

"There's Only So Much the School Can Change About Itself ...Before You Need to Change Something About Yourself"

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“There's Only So Much the School Can Change About Itself ...Before You Need to Change Something About Yourself” – a Qualitative Analysis of the Experiences of Neurodivergent Student Teachers.

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Running head: NEURODIVERGENT UNIVERSITY STUDENT EXPERIENCES

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Abstract

Background: In Scotland, to become qualified to teach children in primary schools (aged 4-11 years), student educators must complete degree programmes that include a combination of university and school-based placement learning environments. Previous studies have examined the experiences of neurodivergent students in other professional degree programmes, most notably in healthcare. Yet there is limited research considering the barriers and enablers for neurodivergent students in programmes leading to careers in education.

Methods: This study contributes to the evidence base by examining the experiences of neurodivergent student participants from two Education Studies programmes run by one Scottish university: one including required professional placement experience in schools leading to professional teaching qualification status, and the other a theory-based course with flexible community placement options. Nine neurodivergent students, all originally following the professional placement strand, participated in a semi-structured interview. Data analysis was led by a neurodivergent educator, using reflexive thematic analysis. The resultant themes identified were named to reflect the lived experience of participants: Who we are matters; How we are matters; How we know matters and What we need matters.

Results: Neurodivergent education students reported risk of withdrawal from and/or challenges within the professional strand programme, particularly emphasised in relation to placements. They felt that they needed to navigate additional systemic barriers to reach the same result as neurotypical peers. Further, they discussed how the accessibility and attitudes of others impacted upon opportunities for disclosure, inclusion, and support. Our findings also suggest the possibility of an attitudinal hierarchy of neurodivergence acceptability occurring within educational environments.

Conclusions: Neurodivergent students report a range of challenges when attempting to successfully complete education degree programmes leading to the teaching profession. Our

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findings identify the need for greater advocacy, support, and inclusion of neurodivergent participation, which attends to the nuanced experiences that education students face.

Community Brief

Why is this an important issue?

Increased numbers of neurodivergent students are entering higher education. However, studies suggest that neurodivergent students are more likely to leave or divert from an initial course of study. Further, studies have shown that autistic educators are more likely to leave the teaching profession than neurotypical peers. Investigating barriers and supports for neurodivergent student teachers to complete their degree programmes is important. Such efforts may lead to higher levels of recruitment and retention amongst this population. The lead researcher is a neurodivergent researcher, who was as a primary teacher in the Scottish education system.

What is the purpose of this study?

This study aimed to investigate the experiences of neurodivergent education students in their required learning environments over the course of their programmes, to identify specific challenges this population may face and areas where change is required.

What did the researchers do?

We recruited 9 neurodivergent student teachers within the university. Demographic information was collected, including age, neurotype, gender identity and ethnicity. We asked open-ended questions about experiences within university and placement settings. We looked across participant data and analysed responses by identifying patterns or “themes”, finding commonalities shared across participant experiences.

What did we find?

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We identified four key findings affecting neurodivergent student teachers: (1) They face increased risk of withdrawal from, or barriers to success within, the professional strand education programmes leading to qualification as teachers. (2) They needed to overcome additional systemic barriers to reach the same result as neurotypical peers. (3) They felt that accessibility and attitudes of others impacted upon their opportunities for disclosure, inclusion, and support. (4) They acknowledged representation as universally beneficial, but students with some neurotypes reported more positive placement experiences than those of others. This suggests that a possible hierarchy of neurodivergence acceptability exists.

What do the findings add to what was already known?

This study is the first to qualitatively investigate the lived experience of neurodivergent student teachers in a university education programme leading to professional qualification. This study supports previous research investigating ways to increase accessibility for neurodivergent students in higher education environments and supports previous research looking at experiences of qualified autistic education staff across the UK. This study adds to existing research to provide clues as to where support can be best directed and change posited.

What are potential weaknesses in the study?

Our sample was White and predominantly identified as female, which although representative of the current Scottish context in this professional area, does not allow for intersections of identity that may impact upon lived experience. The originating university offers two education programmes, one with entry to the teaching profession incorporating school placements, the other with a theoretical approach to education. Participants at risk of burnout or withdrawal were thus able to negotiate movement between the two, which may not be possible for students in other universities. Despite the identified issues, this study serves as an important starting point for research in this underrepresented area.

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How will these findings help autistic adults now or in the future?

This research calls into question the current accepted route into the teaching profession as potentially discriminatory against neurodivergent student teachers. Our findings should be utilised as a call to action to examine how education programmes, school placements and interpretation of professional standards may be made more sympathetic to the needs of neurodivergent students. We advocate for change to increase the chances of a more representative teaching profession by reducing stigma for neurodivergent educators and allowing more neurodivergent adults to access the profession. Increased representation would lead to better understanding of neurodivergence, impacting positively on educators and learners.

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International studies suggest that while there is a recent global rise in the number of neurodivergent students entering university programmes, there are substantial barriers to successful course completion.^{1,2,3} In response, research about improving general university accessibility for neurodivergent students is emerging.^{4,5,6} Universal design for learning (UDL) principles, including provision of materials in multiple formats and offering flexible assessment options, are widely recognised as beneficial for all neurotypes.⁷(For more information on UDL see ^{4,7}). However, neurodivergent student teachers completing degree programmes leading to professional qualifications may face unique challenges, as they encounter multiple learning environments. For example, in the Scottish context, students must meet university academic expectations and complete professional placement experiences in schools to gain practical teaching experience and satisfy externally determined professional qualification standards.

