

Is trauma research neglecting neurodiverse populations?

A systematic review and meta-analysis of the prevalence of ACEs in adults with autistic traits

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Adverse Childhood Experiences

- Adverse childhood experiences (ACEs) are a framework of events occurring in the first 18 years of life that have the potential to cause significant harm or distress.

'Direct' ACEs (child maltreatment)



- Physical abuse
- Sexual abuse
- Emotional abuse
- Physical neglect
- Emotional neglect

'Indirect' ACEs (household adversity)



- Witnessed violence towards mother (IPV)
- Parental separation
- Parental incarceration
- Household mental illness
- Household substance abuse

- ACEs are impactful, with increased risks across various domains of ill-health and functioning, e.g:

Physical



- Heart disease
- Cancer
- COPD
- Stroke
- Health risk behaviours (e.g., smoking)
- Premature mortality

Psychological



- Low mood
- Other MH problems (e.g., Anxiety, PTSD)
- Non-suicidal self-injury
- Suicidal ideation and attempt
- Reduced life satisfaction

Behavioural



- Social withdrawal
- Increased substance use
- Lower educational attainment
- Unemployment
- Engagement in violence and offending



Autism and trauma: Current insights and knowledge gaps

What do we currently know about early adversity in the context of autism?



Autistic people may be at an increased risk of exposure to trauma, inclusive of experiences not considered within standard diagnostic definitions (35%, Rumball et al., 2020)



Poly-victimisation is also common (Berg et al., 2016):

- 50% increase in risk for 1-3 early traumas in autistic children
- 99% increase in risk for 4+ early traumas in autistic children

What are the gaps in our understanding?



Focus has been on establishing *overall* frequency of exposure. Less is known about the frequency of different *types* of early adversity.



This is an important gap to address, as different ACEs can have different impacts on developmental, physical and psychological outcomes (Campbell et al., 2016) that require different interventions



Reviews conducted to date have included studies that have utilised different definitions of 'adverse experiences', which makes it difficult to meaningfully summarise rates of exposure



Method

Search strategy

- Articles published between Jan 1980 - Jan 2023 were retrieved. Search terms related to:
 - **ACEs** (e.g., 'maltreatment' OR 'adverse childhood experience*' OR 'victim*')
 - **Prevalence** ('epidemiolog*' OR 'prevalence' OR 'prevelance')
 - **Autism** (e.g., 'Autis*' OR 'ASD' OR 'ASC' OR 'Asperg*')

Eligibility criteria

- Reports on prevalence of an ACE occurring in the first 18 years of life
- Standardised tools used to assess ACEs (e.g., Childhood Trauma Questionnaire (CTQ))
- Participants had ASD diagnosis or met clinical threshold on validated trait measures *
- Accessible in English and in full-text format

Process

- Screening was carried out by two independent researchers
- Quality was assessed using the AXIS appraisal tool

Study characteristics

4 articles met the inclusion criteria (n=734)



Sample sizes of included studies ranged between 45 and 251 participants (median=219).



All four studies were conducted across western and high-income countries (Canada, France, UK and USA)



All utilised samples that were exclusively or mostly female. Ethnicity data was not comprehensively reported on and so could not be explored



No studies utilised an exclusively diagnostic sample (all used validated assessment measures of autistic traits to identify participants)



Most were appraised as 'fair' quality (75%), with one study (25%) appraised as 'good' on the AXIS.

Retrieved

14,157 articles

- 2,891 duplicates

Abstract screening

11,626 articles

Full-text screening

41 articles

+ 2 from reference lists

Excluded

18 No prevalence of ACEs

10 Non-ASD sample

5 Adolescent sample

3 Pooled ASD and Non-ASD sample

3 Grey literature

Types of ACEs explored

Direct ACEs

Sexual abuse (4)

Physical abuse (2)

Emotional abuse (2)

Physical neglect (1)

Emotional neglect (1)

Indirect ACEs

Witnessed IPV (1)

Parental separation (0)

