



Children at the frontline — neurodivergence and school distress

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Collaborators

- Sophie Connolly
- Hannah Constable

Bio

Dr Sinéad Mullally completed her PhD in cognitive neuroscience at Trinity College Dublin, followed by a 5-year Wellcome Trust-funded postdoctoral position with Professor Eleanor Maguire at University College London. She subsequently joined

Newcastle University as a lecturer of Neuropsychology in 2013, specialising in developmental cognitive neuroscience, neurodivergence and mental health.

Further reading

Connolly SE, Constable HL, Mullally SL, (2023) School distress and the school attendance crisis: a story dominated by neurodivergence and unmet need. *Front Psychiatry*, 14.



Children at the frontline — neurodivergence and school distress

- Schools should be safe spaces to encourage children to learn.
- ‘School distress’ describes the extreme emotional turmoil of children who struggle to attend school.
- Cognitive neuroscientist Dr Sinéad Mullally and her team surveyed over 900 parents of children displaying school distress.
- A highly significant percentage of their children were neurodivergent; their stories were harrowing.
- The education system should shift practices to empower neurodivergent children to thrive.

the neural mechanisms of cognition. Her research includes how atypical sensory processing and cognitive patterns impact learning, behaviour, and social functioning. Increasingly, Mullally seeks to understand how neurodivergent minds navigate and

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Schools should be safe spaces if they're to encourage children to learn. However, even the seemingly safest and most supportive school environments can harbour perils for neurodivergent children and young people (CYP). The hustle and bustle of an active classroom can generate deep anguish. This is their daily reality – an emotional battleground with them at the front lines. So, it should be no surprise when they want to retreat.

Psychology researchers at the University of Newcastle, UK, have discovered just how closely connected neurodivergence is to school refusal. Their research prompts uncomfortable questions and introduces a sobering term to the lexicon of neurodiversity studies.

Dr Sinéad Mullally is a lecturer and developmental cognitive neuroscientist at Newcastle University who specialises in

interpret the world. Working with research assistants Sophie Connolly and Hannah Constable, Mullally has examined the often-overlooked challenges neurodivergent children face in educational settings.

School distress

The researchers coined the term ‘school distress’ to capture the extreme emotional turmoil faced by children who struggle to attend school. These children experience

profound anxiety, depression, and sensory overload triggered by a typical school environment which they find simply overwhelming. Their distress manifests in various forms, from avoidance to crying spells and physical illness. This distress isn't just limited to missing school; it also includes the emotional trauma that accompanies being present in a classroom while feeling terrified or alienated. Mullally and her team hypothesised that neurodivergent children would display more significant school attendance difficulties than their neurotypical peers. They had little idea how right they were.

In a study using a bespoke online questionnaire involving 947 parents across the UK, the



