

Associations between childhood environment and adult mental wellbeing: evidence from three British birth cohort studies

CLOSER work package 9

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Overview

- Background to the study
- Approach to using data from three birth cohort studies
- Initial findings

Childhood environment and poor mental health in adulthood

- Life course epidemiology has established association between adverse childhood environment and poorer mental health in adulthood
- Many studies have considered individual elements of the childhood environment, e.g.
 - Parental divorce (Amato 1991)
 - Separation from the mother (Bowlby)
 - Childhood socio-economic position (SEP) (Dearing 2008)
 - Parental bonding and family relationships (Weich 2009)
 - Adverse childhood experiences (Anda 2007, Clark 2010)



Childhood risk factors across multiple domains

- Childhood risk factors tend to co-occur (Repetti et al 2002; Bronfenbrenner 1986)
- Some studies considered multiple domains covering material and psychosocial risk factors and adult mental ill health, e.g.
 - Fergusson et al 1994
 - Family socioeconomic disadvantage
 - Parental adjustment problems
 - Impaired childrearing and parenting
 - Family instability
 - Antenatal and perinatal problems
 - Rodgers 1990
 - Family socioeconomic disadvantage
 - Family structure and disruption
 - Impaired childrearing and parenting and poor parental health
 - Antenatal and perinatal problems
 - Stressful life events (childhood illness)
 - (Schooling)

Childhood environment and adult mental wellbeing

- Fewer studies on multiple domains of childhood environment and mental wellbeing in adulthood
 - Mental wellbeing is a key component of health (WHO) and an indicator of healthy ageing (Kuh 2014)
 - Mental wellbeing is multidimensional
 - Positive emotions
 - Positive mental functioning
 - Realising one's potential
 - Evidence on multiple domains of childhood environment and mental wellbeing in adulthood
 - Layard et al 2014
 - National Child Development Study
 - Family economic circumstances
 - Family psychosocial factors
 - Child development (cognition, externalising and internalising disorders)
 - Each of these was associated with adult WB, with the exception of family psychosocial factors
- MRC LHA @ UCL • Are indicators of child development on the explanatory pathway?

Childhood environment and adult mental wellbeing continued

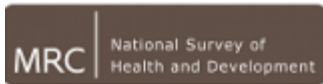
- Stafford et al 2015
 - National Survey of Health and Development
 - Family socioeconomic circumstances
 - Childrearing and parenting
 - Family instability
 - Parental health
 - Child health and mental wellbeing (on explanatory pathway?)
 - Identified parental bonding, maternal mental health and childhood illnesses as predictors of WB
 - Family socioeconomic circumstances were not associated
-
- Are there cohort differences in the association between family SEP and adult WB?
 - How is family SEP associated with other aspects of the childhood environment across cohorts?

Aims

1. To collate (prospective) data on childhood domains likely to be of relevance for adult mental wellbeing
 - Family socio-economic circumstances
 - Child rearing and parenting
 - Family instability
 - Parental health
 - Child health and behaviour
2. Using a coordinated approach to the analysis, to identify predictors of adult mental wellbeing from across these domains
3. And describe associations between childhood social class and other childhood factors to understand similarities/differences across the national birth cohorts



Birth years of the cohorts



National Survey of Health and Development
b.1946



National Child Development Study
b.1958



British Cohort Study 1970
b.1970

1930

1940

1950

1960

1970

1980

1990

2000

2010

DERIVING MEASURES ACROSS 3 COHORTS

Warwick–Edinburgh Mental Wellbeing Scale (WEMWBS)

- 14 item scale
- Totalled score 14 – 70
- Measured at age:
 - 63 years - NSHD
 - 50 years - NCDS
 - 42 years - BCS70

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

Approach to collating data on childhood environment

- Recognised the limits of retrospective harmonisation across all these childhood environment domains
- Approach was to try to identify variables that capture similar constructs for each of these domains in each of the cohorts
- Coordinated approach to the analysis to assess whether the relative importance of a domain is similar across the cohorts
- Derive average/cumulative exposure across childhood where repeat measures allow
- Use same ages in each cohort where possible
- Work in progress!

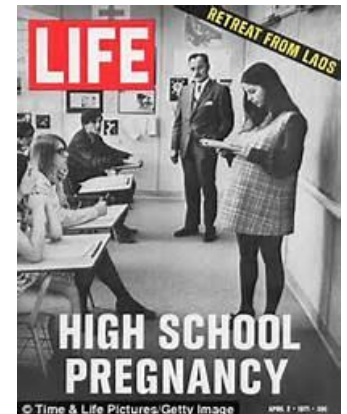
Family socio-economic measures (1)

- Father's social class – harmonised in CLOSER WP2
- Parental education: age left full time continuous education - harmonised in CLOSER WP2
- Mean overcrowding in childhood at multiple time points (persons per room)
 - NSHD: 2, 4, 6, 8 and 11 years
 - NCDS: 7, 11 and 16 years
 - BCS70: 5 years

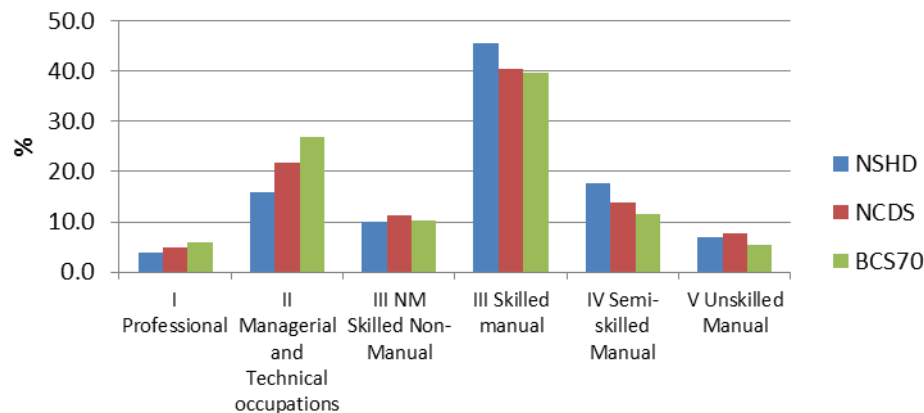


Family socio-economic measures (2)

