The Impact of Academic Stress on Neurodivergent Students in Higher Education

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Abstract

Despite increased awareness and level of diagnosis of neurodivergence, neurodivergent students face significant challenges in higher education due to a lack of fundamental support, often leading to heightened academic stress. This study explored this experience, looking to gain insight into causal factors of academic stress and possible solutions to combat it. Online semi-structured interviews were conducted with 13 university students from various institutions and programs to ensure a diverse range of data. Thematic analysis was applied to the interview transcripts identifying prominent themes and codes. Key findings highlight the impact of academic factors such as assessments and deadlines on academic stress and barriers such as challenges with group dynamics, social cues, sensory factors, and emotional elements. The study also emphasizes the value of support and belongingness in the academic environment. Cultural differences in views towards neurodivergence in higher education were noted, however this was not further examined. Overall, the findings suggest that many institutions still lack the inclusive design to accommodate neurodivergent students in higher education and imply that a more proactive and targeted approach could aid in achieving this by involving these students more and providing neurodivergent-tailored academic options that meet the different diagnostic needs. A major strength of this study lies in its person-centered, holistic approach which amplified neurodivergent students' voices and established comfort to share their lived experiences, providing direct insight into their academic experience and causal factors of academic stress. Future research should investigate the cultural influence on views towards neurodivergence in higher education, and explore solutions that cater to both mental health challenges and neurodivergence as there was apparent overlap in symptoms.

Keywords: neurodivergent students, academic stress, semi-structured interviews, thematic analysis, person-centered approach, inclusive education, cultural influence

The Impact of Academic Stress on Neurodivergent students in Higher Education

With recent advances in diagnosis, awareness, and accessibility, the number of diagnosed neurodivergent students attending higher education has increased, allowing for greater awareness and accommodation for this population of students (Dwyer et al., 2022). However, despite the growth of awareness and understanding, neurodivergent students still face significant challenges in higher education as there is a lack of fundamental support (Dwyer et al., 2022). Existing studies support this claim as it has been indicated that the well-being and employment outcomes for neurodivergent students tend to be poorer in comparison with their peers (Hamilton & Petty, 2023).

For a neurodivergent student, navigating the academic environment can be stressful since many institutions are still predominantly tailored to traditional approaches and neurotypical students (Syharat et al., 2023). Numerous institutions seem to view disability through a medicalized, legalistic and deficit-based lens, which leads to the stigmatization towards students belonging to this group (Dwyer et al. 2022). Medicalization often fails to adequately conceptualize the embodied experience for neurodivergent individuals, leading to a collective view and attitude towards particular diagnoses that fall within this umbrella and failing to consider individual differences and experiences (Cameron, 2024). This often leads to prejudice and preconceptions assuming that individuals under one diagnosis have the same characteristics. The neurodivergent experience is highly individual and specific to interactions with external factors so this view tends to neglect the diverse needs of these students, leading to a less inclusive academic environment (Stenning & Rosqvist, 2021).

Additionally, there is a challenge in providing inclusive education in higher education due to external pressures (e.g., competition with other institutions, and limited resources) and regulatory frameworks set out by academic institutions often prioritizing other educational demands over inclusivity (Cook, 2024). Within such regulatory frameworks is the “hidden

curriculum" - the undocumented lessons, expectations and norms that students learn in the academic context through the culture, rules and exchanges with their institution (Sulaimani & Gut, 2019). The medical model and the "hidden curriculum" are interconnected, as society's view of neurodivergence influences and shapes the instilled policies and frameworks that affect neurodivergent students (Hamilton & Petty, 2023). This causes a disconnect between institution and student, leaving neurodivergent students often feeling neglected and experiencing heightened academic stress and poorer well-being, highlighting the need for more inclusive and adaptive educational design.

Challenges faced by neurodivergent students in the academic experience relate to disability functional differences, accommodation needs, and stigma and prejudice (Dwyer et al., 2022). They often face common difficulties in executive dysfunction such as planning, time management, organization and task initiation; however, these difficulties manifest differently for every individual. Neurodiversity as a dimension of difference still receives little attention in higher education pedagogical literature (Hamilton & Petty, 2023). The majority of the current publications focus on dyslexia, attention deficit hyperactivity disorder (ADHD), and autism spectrum disorder (ASD), which does not provide a representative overview of the neurodivergent academic experience (Clouder et al., 2020). To deepen understanding of neurodivergent experiences, further research is crucial to shape the inclusive approach in education, enabling universities to better accommodate the growing involvement of neurodivergent students in higher education. Moreover, the gap between shifting research mostly targeted *at* this population to research that *includes* this population is an important one to address. Targeted studies have often focused on examining neurodivergent individuals as a subject of study overlooking their lived experiences, whereas studies *including* this population consider these aspects by involving and engaging neurodivergent students directly rather than passively. Research has shown that although institutions mostly have good

intentions to support the neurodivergent student community, this often does not reach its full potential due to resistance and hesitation to fully adopt an inclusive design strategy (Clouder et al., 2020). Moreover, a key catalyst to creating an inclusive academic environment where all students can thrive seems to include establishing trust without the need for labels, special accommodations, or adjustments (Clouder et al., 2020). However, as the establishment of trust often lacks, further research is needed to understand how this could be implemented effectively across diverse institutions.

Thus, considering the above, this study aims to collect and analyze direct accounts from neurodivergent students regarding their experience in higher education and the challenges faced. The goal is to uncover important themes for neurodivergent students and to shed light on aspects that influence their general academic experience and possible solutions to their academic stress and challenges. The findings of this study can contribute to the existing body of literature that targets this topic by providing insight for universities and educational faculties on how to accommodate all students and how to adjust policies and academic environments to facilitate support to combat experienced academic stress.

Theoretical Framework

Neurodiversity Definition and Associated Conditions

Neurodiversity is an umbrella term that captures and describes a wide range of neurological variations widely classified and recognized as disabilities (Syharat et al., 2023). In the latest version of the Diagnostic and Statistical Manual of Mental Disorders (the DSM-5), neurodivergence is referred to as neurodevelopmental disorders (NDDs) as an overarching disorder category which is defined as a group of conditions that have an onset during the developmental period and induce deficits that impair function (Morris-Rosendahl & Crocq, 2020).

Neurodivergent variations include ADHD, Dyslexia, ASD and other learning differences. ADHD is defined by the DSM-5 as a neurodevelopmental disorder characterized by impairing levels of inattention, disorganization, and/or hyperactivity and impulsivity (Koutsoklenis & Honkasilta, 2023). Dyslexia, as defined in the DSM-5 refers to "a pattern of learning difficulties characterized by problems with accurate or fluent word reading, poor decoding and poor spelling" (Snowling et al., 2020). ASD as defined by the APA and authors Tobón and De Luca (2024), is a complex developmental condition that involves persistent and constant challenges with things such as social communication, restricted interests and repetitive behaviors. It is important to note that these definitions are not exhaustive as there are several other variations of neurodivergence such as obsessive-compulsive disorder (OCD), Dyspraxia, and Tourette Syndrome.

Medical Model and the "Hidden Curriculum"

The Medical Model. Within the field of mental health, the medical model conceptualizes psychological problems by applying an illness or disease-based framework (Pilecki, 2020). The medical model receives a lot of critique concerning its relation to disability due to its reductionist approach of viewing these conditions through a diagnostic and medical lens without accounting for broader factors that could be individually influential (Hogan, 2019). Due to its emphasis on deficits and symptoms, it fails to acknowledge the unique lived experiences of individuals with disability limiting the possibility to create and address various mental needs (Hogan, 2019). This creates a stigmatized and disordered view of neurodivergence in the academic context generalizing the experience for individuals that fall within the category (Stenning & Rosqvist, 2021).

This view on neurodivergence presented in the traditional medical model needs to be challenged as the focus of research has primarily aimed at the general neurodivergent community, and has not considered the individual views of neurodivergent individuals to

ensure inclusivity across diagnoses. This is problematic as the experience varies for every neurodivergent student and should be viewed from a more inclusive and collaborative approach to better understand these experiences (Stenning & Rosqvist, 2021). This creates a shift from *problems neurodivergent individuals have* to *problems we experience* and allows for more variety in the understanding of the neurodivergent experience as it is not universal for everyone within this category.

The Hidden Curriculum. The "hidden curriculum" is defined as the "unwritten, unofficial, unintended, and undocumented life lessons and virtues that students learn while in school" (Sulaimani & Gut, 2019). This enables expectations of institutions on students and how they should be performing, behaving or interacting (Hamilton & Petty, 2023). Expectations included in the hidden curriculum include high demands of executive functioning, language, literacy, and social interaction in the context of university. This often applies pressure to conform and excludes minority groups such as neurodivergent students from reaching their full academic potential as their experiences of social interactions in school differ from those of neurotypical students (Sulaimani & Gut 2019). These high demands inhibit neurodivergent students from developing a sense of capability and belongingness in the academic environment (Hamilton & Petty, 2023).

The pressure and expectations exerted by such a curriculum often lead to neurodivergent students' neglecting their self-care to meet the requirements of a program which leads to 'neurodivergent burnout' (Syharat et al., 2023). This is often interconnected with 'self-silencing', where due to fear and stigmatization neurodivergent students avoid expressing their voice or concern in moments of pressure making it difficult for these students to establish boundaries with peers and staff. In combination with the medical model, the hidden curriculum further exacerbates the pressures and challenges faced by neurodivergent students. Additionally, these expectations create highly competitive academic

environments, which for neurodivergent students is overwhelmingly challenging due to their perceived sense of difference (Shaw & Anderson, 2018).

Relevant Theories for the Neurodivergent Academic Experience

The theories and models that will be used to define and frame this research include: the ecological model of mental functioning (Chapman, 2021), the social model of disability (Hogan, 2019), and the self-determination theory (Deci & Ryan, 2000). These frameworks emphasize the individual experiences and voices of neurodivergent students, helping to understand and address the topic of academic stress for this population better.

Ecological Model of Mental Functioning. The ecological model of mental functioning considers how the neurocognitive variations specific to individuals contribute to human ecosystems to offer more support, inclusivity, resilience and adaptation (Chapman, 2021). This model underlines the importance of mental differences and emphasizes how the compilation of different mental functions makes up an ecological system that leads to unique experiences within a collective group. This model can be applied to the previously mentioned challenge for neurodivergent students to adapt and fit into a higher education program as these curriculums are often tailored to neurotypical students. Furthermore, it contributes to understanding the presence of academic stress by highlighting that it can manifest differently for different variations of neurodivergence. It underlines the presence and importance of unique experiences of different students and brings forward the need for a universal design that can include and accommodate all student's needs. It is relevant in this study because it emphasizes the value of diversity in establishing inclusive education.

