

# The Educational Attainment, Engagement, and Experiences of Autistic Students

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# Introducing Autism



- Heterogeneous set of neurodevelopmental conditions
- Characterized by social differences, repetitive behaviours, and restricted interests
  - Sensory differences are common
  - Often have a cognitive profile that prefers logical and factual information
  - Spectrum of intellectual ability
- Combination of genetic and environmental factors

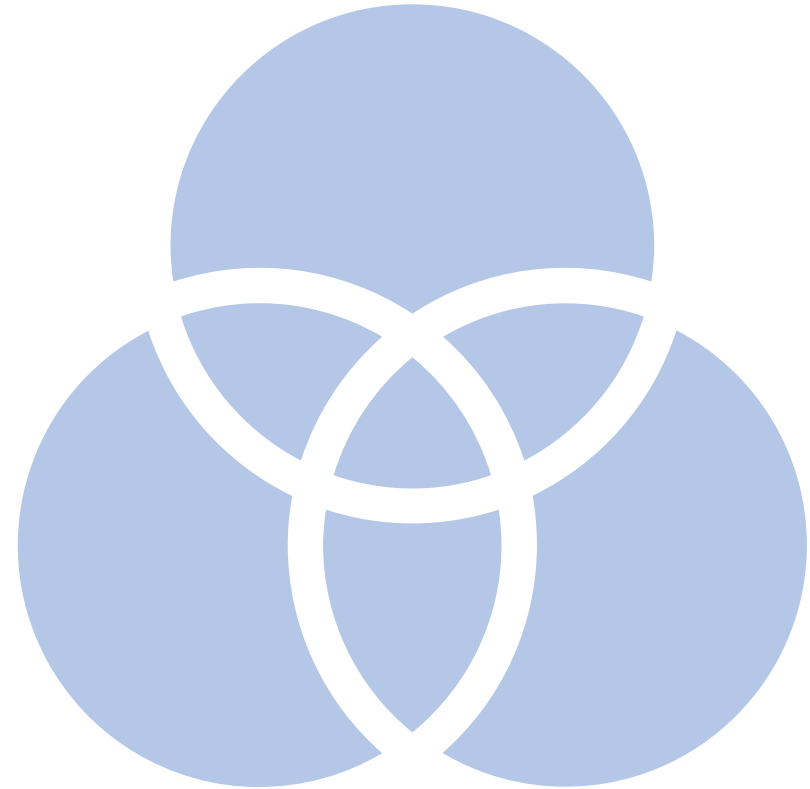
# How common is autism

- 1 in 31 children 8-year-olds diagnosed in US
- 1 in 34 children aged 10-14 years diagnosed in UK
- Males are diagnosed more often than females
  - Approximately 4:1 in UK based on latest statistics
- As many as 1.2 million people may be undiagnosed in England alone
- Changes to prevalence across time reflect changes to diagnostic criteria and recognition

# Co-occurrence with Other Neurodivergence

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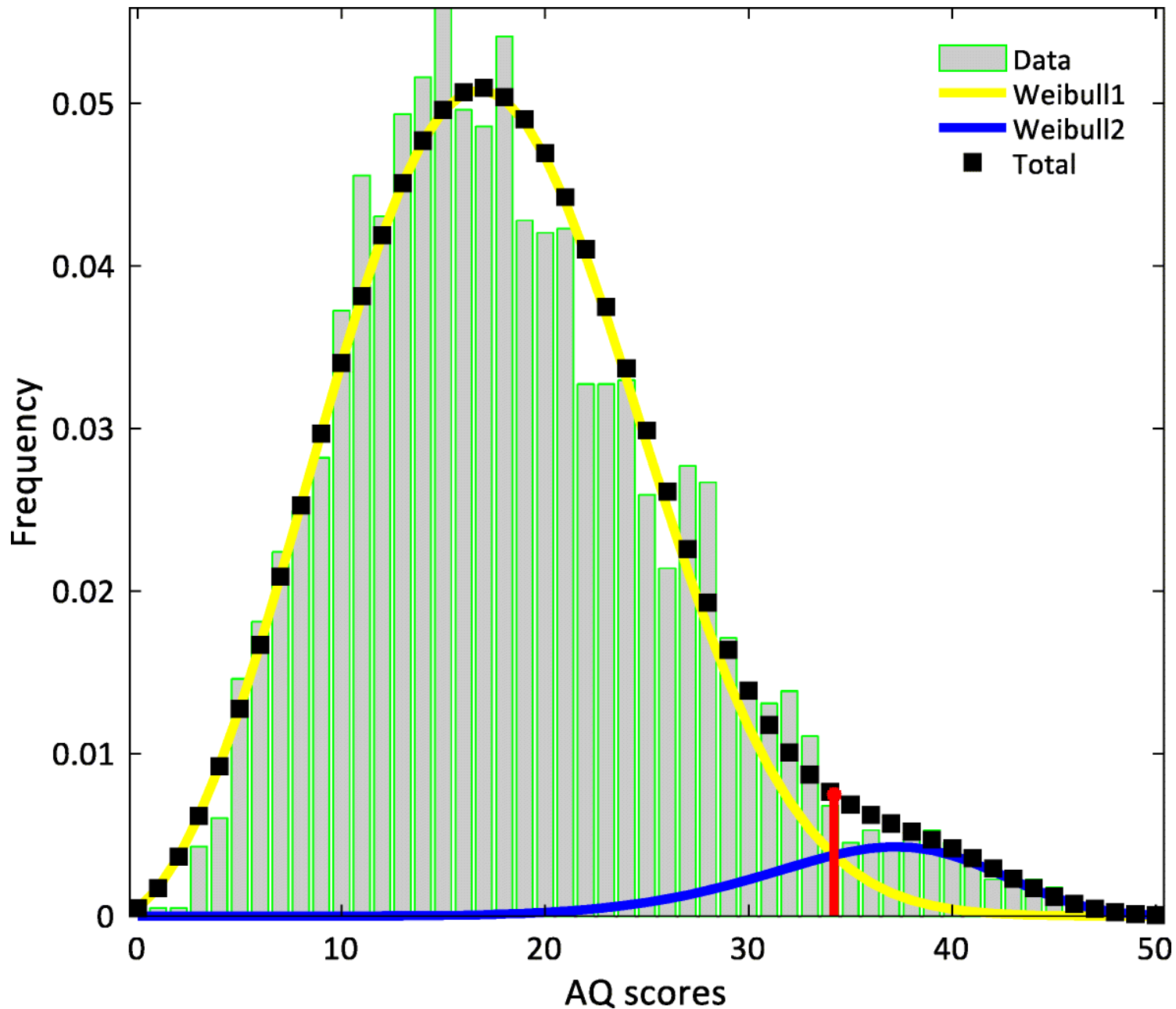
- Approximately 25% of autistic people have diagnosed, co-occurring ADHD
  - Only possible since DSM-5 in 2013
- 25-40% of autistic people have co-occurring learning disability (also known as intellectual disability)
  - Range depends on age and country
- Other types of neurodiversity and SEND are also common



