



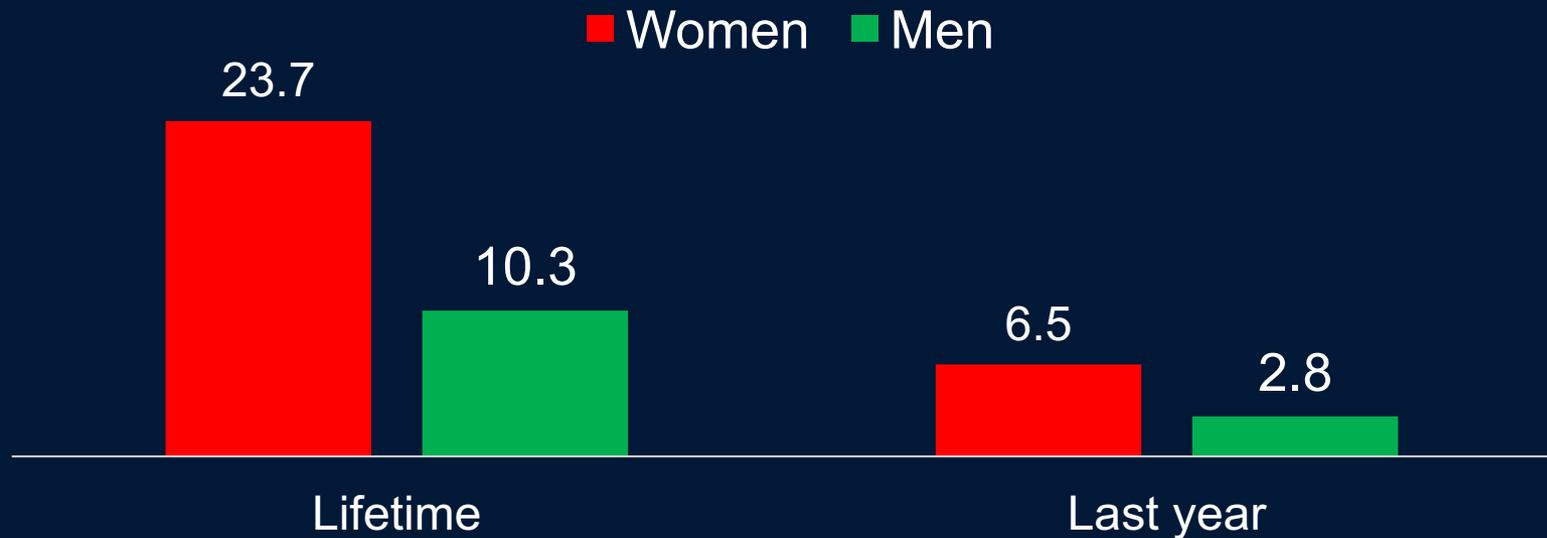
The effect of sustained exposure to neighbourhood deprivation on the risk of experiencing intimate partner violence among women in the UK: a birth-cohort study

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Intimate partner violence against women in the UK

% Prevalence of physical, emotional, financial, or sexual abuse or stalking in 2017 Crime Survey in England and Wales



IPV prevention

- Effective prevention requires knowing:
 - **Risk factors:** Which conditions, when changed, will increase the risk of intimate partner violence



- **Protective factors:** Which conditions, when changed, will decrease the risk of intimate partner violence

