



“It is Just Too Overwhelming and Constant”: Environmental Influences on Anxiety and Depression in Autistic Young People

Sarah Hampton¹ · Will Mandy¹ · Reesha Zahir¹ · Odette Miller^{1,2} · Susannah Carter^{1,2} · Emily Midouhas² · Eirini Flouri² · Kate Cooper¹

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Abstract

Purpose Autistic people experience high rates of anxiety and depression, yet an evidence-based understanding of how and why these difficulties first develop is lacking. By centring autistic young people’s accounts, this study aims to understand how interactions between autistic people and their environment throughout childhood and adolescence give rise to anxiety and depression.

Methods Twenty autistic young people aged 10–18 and 30 parents of autistic young people aged 5–18 completed semi-structured qualitative interviews about experiences of anxiety and depression.

Results Framework Analysis identified three themes. *External demands and pressures*: Participants described the weight of pressures to meet non-autistic standards within school, social and sensory environments. *Autonomy and control*: Young people struggled with environments not under their control. They benefited from a balance of structure and autonomy within home and school settings. *Safety, trust and predictability*: Trust and acceptance from others (such as family, peers, teachers and professionals), access to safe places (such as home and nature), and engaging in interests were important protective factors.

Conclusion Autistic young people can feel pressure to meet non-autistic demands, impacting mental health. Factors such as academic expectations, parenting styles, understanding of autism among family, teachers and peers, and low sensory demand spaces may be important targets for intervention.

Keywords Anxiety · Depression · Internalising · Autism · Young people · Environment

Introduction

Autism is a neurodevelopmental condition characterised by differences in social communication and sensory experiences, focused interests, and a preference for sameness (American Psychiatric Association, 2013). Autistic people are at least three times more likely than non-autistic people to develop anxiety and depression, with rates of anxiety disorders estimated at 20–39% and depressive disorders at

11–21% (Lai et al., 2019; Polanczyk, Salum, Sugaya, Caye & Rodhe, 2015). Anxiety and depression typically emerge by adolescence (Mandy et al., 2022) and can have detrimental effects. These include associations with poorer quality of life, reduced day-to-day functioning, poorer physical health outcomes, increased risk of suicide and premature mortality (Cassidy et al., 2018; Park et al., 2019; Schendel et al., 2016; Taylor et al., 2021).

Mental health support is a top priority for the autistic community (Cage et al., 2024). However, there is a need for greater evidence about effective interventions. There is evidence that CBT, especially when adapted for autistic people’s needs, is effective in the treatment of anxiety among autistic youth (Perihan et al., 2019; Sharma et al., 2021; Wood et al., 2020). However, treatment effects are generally smaller and more variable than those reported in non-autistic populations, studies suggest smaller effects when using child/self-report measures, and effects may be

✉ Sarah Hampton
schampton41@gmail.com

¹ Department of Clinical, Educational and Health Psychology, University College London, 1-19 Torrington Place, London WC1E 7HB, UK

² Institute of Education, University College London, London, UK

more applicable to younger children than older children and adolescents (Sharma et al., 2021). Further, there is limited evidence that reductions in symptoms persist long-term. Research into interventions for autistic youth with depression is much more limited, though studies provide some preliminary support for the use of CBT (e.g. behavioural activation) to treat depression in autistic youth (Menezes et al., 2024; Mohamed et al., 2024). However, the literature remains dominated by early-stage feasibility studies.

The relatively limited availability of effective mental health interventions for autistic youth may in part be because an evidence-based understanding of why anxiety and depression first develop among autistic people, why they persist and what can help reduce them is limited. Much research into anxiety and depression in autistic people has located risk factors within the individual, exploring characteristics such as intolerance of uncertainty and alexithymia (South & Rodgers, 2017). More research is needed into environmental risk and protective factors (Pellicano & den Houting, 2021). It is important to consider environmental factors as many such factors (such as the built environment and parenting) are modifiable and could represent promising targets for interventions.

