivism knowledge is regarded as subjective and developed by people functioning as active knowers in their surroundings (Scott & Morrison, 2006). The main epistemological position of interpretivism is that "truth and knowledge are subjective, as well as culturally situated, based on people's experiences" (Ryan, 2018, p. 8). This means that people's context and experiences contribute to their understanding of phenomena and that knowledge is not objective as the positivist view suggests, but subjective in that it depends on the past experiences and value systems of the knower (Caldwell, 2015). Interpretivists present an opposite view to positivism, so most of the assumptions and core aspects of this paradigm contrast and dispute the positivist way of knowing. For example, the interpretivist approach regards people

as active agents in the synthesis of knowledge, rather than consuming it as an unalterable, objective entity as the positivist view suggests (du Plooy-Cilliers et al., 2014). With the centrality of the importance of people's context in the interpretivist philosophy comes the need to situate research geographically and also according to the historical period in which the research is conducted (Weber, 2004). This means that knowledge synthesis is affected by the situatedness of the researcher and research participants in physical terms, but also in terms of the time during which the investigation happens. The time aspect is explained well by Ryan (2018) who states that truth and knowledge are both "historically situated" (p.8). With this awareness of the various dimensions of context, this study was conducted with cognisance of the local and international understandings of neurodiversity in higher education. Current trends in research concerning these two disorders are also highlighted in the literature review (see chapter 2) along with positioning the study in relation to the current developments in inclusive education in the South African higher education context and as part of outlining the situatedness of the study.

When conducting research, interpretivists put the participants first as active knowers, in interpreting the phenomenon under study based on their experiences, rather than imposing the researcher's own views in interpreting the data (Tuyay et al., 1995). Since the participant's voice is foremost in interpretivist research, the research should seek to have sufficient understanding of the participants' context, which in the case of this study is the university that the participants belong to. Gage (1989) explains that communities have norms and practices that develop over time because of interaction with other people, and by learning about these norms from the members of the community, researchers can reach reasonable conclusions that are relatable and meaningful to participants. Thus, the participants' own accounts which highlight the norms and practices in the university in which they work and learn is the best reflection of the context. Moreover, the branch of interpretivist research that specifically applies to this study is phenomenology, which I chose because of its focus on the experiences of participants as the main aspect that informs their views and opinions (Norlyk & Harder, 2010). According to du Plooy-Cilliers et al. (2014), the task of the phenomenological researcher is "to interpret and gain an understanding of human actions and then to describe them from the point of view of the person or group being studied" (p. 28). This is precisely what I prioritised; to provide a platform for DU staff members and students with ASD and ADHD to outline their experiences and comment on the strategies for including students with the two conditions. Thus, in this study, the experiences of university students with ASD and

ADHD in South Africa are illuminated because they are most closely affected by the inclusive practices that their respective universities implement. Students' perceptions and experiences of the ways in which their university caters for students with ASD and ADHD can best reflect the unique context of South African higher education institutions in relation to ASD and ADHD. In phenomenology specifically, meaning is constructed based on the lived experiences of individuals with direct connections to the phenomenon under study (Tomaszewski et al., 2020). Likewise, to a significant extent DU staff members have valuable insights on programmes for catering to students with ASD and ADHD and are knowledgeable about academic problems experienced by students with these conditions. Thus, their insights were also sought in the collection of data for this study as the main implementers of inclusive practices in universities.

In addition to epistemology, different paradigms have unique ontological statements. Ontology is defined as "the nature of being" (Howitt & Cramer, 2020, p. 532). It is a view of what can be considered as reality under a specific worldview or paradigm. While epistemology refers to the way of knowing, ontology is the actual reality of what is being studied. Interpretivism has its distinct ontology, which asserts that there is no single shared reality, therefore it takes a relativistic view; one in which reality is shaped by people's perceptions and experiences (Weber, 2004). This perspective is adopted in this study with the assumption that unique circumstances shape higher education in South Africa. It also recognises that obstacles to the inclusion of students with ASD and ADHD may differ from those in other countries and between the students themselves, based on their different backgrounds, identities, socio-economic positions and other factors (Donohue & Bornman, 2014). The differences can be understood, not by simply observing the context and coming to conclusions, but by seeking the opinions and experiences of relevant stakeholders who have first-hand experience (Tomaszewski et al., 2020). Thus, the local university context takes precedence over international generalisations in investigating the inclusion of students with ASD and ADHD in South Africa. However, this does not imply total disregard for the impact of global conceptions of inclusion because in the age of globalisation, local educational practices are influenced by global trends and to an extent the local influences the global (Kochung, 2011; Nunan et al., 2000). More specifically, the context of the specific university a participant is from can also inform their views, according to their experiences. An example of this is the different realities that are present in rural and city-based universities in terms of resources, funding and student population sizes (Mutanga, 2018). To a significant extent as well, the pre-democracy history of

universities contribute to their current development and success in catering for a diverse student population (Godsell et al., 2016; Matshedisho, 2007; Ndofirepi, 2017). History, therefore, is likely to contribute significantly to context for the participants, not only the history of their universities but their own in the communities from which they originate.

The last distinguishing factor of interpretivism is its axiology which is the position that the paradigm takes on human values and how they influence knowledge (Alharahsheh & Pius, 2020). Interpretivism regards knowledge and research as value-laden, so researchers obtain knowledge about people by giving them platforms to give their views based on their experiences in ways that allow for the expression of the participant's values (Scott & Morrison, 2006). It also means that researchers are not fully detached from the research and that their own values matter in deciding what knowledge is beneficial to their research. Thus, this study investigated the lived experiences of students with ASD and ADHD, reflecting on the efficiency of the strategies implemented by universities to ensure their meaningful and fair participation in academic and social activities in their schools. The study also sought insight from those responsible for the welfare of students with ASD and ADHD through their Disability Units, and their strategies for ensuring participation of neurodivergent students in universities in terms of how the institutions contribute towards inclusion in higher education. Thus, in engaging with the DU staff members, I included questions seeking clarification of the values that drive their provision of support for students with ASD and ADHD (see appendix 12 and 13). Likewise, the students' values factor in on their experiences, for example, whether as neurodivergent individuals, they have positive or negative views of themselves. This also was explored in the data collection.

As stated in the introduction of this chapter, this is a qualitative study, but a minor quantitative element in the data collection instruments exists. The quantitative aspect to this study comes from the first part of the questionnaires which were administered to DU staff members and students. Though being a minor section in the mostly semi-structured questionnaires, the statistical data gathered from the short answer and Likert scale questions provide insight into the longevity of staff members working within a Disability Unit, as well as a comparison of their views regarding the inclusion of students with ASD and ADHD. While this is statistical data, the analysis of it is still purely qualitative in that I assessed it in relation to the opinions expressed in the interviews and long answer questions. Ultimately, what the proportional and statistical section of the

questionnaire provides is the numerical representation of the participants' views, but my focus in analysis is the experiences and opinions themselves, therefore I do not attempt to do a numerical or statistical data analysis. The amount of quantitative data that I collected from the questionnaires is negligible in relation to the rich qualitative data, hence I kept this labelled as a qualitative study, rather than a mixed methods study. Mixed methods research involves relatively balanced proportions of qualitative and quantitative approaches, with none really dominating the other (Scott & Morrison, 2006). However, in this study, the quantitative aspects are not the focus.

4.2 Methodology

The participants in the study are from two distinct but closely associated groups: DU staff members and students with ASD and ADHD. To address the main question and objective regarding the investigation of the strategies used to cater for students with ASD and ADHD by university DUs, I administered a semi-structured questionnaire to DUs in South Africa's public universities which had given permission to conduct the study (see appendix 12). The questionnaire gave DU staff members the opportunity to explain their support strategies for students with ASD and ADHD. The questionnaire paid close attention to whether the unit takes on both student services and learning development services as outlined in the introduction in assisting students with ADHD and ASD. Part of the aims of this was to find out the knowledge levels of the staff about ASD and ADHD, and how this contributes to their being able to respond to the needs of students living with the two conditions. This questionnaire was sent to each university by email, with specific requests for it to be sent to two staff members within the unit. To allow richness of data, in cases where more than two staff members were willing to participate, they were allowed to do so, and the same was done with the student participants. This was to ensure as much depth as possible in the data as well as to enrich the data with a wider variety of voices, thereby enhancing the depth of data collected (Creswell & Poth, 2016). The questionnaire consisted of questions that sought to find out the kinds of accommodations that are made for students with ASD and ADHD in the university and detail the effectiveness of the implementation of those strategies. For this group of participants, I used questionnaires because it enabled the study to have a broad geographical reach because participants would be able to attend to the questionnaires at their own time, without having to travel to the universities which are spread over vast distances across the country. This was the consideration because I aimed to get data from universities of varying backgrounds, giving as comprehensive a picture of the experiences and attitudes towards students with ASD and ADHD

in the higher education system in South Africa as possible. The benefit of getting multiple voices from different university contexts is a data set that is relevant across different contexts and gives room for multiple expressions of experiences of the social phenomena under study in qualitative research (Merriam & Tisdell, 2015). Additionally, the decision to administer questionnaires rather than interviews to staff members was to give more preference to students for in-depth discussions because ultimately the effectiveness or lack thereof of DU support strategies can be best judged by the students directly affected by it. Essentially, inclusive research relies most on the opinions and lived experiences of marginalised groups (Nind, 2014). In this case this is students with ASD and ADHD, hence the preference to interview them. Thus, significant focus was on the experiences of students with ADHD and ASD in universities, which was the area I investigated in greatest detail using interviews with the students. DU staff members' opinions and experiences were then incorporated as components for explaining why students would have had the experiences that they had in terms of being included or excluded in the university.

The second area of inquiry was to find out what the experiences of students with ASD and ADHD were in terms of university education and with respect to their conditions, mainly focusing on the extent to which they have felt included in the university. This was done using narrative interviews with open-ended questions, allowing for in-depth responses (Howitt & Cramer, 2010) (see appendix 15). The reasons for using these methods are explained below, clarifying their characteristics and why I see them as being appropriate avenues for finding information that addresses the research questions of this study. A key aspect of data collection was to gain access to students via the DU as this unit in each institution is expected to have a record of students with disabilities and the respective conditions that they are diagnosed with (Mbuvha, 2019). I requested the DU to send out a request to students with confirmed ASD/ADHD diagnosis, inviting them to participate in the study and share their experiences. The initial way of communication to students in each university was left to the respective officials to decide on, and having obtained the student participants, I then set interview dates with them or send a questionnaire link in case the student preferred to do a questionnaire instead. It was worth noting that mainly because of fear of stigma, many students may not have been willing to participate (Trani et al., 2020). Moreover, many students with impairments decide against disclosing their diagnosis at all, and Gurbuz et al. (2019) suggest that this may be due to fear of discrimination and stigmatisation. This could have been a factor leading to difficulty in finding students to participate. Fortunately, with the DUs involved

in the sourcing of participants, the process of getting students to participate was more efficient and seamless, probably due to the level of trust built between students and their respective Disability Units.

To further mitigate the possible reluctance of students to participate, the communication that I sent to DUs to send to the students indicated that anonymity would be maintained throughout the study, and that all ethical considerations required by their respective universities would be adhered to. Once students agreed to participate, they took part in narrative interviews, these are interviews in which participants give detailed accounts about their experiences (Scott & Morrison, 2006). I chose narrative interviewing because it puts the participants at the centre and allows for a comprehensive discussion of key issues, without confining them to many rigid questioning. Merriam and Tisdell (2015) state that "a central characteristic of all qualitative research is that individuals construct reality in interaction with their social worlds" (p. 24). Therefore, data collection should encourage not only the expression of experiences, but also the constructions of meaning that the participants make about their experiences. This then needs interviewing techniques that allow participants to give detailed accounts of their experiences and opinions. Similarly, Merriam (2015) adds that when gathering data for a qualitative study, the instruments for data collection must enable the participants and the researcher to comprehensively reflect on the underlying meanings of the responses given and the opinions expressed. Likewise, Allan (2010) states that qualitative research, especially within inclusive education studies, should be "research in collaboration with, rather than on behalf of participants" (p. 612). Narrative interviewing, according to Anderson and Kirkpatrick (2016), consists of open questions, that is questions that solicit responses that are in-depth and detailed. Each interview with a student took about 30 to 45 minutes, with only 6 open-ended questions prepared, all interviews were conducted virtually on Microsoft Teams, in spaces where students could be most comfortable. Though there were prepared semi-structured interview questions, there were also follow-up question that were asked to participants in cases where more clarity was needed. This is normal for qualitative research, which seeks underlying reasons for the views held by participants, which prompts researchers to encourage participants to provide in-depth insights (Pham, 2018). To ensure this depth, qualitative researchers deploy their research tools in ways that enable them to get responses that are well-expounded and detailed. Silverman (2024) therefore, adds that in addition to prepared

questions in a semi-structured interview, researchers can also "probe an answer with questions like 'tell me more' or 'what exactly do you mean'" (p. 159).

In anticipation of the possibility of some of the students being uncomfortable with participating through interviewing, I developed an online questionnaire, adapting the interview questions into a questionnaire format. The kind of questionnaires that I used in this study for DU staff and optionally for students not willing to be interviewed were semi-structured questionnaires. This type of questionnaire is usually used in qualitative research and it includes a combination of structured and semi-structured questions (Merriam & Tisdell, 2015). According to Cohen, Manion and Morrisson (2002), questionnaires assigned to large samples (typically in quantitative research) are more structured and those with small samples are less-structured as they seek expansive elaboration on the issues being researched, which is characteristic of qualitative research. In this case, I had a small-to-medium sized sample, so depth of meaning based on the participants' experiences, rather than quantity and structure, was the priority, therefore the questionnaires consisted predominantly of open-ended questions. Moreover, semi-structured questionnaires were chosen because they keep a good balance between keeping the focus on the research questions of the study and the relevant experiences and views of the participants. In this regard, Cohen et al. (2002) state that "the semi-structured questionnaire sets the agenda but does not presuppose the nature of the response" (p. 321). This means the questionnaire directs the participant to the intended subject of discussion in the question, while leaving the answer and its elaboration open for them to thoroughly express their views, experiences and interpretations as qualitative research is designed to do (Klopper, 2008). It is worth noting that in encouraging detailed responses, other important issues can arise which can add valuable insights that may not necessarily be stated in the research questions or objectives but are nonetheless relevant to the participants' experiences.

The question structure in a semi-structured questionnaire is appropriate for qualitative research as it encourages in-depth responses that do not confine the participants to limited options. A semi-structured questionnaire contains both open-ended and structured questions. Structured questions in this study served to obtain general information such as the relevant work experience of the staff members because they are questions that do not require elaboration but require short answers (Falissard, 2012). Dohrenwend (1965) asserts that structured (closed) questions are necessary when the researcher intends to measure a specific attitudinal dimension, as such, they are usually

followed up with a limited set of responses to choose from. The structured questions also provided an analysis of the perceptions of students and DU staff over the general capacities of their universities to cater for students with ASD and ADHD, the kinds of impairments that are catered for and whether students with ASD and ADHD receive as much attention as students with physical and other easily visible impairments. These were Likert-scale questions that require a participant to choose an option out of a range of answers without any explanation (Scott & Morrison, 2006). As this was a qualitative study, structured questions made up a comparatively smaller portion of the questions as the questionnaire mainly consisted of open-ended questions. Unlike closed questions, open-ended questions seek detailed responses, usually of lived experiences of people or their opinions on matters being studied (Friborg & Rosenvinge, 2013). As this study investigates experiences regarding university norms and practices in relation to catering for students with ASD and ADHD and on the part of students, receiving support from DUs, open-ended questions dominated the questionnaire and the interviews. To address the main question which centres on strategies, open-ended questions allowed the participants from the DUs to give detailed descriptions of the techniques or strategies used to support students with ASD and ADHD. Due to the variety of conceptualisations of inclusive education**,** acquiring explanations that are too brief in relation to strategies may lead to lack of clarity on what the participants and their institutions define inclusive education to be (Roberts & Simpson, 2016). Getting a sense of what inclusivity entails from the DU staff is vital because the ideological positions guiding them significantly influence their practical strategies of implementation of inclusive practices. Apart from lack of clarity in definition, inclusive education has also not been practically demonstrated enough, particularly in the local context where practice has not followed on from policy statements (Engelbrecht et al., 2016). What then needed to be ascertained was what strategies had been used in the cases where the staff members had successfully accommodated students with ASD and ADHD. Likewise, where there had been difficulties it was necessary to establish the obstacles to supporting these students in the university environment. This may sometimes be a result of the lack of resources or expertise in the university but it could also be attitudinal factors that constrained the development of inclusive practices (Powell, 2023). In the context of the cultural model, the treatment of people with impairments is born from the culture of the community or institution (Atherton et al., 2023). Thus, a university's values on a subject like inclusive education

stems from and contributes to the culture of the institution, which then informs the practical norms in lecture halls and the social environment of the university.

The questions in the interviews and questionnaires were based on the research questions, so the themes addressed were in line with the objectives of the study, but the participants had the freedom to express any views they had in a relatively elaborate manner. Depth of responses in interviews was ensured by asking open, narrative type questions, and in questionnaires, I ensured detailed responses by indicating to the participants that there was no word limit on the open-ended questions to give them freedom to express themselves fully. Additionally, the DU data was further enriched by interviewing participants from separate institutions; a Research-Intensive University (RU1) and a Comprehensive University (CU1). The total number of DU staff members interviewed was three as only one staff member was available from CU1. The contrast in the types of universities is important as it provides a diversity of views and experiences in different kinds of universities in South Africa. To improve the research instruments, I used the first participants in each type of engagement as a pilot upon which to improve the rest of the data collection. This included the first student interview, student questionnaire and DU staff questionnaire.

4.3 Sample

With a relatively medium-sized sample, this study sought to investigate people's experiences and therefore relied on depth of data more than the number of participants. Given this objective, the type of study (qualitative) has a greater bearing on the sampling method. I used purposive sampling, which seeks participants who are most likely to give the most informed perspectives on the subject under study (Scott & Morrison, 2006). Purposive sampling aligns well with qualitative research, and qualitative research seeks insight mainly based on experience. Hence, people closest to the phenomenon under study from an experiential standpoint make up an ideal sample in a qualitative research study (Merriam & Tisdell, 2015). The study mainly investigates the strategies used by universities to ensure the full participation of students with ASD and ADHD, and the experiences of students with ADHD and ASD in relation to that support. Therefore, inclusion for participating in the study is specific and restricted only to people with the required insight. In obtaining participants to detail the experiences of students with ASD and ADHD, only students fitting this criterion would be appropriate participants. Likewise, on explaining strategies used to cater for the needs of students with ASD and ADHD in universities, only staff members with

experience providing the necessary accommodations and support for this group of students were included in the study to explain those strategies. In essence, students with ASD and ADHD and DU staff members are the population groups that have the insight needed to address the questions and objectives of the study. The sample was 24 participants in total, including staff members and students. This is a relatively large sample for a qualitative study (Merriam & Tisdell, 2015). Originally, the intention was to include all 26 public universities to get as much diversity of contexts as possible so that the results can be relevant across the national context. Repeatability is also an added advantage because more voices on a point of discussion give perspective of how far reaching the problem is and ultimately how far corrective efforts can reach (Siedman, 1998). Qualitative studies, though focusing predominantly on opinions, become repeatable across various contexts when they have a multiplicity of voices involved (Moustakas, 1994). Diversity of voices also complements the multiplicity of contexts, and in this study, diversity of voices stems from the involvement of students and staff from different universities varying on institution type, local context and availability of funds and resources. The tables below show the breakdown of the sample in terms of staff and student participants:

Table 2: Number of staff members from each university

University	DU staff participants
PR1	2
PR2	2
PR3	0
CU1	1
PU1	2
PU2	0
PU3	0
UT1	1
UT2	2

Table 3: Number of student participants from each university

University	Student participants
PR1	2
PR2	2
PR3	4
CU1	0
UT1	0
UT2	0
PU1	1
PU2	2
PU3	3

4.4 Research Site

The study is situated within the South African higher education system, specifically the public universities in the country. All 26 public universities were considered as this is a national study seeking to obtain as widespread a picture of the state of inclusion of students with ADHD and ADHD in South African higher education as possible within the scope of the study. Requests were sent to all 26 public universities, following the ethics protocols of each institution as guidance was provided. However, not all institutions responded to the invitation, with some rejecting the request to conduct the research. Most of the universities that did not end up being part of the study were not responsive to the application, but one Research-Intensive university (the university types are explained in detail further below) indicated that it had already met its threshold for research for the year requested and could not take any more studies. In another case, the reason for the decline was that there was no Disability Unit or similar department in the university, which raised my curiosity and concern about how these institutions see inclusive education in connection with their goals as institutions. The implications of an institution of higher learning not having a DU are

potentially detrimental for students presenting unique needs and negatively affect the chances of the institution being inclusive and I discuss this in detail in the analysis later in this thesis. The Disability Units of the universities are of key interest for this study because they are responsible for the welfare of students with disabilities, along with neurodivergent students such as those with ASD and ADHD. Thus, the research is situated in the DU of each university that took part in the study. Due to ASD and ADHD being the only forms of neurodiversity being highlighted in this research, only the members of the student population from those categories were included in the study.

4.5 Categorisation of universities in South Africa

Having discussed the sampling criteria and site of the research study, more clarity is needed on the landscape of South African higher education, namely the university system. I explain on this by discussing the different categorisations of universities in South Africa, which will contextualise the variability in category, resource availability and other factors useful for distinguishing between universities. In studying the categories of universities in South Africa, one will also become acquainted with the history of individual institutions in relation to their current state. In this regard, Keet et al. (2024) argue that the current higher education system is highly reflective of South Africa's history, in that previously advantaged institutions remain ahead in many ways, despite laws and policies favouring equality. In addition to history, currently, South African universities can be grouped based on factors such as research output, continental and global rankings and geographical location.

Three main categories are generally accepted and designated by the Department of Higher Education, which are traditional universities, comprehensive universities and universities of technology. The Policy on Recognition of South African Higher Education Institutional Types, which designates categories of tertiary institutions in South Africa describes the three public university categories in the following manner:

A traditional university:

> must undertake research and produce knowledge contributing to the national development needs and international scholarship and demonstrate a culture of sustained scholarship evidenced in peer reviewed academic publications which inform teaching and learning in all its academic fields … must be involved in engagement activities within its locality

> contributing to the wider development of its community. Must be active and with tangible outcomes in academic internationalisation activities (Department of Higher Education and Training, 2014, p. 25).

From this description, it is evident that traditional universities are the link between the South African education systems and the world, as they have a strong research emphasis, which is why they are also called research-intensive universities (Ramaahlo et al., 2018). These universities are highly ranked continentally and globally renowned. Recently, there was a further division of the criteria of traditional university based mainly on research output, resulting in the categorisation of Public Research-Intensive Universities and Public Universities.

The following criteria are specified for comprehensive universities and universities of technology:

> For a university to be recognised as a Comprehensive university or a University of Technology, 60% of their research activities and outputs must be on applied research. A Comprehensive university and a University of Technology must offer 30% of their qualifications on technology-based programmes. What differentiates between Comprehensive Universities and Universities of Technology is that comprehensive universities still have large research component, and they provide industry-specific expertise. On the other hand, universities of technology mainly teach application of skills and are innovation centres where technological advancement is the main aim as the name suggest. (Department of Higher Education and Training, 2022, p. 25)

Though these three main categories are detectable, the South African post-school education system is complex, with sub-categories and different forms of institutions also being formed. To this effect, Essop (2020) argues that the South African higher education system is more stratified than it may seem. The stratification referred to is hierarchical because the type of institution is viewed within the academic and industrial spaces as an indicator of the level of education received (Matsepe et al., 2020). This is evident in the fact that universities considered to fall in one of the three main categories are not necessarily equal in standing with regards to ranking, budget and research output. For example, former White traditional universities are still far ahead and more resourced than traditional universities that formerly served the Black population (Ntshoe & Selesho, 2014). In light of this variability in university capabilities and prestige, the experiences of students with ASD and ADHD as well as the efforts to include them in universities will likely

be reflective to an extent of the type of institutions they attend. This will help to provide a comprehensive view into the higher education system in relation to the inclusion of these categories of students to ensure that in advocating for increased awareness of neurodiversity, the specificity and intensity of challenges in different universities is also highlighted.

In the data analysis, the pseudonyms used to refer to participants were based on the category of university the participants were from and whether they were staff members or students. Firstly, the category Public Research University (PR), had three institutions represented and given the designations PR1, PR2 and PR3. Under the Public University (PU) category, there were also three universities, designated as PU1, PU2 and PU3. Only one comprehensive university took part in the study and was designated as CU1 whereas two universities of technology took part and were designated UT1, UT2 respectively. Furthermore, the pseudonyms for the participants were created using the designations of the universities, adding the kind of participant and the number representing the student or DU staff member in terms of the order in which they participated in the interview. For example, the first student from the first public university that participated was given the pseudonym PU1 student 1, while the second DU staff member from the first University of Technology was identified by the pseudonym UT1 staff 2. This categorisation is used to protect the identity of participants, and also to help the reader get a perspective of the context from which the person quoted speaks in terms of the kind of university they are based in.

4.6 Data analysis

According to Corbin and Strauss (2008)**,** data analysis is the process in which researchers make meaning of the data they have collected by explaining the implications gleaned from the collected information. Data analysis is done according to the aims of the study, with the research questions also forming a framework on which to analyse gathered data. As this is a qualitative study, my data analysis was focused on the experiences of participants and how their experiences have shaped their understanding and opinions of inclusion of the students with ASD and ADHD in South African universities (Scott & Morrison, 2006). Qualitative data analysis seeks to find relationships between information that was received from different participants and making meaning of those relationships. In explaining the relationships in a data set, qualitative researchers “theorise about how and why the relationships appear as they do” (Ary et al., 2018, p. 513). This means that qualitative data analysis goes beyond a descriptive breakdown of the data and seeks the underlying

meanings of the information gathered (Belotto, 2018). Moreover, qualitative research is predominantly meaning-oriented and context-sensitive (Merriam & Tisdell, 2015). This implies that it not only determines the existence of phenomena but also attempts to explain why it exists where it does, in the manner in which it is experienced, hence there must be considerable regard for context in conducting qualitative research. Crucially, the way to gain better understanding of phenomena in qualitative research is by drawing from the related experiences of participants who experience the phenomenon under study directly (Belotto, 2018). In essence, lived experiences take precedence over researcher opinions in qualitative research, though the expert opinions developed by researchers are informed by the revealed experiences of participants (Azungah, 2018). Therefore, in the data analysis in this study, I focused on expounding on the underlying meanings of the statements made by the participants concerning their respective institutions and how students with ASD and ADHD are catered for.

In addition to analysing the data qualitatively, it was also assessed based on the instruments used, which in this case were questionnaires and interviews with participants from various universities. The questionnaires and interviews were analysed qualitatively by organising the data into themes in relation to the research questions and observing commonalities in the data gathered from different participants. This method of analysing themes in the data set is known as thematic analysis, and it entails organising pieces of data into specified categories due to them being related to one another (Gibson & Brown, 2009). Braun and Clarke (2006) add that thematic analysis entails "identifying, analysing and reporting patterns (themes) within data" (p. 297). The patterns then guide the researcher into organising the data into meaningful groupings (Castleberry & Nolen, 2018). The process by which these groupings are made is known as coding, which begins with raw data being systematically compartmentalised into themes that are either predetermined or seen to be repeatedly observed in data from different participants. Robson and McCartan (2016) define coding as the process in which "all or parts of the data… are identified as representing something of potential interest" (p. 461). The way to judge whether aspects of data are of interest is to assess its relevance to the research questions and objectives, and also based on how commonly it appears on data sourced from different participants. The organisation and analysis of these themes is expounded on further below, drawing distinction between preliminary and emerging themes.

Castleberry and Nolen (2018) argue that qualitative data is commonly analysed inductively, meaning it allows meanings to appear from the data rather than testing the data against preconceived hypotheses. However, due to questionnaires being used in this study, and the structured nature that some of the questions have, they were analysed deductively, with the research questions guiding the analysis. Deductive thematic analysis puts a pointed emphasis on addressing the research questions but does not rely entirely on the questions, it can be used in combination with an inductive approach which allows the emergence of themes, as stated above (Xu & Zammit, 2020). Deductive analysis is dependent on pre-set hypotheses and theme statements, which are simply reported on by looking at the gathered data, while inductive analysis allows for the emergence of unexpected types of information to appear (Azungah, 2018). In thematic analysis, the research questions take precedence because "a theme captures something important about the data in relation to the research question" (Braun & Clarke, 2006, p. 82). Essentially, the research questions are used as a framework for coding the data in deductive thematic analysis, making for an analysis specifically in line with what the researcher intended to investigate, but emerging themes are also recognised (Blum et al., 2020). In this study, I applied a blend of deductive and inductive data analysis to address the research questions while also discussing the emerging themes from the data. The likelihood of emergent themes is increased significantly by the fact that in both data collection methods (questionnaires and interviews) open-ended questions were prevalent, allowing detailed explanations of experiences and opinions. According to Azungah (2018), using both deductive and inductive analysis enriches qualitative data and gives a more meaningful role to the research participants. This is because in addition to their reflections on *a priori* themes, the researcher also discusses issues that the participants raise themselves. Below is an explanation of the data analysis process from my study.

Firstly, due to the participants of the study being from different universities, the times in which I collected the data from participant to participant were sometimes weeks apart. For this reason, I could not delay the analysis of obtained data while other universities were yet to confirm the agreement of students and staff who would participate. Thus, for a period of about six months I was collecting data and simultaneously analysing it to avoid delaying the analysis, therefore I analysed each piece of data as it came. This was particularly important in processing interview data as it is advisable to transcribe interviews withing a short period of time (Belotto, 2018). I ensured that I did all transcriptions withing 24 hours of the interview being conducted. I used

Otter.AI, an Artificial Intelligence (AI) tool to do the initial transcription and separate the text converted from speech according to speakers (myself and the participant). Having obtained the initial transcript from Otter.AI, I replayed the audio while examining each entry to ensure that any incorrectly transcribed words or phrases that may not have been intelligible to the AI tool were corrected. The corrections were minor, but I ensured that the transcripts were word-for-word and that no slight detail from the audio was left out.

Having obtained data from the first two interviews, I began preliminary coding in which I used the research questions to indicate the main themes; including talking points that I had tried to cover in the interview questions. I then created a codebook that first stated the *a priori* codes that I had, based on the objectives and research questions, and after evaluating it with my supervisors I made a few changes as advised. I kept this codebook throughout the analysis and added emergent codes to it as they came up. Before proceeding to identify codes in the data, I did an initial free coding process in which I was just highlighting the essential elements of each answer to a question, since the interview questions were open-ended, I identified several elements covered in each response. Subsequently, I identified recurring issues in the interview data, and these led to the statements being labelled according to their relevance to the research questions and objectives, these constituted *a priori* themes and were added to the codebook.

After the preliminary codes were finalised, I then identified recurring themes that were not among the initial themes, as emergent themes. Emergent themes are a common feature of phenomenological studies, because the open-ended questions encourage extensive explanations that may lead to the expression of important aspects that were not anticipated (Norlyk & Harder, 2010). The interviews with students were analysed both inductively and deductively as they were expected to give comprehensive responses giving rise to more themes (Braun & Clarke, 2006). Emergent themes also encourage participant-centred research because while the research questions show what the researcher is interested in uncovering, emerging issues reveal what matters to participants that may not have been anticipated. Having identified various codes and themes in the data, I looked for correlation between them and merged closely related codes to form fewer themes. This is in line with the thematic approach, which is based on the combination of codes under broad themes, which makes for a more structured but broad analysis of data (Robson & McCartan, 2016). This is important in light of the need to not only show existing themes in data but also show how

different elements in the data are connected. In this regard, Robson and McCartan (2016) state that coding involves not only assigning codes but "also having a way of seeing it *(the code)* alongside other data that you have coded in some way" (p. 464, emphasis added). This particularly resonates with the conceptual framework of this study, which through both the cultural model and intersectionality, seeks to analyse challenges facing students with ASD and ADHD taking cognisance of how each challenge relates with other aspects of the students' lives. Both the cultural model and intersectionality are broad approaches, with the cultural model conceptualising neurological difference in the context of other identity markers and contextual factors while intersectionality views marginalisation as caused by the interplay of several aspects of a person's identity upon which they may experience exclusion.

4.7 Maintaining data quality

In quantitative studies, there are criteria that are expected to be met such as repeatability and generalisability (Scott & Morrison, 2006). These are elements that have a mostly statistical and numerical significance, which is fitting of quantitative enquiries. In contrast, the validity of a qualitative research study depends on different criteria which relate to the study's impact and relatability not only to the research community but most importantly, to the research participants. As such, some qualitative researchers use the term 'credibility' rather than 'validity' when discussing the authenticity of data gathered through qualitative research methods (Creswell & Poth, 2016). Furthermore, Merriam (2015) states that the philosophical approaches that a specific study employs determine the factors to be considered in ensuring the credibility of the data produced. In this case, interpretivism is the overarching paradigm and in line with its fundamental imperatives, the participants should be individuals with relevant experiences to the objectives and questions of the study (Alharahsheh & Pius, 2020; Weber, 2004). By involving people with relevant experiences, the study's findings and conclusions are directed by the participants and are therefore relevant to them. This kind of research approach is vital in studies involving vulnerable groups, where researchers often impose their opinions and prejudices on research participants. In describing this problem, Atkins (2013) states that in most research studies, "the interpretation of data is exclusively that of the researcher but is represented as the truth about a particular group and used to create meanings and produce identities" (p. 146). In contrast, the current study draws from the opinions of participants that are informed by their experiences to generate meanings that truly represent the views of the participants and not just the researcher.

The data is, therefore, authentic because it comes from people with direct experiences of being a student with ASD and/or ADHD in university or providing support services to students with these conditions in South African universities. Equally, the research questions of the study also guide the strategies implemented to ensure the credibility of the data and findings. In qualitative research, these strategies can include approaches such as triangulation, peer review, clarification of researcher bias and external audits. Notably, this is a long list of strategies, and not all are expected to be applied to all qualitative studies but according to the nature and focus of the study. However, Creswell and Poth (2016) recommend the use of at least two of these strategies for validation in qualitative research, according to the scope of the research, to ensure the richness of data required in qualitative research. In line with Creswell and Poth's (2016) recommendation, the strategies used in data collection and analysis were clarification of researcher bias and triangulation.

In addition to the strategies stated above, this study applies the eight big tent criteria for quality in qualitative studies. The eight big tent criteria is a framework for determining quality and credibility of a qualitative study (Tracy, 2010). These aspects contribute to the overall validity of a study and its findings with regards to meaning production, relevance and impact. Due to its general subjectivity and value-laden nature, qualitative research is subject to more flexible quality standards, different from the comparatively more rigid number-based quality aspects considered in quantitative research (Cosgrove, 2018). Notably, flexible and subjective meanings in qualitative studies are meant to be afforded to the research participants mainly, but the research has to be evaluated in terms of its findings and their interpretation (Tracy, 2010). This then necessitates criteria for quality as measures of validity of the research study in terms of academic merit and credibility as a source of knowledge. Thus, this study adopts the eight big tent criteria to check the quality and validity of the data from every stage: from collection to analysis and ultimately conclusions to be drawn from the data. Below, I outline the meanings of these criteria as well as what they each contribute to ensuring that the study collects quality data and makes valuable contributions to knowledge. In explaining these aspects, I combine those that are more closely related to avoid repetition and show how the criteria function as a package and not isolated concepts.