- X →  Lower risk

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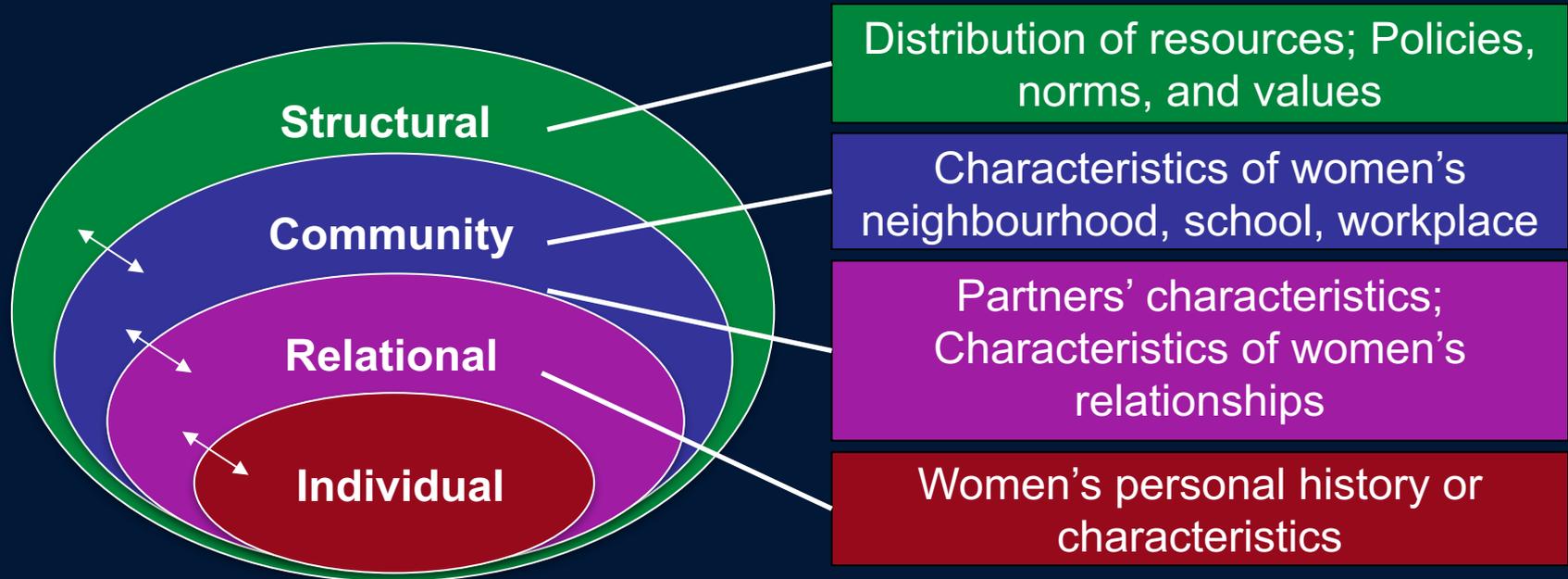
- **Protective factors:** Which conditions, when changed, will decrease the risk of intimate partner violence

