



The Prevalence of Adverse Childhood Experiences in the General Population of Scottish Children in the first 8 years of life

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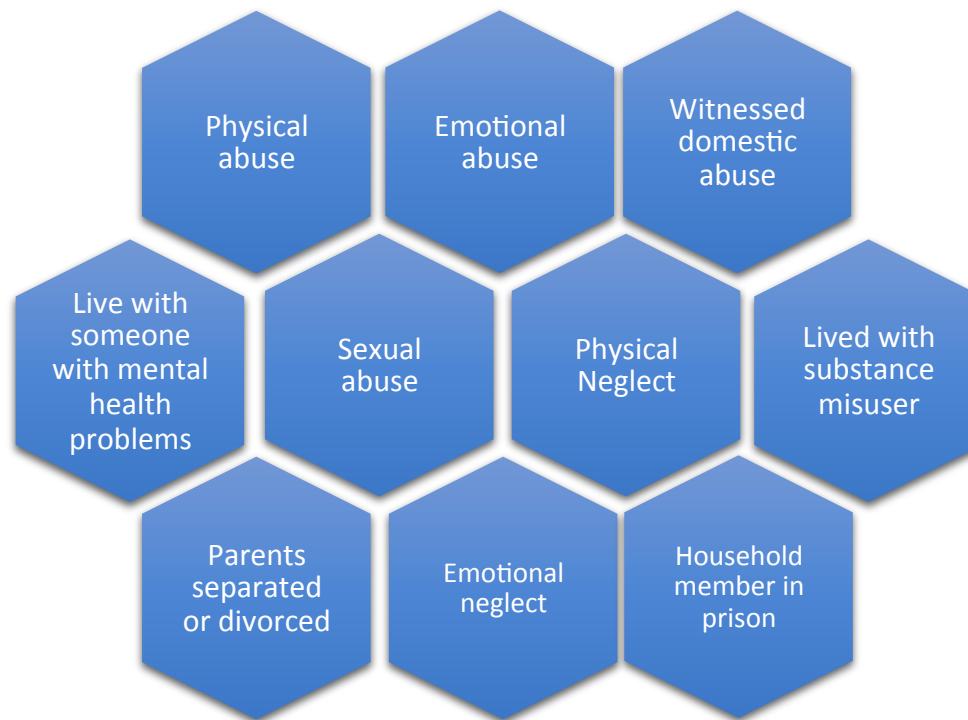
Visiting Michael Smith Doctoral Scholar, SCPHRP



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What are Adverse Childhood Experiences (ACEs)?



The original Kaiser Permanente study

- Kaiser Permanente is a private healthcare insurer in the USA;
- Retrospective study (N=17,000) of childhood experiences (0-18 years)
- Conducted in 1995-1997
- Non-representative sample: 85% had at least some college education; 75% white; 46% aged 60+
- 52% had experienced at least 1 ACE by 18 years



The Welsh ACEs study

- Retrospective design
- 2,028 adults aged 16-69 surveyed in 2015
- More demographically representative
- **47%** had 1+ ACE, **14%** had 4+ ACEs



What about ACEs in Scotland?

- Scottish Public Health Network 2016 Report
- *'although, data exists on various aspects of household dysfunction in Scotland, no published studies exist to date of the prevalence specifically of ACEs in the general population of Scotland'*
- Concern for potential high prevalence



The current study

AIM: to explore to what extent ACEs could be measured using prospective cohort data, and what prevalence levels look like in a general population of Scottish children.

RESEARCH QUESTIONS:

1. What are the levels of ACEs in the general population of Scottish children?
2. What factors predict a) having any ACEs and b) having several ACEs?