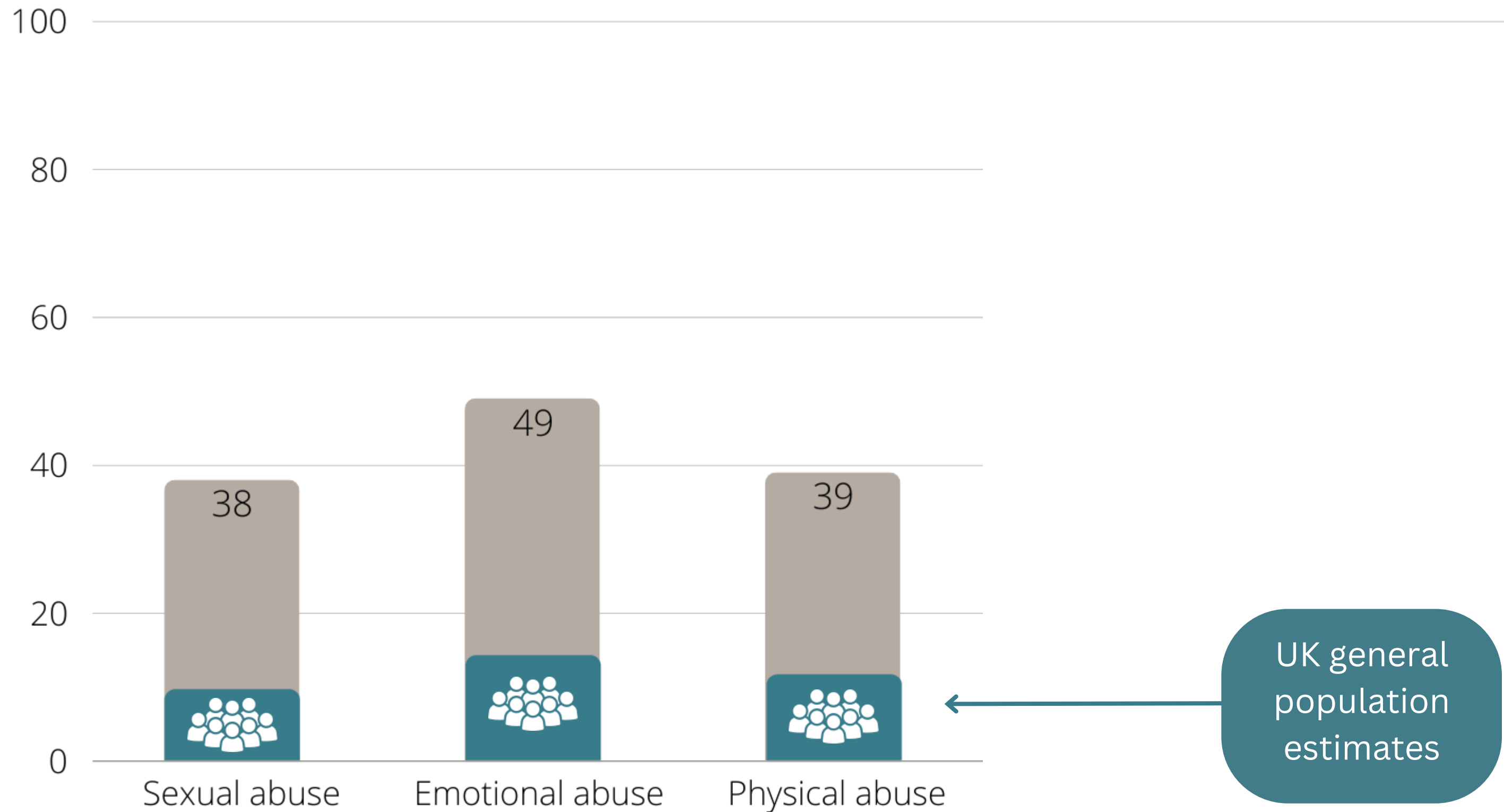
Parental incarceration (0)

Household mental illness
(0)