To date, little research has been conducted on the specific lived experiences of neurodivergent student teachers navigating both university and education placement settings throughout their programmes of study. For example, previous research has primarily focused on challenges of neurodivergent healthcare students^{8,9}. Further, research within education tends to focus on the experiences of school pupils or qualified teaching staff.¹⁰ One such study examined the experiences of 16 disabled students enrolled on university education studies programmes, but these did not lead to qualified teacher status and therefore do not help us understand the experiences of neurodivergent students during professional teaching placements.¹¹ Another study, focusing on support for six dyslexic student teachers in England, recorded their experiences within university teaching sessions, but did not explore issues related to wider neurodivergence.¹²

Jones¹³ noted in their 2022 study of autistics working in academia that studies examining the experience of autistic autism researchers themselves were lacking. A similar absence is encountered when seeking representation of neurodivergent student voices in studies concerning

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higher education initial teacher education experiences. Neurodivergent students must interpret hidden curricula - the unspoken and unwritten expectations, norms and assumptions tacitly woven into existing organisational operations - in every environment they encounter. Limited research examines the effect this has on their wellbeing.¹⁴ Disclosure is not always met with positivity, leading some students to conceal their neurodivergence^{14,15} and risk judgement against professional standards not devised for or reflecting their identity. Qualified teachers with established experience may harbour attitudes towards autistic children which then influence negative generalised beliefs about behaviour or expectations within that population.¹⁶ Such qualified teachers may be supervising neurodivergent education students on school placements, potentially exposing these students to negative views and additional challenges compared to their neurotypical peers in higher education environments.¹⁷

Education programmes contain source material predominantly focused on the development and inclusion of children that adult students will encounter during their studies and beyond into their careers.¹⁸ Although research may intend to equip students with strategies to assist the increasingly identified autistic population within school mainstream classrooms, it often does not represent neurodivergent students themselves.¹⁹ The potential for personal judgements by school staff supporting education students to influence the ultimate success of all student teachers on professional placements within schools has been documented.²⁰ Neurodivergent student teachers may be more likely to be judged as lacking the required personal qualities for the teaching profession by their school-based mentors.²⁰ Consequently, students may be less inclined to disclose their own neurodivergent identities²¹ fearing it could negatively alter their perception by those supporting staff.

Action based upon neurodivergent lived experiences is required to increase meaningful inclusion, retain neurodivergent student teachers, and examine the impact upon them when encountering experiences created for and evaluated by neuro-normative standards.⁴ While

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previous research has focused broadly on general higher education accessibility for neurodivergent students, this study introduces several innovative aspects. A neurodivergent researcher with previous lived experience in primary teaching leads this research, aligning with recent trends in neurodivergent research.^{22,23} This element allows us to examine the responses to this qualitative, interview-based research through a lived experience lens. By centering neurodivergent voices, we aim to identify areas for potential change to improve experiences and outcomes for neurodivergent student teachers across all learning environments encountered. We focus on their lived experience to suggest ways to action or further explore proposed requisite changes. This case study focuses on a single programme of courses within one university, making this the first research to concentrate on initial teacher education programmes with unique taught and practical elements. It also aims to recruit neurodivergent students more broadly in this environment – this is important given the frequent co-occurrence of neurodivergence.²⁴

Method

Community Involvement Statement

The lead author (CJ) is autistic and otherwise neurodivergent and entered initial teacher education after a career in Scottish primary schools, training in Scotland before working in mainstream and specialist provision. CJ generated the question and was involved in the design of the study alongside other authors, two of whom (RD and CB) teach on education programmes at the same institution.

Design

We adopted an existential phenomenological qualitative design to explore the lived experience of participants, using semi-structured interviews derived from three sources: existing literature, observations made by CJ in practice, and personal and professional interests around

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the experience of neurodivergent education students. CJ used her own lived experience as a primary teacher and observations from supporting students on the initial teacher education programme to identify relevant interview questions. LC and RD are autism researchers with expertise in qualitative methodologies and used their experience to advise about interview content and structure. Ethical approval was granted by Queen Margaret University Psychology, Sociology and Education Research Ethics Committee.

Neurodivergent students enrolled in one of two Undergraduate Education Studies programmes (one solely theoretical and the other leading to a professional primary teaching qualification) were eligible to participate. Degree programmes are completed over four years of study. The programme leading to a professional primary teaching qualification includes three requisite ten-week professional placements within primary school environments. These are undertaken in years two, three and four of the degree programme. At the time of data collection, around 400 students were enrolled across both courses in all year groups, with 335 in the primary education strand (note: primary education in Scotland is the stage of formal learning experienced by children aged between 4 and 11 years old).