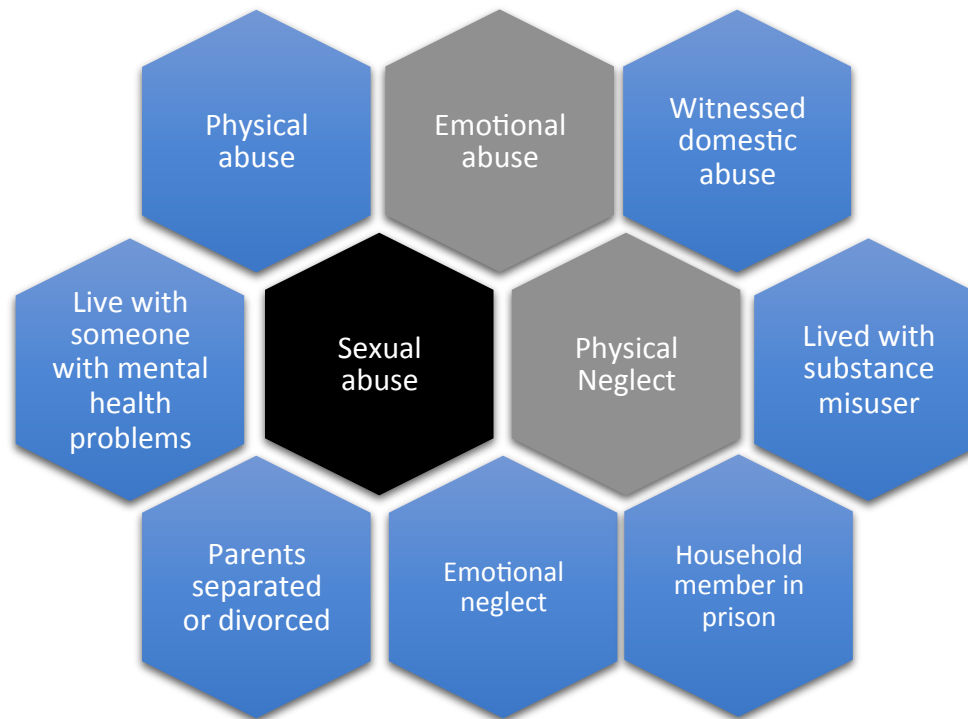


The Growing Up in Scotland study sample

- Used Birth Cohort 1 – born 2004/5
- Data from sweeps 1-7 (10 months to age 8)
- At sweep 1 there were 5,217 children recruited
- At Sweep 7 there were 3,456 children in the study (66% of sweep 1 children)
- Calculated ACE scores using data from every sweep