Social Model of Disability. The social model of disability posits that disability is viewed in terms of environmental, structural, and attitudinal barriers experienced by individuals with disabilities that affect their lives and prevent their inclusion (Holton, 2022). This model is relevant in this study because it emphasizes the influence of multiple barriers

from different domains on individuals with disabilities which can also be applied to the neurodivergent community and highlights how these barriers can amplify academic stress. Moreover, it underlines how these barriers can lead to exclusion within academic contexts. Barriers can encompass social, personal, academic, and emotional factors. This model applies to the specific challenges that are faced by different neurodivergent students in the academic context and emphasizes the need for a change of perspective from the traditional medical model. This will be a main focus of the study, where prospective participants will be able to discuss their individually experienced barriers. These findings can help underline the cause of academic stress and provide insight into the various barriers at play regarding specific diagnoses. Moreover, it can highlight patterns or prominent themes that could be addressed to provide possible solutions to prevent such experiences in the future.

The Self-Determination Theory. The self-determination theory posits that humans have three basic psychological needs known as autonomy (i.e., the freedom to engage in a behavior), competence (i.e., the feeling of mastery and efficacy), and relatedness (i.e., the need to feel meaningfully connected to others; Deci & Ryan, 2000). This theory can be applied to the aspect of exclusion and 'self-silencing' for neurodivergent students in the academic environment and emphasizes the need for tailored design to address the individual needs of students. When these needs are not met, students face higher chances of experiencing poorer well-being and higher academic stress. This theory is relevant for this study as these three psychological needs will be of utmost importance in the interview sessions. Delving into these separate needs and their relevance for different neurodivergent individuals will allow for topics and specific themes to emerge that can help identify solutions down the road to aid neurodivergent students in coping with academic stress in a way tailored to their needs.

The Current Study

As previously mentioned, the current research and literature on this topic are often aimed at the neurodivergent student community and do not always include them personally, tending to neglect many important aspects of the lived experience and personal accounts. This implies that there might be unaccounted differences between neurodivergent students due to their different diagnoses or combinations thereof. Thus, the current study aims to explore the direct accounts of academic experiences from students who identify as neurodivergent in higher education. During this study, there will be a focus on understanding the challenges and barriers faced by neurodivergent students to better account for factors that contribute to their academic stress. The study will be inspired by the previously mentioned literature and theories.

The study will follow an inductive exploratory approach with the aim of uncovering prominent themes and patterns that emerge from individual interviews. The research questions are stated as follows: 1) *How does academic stress impact students who identify as neurodivergent in higher education?* and 2) *What support can be provided to students who identify as neurodivergent in higher education to overcome academic stress and burdens?*

Methods

Participants

For this exploratory study, participants were gathered through convenience sampling and self-selection sampling. During recruitment, participants were reached through social media platforms such as Instagram, LinkedIn and WhatsApp. Moreover, posters were distributed throughout the campus with information on the study and links to sign up (Appendix B). To be eligible for participation participants had to be 18 years or older, a current student of higher education, and to self-identify as neurodivergent. The study initially consisted of 14 participants; however, one participant's data was removed from the final set due to changes in the interview scheme leaving a total of 13 participants. Students' ages ranged from 19 to 36 (M = 25.69, SD = 5.03) and four males and nine females were present in this study. Moreover, the diagnoses present were as follows: ADHD (n = 5), ASD (n = 3), dyslexia (n = 2), OCD (n = 2), and one participant struggles with stimulation problems with formal diagnosis or identification (n = 1). Some participants had multiple diagnoses, including comorbidities with mental health disorders such as depression and anxiety disorders. Students with mental health disorder comorbidities were still included due to having relevant neurodivergent diagnoses, however, the focus of this research did not involve mental health disorders.

Their nationalities were Dutch (n = 3), German (n = 3), Brazilian (n = 2), South African (n = 1), Maltese (n = 1), Romanian (n = 1), Dutch-Philippine (n = 1), and Indonesian (n = 1). The information about program subject showed a variety of degrees and programs including Psychology, Education, Organic Chemistry, Civil Engineering, International Relations, Bio Engineering, Robotics, and Computer Sciences. The participants also studied in different institutions from countries such as The Netherlands, Germany, Brazil, South Africa, Malta, Romania, and Australia. Three of these participants studied across multiple

higher education institutions globally. All of the participants provided informed consent before the interview started by following a direct link to the consent form in the meeting environment (Appendix C).

Materials

Interview Protocol

For this exploratory study, semi-structured interviews were conducted to provide a space for participants to share their experiences freely. The semi-structured approach allowed for thorough coverage of the topic and allowed for generalizability among the participants while allowing adaptability and flexibility as the participant shared their personal experiences and thoughts on the topic (DeJonckheere & Vaughn, 2019).

The study by Syharat et al. (2023), served as an inspiration for the interviews conducted in this study as the aim of their study also focused on the academic experience directly accounted for by neurodivergent students in the form of focus groups. Therefore their method served as an inspiration regarding topics explored and ethical approaches. All of the questions were informed by theories such as the ecological model of mental functioning, the social model of disability, and the self-determination theory as described in the theoretical framework. This was achieved by implementing the core aspects of the theories into the interview protocol and across questions. Moreover, it was developed based on prior psychological knowledge and research to explore the factors that influence neurodivergent students in higher education. This information allowed for an understanding of several influential for academic stress, inclusion, and access to support, thus informing the design of the questions and allowing for an effective collection of academic experiences and challenges faced by this population of students. With the combination of these inputs, the following topics were included in the protocol: educational experience, barriers faced in academic

context, experience with support or accommodations, and belongingness in the academic environment.

The topic guide is organized into seven different topic sections as shown in Appendix D with the inclusion of five main questions of which four were open-ended and one was closed. For each of the main questions, several sub-questions could be asked if more guidance or further elaboration was needed. In the first section of the protocol, the participant's demographic information is collected through an introduction of themselves. Following that, the topic of educational experience and academic stress is explored and there is a focus on several subtopics.

Firstly, investigating the presence of the “hidden curriculum” and restrictions of the medical model in the academic context, the impact of different modes of assessment and educational design on the participants is explored. This section also explores the psychological needs of autonomy and competence from SDT by examining how these needs are impacted by such factors. Secondly, with inspiration from the social model of disabilities, the topic of academic barriers is explored by looking into several factors such as social, emotional, and physical factors that could affect the academic experience and prevent inclusion. Thirdly, the presence and impact of accommodation and support services offered to participants in their higher education institutions are explored, highlighting the various variations and needs of neurodivergent students as specified in the ecological model of mental functioning. Here, participants are given an opportunity to discuss improvements or suggestions to the university that could aid their academic experience. Fourthly, focusing on the psychological need of relatedness as specified in the SDT, the topic of belongingness for the participants is explored with general questions about inclusion and peer and staff understanding. Hereafter the participants will be given the opportunity to provide feedback

on the interview and their experience with the protocol, this feedback will then be considered for the following sessions.

The interview protocol has been centered around a person-centered approach which prioritizes the individual experiences and perspectives that participants bring forward. Previous research by Cascio et al. (2020) shows that an individual-focused approach is well effective and ethical for this target audience. As reported in their paper, there are five guideposts to follow with regard to this approach, this includes 1) Individualization: individualized support provided to participants; 2) Acknowledgment of lived world: participant's individual experiences are considered and the external barriers they might face are acknowledged; 3) Empowerment in decision-making: participant autonomy and decision making for participants is enabled; 4) Respect for holistic personhood: participants are respected and considered as whole individuals in a safe environment; 5) Focus on researcher-participant relationships: rapport, trust and respect are built between the participants and the researcher. These guideposts were applied to this interview protocol by ensuring tailored interviews specific to each participant and their comfort and by respecting each response and boundary for participants in answering interview questions.

The feedback collected from participants regarding the interview protocol and questions was continuously applied to ensure well-tailored and relevant questions. Additionally, before the first interview, two pilot interviews used the interview protocol with students outside the sample to ensure the questions were understandable and clear. Moreover, the first interview was excluded from the final dataset as it revealed the need to add additional questions for clarity in the protocol. Thus, this interview primarily served to shape and refine the interview protocol rather than inform the findings. The following interviews were all conducted with the protocol which can be seen in Appendix D. The interviews were set online through Teams as previous research by Syharat et al. (2023) posits, online meetings

provide more convenience and allow for higher levels of participation and engagement for neurodivergent individuals.

Procedure

The study received ethical approval from the BMS Humanities & Social Sciences (HSS) Ethics Committee of the University of Twente. After participants decided to sign up and participate given the consent form and prior disclosure of the aim of the study, they received a full overview of the study in the study description which included information such as the timeframe of the interview (60 to 90 minutes), the focus and goal of the study, the relevance of the study, the presence of informed consent and participant rights, and the assurance of secure data storage in a drive offered by the University of Twente. The participants then received a direct link for the scheduled Microsoft Teams meeting to their chosen timeslot through the platform they signed up in, SONA automatically shares this information with the participants and in Google Forms the participants were contacted through email.

Before the interviews commenced, the participants were directed to the consent form in Qualtrics through a link in the chat function on Teams. This consent form confirmed voluntary participation and the right to withdraw from the study at any point without having to provide a reason. Participants were then explicitly asked for consent to record the interview session with the assurance that these recordings were used for transcription and that they would be deleted once this process was completed. Moreover, the participants were assured that identifying information such as their names would be removed and pseudonyms would be used to replace these. The interviews were all conducted in English with the exception of one which was conducted in Afrikaans which was translated for analyzing purposes. The interviews were all conducted during November 2024.

The interview started with participants being given the opportunity to introduce themselves, this was collectively done to build rapport. The participants then received an additional explanation of the research (aim and purpose) and were allowed to ask remaining questions before continuing. The students were informed that broad questions were intentionally created to provide the space and freedom to discuss and explore topics of their choice without steering them toward a specific answer. However, if a question felt too broad, specific sub-questions were available to guide them if needed. Maras et al. (2020) have shown that the use of more specific questions as opposed to broad questions serves beneficially for this target group as it allows for easier focus, recognition and recall as there is no need to exert as much mental effort to apply a strategy to understand a broad question and in turn generate a response.

At the end of the interviews, the participants could share additional thoughts or questions. Hereafter, the participants were asked for feedback and suggestions on the interview process to improve the general experience. This feedback, when feasible, was taken into consideration with every following interview to improve the study approach. Lastly, participants were thanked for their time and participation in the study. The interviews ranged from 17 minutes to 78 minutes (M = 50.64 min, SD = 15.43).