- X   Lower risk

- Best evidenced by studies that measure participants over time

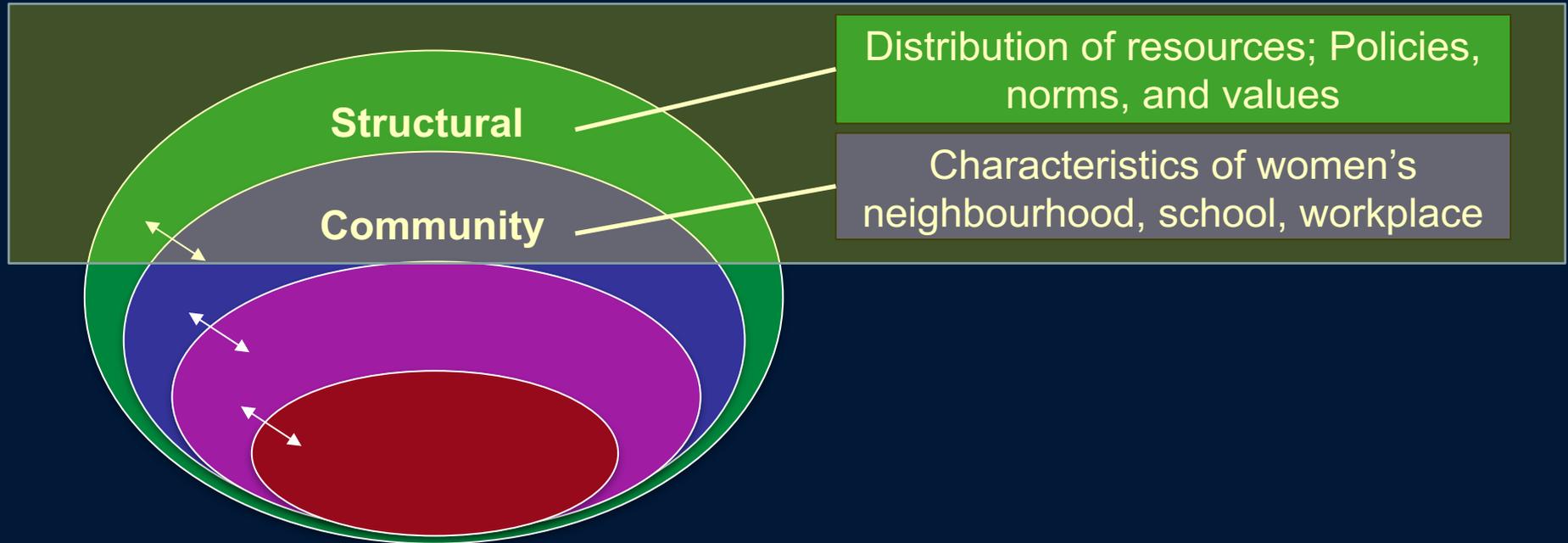
Risk and protective factors of IPV

- Ecological model for IPV against women



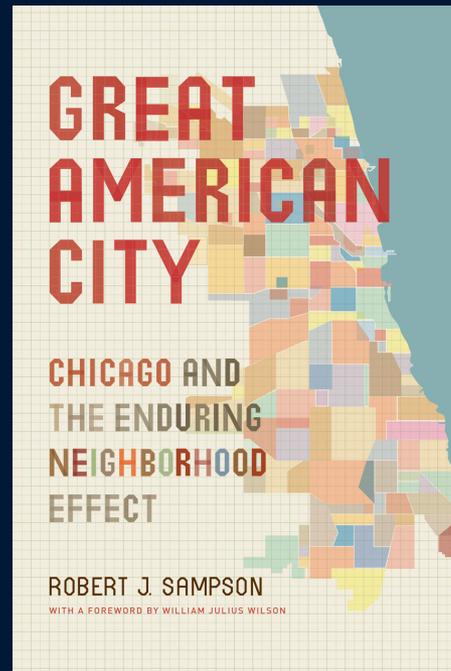
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Neighbourhood deprivation & IPV

- Neighbourhood effects well established for ‘public’ forms of crime and violence



Neighbourhood deprivation & IPV – by what mechanisms?

Normalizing
psychological
and physical
aggression



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Neighbourhood deprivation & IPV – by what mechanisms?

Normalizing
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Increasing
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Neighbourhood deprivation & IPV – by what mechanisms?

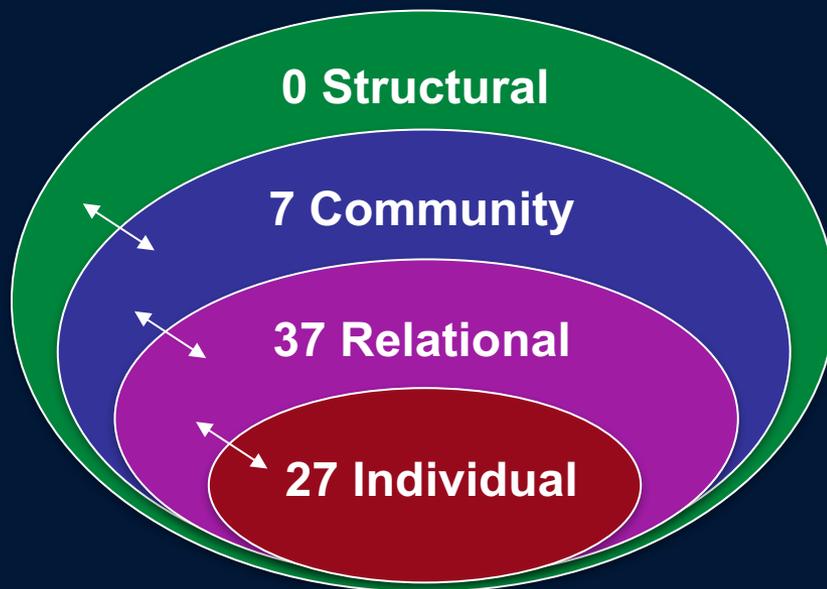
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Exacerbating other
individual/relational risks
(e.g., substance use)