4.7.1 Worthy topic and significant contribution

A worthy topic is characterised by relevance, timeliness, making a significant contribution and being interesting. In terms of relevance, this study fits the bill in that the reversal of marginalisation of some groups in South Africa has been slow and groups such as neurodivergent students have been neglected for decades, as evidenced by the lack of focus on developing inclusive educational norms in the higher education system. By placing the conversation of inclusive education in the higher education context, this study responds to a research gap which has been left by the fact that inclusive education has largely been a basic education project in South Africa (Mutanga, 2017). Moreover, Tracy and Hinrichs (2017) assert that a worthy topic must reveal information about a concept or phenomenon that has been misunderstood. Neurodevelopmental conditions are viewed negatively in sub-Saharan Africa, so by applying the cultural model and the neurodiversity paradigm in the analysis of the data, more positive ways of understanding ASD and ADHD will be presented. This also includes dispelling misconceptions stemming from cultural beliefs and a lack of understanding of ASD and ADHD. In terms of making significant contributions, Tracy and Hinrichs (2017) state that a qualitative study should revolutionise how major issues are thought about and give practical applications to the knowledge generated. This study promotes new ways of understanding what it means to be autistic or live with ADHD in a South African university and educates people on how to act in the best interests of neurodivergent people for the development of an inclusive society. The successful strategies that DU personnel have shared in this study can be used to guide future efforts to transform South African universities to become ASD and ADHD friendly. In addition, the study is timely because comes at a time when there are increasing rates of prevalence of neurodevelopmental disorders around the world, with ASD and ADHD being among the fastest growing (Constantino, 2018; Van der Merwe et al., 2020). While Global North research focus has increased, there is little focus in this area from the Global South, particularly relating to how people with ADHD and ASD experience socially complex environments such as universities.

4.7.2 Rich rigour

In qualitative research, rigour is related to the depth of data collected, followed by a rich analysis of the data as well. Rigour also relates to complexity because qualitative research focuses on the reasons why certain opinions or experiences exist. Therefore, the study should employ methods that tap deep enough into underlying causes. It is also demonstrated in the use of different sources

of data to further add in-depth insights from participants, which in this study is demonstrated by the use of questionnaires and interviews. It is also shown in the involvement of students and DU staff members as they bring different perspectives, as providers and benefactors of support respectively. Tracy and Hinrichs (2017) also add that the analysis of data should match the complexity of the phenomena being studied. In this study, the concept of inclusive education is central and to get as complex an analysis as possible, intersectionality is applied to capture different axes of oppression that affect students with ASD and ADHD.

4.7.3 Resonance and sincerity

Resonance speaks to how relatable and compelling the study is to the target audience. Though the participants in this study are students with ASD and ADHD and DU staff who are closely linked to their university experiences, the thesis should draw the interests of readers beyond these populations. In accordance with the development of inclusive educational reform in South African universities, this study promotes positive views of ADHD and ASD, using the cultural model and neurodiversity. For this to be realised, positive attitudes should be cultivated among both neurodivergent and neurotypical people, so the discussion of the findings of this study prompts changed attitudes towards neurodiversity, particularly ASD and ADHD across the population. Furthermore, resonance in a qualitative study is to be found by making the study relevant to the time and context in which it is conducted. In this regard, Tracy and Hinrichs (2017) argue that studies should produce "historically and culturally situated knowledge" (p. 7). Focusing on neurodiversity fulfils this aim because there is increased focus on neurodevelopmental disorders in inclusive research. With growing prevalence rates of ASD and ADHD, the study responds to the need to promote practical approaches to educating students with these conditions to the best effect. Tied to resonance is sincerity, which according is about being open about the possible biases of the researcher and being transparent about the entire research journey (Tracy, 2010).

4.7.4 Triangulation

Another aspect of ensuring the validity of qualitative data is that the analysis should incorporate multiple viewpoints and sources of data. This serves to provide an in-depth description of the phenomena under study so that the findings reached can be generalisable and also to ensure that multiple perspectives are addressed. To achieve this level of validity, triangulation can be incorporated into the collection and analysis of data for qualitative studies. Silverman (2024)

defines triangulation as "combining multiple theories, methods, observers and empirical materials, to produce an accurate, comprehensive and objective representation of the object of study" (p. 355). This does not mean that all of those variants have to exist in the data, as what can be compared and combined depends on the specific study. Triangulation can entail using different data sets collected using different methods such as interviews, focus groups and questionnaires (Howitt & Cramer, 2020). Basically, there is a minimum of two methods of collecting the data, but triangulation can also be demonstrated by comparing data from two or more population groups, which can be done using the same data collection instruments. This involves the comparison of various participants' perceptions and viewpoints that they expressed in different research engagements (Ward & Webster, 2018). In this study, the views expressed by participants from two distinct groups are compared with each other, between the two groups but also between different participants within the same group in reference to similar issues. The two distinct participant groups are students with ASD and ADHD, and Disability Unit staff members. Throughout the data analysis, the correlations and differences between the opinions and experiences of these groups are noted. This is advantageous because DU staff members' explanations of what their unit is able to provide in terms of support to the students is assessed in detail against the experiences of students in receiving that support. Moreover, the participants in this study come from different universities with different contexts and the experiences of participants from different institutions helps to show how the context contributes to their individual experiences.

4.7.5 Ethical considerations

After my doctoral proposal was approved by the Wits School of Education, I sent an ethics application to the university's Human Research Ethics Committee (HREC-Non-Medical). Having obtained provisional permission from the HREC, I was allowed to communicate with the individual institutions, following their respective ethics processes for external researchers. Having received the permissions from nine universities, which I deemed enough for the study to go ahead, I sent approval letters to the HREC, after which my conditional ethics clearance was upgraded to unconditional clearance. The study was given the ethics protocol number H23/06/34. Having received unconditional clearance, I began collecting data. I did this firstly by contacting the Disability Unit of each university from which I had received permission, to obtain the consent of two staff members who would participate in filling questionnaires. Additionally, I requested from two universities in Gauteng to conduct interviews with their staff members (two from each); a

public research-intensive one (PR1), and the other a comprehensive university (CR1). One participant was available from CU1, while two were provided by the DU in PR1, therefore three DU interviews were conducted in total.

In addition to providing staff members as participants, I also requested the assistance of the Disability Unit in identifying students with ASD and/or ADHD to participate. I opted for this option to ensure that the participating students were obtained quickly as the DU has records of students with various conditions that require special accommodations. Moreover, reaching the students through the DU ensured that the students that would participate would indeed be living with ASD and/or ADHD. I was confident of this based on the expectation that for students to receive support in accordance with their conditions, they must provide proof that they have been diagnosed with ASD or ADHD. Once the students agreed to participate, the DUs allowed me to communicate further with them to set interview times, or in the case where the student was not comfortable with being interviewed, to fill in a questionnaire instead. None of the student or staff participants were minors, therefore the study was categorised as minimal risk by the Wits HREC, therefore I did not need to seek further permission beyond obtaining formal consent from the participants, which I outline below.

4.7.6 Formal consent

All the participants were given a consent form that explained their rights as research participants. Each of the consent forms was tailored to a specific type of participant (student or staff member, and kind of engagement (interview or questionnaire). The consent forms used are available in Appendices 6, 8 and 10. The consent forms for interviews explained the right to withdraw at any point in the interview, and their right to choose whether they answer any of the questions asked. I also explained that the recording of the interview was contingent upon the participants expressing their approval. All the online questionnaires also had consent forms built in, such that the participants would not be able to answer the questions without first completing the consent section. Anonymity for all the participants was maintained by using pseudonyms for them and their respective universities. Interview and questionnaire data were stored in a password-protected computer.

4.7.7 Clarification of researcher bias

In this section, I outline how I avoided any personal biases as a researcher interfering with the authenticity of the data gathered. Since I was the only person conducting interviews and administering the questionnaires for students and DU staff members, I was the primary data collection instrument. Therefore, my biases had to be in check for the study to not be influenced unjustifiably. Having done research in my Master's degree, and later co-authoring an article focusing on the education of students with ASD in South Africa (Nthibeli Griffiths & Bekker, 2022), I had developed a strong conviction that students with this condition should be given ample opportunities to participate fully in mainstream educational environments. This is a view that I also hold regarding students with ADHD and other neurodivergent individuals. To ensure that this bias did not influence my participants, I ensured that all questions requiring the opinions and values of participants expressed were kept open-ended. The bias would most likely show in the interviews as they were more conversational than questionnaires. To avoid interference emanating from researcher bias, open-ended questions are used in phenomenological interviews to give the participants freedom to express their views freely, and to avoid prompting them towards the researcher's preconceived ideas (Moustakas, 1994; Norlyk & Harder, 2010). This open-ended approach enabled the participants to answer the questions based on their own views and experiences and not my own, thus eliminating my bias from the responses given and ultimately, the data itself.

Conclusion

This chapter has outlined the procedural part of the study, discussing the interpretivist research paradigm in relation to its applicability in this qualitative research study. In summary, the qualitative nature of the study means that it relies heavily on the experiences of the participants and the opinions they have formed based on those experiences. In addition to the paradigm, the chapter has also detailed methodological insights, explaining the steps taken in collecting the data, why those steps were taken, and how they answer the research questions and meet the objectives of the study. Major aspects, such as the use of purposive sampling are also argued for, including a rich description of the research site for this study, comprising of the number and types of universities that were involved in the study. Importantly, the use of thematic analysis as a data analysis method is clearly discussed in relation to its application to the gathered data. Lastly, this

methodology chapter has also detailed the techniques that were applied to ensure that data quality is maintained with limited bias, relevance to the research participants, and by ensuring rich rigour.

CHAPTER FIVE: STRATEGIES FOR INCLUSION OF STUDENTS WITH ASD AND ADHD: FINDINGS AND ANALYSIS (RESEARCH OBJECTIVE 1)

In this chapter, I highlight the strategies that DU staff have explained that are used to accommodate students with ASD and ADHD. This directly addresses the first research objective which is to investigate the strategies in place in this regard. It also addresses the main research question, specifically focusing on implemented strategies that have enabled DU staff members to successfully cater for the needs of students with ASD and ADHD in the university space. In seeking clarity on implemented strategies, I also aimed to ascertain the general philosophies of each DU on catering for students with ASD and ADHD. Schuck et al. (2024) highlight the impact of attitudes specifically towards neurodiversity, asserting that "attitudes toward the neurodiversity perspective can have real-life impacts on the lives of neurodivergent people, from effects on daily interactions to how professionals deliver services to neurodivergent individuals" (p. 1). Therefore, the guiding principles that inform the implemented strategies are also highlighted. The staff component of the research sample comprised of a total of ten staff members from six universities; there were no responses from three universities on the questionnaire, despite repeated reminders. The total responses to the questionnaire were nine, while three interviews were conducted with staff members. Of the three participants that did interviews, two also filled in the questionnaire.

A further aspect of the analysis is to comment on the forms of support that I outlined in the first chapter in two main categories, namely differentiation between students services as non-academic support and learning development, which entails academic-type support measures (Simpson, 1996). Understanding that to participate fully in university activities, students need to be supported both socially and academically, I analyse whether students were being supported in both these areas. In line with the design of this study, a few themes stood out and guided the data analysis in this chapter, focusing on the strategies that DU staff pointed out. A similar approach is taken in chapter 6 to highlight the key themes in the data gathered on the experiences of students in their respective universities. In terms of the DU data, three main themes were identified: 1. Guiding principles and views of DU staff on inclusion 2. Support strategies that are in place; 3. Collaborations with other departments and stakeholders. Under each of these themes, the strategies that DUs have in place to include students with ASD and ADHD are analysed in this chapter in relation to the study's objectives, most notably the first main objective of investigating the inclusive strategies already in place. It is worth noting that while these three themes were

identified, a variety of sub-themes were also evident and are therefore discussed under the main themes.

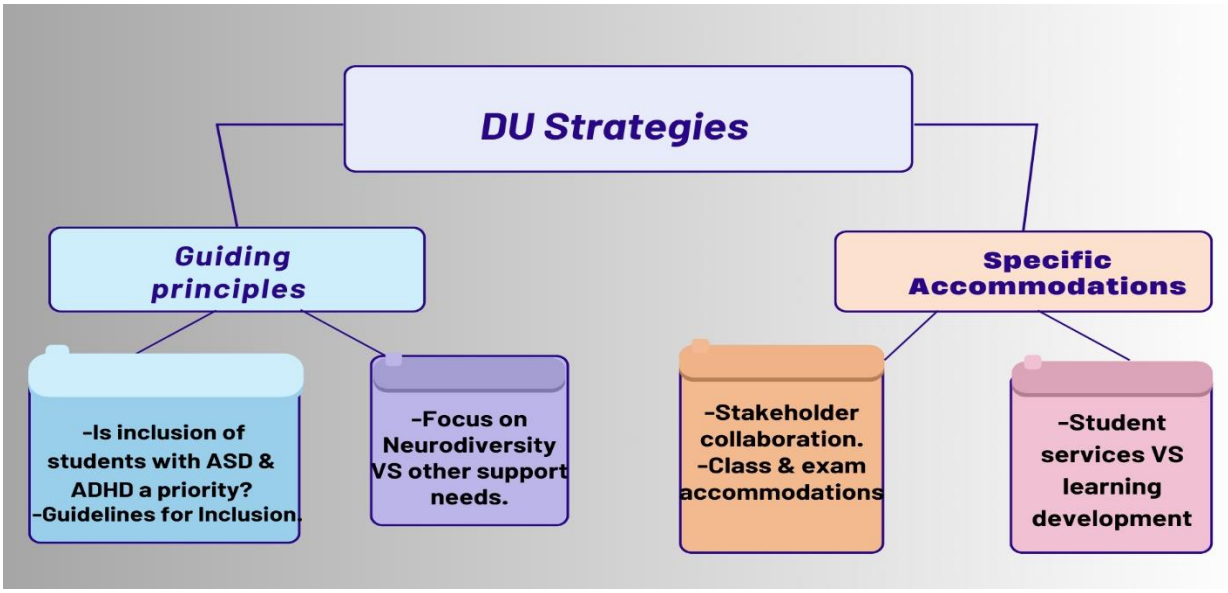

Figure 1: Themes from DU data

5.1 Guiding principles of DUs and the views of staff members on inclusion of students with ASD and ADHD (Theme 1)

The guiding principles of DUs features significantly in their statements regarding their commitment to the inclusion of students with ASD and ADHD. The findings show across the board that all DUs involved in this study strive to promote inclusive education practices. All the participants had a generally inclusive approach to supporting students with ASD and ADHD, and other impairments, expressing commitment to catering for a variety of student needs. In addition to this, most of the DU staff members indicated that their DUs strive to cater for the needs of both students with physical disabilities and those with neurodevelopmental disorders such as ASD and ADHD. This was evident in the DU staff questionnaire as the majority of participants did not indicate a response below the middle range on the Likert scale question regarding their unit's capacity to cater for students with ASD and ADHD. The following examples further attest to this commitment to inclusive education:

> *"We try to work on a case-by case basis, understanding that people make sense of their experiences differently and as such, have differing needs." (CU1 staff 1)*

"We support our students on an individual basis. Not one student is the same as the next." (PU1 staff 1)

Though most DUs aim to cater for all support needs presented to them, there were indications that some staff members find it more difficult to support students with ASD and ADHD than they do with physical impairments:

"I would say the university strives to be balanced in terms of how it caters to those subtypes of disability so to speak. Realistically, I can't say it's always easy. Nobody is written on the forehead "this person is living with ASD, or this person is living with ADHD", and so it can be difficult then to be able to advocate for these students." (CU1 staff 1)

This response highlights a major aspect that makes neurodiversity unique, which is the fact that it is not always easily observable. While there may be strategies and resources for support, it may be difficult to recognise a person with ASD or ADHD, unless one is already aware of these conditions. Unlike physical impairments, the difficulties faced by neurodivergent students occur mainly in the mind, therefore they are not as directly observable (Accardo et al., 2024). Thus, including students with ASD and ADHD is complicated by the fact that many of them will remain unnoticed unless they disclose their condition to their local DU. Hence, there is relatively lower awareness of neurodiversity compared to physical impairments. Though the participant above stated these aspects in relation to the difficulty of supporting students with ADHD and ASD, they rightly emphasise that advocacy is an important part of support. In this regard, Kenna (2023) state that the provision of support for neurodivergent persons should be paired with advocacy for their rights to address the social challenges they face due to the negative attitudes surrounding them. This response therefore shows an intersectional awareness of the marginalisation of neurodivergent students as the staff member recognises that support needs should be met in conjunction with advocacy to address challenges that stem from external social sources (Bayeh, 2022). However, the participant aligns with the common view of neurodivergent traits as invisible characteristics, which is a view that fuels ignorance and exclusion. While it is true that the traits connected to neurodevelopmental disorders are not always distinct and detectable, it is not sufficient to merely admit to the difficulty in their detection. I argue in fact, that the perception of neurodivergent traits as not easily observable is problematic and is an indication that many people just lack the information regarding indicators that show that a person is neurodivergent. Likewise, Borsotti et

al. (2024) add that stigma towards neurodivergent individuals may also contribute to them lacking the confidence to show their neurodivergent traits, hence conditions like ADHD and ASD are still considered 'hidden' disorders. The perception of these conditions as 'invisible' highlights the lack of knowledge about the apparent symptoms, as well as the denial of the underlying reasons for the apparent lack of knowledge. Evans, Granson, Langford and Hirsch (2023) assert that neurodevelopmental disorders such as ASD are usually termed 'invisible' "because there is generally no outward indication that a disability exists" (p. 243). In contrast, the neurodiversity movement argues for visibility and recognition of neurodivergent traits, not as disabilities but forms of diversity, therefore their perception of them as invisible should not be sustained (Cheng et al., 2023). In the same vein, Rasch (2022) argues that "using terms like 'invisible disabilities' fails to account for the lived experiences that neurodiverse students have in higher education" (p. 191). The cultural model also, by advocating for celebration of difference, does not align with the perception of people's unique traits as invisible (Jones, 2022). Therefore, using an intersectional approach to neurodiversity in connection with the cultural model, one can argue that the categorisation of ASD and ADHD as 'invisible disabilities should be avoided. Furthermore, the scientifically and officially recognised signs of ASD and ADHD prove that they are observable traits. The descriptions of the diagnostic criteria in the Diagnostic Manual of Mental Disorders for example, states the following in describing ASD:

> Autism spectrum disorder is characterised by persistent deficits in social communication and social interaction across multiple contexts, including deficits in social reciprocity, nonverbal communicative behaviours used for social interaction, and skills in developing, maintaining, and understanding relationships. In addition to the social communication deficits, the diagnosis of autism spectrum disorder requires the presence of restricted, repetitive patterns of behaviour, interests, or activities. (American Psychiatric Association, 2013, p. 31)

These are observable behavioural traits that can be easily identified by anyone who is aware of them. The reality, therefore, is that there is just a lack of awareness, hence the labelling of ASD as an 'invisible' condition. Likewise, ADHD, despite being commonly described as an invisible condition, is also characterised by observable traits:

> ADHD is a neurodevelopmental disorder defined by impairing levels of inattention, disorganisation, and/or hyperactivity-impulsivity. Inattention and disorganization entail

> inability to stay on task, seeming not to listen, and losing materials, at levels that are inconsistent with age or developmental level. Hyperactivity-impulsivity entails overactivity, fidgeting, in-ability to stay seated, intruding into other people's activities, and inability to wait – symptoms that are excessive for age or developmental level. (American Psychiatric Association, 2013, p. 32)

The neurodivergent traits are only invisible to those lacking awareness about them, and the solution to that is to increase awareness in university campuses that they do exist and must be recognised. Cherewick and Matergia (2024) add that neurodivergent people are only hidden because of the social environment that is hostile towards them, and not because neurodivergent traits are invisible. In effect, neurodiversity advocacy aims to promote the visibility of neurodiversity, and the view of neurodevelopmental conditions as 'invisible' proves that there is still much work to be done in that regard. In response to the lack of awareness, the neurodiversity movement calls for the recognition and positive affirmation of neurodivergent traits as existing variations to human cognition.

One of the identifying markers of the intentions and guiding principles of a DU is the name of the unit, which gives insight into the approach towards students with disabilities. Among the names of the DUs from the universities that featured in the study were 'Disability Unit' (which is the most common), Office for students with Disabilities', and 'Disability Rights Unit'. The name 'Disability Rights Unit', which belongs to one of the public research-intensive universities, stands out among others as its name carries a unique focus – *'rights'*. The name recognises that education is a human right for all persons, and should be provided without prejudice (United Nations, 2006; Johnstone et al., 2023). The name suggests that the services offered by this DU are provided in in consideration of this right. In explaining the meaning and thinking behind the name of the unit, one of the staff members from this unit emphasised the importance of the name as an indicator of the human rights approach. The explanation also shows a philosophical shift from a deficit conceptualisation of disability to an approach based on justice and equality for all, in tandem with the values of a democratic South Africa. In affirming this, the participant stated:

> *"So, the Disability Rights Unit… We are rights-based, we used to be a Disability Unit, and we changed the name to Disability Rights Unit. You know, we're looking at the rights of students with disabilities." (PR1 staff 1)*

This reflects an inclusive, student centred approach in that the rights of students form the basis of the unit and therefore, it serves to ensure that students' rights to education are fulfilled. Shaw (2021) supports a rights-based approach to inclusive education, arguing that "disabled people have human rights and the potential to contribute to society" (p. 14). The specific allusion to the fact that disabled people can contribute to society is vital and should similarly take pre-eminence in efforts to include them in higher education. The move to a rights-based approach referred to above also enables meaningful participation of students with different abilities, identities and socio-economic backgrounds (Ainscow et al., 2019). This supports the objective of inclusive education to enable meaningful participation of students, in this view, all students become active members of the academic community, rather than only being physically included (Naraian, 2011). By adopting a rights-based method that promotes meaningful participation, the DU is well-placed to provide support that enables students to reach their highest academic potential. Support based on meaningful participation is a significant improvement on the common deficit-based medical model approach in which students are only supported to measure up to the assumed ability of 'normal' learners (Waltz, 2020; Zaks, 2023). In contrast, focusing on the rights of students within the cultural model, students' strengths rather than deficits, become the focus (Twardowski, 2022; Waldschmidt, 2017). In large part, the insights shared by staff from this DU demonstrate significant commitment to meaningful participation, which further proves that the change of name to 'Disability Rights Unit' represents a positive ideological shift. The following statement from another staff member from this unit shows that students with ASD and ADHD are seen equally with other students, and the role of the unit is to ensure that all students are included as key members of the university community:

> *"We offer support for all types of disabilities that we can reasonably accommodate and the reason I say reasonably accommodate is the best type of support that [PR1] can give within reason without ensuring that our students with disabilities have an unfair advantage over students which are not disabled. So, it really is about evening the playing field and making sure that we're giving our students with disabilities the same chance as the students without disabilities have." (PR1 staff 2)*

This response alludes to 'reasonable accommodation', meaning providing the support that is needed to ensure equal participation of students that face challenges without disadvantaging other

students without known impairments (Conradie, 2024; Lester et al., 2013) This is an important consideration that helps to avoid the phenomenon of excluding while trying to include, which Messiou (2012) argues, results from narrow views of inclusion of students from marginalised groups. To avoid this, inclusive research and educational practice should take more holistic approaches, considering the needs of all students and not just those that belong to groups that are identified as needing support (Kenny et al., 2023). This means that inclusive efforts should take into consideration the needs of students with identified impairments as well as those that are not identified as such. By taking a holistic focus where all students are considered and the DU works to ensure that all students have the same chance for success, the possibility of giving an unfair advantage to supported students is alleviated. This demonstrates a truly inclusive approach because inclusive education is not just about improving the experiences of disadvantaged or impaired student groups but to ensure that the needs of all students are met, including those that do not have any known impairments (Carrington et al., 2023; Waitoller & Kozleski, 2013). The unit, therefore, shows the practicality of catering for the diverse needs of students in a mainstream educational setting in that the support strategies are developed with consideration of all students. Such consideration properly exemplifies reasonable accommodation, which is an integral part of inclusive education. In addition to reasonableness when providing support for students, the aforementioned 'Disability Rights Unit' has also broadened its reach as part of this transformation:

> *"When we the Disability Unit first started, it was focusing more on physical disabilities and visual, and over time it's expanded to include a lot more range of disabilities, especially neurodiversity and mental health." (PR1 staff 1)*

This further proves the impact of the positive ideological change in the unit because by rebranding itself, the unit has developed the capacity to serve a wider range of students' needs. The participant explicitly states that as part of the shift from 'Disability Unit' to 'Disability Rights Unit', neurodiversity received more recognition and attention. This gives neurodivergent students more confidence that their needs will be prioritised, therefore they are more likely to seek support from the DRU. In this regard, Doyle et al. (2024) state that "reluctance to access reasonable accommodations via disability services is connected to stigma" (p. 1). This still persists around the world as most people either lack knowledge or have negative perceptions about conditions such as ADHD and ASD (Conradie, 2024; Vergunst & Swartz, 2021). By taking a firm positive

stance on the rights of neurodivergent students, this unit has given students more confidence to come forward for support services. Moreover, the unit improved the skill set of its staff, and neurodiversity has even become one of the major focus points of the DUs support work:

> *"In terms of neurodiversity, from about thirteen years ago, this position came about that we needed to actually have someone specifically working with specifically learning disabilities and neurodiversity. So, my role came about and has evolved then from looking at just more specific learning disabilities to include more neurodiversity, as well as mental health, and if we look at mental health and neurodiversity, it's one of the biggest groups of disabilities that we support." (PR1 staff 1)*

The move to a rights-based approach referred to above also exemplifies recognition of the abilities of all students and demonstrates that a rights-based approach encourages the strengths of students and the rights to thrive based on those strengths (Casanova & Widman, 2021; Haegele & Hodge, 2016). This resonates with the cultural model's submission that impairment should be seen as "transversal and intersectional" (Waldschmidt, 2017, p. 26). 'Transversal' in this case denotes that it should not be ascribed a narrow, singular (typically negative) meaning, and fittingly, an intersectional view yields more awareness of the various axes that contribute to the unique identity, which in this study is the neurodiverse identity. Focusing on students' rights to contribute to society or learning institutions also means the support services given to students can be tailored by allowing students realise their potential. This aligns with the international standard of inclusive education, as given in the United Nations Convention on the Rights of Persons with Disabilities, which states that students with disabilities have the right to an education that develops their "personality, talents and creativity, as well as their mental and physical abilities, to their fullest potential" (United Nations, 2006, p. 16). This directly contrasts with the dominant medical-deficit model, which tends to lower the expected achievement standards for neurodivergent students, and is more focused on making students fit in (Casanova & Widman, 2021). In describing the lowered expectations for achievement placed on people with impairments, Liyanage (2017) states that the deficit view of disability, along with some cultural beliefs, influences charity-based approaches to people with disabilities. This involves giving basic supports to them that they need just to survive, and not necessarily to thrive in different sectors of work, education and society. In contrast, rights-based, inclusive education goes beyond survival by equipping students for success in the learning

environment and not merely remedial approaches that seek to provide basic needs and to only correct so called 'abnormal behaviour' (Cheng et al., 2023). This is especially important in cases where the condition itself results in above average strengths such as those seen in students with ASD and ADHD (Schippers et al., 2024). One student participant for example, indicated that they had a higher-than-average IQ:

> *"I have an above average IQ, if you will, but because of my ADHD and my bad concentration, it brings it down to like, to like with my school marks being average." (PU3 student 1)*

According to the cultural model, this student's strength, which is a high IQ level, should be allowed to thrive by ensuring that the educational environment is conducive for a student with unique abilities such as this one (Twardowski, 2022). In this case however, the impact on the student's achievement levels has been negative, which shows that the difficulty of inattention as a result of ADHD must be addressed for the high IQ to translate into high academic achievement. The primary focus of inclusive education is to respond to the student's needs (Acevedo & Nusbaum, 2020). In this case the need for support is clear, as the learning outcomes of the student have been negatively affected by their impairment. The student, therefore, should be supported to ensure that the difficulty of focus is mitigated.

While the aforementioned DU takes a right-based approach, the other units involved in this study take different approaches, some of which are too narrow to cater to the needs of students with ASD and ADHD. For instance, some of the participants, to the question of what guiding principles their units take to supporting students with ASD and ADHD, stated the obstacles hindering that support. The example below clearly depicts a unit lacking the necessary capacity to support students with ASD and ADHD:

> "*I don't think we have such a policy in place, we only have concession guidelines which accommodate students with ADHD" (UT1 staff 2)*

There are several problems with such a narrow focus, which can be uncovered using an intersectional lens. Firstly, the fact that concessions have been made on ADHD, but not ASD disregards the possibility that the two conditions can be comorbid in the same individual. In advocating for an intersectional approach to neurodiversity, Botha and Gillespie-Lynch (2022)

state that "intersectionality takes into account how the complex and multifaceted nature of people's identities, including other disabilities, race, ethnicity, gender, sexuality, and class, impact experiences and development across the lifespan" (p. 98). Neurodiversity is multifaceted; therefore, the support interventions should respond to the intricacies involved, such as comorbid ASD and ADHD. For instance, Miller et al. (2023) states that "there is some overlap in the symptom profiles of ADHD and ASD" (p. 3544). This necessitates support strategies that cater for these overlaps, along with other factors such as gender, race and socioeconomic class. With only ADHD concessions present, the DU above only partially addresses the needs of the students with both conditions and leaves students with ASD without support. Furthermore, other staff members gave generic responses that showed that there are no specific guidelines on neurodivergent students such as those with ASD and ADHD:

> *"As a Disability Unit, we believe in a holistic approach and individualized support." (UT2 staff 1)*

While it is important to take holistic approaches that cater for student needs based on their individual needs, there needs to be clarity of what that entails in practical terms. However, there is a lack of specific guidelines on how South African universities should implement inclusive education, specifically in relation to students with ASD and ADHD. The lack of imperatives for inclusion in South Africa, historically has led to the persistence of exclusionary practices (Donohue & Bornman, 2014). This may still be a reality in the current education space without specified requirements for accommodations. Government guidelines are quite obscure on how students with disabilities should be accommodated in higher education institutions, much less neurodivergent students like those with ASD and ADHD (Ramaahlo et al., 2018). One of the DU staff members confirmed this dilemma, admitting that universities are left to themselves to decide on the best accommodations they can offer:

> *"So, we're obviously guided by the paper, the White Paper on Education and Disability from government, and we within the university, make our own rules based on what the criteria is" (PR1 staff 1)*

Similar sentiments were expressed by DU staff members from other universities, who mostly mentioned some policies without specifying what guidance each policy offers for supporting

students with ASD and ADHD. Beyond these categories, it was apparent that the universities indeed largely set their own parameters and standards for meeting students' support needs:

> *"We are guided by, of course legislation that is worldwide, so from the UN as well as South African legislation… So, you will remember the white paper six. Which was for inclusive education, it applies to us, as well as the [CU1] policy, so we've got a number of policies that speak to people with disabilities" (CU1 staff 1)*

The White Paper 6 is the guideline for inclusion of learners with disabilities in basic education, therefore it lacks relevance to higher education. For over two decades in democratic rule in South Africa, there have been no official, local guidelines for universities for advancing inclusive education (Mutanga, 2017). In 2018, the Department of Higher Education and Training released the Strategic Policy Framework on Disability for the Post-School Education and Training System for the inclusion of students with disabilities in tertiary institutions (Department of Higher Education and Training, 2018). This framework which is meant to be a guideline for higher education institutions, is generic, with no clear guidance on the standards of inclusion to be implemented in catering for diverse student populations. More than 5 years on, the statements above show that indeed the framework does not offer clear guidelines as universities still use their own discretion despite its availability. To mitigate this lack of a sense of obligation or responsibility, some universities have formed collaborations to share knowledge and support strategies:

> *"We [at the DRU] also work with the HEDSA, which is the Higher Education Disability Services Association in South Africa, and try and find common ground, you know, with what concessions and what supports we offer with all the universities. So, we work together, and we've got a group, an email group that we can post questions and members join and let's say we want to know what is the benchmark for a certain concession, then we can ask that and get feedback so we can get kind of get consensus on that. So, it's a good support community network we're trying to build." (PR1 staff 1)*

Given that universities face common challenges, these collaborations are vital for information sharing and can also serve as guides for government in terms of the recommendations for policies that specify the guidelines for addressing different students' needs. In addition, maintaining support networks can help universities share expertise on different techniques that can be used in

different contexts around the country as reasonable accommodation standards. Further on reasonable accommodations, DUs can offer services based on their capacity, with reference mostly to the resources they have. Essentially, most of the DU staff members spoke of resource limitations as one of the main determinants of what can be considered to be reasonable accommodations. Given the inequality and lack of funding of institutions of higher learning in South Africa, some of the resources needed to support students with ASD and ADHD are not easily affordable (de Milander et al., 2020). In some universities, there are sufficient resources, which has a positive impact on the capabilities to support students. In fact, the comment below from one of the high-ranking research universities shows that there are sufficient resources, which enables the DU to meet most of the support needs of their student population:

> *"Look, there are mandates from government in terms of the White Paper and the United Nations and things like that in terms of saying, you know, that people should be supported especially the staff with disabilities as well, but the type of support we offer is based on the best that the unit can offer based on what [PR1] has available, and I can tell you that we probably give one of the best supports in the country. So, the support that students get is of a very high standard from [PR1]." (PR1 staff 1)*

The same cannot be said of less-privileged universities, which face funding and resource constraints, therefore it is difficult to establish clear standards for reasonable accommodation given the gaps in resource capacity between the universities. As part of developing policies for reasonable accommodation, the government should therefore direct more resources and funding towards ensuring that all institutions have the capability to meet those standards.

5.1.1 Balance of focus: neurodiversity and physical impairments

Another aspect related to guiding DU principles is the approach of the units in terms of providing support for students with physical impairments in comparison with non-physical neurological differences such as those of students with ASD and ADHD. I included this aspect to ascertain if the universities focus more on making accommodations for physical impairments than neurodevelopmental conditions. In this regard, Wenke and Mophosho (2008) argue that the unequal focus in research between physical and neurodevelopmental disorders may be contributing to the insufficient emphasis on neurodiversity as a growing form of diversity that presents different needs and challenges in the learning environment. By placing unequal focus on physical and

neurodevelopmental impairments, universities prove unable to address the diverse student populations they receive. Thus, research suggests that as student populations become more diverse, teaching approaches and the general academic environments will need to transform to accommodate their differences (Alstete et al., 2024; Griffiths & Leach, 2022). Notably, growing forms of diversity are also met with a similar variety of forms of marginalisation, giving rise to multiple forms of oppression as described by the intersectionality theory (Crenshaw, 1991). In terms of the conceptual framework of this study, the support of students with ASD and ADHD is understood as part of a broader human rights campaign. By this approach, a university that caters for disabled students but neglects neurodivergent students is not inclusive. Consequently, in analysing the approaches taken by DUs in catering for students with ASD and ADHD, it is important to ascertain how comprehensive and intersectional the support strategies are.