Data analysis

As a preparatory step for data analysis, the interview recordings were all transcribed. For the process of transcription, tools such as Amberscript and Microsoft Teams were used to transcribe the audio recordings of each interview. Teams transcriptions served as a backup to ensure data integrity in the event of any problems with the Amberscript transcriptions. The quality of the transcriptions was ensured by manually reviewing each transcript by reading along while listening to the audio recordings. When necessary, adjustments were made to the transcripts. To ensure and maintain anonymity of the participants, names were removed from

the transcriptions and numbers were assigned to each participant in the form of “Participant X”. Moreover, filler words such as “like”, “yeah”, and “um” along with repeated words that did not add meaning were removed from the transcriptions. Atlas.ti Version 24 was used for analysis in this study to apply thematic analysis to the transcriptions, identifying and analyzing recurring themes and patterns found in the transcripts. Thematic analysis serves as a method to identify and interpret patterns of meaning across qualitative data (Clarke & Braun, 2014).

For this study, an inductive thematic approach was applied, meaning that the themes were identified and analyzed based on how strongly they link to the data itself. However, the interview scheme was prepared with input from the previously mentioned theories, thus there was a theoretical influence present in data collection. When coding, there was a constant attempt to remain open to emerging concepts and insights that were not only related to the contents of the questions. Furthermore, the semantic level was applied when analyzing this data, as the goal is to identify the explicit meanings of what the participants said rather than looking at underlying patterns through expression. For the analysis, the codes will be created by reviewing the data and investigating emerging insights (Braun & Clarke, 2006). Thus, an inductive codebook thematic analysis is relevant because codes are drawn from the data itself with inspiration from prior knowledge and theory. This codebook can be seen in Appendix E along with code definitions and corresponding example quotes. This analysis had a positivist goal of trying to capture the generalizable academic experience for participants.

The six-step guide outlined by Braun and Clarke (2006), was utilized to analyze this data. First, familiarization was established by reviewing the transcripts multiple times to establish familiarity with the content of participants' answers. In this phase, the segments of participant answers that seemed relevant to the research questions or reoccurred multiple times throughout interviews were highlighted without labels. Second, initial codes were

explored with extracts and patterns in the participant's data being identified and highlighted if perceived as relevant (regarding previous research and research questions), prominent throughout interviews, or unique/opposing experiences and opinions. These sections were labelled with the initial codes. These initial codes consisted of keywords capturing the essence of the data. Third, there was a search for themes with the codes being categorized by their meaning. In this phase, initial codes were grouped into themes based on similarity. For example, if two codes concerned stress-inducing experiences with deadlines they were grouped as this helps underline how deadlines contribute to academic stress. However, on the other hand, if one code concerns deadlines but focuses on the social aspect of project work, this code was more appropriate for the theme of social barriers. Fourth, themes were reviewed with the previously marked codes being checked according to the themes they were placed in. In this phase, if certain codes seemed to suit other themes better, they were moved and reevaluated.

Fifth, the themes were defined and named with the previous steps' work being reviewed and the final themes and codes being applied, these final themes along with their sub-themes can be seen in Table 1. The first main theme is *impact of academic experience*, which captures how different aspects of course design and assessment mitigate academic stress. The sub-themes for this theme are *experience with assessment types*, *experience with deadlines*, *experience with course design*, and *remote learning experiences*. The second main theme is *barriers in the academic context*, which addresses how the wider university environment and specific factors impact neurodivergent students' academic stress. The sub-themes for this theme are *social barriers*, *physical barriers*, and *emotional barriers.* The third main theme is *perceived support and recommendations*, which highlights the prior experience neurodivergent students have had with support resources and accommodations concerning their challenges. The sub-themes for this theme are *accessibility to support resources*, *impact*

of support, *received external support*, *suggestions for support improvements*, and *need for social support*. Lastly, the fourth main theme is *belongingness in the academic environment,* which captures inclusion and relatedness experienced by neurodivergent students. The sub-themes that relate to this theme are *recognition and understanding from peers*, *recognition and understanding from staff*, *stance on inclusion in institution*, and *collective support from neurodivergent/disabled community.* Although there were more female participants present in the study, these themes were present in every interview and across sexes, thus no distinctions between sexes will be made.

Table 1

Overview of Themes

Theme	Subtheme
1. Impact of Academic Experience	Experience with Assessment Types
	Experience with Deadlines
	Experience with Course Design
	Remote Learning Experiences
2. Academic Barriers	Social Barriers
	Physical Barriers
	Emotional Barriers
3. Perceived Support and Recommendations	Accessibility to Support Resources
	Impact of Support
	Received External Support
4. Belongingness in the Academic Environment	Recognition and Understanding from Peers
	Recognition and Understanding from Staff
	Stance on Inclusion in Institution
	Collective Support from Neurodivergent/Disabled Community

In the final, and sixth step, the vivid and exact examples were selected and a final analysis of selected quotes were applied and connected to the analysis of the research questions at hand. This will be covered in the following results section.

Results

This study aimed to examine the academic stress of neurodivergent students in higher education and to explore possible solutions to aid these students on their academic journey. The thematic analysis was organized and centered around the two primary research questions for which the different themes gave clear and distinct implications. The first research question *How does academic stress impact students who identify as neurodivergent in higher education?* aimed to uncover the effects of academic stress on the performance and experience for neurodivergent students in higher education. The themes *impact of academic experience* and *academic barrier*s gave insights that are specifically relevant to this research question. And the themes *perceived support and recommendations* and *belongingness in the academic environment* gave insights specifically relevant the second research question *What support can be provided to students who identify as neurodivergent in higher education to overcome academic stress and burdens?*

Impact of Academic Experience

This theme captured the essence of the effects that academic experiences have on neurodivergent students in higher education. It includes statements about their experiences with reference to the academic frameworks and structures set out by their institutions. This theme and its sub-themes provided insight for the first research question as it highlights stressors present within these structures such as restricted assessment types, inflexible deadlines and rigid curricula, which illustrates the negative impacts this has on academic stress and the general learning experience for neurodivergent students in higher education.

Experience with Assessment Types

The sub-theme *experience with assessment types* included the students experience with assessment types such as project work, writing assignments, and exams in higher education and the impact this has on their academic and learning experience. A task

mentioned at a high rate included examinations. The majority of the students reported an increase in stress associated with this assessment type due to volume of study material and the pressure to retain information while also having to cope with specific executive function challenges and deficits. Which, as reported causes a mismatch between the effort they exert and their chances of having successful outcomes. A specific type of examination that was brought up in interviews a lot include multiple choice exams, with the majority reporting negative experiences due to not having the freedom or flexibility to show their knowledge on the topic and due to the necessity of memorisation and time pressure of such exams. Some, however, reported that they prefer this exam type, as it was easier for them to identify the answer when it lies within the options provided.

Other assessment types that were brought up in the interviews included project work, assignments, essay writing, and literature review. It can be seen that students' preferences aligned with their skills and needs, for example, one of the students who identifies with ASD reported that they are very proactive in lectures and tutorials, and find it easy and enjoyable to engage with the different professors. However, due to the multiple-choice nature and the guessing formula applied to the exam, they only perform averagely even though they put a lot of effort into classroom participation. This experience was reported as demotivating and leading to students feeling inadequate.

The impact of assessment type also varied depending on diagnosis. For example, ASD students were more likely to emphasise how overstimulation when working on group projects, was specifically inhibiting. These tasks caused negative experiences with the assessment type of project work for these students.

> "For me that group work was really hitting me hard. And that was just all I could think about at one point. And people were telling me, you need to get this off your

mind somehow. And I just can't it was getting worse and worse." (Interviewee 10 - ASD)

In contrast, students with ADHD were more likely to emphasise the time pressure and perceived higher stakes of exam type assessments. This impact of exams was seen as having a negative effect on the academic experience for this group.

"Especially because here in Germany there is this thing of you only have three tries. And you need to pass them, so that's a lot, you know. And again, that adds to the stress." (Interviewee 6 - ADHD)

For students who identify with OCD, assessment types such as assignments and exams caused pressure and compulsive behaviours. This emphasized a specific aspect of the disorder, perfectionism, and showed how this tendency caused heightened anxiety for the student. The impact of this was seen as causing distress for this group.

"With the constant double-checking, I am not necessarily going to miss anything. There is a very small chance that I cannot hand in something because I am always busy checking everything." (Interviewee 8 - OCD).

On the other hand, for students who identify with Dyslexia, writing as an assessment type caused distress. This assessment type was reported as having a negative impact on the academic experience for these students. This specific challenge was not relevant for individuals with other diagnoses, and specifically presents in dyslexic students as their executive function challenges relate to reading and writing specifically.

"The literature review... Reading tons of papers and trying to make sense of what they are mentioning there and then trying to make a story. You know, that was horrible." (Interviewee 5 - Dyslexia)

Experience with Deadlines

The sub-theme *experience with deadlines* includes statements related to the experiences students had with course design and set up, and how this influenced their academic experience. All of the students reported that deadlines caused pressure and stress. However, in response to that there were two different reactions, on one hand there was the need to stay ahead and start early and on the other hand there was the tendency to procrastinate and leave deadlines to the last minute.

On the side of staying ahead and starting early, students who identify with ASD seemed to be exercising this behaviour most. The impact of this experience was reported to bring relief to the participant as they are able to stay more organized and in control.

> "Assignments are very consistent in length and just how they are structured. So, it's for me easy to then have a weekly overview over what to do as I'm the kind of person that always wants to hit deadlines as early as possible." (Interviewee 3 - ASD)

On the side of falling behind and meeting the deadlines last minute, students who identify with ADHD, OCD, and dyslexia seemed to relate most to this method. A key catalyst in this, as reported by students, included executive function challenges such as time management, planning, procrastination, self-regulation, and managing workloads. Moreover, deadlines were reported to cause pressure, anxiety and the feeling of being overwhelmed for these students. They reported an inability to engage with work before the last minute as a means of procrastinating the stress that goes with an assignment. For students who identify with ADHD, their main executive function challenges connected to deadlines include structural challenges, planning and time management.

> "My biggest struggle was just that everything seemed so much and so overwhelming. A lot of deadlines, this is something I struggle with." (Interviewee 12 – ADHD)

Whereas students who identify with OCD and dyslexia, report their experiences with deadlines to trigger executive function challenges such as procrastination, task initiation, and time-management.

> "I procrastinate so badly, I actually make it difficult for myself. And then it's actually a lot more stressful than it should be because I procrastinate and then the night before I sit there and do the assignment."(Interviewee 8 - OCD)

A few students also shared examples of where they were able to cope with procrastination and avoid the trap thereof when having more breathing room and less applied pressure from the institution. These reports show possible remedies to aid neurodivergent students with their challenges regarding deadlines.