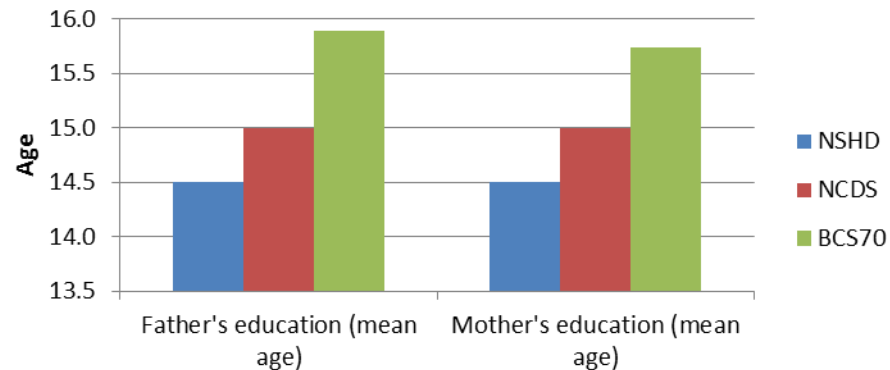
- Lacking any household amenities in childhood at multiple time points: bathroom, or kitchen, or hot water
 - NSHD: 2 and 11 years
 - NCDS: 7 and 11 years
 - BCS70: 5 and 10 years (age 10 only bathroom or kitchen)
- Tenure at two time points in childhood
 - NSHD: 2 and 11 years
 - NCDS: 7 and 11 years
 - BCS70: 5 and 10 years
- Teen parents