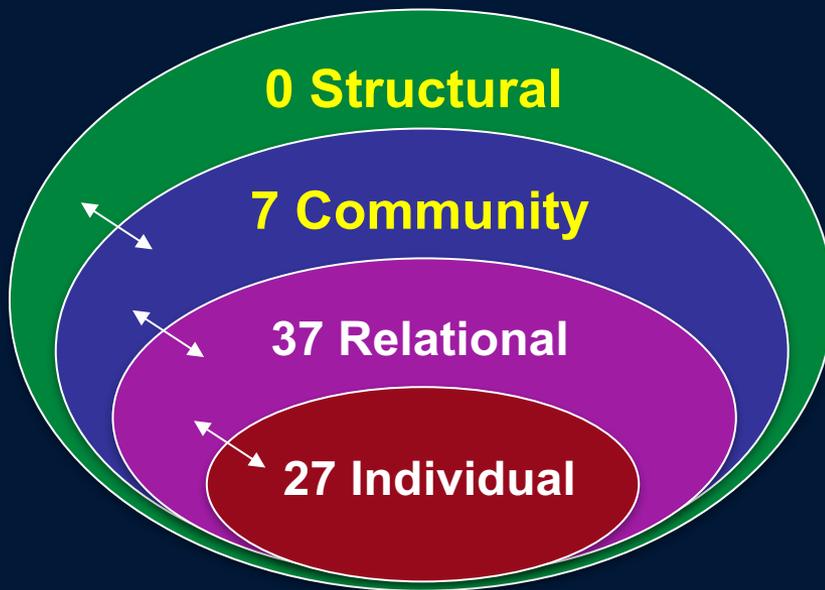
Risk and Protective Factors for Intimate Partner Violence Against Women: Systematic Review and Meta-analyses of Prospective–Longitudinal Studies



71 risk or protective factors investigated in included studies

Yakubovich et al., 2018

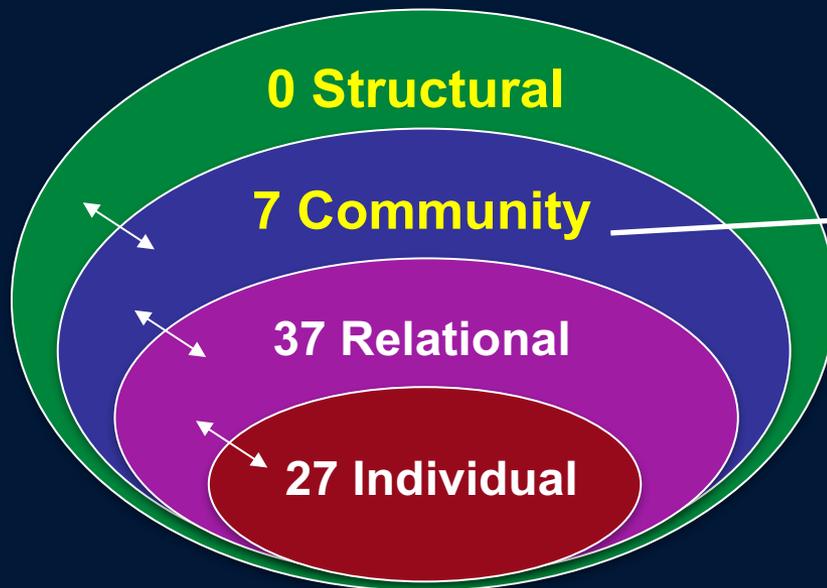
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Risk and Protective Factors for Intimate Partner Violence Against Women: Systematic Review and Meta-analyses of Prospective–Longitudinal Studies