> "I think not having a lot of importance on the final exam and having like it being broken down throughout really helps, not to a point where it's just like there's a deadline every week for every course. But I think having it broken down from a systematic point of view. I think just guides, students in general but specifically also neurodivergent students would also have a better ride to get to the end" (Interviewee 4)

Experience with Course Design

The sub-theme *experience with course design* includes the students experiences with course design components such as curriculum, classroom environment, and teaching methods with regards to how this influenced their academic experience.

Students who identify with ASD reported feeling restricted due to the rules set by institution-specific curriculums. The students reported frustration and dissatisfaction with their institutional frameworks and specific models implemented, emphasizing how strict structures create very high expectations and pressure to conform. This was reported as highly amplifying their academic stress and making them feel that there is no room for flaws.

> “When I studied, computer science, they did not have the Twente Onderwijs Model yet. And, so, I've been able to get a taste of both systems and the older system was a lot more flexible. And another thing is the binding recommendation. Those two, the TOM model and the binding recommendation, those two together, they put a lot of pressure on you and with very little room to spare.” (Interviewee 10 - ASD)

TOM is the educational model implemented at the University of Twente which consists of twelve modules (each worth 15 credits). These modules are spread across three blocks which each make up of one year of the programme. This model has passing requirements for each program for students to continue with the study programme. An important aspect of the model includes what is known as the binding recommendation that is provided to bachelor’s students in their first year of study, and states that these students need to obtain a certain number of credits (45 out of 60 EC) in their first year in order to progress. If there is failure to do so without being excused from the university’s exam board, the student will receive a negative advice and not be able to proceed with their study (University of Twente, 2023 & 2024). This model is an example of the rigid curriculum design described by students.

Students who identify with ADHD reported a variety of experiences with the course design, but one that repeatedly appeared was the feeling that the curriculum was too rigid and did not offer enough flexibility in its design. This involved the requirements of a program in order to be able to participate and continue with the programme, strict deadline requirements, limited options for assessment, and a curriculum that felt more tailored to neurotypical students. This impact was reported as being negative for their academic experience and also influenced the motivation of the students to perform well in the academic environment.

> “It's hot and cold like they require us to think outside the box but at the same time, we also have to follow some curriculum rules and stuff. I would say the Australian

> curriculum is actually pretty great because compared to what I went through with other curriculums, this one is more accommodating. But at the same time, I wish that they would let me express myself out there. Different kind of techniques instead of very a restricted type of pedagogy." (Interviewee 2 - ADHD)

Students who identify with OCD reported that when the course design involved a rigid structure with a lot of things to keep track of, the impact of this was negative for their academic experience as it overwhelmed these students leaving little room to process information and be productive.

> "Last year the year was divided into two semesters and then you have between seven and nine modules in each semester. And then you write exams in the end of the semester and you write off the modules. But from this year they have it in terms, so we have three modules per term, and when you finish the module and the term then you're done with it unless you fail. And I feel it's better this way because now you only have three modules to focus on." (Interviewee 8)

In contrast to otherwise negative reports for this code, students who experiences less extreme executive function difficulties (which was a minority) reported their experiences with structured course design such as different roles for groups within tutorials and structured assessments with weekly deliverables to have a positive impact on their academic experience. The structure was reported as helpful in creating productive working atmosphere for these students.

> "In the first module, it was really structured like every week we had a deliverable, that was quite helping me with my procrastination." (Interviewee 5)

Overall, students who reported on negative experiences with course design also reported a lack of motivations due to factors such as overwhelming workload, unexpected

difficulty and distorted expectations. The students who reported on these experiences also described why certain set ups in their institution effected their motivation levels.

> "Like I noticed, no matter how motivated or excited I was. Like oh this module, I'll be able to properly study and I'll start on time. Like it never works out. No matter how much I hype myself up and it's like, all of the tasks kind of just get shoved to the last moment, no matter how hard I try."(Interviewee 11)

When students reported on positive experiences with course design and a heightened level of motivation in the academic setting, they described motivators such as engaging teaching styles and personal passions as catalysts.

> "I'm very motivated. That's one thing I've noticed. I think I'm really passionate about this, I'm really into this. Computers are a special interest for me. But psychology is also a special interest for me. And it helps a lot and makes me very motivated. And that's how I end up writing those crazy long notes and everything." (Interviewee 10)

Remote Learning Experiences

The sub-theme *remote learning experiences* include the students' prior experiences with online learning experiences and the impact this has had on their academic experience. The students who reported on this code, reported a decreased level of anxiety and positive impact when there were remote options available. It seems that having remote learning provided or offered as a supplement for in person learning was highly valued in order for these students to cope with sensory overload or the pressure and requirements to mask their symptoms.

> "That's also why I loved the lockdown. In terms of education, I loved it. Everything was online. I could take my time to do things. Didn't have to go to lectures. Also, I didn't have to socialize, so I didn't have to mask and things like that. So, it was really, really good for me to be at home." (Interviewee 7)

This experience seemed constant across diagnoses and students reported that they felt their emotional states were more accommodated with hybrid or remote options. Moreover, students reported how remote options accommodated them in times when concentration or other executive challenges such as sensory overload arose. Having an online function on un-social days also was something reported as popular as students did not feel pressured or uncomfortable to physically participate. The remote option served as a remedy for the social challenge. They expressed that due to unpredictable moods there is uncertainty with regards to planning ahead and the desire to go to class with other students and that the online option for lectures allowed them to learn within their comfort. The option of hybrid learning allowed these students to gain more control over their learning environment which as reported by them, helped to reduce academic pressure and stress thus improving their learning experience.

Academic Barriers

This theme captures the essence of the barriers faced by students during their journey in HE. It touches upon several barrier types (social, physical and emotional) and includes statements on how these barriers challenged the academic experience for these students. This theme and its sub-themes also provides insight for the first research question as it illustrates the impacts of barrier types on general academic stress for neurodivergent students in higher education emphasizing how these amplify stress levels.

Social Barrier

The sub-theme *social barrier* includes the social challenges that the students faced that influenced their academic experience. This code links to the prior code of *remote learning options* as they both touch upon the aspect of social barriers and ways to combat this. This code however, places more emphasis on the social aspect alone excluding the element of remote learning.

Participants reported that social factors such as group dynamics, personality clashes, overstimulation, discomfort with social settings, social cues, and social anxiety, prevented them from having positive experiences within the academic environment.

> "It depends on if I know somebody inside a classroom. Because if I don't then I have to again figure out how to act all on my own. Usually, I have a friend or something that already acts a certain way. And then I'm like okay, based on the way that they're acting, I can act in this way. And that makes sense for the classroom. And that can be hard if I don't have anyone because then I'll just focus only on the stuff in front of me in the class and I don't really know how to interact with people." (Interviewee 11 - ASD)

These experiences were caused by different factors, for students who identify with ASD, the social barriers usually consisted of difficulty reading and understanding social cues. It also seems highly important for some of the students to have known faces around, and without that there were reports of heightened anxiety and increased energy to conform in the academic setting. For students who identify with ADHD, the social barriers consisted of overstimulation. This was reported as social settings creating too much noise and social contact, which overwhelmed these students and caused heightened anxiety for them which in turn negatively impacted their learning experience. For students who identify with dyslexia, social barriers were reported to arise from feeling misunderstood or afraid to disappoint others. This fear of disappointment was caused by difficulties in effectively performing in group work due to the accommodated anxiety and feeling of expectation that comes with it. For students who identify with OCD the need to be in control and the fear of being vulnerable served as the social barriers as it held students back from fully participating and thus also had a negative impact on their learning experience.

Physical Barrier

The sub-theme *physical barrier* includes the physical challenges that the students faced that influenced their academic experience. These barriers include sensory challenges faced by the students. Frequently mentioned factors were noise (clicking pens, typing, and conversations), lighting in certain classrooms (white light, flickering lights), room layout (inclined vs. flat lecture halls), and personal space as common physical barriers that effect their academic experiences. This code was only reported by students who identify with ASD and ADHD and was mostly reported as causing distress, distraction and discomfort.

> "I remember very well that there was a kid next to me in one of those exams that was clicking his pen, and I couldn't focus at all because he was clicking so much." (Interviewee 6)

Emotional Barrier

The sub-theme *emotional barrier* includes the emotional challenges that the students faced that influenced their academic experience. Students reported challenges with emotions such as anxiety, confusion, disappointment, frustration, fear of disapproval, fear of disappointment, and more. These emotions were tied to different academic experiences and were reported to have a negative impact on the students. It showed that most of the students spend a lot of time comparing themselves to others and being self-critical which prevents them from making progress with the academic tasks at hand thus negatively impacting their learning experience. The majority of the reported emotional barriers took place in moments of introspection and reflection of students on themselves.

> "I also noticed that I can get very stressed about seeing how people progress and or if people are done with their exams already and that freaks me out in the exam and I'm like, oh God, what if I'm slow? Or what if I'm too fast? Or should I maybe go over the questions more?" (Interviewee 11)

Perceived Support and Recommendations

This theme captures the essence of the support experienced and offered to students as well as the improvements participants feel could be made with regards to the existing systems. This theme and its sub-themes provide insight for the second research question as it illustrates the impacts of existing support structures to neurodivergent students and highlights further support options that could remedy academic stress and challenges for these students.

Accessibility of Support

This sub-theme includes the students' experiences with support and how accessible the support is and clarity on where to locate it. These reports varied per student as they were from various institutions, and the different institutions offer different support services. This showed that there are variations in quality and accessibility of support across different institutions. There were some reports of very positive experiences with the accessibility of support systems. An interconnected factor for these positive reports includes motivation. When students experienced positive support accessibility, they felt more motivated to perform well in the academic environment.

> "We have the RAP, the reasonable adjustment paper. Which is if you think that you can't really handle doing university at a normal pace or you want some extension for your assignments for until you graduate for example. It is sort of like an official transcript document that says look, if the individual wants an extension, there's this one paper they can use every time. It's not like a doctor transfer or general practitioner transcript where you can only use it once, but you can use it on multiple occasions until you graduate, which is nice. You don't have to get interrogated for that; you know." (Interviewee 2)

And there were also some reports of negative experiences with accessibility of support systems. These reports of negative experiences with support were connected to lower levels of motivation in the academic setting for these students.

> "I think there are official options for special accommodations, but we were never properly informed about that. I would have loved, for example, to have like not necessarily mental health, but also neurodivergent options." (Interviewee 7)

These different experiences with regards to accessibility of support did not really seem to have any different effects across diagnoses. However, there were differences in support accessibility identified across institutions in various countries with some being very open and accommodating to neurodivergent students and others being more negligent towards them. This indicates cultural variability in accessible support for neurodivergent students in higher education. When there was a lack of support and awareness, this was clearly described as having a negative impact on participants academic experience.

Impact of Support

The sub-theme *impact of support* includes the reports made by students regarding their previously received support in the academic environment and the effects these supports had. As previously found with the *accessibility of support*, the results for this code varied too. On one hand some students reported a positive impact of support describing how this aided them in coping with academic stress.