All DU participants in this study expressed commitment to serving students with physical disabilities, and those with ASD and ADHD. This was the case across the three main types of universities: traditional, comprehensive and universities of technology. The overall sense is that the DUs strive to cater for a variety of needs in the student population, but there are differences highlighted in terms of what support each DU is able to provide. In terms of the commitment to support students presenting different challenges, the staff member below highlighted the importance of viewing students equally but also mentioned reasonable accommodation as a means towards that:

> *"Yes, remember our students with disabilities are, you know, accepted into courses and things like that as the other students are, so they have the same abilities. They just have little hindrances that are kind of holding them back and this is where reasonable accommodation comes in, and they should all have the same opportunity across all disabilities." (PR1 staff 2)*

While the response shows commitment to giving equal opportunities to students, asserting that all students have the same abilities is potentially problematic in the sense that assuming uniform ability can lead to ignorance of the unique needs of students. In contrast, Waltz (2020) argues that it is vital to acknowledge that neurodivergent individuals "have unique strengths and weaknesses and in understanding what these strengths and weaknesses are, it is possible to understand and utilise individual differences effectively" (p. 104). Acknowledging differences is important

because it enables DUs to tailor the support strategies to individual students based on their unique needs, rather than assuming that a specific approach works for all students with a diagnosis of ASD or ADHD. Moreover, the neurodiversity movement rejects attempts to homogenise and normalise neurodivergent people, instead, it advocates for acknowledgement of neurological diversity (Bayeh, 2022). Essentially, the neurodiversity perspective appreciates neurological diversity, and rejects assumptions that there is a 'normal' neurotype across the human population (Cheng et al., 2023). To further emphasise the problem with viewing students uniformly, one can look to the cultural model, which stresses the importance of viewing differences in ability positively (Waldschmidt, 2017). Furthermore, to avoid neglect of students' needs, the cultural model states that it is crucial for difference to be acknowledged positively and not be dismissed as is the case in the social model, which attributes it entirely to social norms (Austin & Pisano, 2017). Furthermore, the cultural model also emphasises that it should first be acknowledged that people have different abilities, and subsequently, the unique abilities of students should be allowed to thrive (Devlieger, 2005). The differences in students' abilities is thus seen as an opportunity for their skills to complement each other, therefore it is important to see neurodivergent students as different, but in a positive light (Schuck et al., 2024). In contrast to the participant above, another staff member from a different university expressed more willingness to acknowledge the uniqueness of neurodivergent students, stating that:

> *"We have general guiding principles for all disabilities. ASD and ADHD are not singled out per se. Principles such as reasonable accommodation, progressive realisation, engaging students individually about specific requirements underpin our work". (PR2 staff 1)*

It is noteworthy that the acknowledgment of difference in this statement goes beyond differences between people with different impairments, highlighting further that even within a category such as ASD or ADHD, there are differences and thus the support needs are not the same. This is an important consideration, as ASD, for instance, is called a spectrum disorder because it manifests in a wide array of cognitive abilities from high functioning individuals whose main struggle is with social interaction to those whose cognitive abilities are lower, with better social interaction skills and other categories in between (Atherton et al., 2023). The DU staff member above, likewise, added that the differences existing in students with ASD and ADHD guide the approaches in supporting them:

"Students with ASD and ADHD are not homogenous in nature and our approach is individual, depending on what the student presents with". (PR2 staff 1)

By dealing with students as individuals, DU staff can address the specific needs of each student, because students differ on many levels. Another important aspect of dealing with students individually is that the set of contributing factors that underpin a student's struggles at the university can be investigated before deciding what support to provide. Apart from different levels of impairment in students with ASD or ADHD, there are different factors that underpin their struggles in the university (Besic, 2020). According to the theory of intersectionality, a student's experience of difficulty or oppression is a compound result stemming from a variety of factors (Walton, 2021). These may be academic, social, emotional and even economic challenges; therefore, the support strategies must be intersectional, responding to various aspects that lead to difficulties. In recognition of the variety of challenges that affect students, a growing body of research suggest that inclusive education should take an intersectional form (Al-Faham et al., 2019; Besic, 2020; Walton, 2021). This means that catering for students' needs should be done in recognition of the various aspects contributing to their exclusion, therefore, support strategies should address all forms of oppression present, not just those directly linked to the diagnosed condition (Walton, 2022). Following intersectional thinking means that the student's difficulties are not assessed and supported based on ASD or ADHD alone but on multiple axes of oppression. In this regard, Hernández-Saca et al. (2023) explain that services offered to accommodate students' needs and differences should "focus on the intersections of race, language and dis/ability, given the demographic imperative within and across globalised society and inclusive education" (p. 2). In South Africa specifically, the 'demographic imperative' is underscored by the high levels of diversity based on race, culture and economic standing (Reygan & Steyn, 2017). Thus, in South African universities, the strategies for catering for students with ASD and ADHD should be flexible, based on demographic diversity but also because of the variations and unique personal challenges and strengths that each student has. Having highlighted the importance of taking intersectional approaches to support, it is necessary to also further discuss the importance of holistic approaches for supporting students with ASD and ADHD, which I do in the next subsection.

5.1.2 Holistic approaches to catering for students' needs

Building on the intersectional focus discussed above, the opinions of DU staff members regarding comprehensive and holistic strategies are analysed below, demonstrating the practical applications of intersectional thinking in supporting students with ASD and ADHD. Predominantly, the DU staff members recognised the need to embrace student diversity, even within defined groups such as those diagnosed with the same neurological disorder:

> *"We try to work on a case-by-case basis, understanding that people make sense of their experiences differently and as such have differing needs." (CU staff 1)*

> *"We support our students on an individual basis. Not one student is the same as the next. We support holistically looking at academic, student life and support environments. We tailor support to each student." (UT1 staff 1)*

The emphasis on students' differences is vital because support strategies should suit individual students' needs. In this regard, Dwyer et al. (2023) suggest that "accommodations should be developed in a collaborative and person-centred manner to meet specific individuals' needs" (p. 6). Apart from differences in manifestations of the same condition, other factors contributing to the student's difficulties should also be considered, therefore Dwyer et al. (2023) add that support strategies should be intersectional, using a variety of methods. One such method referred to by one staff member is the Washington Group questionnaire, which can be useful in determining the different kinds of barriers to inclusion existing in an educational institution.

> *"As a Disability Unit, we make use of mainly the Washington Group in order to guide us with neurodevelopmental disabilities." (UT1 staff 1)*

The Washington Group (WG) is a standardisation tool used by United Nations member states to measure the proportion of the population that is living with disabilities and also provide international standards for what constitutes a disability. This entails survey questions collecting data for measuring the representation levels of people with impairments in a variety of environments. It seeks to investigate the experiences of individuals with disabilities, thereby ascertaining whether they are included or excluded. Describing this function, Madans et al. (2011) state that the WG panel of experts representing more than 140 member states "chose to develop questions that would address the issue of whether persons with disability participate to the same

extent as persons without disabilities in activities such as education, employment and/or civic life" (p. 3). The WG questionnaire is basically a diagnostic tool to monitor the educational institution's effectiveness in including students with disabilities and gives a general outlook of the extent to which inclusion is happening. This questionnaire mainly provides statistical evidence (which helps university authorities to assess the levels and types of exclusion that are prevalent), but it does not provide experiential and contextualised strategies to address identified challenges. Essentially, the WG serves as only a diagnostic tool. Consequently, the need for contextualised strategies remains. Along this line, the DU staff member added that further strategies are implemented in addition to the Washington Group surveys:

> *"Along with this, it is the student's medical report that provides us with personalised guidelines for each student as we believe in a holistic approach and individualized support." (UT1 staff 1)*

A holistic approach is vital because it covers more than just the aspect of impairment as a result of living with ASD or ADHD, but other aspects of life in the education space as well. Expounding on applying a holistic approach to supporting students, the staff member further stated:

> *"We believe in a holistic approach; thus, we work closely with other support services such as Financial Aid, Wellness and the Medical Centre. We refer students between each other and see who can assist best where." (UT1 staff 1)*

This statement shows that a holistic approach supporting students based on their needs requires a combined effort of different departments within the university. This is consistent with the community definition of inclusive education, which maintains that the involvement of several departments in developing an inclusive educational environment is necessary. Notably, the community approach promotes meaningful participation of all students, with the involvement of different stakeholders, making inclusion a collaborative endeavour (Göransson & Nilholm, 2014). Inclusive education is a system-wide effort, therefore the collaboration of all departments and faculties is essential, therefore there should be collaborative efforts "involving all the sectors within universities, not just Disability Units" (Mutanga, 2018, p. 240). Similarly, FOTIM (2011) states that "the student, DU, faculty and institution all have a role to play to ensure positive outcomes and a successful learning experience" (p. 10). Indeed, involving different sectors is necessary, but the DU plays a central role in facilitating inclusion, being a specialised department

with experienced experts who have the best understanding of the various conditions that students present with and the types of accommodations they require. The vital role played by DUs is described by Mbuvha (2019), who states that for students needing support "the DU is the first point of contact" (p. 58). Therefore. it plays a central role in supporting students such as those with ASD and ADHD. Thus, the willingness of DUs to respond to the full spectrum of students' needs is crucial for the overall wellness and participation of these students. Critically, DUs must not just acknowledge ASD and ADHD as forms of difference but also recognise the differences that exist between students living with the same condition. This can be demonstrated by recognising that despite having the same condition, students with ASD or ADHD can have differing impairment types and strengths, which necessitates a more flexible system of providing accommodations (Hamilton & Petty, 2023). Beyond this, however, there should be a more intersectional awareness of the students' difficulties, which entails treating students as more than just individuals with challenges caused by a neurodevelopmental disorder (Moodley & Graham, 2015). In addition, there must be recognition that a student with ASD or ADHD has other facets of identity upon which they face difficulties or discrimination (Crenshaw, 2006; Walton, 2022). Apart from facing difficulty on different aspects, students also find meaning and identity with respect to some of the aspects that are ignored when focus is given only to their ADHD or ASD diagnosis (Reygan & Steyn, 2017). One of the students in the study criticised the tendency of neurotypical people to treat her only as a person with ADHD, even in efforts to give her support and concessions:

> *"There's a difference between being treated differently in that you get your concessions, or you get better understanding and sometimes people treat you differently as in they start like babying you and stuff, which is like, it's like, I'm still I am still a 22-year-old woman. I can still function by myself. I've been doing this; I'm not a different person". (PR2 student 1)*

The student highlights identity markers such as gender and age, that are often overlooked when supporting neurodivergent students, with neurodivergence being the only identity marker that is addressed by support strategies (Strand, 2017). An intersectional focus would be more effective due to its sensitivity to the intricacies of human identity and marginalisation. Saxe (2017) adds that "intersectionality considers identities as interacting with one another rather than simply separate identities from which the most oppressed is most salient" (p. 154). By taking an intersectional approach, DUs can uncover and address some other forms of marginalisation affecting students

with ASD and ADHD. Apart from taking a comprehensive approach to addressing marginalisation, intersectionality seeks to encourage positive self-image in marginalised communities, therefore, it also focuses on positive views towards multiple identities (Azmitia & Mansfield, 2021). This is crucial because focusing on single labels of conditions that students have leads to ignorance of the challenges they face that relate to other factors. Walton (2022) states that intersectionality gives more clarity on the intricate interplay of identity in people and that pursuing inclusive education with an intersectional lens includes awareness of the influence of context on people's experiences. Another student further highlighted the intersection of identity markers that combine to form the experiences they have as a student with ADHD, which show the unique complexities in the South African context:

> *"It's not even just the ADHD I have. I'm that, but I grew up in an Indian home, so I don't speak IsiZulu. So that's one. There's the ADHD. There's also, I do have, I'm a little bit overweight. And, and, yeah, yes, those things. So, I'm Zulu but I only speak English". (PU3 student 1)*

Language is a major aspect of one's identity in South Africa; in many communities, if one does not speak the language of their heritage, they might be ostracised. It is also worth noting that the student studies at a university that is situated in a region where IsiZulu is the most widely spoken language. Therefore, the student does not just face exclusion because of ADHD, but language can be another factor (Amineh & Asl, 2015). Therefore, the support needs are not limited to ADHD traits alone but also relate to exclusion based on language, meaning that support should be given on this aspect as well. However, this requires DU staff to recognise issues such as language as being integral in the experiences and difficulties of neurodivergent students. Overall, the DU staff involved in this study hardly referred to the fact that students with ASD and ADHD experience difficulties based on a variety of factors connected to their identity. In essence, there is little evidence of intersectional approaches in supporting students with ADHD and ASD. However, there were a few responses that showed that some of the participants understand the unique complexities that underpin the South African educational context that can provide a basis for the further development of intersectional approaches. Though the support strategies lack an intersectional focus, there were indications of awareness of the differences in students' backgrounds and the potential impact on their university experiences. For instance, the staff

member below explained that students with ASD and ADHD may need support in settling in the university in their first year due to several changes in their environment:

> *"So, with first years you are looking also at some adjustments, things that are going to go on. So, a person adjusting from high school, a lot of students leave home and come here. So, adjusting to maybe being in a new province or a new town and all of that, and so these are all things that we take into account, which is why we try to talk to them individually, and we try to work with them on an individual basis so that we can get a sense of what the student needs and then take it from there." (CU1 staff 1)*

Settling into tertiary education is challenging for most students, even those without impairments. However, those with ASD and ADHD can face more difficulty due to the change of environment and routine (Kashinath et al., 2006; Ward & Webster, 2018). To mitigate these difficulties, students need to receive information in the early stages of settling into the university so that they know where to go for assistance. Thus, the DU should be one of the departments that all students are informed about early and throughout their stay at the university. In the next chapter, I show the importance of this by discussing in detail, the relationship between students' university experiences and how early they were introduced to DU services. I also discuss in the same chapter, the students' experiences during the transition from high school to university, showing the impact of some students having been introduced to DU services early as opposed to those that received them later on.

5.1.3 Addressing cultural constructions of stigma

In the previous section, I reported that the DU staff members that participated in this study overall agreed that all students should have access to equal educational opportunity and support according to their needs. In principle, DU staff members view the inclusion of students with ASD and ADHD as a priority for their unit. Therefore, they expressed commitment to balanced approaches to support in which no vulnerable groups are neglected. Being responsive to different students' needs aligns with the concept of inclusive education which recognises the right of all students to be supported so that they can have equal opportunities to succeed academically (Johnstone et al., 2023). Ideologically, the staff members support inclusive educational approaches in their universities where all students' needs are prioritised. This confirms earlier research studies in South Africa which found that there are rarely any objections to the development of inclusive

education among educators (Donohue & Bornman, 2015; Engelbrecht et al., 2016). While these studies mostly focused on the basic education system, they showed that the issue with inclusive education is not whether it is an important goal but that there are concerns about the practicality of its implementation. As the findings of this study show, university DUs regard inclusion as a priority, but the implementation across the university beyond the DU similarly remains a concern. I therefore, unpack some of the difficulties experienced by DU staff in supporting students with ADHD and ASD in their respective universities. One of the participants had this to say regarding the commitment to serve students with different kinds of impairment:

> *"I would say that the university strives to be balanced in terms of how it caters to those subtypes [physical and non-visible impairments] of disability so to speak. Realistically speaking, it isn't always easy as that." (CU1 staff 1)*

In general, because of negative attitudes about some disabilities and neurological differences in the South African context, supporting students can be challenging (de Milander et al., 2020). In the case of neurodiversity, the main issue is lack of knowledge. This because when it comes to these specific neurodevelopmental conditions, little is known by the general South African public (Laitila, 2018). The impact of this is seen early in the students' lives as teachers in schools also lack knowledge of neurodivergent traits. For instance, Topkin and Roman (2015) found that "main-stream educators… lack the understanding, tolerance and knowledge of ADHD learners" (p. 2). Thus, there are unique challenges relating to awareness and support for students with ASD and ADHD, which require more effort and innovative strategies in including students with these conditions (Manase, 2024). To better understand the complexities involved in supporting students with ASD and ADHD, one can consider the experiences that DU staff have and some of the challenges they have faced in providing that support. A staff member suggested that one major barrier to support efforts is the lack of information about ASD and ADHD:

> *"I don't think the university struggles to cater for these disability categories, but more effort and research is required to remain informed and ensured that these disability categories are truly catered for." (PU1 staff 1)*

The sharing of information about ASD and ADHD is an important step in making the universities inclusive for students with these conditions, and the participant rightly points out the need for research. This is because there is a lack of research focus on ASD and ADHD in the South African

and broader Global South context in these areas, though there is evidence that they are global phenomena (Manase, 2024). With neurodiversity research mostly having Western origins, the information available on neurodevelopmental disorders such as ASD and ADHD lacks relevance to the local context. To make the neurodiversity movement relevant to Global South contexts, Nair, Farah and Boveda (2024) argues that "one must interrogate the relevance of current neurodiversity paradigms to Southern communities" (p. 4). Thus, advancing information about neurodiversity in South African universities should not just be an adoption of Western epistemologies. Rather, authentic experiences of neurodivergent students, including the importance of their own cultural values and self-image, should be highlighted. Moreover, awareness should be raised in response to stigmatisation of neurodivergent traits, which can also be attributed to the lack of knowledge about neurodiversity. In the sub-Saharan African context, impairment is largely associated with negative notions such as witchcraft and curses, and these ideas are mostly grounded in cultural beliefs (Ametepee & Chitiyo, 2009; Manase, 2024). Thus, in ensuring that university students with ASD and ADHD in the African context are included, respected and valued, the issue of stigma should be addressed. Notably, given the fact that culture is the main influence that causes stigma in the African context, the efforts to include marginalised students should address cultural misconceptions. The cultural model is useful in this regard as it "focuses on cultural patterns that are causing exclusion by defining what is considered normal for a culture" (Müller, 2017, p. 15). Rather than just providing support for students with ASD and ADHD, the cultural norms and misconceptions must be corrected through awareness campaigns that focus on rooting out marginalisation. It is evident from research that neurodivergent individuals in the South African context are perceived negatively, and that culture is a significant contributor to stigma (Rajcumar & Paruk, 2020). Universities are not free of such influences, for instance, the comment below highlights the impact of misconceptions of students:

> *"There is a lot of stigma around 'why are you the way you are? What are you weird? Why aren't you like other kids?' And in my experience a person can grow with that kind of thing." (CU1 staff 1)*

The issue of stigma presents significant challenges because as the staff member suggests, stigma is not only projected by neurotypical people, but it can affect ways that students with ASD and ADHD view themselves. To this point, Beardon (2021) adds that people with ASD can develop

negative views of their selves, based on their social environment which includes negative attitudes about their condition. This means that in facilitating the meaningful participation of students with ASD and ADHD, university DUs must address the negative attitudes of neurotypical people in the university and also try to help neurodivergent students view themselves positively. In any context, stigma is a major obstacle to the inclusion of students with ASD and ADHD. In the South African context, this is exacerbated more by the fact that cultural values influence negative attitudes (de Milander et al., 2020; Travis & Geiger, 2010). Ideas founded in cultural beliefs have a strong influence and lead to some negative stereotypes, the result of which is marginalisation of neurodivergent people . Tapera (2022) suggests that "stereotypes are activated when the cultural environment prescribes negative labels to a particular group of people as other" (p. 15). To replace negative attitudes with positive perceptions of neurodiversity, the cultural environment needs to shift to see that conditions such as ASD and ADHD are representations of human diversity. Cheng et al. (2023) suggest that negative attitudes about neurodiversity should be addressed by community engagement, especially in cases where the stereotypes are created by societal norms and values. In terms of the community definition of inclusive education which states that inclusion is the responsibility of the educational institution including different stakeholders, the stigma faced by students in universities is likewise, a community issue needing community engagement (Nilholm & Göransson, 2017). Not only are universities communities, but they also influence and are influenced by communities around them, and this should be considered in dealing with negative stereotypes about neurodiversity (Manase, 2024). A staff member, likewise, suggested that in addition to raising awareness about ASD and ADHD, their DU has developed strategies to transform the university into an inclusive community:

> *"Besides creating awareness, there are training sessions and workshops for the university community to teach them about different disabilities and how to be inclusive as a community in the workspace as well as outside the workspace. The Disability Unit staff have also undergone training regularly to stay up to date regarding the best practices when it comes to disability support". (PU1 staff 1)*

This statement shows awareness of the need to address lack of knowledge about ASD and ADHD broadly, aiming to even have an impact outside the university. This is crucial because universities exist in the communities where they are located, and influence the surrounding communities just

as they are influenced by the communities (Mbah, 2019). Therefore, it is vital that the staff and students are trained to exercise inclusive norms in and out of the universities so that positive attitudes can be developed holistically, contributing towards an inclusive society. Moreover, extending community engagement beyond the university itself helps to address the problems that affect students out in the communities that may affect their studies, self-esteem and safety. Through an intersectional lens, one can deduce that in addition to the academic challenges and the complex social university environment, students face other socio-economic and emotional issues in their communities and homes (Walton, 2022). The statement below attests to the role played by the broader community and cultural context, highlighting the impact of cultural beliefs on negative attitudes about ASD and ADHD:

> *"There's this idea that I'm abnormal in inverted commas because I've been bewitched, or, you know, things like that. So, this is what I think in the South African context, we've had to deal with quite a bit." (CU1 staff 1)*

Support efforts should, therefore, not be limited to the typical issues facing students in the university space but should also address the challenges that students have from outside the university. This can be in the form of outreach initiatives by universities to educate the general public about ASD and ADHD to remove misconceptions that are imposed on students by their communities. This has not been done so far, as evidenced by the fact that the DU staff in this study mentioned strategies that are limited to academic activities, with little indication that the universities are actually addressing social challenges, including deeply entrenched cultural stigma towards neurodiversity. In essence, the issue of stigma is a societal and community issue, and most of the DUs will not properly address it unless they broaden their support strategies beyond academic activities.

5.1.4 Resource limitations

In addition to stigma, some DU staff members mentioned that the lack of resources constrains their efforts of supporting students with ASD and ADHD. This was highlighted in relation to physical resources, funding and human resources. There were also indications that the limitation of resources is mostly related to human resources. Despite the large student population that they serve, DUs have significant constraints in terms of the staff members that they have available to address the different needs of students. Some of the participants suggested that adding more staff

members to the DU would improve their ability to cater for the needs of students with ASD and ADHD:

> *"Employ more staff to run specific programmes for these. But the risk is that deaf students, visually impaired, blind, physically disabled, specific learning disabilities etc might also want specific programmes to run for their specific disabilities." (PR2 staff 1)*

This response not only shows a lack of resources, but it demonstrates lack of commitment to inclusivity, as the participant insists that starting specific problems for students with ASD and ADHD might lead other marginalised students to demand the same attention. In terms of the goals of inclusive education, universities should aim to do exactly what this participant is seeking to avoid, that is to become institutions that respond to a wide variety of students' needs (Moriña, 2017). Dwyer et al. (2023) suggest that rising neurological diversity in the student population should prompt universities to come up with new ways to ensure their full participation. The right attitude for the participant above, therefore, would be to be willing to provide support for students with ASD and ADHD along with those with disabilities such as physical impairments. Rather than avoiding having other categories demand specialised support, the DUs should be devising integrated, intersectional initiatives in which the needs of students from different categories of impairment can all be addressed. This also requires awareness that physical disabilities and neurodiversity are not mutually exclusive but rather intersect in that some students may belong to both categories and would benefit from both neurodiversity-focused and physical disability-related support. In this regard, Borsotti et al. (2024) state that "structural and attitudinal access barriers are intensified by intersecting social dimensions such as gender, nationality/immigration status, co-occurring mental health conditions and multiple diagnoses" (p. 10). This necessitates intersectional approaches to including students presenting different needs, as the intersection of identity and marginalisation categories shows that narrow approaches are ineffective. This may include adding more staff members in key departments, such as the DU, to ensure that their needs are met. However, the needs of students with ASD and ADHD in the South African context have not received much attention until recently, which hints at a lack of experience and expertise in this area (de Milander et al., 2020; Guler et al., 2018). The following participants indeed expressed a deficit in their own efficacy in supporting students with ASD and ADHD. While the following

participant is the head of their DU, they still haven't accumulated enough experience in their university to know how to approach the support of students:

> *"I am new to this unit, so I just started at the beginning of the month. I'm saying this because I'm in the state of looking at areas for improvement and what we've been doing right so far." (CU1 staff 1)*

Another participant added remarks that further showed that there was also a lack of training of staff members specifically for supporting students with ADHD and ASD:

> *"I think it is important that staff members who work directly with students with ASD and ADHD are equipped with knowledge and training. In most instances the training provided for employees relates to work management such as coping in a changing work environment. However, as someone working closely with students with ASD and ADHD, no training in those areas has been provided" (PU1 staff 1)*

This statement demonstrates the need for upskilling in supporting students with ASD and ADHD so that there can be informed decisions made in supporting these students. It also shows that the university, while being aware of changes in the working environment, has not factored in neurodiversity as part of that change. Wilson and Dallman (2024) state that despite increases in the number of neurodivergent students on university campuses worldwide "few postsecondary initiatives address the well-being of neurodivergent students" (p. 1). One way of ensuring their wellbeing is to train DU staff to support them but as the participant above indicates, this is not being done in their institution. Furthermore, making accommodations for students with these conditions was described as needing specialist knowledge, which is not available, particularly for under resourced institutions such as universities of technology:

> *"The university is struggling because this is a very specialised service. Meaning, for the unit to cater for such students it needs to have qualified educational psychologist in its staff force." (UT1 staff 1)*

This statement presents a specific need in terms of the expertise needed to support students with ASD and ADHD because what students with these conditions need is a specialised service. This level of specialism is highlighted by researchers. For instance, Sulek et al. (2021) argue that due to its complex nature and the various levels of variance on the autism spectrum, highly specialised

professionals are needed to determine the kind of support for students with ASD. Furthermore, expertise is needed in terms of examining students that do not have a diagnosis of ASD as yet, but might be showing signs matching it (Huang et al., 2022). In this regard, the knowledge of psychologists for example, contributes significantly to helping diagnose and support students with ASD. Likewise, Sedgwick-Müller et al. (2022) argues that supporting students with ADHD in universities requires "expert advice, practical guidance and recommendations for support" (p.5). These services can be provided by trained professionals such as medical staff but in the educational context, educational psychologists offer more direct and relevant guidance (Bodhi et al., 2022). The participant therefore reiterated that the lack of an educational psychologist in their unit limits the possibility of supporting students in need of assistance:

> *"Our main problem is that our unit is not fully capacitated to deal with certain categories of disabilities, as I indicated earlier, we need a qualified educational psychologist to be able to give sufficient support to such students." (UT1 staff 1)*

The importance of educational psychologists in supporting students with ASD and ADHD was confirmed by another participant at a different institution, with expertise in the area and in relation to neurodiversity:

> *"I've got quite a lot of knowledge of your more neurological and developmental disabilities that students faced with because that is closer to my speciality, as a psychologist" (CU1 staff 1)*

For students to receive the necessary support, there should be more specialised professionals for supporting students with ASD and ADHD. Crucially, there should be willingness from university management to ensure that the relevant resources are put in place for proper assistance to be available for students. This can be in the form of financial support to DUs, which some of the participants mentioned, is lacking in their universities:

> *"The university struggles because of limited resources." (UT1 staff 2)*

> *"I think sometimes there is a lack of funding which impacts the resources of the Disability Unit" (CU1 staff 1)*

The statements above are from staff members from universities that are relatively under-resourced in general, so the lack of funding affects the university at large. However, even in universities that have much greater financial capacity, there were still limitations regarding the human resource and funding that the DU has to support students with special needs. The student below from such a university explains the lack of resource allocation to DUs despite evidence of surplus funding in other sections of the university:

> *"I think that the disability service is underfunded and undervalued, it only exists because [PR3] can't not have it. In such a well-resourced university, what you would expect is that anything they regard to be important; they will fund." (PR3 student 4)*

This statement implies that the DU was established to meet a requirement for inclusivity. Indeed, one of the key markers of the inclusivity of universities is the designation of a unit responsible for the inclusion of students with impairments (Mbuvha, 2019). Beyond such an establishment, there should still be action taken to ensure that inclusion happens in practice. The impact of the lack of funding in this particular DU is discussed in detail in the next chapter, which shows that students from this particular university face difficulties with finding an ASD or ADHD diagnosis or psychological evaluation as they are expected to cover the costs.

5.2 Specific Support Strategies (Theme 2)

5.2.1 Support strategies for class attendance and examinations

Disability Units (DUs) provide support for students with various impairments, and the kind of support given depends on the specific needs of each student. For students with ASD and ADHD, there are challenges that arise in shared environments like lecture halls and labs where many people are present. For students with ASD, one of the common issues is their discomfort with being in crowded places where social interaction may cause them sensory overload (Bakare et al., 2022; Thwala, 2018). They may also find difficulty adjusting to changes in schedules, which can happen regularly in the academic environment (White et al., 2017). Similarly students with ADHD are also affected by sensory overload in places with heightened social interaction such as lecture halls where large crowds are common (Roshani et al., 2020). Moreover, due to their hyperactivity, sitting still for extended periods can be challenging. Another challenge is their inattention, which causes them to process information slower than other students (de Milander et al., 2020). This can make it difficult for students to keep up with large volumes of content in university courses.

5.2.2 Classroom accommodations

With the reality of these challenges apparent, students need support to cope with classroom attendance, and the following strategies were mentioned by a DU staff member regarding support for students with ASD and ADHD on class attendance:

> *"We've had to put in place something like a flag system with the students feeling a bit overwhelmed, they can raise the flag and leave the class before they, you know, they can get like an anxiety attack or something like that because of being overwhelmed." (PR1 staff 1)*

The flag system is a simple and unsophisticated approach because no special technology or equipment is needed, and the knowledge of lecturers and other students about the meaning of the signal can allow the student to take a timeout without causing any disturbance. It is therefore, an accommodation strategy that takes the learning of neurotypical students into consideration, which is an important aspect of inclusive education. In this regard, Kart and Kart (2021) argue that being inclusive means ensuring that all students' learning needs are met, including those that are without any unique needs. Likewise, Messiou (2012) cautions against the possibility of interfering with the learning of students without any known impairments while accommodating students with impairments. The flag system is an accommodation that meets this requirement by ensuring that the process of addressing the needs of one student does not lead to the disruption of the learning of others. More importantly, it provides a much-needed reprieve to students with ASD and ADHD by allowing them to recharge and recover from the sensory overload that they can experience in the classroom, therefore it is a way to address the difficulties that students experience. Though it is a simple action, being allowed to leave when overwhelmed is an important aspect to neurodivergent students, as the student below states:

> *"Students are allowed to leave some lectures at any time, which is helpful for when I experience sensory overload in the lecture hall." (PR1 student 2)*

By allowing students to leave, the possibility of them having meltdowns in front of other students and causing disturbance is avoided. It is vital in implementing inclusive education to ensure that students with no known impairments are also given the best learning experience (Carrington et al., 2023). As part of simple classroom accommodations, another participant also mentioned that the

seating arrangement in lectures can also be used as a simple way of accommodating students that experience challenges with sensory overload and inattention:

> *"We then try to give them strategies that yes, it is a good idea generally to sit in front" (CU1 staff 1)*

When seated in front of the class, students can more easily communicate with lecturers about some adjustments they may need, during teaching and learning. Students with ADHD for example, take a longer time to process information, and may need to ask the lecturer to slow down if they are talking too fast (Schulze et al., 2020). This is easier to do when they are seated close enough without having to shout, which may make them nervous. One of the student participants did in fact, indicate that sometimes they need to ask lecturers to slow down but feel nervous to do so.

> *"One thing I have noticed about my ADHD is that it takes me longer to process things and I feel like that's probably part of the reason I write so slow… and it's so awkward to have to ask the lecturer to slow down." (PU3 student 1)*

It may be possible to mitigate this by sitting closer to the front of the class to be able to communicate that need. Choosing a place to sit and the flag system mentioned above are simple accommodations that show that sometimes accommodating students with ASD and ADHD is not as expensive as is usually assumed (Manase, 2024). However, in other cases, such as in the case of overstimulation due to noise, there may be a need for more sophisticated and technology-based approaches:

> *"So, we work with students if they need concessions because of autism. Often students may need like noise cancelling earphones, with the overstimulation of the sound. So, we do a tailored approach and see what the sensory issues might be." (PR1 staff 1)*

Importantly, the participant indicated that the technology used depends on what the need of the individual student might be. In some cases, however, the technology that is needed to address particular needs may be lacking, especially in less-resourced institutions.

5.2.3 Tests and examinations

Examination season is a challenging time for all university students, as there is a lot of studying needed, and the academic workload can be overwhelming for students. Given their conditions,

students with ADHD and ASD may face arguably higher levels of anxiety, and need support with managing through examinations (Quenneville et al., 2022). In general, examination-based accommodations were the most common area of accommodations that students in this study referred to. This shows that there are significant challenges with this aspect of academic life that students experience. For students with ADHD, time management is the most likely area of concern as they take longer to process information, which means they require more time to complete the same tasks as other students (de Milander et al., 2020). To mitigate this, reasonable accommodations are made for students with ADHD to make up for their relatively slower reading and processing of questions. Below is a detailed explanation by a student with ADHD of why it is necessary for extra time to be provided for students with the condition during assessments:

> *"A lot of people say 'Oh! You're using your ADHD as an excuse to do certain things; you have all this extra time'. It's not like you're trying to have those extra benefits, it's like, my time concession because I physically write slower than my class because of my ADHD. But also, that also gives me time to get distracted as well, because people without ADHD, they could just look down and whatever and concentrate alright and I would need to, you know, just need to calm down, or if I hear something's going to distract me, and then I get back to it." (PU3 student 1)*

Likewise, students with ASD may require extra time due to their high anxiety levels and the fact that they need to take sensory breaks when overwhelmed during examinations. ASD and ADHD both require similar accommodations, most notably the DU staff members in this study mentioned support strategies based on time concessions and separate venues for tests and examinations:

> *"We provide extra time and separate venues for students with ADHD. For example, once the student has indicated on the reasonable accommodations form that they have ADHD, we provide them with the extra time application forms which they have to fill in and the necessary documents such as a report from maybe their educational psychologist, and then all these documents are submitted to our extra time committee which will provide feedback on the kind of support we should provide to the student." (PU1 staff 1)*

"We support those students mainly through concessions during tests and exams, meaning we ensure that they receive extra time during tests and exams… We work with our student support services in this regard." (UT1 staff 1)

This focus on extra time and separate venues confirms Weis and Beauchemin's (2020) review concerning the types of support provided for students with ADHD, which found that the most common type of accommodation made for them was writing assessments in separate venues with reduced sensory stimuli. Notably, Weis and Beauchemin (2020) argue that writing in a separate venue does not have any notable impact on the students' outcomes, making this accommodation ineffective. However, their argument is based on the fact that in their study, they did not find any difference in the grades of students with ADHD who wrote in separate venues compared to those who wrote in the same venues as the rest of their class. However, the effectiveness of an accommodation should not be assessed only through a narrow lens such as the grades of a student given the separate venue concession. While I recognise that improved grades are an indicator, I note that the main motivation for making accommodations for students is to make them feel included as valuable participants in the academic environment, not just their grades. In this regard, Brown (2017) asserts that higher education institutions demonstrate inclusive attitudes in their willingness to "invest in an institutional *culture* of student support" (p. 148, emphasis added). The reference to culture implies that support should be provided as a matter of principle and not directed at academic outcomes alone. Likewise, the cultural model and the neurodiversity paradigm affirm that neurodivergent students should be accommodated to assure them that they are a vital part of the academic community (Borsotti et al., 2024; Twardowski, 2022). Separate venues are also an important aspect of support for students with ASD as their ability to focus is lessened when they are in an environment with many sources of sensory stimulation (Brown, 2017). In addition, the inclusion strategies in examinations must be flexible enough to respond to the needs of specific students, and the participant below emphasised the need for a tailored approach:

"Depending on the severity of the ADHD, depending on how they are treating it, sometimes they may get something like extra time. Other times, they may again get rest breaks during tests and exams." (CU1 staff 1)

This further emphasises the importance of treating students as individuals and giving them support that responds to their individual unique needs. This is a vital aspect in the practice of inclusive education, which seeks to ensure that the unique and specific needs of all students are addressed (Veidemane et al., 2021). Although accommodations such as separate venues and extra time are available in most of the universities, acquiring the support can be a difficult process for some students:

> *"Our DU does have the option to apply for assessment accommodation though it is a hard process for me to do." (PU2 student 2)*

This response highlights the need to improve accessibility of services. In most cases, high ranking universities such as the one the student is enrolled in have the necessary facilities that are needed to accommodate students with ASD and ADHD during assessments. However, if access to the accommodations becomes difficult, the students do not benefit much, so DUs should ensure that students can access channels to apply for concessions more easily. I further discuss the effectiveness of support strategies that students get from DUs on a daily basis and during assessments in the next chapter that focuses on students' experiences.