# Understanding Neurodiversity



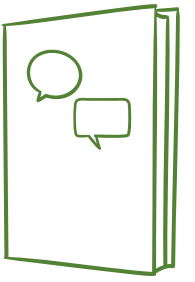
- Differing brain types but these brain types aren't inherently more or less valuable than others
- All brain types have certain strengths and challenges
  - Examples include autism, ADHD, dyslexia, and dyspraxia
- Differing brain types allow us to progress and approach problems in diverse, adaptive, creative ways
- All of us have varying levels of autistic traits:
  - Attention to detail
  - Introversions
  - Preference for routines
  - Areas of interest



# Autistic traits across the population

Both categorical and  
dimensional models of  
autistic traits are supported  
by the data

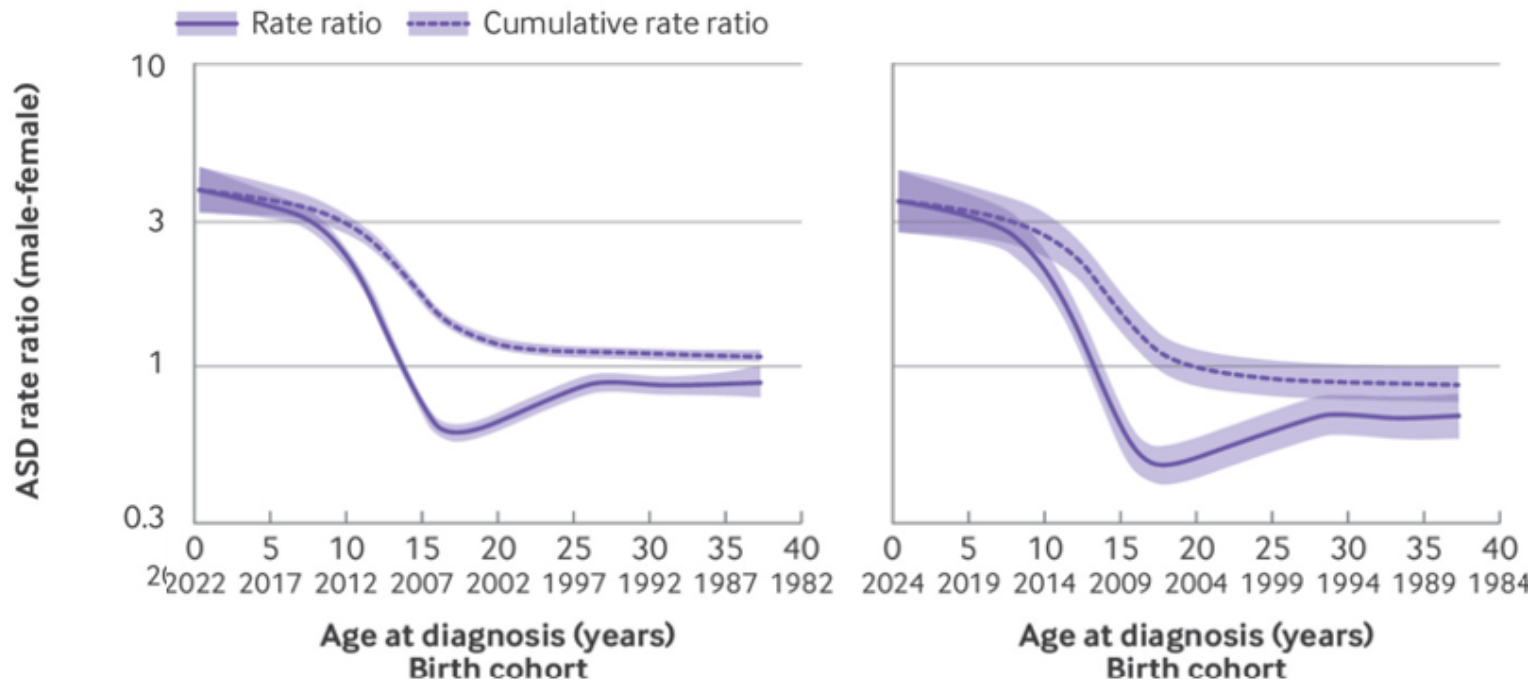
# Notes about Language



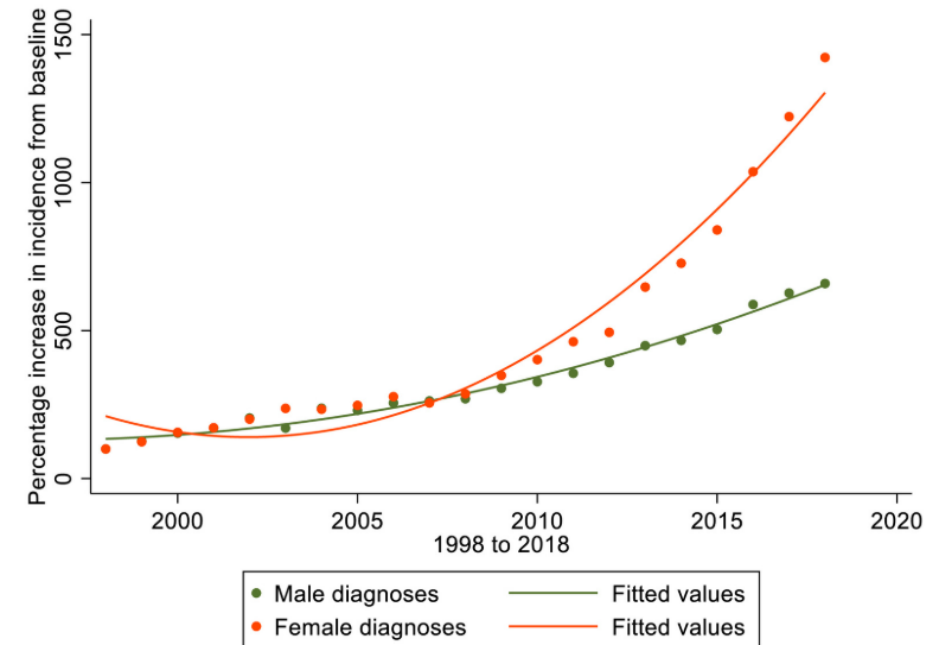
- Identity-first language (e.g., autistic person), as this is preferred by the majority of autistic people in the UK, Australia, and North America
  - Diversity of opinions among autistic people and their families
- Autistic people are acutely aware of discrimination, judgement, and stigma
- I do not use ‘autism spectrum disorder’ but instead use ‘autism’ or ‘autism spectrum condition’
- Higher autism satisfaction and solidarity were associated with better psychological wellbeing and lower social anxiety
- Many late diagnosed adults suggest that their autism diagnosis helped to reframe their experiences and had a positive effective overall on wellbeing

