Southampton



The Southampton Women's Survey: Introduction from a social science perspective

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Lifecourse view of non-communicable disease risk



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Hanson MA, Gluckman PD. Physiol Rev 2014;94:1027-76.

PHE Life course approach

it Public Health England

Health Matters



PHE: Health matters: Prevention - a life course approach. 2019 <u>https://www.gov.uk/government/publications/health-matters-life-course-approach-to-prevention/health-matters-prevention-a-life-course-approach</u>



12,583 non-pregnant Southampton women aged 20-34 years interviewed between 1998 and 2002



Subsequent pregnancies studied, ultrasound scans and interviews





Children followed-up at 6, 12, 24 & 36 months. Samples seen at 4, 6-7, 8-9 & 11-13 yrs

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Adapted from Inskip et al. Int J Epidemiol. 2006















How to access SWS data

- Online access to data dictionary
- <u>https://www.mrc.soton.ac.uk/sws/for-researchers/sws-</u> <u>data-dictionary/</u>
- Research proposals considered by study leadership team (Janis Baird jb@mrc.soton.ac.uk, Sarah Crozier src@mrc.soton.ac.uk and others)
- Once proposals accepted, researchers become collaborators on the study
- CLOSER discovery variables collected in early sweeps

Data collected

- Main focus on diet, health behaviours and body composition
- Of particular relevance to social science researchers:
 - Maternal stress before pregnancy (GHQ-12) and postnatal depression at 6 months postnatal (EPDS)
 - Level of educational attainment
 - 2-year follow-up focusing on social factors
 - 3-year follow-up child behaviour, parent-child relationship

Social factors at 2-year follow-up

- Childcare arrangements
- Housing including type of accommodation, number of rooms, home ownership, heating
- Housing quality including condensation damp, leaking roof, lack of space
- Neighbourhood including vandalism, litter, traffic, noise
- Employment and income
 - Mother and partner
 - Financial difficulties
 - Access to car
- Receipt of benefits
- Sleeping arrangements (including sharing room, night waking, sleep duration)

3-year follow-up

- Child behaviour strengths and difficulties questionnaires (SDQ)
- Sleep night waking, sleep duration
- Parent-child relationship (Pianta) a measure of closeness and conflict

Case studies

- The diets of women and children
- Child behaviour and maternal perconceptional distress
- Child behaviour and crowding







Case study 1: Diets of women and children





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Influences on diet



Not living with children

Percentages in the lowest quarter of prudent diet score by highest educational qualification



Robinson et al Eur J Clin Nutr. 2004

Percentage of women in the lowest quarter of the prudent diet score by education and number of children in the house



Robinson et al Eur J Clin Nutr. 2004

Influences on an 'infant guidelines' diet



Infant guidelines pattern score according to prudent diet score of the mother



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Robinson et al. Br J Nutr. 2007

IQ at 4 years of age in relation to infant guidelines score



IQ adjusted for sex, birth order, gestational age, birth weight, maternal age, IQ, social class, education and HOME score

Gale et al. J Child Psychol Psychiatry. 2009



Case study 2: child behaviour and preconceptional distress

- Around 40% of mother had preconceptional distress and a fifth had probable postnatal depression
- Around a fifth of children had hyperactivity or emotional problems and a quarter had conduct disorders
- Maternal preconceptional distress was associated with an increased risk of child behavioural difficulties, particularly emotional problems at 3 years of age
- The influence of maternal distress on child behaviour was still in evidence once we adjusted for postnatal depression

Association of maternal preconceptional distress with child behaviour at 3 years of age



Mental health in the SWS

- Preconceptional depressive symptoms not associated with birthweight
- Showed that red cell folate was associated cross-sectionally with prevalent depressive symptoms but not longitudinally with incident depression, indicating reverse causation
- Infant sleep disturbance is associated with preconceptional psychological distress
- Preconceptional psychological distress is associated with behavioural problems in the child independent of postnatal depressive symptoms
- High glycaemic (GL) load diets in pregnancy associated with increased postnatal depression, but no relationship between preconceptional distress and GL in pregnancy

Case study 3: crowding and child behaviour

- Crowding
- Behaviour based on SDQ at 3 years
- Assessed effect modification for factors assessed at 2 years of age

Increased crowding in the home associated with a negative impact on behavioural problems in children aged 3 years



Relationship between crowding in the household and behavioural problems in children

r calculated with Spearman's test MRC | Medical Research Council

Crowding was associated with behavioural problems

- In a household more crowded by one person per room (PPR), the child will have more behavioural problems by 2.26SDQ points (95%CI 1.70 to 2.82, p<0.001)
- After adjustment for confounding factors, risk was still increased (1.30 SDQ points, (95% CI 0.7 to 1.90, p<0.001
- Mediating factors identified: largest effect seen for children who had mothers with depression
- Children who slept less, had mothers who were stressed and when parent-child interactions had more conflict and less closeness





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