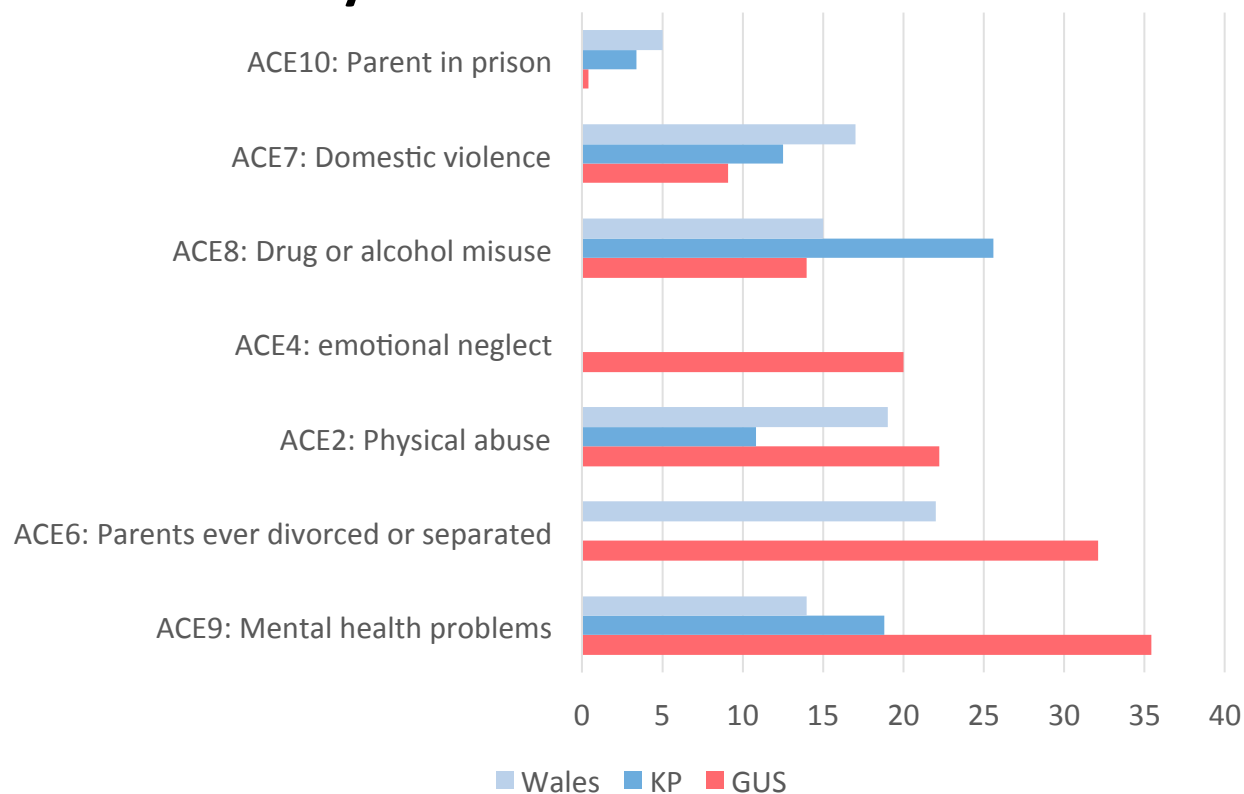


Data availability

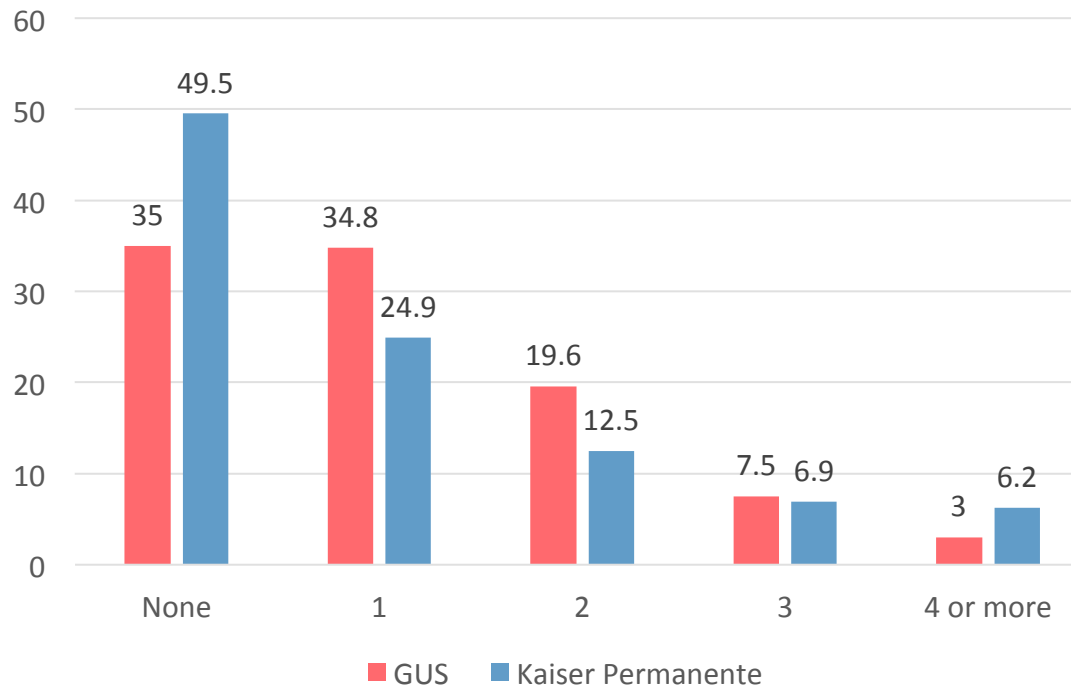


RESULTS

Levels of ACEs by cohort



Levels of ACEs



Children's odds of having 3+ ACEs at age 8 were associated with...