Participants

Participants responded to recruitment invitations displayed in campus buildings and online course spaces. Twelve participants met the following inclusion criteria: a clinically diagnosed or self-identified (SI) neurodivergent person (autism, ADHD [Attention Deficit Hyperactivity Disorder], dyspraxia, and dyslexia were specified) and studying on an Education Studies programme at Queen Margaret University in Scotland. Inclusion of SI neurodivergence was imperative to account for the inclusion of suspected or identified co-occurring conditions²⁴ and to reflect barriers to formal diagnosis many neurodivergent adults experience.²⁵ Three students were unable to participate at the time that interviews were taking place, resulting in a total of nine participants. This sample reflected the course demographic being White, predominantly female

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and with an average age of 23 years (see Table 1). Specific data on socioeconomic status and educational attainment levels were not recorded as this information was not within the study's intended scope. All participants identified as White and were from either Scotland or England. One respondent disclosed that they were transgender during the interview, but their gender has been recorded as per their initial binary self-identification description to honour that decision and ensure participant anonymity. No reward was offered for participation. Demographics are displayed in Table 1.

----- Table 1 to go here -----

Measures

Research suggests that sensitivity to communication preferences maximises data yield.²⁶ Therefore, we offered multiple modes of participation to encourage participants to answer as fully as possible. Most participants elected to be interviewed via video call (n=7), with or without cameras depending on personal choice, and two participants opted for in-person interviews (n=2). To provide increased anonymity, the research assistant (AK) conducting the interviews was intentionally not affiliated with Queen Margaret University.²⁷ However, all participants understood that named university staff would analyse their responses.

We could not identify a suitable pre-existing interview measure to address the current research questions. Therefore, we developed semi-structured interview questions focusing on neurodivergent identities, disclosure issues, inclusive practice, support needs, and experiences with education professionals in different settings. The interview included questions branched to reflect the two programme pathways that students could be studying on (see supplementary materials).

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Procedure

Advertisements for the study included a link to an online survey where interested participants could register their interest. AK then contacted eligible participants to organise a date and check communication preferences. On the day of participation, participants answered demographic questions after providing written consent, followed by a set of predetermined questions. Participants received the questions a week in advance of interview dates, were told that they did not have to answer any questions they were uncomfortable with, and that they could withdraw at any time. Seven interviews were conducted online and two in person. The interviews varied in duration from approximately 45 minutes and 3 hours, depending on the detail of responses. At the end of the online interviews, participants could share any additional information about their experiences as education studies students on campus and during placements. All participants had the contact details of the staff researchers and AK for any follow-up questions and queries. AK recorded, transcribed and pseudonymised the interviews before sharing them with CJ and RD. LC, RD and CB assisted with revising and editing the writing.

Data Analysis

The interviews included open questions which meant we could not anticipate the content of participant responses. We used inductive reflexive thematic analysis (RTA) to analyse the resulting data.²⁸ Reflexivity is integral to RTA, underpinned by the positionality of the researchers. CJ identifies as autistic and otherwise neurodivergent (ND), while all other authors identify as non-autistic. All authors follow neurodiversity-based approaches to understanding autism and reject a wholly medicalised model. CJ and RD led the analysis, with LC providing regular feedback and input. We used group discussion to consider how the authors' prior knowledge and experience might influence any analyses. This process was particularly important given the origin of the initial research question, which arose from CJ's lived experience, observations, and

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teaching practice. We continually considered and discussed confirmation bias, understanding that the researcher's lens is informed by their own experience and shapes the narrative created when using a critical realist approach to RTA.²⁹ CJ recognised the impact of their own lived experience on their engagement with the data and its role in shaping subsequent theme identification. Interpretative processes cannot exclude the interpreter from their operation, or the subsequent story created about the data collected.³⁰ Lived neurodivergent experience should not be discounted as a methodological lens in the study of factors impacting the neurodivergent experiences of others.³¹

We analysed the data following the six phases of analysis developed by Braun and Clarke.²⁸ First, CJ received the transcribed interviews and made initial analytic notes from repeated readings of the data. Second, CJ generated initial codes through repeated pattern/theme identification until creating a complete list of codes for the dataset. CJ then discussed these codes and decisions with RD. We agreed on some modification of these initial codes through this discussion. In a slight deviation from Braun and Clarke, we identified codes in literal ways, reflecting some of the semantics of the questions asked. This process reflected sense making in an inclusive way for the autistic author and allowed us to discuss the wider aspect of each code to ensure shared meaning between authors. All authors are aware of Milton's theory of double empathy³², recognising that autistic and non-autistic individuals can have differing communication styles that impact comprehension of meaning in discussions between participants of divergent neurotypes. With that understanding in mind, we actively approached shared discussions, ensuring effective communication and mutual comprehension despite differences in neurotypes. CJ then organised codes into initial, less literal, candidate themes, as evidenced by data extracts and shared them with LC and RD. We evaluated the themes based on the sufficiency of data and the weight given to them by participants, considering the elaboration or emotional connection present in their responses. Finally, we agreed the final set of themes, which we defined using appropriate summarised titles.

Results

We generated four main themes from this data reflecting the overall messages contained in the student responses: (1) Who we are matters, (2) How we are matters, (3) How we know matters, and (4) What we need matters. The structures of these themes and their subthemes are presented in Figure 1. Subthemes are highlighted in bold text within the body of the relevant theme sections below. Although we truncated direct participant quotes for use in the results, we retained the terms they used in their responses.