5.3 Collaborations between DUs and other departments and role players (Theme 3)

Another major theme in the data from DU staff members was the collaborations they have with other departments within their universities in supporting students with ADHD and ASD. This is vital because creating inclusive educational environments requires a collective approach, involving a variety of stakeholders who each contribute different aspects to ensuring that all students can participate fully (Causton-Theoharis et al., 2011; Engelbrecht et al., 2014). Though they are the most specialised departments for supporting students with disabilities, DUs need other sectors in the university to contribute to their efforts for universities to become inclusive (Mbuvha, 2019). In this study, the participants from the DUs indicated some of the strategies they have in place to involve different departments and role players in the universities in catering for the needs of students with ASD and ADHD. The role of a DU is aptly described below, clearly positioning it as one of the entities that play a key role in supporting students with impairments, but clarifying that support for students with special needs is not only dependent on the DU:

> *"As much as support of students with disabilities lives within our unit, we can't do it alone. we depend on other entities within the university such as accommodation, sports*

and things like that. So, all of them, they need to know what it is that we're doing, what our guidelines are and what our policies are." (CU1 staff 1)

Regular communication and collaboration are therefore needed to ensure that students are catered for across different departments and places in the university. DU staff participants highlighted the ongoing collaboration across the DUs and other departments:

"Yes, we liaise with lecturers and the broader university community to meet the needs of the students." (CU1 staff 1)

Working closely with key role players such as lecturers helps to keep the culture of support prevalent in the university and also helps to increase awareness about students' challenges. In collaborating with lecturers for example, the staff member below indicated that there are efforts to ensure that they know what specific students need:

"We make sure that relevant lecturers are informed about the condition of the specific students in their class. We also advise them on the type of support we will need from them so that the student in question can have a successful academic period at the university." (UT2 staff 1)

This shows a comprehensive approach to supporting students with ASD and ADHD because it goes beyond just informing the lecturer about the exceptions or special accommodations that are needed by specific students. The DU goes the extra distance to also educate the lecturers about the condition itself, which further raises awareness on the particular condition that the student has, so that if other students with similar challenges are encountered, the lecturer already has some knowledge they can apply. This is a vital step in developing the university into a conducive environment for students with ASD, ADHD. In this regard, Doyle et al. (2024) argues that a university cannot become ADHD-friendly if there is no awareness about the condition across the university population. The participant below from a different university confirms this, explaining the negative impact of the lack of education of staff members outside the DU of conditions such as ASD and ADHD:

"I think it is important that staff members who work directly with students with ASD and ADHD are equipped with knowledge and training. In most cases, the training provided for employees relates to work management such as coping in changing work

environment, customer service and multitasking silks etc. However, as someone working closely with students with ASD and ADHD, no training in those areas has been provided". (PU1 staff 1)

A lack of training of DU staff is a major obstacle to the possibilities of making the university more conducive for students with ASD and ADHD. As the connecting entities between lecturers and students, DU staff members need to be properly trained to facilitate the working relationships between students and lecturers as these are key for the success of students (Powell, 2023). In cases where this is well-facilitated, students are able to get support, and lecturers can be informed on the accommodations that are to be made to support students' unique needs:

"We often would work with lecturers if needed to explain to the lecturers with regards to what the challenges might be, after we've met with the students, and they're happy with that, we always get consents… so we'll meet with the staff member and the student, and in the past, that's been very effective." (PR1 staff 1)

"Yes, we collaborate with lecturers regarding each individual student. At the start of each academic year, we inform lecturers of students in their classes who make use of the Disability Unit's services. We also recommend the best ways in order to assist these students as guided by their medical reports. We regularly visit faculties to have information sessions with students as well as lecturers on the services we provide. We have regular awareness campaigns where we promote awareness of various disabilities." (UT1 staff 1)

Drawing from the latter quotation, the collaborations with lecturers extend to other departments, including the university's medical unit which give their insights in the form of medical reports. By forming support networks like these with medical practitioners and lecturers, different aspects of students' lives are addressed, which is consistent with the application of intersectionality in inclusive education (Azmitia & Mansfield, 2021; Besic, 2020). Furthermore, to facilitate social inclusion as well, DUs can also collaborate with entities within the university, including those that are more responsible for non-academic aspects:

"So, lecturers, house mothers [officers in charge of student residences], accommodations, finance and so on, whoever it is who needs to be making sure that

they're having contact with a student. You have to explain to them exactly what is going on… they need to understand how they need to adapt to be able to accommodate a student." (CU1 staff 1)

This broad reach helps the DU to ensure that students are not only included in academic activities but that they get full participation within the university. For students staying on campus, it is crucial that the staff members in charge of halls of residence understand their needs so that they can be accommodated well. For students that do not stay on campus, their parents or guardians are more responsible for their wellbeing and need to be informed on how they can provide a conducive environment for their children. Despite this being an important aspect, it was only mentioned by one DU staff member, who emphasised the important role that parents play in supporting students with ADHD and ASD:

"We often get parents that do first connect with us and help and especially with autism yes, because naturally because of the autism will be reluctant to connect with [the DU]." (PR1 staff 1)

The role played by parents needs to be recognised more and integrated into the support efforts that are implemented at the university. For students with ASD, changes in patterns of behaviour of people around them can cause distress, and this is common when there is no consistency between how they are treated at home and in the university. Furthermore, the patterns of behaviour that students with ASD and likewise, ADHD have are known by their families and can serve as a basis upon which support strategies can be developed (Gona et al., 2016). It is therefore, concerning that parental involvement was not highlighted as a key aspect by most of the participants in this study. Carruthers (2020) argues that parents of neurodivergent students should be allowed to be involved in the education of their children. While it may be argued that parental involvement may interfere with the students' independence as university students and therefore young adults, it should be noted that the brain development of people with ASD and ADHD is relatively slower (American Psychiatric Association, 2013; Chakrabarty et al., 2023). As a result, it usually takes more time for students with these conditions to be able to function independently, meaning they may still need to be closely cared for by their parents. In essence, I argue that the involvement of other stakeholders in supporting students with ASD and ADHD should not be limited to departments and staff members within the university, but the support network goes beyond the academic spaces

into their homes and communities. More parental involvement is needed to ensure that students have conducive environments in and out of the university and the parents' advisory role to DUs should be valued. This multifaceted support network is consistent with an intersectional approach, which when applied to inclusive educational development, advocates for systems of support addressing learning difficulties, social integration and socio-economic issues (Walton, 2022).

5.3.1 Student services vs learning development

To further address the main question and more specifically the sub-question regarding the strategies for including students with ASD and ADHD, I assess the focus of the support strategies of DUs in relation to whether they are more focused on student services or learning development. To reiterate this distinction, student services are personal services such as psychotherapy, healthcare, career guidance and accommodation (Howell, 2006). Basically, this category entails the kind of services that address emotional and psychological challenges not directly related to academic activities. On the other hand, learning development is academically inclined as it involves the accessing of the curriculum through "tutorial support, assessment support, or professional development" (Simpson, 1996, p. 25). The need for the consideration of both student service and learning development services is compellingly argued for in research as discussed in earlier sections. The findings of this study further prove that the inclusion of students with ASD and ADHD should be pursued with both categories in mind. Brown (2017) posits that most accommodations for students with ASD are related to academic activities and less emphasis is placed on the social aspect. The findings of this study confirmed this perspective as there was more specificity on academic concessions than on support strategies that respond to students' social challenges. Though this observation was made, the large majority of DU staff members involved in the study indicated that they are committed to ensuring a balance between student services and learning development services. This was discussed at length earlier in section 5.1.1.

Even though both types of services are essential in the development of students in the educational setting, it is important for a distinction to be made between the two categories of services (Howell, 2006). The distinction is necessary firstly because different professionals in the university are trained to offer different services that students need. Moreover, student service and learning development services are complementary and the provision of each is important for students to enjoy a full experience of university life (Brown, 2017). Thus, in this study, the conclusions

deduced on whether students with ADHD and ASD are included in the respective universities depend on my analysis of the provision of both student services and learning development services for students with ASD and ADHD.

In analysing the provision of student services and learning development services, I have incorporated the responses from DU staff and from students. This is in line with the qualitative research methodology, which relies on the lived experiences of people in touch with the phenomenon of study (Creswell & Poth, 2016). As the people responsible for providing support for students that have special needs, the DU staff have relevant insights on the capabilities of their universities to accommodate students with ASD and ADHD. Furthermore, applying the cultural model, it can be expected that the principles that guide the operational habits in DUs are indicative of the culture that exists in the DU with regards to support services. In this regard, Twardowski (2022) argues that the type of support services given to students with special needs are influenced by the culture that the institution has regarding disability and/or impairment. It is also worth noting how these cultures intersect with the general university environment and its different towards students ASD and ADHD to shape the experiences of students. With that said, the experiences of students with ASD and ADHD themselves are arguably the best indicator of whether the strategies being used to provide support are inclusive and effective. Understanding the relevant experiences requires the involvement of students with ASD and ADHD, and by amplifying the voices of students with ASD and ADHD, correct perspectives on those experiences will be discussed (Ward & Webster, 2018).

Broadly speaking, the findings show that there is support given on both sides, but there are some differences, which are likely influenced by the views that DU staff have in terms of the kind of support that neurodivergent students have. There is mostly a focus on student services because staff members described ASD and ADHD as conditions that affect the social aspects of students' lives. For example, one staff member had this to say regarding the support provided for students with ADHD and ASD compared to those with physical impairments:

> *"I think with the physical disabilities, one needs to focus more on assistive technologies whereas with neurodiversity and mental health, it would be looking more on support from a psychologist, and that would be the main differences, I would say." (PR1 staff 1)*

By suggesting that psychological support should be the focus, the participant places support for students with ASD and ADHD more on the side of student services rather than learning development. Due to them being neurodevelopmental disorders, ASD and ADHD require psychological support (Acevedo & Nusbaum, 2020). Therefore, the role of psychologists is indeed vital. However, the assertion that less focus should be placed on assistive technologies with regards to neurodiversity limits the effectiveness that can be achieved in supporting neurodivergent students. Assistive technologies are not limited to physical impairments, in fact, Boyd and Shaw (2010) suggest that there is great potential in integrating technology into assisting students with neurodivergent students. It is true however, that, given the differences in financial capacity among South African institutions, some assistive technologies may not be accessible to all institutions. One of the participants showed awareness of the value that can be added by assistive technologies, but added that there is a lack of capacity to acquire them:

> *"We do not provide sufficient support in terms of assistive devices or software that might be more helpful." (PU1 staff 2)*

It is vital to take advantage of developing technological innovations and integrating them into support efforts towards students with ASD and ADHD. Importantly, the participant (PR1 staff 1), who earlier stated that neurodiversity does not need assistive devices stated that in providing learning development support for students with ADHD and ASD, Universal Design for Learning (UDL) principles are applied by their university:

> *"So, I think when it comes to education, universal design principles would apply and trying to get content, learning content in as many different ways as possible. So, allowing students audio-recording, for example, allowing students access to PowerPoints for a presentation, giving different ways of learning whether it's through video or audio." (PR1 staff 1)*

UDL is important in the inclusion of neurodivergent students in universities because of its use of the latest technology in accommodating different needs and strengths in the study environment (Dewi & Dalimunthe, 2019). This makes it relevant and responsive to current developments in understanding neurodiversity, along with making use of innovative ways of providing support. According to Cumming and Rose (2022) "universal Design for Learning is based on the premise that all learners, regardless of ability could benefit from curriculum planning that caters for wide

variety of learners" (p. 1026). Crucially, the approach is not limited to technological or assistive devices but is inclusive of a unique pedagogical ethos as indicated by the element of curriculum planning referred to by Cumming and Rose (2022) above. Thus, UDL is an approach that informs educational practice and not just the use of technology. In explaining the role of technology in support strategies, the following staff member indicated that technology is used as part of the greater objective of making the university as a whole an inclusive community:

> *"We have facilities that foster an environment of inclusivity, equipped with a specialised lab, specialised technology and devices." (UT2 staff 1)*

Moreover, UDL takes a similar approach to difference as the cultural model of disability; both approaches encourage a positive outlook and exploring how having a diverse student population can lead to positive results (Dewi & Dalimunthe, 2019; Waldschmidt, 2018). Likewise, inclusive education is predicated on the view that diverse classrooms benefit the student population, such that learning alongside differently abled students such as those with ASD or ADHD can have a positive impact on all students (Naraian, 2011). Furthermore, UDL can encourage intersectional approaches to teaching and learning, hence its implementation in South African universities, is crucial given their diversity (Chiwandire, 2019). UDL promotes a culture of inclusivity in curriculum development in addressing different student needs and ability levels (Dewi & Dalimunthe, 2019). From an intersectional viewpoint, the need is not only to respond to the needs of different students but to also cater to the collective needs of an individual student (Goethals et al., 2015). This stems from the central tenet of intersectionality which is that oppression or exclusion may be experienced in many forms by the same person, based on the intersecting identities they may have. Thus, supporting neurodivergent students in higher education should be intersectional to achieve inclusion in totality. Shaw (2021) states that UDL is a useful approach in advancing inclusive education to higher education, where it has seen little progress internationally, arguing that this model responds to increasingly diverse student populations by providing "multiple means of engagement" (p. 10). Due to the prominence of the view of neurodiversity as disability needing to be cured, there is a lot of stigmatisation associated with ASD, ADHD and other forms of neurodiversity. This discourages students from disclosing their diagnosis for fear of being labelled and treated negatively (Syharat et al., 2023). Universities, therefore, must promote positive views of neurodiversity, which will encourage students to openly embrace their

neurodivergence and the strengths thereof and also be afforded the opportunities to receive appropriate support. I present a brief summary of the findings from this chapter below.

Table 4: Summary of findings under objective 1 (strategies in place for the inclusion of students with ASD and ADHD)

Theme 1: Guiding principles on inclusion of students with ASD and ADHD	
Sub-theme 1: Is the inclusion of students with ASD and ADHD a priority?	All DU staff members indicated that they regard the inclusion of students with ASD and ADHD to be a priority, but there were differences in the perceived capacity for the unit to provide for the needs of these student populations, mainly due to lack of resources.
Sub-theme 2: Guidelines for inclusion	There is a lack of clear guidelines for the inclusion of students with ASD and ADHD. Despite claiming adherence to international and local legislation on inclusive education, university DUs still determine for themselves what inclusion entails.
Sub-theme 3: Focus on neurodiversity vs physical impairments	Neurodiversity is regarded as being as important as physical impairment in terms of the need for inclusion, but it is seen as more complex and difficult to accommodate than physical impairments. Most DU staff members feel that more training and expertise is needed for their units to be able to accommodate students with ASD and ADHD.

Theme 2: Specific Accommodation Strategies	
Sub-theme 1: Reasonable Accommodation	Accommodations for students with ASD and ADHD are made to equalise opportunities without giving them an unfair advantage. Reasonable accommodations are based on what is needed for students to achieve equitable participation
Sub-theme 2: Collaboration with relevant stakeholders and departments.	Other professionals such as psychologists and occupational therapists are consulted in making diagnoses and recommendations for support strategies. Beyond medical professionals, there is little collaboration between DUs and other departments and role players. Lecturer and DU collaborations need to be strengthened
Sub-theme 3: Support in class attendance and assessments	There are few day-to-day accommodations for students in class attendance, most of the accommodations that DUs facilitate relate to examinations and tests. Assessment accommodations include extra time, writing in smaller venues and extended submission deadlines. Lecturers sometimes create obstacles for the implementation of assessment accommodations even when DUs are willing to provide them.
Theme 4: Student services vs Learning Development	The support that is in place for students with ASD and ADHD is largely on learning development. There were hardly any

	strategies that were mentioned that have to do with students' wellbeing. Student services need to be improved to also help students struggling academically because some of the academic struggles may be caused by non-academic factors.

Conclusion

This chapter has discussed the support strategies that DUs have in place for supporting students with ASD and ADHD. In summary, responses from DU staff members indicate that there is a commitment to support students with ASD and ADHD, but there are constraints mainly related to resources. The DUs are not supported by universities in terms of the resources that are needed to facilitate the inclusion of students with ASD and ADHD. There are constraints in human resources and DUs are understaffed and unable to respond to a growing neurodivergent student population in addition to other students with support needs. A key element in the efforts of the DUs to support students with ASD and ADHD is to collaborate with different departments and faculties across the university. This is mainly through awareness campaigns around campus to teach people about neurodiversity. Despite these campaigns, there is still a lack of knowledge about neurodiversity in the general university population and some DU staff members feel that there should be more specialised professionals recruited into the DU itself to lead awareness campaigns and provide the skills needed to implement inclusion of students with ASD and ADHD. There is a general sense among the staff members that more training of personnel in the area of neurodiversity is needed to be able to include neurodivergent students. Lastly, the chapter has shown that despite the claim by DU staff that they take a holistic approach to inclusion of students with ADHD and ASD, the strategies they have in place are almost entirely academic. There is little indication that there are services meant to support students on psychosocial difficulties, thus the area of student services needs more attention because so far only learning development is prioritised in support efforts.

CHAPTER SIX: FINDINGS AND ANALYSIS OF STUDENTS' EXPERIENCES (RESEARCH OBJECTIVE 2)

The previous chapter discussed the strategies of DUs to facilitate the inclusion of students with ADHD and ASD in their universities. In addressing the second main research objective, this chapter reports on the experiences of students regarding both academic and social aspects of university life. A total of 14 students took part in the study by participating in interviews, and in the case of those who preferred to not be interviewed, a semi-structured questionnaire. Seven students completed interviews while the other seven opted for questionnaires. The student sample was made up of students from six universities as no student participants were provided from the three other institutions.

After collecting and transcribing data from students via interviews and questionnaires, I started the thematic analysis by doing free coding of each participant's data using the conceptual framework as an analytical lens. This was followed by the identification of common themes that emerged from the different students and the subsequent organisation of key statements under the themes. The main themes that I identified in relation to student experiences include:

1. Transition from high school to university
2. Experiences regarding social interaction and academic aspects
3. Access to the built environment
4. Self-efficacy and neurodiversity advocacy in the universities.

The diagram on the next page is a summary of these themes and the subthemes under each:

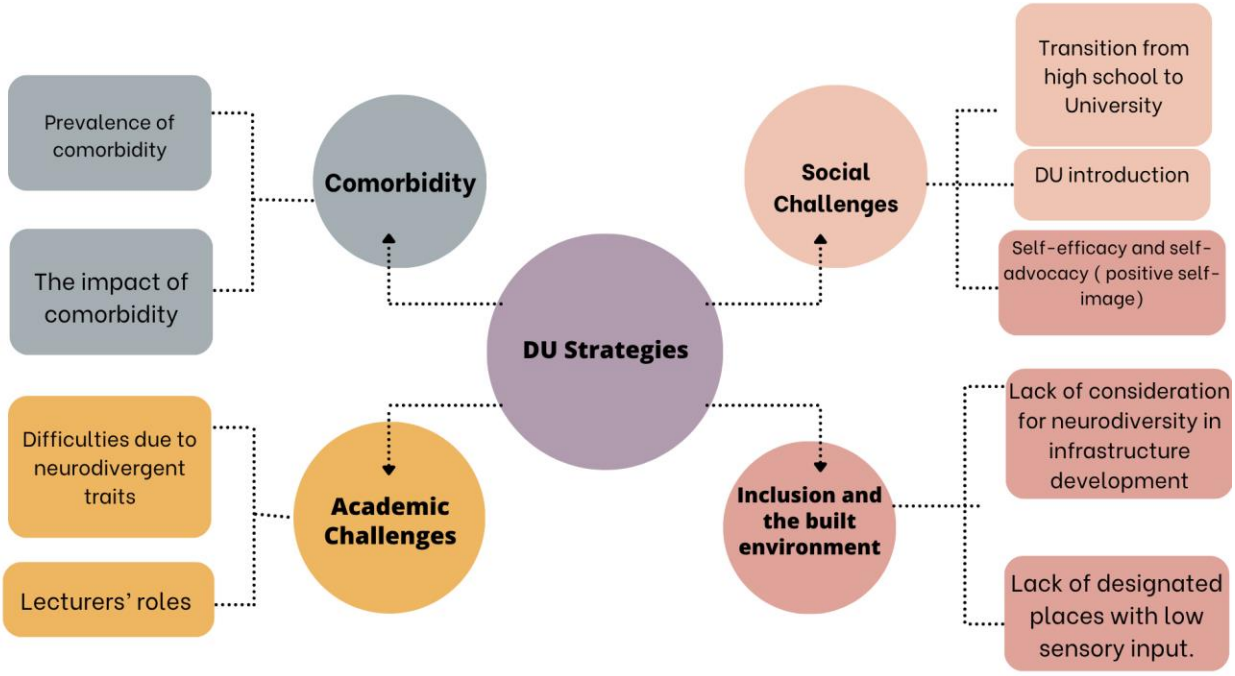

Figure 2: Themes from student data

The chapter is organised into headings under these four themes, with subthemes discussed under each theme as subheadings. To begin, I discuss the close relation between ASD and ASD as neurodevelopmental disorders that include similar challenges as well as their manifestation as comorbid conditions. In discussing comorbidity, I include statements from students highlighting the experiences they have had in their universities living with both ASD and ADHD.

6.1 Comorbidity

Comorbidity is relevant to this study due to its intersectional focus which takes into consideration different factors that contribute to the exclusion of students with ASD and ADHD. By virtue of living with both ASD and ADHD, students are likely to face marginalisation on multiple levels, thus it can be said that they contend with more than one axis of oppression (Al-Faham et al., 2019). Comorbidity is a medical term that refers to a situation where a person has two or more conditions simultaneously, usually being conditions that are closely linked (American Psychiatric Association, 2013; Mammarella et al., 2022). Comorbidity is a common feature of neurodiversity, as seen for example in research that estimates that over half of individuals with ASD typically also have ADHD (Hours et al., 2022). Applying the theory of intersectionality, one can deduce that comorbid neurodivergent traits may lead to the student experiencing difficulties and exclusion in

connection with more than one condition (Azmitia & Mansfield, 2021; Crenshaw, 2006). According to Crenshaw (2013), when combating marginalisation, all axes of oppression should be addressed, therefore a student with both ASD and ADHD should receive support for difficulties faced in relation to both conditions. Comorbidity is, therefore, viewed in this study, as an aspect of intersectionality that should be considered in addressing the exclusion of students with ADHD and ASD. The support students receive should, with this understanding, be responsive to their difficulties related to both comorbid conditions, which requires a flexible approach to accommodating students' needs. Likewise, if the challenges also relate to other factors such as social issues, support for the student should be wholistic and not only focusing on the medically diagnosed condition (Bayeh, 2022). Out of 12 student participants, 5 were diagnosed with both ASD and ADHD. A common feature in the experiences of these students was that they indicated that they felt that they had more difficulties to deal with as a result of comorbidity:

> *"I've got both, I've been diagnosed with both ASD and ADHD. So, double the challenges." (PR2 student 2)*

> *"Getting to and from classes, the engaging in class is difficult, that's the autism side of things, and then the ADHD reared its head, and I couldn't focus, I couldn't get work done. I couldn't stick to deadlines. So, between those two things, I burn out multiple times". (PR3 student 3)*

The student states that the challenges are doubled as a result of having been diagnosed with both conditions. Though comorbid ASD and ADHD can lead to more challenges, Harkins et al. (2022) argue that this is not always the case, as some people with either ASD or ADHD show similar social and intellectual competencies as those living with both conditions. This may be due to the fact that the two conditions have common symptoms such as attention-deficit, impulsive activity and hyperactivity (Hours et al., 2022). The levels of difficulty felt by students with comorbid diagnoses can therefore differ. An example of this is the student below who experiences social struggles related to comorbid diagnoses:

> *"I have autism and ADD. I'd say I struggle socially" (PR1 student 1)*

ADD (attention-deficit disorder) is basically an older terminology for what is now known as ADHD (American Psychiatric Association, 2013). Between both ASD and ADHD, social

interaction is the main point of struggle as both conditions impair aspects of social functioning such as verbal communication, maintaining a conversation and functioning within social settings (Harkins et al., 2022; Mammarella et al., 2022). In essence, the key aspect related to comorbidity one should recognise is that the incidence of both ASD and ADHD in the same individual calls for a comprehensive, intersectional approach to including the student in the tertiary education environment. Having discussed comorbidity between ASD and ADHD, it is also worth noting that there are also conditions that are not forms of neurodiversity that impact on the students' experiences. In addition to marginalisation due to their neurodivergent traits, the student below stated that they also face difficulties due to chronic illness:

> *"I also have some chronic illnesses… It would be helpful to have something like a leave of absence but for less than a semester. It is a bit ridiculous when one is in a health crisis to have to email and negotiate deadlines." (PR3 student 1)*

The response above shows that in addition to neurodivergent traits, students health can impact their experiences in the university. Neurodiversity, being a broad spectrum of conditions, is complex as some other forms such as dyspraxia and dyslexia may also be comorbid with ASD or ADHD (Quenneville et al., 2022). Further, health conditions not related to neurodiversity should also be considered in the support strategies for neurodivergent students. Comorbidity is an important aspect of the complexity in the nature of ASD and ADHD, thus putting the challenges discussed into clearer perspective. Having briefly discussed the aspect of comorbidity, the next section discusses the transition of students with ASD and ADHD from high school to universities.

6.2 Transition from high school to university and ASD/ADHD disclosure (Theme 1)

This section discusses the early stages of university, which is crucial for the chances of students to succeed in the university. Regarding the transition to university, Dwyer et al. (2023) argue that a significant amount of challenges faced by neurodivergent students in universities stem from the ways in which they are introduced to the support services available in the university. Likewise, in their study of the adjustment of students with ASD and ADHD in an American university, Baczewski et al. (2022) found that "first-year experiences and adaptability to the college environment greatly impact students' decisions to remain enrolled" (p. 12). Thus, it is vital to ensure that in the early stages of university education, students are supported in settling into the higher education space, which is significantly different from the high school context. In general,

students coming into South African universities for the first time struggle due to a variety of factors including financial constraints, moving to new cities and adapting to a new and demanding academic environment (Mgqwashu et al., 2020). These are related to transitioning from the high school environment and also with disclosure of their conditions to the DU in hopes of obtaining eligibility for support and concessions. The experiences of students on the transition from high school in the current study is that students with ASD are mostly challenged because they are often sensitive to changes in their environment. This is due to the larger population of universities compared to schools and the high level of stimuli and social interaction that comes with it, which is a major anxiety trigger for people with ASD (Van Der Cruijsen & Boyer, 2021). Similarly, students with ADHD mostly reported social challenges but due to their inattention, they also indicated that the transition to university is difficult because there is a higher amount of content to process during lectures. On the aspect of disclosing their conditions and registering in the DU, students' experiences throughout their years of study were directly linked with the process of registering with the DU. By and large, students reported improvements in their learning and overall university experience after having registered with the DU. In contrast, other students still reported being neglected and that despite their constant requests for concessions, they do not always get permission to write in separate examination rooms or get extra time. Another more concerning issue is that administration processes in some DUs are inefficient in that students sometimes spend years just trying to register their ADHD or ASD diagnosis.

6.2.1 Transition from high school

Challenges for neurodivergent university students begin in the early stages when starting out at the university after completing high school education. In general, the basic education setting is a more controlled environment with less academic content to cover, with the added advantage of having teachers that can more readily attend to the needs of individual students (McCall, 2015). In contrast, university classes comprise of many students, and it is impractical for lecturers to give as much attention to individual students as teachers do in high schools and primary schools. Thus, moving from basic to higher education can be quite challenging. During the transition to universities, students with ASD particularly are faced with an environment that is very different from the schools they previously attended, which is challenging given the common sensitivity to environmental changes in people with ASD (Laitila, 2018). This was emphasised by a student

who, prior to enrolling in a university, studied at a smaller college with smaller classes and there was more attention to his needs from the educators:

> *"I'm in my first year, studying film and TV production. The first couple of weeks it was overwhelming because I was in a new environment. From 2023 I was at a film college, so the environment was like, that jump from that small environment to this environment of [the university]. It was kind of a huge leap." (PR1 student 1)*

Moving to university can, indeed, for several reasons be a huge leap, more so for students that go directly from high school to university. One reason is the intense amount of social interaction that happens in the university, which can be overwhelming for a student with ASD. In particular, the environmental factors that negatively affect students with ASD are mostly related to the highly social activities around the university (Hillier et al., 2018). People with ASD tend to be highly sensitive to intense social environments such as large gatherings (Gurbuz et al., 2019), and lectures for example, can be overwhelming. For instance, another student with ASD described his difficulties in coping with the social environment of the university in the following manner:

> *"Going to classes is dreadful even though I yearn to be able to go to class and learn but everything is so overstimulating." (PR2 student 2)*

The student mentioned overstimulation, which can be caused by a number of factors in the learning environment and the social interaction that comes with that. Overstimulation can result from both infrastructural and social aspects of the university. For instance, Rasch (2022) states that the lighting in a room can be overstimulating for students with ASD as well, meaning that the challenges of students are not entirely limited to interactions with other people but with the study environment as a whole. Price and Romualdez (2024) state likewise that "everyday classroom noise and fluorescent lighting can hinder learning and academic attainment" (p. 2). The reasons given by the students in this study for overstimulation are similar to those found by Wagner's (2023) study in an American university involving students with ASD. The students in that study listed factors such as "loud noises, crowds and bright lights" Wagner (2023, p. 11). While there are a variety of causes, social interaction and the large crowds of people around neurodivergent individuals remain foremost in the challenges experienced by students with ASD. For instance, the students below associated their anxiety and overstimulation with the large numbers of people on campus:

"I burnt out twice last semester. So, I, it just, it takes too much energy. I find the people overwhelming. The courses themselves are fine. It's just the getting to and from classes, the engaging in classes is difficult" (PR3 student 3)

"One thing that I struggle with is a lot of exhaustion from like going to class and stuff because being around so many people is just so exhausting… just the crowds on campus can be quite overwhelming." (PR2 student 1)

This challenge of overcrowded spaces is arguably most profound during the early years of neurodivergent students at the university because first year classes are generally more crowded than those in higher levels of study. This therefore necessitates assistive measures to be implemented in a manner that enables students to settle into the university space. One suggestion given by a student with ASD was for psychological services to be offered to prepare students with ASD before they begin their academic activities:

"I believe it will also be beneficial for a mandatory counselling session to be set upon arrival at the university so that the social challenges can be raised before they need to be blindly faced by ASD students." (PU2 student 1)

Moreover, students face difficulties in adjusting to the university curriculum. In this regard, Nash-Luckenbach and Friedman (2024) argue that the transition to a new level of learning such as from high school to university can undo progress that has been made in helping neurodivergent students improve their social skills. In addition, the transition to university presents major changes to academic activities, which in the university context are more demanding (Mellifont, 2023). This can be due to the content learned in university as well as being introduced to new systems of learning:

"Initially it was very confusing, being new to the systems of correspondence between the university and the students… I was quite anxious at that time because I was not entirely aware of how the curriculum would be structured and what exactly would happen. With time, however, I learned how to navigate the correspondence and became much more aware of how the curriculum works and what was planned for each week." (PR1 student 2)

It is evident that settling into the university setting is challenging for students with ADHD and ASD mainly because it is a different environment. Notably, it presents a different culture of

learning which gives students more independence and responsibility for their own success (Maphalala, Mkhasibe & Mcube, 2021). In light of the challenges of students in settling into the higher education space, the deduction here is not simply that they should adapt to the new environment, but that efforts should be made to accommodate their needs. In this regard, Wilson and Dallman (2024) assert that "creating a welcoming environment for social connection and appreciation of differences is key to the success of autistic students" (p. 1). Likewise, students with ADHD need a welcoming environment but they are stigmatised, notably in the South African context due to the lack of knowledge of ADHD (De Beer et al., 2022). This implies that students do not merely struggle to adjust to the university space because of the larger campus population but that the negative attitudes towards neurodiversity compound challenges with social interaction. This calls for negative attitudes to be addressed to encourage more positivity towards difference as Wilson and Dallman (2024) above stated. Similarly, the cultural model asserts that learning environments remain exclusionary due to negative attitudes about differences, and that inclusion cannot be achieved unless people adopt positive views of difference such as neurodiversity. Furthermore, students find that most of the support systems that they got used to no longer exist in the same accessible formats as they would have had in high school. The early stages of tertiary education, therefore, require the assistance of DUs to help students settle into a largely unfamiliar learning environment. The introduction to DU services thus, represents a pivotal aspect in determining the possibilities of students having positive experience in their university journey. The next section therefore discusses the impact of introductions to the DU on students' educational experiences.

6.2.2 Disclosure and introduction to DUs

Disclosure is an important but sometimes complex consideration for students with ASD and ADHD when beginning their university life. Due to stigma, students may be reluctant to disclose their conditions but the need for support means that they have to find the courage to seek the relevant channels to disclose their diagnosis (De Beer et al., 2022). In this regard, Von Below et al. (2024) state that "the first hurdle for autistic students in receiving support within universities involves informing the university of their condition" (p. 942). Likewise, students with ADHD face the challenge of disclosing their condition in a community that is likely to not be accommodating of their needs (Thomas, 2020). For students to receive accommodations and support within a university, there should be proof that they have a condition that impairs their functioning in an

important aspect of their education. This is mainly in the form of a diagnosis from a qualified medical practitioner. Since university students are mostly young adults, this information is to be brought by the students themselves to the attention of the relevant department, typically the DU in South African universities (Mbuvha, 2019). Since disclosure is voluntary, not all university students with a diagnosis come forward to seek accommodations at the DU. This means that some students with conditions such as ADHD and ASD may not be documented as forming part of the neurodivergent student population and are therefore not receiving the relevant support. This is also true for students with support needs that fall outside the neurodiversity category who choose to not disclose their impairments to the university (Farsinejad et al., 2022; Roshani et al., 2020). Among neurodivergent students, fear of stigma is arguably the most common reason for reluctance to disclose their condition to the DU to lecturers and even to fellow students (Farsinejad et al., 2022). This leaves the students having to deal with challenges alone without the assistance of DU staff who have the knowledge to provide the necessary support. Having noted the reluctance by students to disclose their neurodivergent conditions, I report on the experiences of students with ASD and ADHD who have disclosed their conditions to their resident DU below to show what impact disclosing the diagnosis has on their overall experience of the university. All students in this study were registered in the DU at their respective universities as living with either ADHD, ASD or both, therefore I detail the accounts of students on the impact of their disclosure.

Broadly speaking, students expressed having had a mix of experiences of being at university, noting positive and negative aspects to their academic and social experience. One of the main positives picked up was that support from DU staff members had a profound impact on their overall university experience. The role played by DU staff here is key because they can be expected to have the skills and expertise to know the challenges that students experience at the university, being neurodivergent individuals. This was mainly highlighted with reference to the transition from high school to university; most of the students explained that settling into the university environment was challenging as it is more complex than the school environment that they were previously used to. They indicated that the DU played a key role in adapting to tertiary education and enabling them to learn in ways that are appropriate for their special needs. A few statements below highlight the impact that DUs have had on the students' university experiences:

"The Office for Students with Disabilities (OSWD) at [PU3] is supportive as far as possible" (PU3 student 1)

"Support staff (therapist and Office for Students with Disabilities) have done an incredible job in making me feel accepted and just as able as any other student." (PU3 student 2)

"I definitely think that having disclosed the information [about her condition] made, it has made it a better experience." (PR2 student 1)

These statements are consistent with De Beer et al.'s (2022) study on students with so called 'invisible disabilities' that included students with ASD and ADHD in a South African university. The study found that students who had disclosed their conditions saw improvement in their academics as they were able to receive the necessary support. The importance and impact of disclosure is therefore, clearly evident, but it is equally important to recognise that stigma against neurodivergent students remains a barrier to disclosure. More still needs to be done to encourage students that have not disclosed their conditions to do so and educational initiatives for the wider university community to deal with stigma. This was highlighted by a student who called for more confidentiality in the disclosure process:

"I think that other students should not be able to know about our conditions and that there should be stricter regulations regarding our confidentiality and safety." (PU2 student 2)

The statement above provides insight into the complexity of making universities inclusive of students with ASD and ADHD. Given that the neurodiversity movement promotes positive affirmation of neurodivergent traits, there is an implicit meaning that those traits must be acknowledged even by neurotypical persons. However, in the current context in which South African society has not developed positive attitudes towards neurodiversity, many neurodivergent people prefer to not publicise their neurodivergent traits for fear of stigma (Guler et al., 2018; Schoeman & Voges, 2022). This necessitates the education of neurotypical people to adopt positive views of neurodiversity so that they can contribute to the celebration of difference. Unless this change is made, the preference of students to keep their diagnoses confidential is well justified

and remains a clear indictor of the changes that still need to happen to make universities and broader society neurodiversity friendly.