# Diagnostic Rates by Sex

Sweden



United Kingdom



# Underdiagnosis of Women and Girls

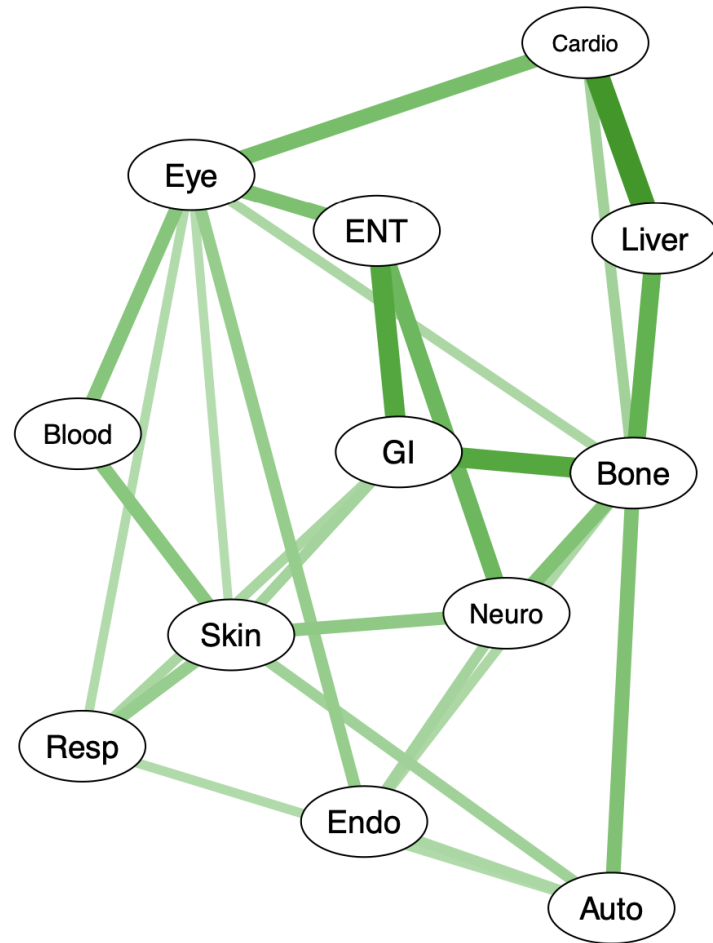
- Presentation of repetitive and restricted behaviours may depend on sex
- Autistic females tend to have a later age of diagnosis than males
- Diagnostic tools differ in their ability to capture autistic traits in females
- Clinical overshadowing may delay autism diagnosis, and females experience a greater delay than males
- Females may be misdiagnosed with other conditions before receiving appropriate autism diagnosis
- Higher rates of camouflaging and compensation

Antezana et al., 2018; Bargiela, Steward, & Mandy, 2016; Cary et al., 2023; Edwards et al., 2023; Hull et al., 2019; Kentrou et al., 2018; Kentrou et al., 2021; Kentrou et al., 2024; Lai et al., 2016; Livingston, Shah, & Happé, 2019; Maciver et al., 2025; Martini et al., 2025; Ratto et al., 2019