-----Figure 1 to go here-----

Theme 1: Who we are matters

We generated this theme from four identified subthemes centred on the lived experience of participants as neurodivergent students existing within the university system, and their specific degree programmes. Some responses were diagnosis-specific, others were more general, but all codes that we ascribed to these subthemes shared common threads about identity, including considerations of intersectional identity.

For all participants, the common factor of simply **being** a neurodivergent student within a higher education environment was reflected in various self-aware ways. P1 expressed that being neurodivergent was fundamental to who they were, stating “*there's no point where I feel like I start and my autism ends it's ...like everything I do, ...can be related back to it.*” Navigating environments with sensory challenges had an impact on their ability to participate, with co-occurring neurodivergences complicating learning experiences. Participants also noted that self-regulation once overwhelmed could prove challenging within the campus environment, illustrated

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by their comments on the difficulties faced in escaping sensory-rich settings. For example, P7 shared that this necessitated, “...*having to resort to sitting in a prayer room... the only quiet space I could find.*”

All participants sought a sense of **belonging** but indicated the centrality of learning environments, physically and emotionally, for them to feel comfortable. Participants also highlighted the need for representation and inclusion of neurodivergent voices within programmes. P1 elaborated “*consultations need to be done with people with lived experience not just proximity to ...lived experience.*” P6 stated, while contemplating impromptu class input from an ADHD peer, “*it is good to...hear from other people that may be going through something similar... to ourselves.*” When participants were aware of them, they saw neurodivergent teaching staff as sympathetic, although they had reservations. For example, participants noted such staff were “*able to understand where I was coming from*” (P8) and “*quite open... probably the most helpful... but even then it’s always more about the kids in the class and how they can be supported.*” (P9).

Despite some participants reporting positive exchanges, many experienced **feelings** of inadequacy, confusion and frustration when seeking information or accommodations. Response times and uncertainty about where to find answers to questions were common themes in most responses. Participants also identified issues around the sharing of an Individual Learning Plan (ILP) – the agreed accommodations suggested by the university for students with additional support requirements. These issues negatively impacted their overall experience in learning and teaching environments, placing further burdens upon them. Reasonable adjustments often entail requests being made to access basic rights other students enjoy automatically but participants felt these are interpreted as challenging to facilitate for individual students. For example, P8, considering contradictory responses experienced from different staff members, noted, “*Some people are like as soon as you say it...switch things and do accommodate to you, whereas some*

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people...it's kind of brushed off...". These unpredictable attitudes toward requests for implementing accommodations could impact upon participants' willingness to disclose their need for them. Neurodivergent students identified self-knowledge and the accompanying ability to self-advocate was identified as crucial for seeking appropriate support. They considered challenges for peers who were possibly unaware or unsure of possible neurodivergence. For these peers, P5 reflected "*...they're treated like normal students, and they don't get ...support and then they're completely overwhelmed, and some have dropped out some have moved over courses...".* Participants with multiple neurodivergences found that while one aspect of support might be easier to determine than another, it could lead to a clash in their own needs surfacing. For example, provided dyslexia support had minimal impact as an ADHD need then became more prevalent for P8.

Most participants reported challenges as neurodivergent students in the professional programme strand, where perceived clashes between professional teaching standards and agreed accommodations led to staff prioritising the former, sometimes overriding the latter. Participating in programmes as a neurodivergent student where neurodivergence in primary education is considered on an academic level was reported by most participants as a challenging position to occupy, with minimal opportunity for **questioning** content. Participants noticed that the framing of teaching often assumes a neurotypical perspective. For example, P1 commented, "*...I have complicated feelings ...a lot of the framing about teaching assumes a neurotypical teacher ...which does reflect on how policy approaches teaching... I definitely feel like an outlier...".*

Participants noted that the focus on children in all programme content contributed to a feeling of being 'othered' within an established system where it seemed tacitly accepted that neurodivergence was the preserve of childhood. This perception permeated all aspects of their experience, from actions becoming awkward within this accepted context, through feeling unrepresented within professional instruction on campus, and even to the rejection of intended

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essay subjects. P7, reflecting on the response to this latter situation, explained, *“I wanted to write about the lack of diversity of teachers (neurotype), and was told no, because we are focusing on the children here.”* Participant responses coded to the ‘How we are matters’ theme reflected the difficulty of occupying their position as neurodivergent within a neurotypical-assuming system while being taught about neurodivergence.

Theme 2: How We Are Matters

We generated this theme from three identified subthemes containing codes related to the way participants encounter their overall university experience. All codes ascribed to these subthemes featured elements of lived experience; impressions, consequences, and potential ramifications the participants considered daily.

Participants reported challenges related to being in an *equal* rather than *equitable* environment within teaching and learning spaces, focusing on merely **surviving** (meeting and no more) the expectations put upon them. Although ILP provision supplied options for extended time to complete assignments, the lack of individual adaptation, the temporal proximity of assignments, and release of information created anxiety and participatory challenges for participants not adequately addressed by this limited support mechanism. While some participants found information seeking on campus frustrating and either lacking in or containing too much detail, depending on individual communication preferences, others felt that staff positively received their requests for information. However, the way information was imparted or requested could create a barrier. P7 noted this in relation to a session held prior to going on placement:

“They have drop in sessions ...if I was to sit with you and all these seats were filled, what I would tell you would not be the same as what I would tell you if it was just me and you ... people have

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got real, deep concerns about going on placement ...a lot of people don't feel comfortable divulging that information in a public setting."