All studies of neighbourhood deprivation were USA-based

No study on sustained exposure

Yakubovich et al., 2018

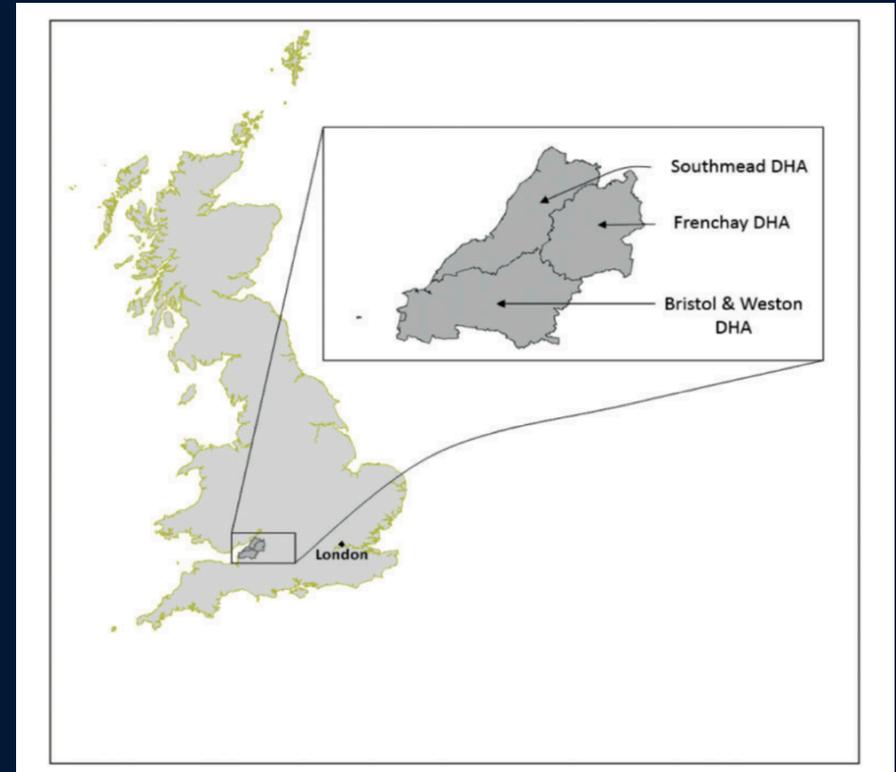
Neighbourhood deprivation & IPV in ALSPAC

- What is the effect of long-term exposure to neighbourhood deprivation on the risk of experiencing intimate partner violence among women?



