

Adverse Childhood Experiences in Scottish children

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What are 'Adverse Childhood Experiences?'

10 most commonly measured Adverse Childhood Experiences (ACEs)

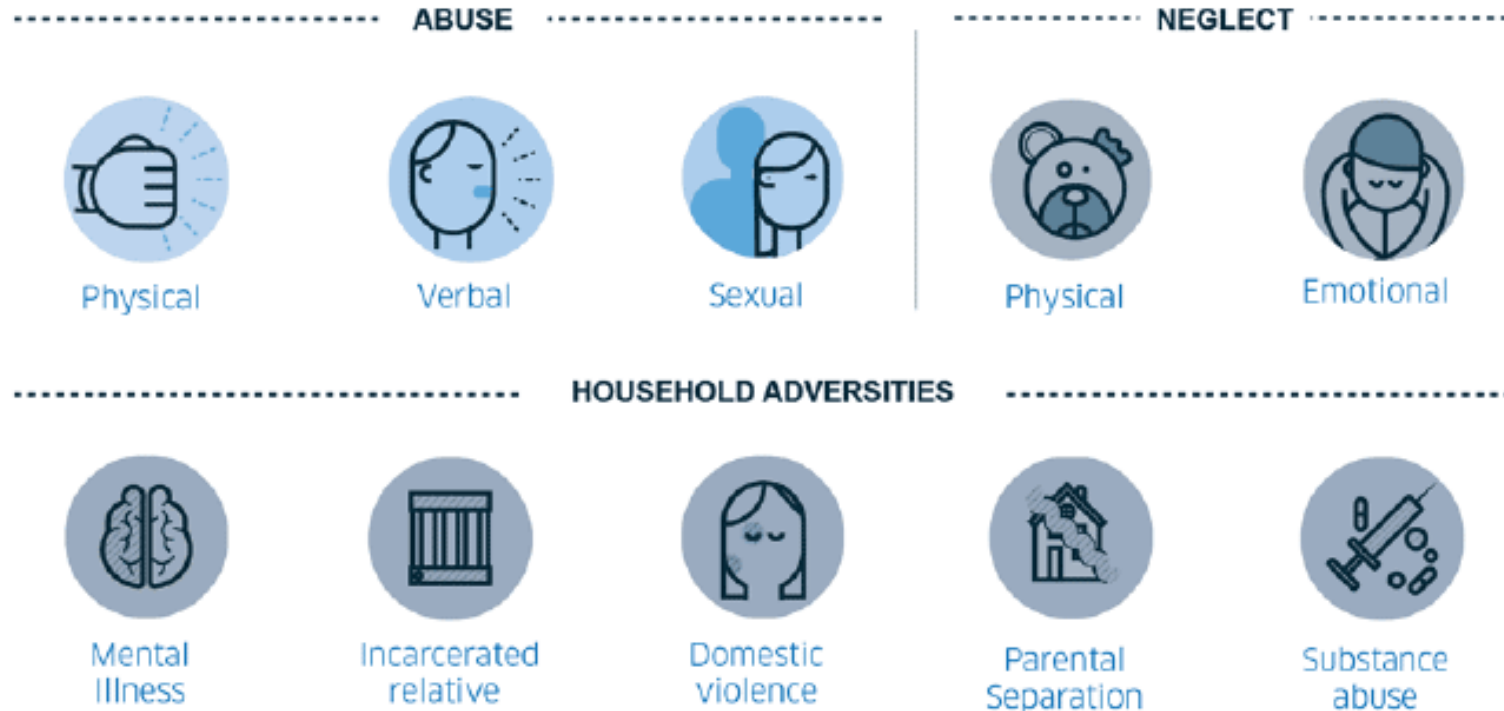


Image: Scottish Government



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Welsh ACE Study: Compared with people with no ACEs, those with 4+ ACEs are:

- 4x more likely to be a high-risk drinker
- 6x more likely to have had or caused unintended teenage pregnancy
- 6x more likely to smoke e-cigarettes or tobacco
- 11x more likely to have smoked cannabis
- 14x more likely to have been a victim of violence over the last 12 months
- 15x more likely to have committed violence against another person in the last 12 months
- 16x more likely to have used crack cocaine or heroin
- 20x more likely to be incarcerated



Public Health Wales, 2015



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Criticism of the ACEs model

- Too narrow a definition of adversity
 - E.g. focussed on the home
- Some included items are questionable
- Historic context
- Recall issues
- ‘Routine enquiry’
- Blurring the boundaries of ‘normal’ adverse experiences
- Determinism