> "Their support actually sort of switches off that irrational fear mode. So, I'm able to do my assignment comfortably and knowing the fact that I can actually extend my assignments indefinitely or something like that." (Interviewee 2)

And some students reported negative impact of support. These were reported to cause students to feel unseen and misunderstood. It also made students feel that there was a lack of effort and seriousness with regard to proactive student accommodation.

> "Also, I did realise, I have the feeling that the committee that judges these things really doesn't understand what mental health is. And I wonder how much they really consult psychologists or really inform themselves on these things. They didn't even

> talk to me. They just saw my application and then just made judgments. And then they made the judgment based on my ability of whether I would have been able to do something, how do you know if you didn't even ask me?" (Interviewee 9)

These impacts of support seem to have no specific ties to the diagnosis, however, there was a reoccurring theme of institutional barriers and recognition challenges present in the reported impacts across all students. These reports show how poor understanding of diagnoses and their impact leads to these students not receiving support or understanding from their academic institutions. In the answers the students provided there was a need of support systems that address the diverse needs of students present.

> "I feel like a good, first step would be actually hosting a meeting with various professors and inviting all neurodivergent students to attend there. The problem will be that there won't be a lot of people attending, but the best opportunity of changing something would just be to have a meeting with all of the teachers and tell them the impression" (Interviewee 3)

Received External Support

This sub-theme includes the reports form students regarding the support they received from their external community outside of the university. This includes formal support such as psychologists and therapists as well as informal support such as support from family and friends. Majority of the students reported positive impacts of receiving external support. These support systems motivate the students to keep going and fully engage in the academic environment. Formal support has been reported to give students the clarity to understand their diagnosis and situation better.

> "Also just talking about other struggles with my psychologist to figure out like, oh, even though I set these boundaries, I'm still doing things that just really are destructive for how I work." (Interviewee 9)

Alternatively, there were also students who expressed that the lack or delay of formal external support outside of the university had a negative impact on their academic experience. Reports from students highlight the benefit and importance of a diagnosis as it allows for neurodivergent to seek out tailored support from their institution. Additionally, it emphasizes how a diagnosis has a disproportionate effect on neurodivergent students' performance in their degrees. Reports from students underline how neurodivergent students sometimes need time to find the right match for them in order to thrive academically.

> "If you come to university and you already have a diagnosis, you already know what your problems are. You can immediately, get your support network in place, right? But when I studied the first time around, I did not have a diagnosis yet. And so I was only finding this out after the fact when I essentially already kind of messed everything up and so I think back then the, the facilities were a lot more limited than they are now." (Interviewee 10)

Important to note though, some students reported the negative effect of a formal diagnosis due to stigma and prejudice that often comes with the label and preset ideas of an institution towards the neurodivergent community.

> "A lot of the times it was just like, oh, you're just hyper. Oh, you just can't spell. But a lot of the times it also would influence how you study, how you work, how you process information. You know what I mean. No one really explains that until you experience it." (Interviewee 5)

In terms of informal external support, the students who received this support at an early stage from family, friends and external groups reported more positive impacts than those who only received it once they already had made a start in higher education. Across all of the interviews, the students expressed a need for social support from others to reduce the feeling of being alone and having a social network in place on which they can rely. The

students described going through challenges that would have been easier to work through with advice or tips from others.

> "Just knowing you're not alone, first of all. And also being able to speak to a sort of like mentor or some person who understands it, first of all, but also can help you get directions to other resources or other people. That's great." (Interviewee 10)

Belongingness in Academic Environment

This theme captures what effects belongingness has on this student population. The statements include aspects of inclusion, understanding, and support experienced by the participants during their academic experience. This theme and its sub-themes also provides insight for the second research question as it illustrates the impacts of community and inclusion neurodivergent students which alludes to the importance of belongingness as a support in aiding these students to overcome academic stress and burdens.

Recognition and understanding from peers

The sub-theme *recognition and understanding from peers* includes the reports from students on the presence of peer understanding, recognition and support with regard to the student's needs and preferences during their academic experiences. It connects to the code *impact of support* as it also provides insight on the effects of support or the lack thereof but focuses more on the peer environment specifically in order to shed light on the factor of belongingness in the academic environment.

The majority of the students reported on positive experiences with peers, where they received understanding and support from them. On the one hand, students expressed that this support was helpful in many aspects, such as keeping each other motivated, feeling seen and understood and having peers to lean on.

> "One thing I really did appreciate from my course mates is that, because half of us were all like struggling with deadlines anyways, and you know, everyone's kind of

having their own issues, it was a lot more forgiving. So, the environment is a lot more forgiving. It was like, okay, this is where you tell us what you got. Okay, let me take a look. Let me see." (Interviewee 4)

On the other hand, some students reported negative experiences with peer support and understanding, in the sense that they reported feeling the absence of this understanding. This was reported as having a negative impact on their academic experience, specifically in the context of collaborative work. This was mostly due to feeling misunderstood and excluded.

"The way I interact is I'm honest and direct, so some people have the tendency of feeling like I'm being disrespectful, rude or things like that, when in reality that wasn't my intention at all. I just want to say something. But if people then wrongfully assess something I say and then they go into the step of making assumptions and not giving me the opportunity to explain myself." (Interviewee 3)

Recognition and Understanding from Staff

This sub-theme is similar to the prior one, except it includes the reports from students on the presence of staff understanding, recognition and support. It connects to the code *impact of support* as it also provides insight on the effects of support or the lack thereof but focuses more on the staff support specifically in order to shed light on the factor of belongingness in the academic environment. The results for this were quite mixed, with some students feeling positive support and understanding from staff and others feeling the lack thereof. There were also a few students who felt that the staff were trying to fulfil supportive roles but that they just were not sufficiently informed on the topic.

"So, it's like I do notice that if tutors and teachers and study advisors are made aware of it, then they do try to figure out how to solve issues for you. But I do notice that they're not really aware of where the issues come from. So, I can notice sometimes there's a bit of a communication barrier." (Interviewee 11)

The students who reported on positive experiences with this, mentioned the support and feeling of care coming from staff in response to challenges they faced. This experience was described as having a positive impact on the students' academic experience and creating a feeling of belonging.

> "And I sensed this could be a problem because I noticed a tension in the group and stuff. And so, I just asked if I could talk to her about it, and I thought this was going to be like a 15-minute conversation, but she ended up talking to me for like an hour and a half. And this happened several times. And she's so open to this, it's crazy. And she seems so committed. She really cares." (Interviewee 10)

On the other hand, there were a few participants who reported on negative experiences with staff, where they felt that there was a complete lack of understanding and support.

> "There was also a particular lecturer in Malta who I'm pretty sure failed me twice on purpose because he did not believe that this dyslexia thing was a thing. So that was fun." (Interviewee 4)

Stance on Inclusion in Institution

The sub-theme *stance on inclusion in institutions* includes the students reports on their perception of inclusivity in their higher education institution. Despite the policies being different across the different institutions, there was a big trend in students expressing a lack of inclusion in their institutions. These students expressed that they do see efforts to provide special facilities such as extra time on exams or a separate exam room, but they do not feel that this is inclusion.

> "But it very quickly feels like university things. It's just about offering perks or privileges. If you earn somehow neurodivergent or somehow other abled. And that helps but in my opinion that's not inclusion." (Interviewee 9)

This shows that the students feel like the university offer adjustments and token benefits (such as extra time on the exam) for students who fit the criteria, but that they do not feel as though the space has been made inclusive and tailored for all. These reports underline that some of the neurodivergent students, regardless of provided benefits, often feel like they are a problem that the university tries to solve and not like they are welcomed and wanted. Additionally, many students, described that they do not feel like their institutions are actively doing enough to ensure inclusivity, and that the student associations do more to try and achieve this than the university itself. Students reported that their universities attempt to show awareness and care in statements towards neurodivergent students but that there is a lack of actual changes with regards to this.

> "But I generally don't feel like there's a lot of discussions, even about inclusion. I at least haven't noticed that, it's just someone neurotypical, someone neurodivergent. But I don't think there's any active integration happening." (Interviewee 3)

Collective Support from Neurodivergent Community

The sub-theme, *collective support from neurodivergent/disabled community* illustrates the support that students have received from individuals who relate to them or have similar situations. Overall, this support was reported as having a positive impact on students' academic and personal experiences. The students reported a sense of community and trust amongst these support systems.

> "And I was working with someone who also had the same diagnosis as me, and it was weird to see that we went through the exact same process and it's just like, oh wow, like I'm not alone." (Interviewee 4)

There was however, one report from a student that illustrated the effects of a neurodivergent student who felt they would not relate or benefit from a collective network.

This student expressed how their differences cause uncertainty to whether they could relate to the other neurodivergent students in such a network.

> "And also, because there's such large difference between people and how different neurodivergencies express themselves within people, it's also hard to say if I can immediately just relate to them because, they have ADHD or they have ASD. It doesn't always, I don't know, compare to my own experiences." (Interviewee 11)

This shows that within the spectrum there are also different social and support needs and that some neurodivergent students could be hesitant to participate and therefore struggle more from benefitting from a collective support group.

Discussion

The current study explored the academic experiences of students identifying as neurodivergent in higher education, investigating their experiences with academic stress and support options available. The results of a thematic analysis showed that these students experience heightened academic stress amplified and catalysed by rigid course design, stress-inducing assessment types (such as multiple-choice exams), limited deadline options, and limited support options. These factors also impacted students' executive functioning, academic performance, and wellbeing. Moreover, there were several influential barriers including social, sensory, and emotional challenges (like frustration and feeling misunderstood) that further compounded the academic stress. Lastly, the results illustrated that while the presence of an accessible and proactive support system aided these students in coping with academic stress, many institutions still lack the necessary practices that could facilitate such support leaving neurodivergent students feeling unsupported and not belonging. Student reports indicate that structural changes such as flexible deadlines, diverse learning options and proactive involvement from the institution serve as critical factors in

mitigating academic stress as it provides a basis for support and gives these students more control over their learning experiences considering their diagnoses and strengths.

RQ 1: Impact of Academic Stress on Neurodivergent Students

This section addresses the first research question *How does academic stress impact students who identify as neurodivergent in higher education?* by illustrating this impact through stress-inducing factors such as rigid curricula, inflexible assessment-types, strict deadlines, remote learning, and influential barriers.