One of the key aspects noted in relation to disclosure was that students that had easy access to information about the DU and other services provided generally registered early and were able to receive support in a timely manner. Apart from fear of stigma, the availability of information regarding DU services during the early stages of enrolling in the university contributed to how soon they were able to register and be approved for support regarding their ASD and ADHD diagnosis. Early events such as orientation were vital for such information to be shared and students who needed support would be guided as to how and where to apply for support services. For instance, a student with both ASD and ADHD stated:

> *"In the first week of orientation week, my first year… It was a meeting for everyone who, for any people who have disabilities, who are disabled to meet the people at the DU and like see what they can do for you and all that." (PR2 student 1)*

The student also mentioned that a specific staff member in the DU was quite helpful in explaining what kinds of services they can get from the DU, as well as the rights they have to ask for concessions. In the staff questionnaire, the same DU staff member expressed the importance of making the DU services known to the students early, with various channels for disclosure being opened for students:

> "*Students can disclose on the application form that they have this disability. They can also disclose when applying for assessment concessions. Some students are introduced to us via their private psychologists. Then some will disclose directly to the Disability Unit and consult with staff there or speak to their lecturers. So various paths to disclosing exist." (PR2 staff 1)*

The openness of the DU in informing students gives encouragement to students to ensure that they disclose their diagnosis and seek the necessary accommodations when needed. As the student above confirmed, disclosing her diagnosis made her university life a better experience. This is a key aspect because the student was then able to start her academic program knowing where to seek help regarding her neurodivergent traits. Early disclosure of neurodivergent traits is indeed identified as a major component towards ensuring the success of neurodivergent students in higher

education. For instance, Farsinejad et al. (2022) assert that by not disclosing their diagnosis to the relevant stakeholders in the university, neurodivergent students endure difficulties that they would otherwise be better equipped to cope with if the relevant support was available. Thus, universities should provide similar opportunities to the one explained above for students to know what services are available for them given their neurodivergent traits. Similarly, another student with ASD from a different university explained the positive impact that their DU has made in their university journey through effective communication:

> *"The Disability Rights Unit and the services it provides to students with disabilities are incredibly helpful, and I like that the department is open to communication." (PR1 student 2)*

The student has obviously had positive experiences with the unit, and an integral part of that is that the DU is open to communication from students. This is important because apart from the university having the necessary resources, skills and expertise to provide the support services to students, the ease of access to the services should be ensured. The Salamanca Statement (UNESCO, 1994) calls for ease of access to educational support services, stating that it is important to ensure accessibility to "information and communication, in enabling persons with disabilities to fully enjoy all human rights and financial freedoms" (p. 3). By maintaining communication with students, the DU referred to above has thus, given students confidence that there is a place within the university where their needs can be catered for. This aligns with Doyle et al's. (2024) assertion that a neurodiversity-friendly university is an environment where students should be motivated to disclose their conditions and not fear that this will lead to negative results.

Having highlighted the positive impact of early disclosure in the students' academic journeys, it is important to clarify that early disclosure which is advocated for here is not necessarily the same as 'early identification'. The two ideas differ based on their sources because early disclosure is the responsibility of the student and is advocated for by the neurodiversity movement as a having to be done in a positive manner (Syharat et al., 2023). The desired result of disclosure is then to foster positive views of neurodivergent traits among other people because the student with ADHD, ASD or any other form of neurodiversity will have not seen their condition as something to be ashamed of, but as a positive trait. Later in the chapter, I explain why a positive self-image is important in helping students with ASD and ADHD to enjoy a more fulfilling academic experience. In contrast

to early disclosure, early identification is associated with the medical model, whose proponents aim to identify neurodivergent traits in order to correct them (Kapp et al., 2013). This is a view that is mainly supported by medical practitioners, whose motivation is to 'cure' people of their neurodivergent traits (Acevedo & Nusbaum, 2020). This is opposed by the neurodiversity movement, who argue that neurodiversity is a form of diversity which should be embraced because as they argue, neurodivergent traits are "natural variations of being human" (Accardo et al., 2024, p. 1). Thus, students should be encouraged to disclose their ASD or ADHD diagnoses to the DU as this will result in their identities being embraced and their strengths appreciated.

In contrast to students who had positive experiences with disclosure, other students struggled through tedious administration processes which delayed their eligibility to receive support from the DU.

> "*It took me a while to get a diagnosis and once I did then I applied. I wanted initially got registered with the Disability Unit just because I wanted to get extra time for writing because obviously, I was running into this problem of not finishing tests and exams over and over again. The first time I couldn't get registered because they kind of threw me from person to person. It was a lot of like me having to follow up and find out why people are not responding." (PR3 student 3)*

In this case the student's decision to take the initiative and try to get registered was not reciprocated by the DU, and this can discourage other students from disclosing their diagnosis when they see this lack of action. The student above also mentioned that they were expected to follow up on their application, rather than getting updates from the DU. This was negligent in that the expectation was that the student, who has ADHD, was expected to do what does not come naturally to most people with ADHD. Due to their inattention, people with ADHD can easily forget timelines and appointments, so they need to be reminded in advance (Sedgwick-Müller et al., 2022). The student highlighted this dilemma, stating that the DU was not considerate in expecting her to follow up and be up to date with lengthy administration processes:

> *"I don't understand why all of the processes are like that, particularly for someone with ADHD, like, a lot of times, remembering to follow up with people about things is a hard thing for me to do. Those kinds of things are already inherently difficult for someone with ADHD" (PR3 student 2)*

The DU in this case has failed to respond to the student's unique neurodivergent attributes and have done so at the crucial stage of registration, which could have led the student to lose confidence in the quality of support services offered going forward. This highlights the fact that exclusion can sometimes happen within the entities that are responsible for inclusion when the needs of students are not addressed appropriately (Messiou, 2017). In this case, the DU, which is supposed to be responsible for the inclusion of students presenting unique needs such as those with ADHD, prolonged their difficulties. A more compassionate and efficient registration processes is needed to ensure that students are not further stressed, in addition to challenges that they may face in the university. Besides the laborious and slow registration processes, support for the student above was delayed by finances, which is an example of a case where a student is marginalised by the intersection of neurodivergent identity and socio-economic factors. Despite having registered his ADHD diagnosis in the DU, the student is still required to do further medical evaluations to be allowed to get extra time in assessments:

> *"I'm still fighting the battle of trying to get extra time for my exams because of the fact that I can't do a report that costs a whole bunch of money that I can't pay for." (PR3 student 2)*

It is worth noting that this student is from one of the highly privileged universities where funding for testing would probably be easily made available if it was taken to be a priority. Moreover, given that many students in South African universities struggle to even pay their tuition fees (Papageorgiou & Callaghan, 2020), it is reasonable to assume that many students from poor socio-economic backgrounds are in the same predicament of not being able to access the necessary services needed for them to receive support, due to neurodiversity. Another student from the same university had a similar experience in which they needed to pay to get a report done as part of registering at the DU, which delayed the process as getting the money was a challenge:

> *"I needed to go to an educational psychologist to get a full report done, a full evaluation report, and that would cost between five and twelve thousand Rand [South African currency]. I have, at that point, thirty-two years of documented medical history, multiple institutions say I have these things, I've been under treatment for this and they're like no, that's not good enough. It's taken me two and half to three years to be fully registered." (PR3 student 3)*

This is a clear example of how neurodiversity can intersect with socio-economic status in the South African context (Walton, 2022). An equally intersectional approach should be applied in addressing cases such as this one where the student is disadvantaged because of ADHD but also due to their lack of financial capacity to obtain the necessary services. Practically, this can be done by ensuring that students get free testing and diagnosis services in the DU, rather than having to seek private assistance at their own expense. Financial difficulty is already a major issue in South African universities, and to expect students to pay for other services that directly impact on their education if they cannot afford them is to add unnecessary burdens on them.

6.2.3 Late diagnosis and late disclosure

While early disclosure is encouraged, university DUs should still be ready to assist in cases where a student's ASD or ADHD diagnosis comes when they are already in the academic programme. Both ASD and ADHD are mainly detected in the early developmental stage which is under two years old (American Psychiatric Association, 2013). Nevertheless, there are still cases in which the diagnosis is in adulthood, which may be during their university years (Guntuku et al., 2019; Ward & Webster, 2018). Below is an example of a case in which the student's disclosure of ADHD was handled well by the DU, though the disclosure was at a later stage, as the diagnosis came while the student was already in the university. In recounting how the diagnosis was made, the student began explaining from the time when she was applying for university:

> *"Initially when you start, even when it comes to NSFAS [government financial aid scheme] or registering, they do ask you if you have any disabilities. It's like a form when you were applying. They ask you basically your information about yourself then you press yes or no." (PU3 student 1)*

This is the standard application procedure in most universities in South Africa, and it helps ascertain the representation levels of students with disabilities in the higher education system, which remains very low (McKinney & Swartz, 2022). In this case however, the student was not aware that she was living with ADHD and was therefore not initially registered as neurodivergent. This is especially common in middle to low-income countries such as South Africa because of lack of knowledge and resources for diagnosis to be made earlier in childhood (Cheng et al., 2023). While late ADHD diagnosis is a possibility, the responsiveness of relevant stakeholders can make a significant difference when it happens. This particular student, having received a late diagnosis,

was fortunate to be in a university with the right resources and know-how to ensure that she would get the necessary support, despite the late diagnosis. Below is the continuation of her diagnosis experience continued from the quote above:

> *"So, originally when I first applied in 2021, I said no to that [the question about being disabled] because I didn't have a diagnosis, and then I think in my second year I had failed one of my modules; 201. I noticed that so I went and got myself tested and everything. So then because I found out at a later stage, what I had to do was when I got to the psychologist, she is actually the one that advised me to go about the university and about getting extra time because she had tested my writing speed and it's slow." (PU3 Student 1)*

This demonstrates the benefit of the presence of relevant professionals to assist students with neurodevelopmental conditions, and psychologists are among the key stakeholders to recommend strategies for assisting students in academic settings (Mfuthwana, 2016). However, there is still a need for further action from other role players, in the university, such as lecturers and DU staff members to show willingness to adhere to the recommendations of other trained professionals on how students can be included. This is encouraged by researchers who view inclusive education as the combined effort of different stakeholders that form the community of an educational system in ensuring that the needs of all students and staff are catered for (Causton-Theoharis et al., 2011; Göransson & Nilholm, 2014a; Howell et al., 2019). The DU in this case was proactive in ensuring that the student received the necessary support, which had a positive impact on the student's academic outcomes:

> *"So, she* [the psychologist] *suggested that I get a time concession from the Disability Unit, and that is when I went to the unit. I explained my situation to the person that was in charge and the I think there was a form that I had to fill out, and you know, I just had to tell her like all my information, then she put me on the system. So yeah, that was helpful in terms of how it works in our system." (PU3 student 1)*

This story shows that there can be much benefit to the students when DU services are effective and quick to respond to student needs. It also shows the importance of collaboration between different stakeholders as different professionals were involved in the whole process. Another student's disclosure story further demonstrates the need for involvement of different stakeholders in disclosure, specifically the role of parents in the academic development of their children.

Applying the cultural model, one should note that families can contribute to negative views of neurodiversity due to established cultural beliefs, most notably in the sub-Saharan African context (John, 2024). The correction of negative stereotypes is therefore, an important aspect to bring in the support of families as stakeholders in the education of students with ASD and ADHD and the appreciation of their unique traits. While parental involvement is well documented in relation to children in primary and high schools (Gona et al., 2016; Kashinath et al., 2006; Mammarella et al., 2022), the case of the student below shows that parents can still be active in their children's development beyond the school level. The student was not contemplating disclosure, but his mother suggested that it may be beneficial:

> *"Mostly when I was registering, like the thought to register with the Disability Unit, it wasn't really a thought in my mind, but my mom told me after reading a bit about what the department does. She said I should probably register so like; I get some support for my condition if ever I need like, assistance." (PR1 student 1)*

This shows proactivity because the parent did not wait for a later time when the students would maybe face difficulties but took the initiative to read and explore the options available in the university. By taking initiative, the parent not only ensured that the student was taken care of in terms of the academic needs but also assisted in finding the information which the student would possibly need to approach and speak to someone in the DU. Given that this is a student with ASD, there was a likelihood that there would be hesitancy to seek assistance because people with ASD rarely initiate conversations, or seek help when they need it (Gurbuz et al., 2019; Meiring et al., 2016). In fact, the same student explained in answering a question about the social struggles experienced at the university mentioned that he does prefer not to approach other people, even in the case where he needs help:

> *"I struggle socially, because it's very difficult for me to like, approach people like to go in and talk to them, like even if I need help with something." (PR1 student 1)*

It was therefore, fortunate that the student's mother found the relevant information so that the student did not have to approach the DU himself, which would not have been easy, given the social awkwardness that comes with ASD (Bondioli et al., 2023). The student was then able to register with the DU, a process that can be completed via email or online in this particular university.

Regarding the impact of disclosure, the student, who was a few months into his first year at the time of the interview, had this to say:

> *"With regards to like, the changes I've gone through, I haven't experienced any yet but I did get help from the, one of the employees in the unit with regards to getting some learning material, which is a reading and writing software which is basically a text to speech thing where it reads my class notes to me since I have trouble reading the course packs by myself because reading pictures for me, it's difficult." (PU1 student 1)*

This is another example of where there is a positive outcome from having disclosed the condition to the DU, where resources have been provided to help the student learn in the ways that are suited to their unique needs. Disclosure is therefore crucial for the development of students with ASD and ADHD in universities, and this study found that most student participants found it to have contributed positively to their experiences. A common feature of the responses of students that said that the DU at their university has been helpful is that it was part of the early processes of application, registration and orientation into the university. The importance of this is further demonstrated by the responses of one of the students who had a late introduction to the available services from the resident DU:

> *"I did not know of many of the support services (including the unit's existence) until far too late in my university career and if I had access to this information earlier it would have spared me many unknowing social mishaps and decreased my confusion and distress significantly." (PU2 student 1)*

Notably, the student reflects on having faced social challenges and clearly feels that most of that would have been avoided by taking a proactive approach to informing students about the supports that is available. This case also shows that there is poor relaying of information to students about the services that are available. Though the student participants were all registered with their DU, one student highlighted the impact that not disclosing their ASD or ADHD diagnosis has had on other students:

> *"I've seen from people that I know who are neurodivergent but haven't necessarily got diagnoses… how they struggle and struggle to get concessions and get what they need from lecturers from their course." (PR2 student 1)*

Simply put, students who do not disclose their conditions do not have any grounds to ask for support or concessions. This however, does not mean that it is entirely their fault that they chose not to disclose their conditions, but the stigma surrounding neurodiversity may discourage them from being open about it (Trani et al., 2020; Vergunst & Swartz, 2021). In response to this, DUs need to embark in initiatives to encourage disclosure and also remove negative stereotypes through education of the entire university community. Despite having disclosed their conditions, some students did not report as positive an experience as those detailed above, regarding being supported by the DU, with some expressing frustrations at the lack of support. Regarding the impact that the DU had on their university experience, this student had this to say:

> *"The impact is the constant pressure and anxiety that comes with not being attended to. Procrastination is overwhelming, leading to destructive behaviour" (PU3 student 2)*

Likewise, another student indicated that the concessions during examinations are not applied with mindfulness of the reasons why they are actually needed, being a student with ADHD, this student can easily get distracted and therefore needs to write in a smaller venue with less disturbances:

> *"I got to write in a smaller venue but then they put us in a venue where it's like right in front of the bathroom. So, people walk through the venue, and they didn't even put a sign on the door to say we're writing a test or anything" (PU3 student 3)*

This shows that the student's needs were only addressed narrowly in that those responsible for organising venues assumed that a smaller venue is enough to make them comfortable. However, there may be multiple sources of distraction for a person with ADHD, in this case the constant movement in and around the venue was not anticipated and addressed appropriately. In the same test, the student was further disturbed by the constant communication that invigilators had among themselves and to students:

> *"The invigilators that come in, they have a whole conversation, like every fifteen minutes goes by they call each person's name out and tell you how much time you have left, and it's really distracting. I don't know if it was nicer to be with less people because at least I wasn't as distracted by all the other people, it wasn't most helpful" (PR3 student 2)*

In planning support strategies, the DU should ensure that those involved in directly facilitating examinations in venues where neurodivergent students write are knowledgeable about their conditions. This incident shows that the student faced more difficulty in writing in a venue that was supposed to be inclusive than they were used to when writing in larger venues containing large numbers of students. To avoid such cases, awareness initiatives should reach as far as the training of invigilators and other people that contribute to the administration of examinations and other academic activities. In essence, the inclusion of students with ASD and ADHD requires knowledge to be disseminated throughout different departments because when it is not shared across all departments, students will continue to face new hurdles of exclusion. In this regard, De Beer et al. (2022) assert that the lack of information transfer in universities in South Africa between different departments about neurodiversity means students have to constantly declare their diagnoses and deal with misconceptions.

6.3 Experiences regarding social interaction and academic aspects (Theme 2)

Building on students' experiences in the university that were discussed above, I now look at those experiences that are more specifically related to social interaction. This theme stood out because both ASD and ADHD involve differences in cognition that result in difficulties and complexities with social interaction (de Boer & Pijl, 2016; Powell, 2023). In assessing social factors of the university environment, the cultural model, which forms part of the conceptual framework of this study, is vital in analysing the social environment of the university. Firstly, the ways in which people think about disability determines how they act towards people with unique differences such as neurodivergent individuals. Here Bogart et al. (2019) suggest that "disability models predict disability attitudes" (p. 260). In making this assertion, Bogart et al. (2019) add that the attitudes of students without any known impairments are also influenced by norms emanating from models of disability. This implies that the ways in which neurotypical students act towards those with ASD and ADHD demonstrates their understanding or lack thereof of the conditions (Alstete et al., 2024).

In the case of students with ADHD, while they may not be as aversive to interacting with other people as students with ASD, their hyperactivity can affect how they are perceived by others (Quenneville et al., 2022). This often leads to their hyperactivity being viewed negatively by those that may not be aware of their ADHD and the symptoms and propensities that come with it (Mayes et al., 2012). Similar to hyperactivity, impulsivity is another common characteristic of people with

ADHD which can be considered unpleasant by many neurotypical people (Shields & Beversdorf, 2021). Due to having these propensities, students with ADHD can encounter problems with how they interact with fellow students, lecturers and other people in the university. For instance, one of the students explained the complexities of interacting with others in the university and the negative consequences that have resulted from it:

> *"I was diagnosed with ADHD. Socializing is difficult because of my hyperactivity. It makes my presence unpleasant which resulted in a secondary diagnosis of Social Anxiety Disorder, characterized by emotional dysregulation. I am always against everyone because I think differently. My mind won't stop flowing and thinking." (PU3 student 2)*

The student presents a mix of factors that seem at odds with each other; propensity towards rigorous thinking and seeing things uniquely, and the urge to express opinions that mostly differ from those of others, which are common tendencies of people with ADHD. To help the student feel accommodated, it would be wrong to attempt to curb the natural thinking patters as is the case in the medical model (Casanova & Widman, 2021). In contrast, the cultural model argues that differences should be acknowledged and affirmed positively. In addition, it posits that the perception of certain traits as normal fuels marginalisation, therefore all people should be considered different but none should be labelled normal or abnormal (Müller, 2017). Exclusionary practices affecting students with ADHD and ASD in their homes should, therefore, be addressed by correcting the perceptions that they are not normal. It is also important to note that trying to change the student to think differently may interfere with some of the strengths that are rooted in the neurodevelopmental make-up of the student. This is highlighted by Schippers et al. (2024) whose study reports that there is an association between ADHD traits and positive skills, such as flexibility and hyper focus which are vital to academic success. For instance, the tendency of the student above to think differently should not only be seen as a barrier, but as a strength (Schulze et al., 2020). Out of the box thinking is another strength that people with ADHD have, which is useful in academic tasks that require problem solving, innovation and creativity (Schippers et al., 2024). According to the cultural model of disability, strengths should be encouraged (Jones, 2022), therefore students with ADHD should be encouraged to apply the strengths that they have in excelling academically. In addition, thinking differently aligns with highly sought-after skills in

today's economic and technological climate which depends heavily on innovation and creativity. In this regard, Schippers et al. (2022) argue that "creativity, determination, ability to get easily interested and excited about new things" (p. 2) are some of the traits of people with ADHD that are beneficial to them and to their respective fields of work. Similarly, several scholars argue that there should be awareness of the strengths that are associated with ASD and not just the challenges that will arise as a result (Austin & Pisano, 2017; Xueyan, 2021). However, the student participants mostly indicated that the people around them in the university have a deficit attitude towards their ASD or ADHD and that this led to difficulties in their interactions with others:

> *"Very difficult due to my lack of social skills and social anxiety. It is hard for me in classes as I have both autism and ADHD" (PR2 student 2)*

Similarly, another student indicated that the difficulty with social interaction should be addressed by better educating other people about neurodiversity, and also about other forms for impairments as the student has comorbid ASD, ADHD and mobility impairments:

> *"In terms of peers I do wish people were better educated about autism, so they didn't take my lack of facial expression or tone personally. I also wish people were better educated about interacting with disabled people generally, especially with regards to my wheelchair." (PR3 student 1)*

This student's experience is a clear example that shows that exclusion is intersectional; the student is marginalised due to a combination of factors including ADHD, ASD and physical handicap. To enable a student with multiple challenges like these to participate meaningfully in the university, the support strategies should be responsive to the different sources of difficulty (Al-Faham et al., 2019). However, students find that rather than being supported and appreciated for their unique intersectional identities, they face multiple forms of oppression. To address marginalisation, Botha and Gillespie-Lynch (2022) argues that students should be given collective empowerment by different power structure, which in the university context can be Disability Units and other management structures. However, marginalisation that involves social interaction calls for more of a focus on changing the attitudes of people that students interact with closely, such as their peers and lecturers. With social interaction being such a sensitive issue for students with ADHD and ASD, they face difficulties with learning alongside other students (de Boer & Pijl, 2016).

Similarly, a student with ASD emphasised the need for others to be educated about how to interact with neurodivergent people in healthy ways:

> *"I do understand that there is a space for self-expression and fun within staff and students alike – I just think that staff being educated on when this can be harmful is important." (PU 2 student 1)*

Most university courses require students to collaborate on activities such as discussions and group work, meaning that students who naturally avoid social interaction may find it difficult to navigate academic work, and the social aspects that are involved in it. Students with ASD in the study certainly highlighted social interaction with their peers as an area of difficulty that they have struggled to overcome.

> *"My interactions with my peers have been strained at best and usually turbulent." (PU2 student 1)*

> *"In my first term of my first semester I went to all my lecturers, all my tuts, tried to do all the readings and complete all assignments on time. Plus trying to get enough sleep, eat, exercise, have some semblance of a social life. I burnt out. Autistic burnout" (PR3 student 1)*

This last response highlights the complexity of university life, which challenges students to manage academic responsibilities, physical health and social life. The combination of these aspects of university life causes some students to struggle, and even neurotypical students also find it difficult to stay focused on academic outcomes while managing social aspects of life (Weis & Beauchemin, 2020). Furthermore, another student with ASD indicated that social interaction itself is intricate and encompasses several challenges:

> *"University came with a whole host of new social skills to navigate as well and many of them were harmful (e.g. conversations surrounding sex, drugs, drama, etc.)." (PU2 student 1)*

The student highlights issues that one can argue, are important to discuss, especially as young adults, but the statement shows that there is a level of discomfort with subjects such as sexuality and drug use. The DU and other specialised entities can help students in this regard by conducting

education initiatives where students can discuss normally uncomfortable topics in a more controlled and safe space. Though the social aspect of university life was generally described negatively by the students in this study, there were some students who actually attributed improvements in their struggles to interactions with other students.

> *"I have made friends from class and that has helped me leave my comfort zone as an introvert. My peers also play a role in my academic life, they sometimes help with my academic contents I don't understand." (PU1 student 1)*

> *"My interactions with peers started out slow and awkward but gradually became more frequent and manageable." (PR1 student 1)*

> *"I think with the social aspect that has to be something that comes from me stepping out of my comfort zone and all that" (PR1 student 1)*

The latter student rightly points out that improvement in social interaction can be achieved by the combination of their own effort and that of others around them. This is an important consideration and one that contributes to the development of the student as an independent agent in their own educational journey. This, however, does not negate the need for neurotypical people to be more affirming of neurodivergent students. In essence, social interaction is a reciprocal activity that can be improved by ensuring that neurodivergent students are encouraged to interact more but also recognising that neurotypical individuals should be willing to change their negative attitudes about neurodiversity.

6.3.1 The danger of masking and the influence of the social environment

Some of the student participants indicated that they prefer to keep their ASD and/or ADHD diagnosis hidden, mainly due to stigma from peers and other people within the university community. This was particularly prevalent among students with ASD, who mostly used the term 'masking' to describe their tendency to try and suppress their neurodivergent traits in public. The student below gives an idea of what masking involves and how it feels having to constantly use it as a coping strategy in class and around campus:

> *"Asking questions in class or being… looking focused the way people want you to look focused and not fidgeting and all these things, all these different things are masking." (PR2 student 1)*

Apart from the obvious discomfort and exhaustion that the student associates with masking, the statement above also shows that the student does not mask because they want to, but in order to appear normal to other people. This aligns with Bradley et al.'s (2021) assessment that students with ASD avoid being themselves precisely because they know that they will not be able to fit into spaces dominated by neurotypical individuals. This implies that the negative attitudes of others cause the students with ASD to hide their neurodivergent traits, so to accommodate them, the perceptions of other students, lecturers and other members of the university community need to change. Students resorting to masking is an indication that the social environment around them is hostile towards their neurodivergent traits, which means that the complexities associated with masking are not natural signs of their condition but are self-imposed and influenced by negative attitudes that surround them. In essence, masking mainly stems from external influences and therefore has to be addressed by eradicating negativity towards neurodivergence by neurotypical individuals. This is confirmed by Syharat et al. (2023), whose study on the experiences of postgraduate students in a university in the United States found that "stigma associated with disability labels contributes a heavy cognitive and emotional load as students mask neurodivergent traits" (p. 6). Stigma is a major concern in the South African context as well, and many of the DU staff involved in this study stated that stigmatisation by neurotypical individuals is one of the main challenges facing students with ASD and ADHD in their resident universities. An example of this is stated below:

> *"If we look at mental health, and neurodiversity, it's one of the biggest groups of disabilities that we support… I would say however, there might be more stigma still around certain disabilities like hidden disabilities, less understanding than other disabilities, especially neurodiversity." (PR1 staff 1)*

In addressing stigma, the key is to correct underlying causes to negative attitudes, which according to the cultural model, can stem from beliefs and superstitions that have been long entrenched in society. This was confirmed by another DU staff member who alluded to the impact of the social constructions of common personality traits as normal, which results in the othering of neurodivergent traits that are seen to fall out of 'normal' functioning. This should be challenged as part of promoting positive views of neurodiversity. In making the university more conducive for students with ASD and ADHD, the participant indicated:

"To start with, the cultural idea of a person being normal versus abnormal, to do away with that to start with. So, in South African society, that's what we can tend to deal with as well." (CU1 staff 1)

The statement rightly identifies constructions of normal cognition as culturally founded, to which I add that to reverse the exclusion that results from this, responses to exclusion must be aimed at encouraging positive attitudes. This is possible using the cultural model as a framework in combination with the neurodiversity paradigm, as both these approaches argue that being different does not imply being disadvantaged or inadequate (Devlieger, 2005; Schuck et al., 2024). Using the lens of the cultural model to understand neurodiversity, the university community at large can be led to understand that there are natural variations in human cognition. Moreover, every person varies from the next neurologically, and that those showing significant variations from what seems common must be respected and viewed as equal to all people. Once acceptance and celebration of neurodevelopmental differences is achieved by all stakeholders, the university will then be truly neurodiversity-friendly. Unless this is achieved, students with ASD, ADHD and other forms of neurodiversity will continually be pressured to mask behaviours that come naturally to them.

Essentially, masking is not an inherent, natural trait of neurodivergent students, but a coping response to a society that is not conducive for the free expression of neurodivergent character traits (Syharat et al., 2023). Though it is done as a coping strategy, masking is dangerous to those who do it because the pretence and camouflaging of neurodivergent traits takes a significant emotional toll, and there is greater risk of suicidal behaviour and depression in people with ASD than with neurotypical individuals (Cassidy et al., 2020). Expectations of neurotypical behaviours are manifested in the actions towards neurodivergent students, which include negative attitudes and hostile actions towards students with ASD that can lead to loss of self-esteem, and also cause students with ASD to feel inadequate (Van Der Cruijsen & Boyer, 2021). This is sometimes caused by a lack of understanding from neurotypical students on conditions such as ASD, as exemplified by the student below:

"Most of my lecturers have been understanding, however since I started my Honours, that has changed and really negatively impacted my emotional and academic performance on campus. My peers are not understanding and make me feel incompetent and embarrassed." (PU2 student 2)

Thus, students turn to avoidance and try to hide the character traits that cause other people to judge them negatively, which can impact their academic performance, as indicated above. To characterise this dilemma, Bradley et al. (2021) state that people with ASD regularly try to hide or 'mask' their autistic habits because they find themselves in environments dominated by neurotypical individuals and being a minority, they hide their true identities to be accepted in those spaces. Students, therefore, are afraid to be themselves because of experiences that have proven to them that their natural traits are found undesirable. The student with ADHD below also highlights the social barriers that can drive students to hide their neurodivergent traits and again, this points to attitudes of intolerance towards neurodiversity:

> *"We actually have a meeting in our Disability Department about like, how disability is viewed by the university and people. I feel especially when it comes to neurotypical disabilities, people don't take it as serious, and they think of it as oh, it's something that you are doing wrong as a person, maybe it's your diet, maybe it's your concentration, everyone has a, you know, there's definitely a lot of stigma." (PU1 student 1)*

This statement further proves that stigma, which is caused by a lack of information, is the main aspect leading to the difficulties of neurodivergent students in universities. The student further points to the fact that deficit-based views of neurological differences are common among neurotypical individuals, which even manifest in scepticism towards the authenticity of ADHD and other forms of neurodiversity. This necessitates more efforts to change these negative perceptions by educating the general university population about neurodiversity, showing that conditions like ASD and ADHD exist, and people living with them should be treated with dignity. According to the cultural model, the acknowledgement of impairments is vital to changing negative attitudes (Jones, 2022), therefore to include students with ASD in the university space, the recognition of the existence of neurodivergent traits is key. Crucially, these traits must be accepted as part of human diversity, as the neurodiversity movement also argues (Lollini, 2018), so with a cultural approach to neurodiversity being applied, a student with ASD would not have to mask their neurodivergent traits, as they would be recognised by those around them. It follows then, that masking can be effectively addressed by applying a comprehensive approach in which the entire university is transformed into a neurodiversity-friendly-space. If, for example, the DU is the only space in the university where neurodivergent students can be comfortable with

themselves, then they are not fully included, because some other spaces, such as lecture halls and social spaces would still push them to mask their intrinsic propensities. The student above for instance, stated that the meetings where they share their experiences happen in the DU, and while this is a safe space for students to vent and receive support, the broader university population should be brought into these discussions. In promoting awareness initiatives, Borsotti et al. (2024) assert that deficit-based stereotypes of forms of neurodiversity, such as ASD and ADHD should be eradicated and replaced with neurodiversity affirming discourse. Some of the DU staff demonstrated recognition of the need for changed attitudes, and shared some strategies that are implemented to raise awareness across the university community:

> *"We inform and advertise various programmes at student affairs and encourage societies' participation in the broader university context. While we cannot ensure participation, we can inform and encourage." (PR2 staff 1)*

> *"Besides creating awareness, there are training sessions and workshops for the university community to teach them about different disabilities and how to be inclusive as a community, in the workplace as well as outside the workplace." (UT2 staff 1)*

The emphasis on a community approach in the latter statement is vital as involving all stakeholders in the university is arguably the best way to curb the social pressures that lead to the masking of neurodivergent traits. Crucially, the stakeholders referred to are *all* members of the university community because a truly neurodiversity-friendly university requires the positive contribution of all who belong to it. In this regard, Doyle et al. (2024) found in their study in an Irish university that students with ASD and ADHD said that one of the most effective ways to make them feel included would be an "improved awareness and comprehensive understanding within the university community to reduce stigma." (p. 6). In essence, a university community that is educated about ASD and ADHD is the most effective path towards eradicating the pressure on students to mask their naturally occurring traits. DUs therefore have to involve the entire university community as much as possible in ensuring the inclusion and full participation of students with ASD and ADHD.

The community approach referred to above aligns well with the community definition of inclusive education that this study endorses, which seeks to develop educational institutions into inclusive communities where everyone holds tolerant views of others and all stakeholders participate equally

(Göransson & Nilholm, 2014a). In basic education, this is actuated through a whole-school reform approach in which all stakeholders including teachers, support staff, learners and parents are involved in ensuring inclusive attitudes in the school community (Causton-Theoharis et al., 2011, p. 33; Kenny et al., 2023). This is therefore a system-wide approach to inclusive education, likewise a university should employ system-wide strategies of transformation. Guided by this community approach, Causton-Theoharis et al. (2011) argue that in an inclusive educational institution, every student should be appreciated as a unique and integral part of the academic community, and that their uniqueness and diversity should be embraced as strengths and not deficits. In some cases, due to the negativity that surrounded students with ADHD and ASD for most of their lives, they may not be aware of some strengths that they have that are linked to their conditions. As part of the whole-school community approach, other professionals with psychosocial expertise can help students discover their strengths, which can boost their self-esteem and lead them to thrive academically as a result of a reduced emotional load from masking. This requires inter-departmental collaboration, and some of the DU staff emphasised the role played by different professionals in this regard:

> *"At our office we do not provide counselling, but we refer students to the relevant office for counselling." (PU1 staff 1)*

By referring students with ADHD and ASD to other specialised professionals, the DU can get insight on some of the strengths of individual students from psychologists and other professionals and build on those strengths in supporting students. In some cases the support given to students proves insufficient because it is not ideal for the particular student, so more attention needs to be paid to the needs of individuals in giving accommodations for their impairments, particularly their strengths (Borsotti et al., 2024). Further, the change of attitude follows from the recognition of neurodivergent traits, which is where the cultural model perspective of 'celebrating difference' comes in (Waldschmidt, 2017). With enough awareness about ASD raised, people around the university can be led to positive views of neurodivergent traits, such as those seen in students with ASD. With the social environment transformed, students with ASD will be motivated to be themselves and not have to hide their identity, and then their participation in different areas of the university will be more complete. This would lower the high rates of mental health challenges that are seen among people with ASD, particularly in the academic environment where failure to

include them can have lasting consequences on their personal and professional lives (Cassidy et al., 2020).

Though people with ASD mask to cope in environments with high social interaction, the effect of this is not positive, as indicated by the statement below:

> *"Other than the getting overwhelmed in classes that are busy and stuff, it's also exhausting to be masking the whole day because if you walk around for example, with like, in terms of the general just flat face, like you walk around and you don't look happy, then everyone is kind of like "Are you okay? Are you okay?" and that's a lot of social interaction, so you mask, and that's quite exhausting." (PR2 student 1)*

Since masking is a coping mechanism for a problem that is caused by the inability of society (particularly non-autistic people) that leads to more problems, it should not be encouraged, rather there needs to be change in how people around autistic people behave towards them. This is especially needed in educational environments to ensure that inclusive attitudes are instilled, and every student can have the best chance of meaningful participation. In developing inclusive education, universities should transform in response to diverse student populations, rather than forcing students to adapt to prevailing norms in exclusionary environments. I argue therefore, that the fact that students with ASD still mask and camouflage their behaviours is a clear indication that the universities they are in are not inclusive. Moreover, markers of diversity such as living with ASD are supposed to be celebrated, as proposed by inclusive approaches such as the cultural model and the neurodiversity paradigm. According to the cultural model, a student with ASD should be confident to be themselves around neurotypical people and those neurotypical individuals should likewise, see the neurodivergent traits in a positive light (Waldschmidt, 2018). That way, there will be no need for masking and the students with ASD can be spared the emotional turmoil that comes with masking. Likewise, the neurodiversity movement's assertion that ASD is just another manifestation of the multifaceted human neurotype is useful in instilling positive attitudes about neurodivergence.