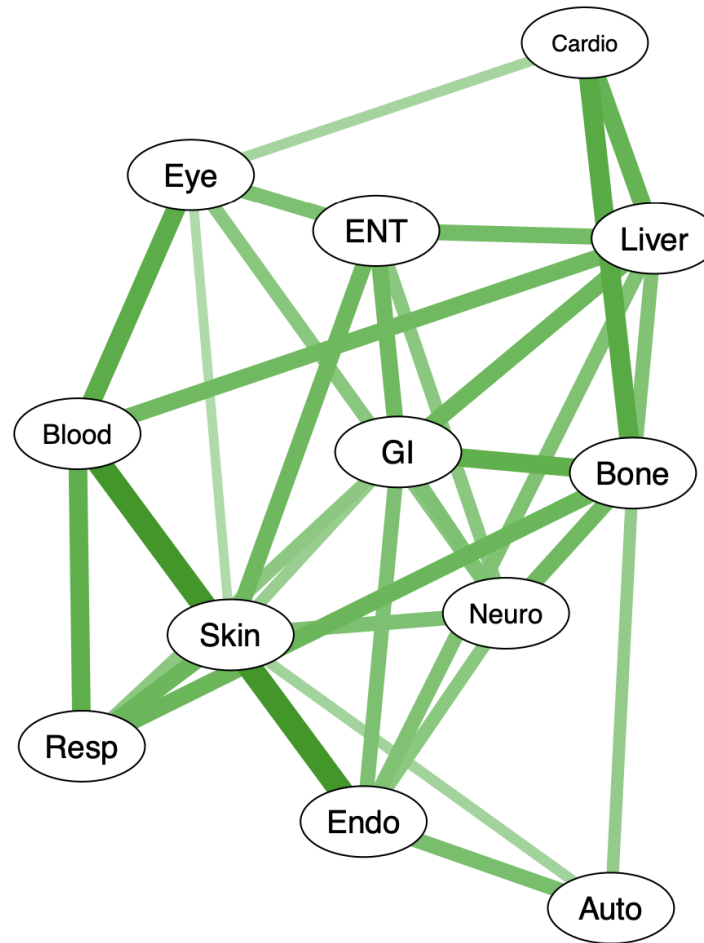


# Physical Health

Control



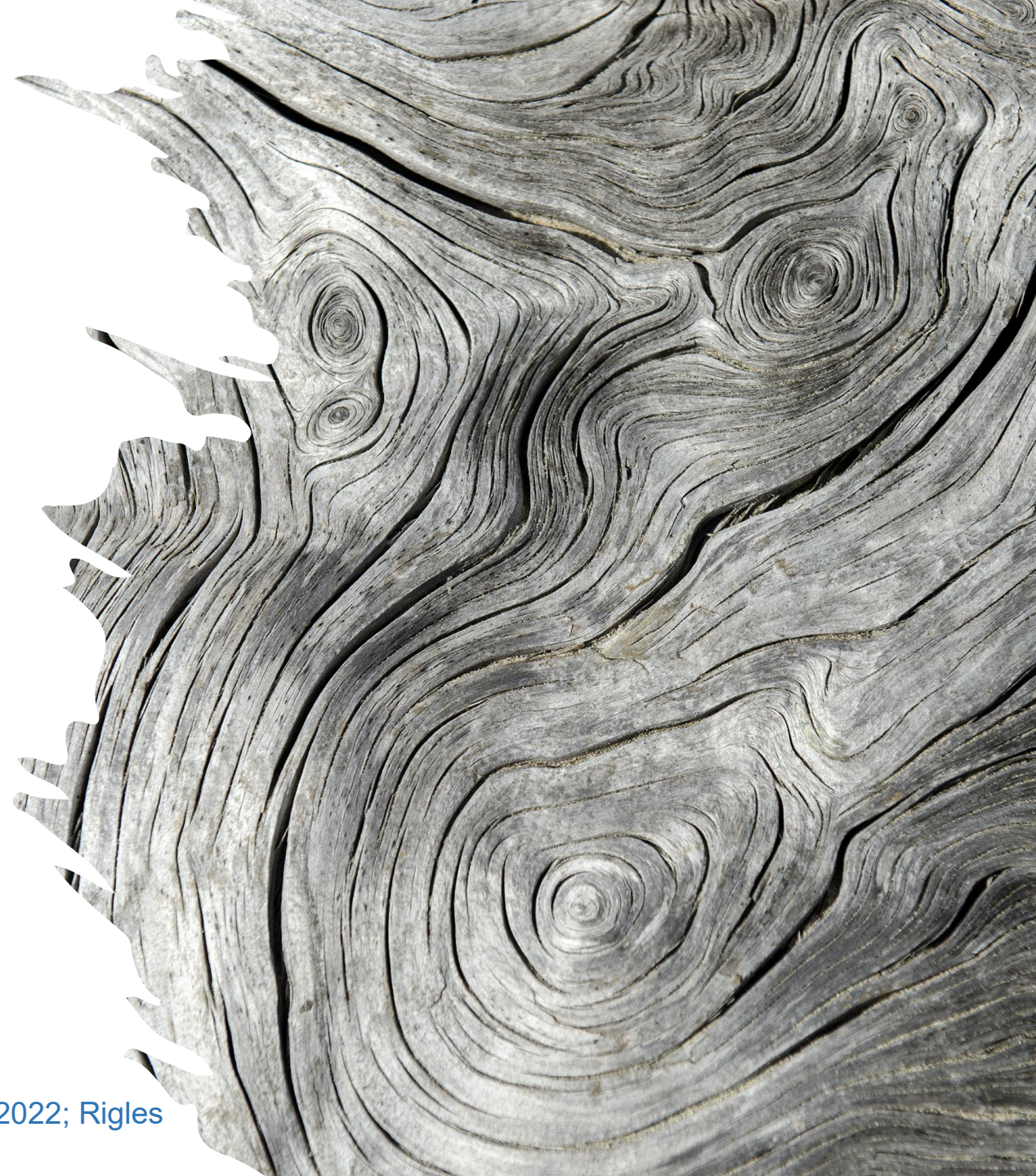
Autistic



- Autistic people have higher rates of nearly all types of non-communicable physical health conditions
  - Includes increased risks of life-threatening and chronic conditions
- Shift away from narratives that there are certain physical health risks to instead consider broader risks overall

# Mental Health

- 55-94% of autistic people have at least one mental health condition
- In general, a higher proportion of autistic people will develop psychiatric conditions and be hospitalized for a psychiatric reason compared to non-autistic people by age 25
  - Anxiety, depression, OCD, bipolar, psychosis, anorexia, bulimia, other eating disorders, sleep disorders, alcohol use disorders, self-harm
  - 32 of 100 autistic females and 19 of 100 autistic males
- Alexithymia may be more common among autistic people
  - 1 in 3 autistic people experience Alexithymia



# Risk of suicide



- **Autistic Adults:**
  - 1 in 4 attempts suicide
  - 1 in 3 has suicidal ideation
- **Autistic Children**
  - 1 in 10 attempts suicide
  - 1 in 4 has suicidal ideation

# Adverse Life Experiences

- Autistic children (and children with high autistic traits) have higher rates of bullying, abuse, and neglect than non-autistic children
- Autistic adults and adults with high autistic traits are more likely to have:
  - Experienced a traumatic event that meets the threshold for PTSD
  - Higher rates of PTSD
  - More severe PTSD symptoms



## Theme

Mental Health

Education

Employment

Finances

Criminal Justice System

Adulthood Victimization

Social Support

Domestic Abuse

Social Services Contact

Childhood Victimization

# Vulnerability Experiences Quotient

- Autistic adults were more likely to report 49 out of 60 adverse life events than non-autistic people
- Higher rates of adverse experiences among autistic people across all ten categories of vulnerability
- Similar patterns for people with high autistic traits

## Theme

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# Vulnerability Experiences Quotient

- 2.6 – 5.8 times increased risk of all but one education-related adverse experiences
  - I dropped out of school/college/university
  - I missed more than 2 weeks of school/college/university due to anxiety or depression
  - I was temporarily or permanently excluded from school/college/university
  - My parents/carers tried to get additional support for me at school but the school did not provide any
  - I avoided attending lessons or lectures at school/college/university because I found them stressful

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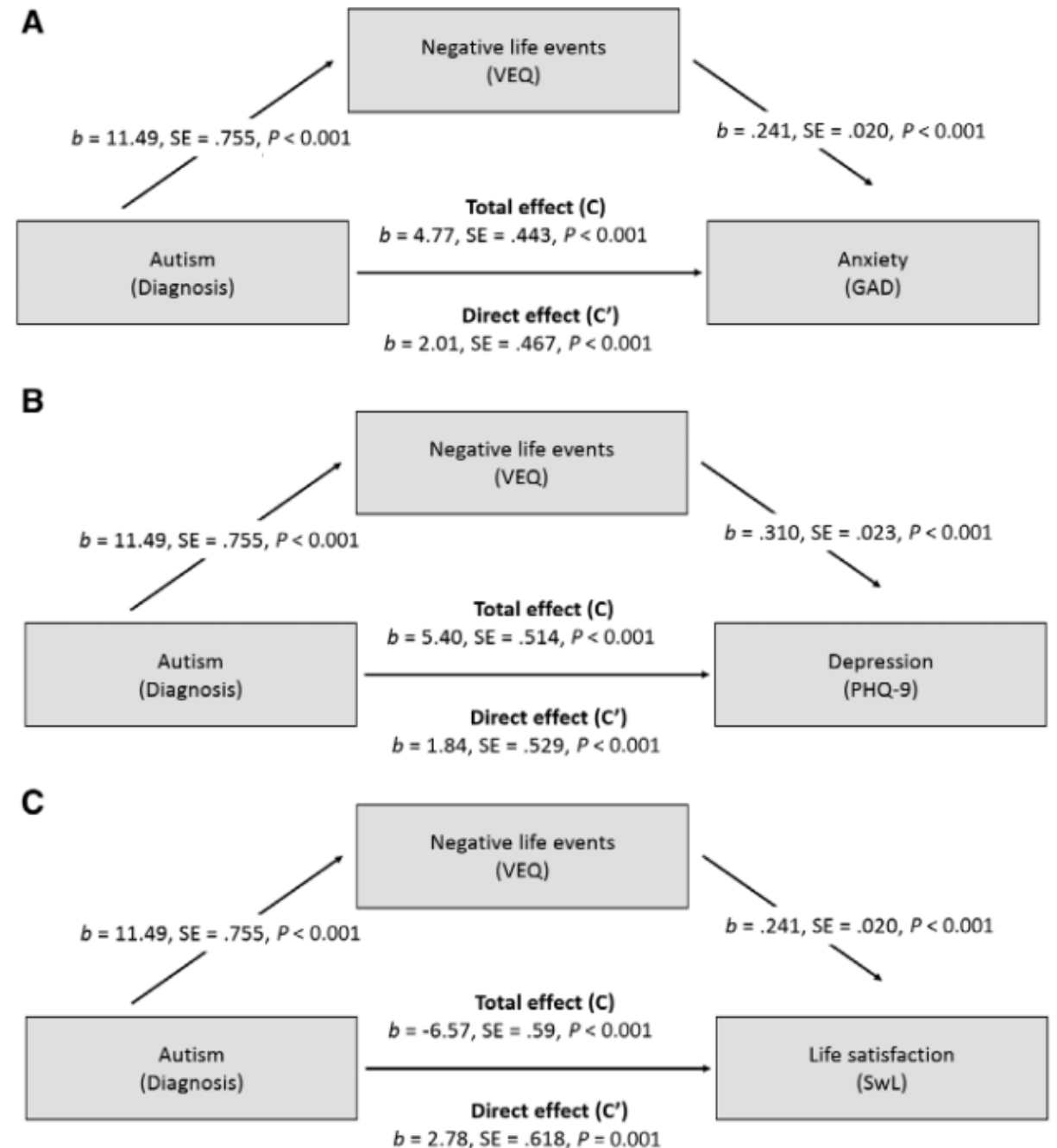
Childhood Victimization