Among non-autistic people, environmental influences such as bullying, parent mental health and socio-economic factors play a role in the development of anxiety and depression (Essex et al., 2006; Reijntjes et al., 2010). There is some evidence that these also play a role for autistic young people (AYP), including parental mental health (Weiss et al., 2015; Simonoff et al., 2013), peer victimisation (Abregú-Crespo et al., 2024; Scheske et al., 2026), socioeconomic status (Weiss et al., 2015; Simonoff et al., 2013), and negative life events (Fung, Lunsby & Weiss, 2015). However, this body of research is dominated by cross-sectional quantitative studies exploring unidirectional relationships, which may lack a richer understanding of the complex mechanisms behind AYP's mental health issues. One factor limiting the development of effective interventions may be an incomplete understanding of how AYP experience and make sense of anxiety and depression. While quantitative research has identified potential risk factors, less is known about how AYP understand the causes of their depression and anxiety. Autistic young people's first-hand insights may identify targets for intervention that are not adequately captured by existing theoretical models and can generate a richer understanding of mechanisms and contextual factors to be tested in future research.

The small body of qualitative work in this area has almost exclusively focused on parents' perspectives, identifying factors such as changes to routine, sensory triggers, social demands and the school environment (Mukherjee & Beresford, 2023; Ozsivadjian et al., 2012; Simpson et al.,

2020). However, parents' perspectives may miss significant nuances that can only be accessed via first-hand accounts.

Only two studies have focused on AYP's accounts of their experience of anxiety and depression. One study conducted interviews with seven autistic 9–18-year-olds with depression (Rhodes et al., 2023) and another with 14 autistic boys aged 13–18 with anxiety (Acker et al., 2018). These studies suggest potential risk factors including peer problems, academic pressure and sensory experiences. However, these studies have small samples, limited age ranges and have almost exclusively focused on boys. More in-depth research centring the experiences of AYP of a range of genders and ages across childhood and adolescence is needed. Research that takes a transdiagnostic approach to internalising disorders by considering both anxiety and depression within the same study is also needed; for AYP who often struggle with identifying emotions, asking questions about specific experiences of either anxiety or depression may reduce the depth of their accounts. This study aims to generate information on how interactions between autistic individuals and their environment might give rise to anxiety and depression during childhood and adolescence, by exploring first-hand accounts of AYP's experience.

Methods

Participants

Semi-structured interviews were conducted with 20 AYP aged 10–18 years, 22 parents of AYP aged 10–18 years, and eight parents of AYP aged 5–9. Of the AYP who took part, all but one had a parent (all mothers) who took part. Participants were eligible to take part if they were a UK-based young person aged 10–18 or parent of a young person aged 3–18 with a formal diagnosis of autism and a formal diagnosis or current experience of anxiety and/or depression. All AYP had a clinician-confirmed diagnosis of autism and a diagnosis or current experience of anxiety and/or depression. Additional neurodevelopmental diagnoses included Attention Deficit Hyperactivity Disorder (ADHD; 5 young people), dyspraxia (2 young people), Oppositional Defiant Disorder (one young person), and dysgraphia (one young person). Participants reported no additional mental health diagnoses. Current experience was defined as scoring above the clinical cut off on the emotional problems scale of the Strengths and Difficulties Questionnaire (which asks respondents to report on symptoms over the last six months; Goodman, 1997). Participants were recruited via autism organisations, parent groups, schools, social media and word of mouth. All participants were UK-based. Ethics

approval was granted by the [University College London] Research Ethics Committee [3027/002].

Procedure

Screening

Potential participants were sent an information sheet and invited to attend a phone/video screening call during which the researcher checked eligibility, capacity to consent/assent, preferences around communication, and demographic details.

Strengths and Difficulties Questionnaire (SDQ)

Participants completed the SDQ (Goodman, 1997), a screening tool assessing the wellbeing of young people. The SDQ has five scales: emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and pro-social behaviour. Each scale has five items and is scored from 0 to 10. The SDQ has good validity and reliability (Goodman, 2001). AYP completed the self-report version, and parents completed the caregiver-report version. AYP and parents were eligible to take part if the young person scored above the cut off on either the self-report (above 4) or caregiver-report (above 5) emotional symptoms scale (or if they had a clinical diagnosis of anxiety and/or depression). The emotional symptoms scale's items measure depression (e.g. "Often unhappy, down-hearted or tearful") and anxiety (e.g. "Many worries, often seems worried") disorder symptoms. The scale has been found to demonstrate high accuracy in identifying anxiety disorders and moderate accuracy in identifying depression across childhood and adolescence in the general population (Armitage et al., 2025) and correlates with other validated scales such as the Child Behaviour Checklist internalising subscale in mixed clinical samples (Becker et al., 2004). When used with autistic people, the SDQ emotional symptoms subscale demonstrates acceptable internal consistency ($\alpha=0.78$), and is associated with independent, clinician-assigned diagnoses of anxiety disorders and depression (Findon et al., 2016).