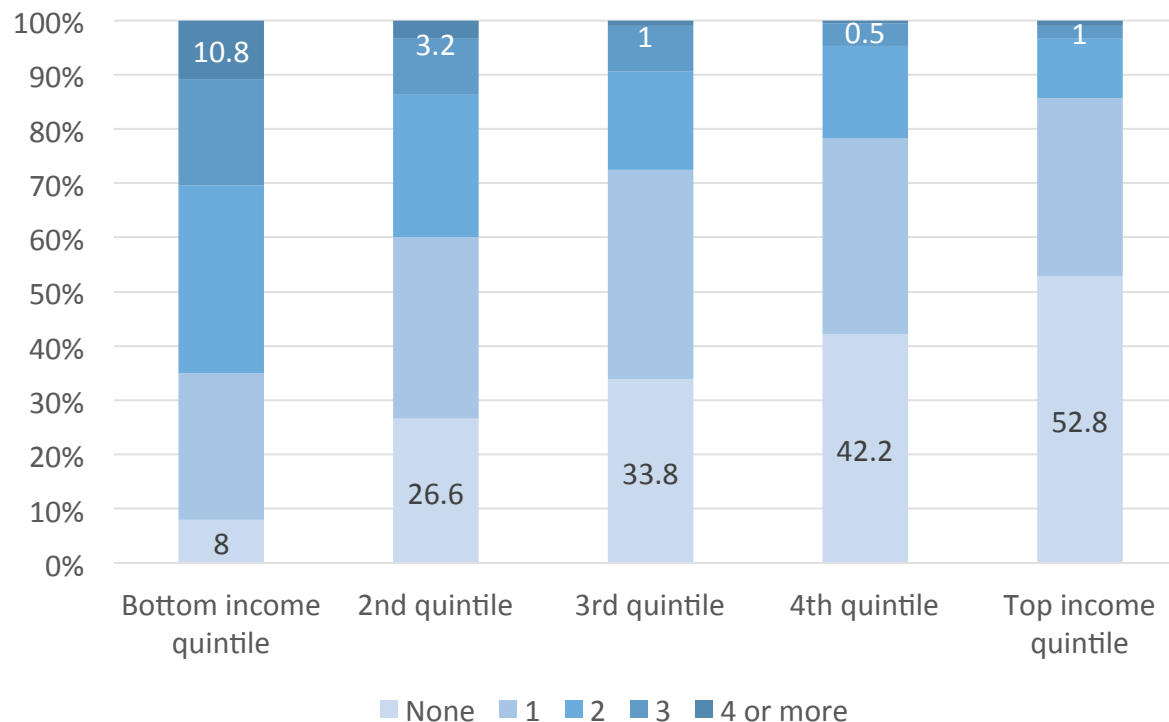
Being male
(O.R.=1.5)

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)

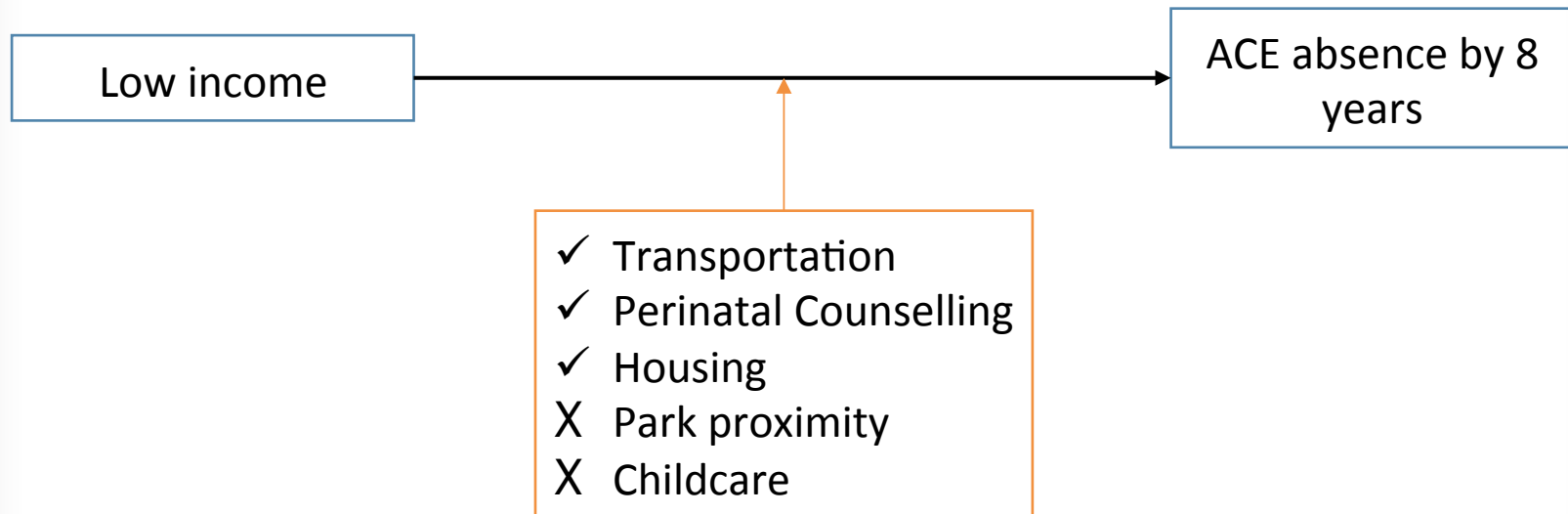
Living in an urban
area (O.R.=1.8)

ACE scores by income



Future directions

- Is the relationship between low income and ACE incidence modifiable by social and environmental resources?



