

Introduction

The process of identifying, referring, and assessing children who may have special educational needs (SEN) is complex. Legislation and professional codes dictate that SEN referrals should be managed equitably, with resources allocated on the basis of need (British Psychological Society, 2017; Department for Education, 2015).

The term 'disproportionality' refers to over- and under-representation of demographic groups (Frederickson & Cline, 2015; Oswald et al., 1999). The starkest example of disproportionality in SEN research and practice is biological sex. Fifty years of research has consistently reported that around 2/3 to 3/4 of children referred for SEN support are male (Rutter et al., 1970; Vardill & Calvert, 2000). In 2020/21, males accounted for 73.1% of pupils in England with Education, Health, and Care Plans (EHCPs), the most resource-intensive form of SEN support (Department for Education, 2020).

Two key questions arise around why such stark disproportionality exists and whether it can be justified. This article will consider a range of possibilities through the lens of Bronfenbrenner's eco-systemic framework, which encourages a holistic perspective (Bronfenbrenner, 1979; Desforges & Lindsay, 2010).

Individual system

The individual system refers to biological and neurodevelopmental factors. Autism, a neurodevelopmental condition, is diagnosed at a male to female ratio of around 3:1 (Loomes et al., 2017). An example theory of within-child group differences is the extreme male brain theory of autism (Baron-Cohen, 2002). This argues there are two key dimensions that govern how the brain works: empathising (understanding and responding to feelings) and systematising (analysing information). Baron-Cohen argues males are more likely to have highly systematising brains, a trait strongly associated with autism. In contrast, females are more likely to have empathising brains. This theory is not without its critics but it does have considerable empirical support (Greenberg et al., 2018).

Microsystem

The microsystem refers to people who directly impact children's development, such as families and teachers. At the psychosocial level, modest evidence exists that boys and girls are treated differently by parents, based on societal norms and stereotypes (Keil, 2014). For example, in Western cultures at least, parents typically talk to girls more overall and more about emotions, play more gently with girls and encourage more role-play, and are more understanding of emotional displays in girls (Maccoby, 2003). There is consistent evidence that boys undertake more disruptive (unwanted) behaviours in classrooms and that these behaviours are noticed more by teachers (Anderson, 1997; Hill, 1994). Linking the two, it could be that boys have fewer opportunities to develop healthy communication strategies, leading them to struggle regulating emotions when learning becomes challenging.

Mesosystem

The mesosystem refers to interactions between microsystems. An example is the SEN referral process, which involves communication between school staff, parents, and specialist professionals. This process is often initiated by teachers, suggesting their knowledge and judgment influence which children get referred. In one study, whilst teachers identified significantly more boys than girls as having 'behaviour problems', educational psychologists who assessed the same children showed no significant sex differences (McConkey & O'Connell, 1982). This fits with other evidence that more

specialist, multi-professional assessments lead to less disproportionality along demographic variables such as month of birth (Squires et al., 2013). It seems that bias exists to some degree in how children are initially identified as potentially having SEN and referred for assessment.

Exosystem

The exosystem refers to links between settings not directly involving the child. An example is the development of standardised assessment instruments, such as the Autism Diagnostic Observation Schedule (ADOS), considered the gold standard in the field (Rea et al., 2022). The ADOS was developed and tested primarily using male samples (Lord et al., 2000). In practice, females are less likely to be assessed for autism (Loomes et al., 2017). Once they are accepted for assessment, females may be less likely to meet diagnostic criteria despite having similar traits to males (Lundström et al., 2019). Even when females receive autism diagnoses, they receive lower ADOS scores on average (Adamou et al., 2018) and receive diagnoses later in childhood on average (Shattuck et al., 2009). There could be male bias resulting both from the methodological development of the ADOS and from the way specialist practitioners use the ADOS in practice.

Macrosystem

The macrosystem refers to overarching social-cultural attitudes. Within the UK education system, there are cultural and legislative emphases on disciplining unwanted behaviour and achieving quantifiable results through examinations (Department for Education, 2021). Whatever the underlying reasons for the preponderance of boys' disruptive behaviour, there is an effect on the learning of other children in the class, as teachers respond to behaviours to maintain order, taking time away from teaching. Such behavioural difficulties may be seen as particularly threatening to overall class and school functioning and therefore be prioritised for specialist referrals (Todman et al., 1991).

Chronosystem

Chronosystem refers to environmental and developmental changes over time. Assessing that children have SEN implies they require an alternative or modified educational approach compared to the majority. This status typically follows children through their school careers and beyond in a static, essentialist manner. However, 'SEN' might exist less within the individual and more within the disjunction between individual and systemic needs (Beaver, 2011). This is a more dynamic and hopeful perspective, implying that collaboration and flexibility can, over time, lead to benefits for both sides, rather than requiring that one side fits into the constraints of the other.

Conclusion

This brief article has aimed to illustrate the complexity of why sex disproportionality exists and whether it can be justified. Having reviewed evidence within a range of systems, disproportionality might result from genuine neurodevelopmental or psychosocial group differences, unintended bias from identification and assessment procedures, or deliberate targeting of certain groups. The existence and consistency of disproportionality are clear; the factors driving disproportionality less so. Researchers and practitioners should work together to understand perspectives from a range of stakeholders, to work towards a future where individuals are neither stigmatised nor denied support on the basis of group membership.

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