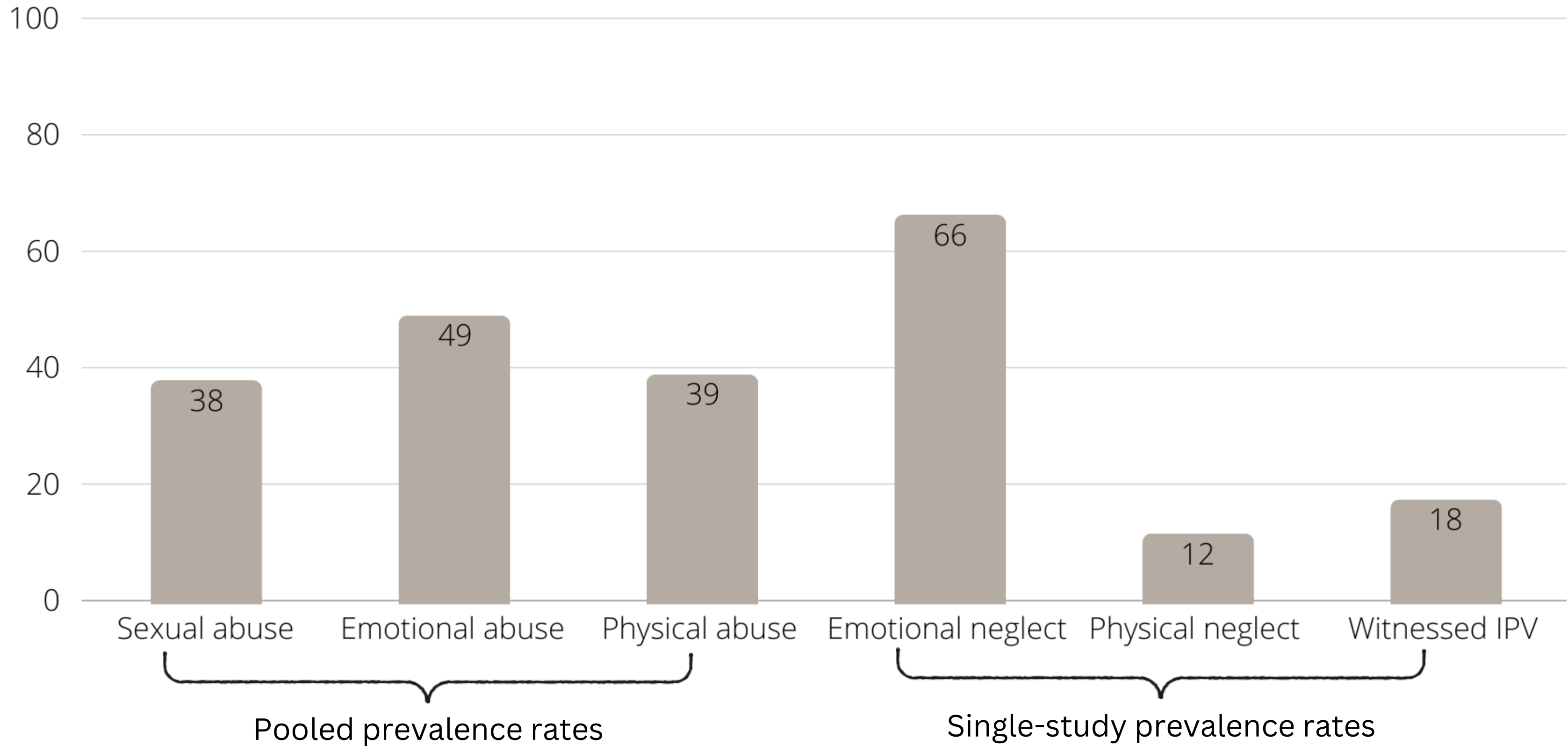
Household substance
abuse (0)