Exploring ACEs in GUS

- Used Birth Cohort 1 – born 2004/5
- Data from sweeps 1-7 (10 months to age 8)
- Calculated ACE scores using data from every sweep
- Maximised the use of data
- 3119 children



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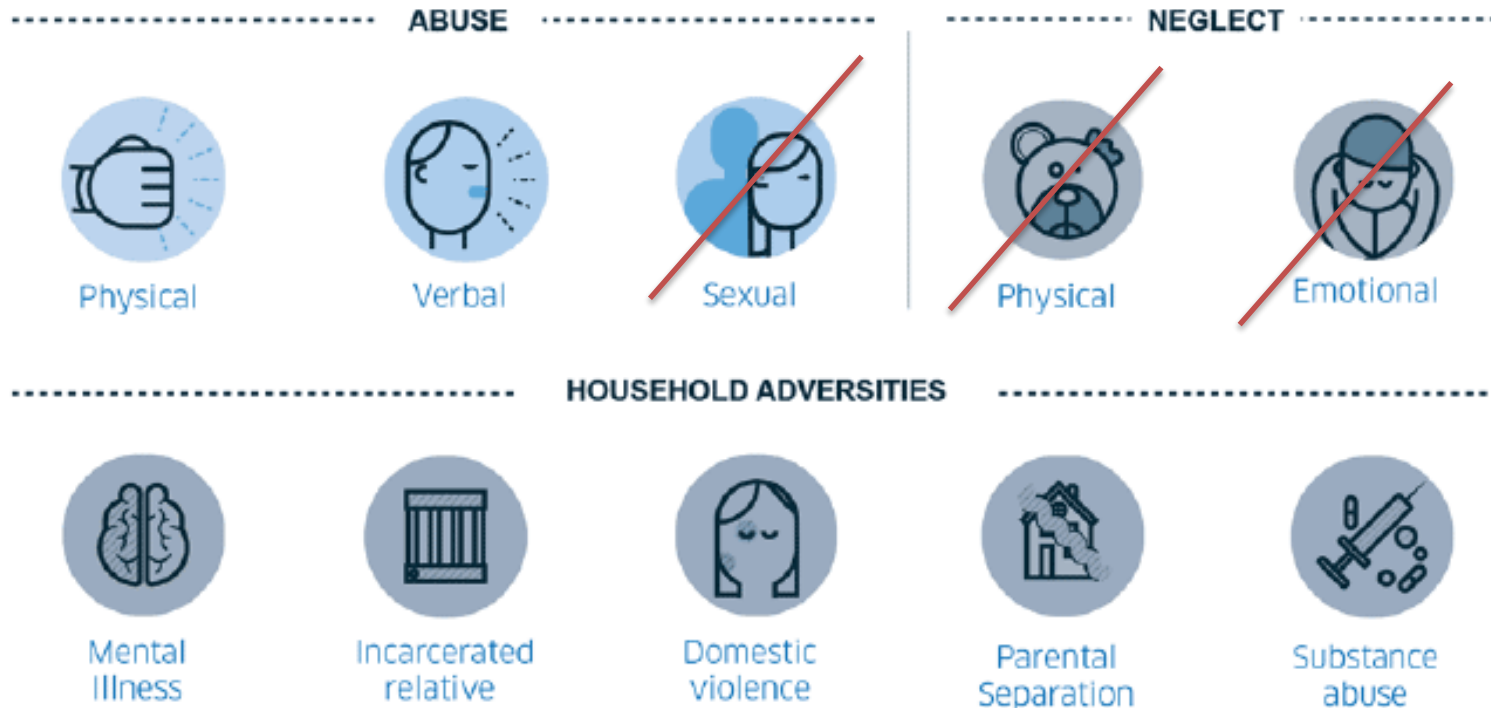
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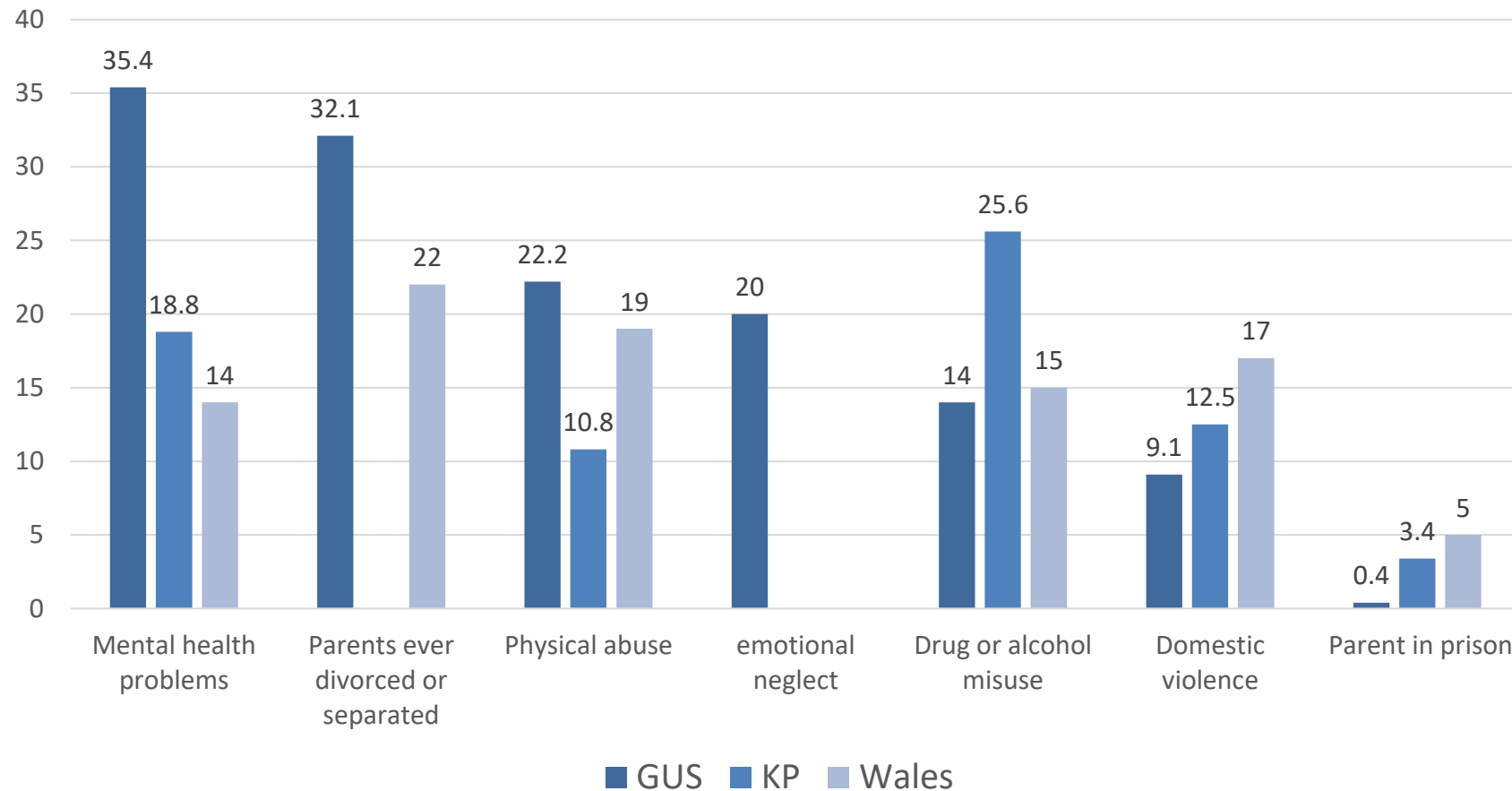
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Data availability