# Vulnerability Experiences Quotient

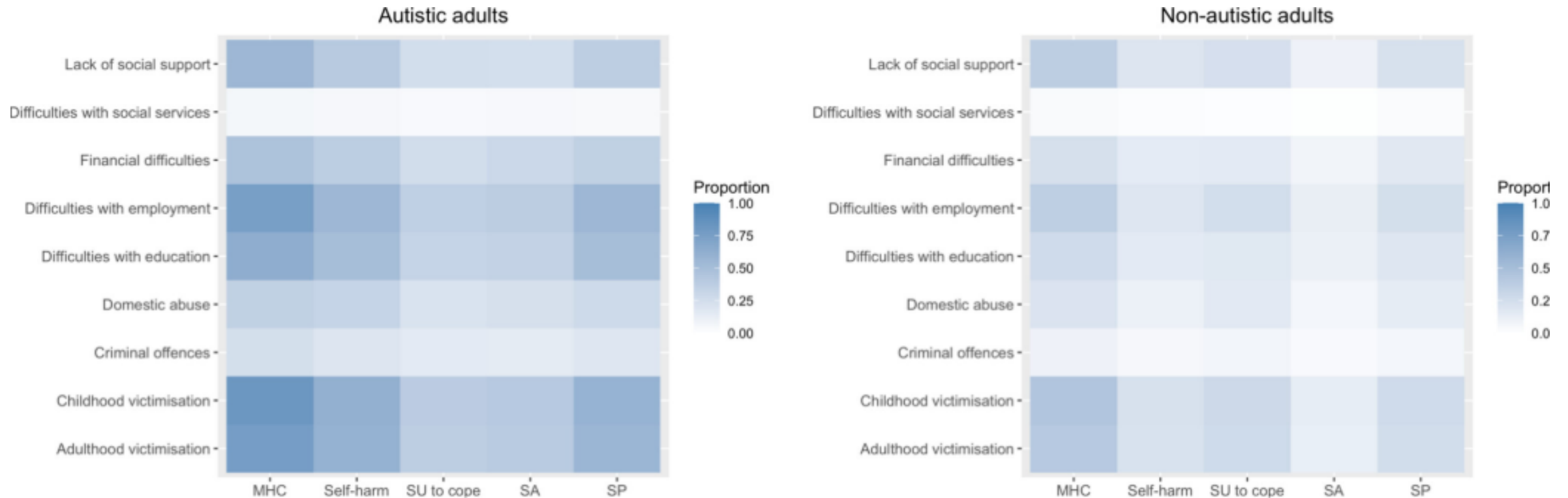
- 2.4 – 5.5 times increased risk of all employment-related adverse experiences
  - I was signed off from work for at least 2 months due to anxiety, depression or any other mental health reason
  - I spent at least a year unemployed and seeking work
  - I was sacked from a job
  - Disciplinary action was taken against me at work
  - I left a job because I was unable to deal with the work environment and/or the demands of the job
  - I have been regularly overlooked for promotions or contract renewals at work
  - I left a job because I was being treated badly by colleagues
  - I have been unable to get a job which matches my level of training and qualification

# Mediation of VEQ

- Negative life experiences partially mediated the relationship between autism with:
  - Current anxiety symptoms
  - Current depression symptoms
  - Quality of Life
- Preventing trauma may be able to partly improve quality of life and mental health for autistic people