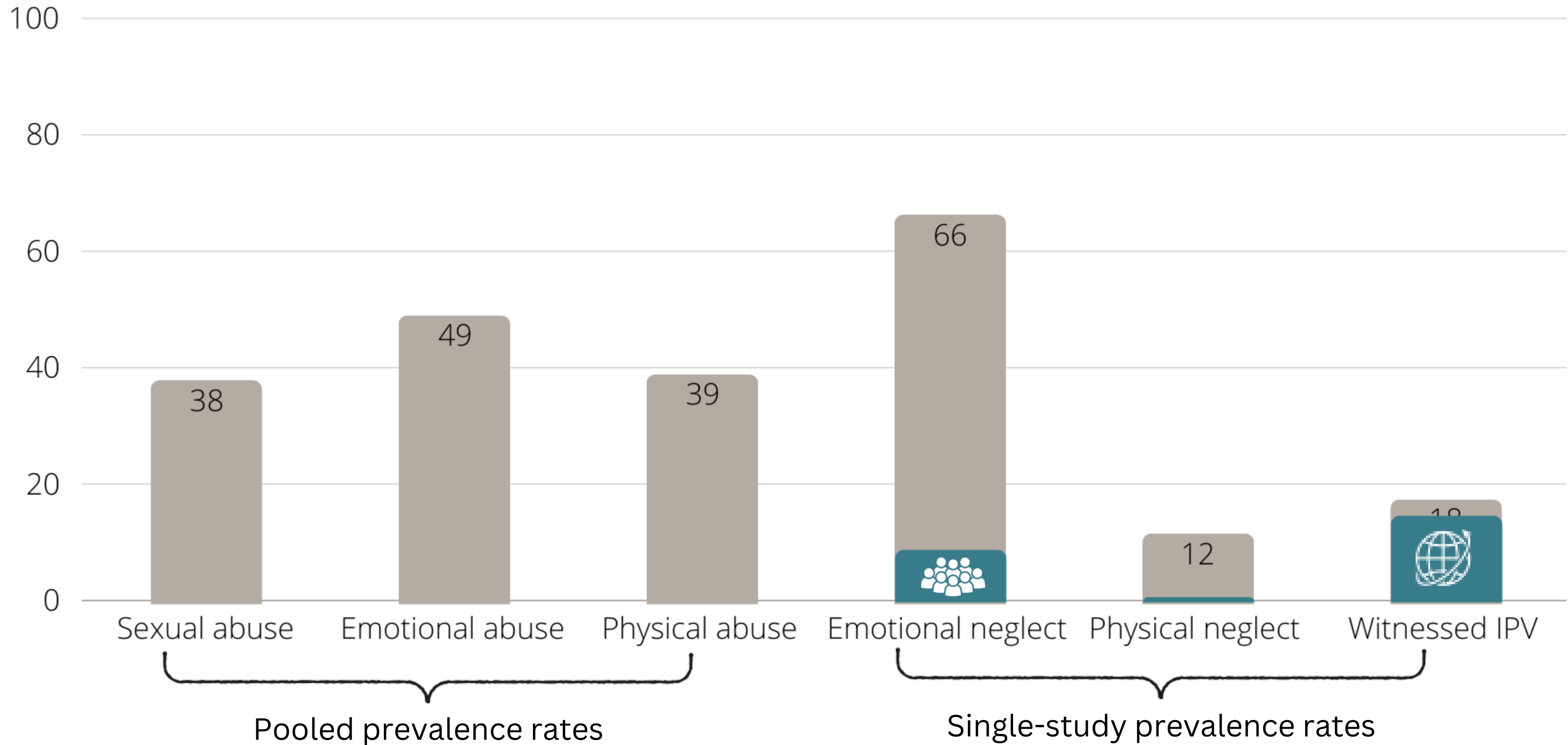
Pooled prevalence of ACEs



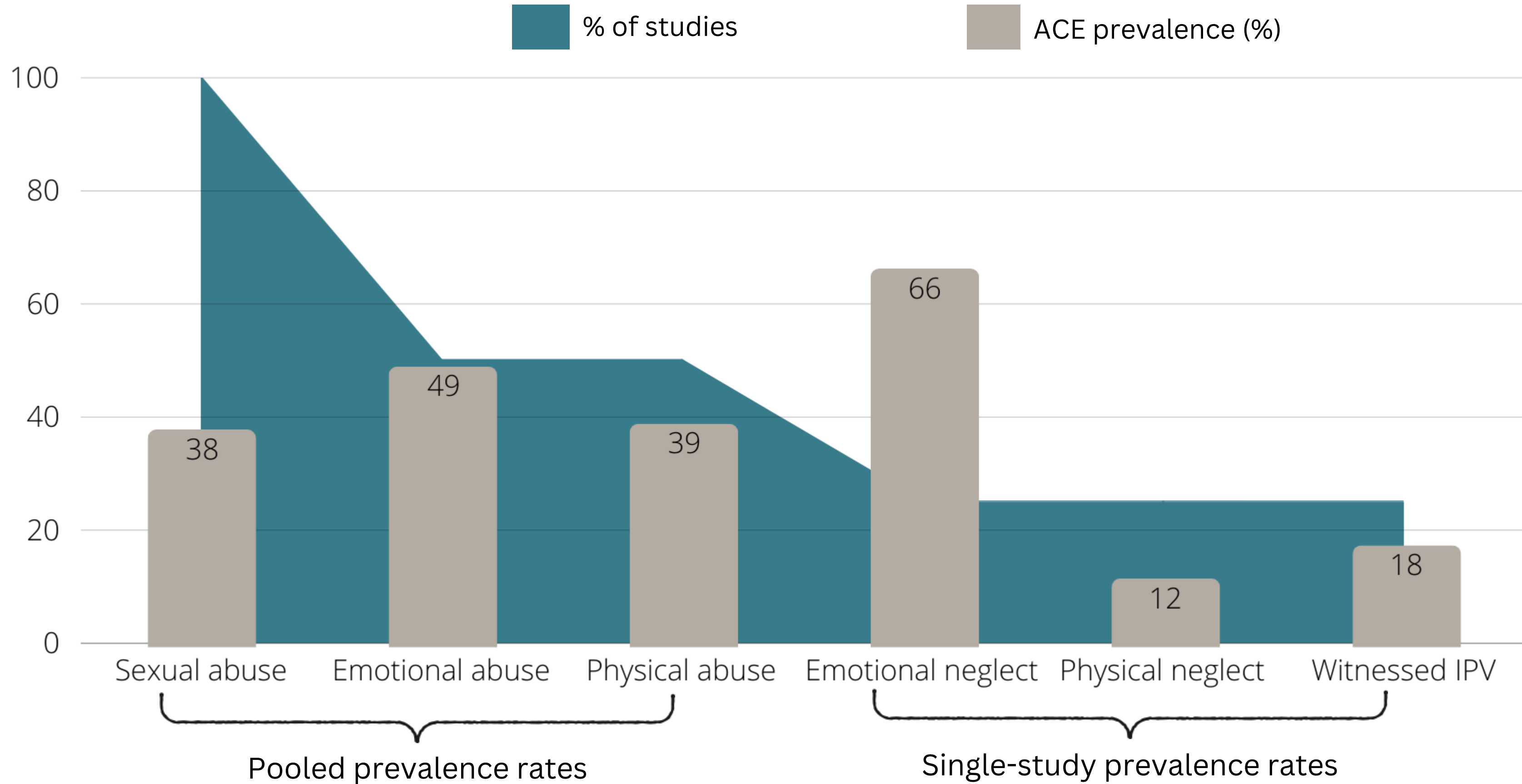
Pooled prevalence of ACEs



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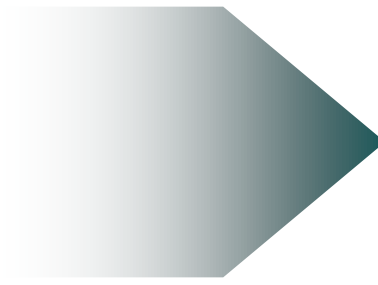


Pooled prevalence of ACEs





Critical questions to be answered...



Why are autistic people potentially at greater risk for experiencing early adversity? And how might we address these underlying mechanisms?

- There is need to better understand the risk factors that can account for the apparent increased exposure to early adversity for autistic people.
- Some hypotheses about why ACE prevalence may be higher include:



Difficulties in communication that impair the verbalisation of adverse experiences, and thus the subsequent prevention of further trauma.



Attribution of trauma symptoms to autism diagnosis, which prevents the identification and prevention of further adversities



Increased risk for being placed in the care system and out-of-home placements (Cidav et al., 2018)

Critical questions to be answered...

What is the prevalence of types of adversity beyond direct experiences of abuse?

- A broader consideration of adverse experiences is needed in research and clinical practice.
- Experiences of abuse often occur in the context of neglect and household adversity (Negriff, 2020)
- Previous evidence indicates links between household adversities and autism, e.g.:
 - High levels of psychopathology reported in parents of autistic children (Schnabel et al., 2020)
 - Parental incarceration = 73% increase in developmental disorder risk (Jackson et al., 2021)
- Other ACEs not captured in current frameworks also need to be considered (Kerns et al., 2022)



Institutional experiences (e.g., restraint, sedation)



Social exclusion (e.g., bullying, isolation, discrimination)