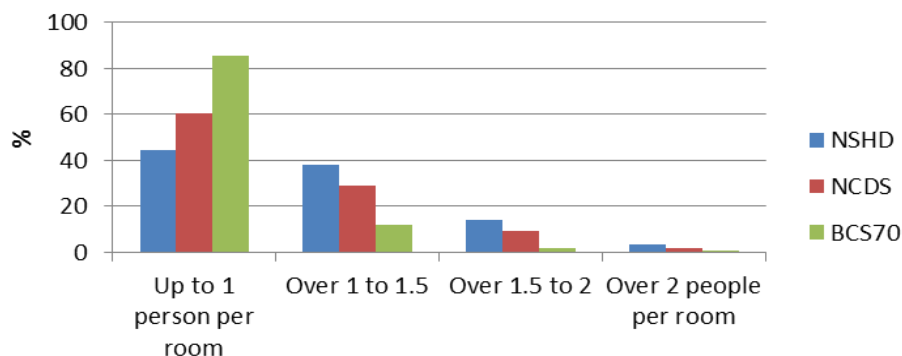
Father's social class



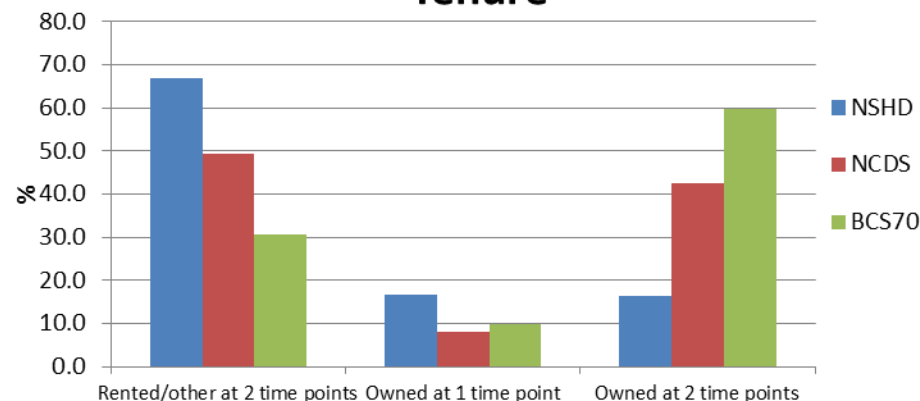
Parental education



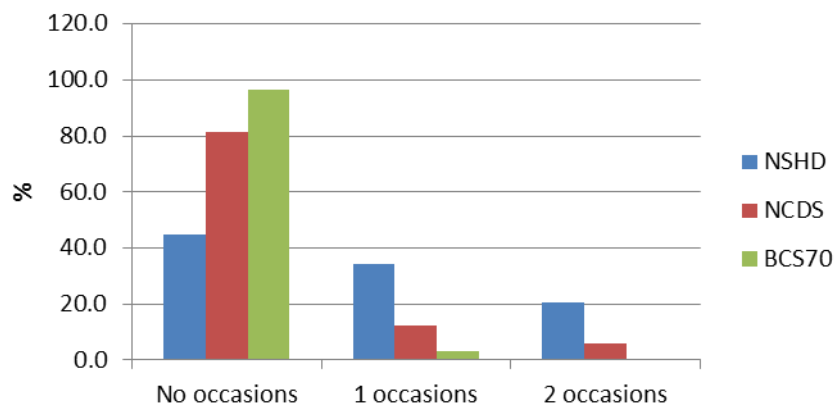
Overcrowding



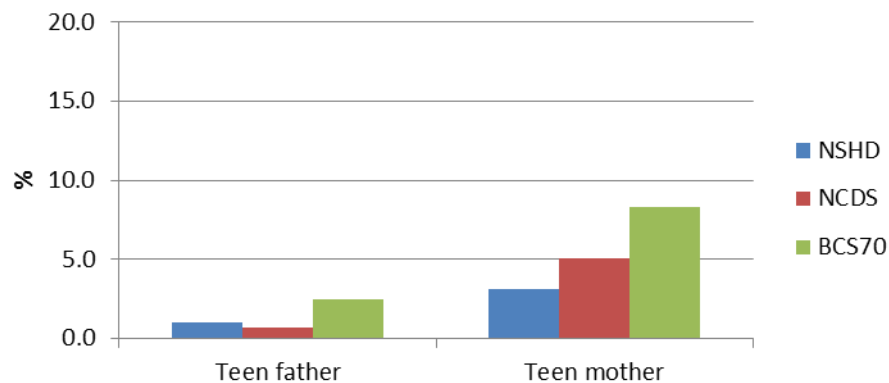
Tenure



Lack of household amenities



Teen parents



Psycho-social measures: child rearing (1)

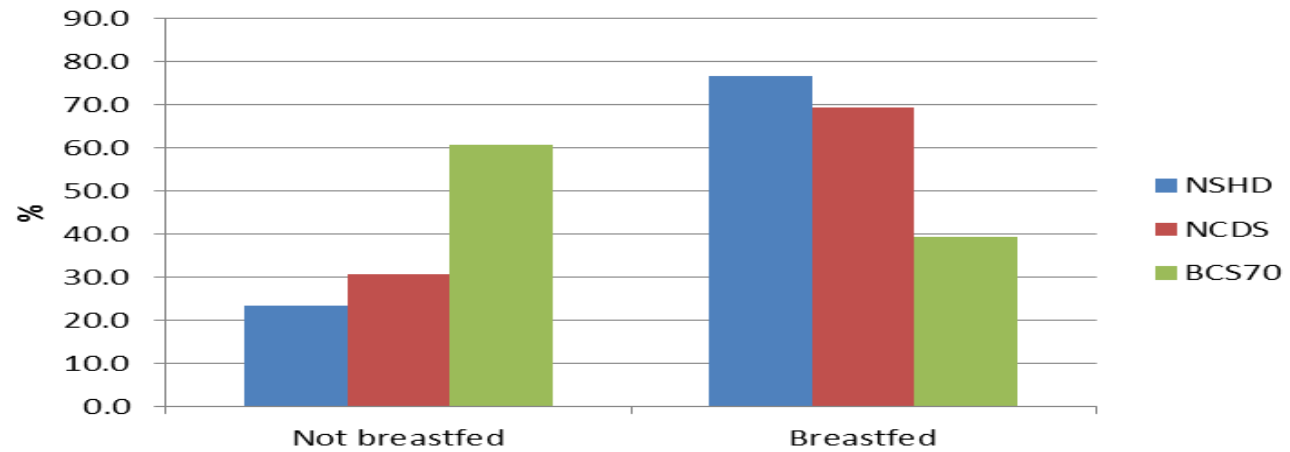
- Whether breastfed or not
- Parent's interest in child's education:
 - NSHD: 11 years (teacher and parent reported)
 - NCDS: 7 years (teacher reported)
 - BCS70: 10 years (teacher reported)



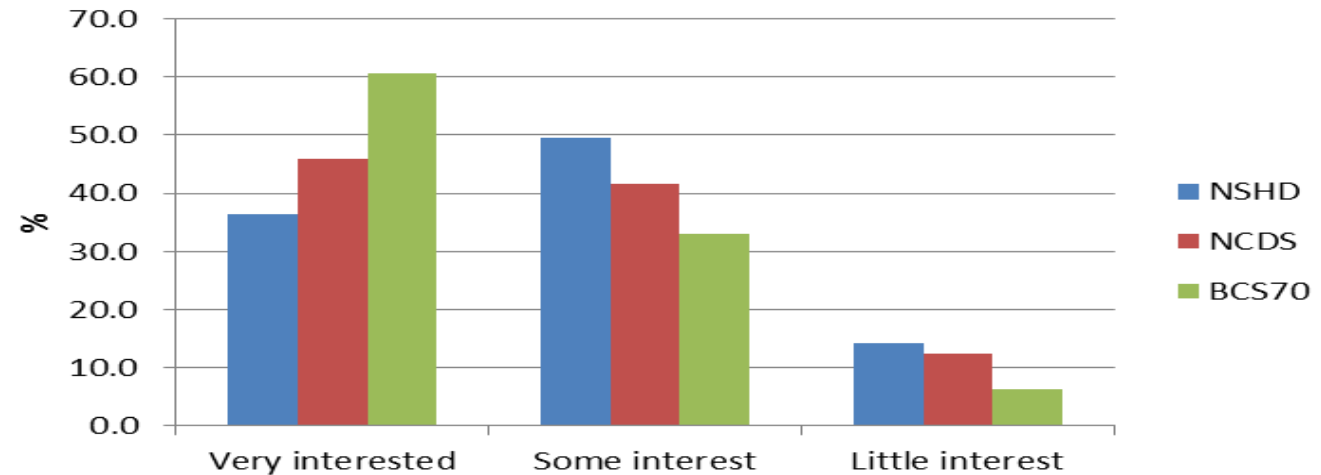
Psycho-social measures: child rearing (2)