6.3.2 Academic struggles and the role of lecturers

Due to their condition, students with ADHD are significantly affected by inattention, which presents a challenge in that attention is a vital skill that is needed during lectures, study sessions and other academic engagements (Roshani et al., 2020). In explaining how inattention causes

difficulties in the university environment, a student referred to the need to focus during lectures where large volumes of knowledge may be taught in a short space of time:

> *"Me having a bad memory and concentration means I cannot grasp concepts during a lecture, I have to go back home, I need to sit with the content by myself and actually do research on everything before I understand… It takes me longer to process things." (PU3 student 1)*

The student is therefore faced with a challenge that is likely not common among other students because being inattentive due to ADHD, she grasps concepts relatively slower than neurotypical students. This is consistent with research which holds that students with ADHD experience increased academic pressure in higher education because of cumbersome study material they must cover in a short space of time (Doyle et al., 2024). According to Hinshaw (2018), inattention negatively impacts the academic outcomes of students with ADHD, therefore accommodations are needed to minimise the effects of taking longer to grasp concepts and struggling with maintaining attention. It is important to note that students with such challenges are not incapable of learning the same content as neurotypical students, but they may do so at a slower pace, and that is where the need for accommodation arises. Therefore, in making accommodations, time should be the main focus as it is the factor that makes the difference in how they learn, thus concessions for students with ADHD tend to mainly involve allowing them extra time to do their tasks (Roshani et al., 2020). Another student with ADHD, likewise, explained the challenges relating to time management within the high-pressure university environment:

> *"I can struggle with the thing of going into executive dysfunction because I'm just so stressed and then that adds more work and it's just a whole cycle of like "you're behind now so I need to do more work… I need, maybe I need an extension or a due date or something like that because I've had really bad executive dysfunction.*" *(PR2 student 1)*

Executive dysfunction involves lack of proficiency in some skills that are vital for success in academic work such as planning and time-management (Friedman & Sterling, 2019). This can directly affect students' learning outcomes, so support is warranted, for example, students with ASD can experience lapses in memory, which is an essential academic skill (Stark & Lindo, 2023). Executive dysfunction also means that students with ASD experience difficulty in doing things that come easily to neurotypical students, as the statement below shows:

"It's just the getting to and from classes, the engaging in classes is difficult. And then when it comes to studying, that's the autism side of things. I struggle on campus, at campus life, people and even working" (PR3 student 2)

Having noted some of the difficulties facing students with ASD and ADHD regarding their academics, it is necessary to discuss the role that lecturers play, and what they can do to contribute to the improvement of students' academic performance. Though the responsibility to provide support services rests predominantly on DU staff members, lecturers and other faculty staff also have key roles to play in the education of students with ADHD and ASD. To reiterate, the community definition of inclusive education requires all stakeholders to ensure that every student participates meaningfully in the educational space (Göransson & Nilholm, 2014). The main objective of university education is academic achievement, therefore lecturers are key stakeholders with a vital part to play in facilitating the participation of all students, including those with ASD and ADHD (Molina et al., 2016). It is therefore crucial that they conduct their academic activities in an inclusive manner. For this to be possible, lecturers should have positive attitudes towards the inclusion of students with ASD, ADHD and other forms of neurodiversity. Moreover, research shows that the attitudes of educational staff about inclusion are a key determinant of the possibilities for exclusion or inclusion to be prevalent (Donohue & Bornman, 2015; Park et al., 2010; Swart et al., 2002). This was highlighted as one of the major influences on students' experiences of university life, specifically with regards to their academic progress. A few students expressed concern over the lack of willingness of lecturers to accommodate their conditions. For instance, one student compared the willingness of the DU staff to provide support with that of lecturers:

"People in the Disability Unit try to make it very inclusive for neurodivergent folks, but I don't think it's quite there yet. Like, some lecturers are there, some just do not care. They're like, they see you start an email with 'hi, I would like to discuss the option of doing this differently', basically, and they're just like 'No, we don't do that, and … You didn't actually listen to what I was saying." (PR2 student 1)

The willingness shown by DU staff members to accommodate students is a good indicator of inclusive attitude. In contrast, lecturers who aren't willing to listen to students' suggestions on accommodating them create a barrier to inclusion. Moreover, being opposed in this manner can

discourage students from asking for concessions going forward. With such reluctance, students are not given the freedom to play an active role in seeking assistance and accommodations (Messiou, 2017; Ramaahlo et al., 2018). Thus, lecturers should be more open to suggestions so that students can feel free to explain their difficulties, and work with relevant stakeholders to devise the best accommodations for individual students (Roberts & Simpson, 2016). DUs serve as middle entities to ensure that students' needs reach lecturers and are acted upon, when this happens, students' needs are more likely to be met:

> *"They [the DU] communicate with my lecturers that I am registered with them and need to write my tests or exams at their venue to meet my needs. They also assist me when I need any additional help and when my lecturers need any communication regarding that." (PU2 student 2)*

Though this student had a positive experience with having their needs communicated between lecturers and the DU, another student from the same institution had different sentiments, which suggest that there are instances where there is a lack of consistency in communication:

> *"The Office of Students with Disabilities at [PU2] is supportive as far as possible. However, seeing as I attend classes on a separate campus and my needs are only communicated by email, sometimes the adaptations aren't applied within the classroom, or my lecturers are not knowledgeable of my condition and adaptations due to them not checking their email." (PU2 student 1)*

The benefit of keeping regular communication between students and lecturers was also highlighted by one staff member from a different Public Research University, explaining how their unit facilitates student-lecturer interactions such as in cases where students feel like they are not treated fairly:

> *"Students, lecturers and the unit. So, we work as much as possible with lecturers and it also depends on the extent of the disability and what involvement needs to be had. If there's a complaint from student about a lecturer that they feel stigmatised, obviously then we haveto intervene with the lecturer. But in many cases, we will try and encourage the student to take responsibility to go to the lecturer, and if we find that it's difficult… then we call a meeting together to try and assist the students." (PR1 Staff 1)*

By facilitating interactions between students and lecturers, the DU staff can keep both parties engaged as active participants in shaping their teaching and learning experiences respectively. While it is important in developing inclusive education to give students more autonomy, this should not be done in ways that alienate lecturers. The DU therefore must involve lecturers and seek their insights into what kinds of strategies can be implemented to support students (Molina et al., 2016). The student below, from the same university, further corroborated the assertions that there is continual engagement and collaboration with the DU staff and lecturers, which shows that the university has a working support network:

> *"I have not interacted much with lecturers, administrators and support staff often, but on the occasions I have, I found that they were generally open to communication but also understood that I was expected to help myself where I could." (PR1 student 2)*

Apart from the positive interaction with lecturers and support staff, the student also mentions that they were encouraged to also be independent as much as possible. This aligns well with inclusive education as it seeks to make students independent thinkers, so an inclusive educational environment is one which encourages participation of all students (Kuder et al., 2023). This shows that the DU in this particular university does relatively well to implement inclusive, student-centred approaches in supporting students with ASD and ADHD. This should, crucially, be done with the students' best interests central as their educational success is the main priority, with lecturers acting as facilitators who give them an equal chance of academic success as other students (Ngubane-Mokiwa & Khoza, 2016; Walker, 2016). Though students' needs should be prioritised, there should still be procedures to follow to ensure that the supports and concessions ask for are justifiable. This is to avoid students getting concessions they do not need just because they see others getting them, which necessitates the establishment of DUs in universities as the bodies that prescribe the procedures for students to obtain support for various conditions (Mbuvha, 2019). In line with reasonable accommodation standards, students should get accommodations because they need them and not merely because other students are getting concessions. Indeed, students can feel entitled to concessions without any diagnosis proving the need thereof when for instance they see students with ADHD getting accommodated on assessments, such as in the case below:

> *"I specifically remember as I was writing a test, I had my extra time and everyone else had to leave and people were making noise as they were leaving. The lecturer had to*

tell them to be quiet, a student is writing, you know, and another student came to the lecturer and said "You know, I also write slow. Is it possible for me to get extra time?" You know, and the lecturer was like 'no', you have to go to the Disability Unit for that." (PU3 student 1)

The lecturer here demonstrated understanding of the procedure for seeking concessions, which should be done through the DU. It may be possible that the student asking for extra time genuinely wrote slow as a result of a condition like ADHD, but there should be proof of this through presenting the diagnosis to the DU or seeking a professional evaluation. If the student was granted extra time despite not following protocols, this would be an unreasonable accommodation as other students will have already completed the test. The lecturer's role is therefore proven to be crucial in ensuring that students only receive reasonable accommodations without giving them an unfair advantage over other students (Conradie, 2024). In addition to making accommodations for students, lecturers also play an important role by devising pedagogical approaches that encourage the participation of all students, including neurodivergent individuals. If this is given attention, students with ASD and ADHD can be more included, and more able to learn in the best ways possible according to their unique traits:

"My lecturers continue to influence my academic development. I am able to consult and receive academic advice." (PU1 student 1)

As argued throughout this thesis, DU staff are central to introducing strategies and accommodations for students with any kind of impairment, but with the universities being academic environments, lecturers play an executionary role in ensuring inclusive teaching and learning. However, inclusive teaching and learning is not possible without lecturers maintaining positive and tolerant attitudes towards neurodivergent students. Therefore, part of the process of transforming the university into a conducive environment for neurodivergent students is to educate academic staff on different forms of diversity that are not commonly known (Powell, 2023). This includes issues such as neurodiversity because some lecturers may lack knowledge about ASD and ADHD, which leads to their denial that there are any concessions necessary for students within those categories (Von Below et al., 2024). In this regard, Carrim and Bekker (2022) emphasise the need to ensure that teaching staff are sensitised to the diversity of the student population to be able to address all the students' needs. To ensure the participation of neurodivergent students

particularly, it is important that their condition be seen as a form of difference and not a deficit (Acevedo & Nusbaum, 2020). Lecturers can then allow accommodations and concessions with positive attitudes but in ways that do not disadvantage other students. With that said, it is also vital to point out that the refusal to allow students accommodations and concessions leaves them at a disadvantage. This was explained by a student with ADHD who gave some insight on why living with ADHD means they learn differently and therefore need concessions to learn adequately:

> *"My ADHD also means I am bad at concentrating. So things like tests and practicals are a little bit harder for me than other people because like for example, you'd see people like speed writing and no matter how much I try, I can't do that because it makes my brain wild, like it's not that I don't understand it, it just takes me longer…so I get extra minutes for every hour." (PU3 student 1)*

This is a positive case in which the need has been responded to well by the academic staff through giving concessions according to the student's unique needs. If the student was not allowed extra time on tasks, she would end up being unable to complete them. That would then mean she has a lower chance of succeeding, not because of a lack of understanding of the content but due to her way of learning not being accommodated. Being able to reach academic standards is the main measure of students' proficiency in their studies, therefore being unable to complete tasks based on reasons beyond the student's control counts as an unfair disadvantage (Messiou, 2017). Inclusive education seeks to avoid such issues through the equalisation of opportunities to learn by ensuring that all students get a fair chance to reach their potential. Crucially, inclusion does not mean treating all students in the same way but treating them according to different needs; equalising opportunities implies ensuring that all students have a chance to learn in different ways, according to their abilities (Veidemane et al., 2021). Therefore, in the case of the student with ADHD above, getting extra writing minutes is meant to give her a chance of finishing the examination or test as a student without ADHD whose attention span allows them to finish in the allocated time. Treating all students in the same way would be allowing them the same amount of time to write, which would, as stated, be marginalising the student that takes longer to process information.

The example above shows the positive impact of lecturers being willing to meet accommodate the needs of neurodivergent students by giving concessions, however, some students have dissimilar

experiences. In cases where lecturers refuse to give concessions, students are disadvantaged and this lower their chances of doing well in their assessments. The student below explains that it seems that giving concessions is optional to some lecturers, and those who are not willing to be inclusive leave students at a disadvantage:

> *"They don't understand when you need concessions and why you need them and they're like 'Oh no! We could just do this instead' and I'm like no, this is what I need, I need maybe an extension or a due date or something like that, but sometimes it's a little bit iffy and they're always like 'I don't like, I don't do this with students, and I don't do this with students." (PR2 student 1)*

This recollection by the student reveals a major problem, which is that some lecturers teach based on their preferences, and not on students' needs. This is contrary to inclusive education, which encourages pedagogical approaches that are student-centred, meaning that the teaching approaches should be adapted to the student's needs, and not the student to the system of teaching and learning preferred by lecturers (Florian, 2015). This can be demonstrated in the approaches taken by lecturers towards students with unique needs, such as those with ASD and ADHD, and the appropriate approach is to prioritise the student's needs (Ward & Webster, 2018). In this regard, Anastasiou and Bantekas (2023) argue that the primary basis for providing accommodations for students' special needs is the fact that they have a right to equal educational opportunity. In the South African context, the Constitution cements this right, stating that "everyone has the right to further education, which the state, through reasonable measures, must make progressively available and accessible" (Government of South Africa, 1996, p. 12). The rights of students therefore, take pre-eminence over lecturers' preferences (Shaw, 2021), thus it is exclusionary for the student above to have been told by lecturers that they do not give concessions. Despite the constitutional imperative to ensure that students' needs are accommodated in higher education, inclusion of students with ASD and ADHD is still treated as an optional consideration by many lectures:

> *"This semester I've had a lot of challenges and have needed extensions, and some lecturers are nice about it, while another refuses to even respond to my request." (PR3 student 1)*

It is unjust for students to be ignored by lecturers as they may attain poor academic outcomes as a result of the lack of accommodations given by lecturers. Similarly, Mutanga (2018) argues that students are negatively affected when lecturers are not willing to use inclusive approaches to accommodate different needs in the student population. Besides being unwilling to give concessions such as extra writing time or extending submission dates, lecturers can exclude students by using teaching approaches which are not inclusive:

> *"Some lecturers just don't teach the way that neurodivergent people learn." (PU2 student 1)*

Teaching in any context should be done with cognisance of the fact that students have different learning preferences. This means that teachers should use different methods to appeal to different learning preferences within the class (Ahmed et al., 2013). Likewise, in the university context, lecturers should be more attentive to the different ways that students learn, and device content delivery methods that serve diverse student needs. This can be done by avoiding excessive usage of typical depository methods of teaching where students just receive the lecturer's ideas without contributing much to the discourse (Freire, 1970). Moreover, learning preferences are actually strength areas of different students, for instance the majority of people with ASD are visual learners, meaning that they learn best by visualising things rather than reading text (Tissot & Evans, 2003). Others on the ASD spectrum may understand better by hearing concepts as opposed to reading them as text. Based on these traits, lecturers should provide different forms of delivery of content according to students' strengths. Therefore, the fact that some lecturers do not teach in ways that neurodivergent students can best learn counts as exclusion of those students, regardless of whether they are familiar with their neurodivergent traits:

> *"Even though a lot of lecturers understand that my needs differ from my peers, especially when writing a test or working in groups, many still judge me based on my disabilities." (PU 2 student 2)*

Judging students based on disabilities is influenced mainly by the medical model of disability, which marginalises people who are different and seeks to 'normalise' their behaviour to match what is perceived to be the acceptable standard (Haegele & Hodge, 2016). In contrast, the cultural model encourages students to be recognised for their strengths (Twardowski, 2022). It argues that pedagogical approaches should affirm diversity by building on the strengths of individual students

(Waldschmidt, 2018). It is however, to be expected that some lecturers may be resistant to strength-based teaching approaches and accommodations due to the lack of knowledge of neurodiversity as a form of diversity and strength (Austin & Pisano, 2017; Doyle et al., 2024). To begin the transformation towards more inclusive teaching and learning, a change of attitude from lecturers to see inclusive approaches positively is needed (Molina et al., 2016). This, of course, can be done with the involvement of the DU as centres of influence that share information about conditions such as ADHD and ASD and the unique capabilities of students with these conditions. The transformation towards more neurodiversity-friendly approaches does not always need sophisticated strategies but the simple implementation of strategies that respond to the students' needs. These can be fairly simple steps as demonstrated by the student below who was assisted by DU staff to get the course material in a format appropriate to their needs:

> *"I did get help from the, one of the employees in the unit with regards to getting some learning material, which is a reading and writing software which is basically a text to speech thing where it reads my class notes to me since I have, I have trouble reading the course packs by myself because reading books without pictures for me, it's kind of difficult because I kind of lose focus on reading." (PR1 student 1)*

Though the student says that the conversion of notes into speech was done because of not being able to read text very well, the support is not responding to a weakness but building on a strength. The student's way of expressing the matter shows the internalisation of an understanding of his abilities as deficient. However, according to the neurodiversity movement, the student just learns differently to how most learners do, meaning that they are different and not deficient (Cheng et al., 2023). Thus, students with ASD should also be re-educated to embrace their neurodivergent traits as strengths, the result in the case of this student would be for the student to simply state that his strength is to learn visually and audibly, rather than saying he is unable to focus on written text. The language that people use in references to neurodivergent traits is a reliable indicator of the views they have embraced, and this includes neurodivergent people themselves (Kapp et al., 2013). Likewise, the cultural model motivates for changing the negative views of difference, which are constructed by culture (Conyers, 2003). The cultural model therefore, aims to "change cultural beliefs" that marginalise those who are different (Zaks, 2023, p. 9). Furthermore, South African universities have a diverse student population, which means that students also have diverse

backgrounds (Essop, 2020; Reygan & Steyn, 2017). The challenges students face also reflect this diversity, and lecturers need to be more aware that students' challenges are multifaceted and varied. To respond to increasing diversity, lecturers should develop more intersectional ways of teaching, in simple terms, a diverse student population necessitates inclusive, intersectional pedagogies (Walton, 2021). It is, therefore, crucial that lecturers understand the variety of challenges students face and apply different ways of teaching to meet the diverse needs of students.

Another hindrance to inclusive higher education is that students can also be reluctant to ask for assistance from lecturers, this was found to be more common among students with ASD. For instance, the statements below show similarity in the reluctance to ask for accommodations to be made, despite knowing that they have unique needs:

> *"If I ever needed to ask a lecturer for help, a part of me like… it would take a lot of nerve that I'll ever have to go ask for help even though I know they are there to assist me." (PR1 student 1)*

This hesitancy likely stems from difficulty in initiating conversations, which is a common feature among students with ASD (Bakare et al., 2022). However, the ways in which lecturers act in their interactions with students with ASD and ADHD can further contribute to students' reluctance to ask them for assistance. This is because some people, for instance those with ADHD, have a fear of being opposed or rejected, hence they avoid initiating social interaction or asking for assistance. The impact of this phenomenon was explained in detail from the student below in recounting an experience with a lecturer:

> *"A lot of people's teaching styles doesn't really work well for inclusivity and in terms of rejection, for example with rejection-sensitive dysphoria with ADHD, where basically you have extreme responses to negative feedback almost. So, like I had a lecturer who, she didn't snap at me … I asked her something I'd done silly with coding, and she was like "arg, no why would you do that? Like, why didn't you just ask someone?" She kind of like really seemed a bit irritated and panicked and I couldn't really… because I had this feeling like, oh my gosh she's mad at me and I'm so embarrassed, I'm stupid and all these things." (PR2 student 1)*

Rejection-sensitive dysphoria, also known as rejection sensitivity disorder, is a tendency to react emotionally to situations in which an individual gets an "imagined perception of being rejected" (Dodson et al., 2024, p. 24). The response can be a sudden change in the mood of the person affected, and this propensity is quite common in people with ADHD (Bedrossian, 2021). Due to the high level of sensitivity that they have to feelings of rejection, care should be taken when communicating disapproval or disagreement with students with ADHD. Notably, as in the case of the student above, the feeling of rejection is usually felt only by the person with ADHD and others may not be aware that the way they communicated would come across that way (de Boer & Pijl, 2016). Though the action triggering rejection-sensitivity disorder may be brief, the effects on the person with ADHD can be felt over an extended period as they may remain with feelings of self-blame and stress long after the perceived rejection (Ginapp et al., 2023). This phenomenon is a classic example of why it is crucial for those interacting with neurodivergent students to be knowledgeable about their conditions and be aware of the appropriate ways to act around them. Lecturers interact with students on a daily basis and therefore, should be aware of the sensitivities that may affect students' ability to focus and feel comfortable in the academic environment. Fortunately, this case the lecturer was aware of the impact her response had on the student, and was more careful in communicating with the student:

> *"Later we cleared it up and she was like, she apologised and all that, but a lot of lecturers don't take the time to consider their words I guess, and their actions and how it might affect a neurodivergent student over a neurotypical student." (PR2 student 1)*

The lecturer here demonstrated a positive attitude and was open to rectifying the mistake. More lecturers should be encouraged to be open to learning about their students and to try and understand their concerns, rather than taking them lightly. In essence, the attitudes of lecturers can be potentially constructive or detrimental, and concerted efforts should be made to ensure the former.

6.4 Access to the built environment (Theme 3)

The following statement by a student with both ASD and ADHD properly summarises the discussion in this section focusing on the built environment:

> *"The institution of academia and universities are not built with disabled people in mind." (PR3 student 1)*

There are several possible reasons for this conclusion. Certainly, a large body of research suggests that universities are elitist institutions that do not serve the needs of minority groups (Brezis, 2018; Chudnoff, 2018; Rambe & Moeti, 2017). While the student refers to disability, which I have argued is not an accurate description for forms of neurodiversity, such as ASD and ADHD, the statement holds true for neurodiversity as shown throughout this section. The infrastructure in a learning institution has significant implications for the ability of the institution to cater for students presenting unique traits such as those with ASD and ADHD and other unique needs. For instance, wheelchair-friendly buildings and walkways are needed to ensure efficient movement of handicapped students and brail printed lifts can aid visually impaired students to make their way to different places on campus (Dewi & Dalimunthe, 2019). Likewise, students with ASD and ADHD require the built environment to be designed according to their needs if they are to function well in the university. Much of the infrastructure of South African universities was built during the apartheid era, long before neurodiversity was a widely-known phenomenon, therefore no considerations were made in design and construction to accommodate students with ASD, ADHD and other neurodevelopmental disorders (Chiwandire, 2019). In the post-apartheid era, most universities still bear the relics of the past, and many scholars have called for changes in the built university environments to reflect a free South Africa where all races and cultures are represented (Shai & Legodi, 2019). Though some research has also been done to advocate for the development of inclusive infrastructure, most of these studies rarely focus on neurodivergent individuals as one of the groups needing infrastructural accommodations (Dalton et al., 2019). Thus, the progress in developing neurodiversity-friendly facilities in South African universities is slow and arguably not in motion at all. Some of the students in the study shared their experiences on campus and highlighted that the buildings and facilities around campus are major contributors to their difficulties in the universities.

6.4.1 ASD and the built environment

In recounting the experiences and opinions of students referring to the built environment, I begin with students with ASD and apply literature to validate the need for the kinds of facilities that they indicated would help them to better cope with the challenges they faced. This is an important aspect for including students with ASD according to Tola et al. (2021), who state that "it is essential to investigate how the built environment impacts people with ASD and how it can be redesigned and re-organised to promote their autonomy and to enhance their quality of life" (p. 2).

In relation to the built environment, students with ASD mostly felt that they need safe spaces on campus with low sensory triggers as a mitigation for sensory overload, which they find to be overwhelming on university campuses. For instance, one of the students emphasised the need for safe spaces, also giving an idea of what such spaces should look like:

> *"There are some things that the Disability Unit for example maybe doesn't do… I don't know if they are trying to do this but like for example, we've asked for places to have like sensory breaks and things like that because when you're on campus, it's a lot and you're kind of just told "go find a room somewhere."" (PR2 student 1)*

Sensory breaks form an integral part of the daily routine of most people with ASD because interacting with large numbers of people can be overwhelming to them. Though being in a quiet room can help calm down a person with ASD from sensory overload, this is not guaranteed because a room being quiet does not mean disturbances are impossible (Boyer & El-Chidiac, 2023). In addition, if the room is just a quiet space but not designated specifically as a safe space for students experiencing sensory overload to go into, nothing alerts neurotypical students who might not understand sensory overload to not disturb the sensory breaks of the students with ASD. Moreover, Black et al. (2022) state that quietness is not the only characteristic that makes an environment conducive for students with ASD, adding that lights and colours can also lead to sensory overload and must therefore be considered when designating safe spaces. It, therefore, doesn't suffice to recommend that students find quiet spaces for themselves but rather quiet spaces for students who are sensitive to sensory overload should be readily available and appropriately designated as such. A similar need for quiet and safe spaces was expressed by another student**:**

> *"I believe that quiet rooms can be imperative in maintaining good mental and physical health of ASD students. Having a quiet, dark, and clean space clear of unnecessary sensory input is very beneficial within the sensory chaos of a university." (PU2 student 1)*

'Sensory chaos' may take several forms besides large crowds and rigorous movement of students around campus, but also in terms of visual stimulation. Here, Rasch (2022) asserts that students with ASD may be sensitive to several kinds of lights that they may find distracting. For instance, the student above had indicated in an earlier question on the questionnaire that the lighting on

campus can also be too intense for her; the student attends lectures at a medical school where there are specialised lights with high intensity:

> *"I attend classes on a separate campus (*B *Medical Campus [first part of the name abbreviated to maintain anonymity] … BMC is also situated in an area with lots of sensory input (noise, shouting , smells etc) and the structure of the building is very clinical with many bright LED lights and vents emitting noise which can be overwhelming and cause burnout quickly throughout the academic day. There is not a designated area for me to go to when I become severely overwhelmed or experience shutdown from sensory overload and this has unfortunately led to meltdowns within the classroom." (PU2 student 1)*

Due to lack of accommodations on such issues as lighting and noise, students with ASD can have negative experiences and face challenges in concentrating in lectures. Thus, Brandsen et al. (2024) assert that one of the biggest constraints to students with ASD in the higher education space is "universities that do not consider sensory processing differences such as discomfort with bright lights or background noise" (p. 2). Likewise, Black et al. (2022) add that because people with ASD commonly experience high levels of sensitivity to bright and intensive lights, this should be taken into account in the design and construction of buildings in universities. Issues such as sensitivity to lighting further prove that the challenges experienced by students with ASD extend beyond social interaction, though they are mainly associated with it (Schulze et al., 2020). Support efforts, therefore, must respond to both the social aspects and the built environment. Social accommodations, as discussed at length throughout this thesis with support of literature, mainly have to do with replacing deficit-focused negative attitudes about ASD and other neurodiversity conditions (Powell, 2023; Schuck et al., 2024). On the other hand, accommodations that respond to sensory challenges that are not based on social interaction require changes to the physical university environment. When students have safe and calm spaces on campus, their experiences and academic outcomes can change for the better:

> *"Having access to the DRU study centre provides a safe, spacious and reliable space to do my work, which I believe does help with my academic performance" (PR1 student 2)*

According to Tavassoli et al. (2024)one of the modifications to the physical environment that can address the challenges to students with ASD is to introduce signage and other visual aids. This

would respond to, and complement the propensity of students with ASD towards "inflexible adherence to routines" and "ritualised patterns of verbal and non-verbal behaviour" (American Psychiatric Association, 2013, p. 50). These are modifications that do not require much in terms of financial commitment due to large-scale changes, as they only entail labelling already existing facilities. It is however, also important to make more significant changes to the built environment, especially in planning and designing the construction of new buildings on university campuses. In this regard, Tola et al. (2021) assert that construction initiatives in universities should incorporate consideration of suitable quiet spaces with reduced sensory input. Though these are necessary steps, the likelihood of them being implemented in the South African higher education context are slim, given that inclusive education has so far not been prioritised in the higher education system at large (Mutanga, 2018; Ntombela, 2022).

6.4.2 ADHD and the built environment

Similar to students with ASD, students with ADHD experience sensory overload and therefore sometimes need to be in environments with controlled sensory input (Doyle et al., 2024). Due to the association between ADHD and inattention, students with ADHD have difficulties in avoiding distractions, a phenomenon whose medical term is "deficient sensory inhibition" (Schulze et al., 2020, p. 2). To mitigate this difficulty, students with disabilities need sensory breaks or to have access to facilities that are conducive for them, with minimal noise and other sensations. It is therefore, necessary for universities to ensure that infrastructural changes happen to cater for students with ADHD. The statement below from a DU staff member suggests that there should be assessments of the available infrastructure in relation to the students enrolled at the university and the needs they may have:

> *"If we're saying we want students with disabilities at [CU1], which we do, then from the beginning, the Disability Unit is working together with student enrolment, working together with marketing, working together with faculties as well to ensure we are able to source students to begin with… To look at, okay, this is the condition the student is dealing with, and this is how we can support the students. So, for instance, if we are saying, for a person with ADHD, we need to have a separate [examination] venue because they are struggling with inattention, do we have separate venues, for instance?" (CU1 staff 1)*

This comment suggests a more proactive approach for addressing the special needs of students, with high levels of preparedness to meet different needs that students may have. It is therefore, commendable that as early as the application and enrolment phases, the DU already has an idea of the kinds of impairments there may be in the student population. This is an important consideration because inclusion should be approached realistically, in that institutions should not just enrol students to maintain a diverse student population. Universities must also develop the capacity to cater for the diversity of the needs of the student population they accept. This avoids unreflective integration, which entails placing students with disabilities in mainstream educational environments without actively ensuring that they participate meaningfully in the academic environment (Nilholm & Göransson, 2017). Certainly, accepting students with ASD and ADHD gives a university a favourable profile as a diverse environment, but if the capacity to respond to diverse needs is lacking, the students will end up being excluded in a seemingly inclusive environment. This is evident in the grievances of students about the lack of conducive places on campuses where they can study or recover from overstimulation, which is an issue faced by most people with ADHD and ASD in highly populated spaces such as universities (Flaherty, 2022; Schulze et al., 2020). One of the student participants with ADHD attested to the need for a controlled study space, stating that the university generally doesn't accommodate this need:

> *"It is hard for me in classes as I have both Autism and ADHD. Going to classes is dreadful." (PR2 student 2)*

Due to overstimulation, the student can easily get distracted or overwhelmed while trying to concentrate, therefore there should be more cognisance of lowering sensory overload in structuring the university environment (Doyle et al., 2024). Moreover, the preferred study environment for the student is their home, but this is not possible given that most universities in South Africa have returned to contact learning after the end of the COVID-19 pandemic. The student is, therefore, unable to learn in the environment they are comfortable in, as the university is a challenging environment for a person with comorbid ASD and ADHD. The proneness to distraction is also shown by the student below from a different university, who explains that noise can also be distracting. Fortunately, the student indicated that there is a space free of distraction factors on their campus, that is ideal for someone with ADHD:

"On the third floor of our library, we have an accessibility line just for students with disability, which I find so helpful because especially with ADHD, when you have a lot of noise around you get distracted easily with decibel levels at the library because everyone is different." (PU3 student 1)

Similarly, a student with ASD from a different institution expressed appreciation for quiet spaces on campus as being crucial in the face of high sensory overload in the university environment:

"Within the university itself, there are some aspects that are helpful to someone with ASD, such as the presence of libraries in which silence is guaranteed." (PR1 student 2)

In contrast, some students find that the only few places that are quiet enough and have low sensory input are not conducive for studying, therefore they do not help in terms of functioning as study spaces: For example, bathrooms are referred to by the student below as sort of escape rooms where a student with ADHD or ASD can take sensory breaks:

"I've had it, most people know I've had it; when you're on campus, you're halfway through your day, and you're like 'I am going to have a meltdown if I do not get out of this loud place where people are screaming', and the only place you can go to is the bathroom and the bathroom is like, still filled with people being loud and you're sitting in the bathroom. Not exactly ideal." (PR2 student 1)

A student resorting to bathrooms for a sensory break shows that there is a need for improvement in the built environment of the university. The infrastructure of the university should be upgraded according to students' needs and labelled appropriately to minimise disturbances from other students and staff. Furthermore, in making the physical environment more inclusive, the concept of Universal Design (UD) can be implemented. An architectural design philosophy, UD is predicated on the argument that since buildings serve diverse populations of varying abilities, identities and ages, they should be "designed to be usable by everyone" (Howe & Martel, 2024, p. 14). As the experiences of students show however, UD principles have been applied in most South African universities to accommodate the needs of students with physical disabilities, while other identities such as neurodiversity have been neglected. McAllister et al. (2022) argue that this should not be the case, rather, neurodiversity should be considered in designing the built environment just as much as physical impairments are taken into consideration. In conclusion, for

the built environment to be inclusive of students with ASD and ADHD, universities should see the value in making their campuses inclusive. Furthermore, this should be put into practise from the early stages of designing infrastructural projects, thereby taking a proactive approach and not only focusing on re-designing already existing infrastructure.

6.5 Self-efficacy and self-advocacy of students with ASD and ADHD (Theme 4)

Another emerging aspect of students' experiences is their own feelings about the need for accommodations to be made for them. Earlier in the literature review, I explained the reasons why students with ASD and ADHD should receive support and accommodations to improve their participation universities. Central among these was the equalisation of opportunities to succeed, based on the fact that not receiving accommodations for their special needs puts students with ASD and ADHD at a disadvantage (Syharat et al., 2023). While this argument is supported by science and by advocates of inclusive educational practices, the opinions of students with these conditions are of vital significance (Jenson et al., 2011; Van Der Cruijsen & Boyer, 2021). What I mean by this is that self-efficacy, a positive view of self, is an important element for the inclusion of neurodivergent students that only they themselves can contribute. This view is also expressed by Syharat et al. (2023), who argue that students who view their neurodivergent traits positively can actually thrive in their studies because of recognising their strengths. In addition, the neurodiversity movement itself "emerged from the work of autistic self-advocates" (Saxe, 2017, p. 155). This makes the goals of the movement relevant to autistic individuals and other categories of neurodiversity, including ADHD. Likewise, neurodivergent students should be at the centre of neurodiversity advocacy in universities, so that they can address issues that are pertinent to them.