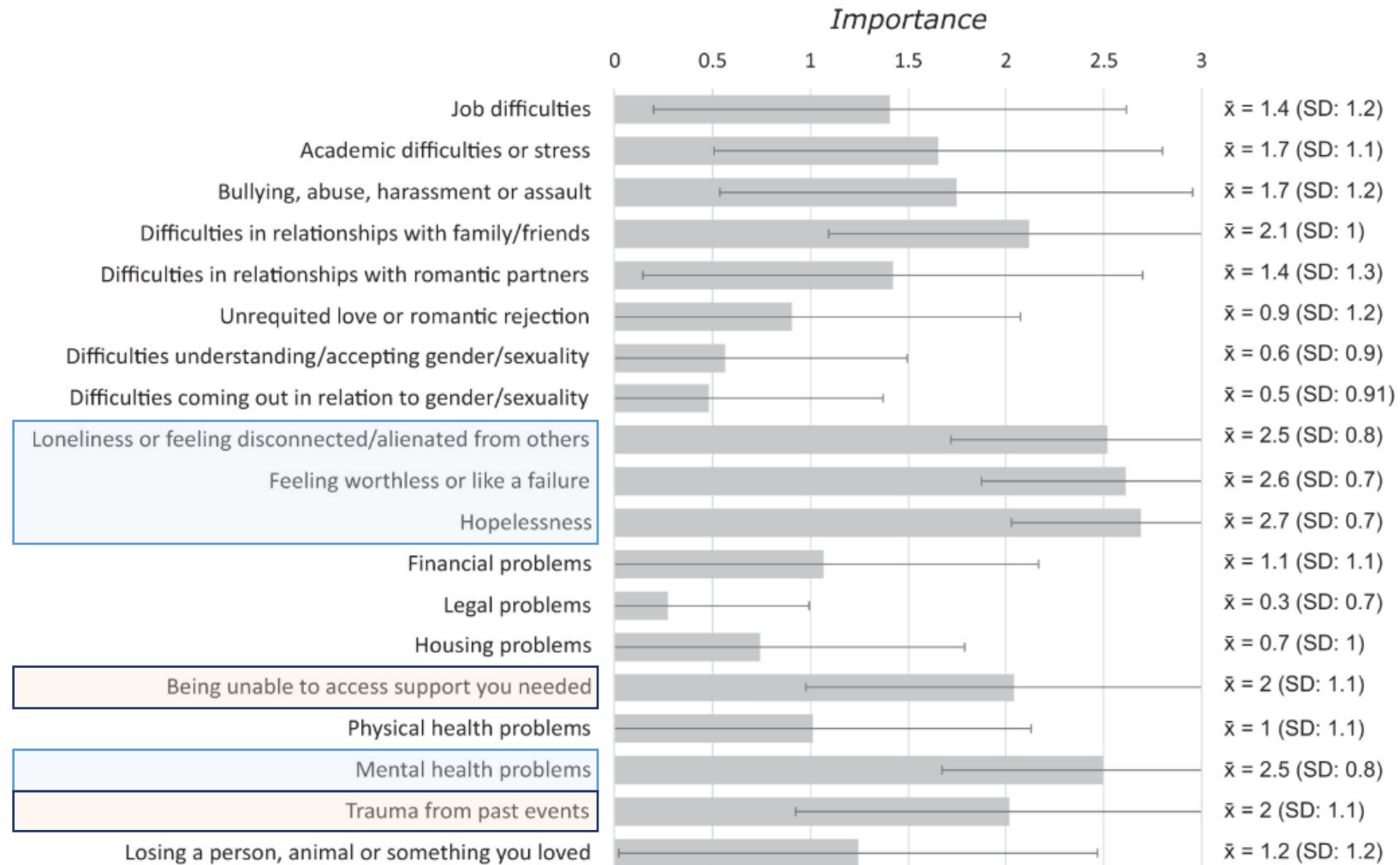


# Trauma, Psychological Distress, and Suicidality



# Autistic Peoples' Reasons for Suicidality

## A) Importance ratings for pre-specified factors



# Autistic Peoples' Priorities for Suicide Prevention

## 1. The “urgent” vs. the “root causes”

This theme reflected participants' deliberations on the staging of suicide prevention efforts between indicated interventions, helping people already experiencing suicidal thoughts and/or behaviour, and selective and/or universal approaches focused on preventing the development of suicidal thoughts and/or behaviour. Some participants explicitly reflected on the difficulty of the choice between approaches.

## 2. “Brutalised, broken systems”—the logic of suicide and the need for “radical social change”

This theme incorporated comments where participants remarked on the scale and breadth of efforts needed to address the problem of suicide with and for autistic people. In some quotations, participants expressed a sense that suicide was a logical or rational response to systemic inequalities.

### *i. “The seed of all autistic suicide death is in childhood and early adulthood”*

This subtheme reflected comments from participants who prioritised longer-term, preventative (universal or selective) approaches to suicide prevention over those for people in crisis.

### *ii. “Crisis 1st, preventing crisis 2nd, quality meaningful satisfying life 3rd”*

This subtheme reflected comments from participants who prioritised indicated crisis measures foremost, relegating longer-term preventative approaches to a later point in time.

### *i. Acceptance, belonging and community*

This subtheme reflected unmet needs for social contact, reciprocal accepting relationships and (in several participants' words) ‘community’. Some quotations within this subtheme reflected on the contributions of alienation, loneliness, and unbelonging, alongside instances of explicit rejection and exclusion, to suicidal thoughts and behaviours. Others explicitly pointed to the importance of measures combatting stigma and social ostracism of autistic people as a priority for suicide prevention.

### *iv. Suitable educational provision and transition support*

This subtheme reflected comments from participants who attributed their suicidal experiences, at least in part, to a lack of support and accessibility within the education system. Some noted that with children unable to attend school, punitive measures taken towards parents and families by the education system resulted in a desperate, helpless situation. Others particularly highlighted the insufficiency of support at transition points, such as the end of formal education. This subtheme also included quotations calling for reform of the education system, which participants suggested needed to become fundamentally more flexible and individual-centred, responsive to and respectful of neurodivergent needs.

### *v. Suitable employment and social care in the community*

This subtheme reflected comments from participants highlighting the inadequacy of current social care provision and/or community-based support ‘beyond’ the healthcare system. Some participants highlighted their need for regular support with daily life tasks and participation in the community. Some spoke about challenges obtaining and maintaining employment, with some speaking of inaccessibility and bullying in the workplace. Some participants explicitly highlighted need for better resourcing and training in the social care sector such that would translate to ‘helping them [autistic people] in their normal life’. Others directly called for employment-focused support, increasing awareness among employers, and for law to make workplaces fairer and accessible.

# Autistic Peoples' Priorities for Suicide Prevention

Across both phases of the survey, participants prioritised change in sectors which might appear less immediately apparent to suicide prevention, such as education and employment.

“Lack of support in childhood set me up for problems for rest of my life. Support with education and career is vital. Those of us that is too late for understanding and safe place are vital” (autistic cisgender woman, 43, diagnosed, England)

“I feel school is where it all starts. there needs to be better support for autistic people in schools, all staff should have mandatory training and support needs to be so much better than it is now” (autistic cisgender woman, 38, diagnosed, England)

“Address the root problem: Education, bullying/school life, diagnosis—reduce the number of autistics traumatised before they reach adulthood, and ill-equipped for independent life. Financial help” (autistic gender-questioning individual, 31, diagnosed, England)

“Although I believe the peak age for suicide is the 30s, the greatest waste of life and the seed of all autistic suicide death, is in childhood and early adulthood. Hence my emphasising schools & unis” (autistic cisgender man, 54, diagnosed, England)

“Bullying in school first as if children hadn't bullied and shunned him and understood autism my son would not have felt suicidal in the first place. He was a happy boy before he went to school” (non-autistic supporter/ally, cisgender woman, 53, England)

“It begins with bullying in schools. Interestingly it takes many years for a ‘professional’ to identify that you're autistic, but a child of 7 can spot you and start making your life hell from then on” (autistic cisgender woman, 60, diagnosed, England)

“I am a broken person & acutely suffering because of not having special needs support, or intervention, especially in early childhood, teens or adulthood” (autistic cisgender woman, 55, diagnosed, England)

# Suicidal Thoughts Among Autistic Youth



- 63% of autistic young people in the study reported suicidal ideation
- Personal use of the term 'neurodiversity' was associated with a 50% reduction in risk of suicidal thoughts
  - Should be interpreted with caution

# Suicide Prevention and Mental Health

- Our findings place responsibility for change on society and systems rather than autistic people
- We have power to change things
  - Improving safeguarding to prevent trauma
  - Improving accessibility of support
- Neurodiversity-affirming models could help
  - Autistic people by reducing self-stigma
  - Reduce discrimination by others
  - Create a more inclusive society that values autistic people and recognizes their strengths

# Barriers to participation (Primary & Secondary School)

- Difficulties with inflexibility of school environments
- School culture plays a key role
  - Positive experiences with teachers and senior staff
- Limited formal training for teachers and feel unequipped
  - Limited resources and opportunities for collaboration
- Strategies that improved participation:
  - Incorporating interests or strengths into classroom activities and routines
  - Using visual supports (e.g., schedules and social stories)
  - Explicitly teaching skills (e.g., emotion regulation)
  - Providing access to regular breaks to meet sensory needs
  - Structure and predictability—though not always feasible
- Strategies implemented also benefitted non-autistic students
- Acceptance is essential
- Pervasive stigma at all levels
  - Awareness could lead to peers targeting autistic characteristics (e.g., sensory sensitivities)
  - Can lead to self-stigma and masking; loneliness and social exclusion
- Problems with physical school environment negatively predicted participation