- Parental bonding:
 - Parental care and overprotection – different versions of the parental bonding instrument in NSHD and BCS70 only.
 - NSHD retrospective (age 43), BCS70 prospective (age 16)
 - BCS70 shortened version – 11 items compared to 24 in NSHD
 - NSHD each parent separately, BCS70 both parents
 - Gets on well with parents – NCDS only (age 16)

Breastfed



Parental interest in education

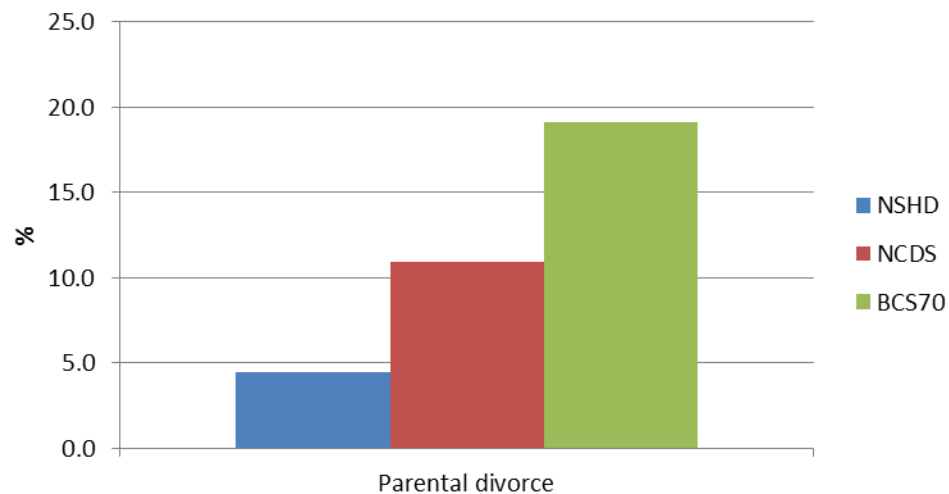


Psycho-social measures: family instability

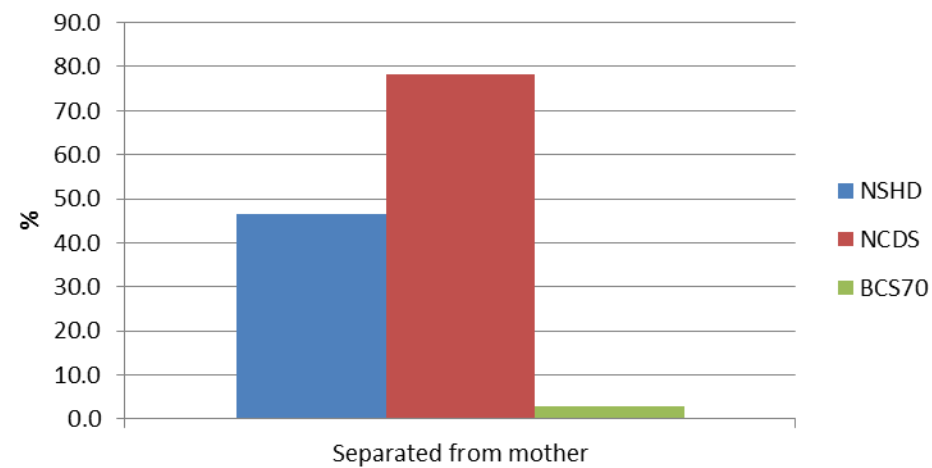
- Parental divorce – whether experienced divorce up to age of 16 years
- Whether ever separated from mother
 - NSHD – at age 4 – short-term i.e. overnight
 - NCDS – at age 7 – short-term i.e. overnight
 - BCS70 – 0–10 years – long-term separation
- Residential moves – number of moves 0/1-3/4+
 - NSHD – age 15
 - NCDS – age 16
 - BCS70 – age 10