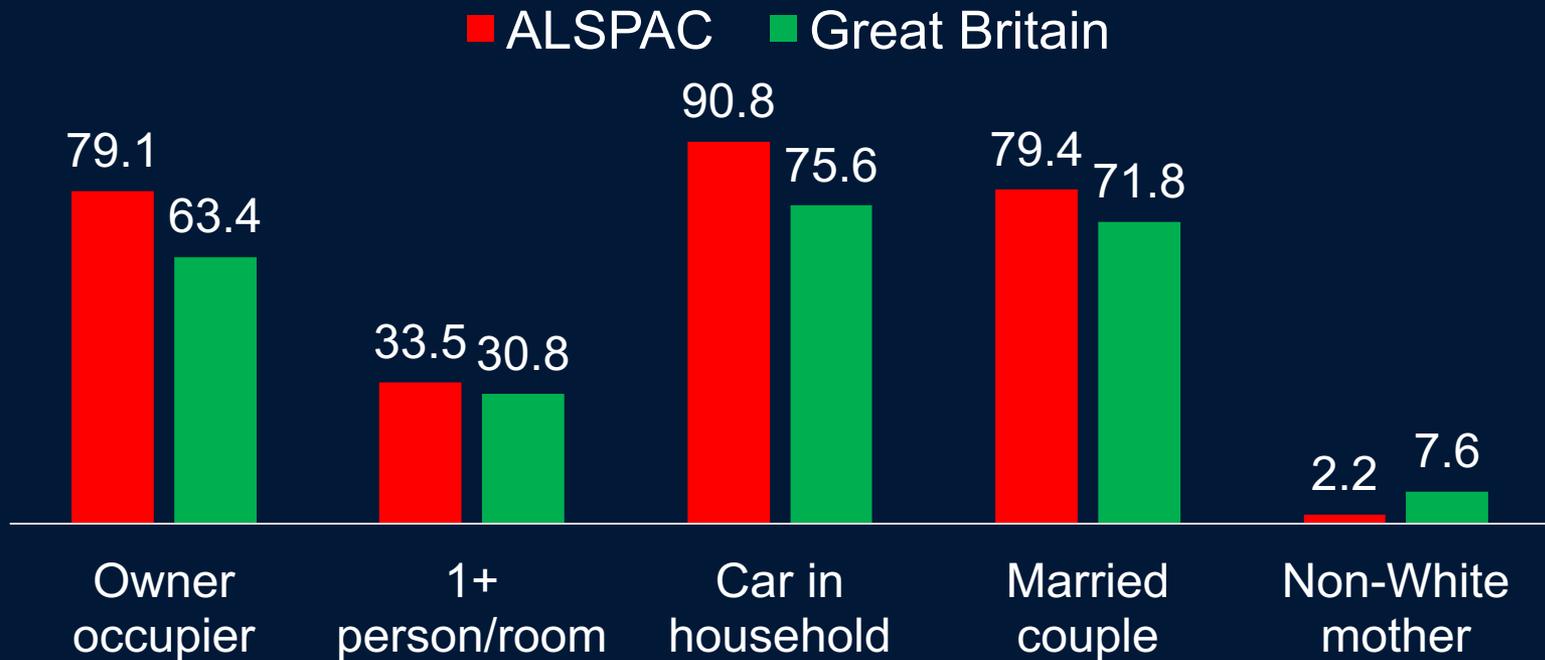
The ALSPAC Cohort

- ALSPAC: Ongoing study of mothers, partners, and children started in 1990
- Total sample: 15 454 pregnancies



The ALSPAC Cohort

% Mothers of infants <1 year (1991 Census)



IPV in ALSPAC: ages 18-21

- At age 21, 2128 women reported frequency and timing of experiencing 8 IPV items ($\alpha = .95$):

IPV sub-type	Example
Physical (2 items)	'Used physical force such as pushing or slapping'
Psychological (2 items)	'Told you who you could see and where you could go'
Sexual (4 items)	'Pressured into having sexual intercourse'

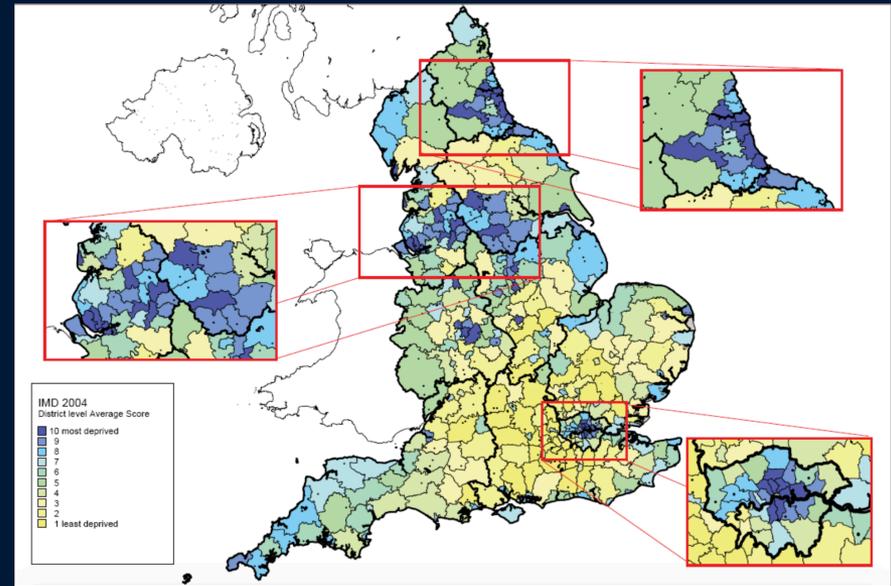
- Never (0), once (1), a few times (2), often (3)
- Experienced after age 18

Neighbourhood deprivation in ALSPAC: ages 0-18

- Indices of Multiple Deprivation (IMDs):
 1. Income deprivation
 2. Employment deprivation
 3. Education, skills, and training deprivation
 4. Health deprivation and disability
 5. Crime
 6. Barriers to housing and services
 7. Living environment deprivation

Neighbourhood deprivation in ALSPAC: ages 0-18

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 7. Living environment deprivation
- Relative deprivation of census-measured neighbourhoods in England (~650 households)



Neighbourhood deprivation & IPV against women in ALSPAC



Neighbourhood deprivation & IPV against women in ALSPAC

- Adjust for confounding by family-level socioeconomic and psychosocial indicators:

Baseline	
Parental education	
Parental social class	
Mother's marital status	
Mother's number of children	
Young person's ethnicity	

Neighbourhood deprivation & IPV against women in ALSPAC

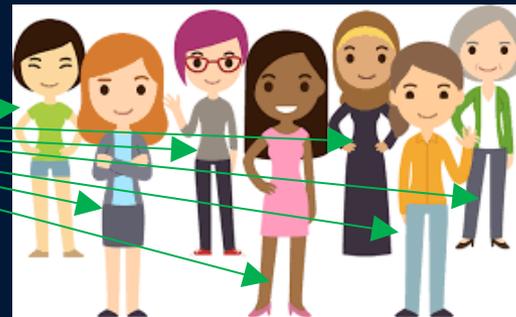
- Adjust for confounding by family-level socioeconomic and psychosocial indicators:

Baseline	At each time (lagged):
Parental education	Residential mobility
Parental social class	Parental employment
Mother's marital status	Maternal depression
Mother's number of children	Maternal social support
Young person's ethnicity	Financial difficulties
	Family structure
	Family income

Neighbourhood deprivation & IPV against women in ALSPAC

- Analysis: Weight participants by probability of receiving the exposure they did and staying in the sample conditional on prior exposure and covariate history at each time

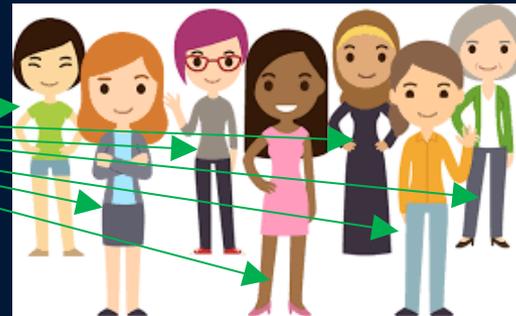
$$\frac{1}{p(\text{exposure}|\text{history})}$$



Neighbourhood deprivation & IPV against women in ALSPAC

- Analysis: Weight participants by probability of receiving the exposure they did and staying in the sample conditional on prior exposure and covariate history at each time
 - Run pooled regression in weighted sample
 - A.k.a. marginal structural models with inverse probability of treatment weighting

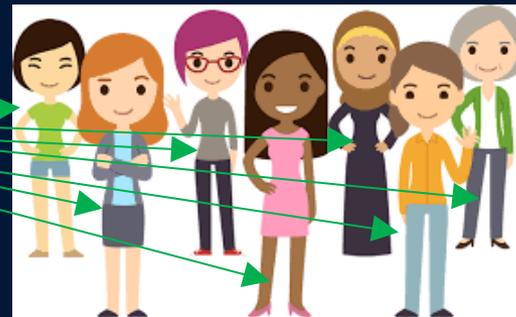
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Neighbourhood deprivation & IPV against women in ALSPAC

- Estimates **causal** effect of long-term neighbourhood deprivation independent of non-random selection into neighbourhoods and attrition (under assumptions)

$$\frac{1}{p(\text{exposure}|\text{history})}$$



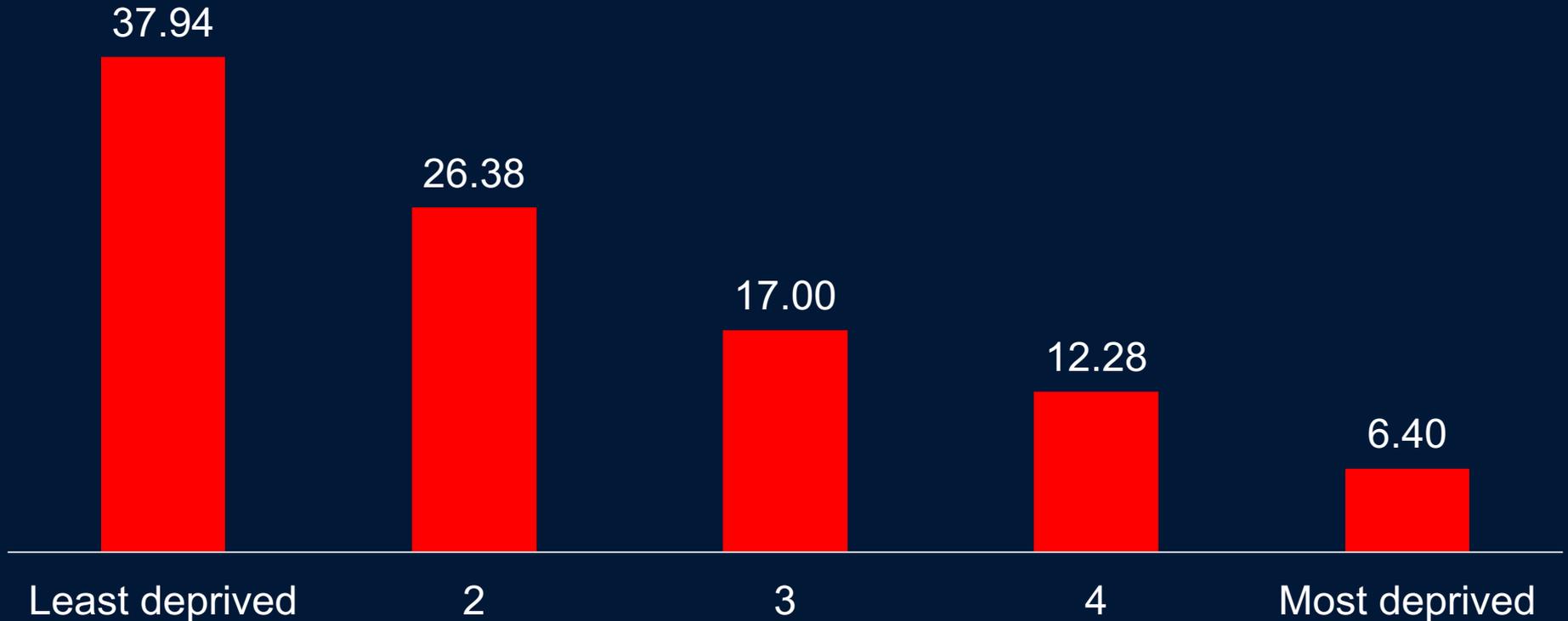
Results: neighbourhood deprivation at age 0