# Barriers to Attainment, Attendance, and Quality of Life



- Academic and non-academic supports are frequently desired but inconsistently available
- Specific barriers included:
  - Financial difficulties
  - Lack of knowledge from educators and peers
  - Discrimination
  - Stigma
  - Bullying
- Reasonable adjustments/supports that benefitted attainment:
  - Mentorship
  - Social Support
  - Counselling
  - Housing accommodations
  - Tutoring
  - Extra time
  - Copies of notes

# National Data on Educational Engagement and Exclusions

Suspensions and permanent exclusions by SEN provision, 2024/25 spring term


		2024/25 Spring term			
		Suspensions	Suspension (rate)	Permanent exclusions	Permanent exclusions (rate)
SEN provision	EHC plan	38,766	8.83	408	0.09
	SEN support	114,173	9.79	1,457	0.12
	No identified SEN	159,623	2.35	1,455	0.02

## Headline facts and figures

16 to 24 year olds NEET

**13.3%**

Down 0.3 percentage points compared to 2024

What is NEET? 

16 to 17 year olds NEET

**4.0%**

Down 0.5 percentage points compared to 2024

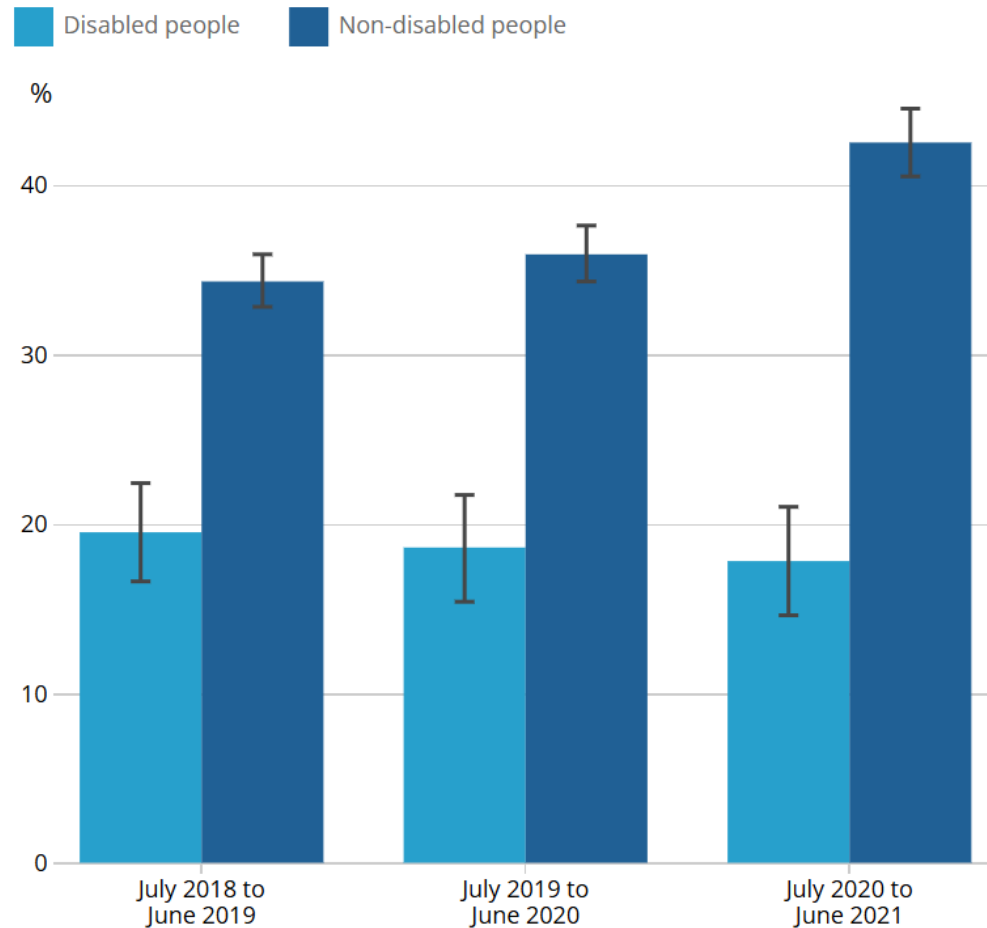
18 to 24 year olds NEET

**16.0%**

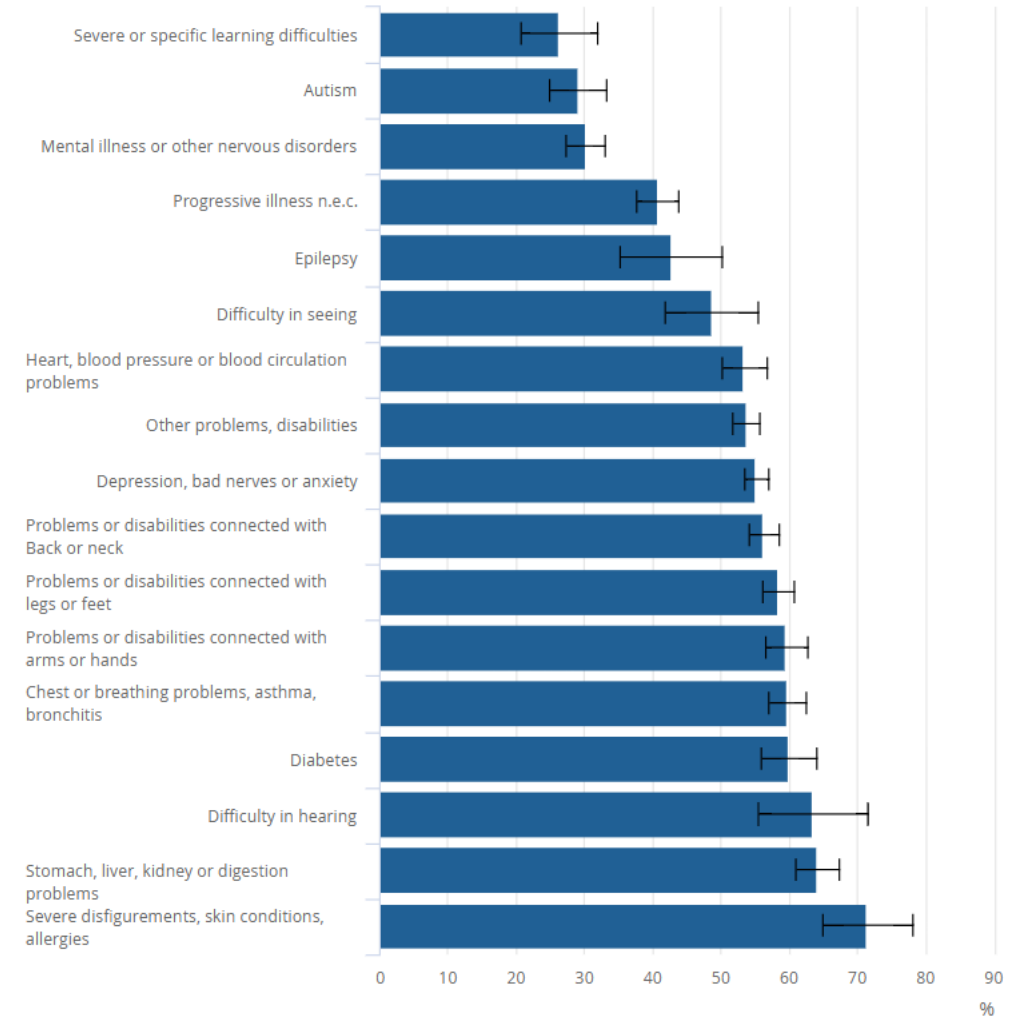
Down 0.2 percentage points compared to 2024