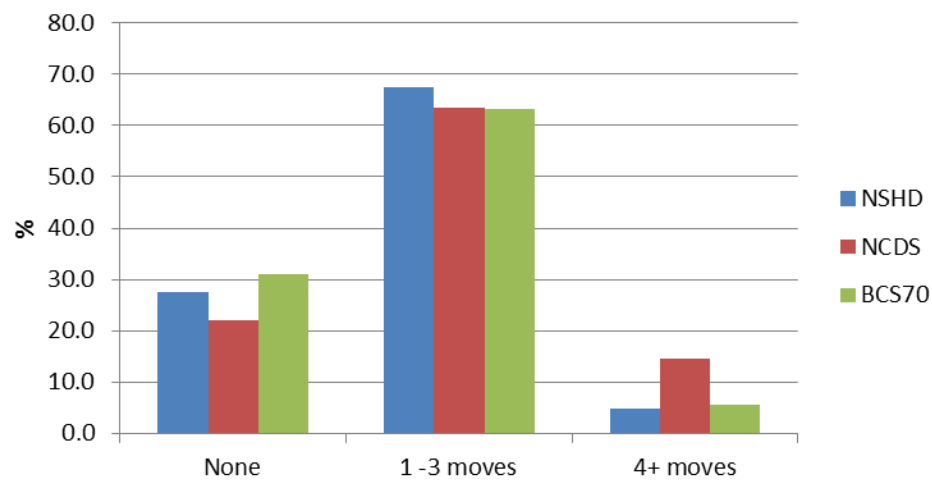
Parental divorce



Separated from mother



Residential moves



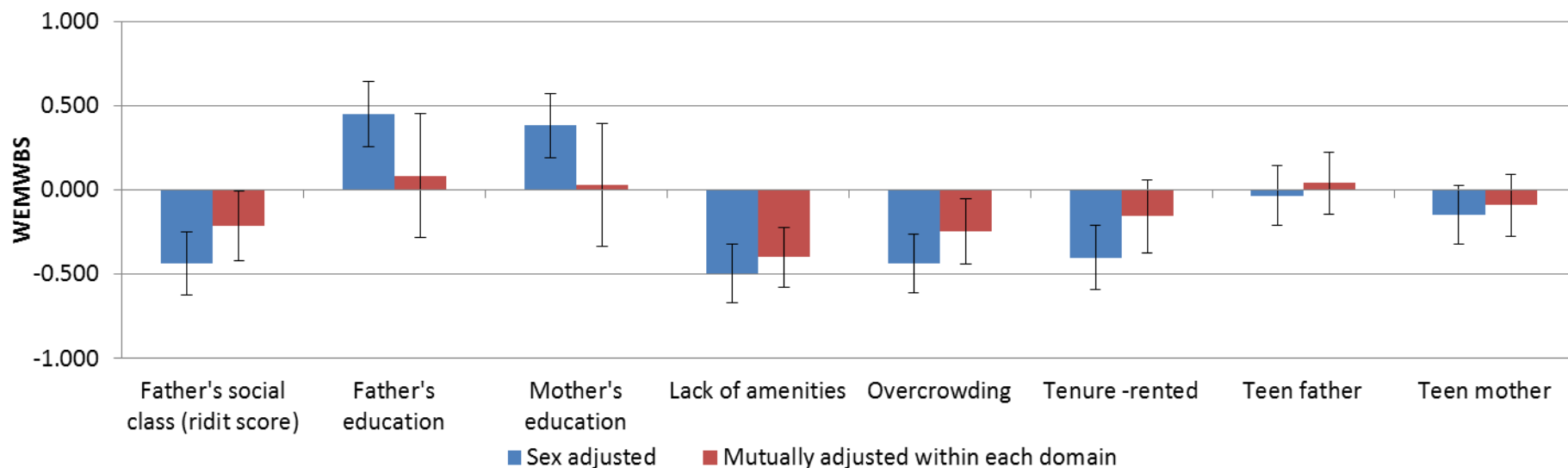
FINDINGS

Sample and analytical method

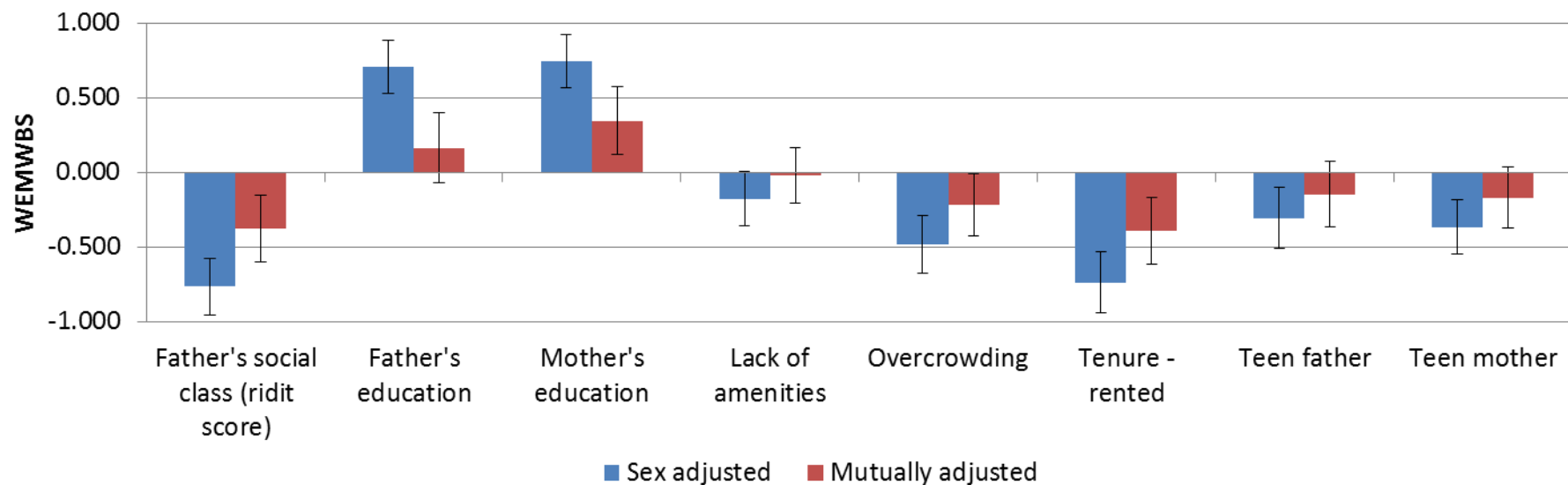
- Sample - all those with valid WEMWBS measure:
 - NSHD – 1,978
 - NCDS – 8,745
 - BCS70 – 8,589
- Missing data = Full Information Maximum Likelihood
- Analytical method = linear regression in STATA
 - Standardised regression coefficients are shown throughout
 - Models:
 - Adjusted for sex
 - Adjusted for sex + mutually adjusted within each domain
 - Adjusted for sex + mutually adjusted within each domain + adjusted for father's social class