Placement provision, accepted as largely beyond the university's influence, added an additional layer of consideration for neurodivergent students. Participants encountered diverse experiences during placement. Student teachers are possibly viewed as homogeneously neurotypical by their placement schools. P5 highlighted the lack of understanding that adults, not just children, can be neurodivergent, saying, "*...we weren't provided with the right support which didn't help us, we got judged rather than supported*". Conversely, P6 stated that during a time of challenge on placement "*my school were extremely supportive*". However, many expressed concerns about being placed in an unknown environment with unknown staff. P8, considering the increased anxiety this uncertainty could cause, said, "*You don't know what you're going to turn up at... they might not put any support in place for me*".

Participants reported developing an understanding of their own needs and strategies to **navigate** expectations and environments they encounter. Many saw disclosure as a risk, with the resultant effect dependent on how others received it:

"there's a risk that you're open about it and then they judge you for it" (P5)

School placement requirements increase unknown factors, and participants reflected upon their varied experiences through this lens. Student teachers are often not in positions of agency or control when undertaking school placements. Those who felt able to disclose their neurodivergence and explain their needs reported positive responses. For example, P4 reported, "*I mostly spoke about my needs... to staff at my placement, who were really supportive and accommodating with it.*" Participants did not view disclosure as a neutral action and reported many views about their relationship with the process. Despite any **hesitancy** to share diagnoses, participants believed their neurodivergence fundamentally shaped their experiences on campus and placement, particularly regarding disclosure and acceptance within those spaces.

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(Disclosure) *“still makes me quite anxious... for example, you know when I raised my [content] issues...it made me feel very vulnerable... to say to a class...I'm autistic can I talk about this...neurodiverse people exist everywhere...and that includes teacher training spaces.”* (P1)

Others' perception and comprehension of neurodivergence, projected onto their approach to the person disclosing their identity, heightened participants' anxiety and reluctance to disclose.

Theme 3: How we know matters

This theme encompasses four subthemes that reflect how neurodivergent students gather, process and comprehend information pertaining to their university programme experiences, in contrast to the expectation that they access all materials in the same way as their neurotypical peers. Participants expressed various views on the successful consideration of neurodivergence within their education programmes based on what they observed (**seeing**) in their course content:

“It's very much kind of seen as ...a non-neurotypical child is seen as a problem for a teacher to solve... some of the vocabulary they used made me feel uncomfortable... it was a very specific view of how these kinds of things present... it's very hard to find examples of representation that I think are positive or that represent the full range of autistic people...” (P1)

Participants' views may have been influenced by how they perceived their own neurodivergence and the level of study they had reached at the time of the interview. They encountered stereotyping not only in content and the views of others but also recognised it as internalised in their own experiences. P6 illustrated this, stating, *“I never thought I would be autistic because I have a job, I have a child, I have a house, ...I was quite naive to think that if you were autistic, you couldn't have all that.”*

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Participants shared how their different **thinking** processes subjected them to stress when encountering tasks or events perceived as 'the norm' within their programmes of study. Neurodivergence adversely impacted workload in ways that were perhaps not immediately obvious to staff who designed course content with predominantly neurotypical students in mind. Autistic participants found course expectations to be a constant source of concern at all points throughout the programme experience. P1 considered this factor at the application stage and found the possibility of changing to a non-professional education strand appealing: "*I felt that I would be at higher risk of burnout if I chose to continue with the primary course.*" Similarly, P7 reported the physical impact of placement and course structure upon their wellbeing they believed resulted from their innate neurological processes: "*... they try to compress all of the academic work into one semester... my brain does not turn off, I'm all or nothing. I'm a lot happier and healthier now that I've changed [course].*"

Student teachers encounter diverse, unconnected hidden curricula during their studies, depending on the location of their studies or placements. Participants highlighted the challenges they faced in these situations, particularly the difficulties created by not having access to **innate knowledge** (immediately knowing or being able to determine unspecified information) required across these circumstances. Enabling comprehension requires making students aware of potential issues with interpreting provided information and identifying appropriate support to alleviate those problems. Most participants identified assessment clarity as a significant challenge. They expressed confusion about feedback provision, often finding it neither useful nor easy to comprehend. P1 summarised the detrimental impact of guessing at the unknown: "*I didn't have clear expectations of what was expected on my part, so whenever I didn't meet that expectation, I felt a bit lost because I didn't feel like I'd been given the information to...close that gap.*" In education programmes, it is necessary to provide information across all learning environments in a timely, accessible, and understandable manner to reduce anxiety and increase success opportunities for neurodivergent students.