Conclusions

- 65% of Scottish children have 1+ ACE by age 8
- Compares unfavourably with previous studies ($\approx 50\%$)
- Design differences make it hard to compare directly
- Clear that many Scottish children are experiencing far from ideal childhoods
- Experience of ACEs was strongly associated with living in poverty



Acknowledgements

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Any questions or comments?



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ADDITIONAL SLIDES

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The Welsh ACEs study

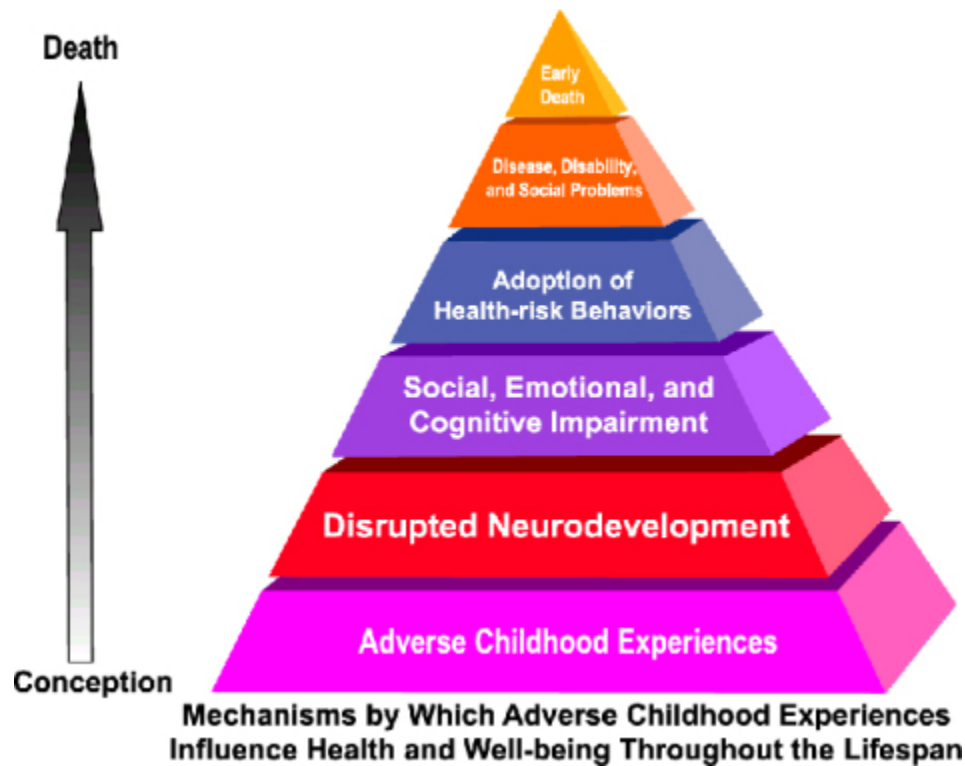
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Compared with those with no ACEs, those with 4+ were:

- **20x** more likely to have been incarcerated
- **16x** more likely to have used crack cocaine/heroin
- **15x** more likely to have used violence against another person in past 12 months
- **14x** more likely to have been victim of violence
- **6x** more likely to have had sex under age of 16

The ACE Pyramid



Based on the US Centers for Disease Control and Prevention 'ACE Pyramid': <http://www.cdc.gov/violenceprevention/acestudy>

Income doesn't explain everything however...

- Calculated the Population Attributable Risk(PAR)
- 'the proportion of the health outcome in an entire population, which is attributable to the exposure'
- Exposure = below relative poverty line; health outcome= 3+ ACEs
- Results suggest that in 22% of cases where children experience 3+ ACEs, this experience can be directly attributed to poverty
- Moving children above poverty line would decrease the proportion of children experiencing 3+ ACEs from 10% to 7.8%