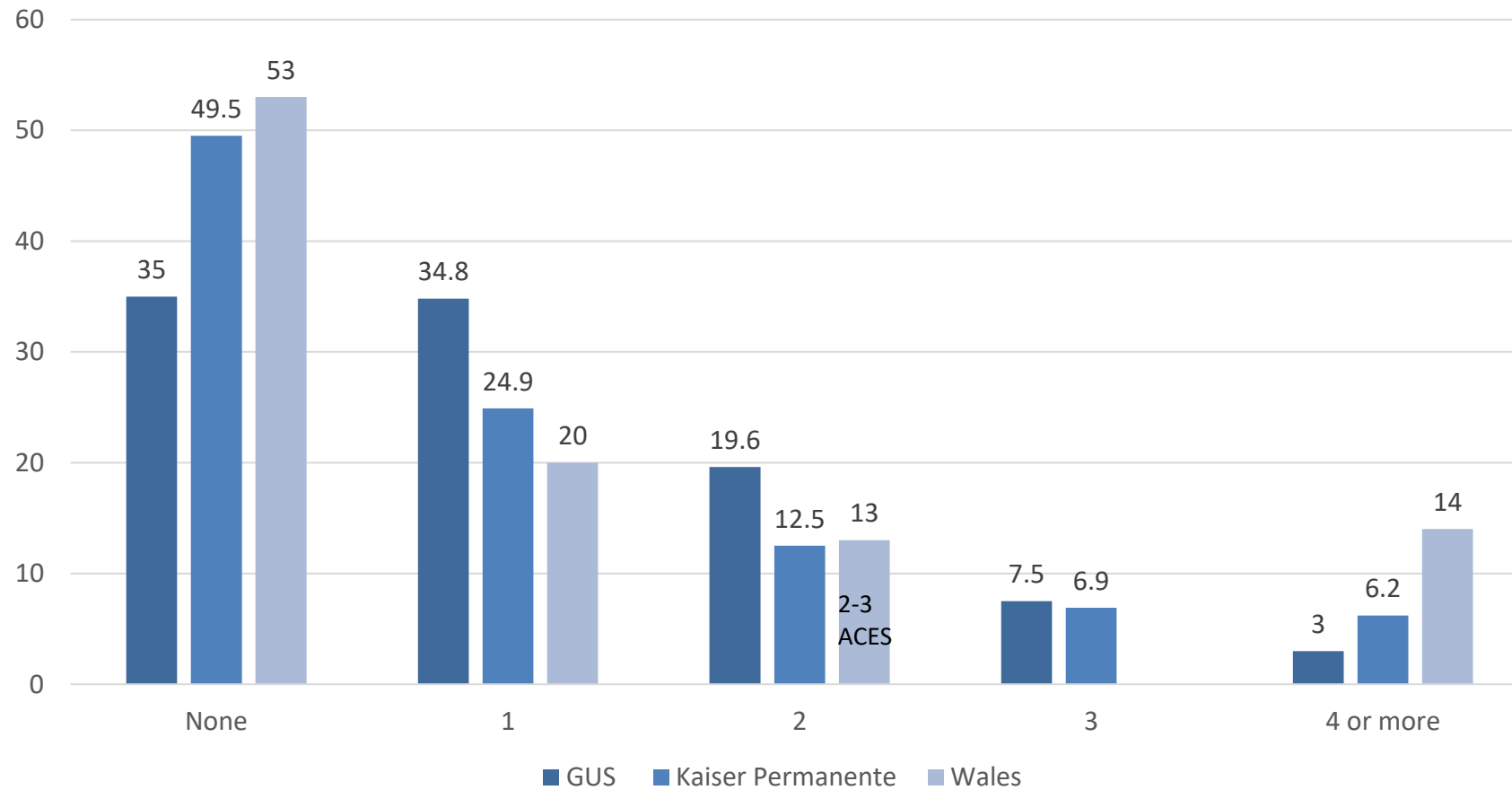
10 most commonly measured Adverse Childhood Experiences (ACEs)