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Theme 4: What we need matters

The final theme pertains to three themes coded on aspects of transition, identified needs, and projection towards the future success of neurodivergent students in education programmes. Participants identified transitional times and a lack of structure as challenging for some neurodivergent people when they have a need for guidance in expectation or organisation to accomplish tasks. As academic years progress, changes in structure occur, particularly around assessment or placement timings. Participants felt that these **changes** influenced overall wellbeing and potential outcomes for affected students: “...*the transition from doing (weekly) seminars and lectures and having that solid routine to...not having a routine ...needing to sort my own deadlines... really took a toll on me.*” (P1)

Participants identified school placement as the most problematic environment, given the potential for many detrimental factors to be present in an unknown location they were unaffiliated with. Expectations on placement, defined by meeting GTCS (General Teaching Council of Scotland) standards, were the same for all students regardless of any identified need. P3 noted “*there's no difference between my provision to someone else's.*” Interpretation of changing guidelines caused confusion when encountered in a previously known situation on progressive school placements throughout the programme. Participants suggested that disclosing individual needs to schools prior to the placement of neurodivergent students might go some way towards **improving** this situation. However, P7 believed that the school also had a responsibility to act: “*I think they need to look at the makeup of a school and how it runs and go realistically, what can we do, what changes can be made to accommodate you, ...to include you.*”

One proposed course of action was to clearly communicate the available support channels and actively seek information from neurodivergent students, acknowledging the challenges they may face in an education programme. Participants emphasised the importance of course providers being aware of the barriers to success for neurodivergent student teachers. P7

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highlighted this, stating, *“I suppose the fact that this research even has to take place is sad actually...the fact that we're having to do this research is because things aren't great.”*

Participants in this study applied for education programmes for various reasons, with all initially intending to ultimately train as primary teachers. They wanted to provide the neurodivergent examples they believed their younger selves may have thrived under in classrooms. The need for **thriving** neurodivergent representation in teaching and the perceived absence of these representatives was clear in participant responses: *“I wanted to go into the field because I felt... being diagnosed slightly later in life...if I had a teacher who was neurodiverse in some way, I would have been helped a lot earlier.”* (P1)

Participants noted that having identified neurodivergent staff on their programmes could be a potential source of information for the cohort. P3 suggested, *“Sometimes I have a lecturer that...identifies as neurodiverse... there's another class that doesn't have a lecturer with that, are they getting the same input...could that lecturer be doing a wee bit more input with everyone?”*

However, participants perceived the reach and impact of neurodivergent staff as limited. P4 explained, *“[Neurodivergent lecturer] ...spoke a lot about neurodivergent practitioners and having autistic teachers ...and what it's like to be to be thinking differently..., that's about it when we're discussing... neurodivergent teachers and peers.”*

Despite being an adult in higher education, with a variety of experiences to draw upon, one participant experienced a pivotal moment upon meeting an autistic practitioner reflecting their own neurotype. P7 exclaimed, *“...for the first time ever, I was like oh my God...they actually exist there is someone who's on the spectrum and can be a teacher and has been a teacher.”* Neurodivergent student teachers need visible, positive representation across all areas of the education profession to believe that their entry into that profession is welcome and, ultimately, achievable.

Discussion

In this study we examined the lived experiences of neurodivergent university students undertaking one of two education studies programmes offered by the institution, which included compulsory external placements. Participants emphasised how their neurology was a constant factor despite it not always being considered by the wider systems they exist within.^{6,33} We identified four key areas where neurodivergent students reported specific challenges:

(1) The risk of withdrawal from or barriers to success within the professional strand education programme included in the study;

(2) The additional systemic barriers to achieving the same results as neurotypical peers;

(3) The impact of accessibility and attitudes of others on opportunities for disclosure, inclusion and support; and

(4) Although the importance of representation was acknowledged as universally beneficial, there is evidence of a possible attitudinal hierarchy of neurodivergence acceptability emerging.

Risk of withdrawal and barriers to success

Recent research suggests that while there is a higher risk of dropping out of university for autistic students, timely, proactive interventions may reduce this risk.³⁴ Universal Design for Learning (UDL) has been posited as a preferred inclusive approach to facilitate the accessibility of higher education programmes for all neurodivergent students.⁶ However, implementing UDL principles in academic settings faces challenges due to perceived incompatibility with the rigidity of outcome-based university assessment systems.¹⁴ Studies suggesting ways to promote inclusion for neurodivergent students in higher education exist.^{4,5,35} For example, staff concerns regarding the introduction and implementation of UDL practices could be alleviated through provision of existing examples demonstrating inclusion efficacy and training aimed at increasing

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confidence in maintaining universal academic expectations.⁷ However, it is unclear how the recommendations for flexible option provision that these include might translate into practice within practical placement environments. These environments vary in location, expectations, and governance, and lack consistent guidance for all.¹¹ Assessment pathways to a professional primary teaching qualification in Scotland are currently rigid and uniform. Placement experiences, and the standards used to measure their success are designed within, for and judged based on neuro-normative standards.⁴ This negatively impacts the wellbeing of neurodivergent students who may struggle to navigate or meet these standards, leading to feelings of exclusion.