To further express the need for self-efficacy for neurodivergent students and taking a stronger stance on the necessities for them to receive support, I draw on the notion of a psychological phenomenon known as social dominance orientation (SDO), which is "the belief that inequalities favouring some groups over others are justified" (Waisman et al., 2023, p. 358). This is a perception largely fuelled by the stigma of those not belonging to marginalised groups, who support the stratification of society such that minority groups occupy lower levels (LaBelle et al., 2013). Though SDO is mostly understood as an inclination held by people belonging to groups that are higher on the social hierarchy, it can also be internalised by those belonging to the stigmatised group. For instance, a student with ASD expressed a view which showed acceptance

of exclusionary practices or at least a sympathetic view towards his university not being ASD-friendly:

> *"I would say for the most part like no, I wouldn't say it's autism spectrum friendly like not, not to the fault of anyone. I'm just saying like, the whole thing of like doing the reading, the readings and all that for me personally makes it a challenge for me to kind of follow the course. Because you know, like I said, reading is a challenge for me, but that's not really through the fault of anyone so that's what I would say. But I'd also say like, cause in my previous college the teaching method was more suitable for me because I was in a smaller class with like, eight people or so. There was more, the lectures had more flexibility to focus on helping each student but since I'm in a larger class, and all that I understand like that can't really be done here." (PR1 student 1)*

Interestingly, the student reports receiving attention and support in their previous college, which means he has first-hand proof that his needs can be addressed but accepts that the same cannot be done in a large university. The conception of self that the student expressed above can fuel exclusion because not only does the view that support cannot be provided reflect the student's outlook, it can also influence those around the student to not be willing to accommodate him. Here, Thomas (2013) comments that by holding negative conceptions of themselves, marginalised people may unwittingly encourage others to treat them unfairly. To address this, students with ASD and ADHD need to be trained into understanding that it is their right to be supported, that equal opportunities should be available for all students (United Nations, 2006). When students are aware that they are entitled to equality of opportunity, they are more likely to take an active role in ensuring that they get included (Van Der Cruijsen & Boyer, 2021). Unlike the student above another student expressed a strong position that neurodivergent students should be recognised and supported in universities. This student argued that support for students with ASD and ADHD (the student lives with both conditions) is imperative and that they should receive more recognition. The student further argued that neurodivergent people are growing in numbers, and viewing them as an insignificant group is illogical:

> *"Everyone needs to understand because so much, such a large portion, such a large proportion of the population is neurodivergent. It's such a large, such a large proportion that it's just, it's silly that people don't know, and don't understand it and aren't given*

the information. They don't, they don't understand it and not like wilfully, they're not wilfully ignorant, they just don't have the resources or don't know how to access the resources. They should access the resources. So, I guess more awareness on that." (PR2 student 1)

This comment highlights that the student attributes the lack of support to lack of resources, which is a real concern in South African universities (Mbuvha, 2019). There is also a lack of focus and awareness about ASD, ADHD and other related conditions. However, the overarching factor is that the student sees the provision of support for students with ASD and ADHD as an imperative, rather than an optional privilege. With this positive attitude and strong sense of self-advocacy, students can be more likely to voice out their concerns and contribute towards the improvement of the experiences of neurodivergent students on campuses. Crucially, this should be done with neurodivergent students taking central and active roles in advocacy efforts as they are directly affected by the challenges of being discriminated against because of their conditions (Hughes, 2016; Nind, 2014). By being involved in advocating for their rights to inclusion and support, neurodivergent students become active agents in bringing the changes they require, rather than having to adapt to regulations set by individuals who cannot relate to their difficulties (Luthuli & Wood, 2022). However, it is also true that some students may lack the courage to individually stand up for their rights to recognition and support (Dwyer et al., 2023). To counter the difficulty of seeking changes to exclusionary institutional practices alone, much benefit can be drawn from collective action by students with ASD and ADHD and other neurodivergent individuals though participating in societies and advocacy groups consisting of individuals that face similar challenges (Hughes, 2016). To achieve this involvement, students needing support should lead the movements and activism campaigns that seek to improve their experiences, so as to be active agents in their educational emancipation. These organisations also provide safe spaces for students to discuss their difficulties with fellow students that experience similar issues:

"So, there's a big neurodivergent community and there's a [PR2] neurodiverse, neurodivergent neurodiversity society, so with all the students." (PR2 student 1)

Though societies such as these give students a sense of belonging, the advocacy for their rights should not be entirely up to them as they are still students and need to focus on their studies. In this regard, Dwyer et al. (2023) concur that "neurodivergent-led communities provide social

connection, belonging and mutual support for their members" and "can also lead to advocacy and action" (p. 55). However, Dwyer et al. (2023) warn that the responsibility for advocacy should not be placed entirely on neurodivergent students as it might affect their studies, therefore relevant departments on campuses such as DUs must do their part in raising awareness. Likewise, the student above who stated that they are part of a neurodiversity advocacy society also indicated that the society has its benefits but added that the students' primary objective is studying and not advocacy. Therefore, students should not be expected to put their studies aside for activism purposes:

> *"So that's a good community thing. You can get more concrete concessions rather than, like things you need, without having to try and sort them out yourself when you're supposed to be studying or focusing on your degree, you know, because that's what we're here for. We're here to study, and we can't spend our whole time advocating for ourselves as much as, you know, as much as we do. Like, you can't spend your whole university career working to get everything sorted for yourself." (PR2 student 2)*

The response above highlights the need for a balance of focus; yes, students need to be involved in efforts to raise awareness, but the implementation of change is not their responsibility. The management of the universities should provide as conducive an environment as possible for meaningful participation of students, therefore advocacy groups should serve to voice the concerns of students, which can then inform management on what needs to focus on (Hughes, 2016; Kuder et al., 2023). Advocacy is a collective responsibility, which, if done effectively, will lead to positive transformation of universities into neurodiversity-friendly communities. According to Kuder et al. (2023) university management are responsible for transformation of universities into inclusive environments for neurodivergent students, but in applying the changes, the management should draw on the perspectives of neurodivergent students. Similarly, Wilson and Dallman (2024) add that including neurodivergent students in the development and implementation of neurodiversity advocacy initiatives on college campuses is a key aspect of showing respect to them. Furthermore, this can change the common approaches taken to support students with impairments which are usually undertaken by unimpaired individuals where the recipients of the support are not consulted about what their needs are. Gillespie-Lynch et al. (2017) state that while neurotypical people offering support to neurodivergent students may hold good intentions, they

"overlook the perspectives of the people being served and yield supports that lack social validity" (p. 206). In addition, the strengths of neurodivergent students are not nurtured due to negative stereotypes:

> *"People don't realise that there's a lot of benefits in neurodivergence and if you're able to actually help us with the difficult aspects, we can be just as contributing as anyone else, but you don't need to go out of your way to make everything harder." (PR3 student 2)*

This statement shows that the student has a positive self-image and realises that it is the lack of response from the higher education system that is causing them to struggle. The student properly captures the essence of many of the voices of neurodivergent students in universities in South Africa, who simply want support so that they can contribute positively to knowledge production and be recognised.

6.5.1 The importance of maintaining positive self-image in students with ASD and ADHD

Among the objectives of this study is raising awareness about ASD and ADHD in the South African higher education system. The need for awareness is brought about by the fact that there is a lack of information sharing about these conditions in the local context and the little understanding that exists is negative and fuels exclusionary attitudes (Chambers et al., 2017; de Milander et al., 2020). In discussing knowledge and perceptions about ADHD and ASD, it is apparent that the changing attitudes should go beyond neurotypical individuals and include those who are neurodivergent as well. The importance of this consideration is echoed by Schoeman and Voges (2022) who comment that in the context of neurodiversity "self-stigma is the most incapacitating part of stigma" (p. 2). Some of the student participants expressed opinions that showed that they were affected by the negativity that is associated with their condition and had internalised some of the opinions of others about themselves. An example of this below:

> *"In my previous college… the lecturers had more flexibility to focus on helping each student but since I'm in a larger class, and all that I understand it can't really be done here. Ultimately, like the way I see it, probably the minority of people with ASD in my class so I kind of understand, like since the majority don't have ASD…What would be the use in like catering all that energy on like just the minority?" (PR1 student 1)*

The student seems to suggest that the number of students who have a certain need is a determinant to whether they should receive accommodations or not. This is a case of accepting exclusion because the student clearly highlights that in their previous college, lecturers paid attention to his needs, but since he is now in a large university, he takes the lack of such attention to his needs as understandable. This perspective is inconsistent with the goal of inclusive education, which emphasises that the needs of all students should be met in mainstream educational institutions, including higher education institutions (UNESCO, 1994). Moreover, the central reason for why students should receive accommodations for any special needs they may have is not that they form a large enough portion of the student population but because they have a right to education and full participation in the academic environment (Johnstone et al., 2023; United Nations, 2006). International initiatives for inclusive education, especially in the way they found expression in the South African context, were meant to respond to the plight of minority groups that have been previously marginalised in the educational environment in order to get equal opportunities for academic success (Department of Education, 2001; Walton & Engelbrecht, 2022). Moreover, the student attends the university mentioned earlier (PR1), which has a strong emphasis on the rights of students to have their needs met, as demonstrated in their designation as a Disability Rights Unit. It may be possible that if the student had approached the DU regarding classroom accommodations, they could be given. However, due to the student's view that it is understandable for support not to be provided to a minority group, they are reluctant to seek support. The following explanation from a DU staff member from the same university shows that the provision of support is not dependent on the number of students needing support but on the need for equality of opportunity:

> *"We always trying to make sure to bring awareness about that, if you're struggling, come for assistance. Let's see where we can help and where we can refer." (PR1 staff 1)*

The statement implies openness to responding to any student who may be struggling, without giving priority to any group or type of condition. There is also an indication that the DU tries to let students know that they can be contacted to be supported on any needs they have connected to impairment. Given that the student does not see that it is necessary to be supported, due to the low number of students with ADHD compared to the rest of the student population, there is a need to

intensify the messaging assuring students of this commitment from the DU. The need to relay more information to students about the support available in the DU was also evident in another statement made by the same staff member, indicating a realisation that not all students were getting information about the procedures for seeking support. This was in recommending ways to improve the services that the DU can offer students:

> *"I think carrying on with what we're doing, making sure there's awareness with undergrad and postgrad on our services. That's something we improved on this year, because there were some postgrad students that didn't know about the DRU because we focus on all the new students coming in with orientation. So, we made sure that with postgraduate students that we were very present with the orientation." (PR1 staff 1)*

This is an important consideration; firstly, some postgraduate students may be new to the institution, having done their undergraduate studies in different universities, so despite being familiar with university life, they still need to be introduced to the new university environment. Secondly, with age, neurodivergent students develop better understanding of their social environment and gain more self-confidence. Neurodiversity entails differences in cognition, but its intersection with age is an important aspect of the experience of neurodivergent individuals as they develop skills and coping strategies in response to marginalisation (Schulze et al., 2020). The knowledge that comes with age can be shared with younger students, such that peer-support networks are created between younger and more experienced students in the university. These networks need to be established officially within universities, and information about them should be shared to all students that may need support. In this regard, Taneja et al. (2024) assert that "a student-led neurodiversity club could provide a safe and welcoming space for students to connect, share their experiences, advocate for change and build a sense of community" (p. 5). Similarly, in terms of the cultural model, such clubs would act as centres of influence working towards the creation of university communities where neurological difference is embraced. In this regard, Garland-Thomson (2017) states that in countering deficit-oriented disability descriptions that result in isolation of those who are different, a sense of belonging must be instilled in social environments. Therefore, younger students who still struggle with this aspect can be referred to clubs and societies with other neurodivergent students to support each other and share coping

strategies. The staff member below indicates that they do refer students to relevant societies in their universities:

"We refer them to various groups and societies that are available." (PR2 staff 2)

This can help facilitate information exchange and encouragement of fellow students by those who have relevant experience. For instance, the postgraduate student below shared that with age comes more resilience in the face of negativity experienced in the university:

"I'm not as sensitive to some of the social stuff because I'm older and more confident in myself that if somebody has a problem with my diagnosis, that's literally a reflection on them and not me, and not on my diagnosis." (PR3 student 3)

The student's positive self-image can benefit younger neurodivergent student who typically lack self-esteem and are easily affected by negativity towards them (Van Der Cruijsen & Boyer, 2021). With prolonged exposure and encouragement from senior neurodivergent students, younger students with ASD and ADHD can build more resilience and self-confidence, so advocacy groups should be strengthened on campuses. The support network between older and younger neurodivergent students is important because self-esteem and the perception of one's self have been shown to grow more positive as individuals get older (Nguyen et al., 2020). Apart from boosting their self-esteem, support networks formed by neurodiversity societies can also help educate students with ASD and ADHD about their own conditions. This is a key element because the students themselves may need the input of others to fully understand why they think and act the way that they do. Fotheringham et al., (2023) advocate for collaborative engagement between students of different backgrounds, including those exhibiting various neurodivergent characteristics along with their neurotypical peers. Interestingly, they state that collaborative student peer support networks provide:

"benefits of peer support at the level of the individual (i.e., reducing social isolation, increasing academic self-efficacy, self-confidence, and feelings of belonging) and the community level (i.e., community building for neurodivergent students, enhancing the connection with the wider school community)." (Fotheringham et al, 2023, p. 2)

Similarly, the community approach to inclusive education calls for all stakeholders in the educational space to take part in making their school or university a healthy environment

(Krischler et al., 2019). The statements above position the support and advocacy for neurodiversity at both the individual and community levels. While there is generally a focus in the neurodiversity movement on changing negative societal attitudes to positive views that embrace neurodivergent identity, there is comparatively less emphasis on addressing the negative attitudes held by neurodivergent persons themselves (Botha & Gillespie-Lynch, 2022). In addition, Stamp et al. (2014) found that some students with ADHD in university do not fully understand how they are different from their peers, and that this lessens the impact they can have to self-advocate. One of the students with ADHD expressed a similar concern and asserted that awareness should be raised about ADHD in the general university environment, but that it should not be done with an assumption that students with ADHD themselves don't need to be taught about it:

> *"Education, education. When I say education, not just for people without ADHD but also those with. For example, I know that I have ADHD, but do I actually understand how it works? Because there are a lot of things that people will tell you." (PU3 student 1)*

This statement gives a fresh perspective on raising awareness about neurodiversity that positions neurodivergent students as self-advocates. By taking charge of efforts to raise awareness, neurodivergent students can eradicate deficit views that tend to assume that they need help from neurotypical people and take the initiative to elevate their own voices in advocating for their rights. Importantly, the student adds that students with ADHD should have more in-depth knowledge about their condition, as this will help them counter misleading ideas imposed on them. The student adds that being able to explain what ADHD is, from not only an experiential perspective but from a scientific perspective is important, especially in cases where they encounter people who deny the existence of ADHD:

> *"I feel like if I was educated, you have a session where it's like okay, this is what ADHD is, but not just the definition but also how it works because ADHD basically means you lack dopamine. You know, what is dopamine, how does it work, how does it affect your brain? What does having more dopamine do to your brain because if you need to explain to people, you can somewhat convince people that it is real." (PU3 student 1)*

These remarks show that the student has a high level of awareness, but is still open to learn more and also educate others as well. This approach gives students with ADHD more autonomy in pursuing the recognition of their rights because there is more impact when those with relevant

experience are central to efforts to bring awareness to their unique traits and curb the marginalisation towards them (Luthuli & Wood, 2022). The student below from a different university further highlights the importance of educating neurodivergent students about their unique neurodivergent traits. This is evident in the fact that this university regularly organises events where students learn about themselves and are motivated to appreciate themselves more:

> *"The department of CUADS [DU] has been very supportive, from holding workshops helps me understand my condition to providing venues when I am sitting for tests to ensure less factors that hinder my concentration." (PU1 student 1)*

The two statements above by the students stand out from the rest in that they show that some universities are not only prioritising the provision of support services for students with ADHD and ASD, but also seek to inform and educate all stakeholders, which makes for a well-rounded and intersectional approach to making the university neurodiversity-friendly. Through advocacy, the DUs can contribute to instilling positivity about neurodiversity, but by involving and educating neurodivergent individuals, the advocacy becomes more relevant and meaningful to students with ASD and ADHD. Furthermore, Taneja et al. (2024) emphasise the importance of the involvement of neurodivergent student, calling for commitment to "ensuring their voices are heard, and their perspectives are considered in shaping university policies and practices" (p. 4). The involvement of neurodivergent students in decision-making is a major step towards inclusivity, going beyond the common trajectory of limiting meaningful participation to the classroom situation. Rather, including the input of neurodivergent students to the level of shaping policy broadens their influence and enables them to advocate for things that are most important to them.

6.5.2 Addressing the influence of culture

Having discussed the importance of advocacy, it is worth mentioning that the negative attitudes and exclusionary practices in universities are traceable to cultural norms and practices. The findings of this study regarding the ways that students with ASD and ADHD experience university life demonstrates this interplay of identities in the student's experiences, and culture was identified as a major influence on their marginalisation. According to the cultural model, culture plays a key role in the treatment of people with impairments, as some of the attitudes towards difference are rooted in principles and beliefs in different communities (Twardowski, 2022). For as student with ASD and/or ADHD, there can be more difficulties experienced as a result of the intersection of

the natural impairments and belonging to other marginalised populations as posited by the intersectionality theory (Azmitia & Mansfield, 2021). In this regard, Dwyer et al. (2023) state that the interplay of impairments and other marginalised identities can compound the challenges of neurodivergent students. For instance, the student below indicated that in addition to difficulties associated with ADHD, the also face culturally constructed stigma:

> *"I think in general, just the negative stigma, especially amongst the Black and Indian community as well, you know, "all that is white people nonsense"." (PU3 student 1)*

The student's statement is a clear example of the intersection of identities, in this case race, culture and living with ADHD. The student had earlier indicated having mixed Zulu and Indian heritage, meaning that the family cultures and beliefs from both backgrounds contribute to her experience as there are similarities and differences between races in South Africa (Donohue & Bornman, 2015). In this case, both Indian and Zulu backgrounds are not accepting of neurodivergent traits, which means that the student not only face stigma at university, but at home as well. According to the student, the negative attitudes are caused by a lack of knowledge of ADHD and having had little exposure to people with ADHD:

> *"Black people and Indian people are very, I won't say traditional but there are some things that show us they don't believe it, and even with my mom, when I went and got myself diagnosed because I knew that they would never take me seriously. So it was like, my Indian mom will say 'Oh, so you're mentally ill' and laugh about it and all those things, and then my mom was like 'I don't like all of this, I don't understand what you mean'. They don't understand it because they were not part of it, whereas if you were to go to some of the white schools who, for example, this sort of thing is more normalised." (PU student 1)*

The student presents her race and cultural background as some of the factors influencing the negative attitudes towards ADHD in South African society, particularly from parents of students with ADHD. This aligns with Rajcumar and Paruk's (2020) assertion that "parental knowledge of ADHD may be influenced by multiple psycho-socio-cultural factors, including educational level, race culture *and* stigma" (p. 2, emphasis added). These factors are quite varied and should all be addressed in an effort to support students with meaningful participation in the university

environment. Notably, the factors are different axes on which students face marginalisation, therefore efforts towards inclusion should be varied and intersectional (Reygan & Steyn, 2017). Similarly, gender intersects with neurodiversity in the challenges facing students with ASD and ADHD and should be considered as part of advocacy efforts. The student below indicated that her university lacks advocacy and support structures for neurodivergent students but indicated that gender empowerment does exist in the form of advocacy groups:

> *"The closest they have to inclusiveness is the Pride Society, which is brilliant. It's a great society but the disability society doesn't exist or if it does exist it just has not made itself apparent to me." (PR3 student 4)*

This statement shows awareness of the different aspects of identity that need to be highlighted in advocacy movements but does not show much awareness of each of them in an intersectional lens. According to the intersectionality theory, a student can belong to multiple groups affected by oppression, so their empowerment should cover multiple axes of identity in relation to oppression (Azmitia & Mansfield, 2021). For instance, the Pride society referred to above can address students' challenges with homophobia on campus, but some students battling homophobia may also be living with ASD and/or ADHD. Therefore, the advocacy efforts should be intersectional, which can be achieved by establishing various societies, but also ensuring that there is regular collaboration between those societies to address the challenges of students belonging to different groups. In advocating for an intersectional focus on neurodiversity, Botha and Gillespie-Lynch (2022) argue that "the sustainability and utility of the neurodiversity movement is reliant upon engaging deeply with other rights-based movements and communities to ensure that the complexity of human development at the intersections of multiple identities is both acknowledged and celebrated" (p. 94). Similarly, De Beer et al. (2022) suggest that multiple avenues should be used to advance neurodiversity advocacy, and different advocacy groups can find common ground in that the students they advocate for may come from intersecting identities**.** In essence, the key to advancing neurodiversity advocacy is to situate it within other rights-based movements in the university that promote diversity. Rather than being an isolated struggle, the advocacy for students with ASD, ADHD and other neurological differences can strengthen other quests for more inclusive universities. It is, therefore, important that the establishment of neurodiversity advocacy groups and the strengthening of the few that already exist, be done in tandem with other societies

that are similarly working towards inclusivity in the university. The table below summarises the main findings from this chapter.

Table 3: Summary of findings under objective 2: The experiences of students with ASD and ADHD

Theme 1: Comorbidity	
Sub-theme 1: The prevalence of comorbidity	Many of the students in this study have both ASD and ADHD, but there are also other comorbid conditions such as anxiety disorder.
Subtheme 2: The impact of comorbidity	Students with comorbid ASD and ADHD attributed increased challenges to comorbidity. Other conditions such as chronic illness and anxiety further contribute to their struggles. Comorbidity leads to multiple types of challenges and therefore requires an intersectional focus in addressing exclusion and other challenges to students.
Theme 2: Transition from high school to university and introduction to DU	
Subtheme 1: Transition from high school	Moving from high school to university presents both academic and social challenges. Students have to settle into a complex environment without close support from parents and teachers. The university demands more independence and students with ASD particularly struggle more to adjust to the new environment.
Subtheme 2: Introduction to the DU	The ease of access to information about the DU has a significant impact on students' ability to settle into the university. Those who registered early find that their transition into

	the university is more simplified. Some students were diagnosed while already in the university and were able to get support. However, there are issues with the registration processes in some DUs and students are negatively affected by delays and costs of registering.
Theme 3: Academic struggles	
Difficulties due to ASD and ADHD	The social aspects of difficulty associated with ASD and ADHD affect the students academically because the social environment can be overwhelming, leading to anxiety in students with ASD and inattention in those with ADHD.
Role of lecturers	While the DU can recommend concessions for students with ASD and ADHD, lecturers sometimes reject applying the recommendations. There are difficulties with communication as some lecturers do not respond to emails regarding students' concessions and accommodations. Lecturers that take students conditions seriously lessen the burden on students and concessions are granted. There needs to be more communication and collaboration involving students, DUs and lecturers
Theme 4: Inclusion and the built environment	

Sub-theme 1: Lack of consideration for neurodiversity in infrastructural development.	Students with ASD and ADHD indicated that they need quiet spaces with controlled sensory input to lower their stress levels. None of the student participants felt that their university is neurodiversity-friendly environment. Only a few spaces on campus are seen by students as neurodiversity-friendly and these are mostly in the DU.
Subtheme 2: Lack of designation of the current built environment for inclusion of students with ASD and ADHD.	In all the universities involved in this study, no student mentioned any space that was clearly designated to accommodate students with ASD and ADHD. There are many physical modifications and designations on campus infrastructure to accommodate special needs, such as visual and physical impairment, but no such effort has been made to designate neurodiversity-friendly areas and make the necessary renovations to existing infrastructure.
Theme 4: Self-efficacy and self-advocacy of students with ASD and ADHD	The negative attitudes of society and the general university social environment regarding neurodiversity have been internalised by many students, they have a negative self-view of their neurodivergent trait. A few students see their unique traits associated with ASD and ADHD as strengths, but most don't see them positively.
Theme 5: The importance of positive self-perception	Neurodiversity advocacy groups are scarce on campuses so students lack a sense of belonging and do not have organisations with

	fellow neurodivergent individuals with which they can advocate for their rights. There is too much dependence on DUs, and students do not have a sense of responsibility for ensuring that their voices are heard, and their needs met.

Conclusion

This chapter has discussed the experiences of students with ASD and ADHD in universities in South Africa. It has shown that the transition from school to university presents a major challenge for the student and in cases where this transition is not managed well by DUs, students experience negative consequences. While the previous chapter showed that DU personnel encourage students to come forward with their diagnoses and receive support, the student data has shown that registering with the DU can sometimes become a difficult process for students. This is due to the complex administration hurdles and in some cases, expectations for students to further pay for their diagnoses and medical evaluations. This latter issue particularly shows that the experiences of neurodivergent students in South African universities is influenced by their socio-economic backgrounds. It is evident that systems such as these are responsible for the fact that many students with ADHD and ASD may be struggling through their academics, and unable to get support because the services they require to qualify for support have financial requirements that they cannot meet.

In terms of the social environment, the data overwhelmingly shows that the universities in this study are not inclusive. This is mainly because students find that most people in the university, including their peers and lecturers, have negative attitudes towards their neurodivergent traits. This is mainly due to lack of knowledge about neurodiversity, which necessitates the development of information campaigns across universities to educate the general population about neurological diversity, the rights of neurodivergent students, and some of the exclusionary practices that need to be eradicated. Due to negative attitudes, students also indicated that they face academic struggles as a result of the unwillingness of lecturers to modify their teaching and assessment approaches to accommodate students with ASD and ADHD. This may stem from the lack of training of lecturers

about neurodiversity. For this reason, I recommend that further studies should involve lecturers in order to investigate their levels of knowledge about inclusive educational approaches. Further, universities should be more thorough in their inclusive education initiatives. Rather than positioning inclusion as a DU responsibility, they should promote it as a system-wide approach. While the role of the DUs in facilitating the inclusion of students with different impairments, including those with ADHD and ASD remains vital, it should be allowed to take effect within the transformation of the broader university into an inclusive environment for neurodivergent people.

In addition to social inclusion, the data shows that universities are not inclusive in terms of the design and usage of the built environment. There are rarely any suitable spaces for neurodivergent students to learn in conducive conditions for their needs. More quiet spaces and clearly designated facilities are needed on campus and in future infrastructural developments, there should be more consideration of students with ASD and ADHD. In line with the principles of inclusion, this needs to happen through a consultative processes between university management through relevant departments for students and staff with ASD and ADHD to give insight into what infrastructural developments would make the university more inclusive of their needs (Luthuli & Wood, 2022). Moreover, the chapter has shown that there is an urgent need to increase advocacy efforts in universities to deal with self-stigma among neurodivergent students. While the social stigma is mainly responsible for the negative views that many students with ASD and ADHD have of themselves, this can be combatted with empowerment through advocacy groups that can help students see their unique traits in a positive light. There was little indication in the data that these structures exist on campuses, yet many of the students spoke of their neurodivergent traits negatively as difficulties and constraints, rather than strengths. In collaboration with the DU, societies for neurodivergent students should take an active role in promoting positive view of neurodiversity and raise more awareness. In essence, the student experiences show that South African universities require significant change in order to become inclusive institutions for students with ASD and ADHD. The culture of exclusion fuelled by negative attitudes is evident in the universities and more studies like this one need to be conducted to raise awareness about this, followed by practical action to transform universities into inclusive environments.

CHAPTER SEVEN: INTEGRATED DISCUSSION OF FINDINGS AND CONCLUSION

In chapter one, I give the introduction and background to the study, which explained its context, a statement of its objectives and the research questions. The chapter also explains the rationale and a summary of the problems addressed by this study. In chapter two, the relevant literature is discussed, including the conceptualisation of inclusive education adopted in the study (community definition), in connection to the South African context. Within the literature review, the concept of neurodiversity is introduced, including its relevance to the study, as well as a detailed explanation of the characteristics associated with ASD and ADHD. Additionally, the choice of the cultural model as a framework for understanding neurodivergence was justified in the literature review. This is followed by a detailed explanation of the conceptual framework in the third chapter, showing the connection between the cultural model and intersectionality to create an analytical lens for understanding the reasonable accommodation of neurodivergent students. Chapter four then explains the methodological aspects, including the research paradigm, data collection and analysis methods. Chapters five and six provide an in-depth analysis of the data collected from DU staff and students with ASD and ADHD respectively. Based on the findings from the analysis chapters, this last chapter ties all the findings together and reflects on the objectives, to report back on the aspects that were investigated. The original contributions are also identified in this chapter, namely the theoretical, methodological and practical contributions. This is followed by a discussion of the limitations of the study and the recommendations for further research and a conclusion of the chapter and the thesis.

7.1 Restatement of the topic and importance of the study

To reiterate, the focus of the study in terms of its objectives, was to investigate DU strategies for including students with ASD and ADHD in South African universities. Another point of focus is the experiences of students with these forms of neurodiversity in the university environment. Here, I explain the necessity of this investigation, which stems from the lack of research focus on inclusion in higher education, and lack of awareness about ADHD and ASD. In focusing on universities, the study raises awareness of the need to implement inclusive education in a system-wide manner, such that higher education will not be neglected in the efforts to make education in South Africa inclusive. Furthermore, by focusing on ASD and ADHD, which are among the most prevalent forms of neurodivergence worldwide, the study raises awareness of neurodiversity. By documenting the experiences of students with ASD and ADHD, as well as the strategies applied

to support them, this thesis adds a vital, missing perspective to the literature. This is because ASD, ADHD and neurodiversity research in general is mostly of Western origin, and there is a lack of Global South studies with this kind of focus (Matshabane & Seedat, 2024). Through addressing ASD and ADHD, which are under-researched in the sub-Saharan African context, the study brings new original knowledge regarding neurodiversity from this context. Additionally, it gives students with ASD and ADHD a voice. Thus, the contribution of this research is not just raising awareness about inclusivity and neurodiversity, but it does so from the perspective of those with first-hand insight: students with ASD and ADHD, and DU personnel who have experience in supporting them. It therefore provides meaningful insights on ASD and ADHD that are relevant in the South African context. This relevance is ensured by the application of the cultural model, which focuses on local contexts, and addresses exclusion through understanding and changing negative attitudes.

7.2 Research gap and objectives

To recap, the main objective of this study was to investigate the strategies that Disability Units in selected South African public universities use to cater for the needs of students with ASD and ADHD to ensure their full participation. This addresses the identified research gap, which is the lack of research on inclusive education in South African higher education, specifically pertaining to ASD and ADHD. The other main objective was to investigate the experiences of students with ASD and ADHD, thus raising awareness about their neurodivergent traits. Importantly, an intersectional approach is taken to provide an in-depth analysis of the experiences of neurodivergence in terms of ASD and ADHD, and the challenges they face. The adoption of an intersectional framework is necessitated by the multifaceted nature of neurodiversity, which consists of several different traits and inclinations (Van Der Cruijsen & Boyer, 2021). In addition to intersectionality, the cultural model provides a lens through which the influence of cultural practices and customs in the South African context are studied to determine the underlying causes of exclusionary attitudes and practices towards students with ASD and ADHD. By highlighting culture, the study presents a relevant and fresh perspective to neurodiversity from a sub-Saharan African context, thereby addressing the gap in literature from this region concerning neurodiversity.

7.3 Original contribution of the study

The original contribution of this study consists of the following: firstly, it provides insights into the issue of inclusive education in South African universities, which is largely unexplored, and secondly it also reveals the efforts of DU staff to ensure support for students with ASD and ADHD. The findings reveal the important progress being made towards ensuring that there is more recognition of students with ASD and ADHD, as part of the growing diversity of the student population. Furthermore, the study provides a uniquely South African, Global South perspective into the lives of neurodivergent individuals. This is a key contribution because these lived experiences can be drawn upon to develop a meaningful and contextualised understanding of ASD and ADHD. Context here refers to the fact that the intersection of multiple, unique factors that are interlinked in South African society is considered as part of ascertaining the causes of exclusion of neurodivergent individuals. Subsequently, further steps towards the improvement of the university environment for the benefit of students with ASD and ADHD are highlighted through the insights of DU staff in terms of the strategies they have successfully implemented in their respective institutions. In the following sections, I detail the main findings of the study in terms of the theoretical, methodological and practical contributions.

7.4 Theoretical contribution

Epistemologically, this study makes the following original contributions. Firstly, by implementing the neurodiversity framework, it gives a positive conceptualisation of neurodivergent identity in relation to ASD and ADHD. This is a unique perspective in the South African context as ASD and ADHD have so far been understood as disabilities and thus conceptualised negatively. In educational research and practice, the understanding of neurodivergent traits as forms of diversity is missing in the South African context (Nair et al., 2024). By implementing the neurodiversity paradigm to ADHD and ASD in South Africa, the study introduces a different conceptualisation of neurological differences. This change of understanding is predicated on the argument that ASD and ADHD are unique traits that form part of diverse human neurotypes (Koi, 2021). In support of the neurodiversity approach, the cultural model also celebrates difference, and adds that while neurodiversity should be viewed positively, the difficulties that may result from neurodivergence should be acknowledged, and the necessary support should be provided. Furthermore, by implementing a conceptual framework consisting of the cultural model and neurodiversity in connection with intersectionality, the study has a significant reach in exposing and highlighting

the challenges faced by students with ASD and ADHD in South African higher education. Taking an intersectional approach specifically allows the study to explore wide-ranging issues faced by neurodivergent students, involving various stakeholders as well. This shows that to ensure the inclusion of neurodivergent students in universities, there must be collaborative action with the input of different role players, and at different levels. This includes the university community as a whole, including lecturers, other students and staff, along with stakeholders outside the university, in society and even in the family backgrounds of students with ASD and ADHD. The conceptual framework, therefore, shows the importance of the theories it entails. The integration of these theories provides an in-depth, relevant and inclusive lens with which to understand the experiences and inclusion of students with ASD and ADHD in South African universities. Further studies using this, and similar frameworks in the South African context, can add insights concerning other forms of neurodiversity besides ASD and ADHD. To ensure practicality, these theoretical aspects are utilised in the study under the standards of inclusive education and reasonable accommodation.

7.5 Practical contributions

Based on the data gathered from both sets of participants and on the theoretical contributions stated above, the following practical contributions and steps to ensure the inclusion of students with ASD and ADHD are suggested. I have categorised the main results of the study under the following categories, and below I explain each of them in relation to the insights gained and to suggest practical steps for addressing the identified inclusion strategies and challenges. These are the main aspects which relate to the findings and should not be confused with the themes identified in the two previous analysis chapters. The following relate to the practical contributions of this study. They detail practical steps which can be taken to address the challenges expressed by the participants, and each is discussed in detail further.

- Facilitating the transition into the university
- Social challenges in the university (creating an inclusive university environment)
- Academic support strategies
- Neurodiversity and the built environment

7.5.1 Facilitating the transition into higher education

Most of the challenges highlighted by university students with ASD and ADHD in this study start early, when navigating the move from high school to university. Many students with ASD and

ADHD in South Africa attend special schools with direct attention and assistance from teachers that are specifically trained to respond to their needs (Nthibeli et al., 2022). In the university space, however, there is far less intimate support as tertiary education requires students to be more independent. In terms of the transition to the university, the students' experiences in this study show that DUs that proactively inform students of their support services early on enable a less-challenging introduction to the university space for students with ASD and ADHD. The orientation phase is an important period as this is when first year students are introduced to different aspects of the university, including faculties, the physical campus, sports and recreation facilities, and other relevant information. In cases where the DU was part of the events during the orientation phase, students were made aware that they can consult the DU for psychological support and for examination concessions. However, students that did not get the information early enough had more significant challenges that could have been avoided had they been informed early on in their academic journey. Based on the positive impact of obtaining DU information and services early, a practical step for improving support for students with ASD and ADHD is to ensure that as early as the orientation phase, students are educated on the availability of DU services for various support needs, including neurodiversity.

As part of the introduction to the DU, it is important to use a neurodiversity-affirming, positive approach, rather than a deficit approach which assumes that the "neurodiverse individual requires curing" (Quigley et al., 2024, p. 2). This aligns with the cultural model in that through affirming neurodivergent identity and traits, the DU can promote the celebration of difference (Waldschmidt, 2018). Crucially, this supports inclusive practice because by promoting positivity towards neurodiversity, neurodivergent students can be encouraged to be confident in their active role in the university community. This is necessary, as inclusive education is about recognising the diversity of the learner population, and ensuring that students from different groups coexist in harmony and participate meaningfully (Walton & Engelbrecht, 2022). In addition to introducing students with ASD and ADHD to DU services, the orientation phase can be used to educate neurotypical students as well. This is important because as the next section shows, the difficulties students with ASD and ADHD experience in universities are significantly related to the social environment, made up mostly of neurotypical students who lack understanding of neurodiversity. Thus, the culture of intolerance and exclusion can be transformed by educating the entire student population, starting with new students during orientation.

7.5.2 Social challenges in the university (creating an inclusive university environment)

Although this study focuses mainly on the practical strategies for including students with ASD and ADHD, the results highlight a greater need to develop an inclusive culture in universities. An inclusive culture promotes the celebration and respect of difference, and it must be instilled in the university community at large by raising awareness about neurodiversity (Taneja et al., 2024). Using the cultural model as an analytical framework to analyse the approaches that DUs take to inform students and staff about ASD and ADHD, the findings of this study show that these awareness campaigns are still ineffective. Firstly, the messaging around ASD and ADHD is negative, associating neurodivergent traits with difficulties and deficits rather than strengths. This continues the negative perceptions in broader South African society, which, according to Clasquin-Johnson (2023), have been perpetuated even by ASD-advocacy associations and organisations. The result of this is that the South African public, which has little knowledge about ASD and ADHD, are receiving information about these conditions that is marred by negative stereotypes, resulting in further marginalisation. This should be countered through awareness campaigns affirming neurodivergent identities by highlighting the strengths and unique abilities of students with ASD and ADHD. In this regard, Müller (2017) states that "the cultural model focuses on cultural patterns that are causing exclusion" (p. 15). This study has shown that the culture of stigma towards ASD and ADHD must be eradicated for the universities to be inclusive for neurodivergent students. Given that the students in this study, expressed challenges regarding stigma, it is evident that South African universities, as communities, are not inclusive for students with ASD and ADHD.