Consent

All participants aged 16 and above gave written informed consent. Those under 16 gave either written assent or consent, depending on capacity to consent. Written parental consent was gained for those under 16 years.

Interview

The topic guide covered the nature, impact, course, and causes of anxiety and depression, and protective factors (see Appendix S1). This paper takes participants' perceived causal and protective factors as its focus.

AYP took part either in person, via video call (with cameras on or off depending on their preference), phone call, email, or chat messages. Most participants chose to take part remotely, with one parent-young person dyad choosing to be interviewed in person. Most chose to have a parent present. AYP were offered regular breaks and could use sensory toys and move around however they felt comfortable. AYP could optionally talk about an object (e.g. a drawing, a photo) or interest to help them explain how they feel when anxious, depressed or happy. The interviewer [*the first author*] is autistic and disclosed this to participants. The interviewer followed the participants' lead on the preferred language to use to describe autism, depression and anxiety during the interviews. This manuscript uses identity-first language throughout in keeping with the preferences of the majority of the autistic community (Schuck et al., 2025).

Participants were informed that they could decline to answer any question and stop the interview at any time. Participants were encouraged to do something they enjoyed and/or talk to someone they trust to help them decompress after the interview. Participants were given a £20 voucher.

Interviews were audio recorded and transcribed in full, with identifying information removed. Consent/assent for audio recording was gained.

Participatory Methods

The study was conducted in extensive collaboration with a panel of eight AYP aged 13–18 years and a panel of nine adults including parents, clinicians, autistic adults, researchers and policy makers. Via online meetings and ad hoc consultation, the panels advised on the interview guide, inclusive data collection materials and methods, recruitment, data interpretation and dissemination. Before joining a panel, each panel member met with a researcher to establish preferred ways of communicating and working. Terms of reference were collaboratively established between the researchers and panel members. Panel members were invited to communicate during meetings however best met their needs such as speaking aloud, typing in the chat, having cameras either on or off, and voting in polls and quizzes. Panel members could also communicate with researchers outside of meetings, by email or phone/video call. To allow time to process, meeting materials were sent to panel members a week in advance. Terms of reference were reiterated at the start of each meeting, including that

the meetings were a safe space for diverse communication and processing styles. Two young stakeholders were also involved in data analysis (see below). Stakeholders were offered £25 per hour of work in the form of gift vouchers as compensation for their support of the research.

Analysis

Data were analysed with NVivo software using Framework Analysis (Gale et al., 2013; Ritchie & Spencer, 1994). Framework Analysis is a widely used, flexible tool that is not aligned with any particular epistemological stance and can accommodate both inductive and deductive analysis. The approach was well suited to the present analysis, which took a critical realist approach and was guided by a priori ideas about relevant environmental factors while centring ideas arising from engagement with the data. Framework Analysis follows a systematic method, facilitating collaborative organisation of larger datasets. Analysis followed Gale et al. (2013): (1) Transcription (2) Familiarization (3) Coding (4) Developing a framework (5) Applying the framework (6) Charting, and (7) Interpretation. Following transcription and familiarization, a coding framework was developed by two coders (the first and last authors) based on environmental variables relevant to mental health (e.g. ‘peer relationships’, ‘academic environment’). These two coders then independently double coded five transcripts, followed by discussion. The two coders then refined the framework accordingly and codes were dropped, merged or created where relevant. The first author then repeated this process with the fifth author (a member of the young stakeholder panel), double coding another five transcripts, engaging in consensus discussion and further refining the framework together accordingly. The first author then coded the remaining 40 transcripts using the revised framework, engaging in regular discussion with the wider team throughout. During charting, the first author summarised each transcript’s content per code. The last author double charted two transcripts and the first and last authors met to compare charting and come to a consensus. The fourth author (another member of the young stakeholder panel) checked the first author’s charting of five further transcripts, adding further nuance where appropriate. Four researchers (the first, second, third and last authors) read and discussed the chartered summaries of all transcripts and devised themes during four in-depth meetings. Themes were presented to the stakeholder panels who reported that the themes were clear and resonated with their experience. The first author engaged in reflexivity throughout, keeping a reflexive journal, considering her positionality as an autistic woman, and discussing reflections with the team.