Impact of Academic Experience

Assessment type served as a catalyst for academic stress when there was a mismatch between the required assessment and individual diagnosis features. Neurodivergent students perform differently based on diagnosis-specific symptoms and executive function challenges (Clouder et al., 2020). For example, dyslexic students struggle with writing assignments due to language processing difficulties. Similarly, deadline management and organization had stress-inducing effects with most students reporting challenges with task initiation and procrastination. Conversely, ASD students preferred to start early and stay in control. Supporting this exception, Scott & Sedgewick (2021) showed that for ASD individuals' control is crucial to perform and a causal factor of this is independence in their work and study place. Overall, there was a consensus that a more flexible deadline design would be desired to mediate stress levels.

The presence of rigid and inflexible course designs (such as passing requirements to advance in programmes, and neurotypically tailored curricula) further amplifies academic stress and pressure to confine for neurodivergent students highlighting the presence of the "hidden curriculum". This prevents students from fulfilling the needs of autonomy, competence and relatedness specified in the SDT (Deci & Ryan, 2000). For autonomy, the lack of transparency and restricted options eliminate the student's choice to take control over

their educational lives. For competency, the curriculum imposes unspoken expectations of high executive functioning (such as time management, organization, and multitasking) which prevent the student from feeling capable of meeting the academic standards. For relatedness, the curriculum imposes implicit social norms which leads to exclusion due to an inability to conform to the undocumented social expectations.

Lastly, remote learning had a notable positive impact on neurodivergent students in this study allowing them to learn in their own environment and according to their own emotional boundaries. This allowed students to avoid sensory overload, the pressure to mask, and unpredictable moods. Research by Öhrstedt et al. (2024) corroborates this as they showed that distance learning allows for more equal participation and offers advantages (such as flexibility and the option to combat challenges) to neurodivergent students depending on their disability and symptoms. The social model of disability is relevant as it illustrates how having the option of attendance allows these students to cope with individual barriers they might face (Holton, 2022).

Barriers in the Academic Context

Barriers in the academic context consist of social, physical, and emotional factors. Within this, challenges with group dynamics, social cues, sensory factors, and emotional elements (e.g., self-doubt) increased academic stress. Highlighting the effects of factors external to the academic environment and creating a clear picture of the general experience for neurodivergent students by providing more insight on influential factors.

Aspects such as motivation and executive function challenges were big catalysts for these barriers, mostly exacerbating these stressful experiences. For example, when students reported on experiencing overstimulation in project work, they lacked the motivation and will to work with others socially, which in turn served as a social barrier and increased academic stress. This corroborates the social model of disability highlighting the presence of various

barriers for students and underlining the effect that this has on their academic experience and perceived inclusion (Holton, 2022). Physical and emotional barriers directly affect students academically as this disrupts them and causes them distress drawing their attention away from the academic task; whereas social barriers affect students academically and socially as it prevents them from participating with other students and thus can lead to exclusion and hesitation of participation. The ecological model of mental functioning underlines the presence of diverse mental needs and challenges which is important to consider in establishing an inclusive educational environment because these barriers vary individually and should be addressed when considering academic performance (Chapman, 2021).

RQ 2 – Support to Aid Neurodivergent Students in Overcoming their Academic Stress

This section addresses the second research question *What support can be provided to students who identify as neurodivergent in higher education to overcome academic stress and burdens?* by illustrating how efforts such as proactive involvement from the institution, tailored support according to different diagnoses, neurodivergent options, and belongingness can reduce academic stress for neurodivergent students in higher education.

Perceived Support and Recommendations on Support to Overcome Academic Stress

A clear distinction was made for support availability and impact; when support was effectively implemented and accessible, neurodivergent students experienced less academic stress and more motivation in the academic environment. However, when support was absent or lacking, neurodivergent students experienced more academic stress and less motivation in the academic environment. Moreover, diverse impacts of academic support were highlighted showing that positively, certain accommodations (such as the Reasonable Adjustment Paper which allowed a student to extend a deadline for valid reasons) alleviated stress and emotional burdens in difficult times. Negatively, the lack of support and understanding from staff regarding neurodivergent disabilities and specific challenges tied to these, established

feelings of being unseen and created more strain on these students. As a solution for these experiences, students recommended university's to be more proactive and representing of neurodivergence. This corroborates the self-determination theory highlighting how positive experiences can increase student autonomy and competence while also emphasizing that the social aspect of support can facilitate relatedness (Deci & Ryan, 2000).

Additionally, a key recommendation was the implementation of multiple (but equal in criteria) modes of assessment which accommodate the diverse needs and strengths of neurodivergent students. Clouder et al. (2020), support this as they showed that alternative equivalent forms of assessment could benefit neurodivergent students in coping with stress and completing assessments given their symptoms. A possible solution would be to implement a universal design for learning strategy (UDL) which is a framework for instruction that considers the emotional, social and academic diversity in the academic context while utilizing this diversity to establish a classroom space embracing respect and inclusion requiring that the curriculum and educational set up is accessible to all learners (Barteaux, 2014). However, implementing UDL in a large course or programme can be challenging due to all the contributing factors and the vast number of individuals with diverse needs. Therefore, reasonable and targeted adjustments such as offering flexible assessment modes, deadline adjustments and multiple modes of learning based on students' diagnoses and needs could form the basis of creating accessible and inclusive environments. This could improve academic performance and mitigate the academic stress for these students.

Moreover, two forms of external support were of importance for these students, informal (e.g., family and friends) and formal support (e.g., therapists or psychologists). Informal support was very valued, with students expressing its emotional benefits and sense of community. Emphasizing these benefits, the social model of disability states that the lack of such support to neurodivergent students can lead to higher academic stress and difficulty

facing challenges (Holton, 2022). Formal support allowed students to understand and manage their diagnoses better. However, outside individuals often assumed understanding neurodivergent students' situations and challenges due to stigmatized views and preconceptions about certain diagnoses. The medical model is relevant to these findings as it illustrates how a diagnosis can cause stigma and prejudice concerning symptoms and behaviours (Stenning & Rosqvist, 2021).

Belongingness in the Academic Environment on Support to Overcome Academic Stress

The presence of institutional inclusion was shown to reduce academic stress and improve general well-being for neurodivergent students in higher education. This support took form in various ways such as peer and staff support, and general institutional inclusion. Regarding peer support, there was a notable positive impact on students' academic experiences due to the feeling of acceptance and respect among peers. However, regarding support from staff, there was a desire for them to be more educated on neurodivergent-specific struggles as there appeared to be a gap in attempting to provide accommodating options and actually understanding the depth of challenges for these students. This implies that being educated on diagnoses and symptoms could aid in staff support and improve the general academic experience for students in this population. The effect of "under-medicalization" is relevant here, showing that neurodivergent individuals are often denied access to the acknowledgement of their conditions along with the rights and benefits associated with their diagnoses (Gauld et al., 2024). Moreover, participants generally expressed a lack of efforts institutionally to achieve inclusion, describing the presence of tokenism through benefits such as extra time and separate rooms for the exam but no active integration or efforts to include the neurodivergent community. Tokenism is a "a merely symbolic gesture that suggests commitment to a practice or standard" (APA, n.d.). This relates to the medical model illustrating how institutions provide support based on diagnostic

features, without considering the individual lived experiences for students, failing to address the mental needs of all neurodivergent students (Hogan, 2019).

Lastly, the findings highlighted the importance of receiving collective support from other neurodivergent students, with students expressing how this relieved stress due to a shared understanding and sense of empathy from each other. Relatedness is present here as the results underline the importance of this need and how when it is neglected, higher stress and lower well-being is more likely for neurodivergent students (Deci & Ryan, 2000).

Strengths and Limitations

Strengths

From a content-based perspective, this study provided significant insights to the research questions at hand, capturing causal factors to academic stress and solutions for neurodivergent students. By adopting a multidimensional approach through the use of the theoretical framework the data collection was enhanced and relevant responses were ensured. The findings highlighted the differences between diagnoses in the academic environment (such as assessment challenges that relate to certain diagnosis) thus effectively challenging the view of the traditional medical model which does not account for individual differences in preferences and strengths of neurodivergent students (Stenning & Rosqvist, 2021). This study followed a holistic approach, acknowledging the lived experiences of various neurodivergent students and amplifying their voices by bringing their specific desires and suggestions in this context forward. This sheds light on the diagnostic differences among neurodivergent students and highlights the need for a multifaceted design. A representative overview of the neurodivergent experience is crucial in designing an inclusive, supportive educational environment (Clouder et al., 2020). To create such environments important catalysts to consider include group dynamic challenges, social cues, sensory challenges and emotional challenges. Moreover, a range of different influential factors for academic stress was

illustrated and provided insight on specific solution-based targets. This research has contributed to bridging the gap described in the theoretical framework by shifting the focus to *include* neurodivergent students rather than target them as a general group.

From a methodological perspective, the study implemented a person-centred approach for ethical and effective data collection focusing on each individual participant ensuring their comfort and establishing respect (Cascio et al., 2020). This approach allowed participants to feel more comfortable to share and engage freely allowing for a more detailed overview of their experiences. Moreover, the interview protocol was adjusted according to participant understanding of the questions and prior practice rounds and students were informed at the start of the interview that if questions felt broad, they could request more specific ones to ensure no confusion or misunderstanding. Prior research implies that open-ended questions and a welcoming environment is beneficial in creating a safe space for neurodivergent students to share their experiences (Tay et al., 2019). This resulted in better interviews as it allowed for participants to go into more depth regarding their experiences due to clear comprehension and comfort.

Limitations

From a content-based perspective, the study aimed to include students from various diagnoses to get a broader perspective of the neurodivergent experience spread across diagnoses. This approach provided some insight on underrepresented diagnoses, however the majority of participants identified with ASD and ADHD, thus these two diagnoses are most represented in the data and other diagnoses were less represented. This implies that there are likely unaccounted experiences and challenges that are not included in this study. However, due to the limited time allocated for data collection, recruiting more students with different diagnoses was not viable.

From a methodological perspective, the lack of sufficient samples from specific institutions serves as a limitation as it prevented specific advice and conclusions with regard to institutional curriculum and designs. While cultural difference was not a focus point of this study, the design also neglects the differences that could be present across cultures, which should be considered in further research. Another limitation of the study was that some of the participants were known by the researcher on friendly terms. Previous research has shown how this can cause a bias as the participant may assume the researcher already understands their answer and what they are implying due to their pre-established connection (McDermid et al., 2014). However, due to the use of the interview protocol and set questions this effect was likely combatted as the themes and topics in the protocol were prepared in advance in relation to theory and prior knowledge with the questions set to all participants in the same way.

Practical Implications

Based on the current findings, students have indicated a need to be heard and included in their institutions. This implies that future researchers can draw from this need and further investigate the positive impact this might have on neurodivergent students. Based on the suggestions from the students, inclusive spaces can be established through equal participation and amplification of the neurodivergent student voice. A step to take in achieving this could include creating spaces for neurodivergent students to provide feedback on educational aspects such as assessment and course design at panel meetings to facilitate more inclusion and understanding as the institution creates a space for the students to give direct feedback and ideas. Having this representation within an academic institution is very important as it facilitates student belonging and aspiration (Hamilton & Petty, 2023). Moreover, providing a space for students to get together and share experiences could establish a collective support

network which can improve the general wellbeing and social identity for neurodivergent students (Fotheringham et al., 2023).