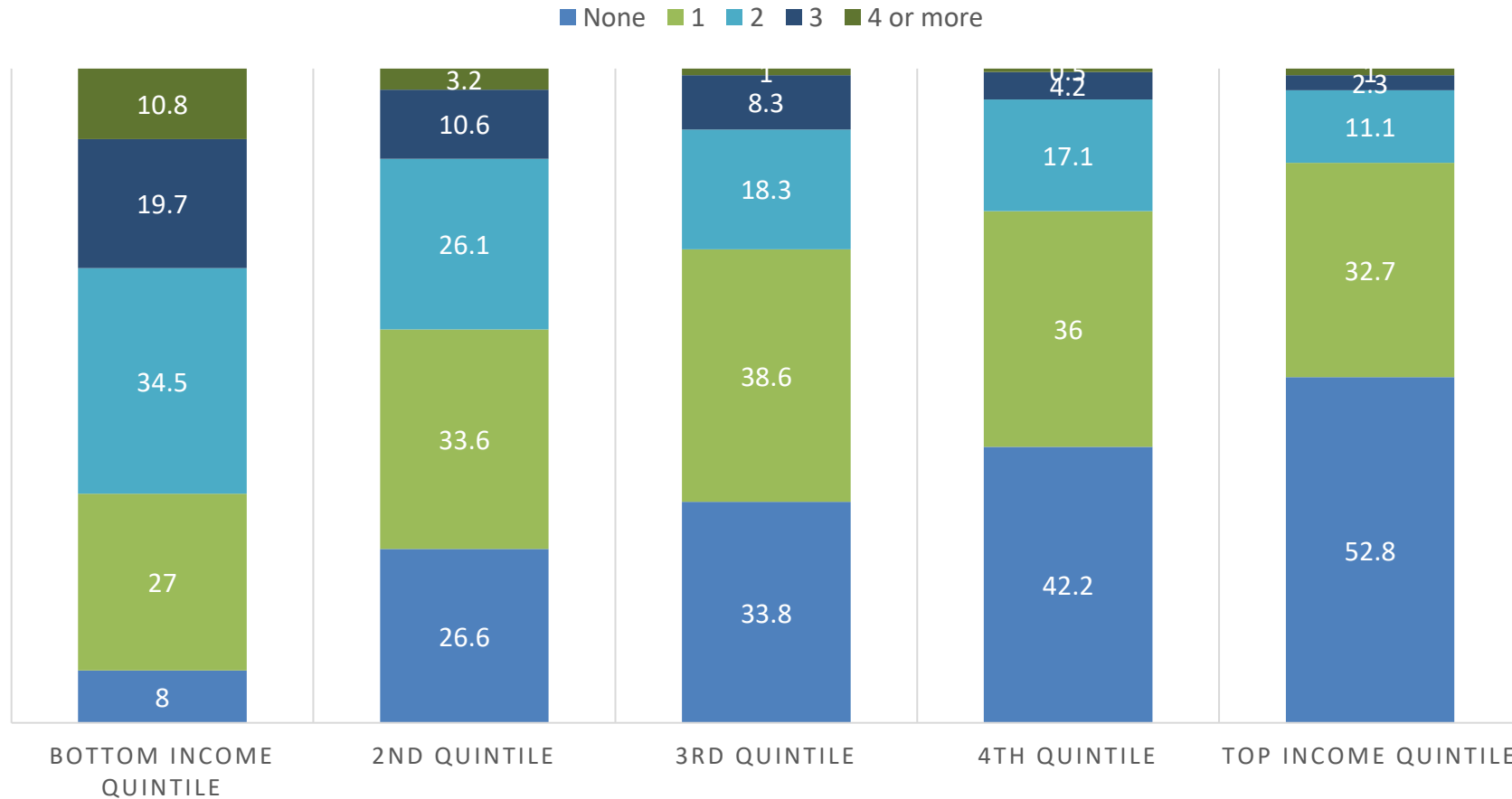
Proportions of children experiencing different ACEs by cohort