Family SEP and adult mental wellbeing

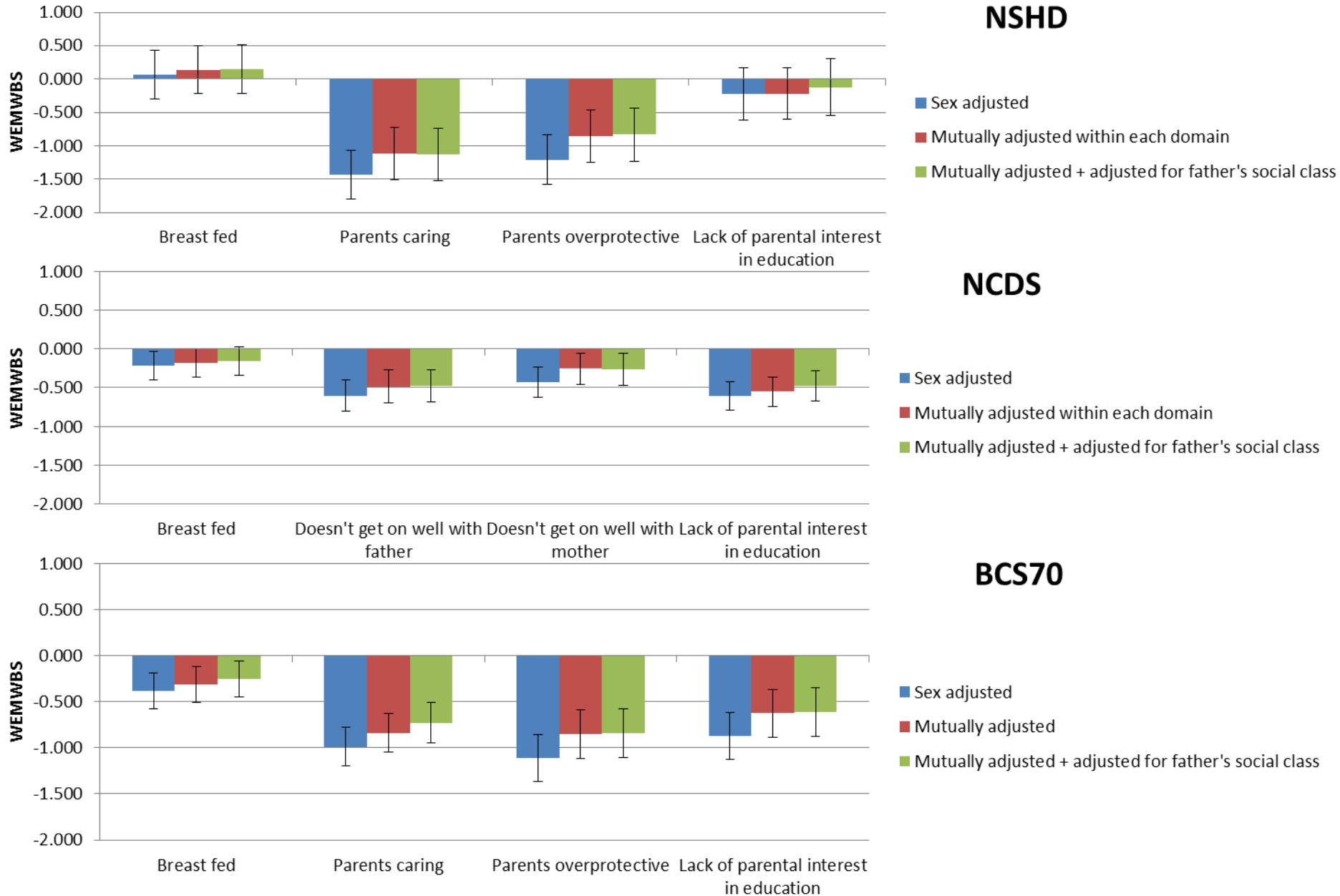
NCDS



BCS70

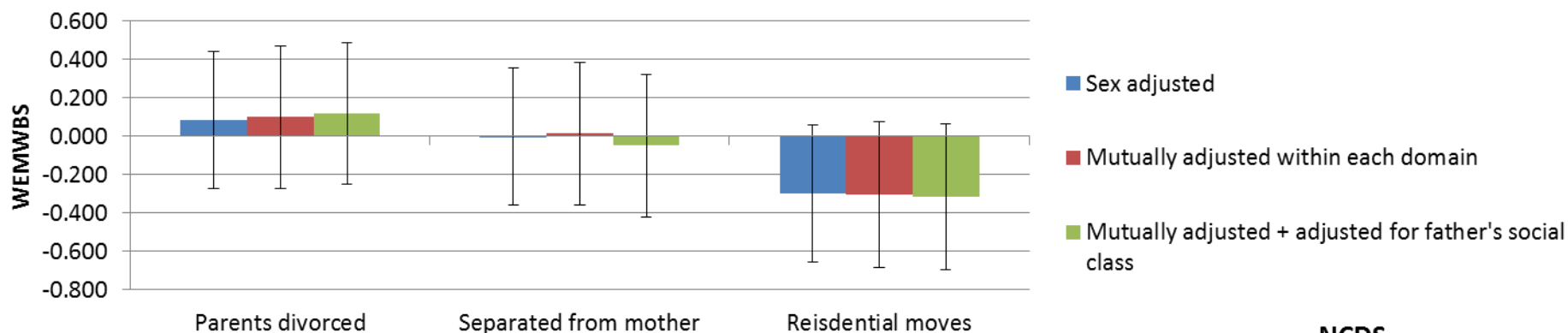


Childrearing and adult mental wellbeing

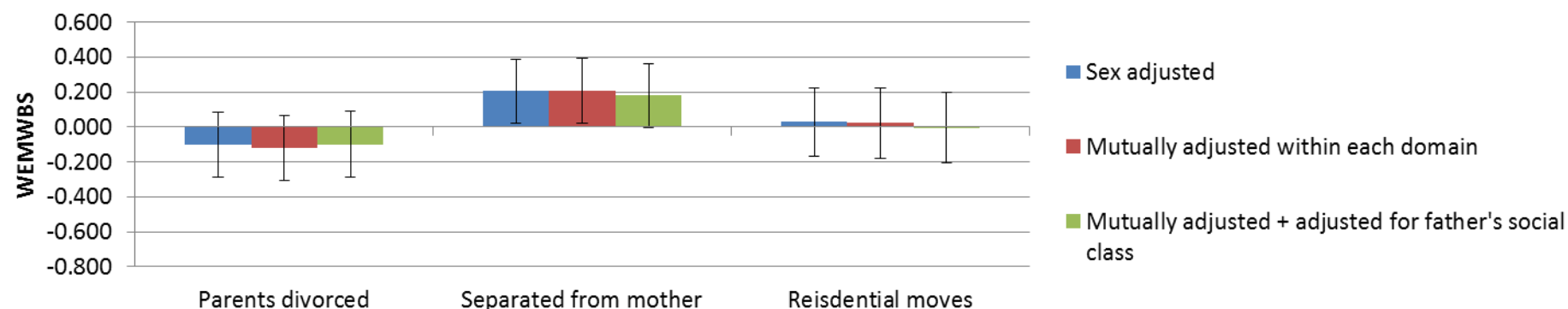


Family instability and adult mental wellbeing

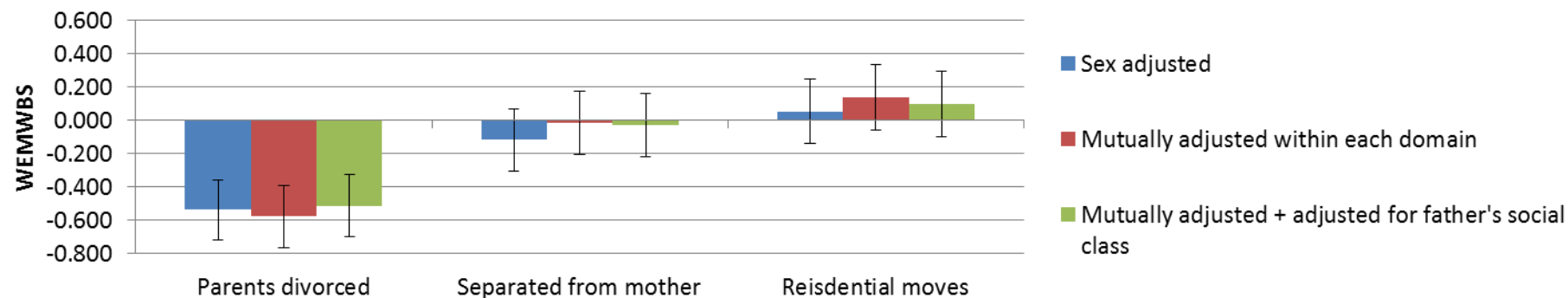
NSHD



NCDS



BCS70



Summary

- Family socio-economic circumstances associated with adult mental wellbeing in NCDS and BCS70, not in NSHD
- Family psycho-social – comparability issues