In light of this lack of awareness, an important consideration is the underlying message in the awareness campaigns. While it has been suggested earlier in this section that there should be awareness raised about ADHD and ASD, it is important that the conceptualisation and messaging in current awareness efforts be re-evaluated to remove negative messaging. Awareness about ASD and ADHD should not just be about educating people about their existence, but it should correct misconceptions and negative stereotypes by bringing to view some of the strengths associated with neurodivergence. Awareness campaigns limited to weaknesses and difficulties faced by students with ASD and ADHD do little to remove the stigmatisation of neurodivergent traits (Cherewick & Matergia, 2024). A strength-based approach is more effective in promoting positive and inclusive attitudes towards neurodivergent students. According to Armstrong (2012), strength-

based approaches to neurodiversity emphasise the unique abilities of neurodivergent students, rather than perpetuating negative, deficit-based perceptions. Likewise, Cherewick and Matergia (2024) state that strength-based interventions "build on the strengths and skills of *neurodivergent* individuals" (p. 409, emphasis added). With their strengths appreciated, students with ASD and ADHD can participate meaningfully and experience full inclusion in universities, both socially and academically. Importantly, these approaches must be applied across the university and not just in specialised departments such as DUs, to effect change across the entire university environment. In essence, an inclusive university for neurodivergent individuals is one which upholds a culture of inclusivity in all its departments and activities.

Secondly, the involvement of DUs in the orientation stage as part of assisting students in adapting to the university environment can be expanded to include the broader university environment. From the findings of this study, the information currently shared by DUs is only targeted at students that need support services with little being done to educate other students about neurodivergent traits. However, I suggest that strength-based information should be shared with other new students about neurodiversity as part of instilling an appreciation of the unique strengths that their neurodivergent peers have. In this way, orientation can be used for awareness about neurodiversity, touching on the support that is available in the university, and the unique strengths that neurodivergent students bring to the university environment. The focus of the DU in terms of neurodiversity needs to be broadened in this way. Cherewick and Matergia (2024) similarly argue that "strength-based approaches can simultaneously address systemic issues that harm mental health, including reducing negative stereotypes and biases, and shifting attitudes that reduce stigma and promote inclusion" (p. 409). By addressing systemic issues and individual students' needs, the DUs can facilitate a more comprehensive and transformative approach that works towards transforming the whole university into a neurodiversity-friendly environment.

7.5.3 Academic support strategies

The main objective of this study is about investigating the strategies in place for supporting students with ASD and ADHD. This section focuses on the improvement of these support strategies. Given that academic success is the primary goal for going to university, the provision of support related to academic activities is a crucial responsibility of DUs (Wilson & Dallman, 2024). From the findings of this study, there are academic support strategies that DU members

explained that are confirmed by students' experiences as having had a significant impact on their academic outcomes. From the staff data, it is evident that the support strategies reported are mostly related to academic activities, notably tests and examinations. This was confirmed significantly by the experiences of students, which mostly refer to academic aspects of support being covered. Research shows that in academic environments, students with ASD and ADHD mainly need accommodations relating to the amount of time to complete tasks, as well as managing environmental distractions (Lefler et al., 2021; Stark & Lindo, 2023). In both these aspects, DU staff members emphasise that the support provided is based on what students need to avoid being disadvantaged and not to give them unjustified advantages. Reasonable accommodation is therefore, central to academic support and concessions, such as extra time and separate venues. As covered earlier in this study, ASD and ADHD are usually comorbid and manifest similar traits such as inattention, social anxiety and executive dysfunction. The challenges involved are similar and inter-related, and this is evident in the fact that the DU staff spoke of very similar approaches for supporting students with ASD and those with ADHD academically. Notably, the time students take to complete tasks differs based on their attention span, information processing rates and how fast they write (Friedman & Sterling, 2019). As a support strategy, DUs provide concessions to students for extra time on tests and examinations, and students have found this to be helpful because prior to receiving concessions, some of them were unable to complete their assessments within the allotted time.

While extra time concessions significantly improve students' outcomes, they still need improvement. More comprehensive approaches are needed that focus on the academic needs of the student in greater detail. Students with ASD for example, face executive dysfunction, which impedes their ability to manage their time and organise their materials appropriately (Demetriou et al., 2018). While time management is a key component of executive function, the provision of extra time does not fully address this aspect. In this regard, Stark and Lindo (2023) argue that extra time does not address executive dysfunction, adding that it requires the establishment of peer groups, academic coaching and training in organisation skills and time management. These services were not mentioned as existing strategies by DU staff members in this study. In effect, the academic support that students with ASD and ADHD receive in the universities involved in this study are not supporting them to function independently but only address the temporary need to finish an examination. The strategies lack depth and are not useful in the long run, as students

will need skills after completing their university education that are useful in the workplace and life in general. Similarly, McDowall and Kiseleva (2024) argue that "time extensions for assessments are common practice, yet such adjustments may not address and support underlying cognitive differences such as difficulty with memory, self-organisation and concentration" (p. 3). In response, DUs and other stakeholders in universities should provide more comprehensive, practical approaches such as training students in executive function, organisation and time-management.

In addition to time concessions, students with ASD and ADHD need accommodations to mitigate sensory overload. To minimise sensory overload and environmental distractions, students with ASD and ADHD sometimes write in separate, smaller venues instead of larger venues where all other students write. This strategy is reported to a much smaller extent than extra time as being effective in enabling the student participants in this study to focus and be comfortable when writing tests and examinations. In fact, as noted in the previous chapter, some students still face disturbances in these smaller venues, sometimes even from invigilators. It is evident that using smaller venues is not an effective strategy because it is not the size of the venue alone that causes distractions for neurodivergent students. Sensory overload involves features such as lights and echoes in the room, which may still exist in a smaller venue with less students. This then, is not just an issue of support strategies but it points to a larger problem, which is that the spaces on campuses are not designed in ways that ensure the inclusion of students with ASD and ADHD. Below, I discuss this in detail in relation to students' experiences and challenges with regards to the physical infrastructure in South African universities

7.5.4 Neurodiversity and the built environment

While the design and construction of the built university environment is not the responsibility of DUs, it emerged as a major theme in the study. Along with the challenges of negativity in the social environment, most students mentioned the lack of availability of quiet spaces where students with ASD and ADHD can study without sensory overload. The students' experiences show that construction in South African universities was done without consideration of the need to include neurodivergent students. This is because most of the physical infrastructure in South African universities dates back to the apartheid era, when there was no awareness about neurodiversity (Shai & Legodi, 2019). It is also worth noting that there has been renovations to the physical

infrastructure of most South African universities since apartheid ended, to facilitate the inclusion of previously marginalised groups (Chiwandire, 2019). For instance, several universities have renamed some of their buildings and facilities that were previously named after colonial figures to honour apartheid struggle icons (Gukurume & Maringira, 2022). Furthermore, to include students with physical disabilities, buildings have been fitted with wheelchair-friendly lifts, ramps and braille signage. This was mainly guided by Universal Design principles, which are applied to ensure universal access to people with different needs and identities (Griffiths & Leach, 2022). While these steps show some commitment to including marginalised students, the actual impact is still minimal as neurodivergent students remain among marginalised groups (Gouws, 2025). In terms of neurodiversity however, there is little progress, and the students' grievances about the lack of dedicated, labelled spaces on campuses for them to study effectively attests to this. It is, therefore, crucial to ensure that the reconfiguration of the built environment is prioritised to transform universities into neurodiversity-friendly spaces. This will require collaboration between the relevant departments, and the insights of students with ASD and ADHD will also be vital so that they can communicate the challenges they experience regarding the physical university environment. This also requires the establishment of active neurodiversity-advocacy groups in universities. In conjunction with DUs, advocacy groups can advise the relevant design and construction entities in the universities on their needs with regard to the design of study spaces, accommodation and other spaces in the university. Inter-departmental and interdisciplinary collaboration is vital within an intersectional framework because different stakeholders provide unique types of expertise. By collaborating, they can respond to a variety of challenges including social challenges, academic difficulties, and lack of appropriate physical spaces for neurodivergent students. In essence, addressing the challenges of supporting students requires collective action and the transformation of the university on a variety of areas. Therefore, the practical contributions of this study on all four main categories of the findings are interdisciplinary, intersectional and are centred on changing negative attitudes, as changing attitudes increases the chances of willingness to implement the necessary changes.

7.6 Method contributions

This study employs a methodology that allows the participants to detail their experiences and also express their opinions. In applying the interpretivist methodology, specifically phenomenology, the findings and conclusions made in this study about the strategies used to include students with

ASD and ADHD in South African universities are not imposed on participants. Through the use of open-ended questions in interviews and semi-structured questionnaires respectively, this methodology ensures that the main sources of knowledge generated are from the participants themselves. This is crucial because the study focuses on an area with little to no research in the South African context, namely neurodiversity, particularly in higher education. This means that the original insights about ASD and ADHD in South Africa in this study have been provided by those with relevant, lived experiences. Furthermore, the emphasis on participants' experiences mitigates the researcher bias, as the opinions concerning the experiences also come from the participants. For instance, despite the study taking the view that ASD and ADHD are forms of diversity and not disabilities, students were free to express differing views, including seeing themselves as disabled and sometimes thinking the lack of support for their needs can be justified. While the need to remove negative stereotypes was clearly advocated for, the interviews and questionnaires did not prohibit the expression of these negative attitudes by the participants. This is a crucial aspect in research, to be open-minded and allow different perspectives to be shared by participants, particularly in qualitative research as it rests heavily on the experiences and opinions of participants.

7.7 Limitations and recommendations for further research

While I made an effort to ensure that this study adequately addresses the research objectives and questions, some limitations should be acknowledged. Initially, I intended to do a nation-wide study, involving all 26 public universities in South Africa, to provide a board picture regarding inclusion of students with ASD and ADHD in higher education. However, due to the lack of responses from most institutions, along with two institutions that declined to participate, only 9 universities participated. Involving all the universities would have allowed a wider variety of perspectives to show how neurodivergent identity is experienced and understood in different university contexts in South Africa. To ensure as much diversity of views and experiences as possible, I ensured that all the main categories of universities in South Africa were represented; public research-intensive universities, public, and comprehensive universities, and universities of technology. By involving participants from different kinds of universities, unique insights based on the participants' contexts were shared. It is also worth noting that comprehensive universities were minimally represented, as there were no student participants from the only comprehensive university that took part in the study. Despite constant attempts by the DU to invite the students,

there was ultimately no response from the students in this institution. Moreover, only one DU staff member took part from that university as well, further adding to the lack of participation from this category. As such, I recommend that further studies involving comprehensive universities be conducted for more insights about neurodiversity in that context to be shared. This can be done in connection with broader studies involving students with ASD and ADHD in all South African universities. Given that this is a doctoral study, with time constraints, there was less likelihood of getting participants from all 26 public universities, even though that was the original intention. An expanded study with more universities, even all the universities in South Africa, would provide valuable insights.

Another limitation is the lack of representation of some relevant stakeholder groups. While the inclusion of DU staff members and students with ASD and ADHD created a relevant sample based on their experiences, many of the participants mentioned the roles played by lecturers, neurotypical students and parents of students with ASD and ADHD. While the comparison of the experiences of DU staff members and of students with ASD and ADHD provided relevant information, the perspectives of the three identified stakeholder groups mentioned above would have provided more depth. Given that the cultural model and the neurodiversity movement were integrated into the conceptual framework to promote positive attitudes towards neurodivergence, the underlying causes for negative attitudes need to be understood. The need to develop a culture of inclusivity is extensively demonstrated and the neurodiversity movement gives a positive view of neurological difference, highlighting strengths of students with ASD and ADHD. Reasonably, the experiences and opinions of neurotypical students are relevant, as the data shows that they are the most likely sources of anxiety for neurodivergent students due to frequent encounters in the university environment (Doyle et al., 2024). It would, therefore, have been beneficial to investigate the reasons for how neurotypical students view neurodivergent students, whether negatively or positively. Furthermore, the insights of lecturers would also have contributed to much needed knowledge about neurodiversity in South African higher education. As the findings show, the support that students with ASD and ADHD receive from DUs are implemented in collaboration with lecturers. However, as some students mentioned, some lecturers refuse to allow concessions to neurodivergent students. It would thus be interesting and relevant within an intersectional, and neurodiversity-affirming framework, to understand the reasons some lecturers are resistant to allowing concessions to students with ASD and ADHD. The role of parents is also critical as it

would provide insights into how the intersection of challenges at home, and those in the university space manifests in the overall progress and challenges of students with ASD and ADHD. While it is not feasible to involve all these stakeholders in one doctoral study, targeted research can involve them to add further insights into neurodiversity in the South African context.

Another limitation relates to the findings regarding the built environment. The relevant stakeholders that are in charge of the design and construction of the physical environment in universities were not included in this study, as this was an emergent theme. However, the students with ASD and ADHD in this study are clearly challenged by the fact that the built environment in their universities is not conducive to them. It is, therefore, vital to conduct more research concerning the built environment in universities in terms of making them suitable for students with ADHD, ASD and other neurodivergent individuals. Lastly, there was a limitation in the research methods. The concept of neurodiversity, despite being used to describe ASD and ADHD as forms of diversity and not disabilities, and subsequently applied consistently in analysing the data, was not well understood by many of the participants. I did not foreground the interviews and questionnaires by explaining that the study aligns with the neurodiversity perspective as one of the objectives was to ascertain the guiding principles for the inclusion strategies employed. Therefore, it was necessary to keep the conceptualisation of neurodiversity neutral so that the participants demonstrate their own stances in their responses. Most of the statements from participants spoke of ASD and ADHD as disabilities, which shows the need for research and awareness campaigns promoting the positive neurodiversity view. Some participants seem to only understand neurodiversity as a term to describe disorders or disabilities and lack knowledge of it as a term to describe natural forms of human cognition. It would therefore have been useful to include a definition of neurodiversity at the beginning of interviews and questionnaires to help participants understand this concept clearly and engage with them about it.

7.8 Concluding remarks

This chapter has summarised the main contributions of this study, and explained how the objectives and research questions have been addressed. The insights provided by this research are relevant in the South African higher education context and are useful for individual institutions and the sector in general to work towards the inclusion of students with ASD and ADHD. In this last chapter, the original contributions are highlighted, along with suggestions for how each aspect

listed under the practical contributions section can be improved upon. By suggesting practical steps, the study takes a pragmatic approach to improving inclusion in South African universities. In conjunction with arguing for the positive conceptualisation of neurodiversity, the study makes recommendations that can serve as guidelines for relevant stakeholders in universities in how include students with ASD and ADHD. Given the rapid rise in neurodiversity currently, the study is well-timed as it provides a uniquely South African perspective to neurodiversity. This is much needed to reverse the domination of Western epistemologies of neurodiversity, inclusive education and education in general, and provide locally relevant perspectives. Building on the successfully implemented support strategies and the positive experiences of students with ASD and ADHD, this study has suggested ways to ensure more effective strategies for ensuring inclusion. As an overarching theme, this research emphasises the need for system-wide changes, involving different role players to not only provide support for students with ASD, but also transform universities into inclusive learning spaces with positive attitudes about neurodiversity.

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Appendices

Appendix 1: Approval letter for doctoral research proposal

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | FACULTY OF HUMANITIES

24 April 2023

Person Number: 1653723

Mr. Moleli Zakaria Nthibeli

By Email: 1653723@students.wits.ac.za

Cc: Drs. Dominic Griffiths & Tanya Bekker

Results for the Doctor of Philosophy in Education

I am writing to inform you that the Graduate Studies Committee of the Faculty of Humanities, acting on behalf of the Senate has considered your proposal entitled *"**Inclusion in higher education in South Africa: a study of how universities in South Africa ensure full participation of students with ASD and ADHD**"* and recommended that you should be admitted to candidature subject to corrections to the satisfaction of the supervisors.

Corrections must be addressed to the satisfaction of the supervisors.

I confirm that **Drs. Dominic Griffiths & Tanya Bekker** have been appointed as your supervisors.

Kindly liaise with your supervisors regarding the contents of the reader's report.
The reader's reports have been emailed to your supervisors.

Your attention is drawn to the Senate's requirement that all higher degree candidates submit brief written reports on their progress to the Faculty Office once a year.

Please note that higher degree candidates are required to renew their registration in January each year.

Kindly keep us informed of any changes of address during the year.

Regards,

Faith Herbert

Faith Herbert
Senior Faculty Officer
Faculty of Humanities
Education Campus
Tel: +27 11 717 3018
Email: faith.herbert@wits.ac.za

Private Bag 3, WITS 2050, South Africa | **T** +27 11 717 4007 | **E** help.humanities@wits.ac.za | www.wits.ac.za/humanities

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Appendix 2: Wits ethics approval

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Nthibeli

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H23/06/34**
PROJECT TITLE	Inclusion in higher education in South Africa: A study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university disability units to cater for their needs
INVESTIGATOR(S)	Mr M Nthibeli
SCHOOL/DEPARTMENT	Wits School of Education/
DATE CONSIDERED	23 June 2023
DECISION OF THE COMMITTEE	Conditionally Approved Conditional Clearance: Data Collection cannot commence until the permission letters are submitted to the HREC Non-Medical Committee Risk Level: Minimal
EXPIRY DATE	07 August 2026

DATE 08 August 2023 **CHAIRPERSON** _____
(Professor J Watermeyer)

cc: Supervisor : Prof D Griffiths and Prof T Bekker

DECLARATION OF INVESTIGATOR(S)

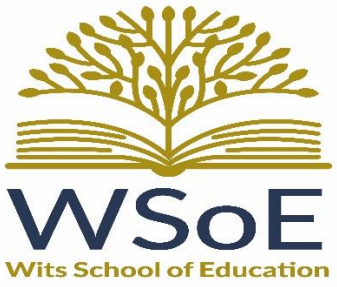
To be completed in duplicate and **A SIGNED COPY** returned to the Secretary electronically. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure as approved I/we undertake to submit an amendment of the protocol to the Committee. **I/we agree to completion of a regular progress report. For Minimal and Low Risk studies, this is due annually on 31 December. For Medium and High Risk studies, this is due twice annually on 30 June and 31 December.**

M. Nthibeli 12 / 07 / 2023

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Appendix 3: Permission letter sent to university registrar



University of the Witwatersrand,
School of Education

The Registrar
Sol Plaatjie University
10 Jan Smuts Blvd, Civic Centre
Kimberly 8300

August 10, 2023

Dear Sir/Madam,

Re: Permission to conduct research at the Sol Plaatjie University.

My name is 'Moleli Nthibeli. I am studying for a PhD in the School of Education at the University of the Witwatersrand. I am seeking permission to do research at your university. The study I am conducting is associated with inclusive education, with a direct focus on the higher education system of South Africa. The research will entail collecting data from students with Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) and staff members in the Disability Unit of public universities in South Africa. With your permission, I will invite staff members from the disability rights unit to participate in completing questionnaires that seek to investigate their knowledge levels concerning ASD and ADHD. Additionally, the

questionnaire will also explore the ways in which Disability Unit staff ensure that students with the two disorders participate meaningfully in the university. I may also request to interview these individuals for further insight into the information they would have provided in the questionnaires.

Along with this request for permission, I have attached an additional letter requesting the head of the Disability Unit to approach students they are aware of, living with either ASD or ADHD, to participate in narrative interviews. Please be kind enough to forward the attached letter to the Disability Unit of provide guidance on how I may reach them. If there are students who are amenable to being interviewed, I would like to interview some from each participating university. A maximum of two students and two staff members will ideally be needed for this research in your institution. Both questionnaires and interviews will be conducted on online platforms, namely Google forms and Microsoft Teams. In case students are uncomfortable with being interviewed, the option to fill an anonymous online questionnaire will be provided as an alternative. In both methods of collection, requisite ethics protocol as mandated by my university of affiliation and your own will be followed. Participants will be asked to give their written or verbal consent before the research begins. Their responses will be treated confidentially, and identities (that is their names and the name of the university) will be anonymous. Individual privacy will be maintained in all published and written data resulting from the study. The results will be communicated in a published article whose details I will share upon release.

The research participants will not be advantaged or disadvantaged in any way. They will be reassured that they can withdraw their permission at any time during this project without any penalty. There are no foreseeable risks in participating in this study as there will be no underage participants included, and the participants will not be paid for this study. All research data will be password protected and permanently erased five years after the completion of the research project. I, therefore, request permission in writing to conduct my research at your organisation. The permission letter is required by my university of affiliation to be on your organisation's headed paper, signed and dated, and specifically referring to myself by name and the title of my study.

Please let me know if you require any further information. I look forward to your response as soon as is convenient.

Yours sincerely,

Moleli Nthibeli

0835266995

1653723@students.wits.ac.za

Appendix 4: Permission letter to DU

The Head of the Disability Unit
Cape Peninsula University of Technology
P.O BOX 1906 Bellville 7535
Cape Town, South Africa

August 10, 2023

Dear Sir/Madam,

Re: Permission to conduct research at the Cape Peninsula University of Technology.

My name is Moleli Nthibeli. I am studying for a PhD in the School of Education at the University of the Witwatersrand. I am seeking permission to do research in the Disability Unit of your university. The study I am conducting is associated with inclusive education, with a direct focus on the higher education system of South Africa. The research will entail collecting data from students with Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) and staff members in the Disability Unit of public universities in South Africa. With your permission, I will invite individuals from the disability rights unit to participate in completing questionnaires that seek to investigate their knowledge levels concerning ASD and ADHD. As the head of unit, I sincerely request that you assist me in identifying and approaching relevant staff members and extending an invitation to students with ASD and ADHD to participate in the study.

Engagements with the participants will be by the following means: two staff members of the Disability Units will complete an online questionnaire with the option of further taking part in a short interview. The questionnaire and interview will explore the ways in which Disability Unit staff ensure that students with the two disorders participate meaningfully in the university. I will also request to interview two students identified as living with either ASD or ADHD to participate in narrative interviews detailing their experiences of life in the university. In case a student is not comfortable with participating in an interview, there will be an option to complete a questionnaire instead.

Both questionnaires and interviews will be conducted on online platforms, namely Google forms and Microsoft Teams. In both methods of collection, requisite ethics protocols, as mandated by my university of affiliation and your own, will be followed. Participants will be asked to give their written or verbal consent before the research begins. Their responses will be treated confidentially, and identities (that is their names and the name of the university) will be anonymous. Individual privacy will be maintained in all published and written data resulting from the study. The results will be communicated in a published article whose details I will share upon release.

The research participants will not be advantaged or disadvantaged in any way. They will be reassured that they can withdraw their permission at any time during this project without any penalty. There are no foreseeable risks in participating in this study as there will be no underage participants included, and the participants will not be paid for this study. All research data will be password protected and permanently erased five years after the completion of the research project. I, therefore, request permission in writing to conduct my research at your organisation. A permission letter is required by my university of affiliation from you, using your university's letter head, signed and dated, and specifically referring to myself by name and the title of my study.

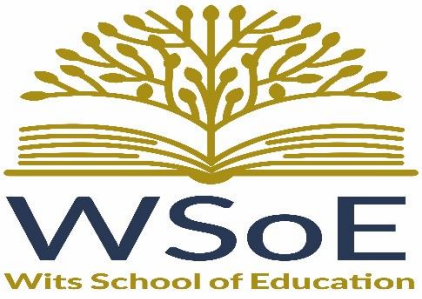
Please let me know if you require any further information. I look forward to your response as soon as is convenient.

Yours sincerely,
Moleli Nthibeli

0835266995

1653723@students.wits.ac.za

Appendix 5: Information sheet for DU staff questionnaire



Hello!

My name is Moleli Nthibeli. I am a PhD student in Inclusive Education at the University of the Witwatersrand, Johannesburg. My supervisors are Dr Dominic Griffiths and Dr Tanya Bekker. I am conducting a research study about inclusion of students with autism spectrum disorder (ASD) and Attention-Deficit Hyperactivity Disorder (ADHD). The study title is **Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs**. I am inviting you to take part in an online questionnaire which will take an estimated 20 minutes to complete.

This data will be stored in a password protected flash drive for 5 years and deleted afterwards. Only the researcher will have access to the data. The questionnaire will be focusing on your knowledge of ASD and ADHD and the strategies that you employ to ensure that students participate meaningfully in university activities. The questionnaire will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the

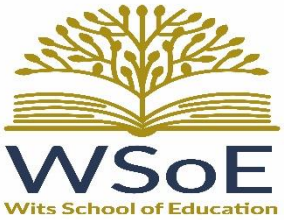
research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study. This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,
Moleli Nthibeli

Researcher:
Moleli Nthibeli, 1653723@students.wits.ac.za

Appendix 6: Consent form for DU staff questionnaire



Title of research project: Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs.

Dear participant, as a Disability Unit staff member, I am inviting you to participate in my research study in an interview seeking your knowledge of ASD and ADHD and the ways in which your department assists students living with these conditions to participate fully in the university. As a participant, you are required to give formal consent by completing this document. Please read carefully through each section.

Name of researcher: Moleli Nthibeli

I, ……, agree to participate in this research project.

I agree to the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that I can volunteer to take part in the study	YES	NO

I agree that the interview may be audio recorded.	YES	NO
I agree that direct quotations from my interview may be used by the researcher in their research report.	YES	NO
I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report)	YES	NO
I agree that other researchers may use the information I provide in my interview (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on.	YES	NO

…… (signature)
…… (name of participant)
…… (date)

…… (signature)
…… (name of researcher/person seeking consent)
…… (date)

Appendix 7: Information sheet for DU interviews

Hello

My name is Moleli Nthibeli. I am a PhD student in Inclusive Education at the University of the Witwatersrand, Johannesburg. My supervisors are Dr Dominic Griffiths and Dr Tanya Bekker. I am conducting a research study about the inclusion of students with Autism Spectrum Disorder (ASD) and Attention-Deficit Hyperactivity Disorder (ADHD) in the tertiary education environment. I am interested in your experiences of inclusion or exclusion as a university disability staff member, and I am inviting you to participate in an online interview which will take 45 to 60 minutes. The study title is **Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs**. The interview will take place on Microsoft Teams.

With your permission, I would like to audio record the interview. This data will be stored in a password protected flash drive and deleted after 5 years. Only the researcher will have access to the data. During the interview, I will need to ask for some information concerning your knowledge of ASD and ADHD and your experiences assisting students with the two disorders in the university. The interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

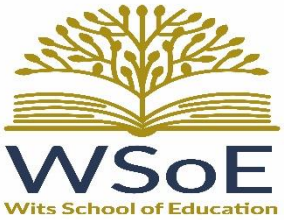
If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

The risks for this research study are no more than what happens in everyday life, but some of the questions asked may make you feel sad or upset. If this happens, I will stop the interview and continue another time. This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,
Moleli Nthibeli

Appendix 8: Consent form for DU interviews



Title of research project: Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs.

Dear participant, as a Disability Unit staff member, I am inviting you to participate in my research study in an interview seeking your knowledge of ASD and ADHD and the ways in which your department assists students living with these conditions to participate fully in the university. As a participant, you are required to give formal consent by completing this document. Please read carefully through each section.

Name of researcher: Moleli Nthibeli

I, ……, agree to participate in this research project.

I agree to the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that I can volunteer to take part in the study	YES	NO

I agree that the interview may be audio recorded.	YES	NO
I agree that direct quotations from my interview may be used by the researcher in their research report.	YES	NO
I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report)	YES	NO
I agree that other researchers may use the information I provide in my interview (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on.	YES	NO

…… (signature)
…… (name of participant)
…… (date)

…… (signature)
…… (name of researcher/person seeking consent)
…… (date)

Appendix 9: Information sheet for student interviews

Hello

My name is Moleli Nthibeli. I am a PhD student in Inclusive Education at the University of the Witwatersrand, Johannesburg. My supervisors are Dr Dominic Griffiths and Dr Tanya Bekker. I am conducting a research study about the inclusion of students with Autism Spectrum Disorder (ASD) and Attention-Deficit Hyperactivity Disorder (ADHD) in the tertiary education environment. I am interested in your experiences of inclusion or exclusion as a university student, and I am inviting you to participate in an online interview which will take 45 to 60 minutes. The study title is **Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs**. The interview will take place on Microsoft Teams.

With your permission, I would like to audio record the interview. This data will be stored in a password protected flash drive and deleted after 5 years. Only the researcher will have access to the data. During the interview, I will need to ask for some personal information about you, including your experiences in the university regarding your condition (ASD/ADHD). The interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on. Please also note that any opinions and experiences that you share in regard to your university, or its Disability Unit will not be ascribed to any of these entities or yourself directly in writing the final thesis and subsequent publications. Pseudonyms

will be used, thus protecting the university's, the Disability Unit's, and your own right to privacy and integrity.

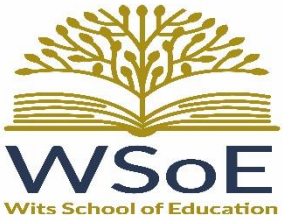
If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

The risks for this research study are no more than what happens in everyday life, but some of the questions asked may make you feel sad or upset. If this happens, I will stop the interview and continue another time. Please note that the wellness centre of your university has been made aware of this research study and will be available if you experience any distress to assist you appropriately. The referral letter is attached to this sheet. This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,
Moleli Nthibeli

Appendix 10: Consent form for student interviews



Title of research project: Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs.

Dear participant, as a student participating in this interview concerning your experience of university life, you are required to give formal consent by completing this document. Please read carefully through each section.

Name of researcher: Moleli Nthibeli

I, ……, agree to participate in this research project.

I agree to the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that I can volunteer to take part in the study	YES	NO
I agree that this interview may be audio recorded	YES	NO
I agree that direct quotations from my interview may be used by the researcher in their research report	YES	NO

I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report)	YES	NO
I agree that other researchers may use the information I provide in my interview (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on.	YES	NO

…… (signature)
…… (name of participant)
…… (date)

…… (signature)
…… (name of researcher/person seeking consent)
…… (date)

Appendix 11: Information sheet for student questionnaire

Hello!

My name is Moleli Nthibeli. I am a PhD student in Inclusive Education at the University of the Witwatersrand, Johannesburg. My supervisors are Dr Dominic Griffiths and Dr Tanya Bekker. I am conducting a research study about the inclusion of students with Autism Spectrum Disorder (ASD) and Attention-Deficit Hyperactivity Disorder (ADHD) in the tertiary education environment. The study title is **Inclusion in higher education in South Africa: a study of the experiences of students with ASD and ADHD in South African universities and an analysis of the capabilities of university Disability Units to cater for their needs**. I am inviting you to take part in a questionnaire, which will last about 20 minutes. The questionnaire will take place on Microsoft Teams.

This data will be stored in a password protected flash drive and deleted after 5 years. Only the researcher will have access to the data. The questionnaire enquires about some personal information about you, including your experiences in the university regarding your condition (ASD/ADHD). The data will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on. Please also note that any opinions and experiences that you share regarding your university, or its Disability Unit will not be ascribed to any of these entities or yourself directly in writing the final thesis and subsequent publications.

Pseudonyms will be used, thus protecting the university's, the Disability Unit's, and your own right to privacy and integrity.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study. There is a counselling referral form attached to this sheet in case you experience distress.

The risks for this research study are no more than what happens in everyday life, but some of the questions asked may make you feel sad or upset. You have the freedom to choose not to answer any questions that you deem inappropriate. This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,
Moleli Nthibeli

Appendix 12: DU questionnaire

Section 1: Short answer questions; please choose the relevant answer.

1.1 How long have you been working in the university's DU?

Less than 2 years ☐ 2-5 years ☐ More than 5 years ☐

1.2.1 Rate the Disability Unit's capability to cater for students with hearing impairment (least equipped (1); best equipped (5)):

1 2 3 4 5

1.2.2 Rate the Disability Unit's capability to cater for students with visual impairment (least equipped (1); best equipped (5)):

1 2 3 4 5

1.2.3 Rate the Disability Unit's capability to cater for students with physical disabilities (those related to mobility)- (least equipped (1); well-equipped (5)):

1 2 3 4 5

1.2.4 Rate the Disability Unit's capability to cater for students with neurodevelopmental disorders (especially ASD and ADHD)- (least equipped (1); well-equipped (5)):

1 2 3 4 5

1.3 On a scale of 1-5 (1 being the least significant and 5 being the most significant), how would you rate your Disability Unit's commitment to the inclusion of students with neurodevelopmental disabilities such as ASD and ADHD?

1 2 3 4 5

1.4 Why do you think the university is least equipped for the categories of disabilities you indicated in 1.4 above?

1.5 Would you describe your university as ASD friendly? Yes or No

1.6 Would you describe your university as ADHD friendly? Yes or No

Section 2:

2.1 Please describe the guiding principles of the DU on catering for students with ASD and ADHD.

_____

_____

_____

2.2 Are neurodevelopmental disorders such as ASD and ADHD commonly encountered in the Disability Unit requiring assistance? What are the ways in which students are identified as having neurodevelopmental disorders?

_____

_____

_____

2.3 What are the personal services (such as counselling and assistance with funding) that your Disability Unit provides for students with ASD and ADHD?

_____

_____

_____

2.4 How does the Disability Unit ensure that students with ASD and ADHD participate socially and academically in the university environment?

_____

_____

_____

2.5 Does the Disability Unit collaborate with lecturers and the broader university community to support students with ASD and ADHD? If yes, please explain how.

_____

_____

_____

2.6 Please explain the strategies that are used to ensure that the university is conducive for a student with ASD and/or ADHD.

_____

_____

_____

2.7 What recommendations would you give for your institution to strengthen the work done by the Disability Unit for students with ASD and ADHD?

_____

_____

_____

Appendix 13: DU interview schedule

1. Please describe you Disability Unit's approach towards the inclusion of students with disabilities.
2. Would you say the way in which your DU caters for students with disabilities is equally effective across the various types of impairment? Please focus on physical impairment and neurological disability.
3. Is it entirely up to the DU to determine its own rules for accommodating students with disabilities or is there any mandates given by government?
4. Please define the following disorders: Autism Spectrum Disorder(ASD) and Attention-Deficit Hyperactivity Disorder (ADHD).
5. Do you see any difficulty in catering for students with ASD and ADHD in comparison with those with physical impairments such as visual impairment, bodily handicaps and hearing impairment? Please elaborate.
6. Please explain some of the intervention strategies either socially or academically that your department uses to improve the experiences of students with ASD and ADHD in their academic journeys.
7. What are some of the constraints that you face in taking care of students with ASD and ADHD?
8. How would you improve the capabilities of your department in responding to the needs of students with ASD and ADHD?

Appendix 14: Semi-structured student questionnaire

Section 1

Which of these conditions are you diagnosed with?

- ASD
- ADHD
- Both

Section 2: Please read each question carefully and answer as honestly as possible.

1. On a scale of 1 to 5, with 1 being unpleasant and 5 being pleasant, how would you rate your overall university experience?

   1 2 3 4 5

2. Would you say that the challenges you face at university relate mainly to academic work or mainly to interacting with other people socially?
   - Mainly academic
   - Mainly social
3. Do you find your university supportive for someone with your condition? (ASD/ADHD)
   - Yes
   - No
4. Please explain your answer in (3) above.

   _____

5. Please narrate your overall experience regarding your interactions with other members of the university population (for example peers, lecturers, administrators, and other support staff).

   _____

6. Please narrate your experience with accessing the university's academic curriculum (academic activities).

   _____

7. Please narrate your experience with accessing the university's academic curriculum (academic activities).

   _____

8. Please explain what you think should be done to enable students with your condition (ASD/ADHD) to participate meaningfully and fairly in your university.

_____

Appendix 15: Student interview schedule

1. Please describe the challenges you face daily as a student with ASD/ADHD in your university, these may be academic, social or both.
2. Describe the process through which you registered at the DU as a student with ASD/ADHD. Did your disclosure of your condition have a positive impact on your experience of the university?
3. Given that your condition (ASD/ADHD) affects both social functioning and academic life, describe your experience regarding access in both areas, i.e., personal services and academic aspects of university life.
4. Giving reasons, state whether your university is, in your opinion, an inclusive learning space for students with ASD/ADHD.
5. What other challenges are you affected by as a student with ASD/ADHD in a South African university?
6. What changes do you feel would improve your experience as a student with ASD/ADHD in your university?