Systemic barriers for neurodivergent students

Participants in this study discussed the increased workload they felt they had when attempting to access and succeed in achieving the same outcomes as neurotypical peers across all aspects of their experience. Participants made reference to managing time, impact of transitions, cognitive load when sensory factors were at play, assessment rigidity, difficulty in prioritising main points over detail, feedback interpretation, comprehending information delivered across locations, and processing the meaning of that information dependent on context. These factors, alongside organisational challenges, align with previous research findings that indicate reasons for the disproportionate attrition rates of neurodivergent students from courses that otherwise retain their neurotypical peers.¹⁷

Participants experienced extra layers of cognitive burden when extrapolating meaning from hidden curricula expectations across various changing environments. These expectations were set, interpreted, or governed by different systems of authority including university lecturers, internal or external placement supervisors, school management teams, and differing local authority policies. The nebulous nature of these unspoken rule frameworks raised the resultant potential for participants to have negative experiences arise through miscomprehension, miscommunication, or misinterpretation of such hidden curricula. Neurotypical peers, working

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within systems designed to suit their majority neurotype, may have been less likely to encounter such issues.¹⁴ Many aspects of situational experiences or environments within education systems are not explicitly outlined, as most neurotypical people encountering them can usually fill in any gaps with their comprehension of similar situations. Qualified autistic teachers have been identified as leaving the profession for reasons related to inconsistencies and lack of reasonable adjustments³⁶, suggesting work is required within school settings to provide better support for neurodivergent students before they fully enter that professional environment. Two participants (P1 and P7) transferred from the primary teaching education programme to the theoretical education studies programme during their studies. This suggests that, for neurodivergent student teachers, the barriers to successful inclusion in the teaching profession begin before the point of qualification.

Factors impacting upon disclosure, inclusion, and support

Decisions around, and reactions to, disclosure featured throughout participant responses in this study and highlighted not only the personal, complex nature of the act of disclosure itself, but also the inconsistencies in outcome when a decision to disclose is made. Although research criticises self-advocacy models of support that rely upon the individual to disclose to receive necessary accommodations³⁶, neurodivergent students still bear the responsibility to disclose, negotiate and find ways through an unyielding system, rather than the system being made universally accessible.² Reasons for reluctance to disclose additional support information to universities reflected in participant responses have been considered in existing research.³⁸ For some students the deciding factor in disclosing comes at a crisis point, often during or after placement, rather than proactively before they become overwhelmed.³⁹ For two autistic participants, anticipating this point led to them switching from the professional teacher education course programme into the theoretical education studies programme, despite having disclosed their neurodivergence and receiving specific academic supports.

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Late diagnosis often coexists with habitual masking of neurodivergence using learned strategies⁶ that can conceal the need for specific support, even from the individual student themselves if they are still unsure of their authentic neurodivergent way of being. The timing of a diagnosis in life, particularly for autistic individuals, can impact on their sense of self⁴⁰ and autistic participants note the effect this self-knowledge has on their self-identification as potential future teachers. Participants noted a disconnect between course content relating to inclusion contained in Initial Teacher Education (ITE) programmes and the reality of their experiences in education studies programmes and associated placement experiences, with neurodivergent adults as educators often side-lined or missing altogether in the education profession.^{19,21,41}

Stigma and related attitudinal hierarchy of neurodivergent acceptability

Despite still being contentious, participants suggested that disclosure to known staff in a university setting is preferable to general disclosure or to altering dynamics within placement settings. In placements, responses may include negative judgement about ability⁴² or perceived invalidation of an 'invisible' yet misunderstood neurotype being applicable to the individual disclosing.³⁶ Further, the fear of being prejudicially perceived as having 'poorly fitting' personal qualities, which could contribute to negative placement outcomes, factored for some participants. This experience has been shown to affect placement decisions even without the added complication of neurodivergence in existing international research.²⁰ Certain neurotypes are still prevalently stigmatised, leading to further reluctance to disclose and identify with associated negative perceptions, not access resultant support, and thus leading to inequitable participation.

Participants noted that autism and ADHD are presented as potentially problematic in classroom contexts both on and off campus, with any attitudinal placement input beyond the control of the university provider.¹⁶ The common co-occurrence of these neurotypes makes it reasonable to consider them collectively.⁴³ This perceived negativity may reflect wider societal attitudes about the manageability of differing types of neurodivergence being exhibited

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systemically within the teaching profession.^{19,44} This concern is reflected in responses to this study submitted by autistic and ADHD participants, perhaps rooted in repeated past experiences¹¹, whilst participants reflecting on dyslexia disclosure consider that doing so will equate with, and leads to receipt of, positive support.¹²

Strengths and limitations

This research represented a modest sample of neurodivergent education programme students, a group with limited representation within the extant literature, particularly for those intending to enter the teaching profession. The importance of this research lies in understanding the barriers encountered by this population and its relevance for inclusion within the teaching profession. While all participants in this study were White and predominantly identified as female, this is representative of the current Scottish context in this professional area and field of study. Additional intersections between race/ethnicity, gender, and neurodivergence, which are not represented in the current study, doubtlessly exist and might impact upon lived experience findings if included. Nonetheless, this study serves as an important starting point.

The university the sample originated from offers two education programmes that allow movement between them for students identifying a need to remove themselves from the additional burden of the professional strand. This flexibility would not be an option at an alternative institution where leaving, by choice or through burnout, may be the only alternative. These factors limit how representative our findings may be beyond this sample population.

In future studies, it will be important to explore the study findings about inequitable experiences encountered by autistic education students, regardless of other co-occurring neurodivergences, in comparison to other disclosed neurodivergent identities. Future longitudinal

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research to track progress through initial teacher education into early career stages would be beneficial. This research could help develop professional guidance created by neurodivergent voices for staff in school and university environments, aiming to increase the successful recruitment, training, and retention of neurodivergent educators.