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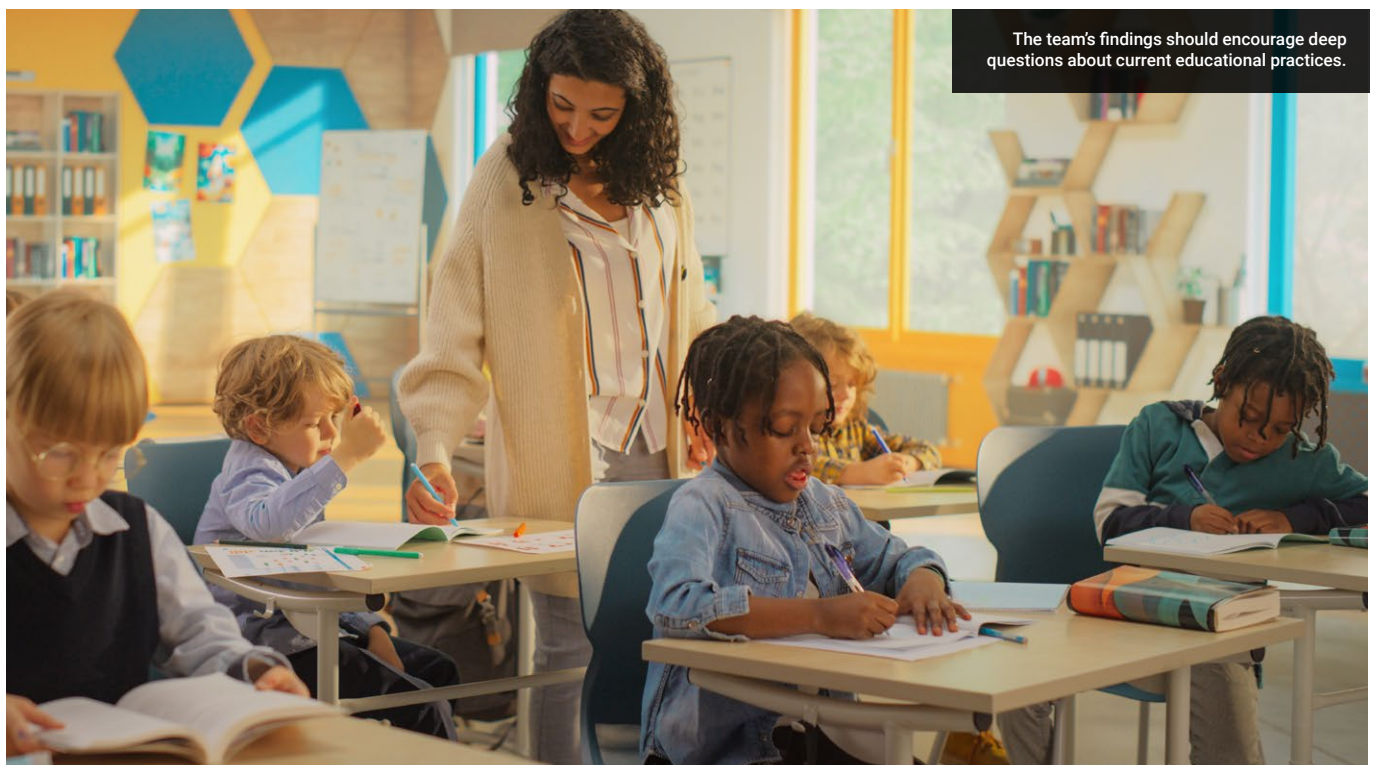
researchers found that a staggering 92.1% of children with school attendance problems were neurodivergent, with 83.4% autistic. ADHD, sensory processing difficulties, and anxiety were also common companions, creating complex profiles that amplified school distress. The parents' accounts of that distress were harrowing, often referring to their children's chronic physical displays of intense anxiety, including vomiting and bed-wetting, and attempts at self-harm at the prospect of going to school.

The survey showed clear evidence of pathological demand avoidance,

manifesting as extreme resistance to everyday demands and a heightened need for control. What made matters worse was teachers mistaking their behaviours as defiance rather than cries for help; punitive measures only deepened the wounds.

The odds – a grim forecast

Statisticians might be astounded at the odds ratio revealed in this study: autistic children were 46 times more likely to experience school distress than their neurotypical counterparts. In contrast, the odds of a smoker developing lung cancer are between 15 and 30 times higher than a non-smoker. This astronomical



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ratio underscores the grim reality that neurodivergent children face, often without appropriate support or accommodation. Despite the high odds, autistic children are still expected to conform to an educational mould designed without their unique challenges in mind.

To get an idea of the impact of the school setting, the researchers compared the neurodivergent CYP with lifelong electively home-educated (EHE) children – a control group with similar neurodivergent profiles. The EHE group presented a stark contrast in mental health outcomes. These children did not exhibit the same distress levels as those in traditional schools, and they did not face the same punitive measures or isolation experienced in school settings. Their stories were a potent reminder that neurodivergent children can thrive in an educational setting when given supportive and understanding environments tailored to their unique needs.