# National Data on Educational Attainment and Employment

Proportion of disabled and non-disabled people aged 21 to 24 years with a degree as highest qualification, UK

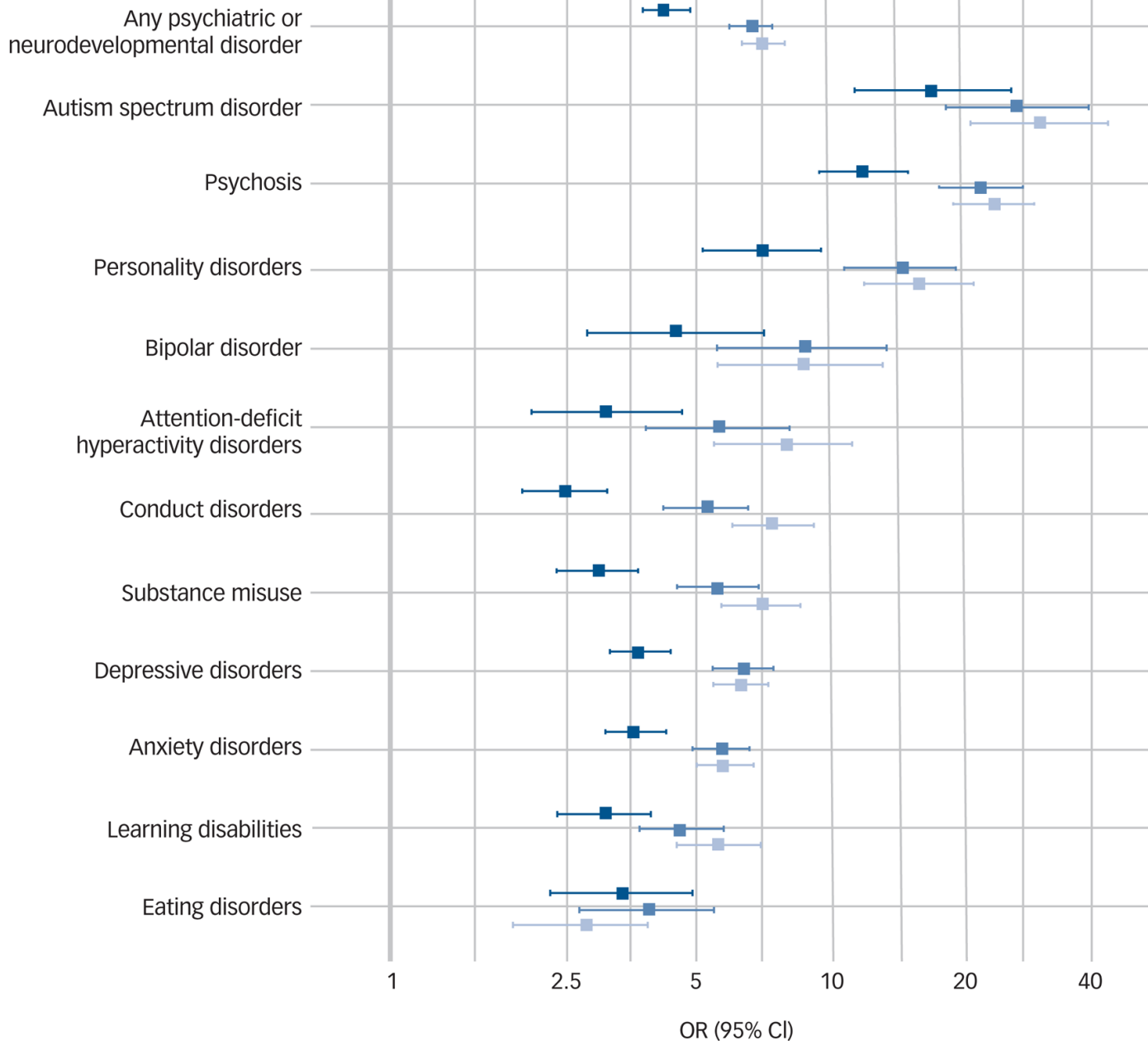


Employment rates of disabled people, by main impairment, aged 16 to 64 years, UK, year ending June 2021



# Educational Attainment and Engagement

Diagnostic category



- Autistic people have lower levels of educational attainment than others
- In Finland and Stockholm, autistic people are more likely to be ‘NEET’ than others during adolescence and young adulthood
  - Particularly long-term NEET

■ Univariate
 ■ Multivariate with background factors
 ■ Multivariate with background factors and secondary education

[Dalsgaard et al., 2020](#); [Fleming et al., 2020](#); [Ringbom et al., 2022](#); [Shattuck et al., 2012](#); [Stark et al., 2021](#); [Steinhausen et al., 2016](#); [Toft et al., 2021](#)

# Upcoming work

- Survey of more than 230,000 people done in collaboration with Channel4
  - Matched 5:1 on age, gender, and UK region
  - Autism and high autistic traits
- Anonymized education records for over 3.9 million children followed from ages 5-18 years via the National Pupil Database in England
  - All types of SEND, including autism

Article

## The educational attainment of autistic individuals and individuals with high autistic traits: A study of 230,000 people in the United Kingdom

Elizabeth Weir, Simon White, Fiona Matthews, Tanya Procyshyn, and 2 more

**This is a preprint; it has not been peer reviewed by a journal.**

<https://doi.org/10.21203/rs.3.rs-7905433/v1>

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# Summary

- Autistic traits are human traits
- All brain types have strengths and challenges
- Reforms to education systems viewed as suicide prevention tools
- Acceptance of neurodivergence and autism, including self-acceptance, may be critical to improving wellbeing and reducing risks of suicidality
- Adaptations to education are strongly desired but inconsistently available
- Poorer long-term outcomes for educational attainment and engagement but limited research/data available in the UK
- Our systems were not set up with neurodivergent people in mind



Thank you and  
Questions?