% sample per IMD Quintile (N=5403 women)



Results: neighbourhood deprivation at age 18

% sample per IMD Quintile (N=2077 women)



Results: changes in neighbourhood exposure

% sample by number of changes in neighbourhood deprivation exposure between ages 0-18 (N=5671 women)



Results: estimated effect on IPV

- 30% of women experienced any IPV between ages 18-21



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↑ cumulative exposure to more deprived neighbourhoods...	Most conservative estimates
Risk of any IPV:	↑ 36% [95% CI 1%, 85%]
IPV incident rate:	↑ 62% [95% CI 11%, 137%]

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Summary

- Long-term exposure to more versus less deprived neighbourhoods over the first 18 years of life was associated with more frequent IPV (by at least 62%) and at least 36% higher risk of experiencing any IPV in early adulthood across various models

What can we say about mechanisms?

Normalizing
psychological
and physical
aggression

Increasing
trauma and
stress

Decreasing social
controls and support
structures that
↓ violence and
↑ intervention capacity

Exacerbating other
individual/relational risks
(e.g., substance use)

What can we say about mechanisms?

Normalizing
psychological
and physical
aggression

Increasing
trauma and
stress

Heightened by sustained exposure during child and/or adolescent development?

Decreasing social
controls and support
structures that
↓ violence and
↑ intervention capacity

Exacerbating other
individual/relational risks
(e.g., substance use)

What can we say about mechanisms?

- Longer exposure to more severe neighbourhood deprivation over childhood has been shown to:
 - ↓ cognitive ability
 - ↓ educational attainment
 - ↑ odds of early parenthood
- Our findings suggest additional importance of cumulative exposure over childhood to IPV risk

Limitations and future directions

- Future research should:
 - Test for differences by exposure pathways (e.g., critical periods)
 - Test underlying mechanisms and moderators
 - Replicate analyses in different contexts
 - And different definitions of neighbourhood deprivation?
 - IPV perpetration?

Conclusions

- First investigation of long-term neighbourhood-level deprivation on the risk of IPV against women
 - Necessary to build the longitudinal evidence base on contextual risk factors for IPV outside the US



Conclusions

- First investigation of long-term neighbourhood-level deprivation on the risk of IPV against women
 - Necessary to build the longitudinal evidence base on contextual risk factors for IPV outside the US
- Raises importance of considering overlapping contexts of structural and interpersonal violence
- Suggests that this exposure increases IPV risk and identifying (+ targeting) determinants and mechanisms should be part of the prevention agenda

Acknowledgments

- PhD Supervisor: Dr. David K. Humphreys (University of Oxford)
- Project contributors: Prof. Gene Feder, Dr. Jon Heron, and Dr. Abigail Fraser (University of Bristol)