Sensory and transition-related experiences

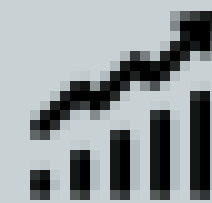
Critical questions to be answered...

What is the prevalence of ACEs in male and gender diverse/gender minority autistic people?

- The under-representation of non-female autistic people in research suggests that the experiences of these groups may remain undetected and unaddressed.
- This is a particular concern given that ASD populations are male-dominated (Fombonne, 2009) and that transgender and gender diverse adults (Warrier et al., 2020):



Are **3 and 6 times** more likely to have an autism diagnosis



Have significantly higher scores on self-report measures of autistic traits

- The trend for female-dominated samples echoes patterns across the trauma research field (outside of veteran populations).
- Gendered differences in the prevalence and impacts of ACEs have been noted in a range of neurotypical populations (Leban and Delacruz, 2023).



Implications for clinical practice

Broadening conceptualisations of adversity

- Consider a range of potentially traumatic experiences in assessment and treatment work
- This will require thinking beyond current frameworks and available tools



Comprehensive screening - avoid assumptions

- Integrate trauma screening with autism assessment and referral processes to ensure that the specific (and not assumed) experiences and impacts of adversity for the presenting person are identified and integrated within care planning.



Consider the overlap of autistic traits and trauma symptoms

- Consider and explore within assessment autistic traits that may rather or also be trauma manifestations (e.g., could hyperactivity perceived to result from over-stimulation actually be hyperarousal?)



Contact Details



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