Positionality

Most authors have a background in neurodiversity-affirming autism research. *[the first author]*, *[the fourth author]* and *[the fifth author]* identify as autistic. *[the second]* and *[the last author]* have worked with AYP professionally as clinical psychologists. The study is underpinned by a critical realist stance, recognising that while reality exists independently, our understanding of it is shaped by context and perspective.

Results

Among the total sample of young people, the average age was 12 years, and half were female (Table 1). The majority attended mainstream school and were from a white ethnic background. All parents were mothers.

Themes

Three themes were generated: (1) External demands and pressures; (2) Autonomy and (lack of) control; (3) Safety, trust and predictability (Table 2). Further illustrative quotes for each theme can be found in Appendix S2.

External Demands and Pressures

Pressures of the School System

School was often experienced as a pressurising environment and a substantial source of anxiety, overwhelm and exhaustion.

“I hate being overwhelmed all day with no relief. I have no downtime which makes me very tired and anxious. I do like school but it is just too overwhelming and constant.” (Young person, aged 15).

The inflexibility of school, such as inflexible timetables, infrequent breaks, and strict policies around uniforms, attendance, and toilet use, contributed to these feelings. Schools sometimes implemented strict discipline policies such as exclusion, detention and, in the case of two young people, restraint. Parents highlighted that these policies could erode AYP’s sense of trust and safety at school.

“they’d also been put in exclusion because of the behaviours that they were displaying. Sensory issues, meltdowns, etc. And I think that’s kind of carried with

Table 1 Demographic information for young people ($n=32$):

Demographic variable	All young people ($n=32$) ^a	Young people interviewed ($n=20$)
Mean age in years (range)	12.32 (5–18)	14.35 (10–18)
Mean age in years at autism diagnosis (range)	8.09 (3–16)	9.45 (3–16)
Mean SDQ Emotional Problems Scale score (range)		
AYP aged 10–18 (self-report; $n=12$)	7.50 (5–9)	7.83 (5–10)
AYP aged 10–18 (parent-report; $n=23$)	7.96 (3–10)	7.74 (3–10)
AYP aged 5–9 (parent-report; $n=8$)	6.88 (4–10)	n/a
Gender		
Female	16 (50%)	10 (50%)
Male	15 (47%)	9 (45%)
Non-binary	1 (3%)	1 (5%)
Ethnicity		
White	23 (72%)	15 (75%)
British Asian	3 (9%)	1 (5%)
Black British	1 (3%)	1 (5%)
White and Black Caribbean	2 (6%)	2 (10%)
Mixed other	3 (9%)	1 (5%)
School		
Mainstream school	24 (75%)	14 (70%)
Specialist school	5 (16%)	3 (15%)
Not in education	3 (9%)	3 (15%)
Index of Multiple Deprivation (IMD) quintiles ^b		
1st (most deprived)	4 (14%)	3 (16%)
2nd	5 (18%)	3 (16%)
3rd	3 (11%)	3 (16%)
4th	7 (25%)	3 (16%)
5th (least deprived)	9 (32%)	7 (37%)

^aThese are the details of all young people represented in the interviews (either interviewed directly or via their parent)

^bData missing for 5 young people

Table 2 Themes and subthemes

Themes	Subthemes
1. External demands and pressures	1.1 Pressures of the school system 1.2 Social pressures and demands 1.3 Sensory demands
2. Autonomy and (lack of) control	2.1 Lack of control over the environment 2.2 Importance of autonomy
3. Safety, trust and predictability	3.1 People 3.2 Places and activities

them into secondary school. That feeling of a distrust"
(Parent of young person, aged 17).