Providing multiple modes of assessment has also been reported as highly desired by students as it would allow them to present their knowledge in ways suited to their academic needs Clouder et al. (2020). Previous research has shown that the choice of assessment style is potentially beneficial for neurodivergent students and for others with accessibility needs as it could provide a tailored approach matched to these students' learning styles and ensuring better performance (Hopkins, 2023). However, for this to be a feasible implementation there are several factors to consider such as fairness of assessment types offered, and processing and grading time required for assessment types.

Moreover, creating inclusive policies in institutions (such as previously mentioned flexible assessment, flexible deadlines, proactive (and mandatory) neurodivergent awareness for staff, and inclusive educational design that considers all student voices) would allow students to combat their barriers and feel more represented and included in the university, allowing for greater well-being and academic performance. This would also foster the aspect of relatedness for this population of students and would establish a better connection between student and institution (Fotheringham et al., 2023). Lastly improving the communication and clarity on support services would greatly help neurodivergent students identify and locate support services as students have reported not knowing where to look or finding out about the accommodations much too late as it was not clear.

Suggestions for Future Research

The generalized approach of including students from several countries in this study brought forward the possibility of unaccounted cultural difference for neurodivergent students in higher education. In this study there were many different cultures present, however, as this was not the focus of the research it was not investigated. There were,

however, interesting insights on the different views and opinions towards neurodivergence in higher education, with some cultures seeming more close-minded and negligent toward it (Romania) and some more open-minded and welcoming (Australia). These results however, are not sufficiently supported in this study and therefore inconclusive and need to be further researched to validate such differences.

Regarding previously mentioned solution-based suggestions, it is important to note that the effects of institutional adjustments to achieve inclusive education should be interpreted and considered with caution as these are ideas that still need to be implemented in practice to prove its effects. Therefore, future research should consider a longitudinal approach that investigates the effects of specific policy adjustments (flexible modes of assessment, proactive involvement, and collective support networks) over time to see if they are constant and significant. Moreover, the effect of remote learning can also be further studied and implemented to show its effects on neurodivergent students. This can be done by providing more hybrid options and doing experiments with control groups to investigate which method is most preferred.

The findings of this study could also be tied to mental health challenges in general as several students were diagnosed with anxiety disorders or depression alongside their neurodivergent diagnoses. Many of the experiences and challenges they faced were relevant and similar to the rest of the participants who had only neurodivergent-specific diagnoses. This would be interesting for future research to explore as it could imply that a solution for neurodivergent academic support could cater to a broader population that includes individuals with mental health disorders.

Conclusion

Overall, the findings of this study hold significant insights on current academic experiences and stress faced by neurodivergent students allowing for institutions and

academic policymakers to gain a better understanding of what can be changed and done to aid this population of students in overcoming their academic stress and performing well academically. It highlights the various challenges faced by neurodivergent students in higher education ranging from assessment-related challenges to a lack of inclusion, and underlines how these challenges serve as catalysts of academic stress. The key findings imply that curriculum adjustments such as offering multiple modes of assessment, proactive support from the institution, and more learning options, would aid in supporting these students in their academic life despite their diagnosis-specific challenges and preferences. Implementing such changes can also allow for institutions to foster a prejudice and stigma-free environment for all students. However, further research is also crucial to confirm and test long-term effects of educational policy adjustments. This study contributes to the body of work dedicated to this topic and highlights the necessity for the academic challenges expressed by neurodivergent students to be addressed. Furthermore, it contributes to bridging the gap in including neurodivergent students first-hand to understand their lived experiences which serves as a base to understand and adapt to them in the academic environment in order to promote their well-being and success.

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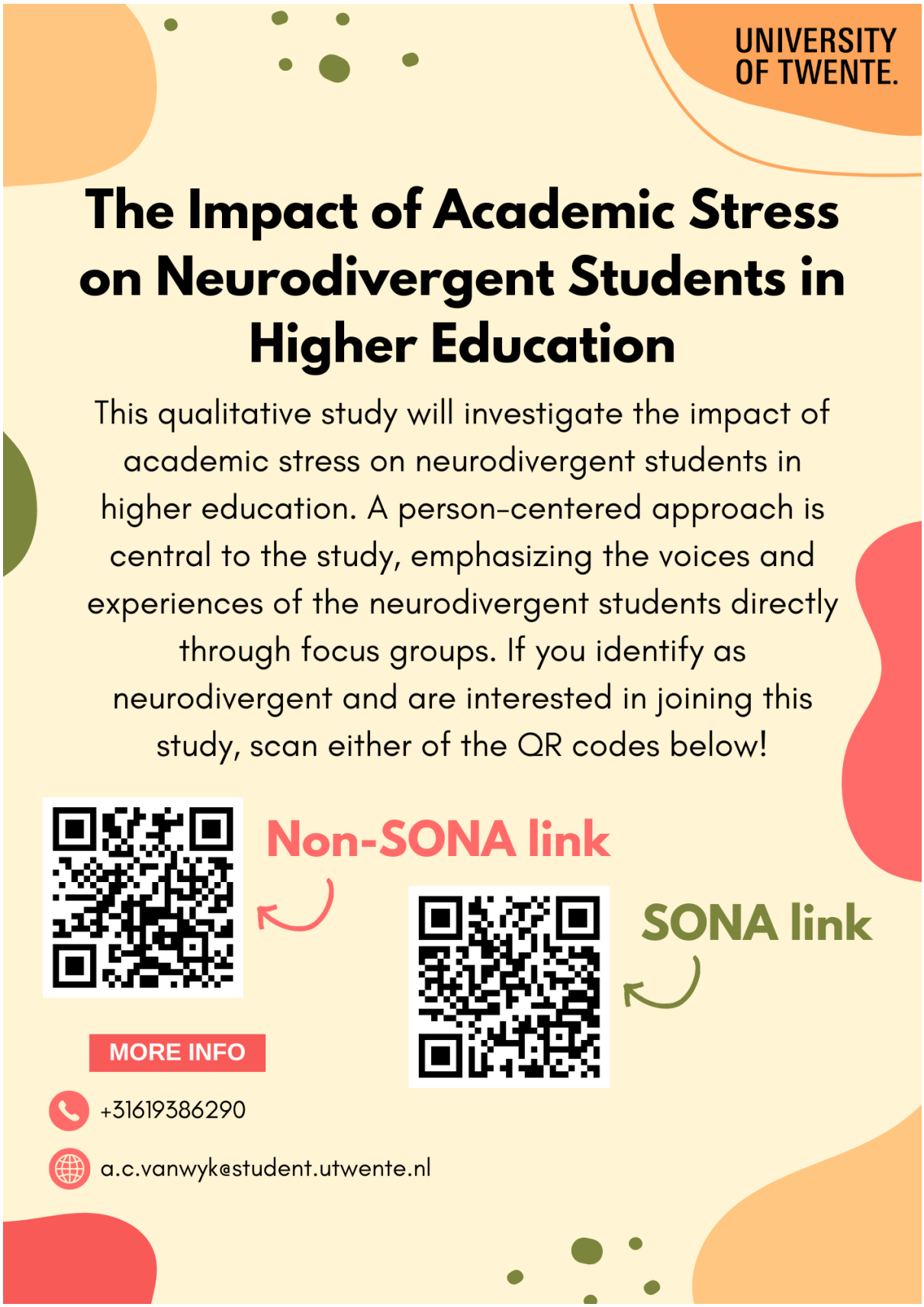
Appendix A

AI Statement:

During the preparation of this work the author: Alexis Catherine van Wyk made use of Chat GPT and Word Editor in order to assist with spell-checking, brainstorming, minor revision suggestions for concision, and feedback on flow of text. After using this tool/service, the author: Alexis Catherine van Wyk reviewed and edited the content as needed and take(s) full responsibility for the content of the work.

Appendix B

Recruitment Poster:



Appendix C

Consent Form:

Informed Consent

Welcome prospective participants!

The focus of this research is on understanding academic experiences and stress for the population of neurodivergent students of higher education. For this study, you will be invited to a focus group session where you and a few others will be presented with the topic of academic experience and stress. You will be provided with questions relevant to this topic and you will be given the opportunity to discuss and answer these questions with other neurodivergent participants. This session will be recorded for analyses and responses will be kept completely confidential. Names and any identifying information will be pseudonymized and removed in the transcripts.

The aim of this research is to shed more light on the experiences of neurodivergent students to create more awareness for universities on how to work with and accommodate to this population of students productively and fairly.

The focus group will be a maximum of 60 minutes, with 30 additional minutes scheduled for those who would like to ask questions or discuss concerns with the researcher. The session will include individuals such as yourself who may identify with different diagnoses that fall under the umbrella of "neurodivergent".

Your participation in this research is completely voluntary and you have the right to withdraw at any point during the study. All data collected will be anonymized and will only be viewed and accessible by the researcher. It will be ensured that no results can be traced back to you. And the data will be stored and encrypted using the secure storage drives offered by the University of Twente. After the research study is completed, the data will be disposed of by also following the guidelines set by the University of Twente.

For any questions or curiosities, you can contact the main researcher of this study: Alexis Catherine van Wyk (a.c.vanwyk@student.utwente.nl)

Supervisors:
Alieke Mattia van Dijk (a.m.vandijk@utwente.nl)
Steven James Watson (s.j.watson@utwente.nl)

By consenting below, you acknowledge:

- Your participation in the study is voluntary.
- You are 18 years of age.
- You are a university student.
- You identify as neurodivergent.
- You are aware that you may choose to terminate your participation at any time for any reason.

I read the informed consent, and agree to participate in this study. My results can be used for the purpose of the study.