Numbers of ACEs reported by study



Numbers of ACEs by income quintile



Having 3+ ACEs at age 8 was associated with:

Being male
(O.R.=1.5)

Having a mother
aged <20 at the
birth of 1st child
(O.R.=2.1)

Living in a
household in
lowest income
band (O.R.=6.5)

Living in an urban
area (O.R.=1.8)



Is access to community resources associated with incidence of ACEs and can it reduce inequalities?

- 5 community resources identified:
 - Self-reported access to:
 1. Stable housing
 2. A local park or play-park
 3. Transportation
 4. Childcare
 5. In person breastfeeding support



Associations between ACEs and community resources

- For households living **above** the poverty line:
 - access to housing, transportation, and breastfeeding education associated with lower ACE incidence
- For households living **below** the poverty line:
 - Access to transportation associated with lower ACE incidence

Estimated that if access to transportation was held fixed across the entire population, c.21% of income-based inequality in cumulative incidence of 3+ ACEs could be eliminated.



Benefits of access to transportation

- Can allow access to health or social services and other service use (Whetten et al., 2006)
- Enable access to employment, food and leisure activities (Markovich and Lucas, 2011)
- May help parents gain a sense of control over their lives (Syme 1996)
- Inadequate transportation is a stressor in itself – lack of flexibility, time, and fatigue (Bostock, 2001)
- May enable parents (particularly mothers) to remove themselves and children from adverse situations (Bambra, 2007)



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Reimagining ACEs



- Adolescent accumulation of ACEs – an important time for girls?
- What ACEs are important in the Scottish context?
- Are there sensitive periods in experiencing ACEs?
- To what extent can we explore ‘capabilities’? (Smith, 2018)
- Interrupting intergenerational cycles of adversity.



Conclusions

- Two-thirds of Scottish children have 1+ ACE by age 8;
- 10% experience 4+ ACEs
- Clear that many Scottish children are experiencing far from ideal childhoods
- Experience of ACEs was strongly associated with living in poverty → redistribution of resources? Basic Income scheme?
- Access to good transportation may alleviate some of the burden on families → free & improved public transport scheme for most disadvantaged households?



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References

Blair, A., Marryat L. & Frank J. (2019) How community resources mitigate the association between household poverty and the incidence of adverse childhood experiences International Journal of Public Health <https://link.springer.com/article/10.1007%2Fs00038-019-01258-5#Tab1>

Marryat, L., & Frank. J. (2019) Factors associated with adverse childhood experiences in Scottish children: a prospective cohort study. BMJ Paediatrics Open, . <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6361326/>

Smith, M. (2018). Capability and adversity: reframing the “causes of the causes” for mental health. Palgrave Communications, 4(1), 13. <https://www.nature.com/articles/s41599-018-0066-z>