Academic pressure, including frequent testing, homework and the pressure to perform well in exams, was one of the main sources of anxiety identified by AYP. This anxiety was heightened when the difficulty and pacing of schoolwork were not attuned to the individual's needs, *'I couldn't do the*

work properly, and then I got angry' (Young person, aged 14). AYP and parents highlighted that struggling to meet academic demands impacted self-esteem and led to low mood, as AYP compared themselves to their peers, *"you always feel like you are failing, why am I not like everybody else?"* (Parent of young person, aged 13).

School demands increased with age. For several young people, anxiety and depression first became apparent at times of transition, most notably the transition to secondary school. This was often associated with the increased academic pressures (in addition to social and sensory pressures, see subthemes 1.2 and 1.3). Acquiring accommodations to reduce pressure was challenging, especially in mainstream school where staff could misunderstand AYP's needs. Specialist settings tended to allow a more relaxed pace of work and less restrictive policies.

Social Pressures and Demands

AYP felt pressure to socialise in non-autistic ways, especially with peers. AYP did not always understand their peers and often found it difficult to make and maintain friendships, *"Everybody seems to have read a guidebook that I*

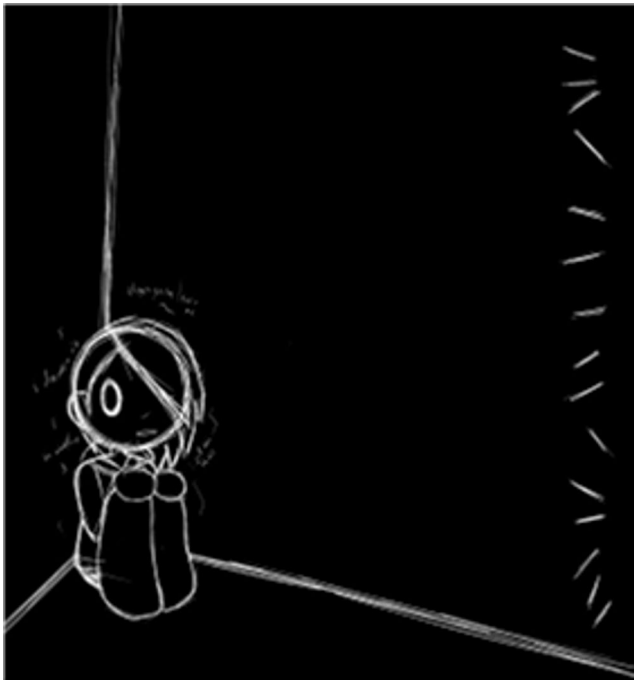


Fig. 1 Artwork by a young person (aged 17)

haven't." (Young person, aged 10). One AYP spoke about their artwork (Fig. 1)¹ and how it illustrates their feelings of difference and isolation, *"I was having really bad anxiety about my friends not wanting me around, and being able to all talk so much without me saying anything."* (Young person, aged 17).

Awareness of their social differences left some AYP feeling self-conscious and anxious when interacting with others (especially unfamiliar people). Some AYP experienced exclusion and bullying, including teasing and rumours, which contributed to low mood. Some felt they were targeted due to being different.

"The girls are not like me. If I wasn't autistic then I would be like the girls. And I don't know how to dress correctly. They make fun of me." (Young person, aged 14).

For some AYP, these experiences made AYP feel like they needed to mask their autistic characteristics to fit in and experience was tiring and contributed to feeling low. These difficulties increased with age for some AYP, as AYP became more aware of their social differences and the complexity of their social environment increased.

"I was worried if they perceived me like, they wouldn't like who I am so I think that's when I first started to like mask a lot more" (Young person, aged 10).

Sensory Demands

Environments with high sensory demands were often overwhelming and put a daily strain on AYP. AYP experienced anxiety in busy, loud, crowded spaces such as shops and public transport. The school environment was often challenging, with crowded corridors, bright lights, and the noisiness of boisterous peers, *"I get stressed and I just want to leave. I can't concentrate sometimes. Our school's really loud."* (Young person, aged 14). Larger schools were more challenging than smaller, quieter classroom environments and the transition to secondary school could be especially difficult for this reason. Family mealtimes and social events could also be anxiety-provoking for some AYP, due to sensory demands such as noise. In contrast, AYP valued low-demand sensory environments such as nature.