◯ I consent, begin the study
◯ I do not consent, I do not wish to participate

Appendix D

Interview Protocol and Guide:

Action	Description (Questions & Follow-up)
Welcome and informed consent.	Welcome the participants, direct them to the consent form link and let them fill it in. Answer any upcoming questions from participants in this time as well.
Introduction.	Introduce myself as a researcher to set the tone and give an example. Allow the participants to introduce themselves and their diagnosis (if they feel comfortable to do so).
Reminder of study purpose – Academic experience and academic stress for neurodivergent students.	Restate the aim of this study to the participants, the contents and themes of the focus group so that they have an idea of what to expect, and address any questions participants may have.
Question round 1 – Experiences in higher education.	Set the first question (*What has your educational experience with tasks and assessments in higher education been like?*) to participants and answer questions in case clarification is needed. Specific questions if needed: - *Could you describe your experience with writing in higher education?* - *Could you describe your experience with exam-taking in higher education?* - *Could you describe your experience with deadlines in higher education?* - *Could you describe your experience with project/group work in higher education?* Prompts: - *Tasks and assessments such as exams, group projects, writing assignments, presentations etc.* - *How do you feel about the assessment types offered in your university programme? Do the options align with your needs as a student?* - *Are there specific factors (institutional - curriculum, societal or personal) that influence the way you experience these?* - *Do you think the classroom environment and course design at your institution influences these experiences?*
Discussion of question 1.	Allow participants to discuss their thoughts on the question and track their answers in case a further question automatically gets covered → in this case extra time is given to discuss the following question (*If any, can you describe barriers you have faced in your experience of participating in a higher education program?*) too.

Question round 2 (if uncovered) – Barriers faced in higher education.	Set the second question (*If any, can you describe barriers you have faced in your experience of participating in a higher education program?*) to participants and answer questions in case clarification is needed. Specific questions if needed: - *Have you experienced barriers in the curriculum/set-up of your study?* - *Have you experienced barriers with certain assessments or assignments?* - *What have your experiences with the teaching styles in your institution been like?* - *Have you had access to academic support?* - *Have you experienced barriers in social or classroom settings?* - *How does the physical learning environment influence your educational experience?* Prompts: - *Barriers: institution specific, academic challenges, financial challenges, mental health, time management, social factors, lack of support, discrimination, exclusion, accessibility, etc.* - *Barriers related to assessment taking, social interactions, academic integration, etc.* - *These can be specific to you as an individual or your experience within a group.* - *How do you think the barriers faced influence the aspect of inclusion in the university community?*
Discussion of question 2 (if uncovered).	Allow participants to discuss their thoughts on the question and track their answers in case a further question automatically gets covered → in this case extra time is given to discuss the following question (*Have there been certain accommodations/support services provided to you that impacted you during your time within your higher education institution?*).
Question round 3 – Previously experienced accommodations or supports.	Set the third question (*Have there been certain accommodations/support services provided to you that impacted you during your time within your higher education institution?*) to participants and answer questions in case clarification is needed. Prompts: - *Can you describe how these accommodations/support has impacted you (positively/negatively)?* - *What do you think caused this experience?* - *Did you reach out or search for support services or were they made readily available/clear to you?*
Discussion of question 3.	Allow participants to discuss their thoughts on the question and track their answers in case a further question automatically gets covered → in this case extra time is given to discuss the following question (*What do you feel would help improve your general learning and academic experience?)*.

Question round 4 (if uncovered) – Need focused support options.	Set the fourth question (*What do you feel would help improve/support your general learning and academic experience?)* to participants and answer questions in case clarification is needed. Specific questions if needed: - *If any, what changes or adjustments to the curriculum and course set up would help you in your academic experience?* - *If any, what changes or adjustments to the assessment procedure would help you in your academic experience?* - *If any, what changes or adjustments to the teaching stiles in your institution would help you in your academic experience?* - *How do you feel about the accessibility of mental and academic support in your instituition?* - *If any, what changes or adjustments to physical learning environment would help you in your academic experience?* Prompts*:* - *What type of support would you prefer/appreciate?* - *In what ways do you think support can be made more accessible/readily available?*
Discussion of question 4 (if uncovered).	Allow participants to discuss their thoughts on the question and track their answers in case a further question automatically gets covered → in this case extra time is given to discuss the following question (*How would you describe your experience as a student who identifies as neurodivergent students within your institution?)*
Question round 5 (if uncovered) – Need focused support options.	Set the fifth question (*How would you describe your experience as a student who identifies as neurodivergent students within your institution?)* to participants and answer questions in case clarification is needed. Specific questions if needed: - *Do you feel that your peers recognize and understand your needs as a neurodivegrent student in group work? If yes, please elaborate.* - *Do you feel that your instructors and teachers recognize and understand your needs as a neurodivegrent student? If yes, please elaborate.* - *Can you describe your stance on feeling included and represented within your institution as a student who identifies as neurodivergent?* Prompts*:* - *Do you feel like this experience influences your sense of inclusion in the academic setting?* - *What is your opinion about policies regarding inclusivity and diversity within your institution?*
Discussion of question 5.	Allow participants to discuss their thoughts on the question and track their answers in case a further question automatically gets covered → in this case extra time is given to discuss the additional

	question (*What do you feel would help improve your general learning and academic experience?)*.
Closing statements/comments.	Thank the participants for their participation and check in to see if any participants have additional questions or concern → let participants know that the researcher will be in the meeting for an additional 30 minutes to address these if participants would like to discuss it immediately but also remind participants, they can contact the researcher by email or phone if questions come up later.

Appendix E

Definitions of Themes and Example Quotes:

Theme	Definition	Example Quote
Impact of academic experience	This theme captures the essence of the effects that academic experiences have on ND students in HE. It includes statements about their experiences with certain components of the academic frameworks and structures set out by their institutions.	
Experience with assessment types	The sub-theme includes the participant's experience with assessment types (such as project work, writing assignments, exams, etc.) in HE and the impact this has on their academic experience.	"Malta it's very textbook. Basically, learn everything that's presented to you in the lectures and then vomit in the exams. Whilst in Maastricht university it was different because it was open book." (Student 4)
Experience with course design	This sub-theme includes statements related to the experiences participants had with course design and set up, and how this influenced their academic experience.	"In my master's in Maastricht, it was a very interesting setup. We were 13 people and all of us had very different backgrounds, and the masters was bio based materials. So everyone kind of had a different approach as well as the institution having an actual structure for tutorials. So in the tutorial you have a chair which is the person leading the discussion, a scribe, which is the person writing down everything that's being said and then everyone else kind of having an input. And I feel like that was taken into project work as well, not only in tutorials." (Student 4)
Experience with deadlines	This sub-theme includes statements of the participants experiences with deadlines and how these influence them.	"I've noticed that whenever I have a deadline, I usually just bring it to the end. Like I don't know how many students actually prepare for this on time. Usually just like a day before or something, I start

		working on those things. I have tried doing other strategies, but it just doesn't work. So for example, making a little bit every day or every weekend or things like that" (Student 9)
Remote learning experiences	This sub-theme includes statements regarding the participants experiences with remote options and how this influenced their academic experience.	That's also why I loved the lockdown. In terms of education, I loved it. Everything was in line. I could take my time to do things. Didn't have to go to lectures. Also, I didn't have to socialize, which was also something I didn't have to mask and things like that. So it was really, really good for me, like to be at home." (Student 7)
Academic barriers	This theme captures the essence of the barriers faced by participants during their journey in HE. It touches upon several barrier types and includes statements on how these barriers challenged the academic experience for these students.	
Social barriers	This sub-theme includes statements regarding the social challenges that students faced and that influenced their academic experience.	"I always found it very hard to work with the others in groups, in the case that, I always felt like I was doing less in a group, and I found it very exhausting to participate in a group. And I always felt bad about it because I thought, oh, I want to participate." (Student 12)
Physical barriers	This sub-theme includes statements regarding physical factors (such as noise, lighting, or other sensory elements) that have challenged these participants during their academic experience.	"I remember very well that there was a kid next to me in one of those exams that was clicking his pen, and I couldn't focus at all because he was clicking so much." (Student 6)
Emotional barrier	This sub-theme includes statements involving emotional challenges (such as anxiety, confusion, frustration, disappointment, fear of	"I think it might also have to do with different people, like some people are more sensitive to that than others. I think I'm just really sensitive to the approval. Or maybe

	disapproval or disappointment, etc.) that have influenced the participants and their academic experience.	just that I don't want to disappoint." (Student 9)
Perceived support and recommendations	This theme captures the essence of the support experienced and offered to participants as well as the improvements participants feel could be made with regards to the existing systems.	
Accessibility of support	This sub-theme includes statements regarding the accessibility of support on clarity on where to locate support.	"We have the RAP, the reasonable adjustment paper. Which is if you think that you can't really handle doing university at a normal pace or you want some extension for your assignments until you graduate for example. It is sort of like an official transcript document that says look, if the individual wants an extension, there's this one paper they can use every time. It's not like a doctor transfer or general practitioner transcript where you can only use it once, but you can use it on multiple occasions until you graduate, which is nice. You don't have to get interrogated for that, you know." (Student 2)
Impact of support	This sub-theme includes statements regarding the effects that provided support had on participants and their academic experiences.	"Their support actually sort of switches off that irrational fear mode. So I'm able to do my assignment comfortably and knowing the fact that I can actually extend my assignments indefinitely or something like that." (Student 2)
Received external support	This sub-theme includes statements of support that participants have received outside of the academic context that have encouraged them to perform well academically.	"Also just talking about other struggles with my psychologist to figure out like, oh, even though I set these boundaries, I'm still doing things that just really are destructive for how I work." (Student 9)
Belongingness in the academic environment	This theme captures what effects belongingness has on this student population. The	

	statements include aspects of inclusion, understanding, and support experienced by the participants during their academic experience.	
Recognition and understanding from peers	This sub-theme includes statements that express the presence of peer understanding, recognition and support with regards to participant's needs and preferences during their academic experience.	"One thing I really did appreciate from my course mates is that, because half of us were all like struggling with deadlines anyways ,and you know, everyone's kind of having their own issues, it was a lot more forgiving. So the environment is a lot more forgiving. It was like, okay, this is where you tell us what you got. Okay, let me take a look. Let me see." (Student 4)
Recognition and understanding from peers	This sub-theme includes statements that express the presence of staff understanding, recognition and support with regards to participant's needs and preferences during their academic experience.	"I was with my study advisor and she was like, oh okay, but then at least once you're out of the lecture and you've got the lunch break, you can rest for a long time. And then I had to kind of tell her lunch break stresses me out because then I don't know what to do. And then there's just a lot of places where I could sit but I don't know where or what or how. Am I just supposed to sit on my phone for like over an hour? And she was like, oh, I never thought about that." (Student 11)
Stance on inclusion in institution	This sub-theme includes statements that illustrate the participants view on inclusion in their HE institutions through expressing how they feel represented, accommodated and supported as ND students.	"I feel like in our university we're an international university. So most students are from another country. So there's definitely a lot of diversity and things like that. People from the LGBTQ community are included, visably disabled people, you know like blind people and people with wheelchairs have the opportunity to study and are accommodated. But the ND students aren't." (Student 7)
	This sub-theme includes statements referring to support	"And I was working with someone who also had the same diagnosis as

Collective support from neurodivergent/ disabled community	received from others who relate and are in similar positions.	me, and it was weird to see that we went through the exact same process and it's just like, oh wow, like I'm not alone." (Student 4)