However, homeschooling isn't a panacea for all; neither is it practical. This reality points to a need for systemic changes in traditional schooling.

A new approach

Mullally's dedication to uncovering the emotional toll of rigid schooling on children with complex profiles aligns seamlessly with her broader research interests in promoting inclusivity and understanding neurodivergent experiences. Furthermore, her contribution to this research resonates strongly with her commitment to developing empathetic educational practices that cater to the unique cognitive

Personal response

What findings from this study surprised you the most, and why?

Initially it was the volume of responses that we received. We originally aimed to recruit ~50 families with experience of school distress (or 'school refusal' as we originally conceptualised this as). Within days, our survey was completed by hundreds of families, and this continued to rapidly rise until we closed the study.

Next, as we processed the data, there were clear standout findings that surprised and shocked us. Firstly, it was the young age of the children impacted with, in over half of cases of school distress, the child's distress being evident to their parents before their 8th birthday. This was coupled with the enduring nature of these children's distress, with the average length of the school distress being ~4 years. Secondly, it was the level of complex neurodivergence evidenced, the level of anxiety that we were seeing on the child anxiety scale we used (which, at the group level, was considerably higher than any previously published reports in the literature using the same scale), and the clear and harrowing impact that attending school was having on these children and young people. When we consider that the expectation set by the Department for Education (July 2023) is that children spend a minimum of 32.5 hours per week and 190 days per year at school, this becomes extremely concerning.

The increasing realisation of how, all too frequently, neurodivergent children are being harmed by the very system meant to support and nurture them deeply impacted us as a team. However, it also served to strengthen our determination to ensure these children's experiences are comprehensively documented within the psychological literature. We hope that with time, their lived experiences can inform change and a re-imagined education system with the flexibility to safely meet the needs of all children.

Should neurodivergent children be schooled in a separate setting from neurotypical children?

Within the current educational system and accompanying special educational needs & disabilities (SEND) crisis, our data (alongside that collected by others) shines a bright light on the fact that mainstream schools in the UK are not currently safe spaces for neurodivergent children (with over 97% of the children in our cohort having commenced their educational journeys in mainstream settings). Whether it is possible, with significant policy change, political will, and considerable investment, to transform mainstream schools into smaller, sensory-sensitive, nurturing, flexible, and truly inclusive places for neurodivergent children to be, is an open question. Key to answering this question is listening to the neurodivergent children and young people themselves, and conducting high quality participatory research into educational spaces in which neurodivergent children thrive.

What would be the most impactful and practical way for an education system to shift practices and empower neurodivergent children to thrive?

The first step is accepting that the current education system in the UK is not fit for purpose for neurodivergent children, and that the current status quo is, all too frequently, causing significant and enduring harm to neurodivergent children and young people and indeed to their families.

Ending punitive attendance policies for neurodivergent children is also essential.

Crucial too, is challenging the legal presumption that school is the best place for all children, as there is currently little scientific evidence to support this when specifically considering neurodivergent children, and plenty that contests it.

Until the above are recognised and accepted, change is not possible.

Running alongside the above, intensive research efforts are needed to fully understand how education practices need to shift to ensure that all neurodivergent children can access education. This effort must cast a wide net and consider both school and non-school based education, and (as above) be fully participatory in nature.

There is no panacea for this, and the answer will require an informed, skilled, and flexible education system that can rapidly respond to the unique learning needs of all its students.

needs of neurodivergent children. Her team's findings should encourage deep questions about current educational practices. Indeed, given the disproportionate number of disabled CYP impacted, in their study, the researchers ask whether the UK is upholding its responsibility to ensure the 'right to an education' for all children and young persons as per the Human Rights Act of 1998.

The study suggests the UK's education system should shift practices to empower neurodivergent children to thrive. Such a shift is not easy, but it is needed. It means fostering empathy, training teachers to understand diverse neurotypes, and providing individualised support that accommodates these children's needs. Neurodivergent children cannot continue to be neglected by the systems meant to nurture them and provide a safe space to learn.





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