- Despite different measures, child-rearing (notably quality of the parent-child relationship) was associated with adult mental wellbeing in all three cohorts
 - Little attenuation by mutual adjustment or adjustment for father's social class
- Next steps are to
 - Continue with other childhood environment domains
 - Look at how family psychosocial domains are socioeconomically patterned

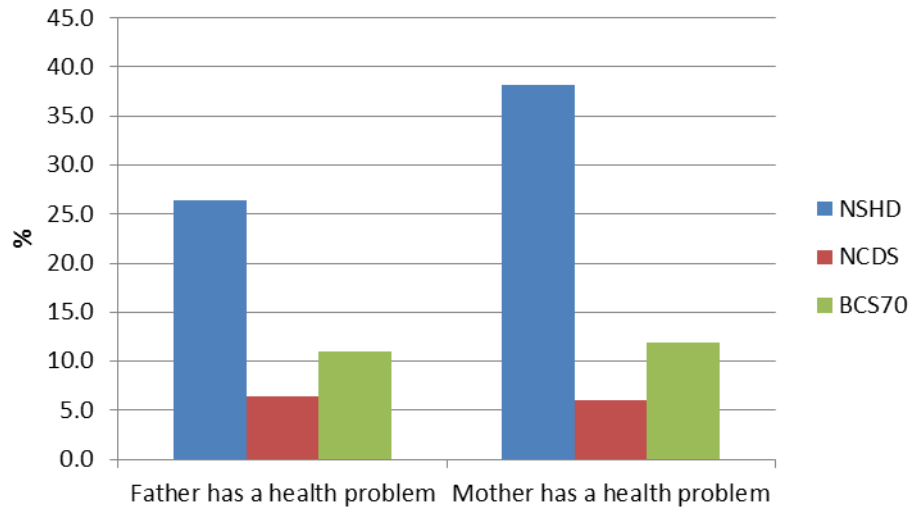
Acknowledgements

- David Bann, Rebecca Hardy, Alissa Goodman and Catharine Gale
- Brian Dodgeon and Claire Crawford for the harmonised father's social class measure
- CLOSER