Autonomy and (Lack of) Control

Lack of Control Over the Environment

Young people found changes to plans and routines anxiety-provoking, *"Anxiety is minimal/nil when she is comfortable in her environment and knows the routine"* (Parent of young person, aged 8). AYP found unpredictability at school difficult such as unexpected changes to schedules or teachers. Disruptive peers caused anxiety for some AYP as the classroom felt chaotic and it was important to AYP that teachers facilitated a safe, predictable space. School-related transitions such as from nursery to primary, and from primary to secondary were often challenging due to adjusting to new teachers, peers and buildings. Smaller transitions were also challenging for some such as transitioning between classes and to/from home.

"I'm starting A levels and I've got a new subject that they don't teach at lower years so it's a completely new teacher. I don't know who's going to be in the classes, I've never been in their classroom before and that makes me really anxious" (Young person, aged 16).

The Covid-19 pandemic represented a challenging transition for some. While lockdown took away the pressures of daily life, returning to school post-pandemic could be jarring, especially for those transitioning to secondary school. The stark contrast between the isolation of lockdown and

¹ Permission was gained from the young person to use their artwork in outputs from the study

intensity of school exacerbated challenges around the social and sensory demands of school.

Importance of Autonomy

Feeling in control of their environment eased AYP's anxiety. Parents and AYP reported that increasing flexibility at school (providing more breaks, reduced timetables, flexibility around attendance, and space to follow interests) significantly alleviated anxiety and low mood. It was often useful to provide a balance of structure and predictability alongside flexibility according to the young person's needs.

"He will go into school in the morning, and they might put four tasks out for him, and say, "Your choice. Do you want to do science, history, English, or geography this morning? [...] So it's passing control to the child" (Parent of young person, aged 8).

Autonomy was also important at home. Parents found that lowering demand and offering their young person choice reduced anxiety *"It's made all the difference in our life. Collaboration. Working together."* (Parent of young person, aged 11). While this approach generally worked well, parents strived to navigate a balance of providing autonomy while maintaining boundaries and structure. Some parents identified that low demand parenting clashed with the stricter school environment and parents found this discrepancy challenging.

Environmental pressures sometimes made AYP feel the need to adapt to the environment (such as by masking; see subtheme 1.2) rather than taking control over it. However, AYP also valued gaining self-understanding as they got older (sometimes facilitated by an autism diagnosis) and this was sometimes a tool for self-acceptance and self-advocacy, leading to greater wellbeing.

"I have the type of autism where I feel like I can never be loved and I crave love and validation constantly. And like that just connects so many dots for me, because I thought like wow, that's why I'm like this, you know." (Young person, aged 16).

AYP identified that facing anxiety-provoking situations was easier when they were self-motivated to achieve a goal that was of inherent value to them rather than those around them. As such, living life on their own terms sometimes represented a tension of both gaining and relinquishing control over their environment via venturing out of their comfort zone.

Safety, Trust and Predictability

People

Feeling accepted and understood by trusted people helped buffer against internalising difficulties, *"I've got so many people around me who just get it and they've understood me as a person more and why I can feel this way. I think that is so, like, crucial to me"* (Young person, aged 15). Acceptance and understanding from peers was beneficial for wellbeing (and sometimes reportedly easier with neurodivergent peers and those with shared interests). Family, especially parents, often provided a safe, supportive base. AYP sometimes shared their feelings with parents and parents talked of helping them to make sense of their feelings. Parents reported fostering a positive sense of their young person's identity to counterbalance the impact on self-esteem, and therefore internalising difficulties, dealt by the world around them. For some (particularly neurodivergent) parents this meant fostering acceptance of autism.

"she feels intense shame about her behaviour and has internalised her struggles with her personality by feeling that there's something wrong with her, so it was really trying to rebuild her self-esteem" (Parent of young person, aged 10).

Parents tried to balance providing predictability (e.g. planning daily schedules) with encouraging AYP to face anxiety-provoking situations where appropriate. While parents were often a safe base, some AYP experienced separation anxiety and this was exacerbated for parents with an unpredictable health condition. Some AYP found it challenging to adapt to these and other family circumstances such as parental separation, parental addiction, and bereavement.

"With my illness he's at times been worried about leaving me at home. What am I going to be like when he gets back because my condition can swing within the course of a day." (Parent of young person, aged 10).