Conclusion and Future Directions

This study explored the lived experience of a group of neurodivergent students following a university programme of study to become primary school educators. With the diagnosis and recognition of an increasing number of neurodivergent individuals within education settings, it is crucial to have this population involved in academic research. Their participation and leadership can help determine necessary changes to ensure they are fully represented and authentically valued within the teaching profession at all stages. Qualitative research must address the challenges faced by this population through their direct involvement, learning from their lived experience, and examining the use of professional standards as potential tools of judgement. This approach can drive change informed by their amplified collective voice. By advocating for and supporting neurodivergent student teachers in educational programmes with placements, programme providers could reduce stigma around different neurotypes. Programme providers, in partnership with their neurodivergent students, might advocate by supplying school-based mentors with support, information, and clear guidance on the necessary adjustments for individual student teachers to succeed on placement. This advocacy may lead to more positive perceptions of students currently facing negative biases, particularly those who are autistic and/or have ADHD, and may increase the retention of these students. To explore the findings from this study, the authors plan to extend the investigation into the placement experiences of autistic and ADHD student primary teachers across Scotland.

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Tables and Figures

Table 1. *Demographic characteristics of participant sample.*

Respondent	Gender	Ethnicity	Age	End of Year	Course Started	Course Now	Clinical Diagnosis	Self-identification
P1	M	W	19	1	ESP	EST	AU	
P2	F	W	22	3	ESP	ESP	Dyspraxia	AU/ADHD
P3	F	W	28	3	ESP	ESP	Dyslexia	
P4	F	W	19	2	ESP	ESP	AU/ ADHD	
P5	F	W	24	3	ESP	ESP	ADHD	
P6	F	W	28	3	ESP	ESP	AU	
P7	M	W	24	3	ESP	EST	AU/Dyslexia	
P8	F	W	25	3	ESP	ESP	Dyslexia	ADHD
P9	F	W	20	2	ESP	ESP	Dyslexia	ADHD

ESP = Education Studies Primary (teacher education)

EST = Education Studies (theoretical programme)

AU = Autistic

Terms used in this table are those used by respondents to describe their neurodivergence.

Appendix 1. Interview schedule:

Introductory Questions:

1. Which course are you on?
2. How old are you?
3. What (academic) year are you in?
4. What gender do you identify with?
5. What ethnicity do you identify as?

Main Questions:

6. What do you identify as in terms of your neurodivergence? (This can be more than one answer if applicable).
7. At which age were you diagnosed or realised your diagnosis/self-diagnosed?

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8. Have you disclosed your neurodivergence to the university?
- If so: why?
- If not: why not?
9. Why did you choose to follow the course you are on instead of the alternative education programme provided by the university? (Question dependent on answer to Q1)
If student discloses a change in course since the start of their studies (from Education Primary to Education Studies strand or vice versa):
9a: Why did you change course?
9b: When did you change course?
10. (Both course strands) For each area of your student experience at the university so far, please consider positives related to inclusion (or consideration of your specific needs) you have identified in -
- information sharing: by the university;
- information sharing: on your course;
- studying (lectures, seminars, resources, access, spaces, etc)
- comprehension of your needs related to your neurodivergence by the university;
- comprehension of your needs related to your neurodivergence by staff on your course;
- assessment (content, requirement, explanation, access, format, feedback)
- accommodation (building, room provision, furniture, lighting, etc – specify that this relates to educational accommodation rather than residential accommodation, although students may wish to reference the latter if applicable to their circumstances);
- placement provision by the university
- placement provision by host schools (primary strand) or community education environment (if no primary strand placement experience to draw on or education studies strand).
11. How do you feel about the inclusion of neurodiversity as content in your course?
12. (Both strands) Please provide suggestions about improving the neurodivergent education student experience at the university in any area you feel currently requires improvement/ contains barriers.
13. (Both strands) Please provide suggestions about improving the neurodivergent education student experience within placement opportunities in any area you feel currently requires improvement/ contains barriers.
14. What, if anything, further would you like to add?

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Appendice 2: Results of the Final Themes, Subthemes, and Example Codes

Theme	Subtheme	Example Codes
1. Who we are matters	1.1. Being	Autism Specific Environmental barriers
	1.2. Belonging	Importance of modelling/ND peers Provision of support
	1.3. Feeling	Answering questions ILP impact on emotions/esteem
	1.4 Questioning	Questioning course ND content When to disclose
2. How we are matters	2.1. Surviving	Assessment flexibility Clashing needs and standards
	2.2. Navigating	ND demand balance Who to disclose to and why
	2.3. Hesitating	Reluctance to disclose Impact of disclosure
3. How we know matters	3.1. Seeing	Evidence of inclusion Stereotyping
	3.2. Thinking	Admin processes Making choices
	3.3 Knowing	Clarity of situational expectations Hidden curriculum
	3.4 Comprehending	Communication consistency Provision of feedback
4. What we need matters	4.1 Changing	Transition thoughts Course flexibility
	4.2 Improving	Improving inclusion: campus Improving inclusion: placement
	4.3 Thriving	Accommodation requests Transparency