AYP also valued trusted professionals who listened, were kind, and understood and accommodated their needs. Having a trusted teacher or teaching assistant at school helped some to feel at ease. AYP sometimes felt anxious about communicating needs to teachers, especially when teachers were perceived to be harsh (such as shouting or being sarcastic). Forming bonds with teachers and feeling understood was sometimes easier in specialist than mainstream environments, *"in a mainstream school, they didn't really understand."* (Young person, aged 16).

AYP valued trusted mental health professionals who provided a foundation for learning coping strategies (such as mindfulness and grounding techniques) as well as self-understanding. However, AYP faced long waiting lists to access services and some were refused support. When AYP accessed support, they did not always feel understood. AYP reported barriers including professionals using non-autistic communication styles, not adapting practice for autistic people and short therapy timescales (AYP often needed time to develop relationships).

“I think doctors/psychologists/teachers should find techniques that work for that person specifically rather than just trying a technique that always works on neurotypical people.” (Young person, aged 17).

Places and Activities

Places and activities provided respite from external demands and facilitated joyful experiences that, in turn, were protective against anxiety and depression. Home, especially their bedroom, was commonly felt to be a safe place where AYP had control over their environment.

“Without a doubt at home. Like it’s where I know everything is. So, I think that’s why I like it because I just know everything’s in place.” (Young person, aged 15).

Online was also an important space that relieved the pressures of in-person socialising. AYP reported making successful friendships through online gaming, though fallings out with friends could occur online too. Nature, animals and open spaces were often calming. Walks, going for a drive and other outdoor activities relieved anxiety and boosted mood. Animals provided connection without the social complexities of people, *‘Bunnies are someone to talk to who don’t judge.’* (Young person, aged 10).

AYP found activities such as stimming, fidget toys and eating comfort food useful for regulating anxiety and low mood. Young people often had strong interests (including music, art and gaming) and these boosted mood and distracted from negative feelings. Interests often provided predictability but also represented small ways AYP could feel free to do things their way, *“With the extracurricular activities and stuff, I might be worrying before then but once I’ve done them, I forget about the worries.”* (Young person, aged 14).

Discussion

Shaped by meaningful collaboration with AYP and parents, this is the largest qualitative study exploring anxiety and depression among AYP and one of the first to centre AYP’s voices. Participants identified potential environmental contributors to AYP’s difficulties with anxiety and depression, most notably pressure to meet non-autistic academic, social and sensory demands.

School factors were reported as significant contributors to AYP’s mental health. This fits with evidence that AYP experience school-related stressors including overwhelming sensory environments, difficulty with transitions and pressure to meet academic standards, especially in mainstream environments (Horgan, Kenny & Flynn, 2023; Williams, Gleeson & Jones, 2019). Participants emphasised the role of academic pressure and its impact on AYP’s self-esteem, a role that is echoed in the limited prior qualitative work with AYP and parents in this area (Acker et al., 2018; Rhodes et al., 2023; Mukherjee & Beresford, 2023; Simpson et al., 2020). It is worth noting that exam pressure is associated with reduced wellbeing for young people in the general population (Long, Zucca & Sweeting, 2021). Further research is needed to determine to what extent academic pressure is intensified for AYP and to explore potential bi-directional relationships between externally imposed pressures, individual factors (such as academic ability) and self-esteem. Inflexibility, lack of autonomy, unpredictability and sensory demands at school were also highlighted by participants. School environments that allow greater autonomy, facilitate gradual transitions, and reduce academic pressure, unpredictability, and sensory demands may help reduce anxiety and depression for AYP.

In keeping with prior findings that AYP face increased socio-environmental stressors (Cresswell et al., 2019), participants highlighted the roles of social exclusion and peer victimisation. These stressors may have complex, bidirectional relationships with mental health, whereby challenging social experiences could result in low mood and anxiety around others’ perceptions which could in turn lead to AYP masking their differences. This masking could then represent a maintaining factor, resulting in low mood and disconnection. These hypothetical mechanisms could be tested in future research. Masking has been associated with mental health symptoms in autistic adults (Cook et al., 2021). One study with autistic adolescents found that masking was often a response to devaluing of AYP’s social difference by others and that acceptance from others could help AYP achieve self-acceptance (Chapman et al., 2022).

Acceptance and understanding from others were identified by participants as protecting against AYP’s internalisation of environmental stressors. Interventions targeting

acceptance and understanding of neurodiversity among teachers and peers in schools (such as the Learning About Neurodiversity at School project; Alcorn et al., 2024) may therefore protect against anxiety and depression in AYP. Young people sometimes felt that acceptance by peers was facilitated by shared neurodivergence. Higher satisfaction with one's autistic identity and greater solidarity with autistic people have been linked with wellbeing among AYP (Cooper, Russell, Lei & Smith, 2023). Interventions targeting positive autistic identity and access to autistic community could therefore reduce anxiety and depression. These interventions could also increase self-knowledge which, as suggested by some participants, could facilitate self-advocacy. Acceptance and understanding from mental health professionals helped some participants develop self-knowledge and acceptance. However, in keeping with evidence that mental health support is insufficiently tailored to autistic people's needs (Brede et al., 2022), greater therapist training in adapting therapy for autistic people may be beneficial, as well as longer therapy timescales to build trust.

Participants identified self-esteem as a mediator between external stressors and mental health. Future research might test this hypothesis further, and there may be a role for strengths-based mental health interventions celebrating the skills, character and interests of AYP. Interests were identified by participants as a protective factor and some AYP faced fear-provoking situations when motivated towards an interest. Indeed, incorporating interests into interventions is linked to positive outcomes for AYP (Harrop et al., 2019). Incorporating interests in nature and animals may be especially beneficial, given that participants identified calming and connecting effects. Access to interests via online spaces (e.g. online gaming) may be useful, given the reduced social demands of online environments mentioned by participants and prior findings that autistic adolescents associate online gaming with agency, belonging and emotional regulation (Pavlopoulou et al., 2022). Among non-autistic adolescents, online environments are associated with challenges such as cybervictimisation and body image issues (Holland & Tiggemann, 2016; John et al., 2018). Such negative effects were not commonly mentioned by participants, and further research might explore the benefits and challenges of online environments for AYP across different online contexts.

AYP often faced environments that limited autonomy. One future-testable hypothesis is that AYP may experience a vicious cycle whereby lacking control over their environment increases uncertainty and exacerbates anxiety, leading to greater need for control to manage anxiety. When participants were afforded greater autonomy, they were sometimes able to better face uncertainty. This fits with findings that AYP desire to engage with the world on their own terms and to balance the need for growth with their

need for familiarity (Cooper et al., 2024). Low demand parenting may be beneficial as a way of affording autonomy. Despite evidence in non-autistic young people (Waite et al., 2014) there is minimal research into the impact of parenting style on anxiety and depression in AYP and research is needed to establish whether lowering demand reduces anxiety and depression. Any interventions supporting parents to lower demand should also support them to maintain healthy boundaries, and navigate the potential clash with a higher demand school environment.

Limitations

Most participants resided in more affluent areas. Many causal and protective factors are impacted by socio-economic factors, including access to services and housing. The findings may have reduced relevance for less affluent families. The study was not accessible to those with lower verbal abilities and may not reflect the experiences of this group. The views expressed may not reflect those of AYP who are less inclined to reflect on and express their views on their mental health. While data analysis was a collaborative process involving several members of the research team and those with lived experience, only 20% of transcripts were double coded, meaning that 80% of transcripts were coded by the first author only.

Conclusions

Unaccommodating environments and pressure to meet non-autistic expectations may impact the development of anxiety and depression in AYP. Several environmental factors may be targets for interventions, including the school environment, parenting style, understanding of autism among family, teachers and peers, access to hobbies and low sensory demand spaces. To what extent it is possible to modify the environment to lower demands on AYP and to what extent it is necessary to support AYP to gain skills to adapt to the environment, are open questions. Navigating this balance when developing interventions should be informed by the perspectives of AYP with whom interventions should be co-developed.

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Declarations

Conflict of Interest The authors have no competing interests to declare that are relevant to the content of this article.

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Consent for Publication The authors affirm that the participant provided informed consent for publication of the image in Fig. 1.

Informed Consent All participants gave written informed consent/assent.

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