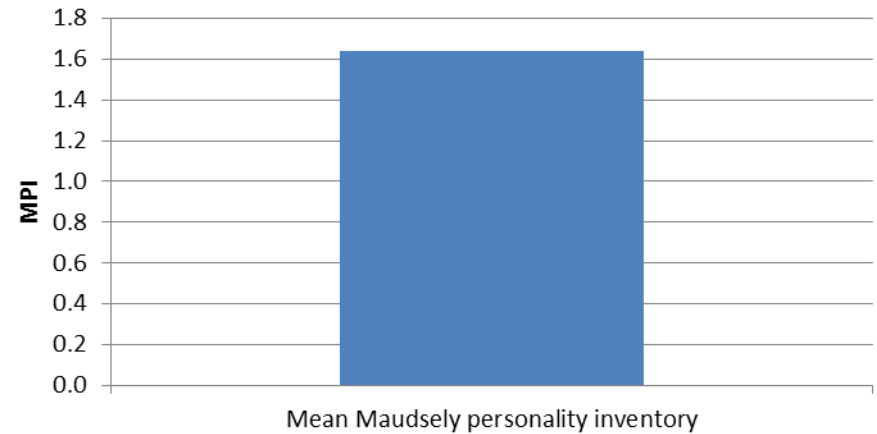
Psycho-social measures: parental health

- Parent's chronic health problems (NSHD age 15, NCDS age 11, BCS70 age 10):
 - Asthma, eczema or hay fever, chronic cough, rheumatism in joints, anaemia, Nervous / psychological, heart trouble, kidney trouble, cardiovascular, dermatological
- Mental health:
 - Maternal neuroticism – NSHD only, age 15
 - Family mental health problem – NCDS only, age 7
 - Maternal malaise – BCS70 only, age 10

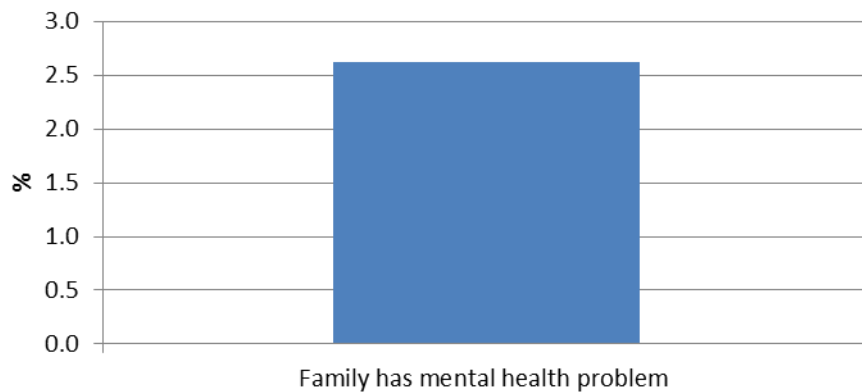
Parental health



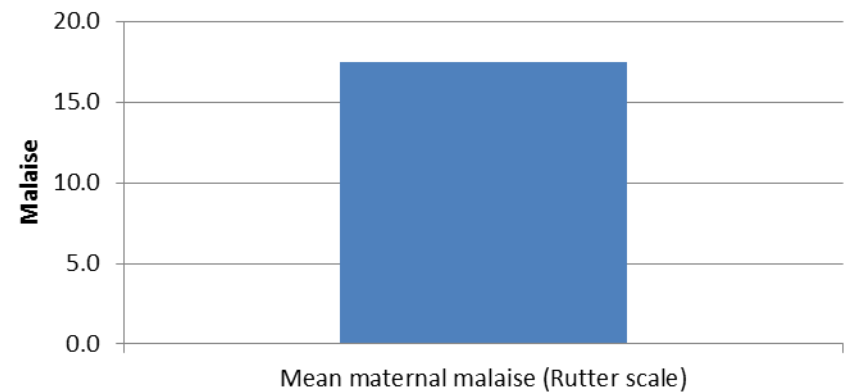
**Maudsely Personality Inventory -
neuroticism, NSHD**



**Family member has a mental health
problem - NCDS**

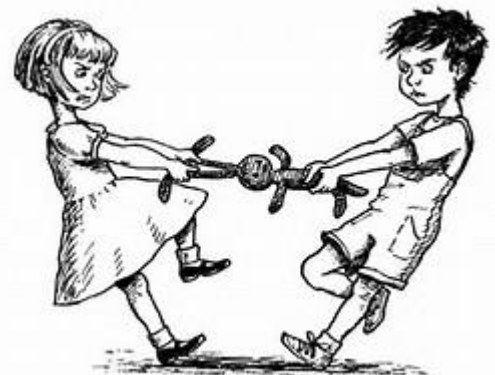


**Maternal malaise - Rutter Scale,
BCS70**

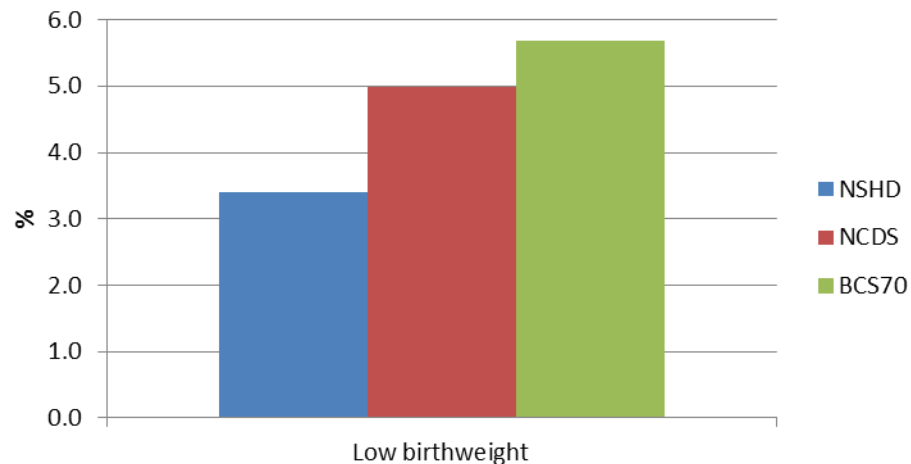


Psycho-social measures: child health and behaviour

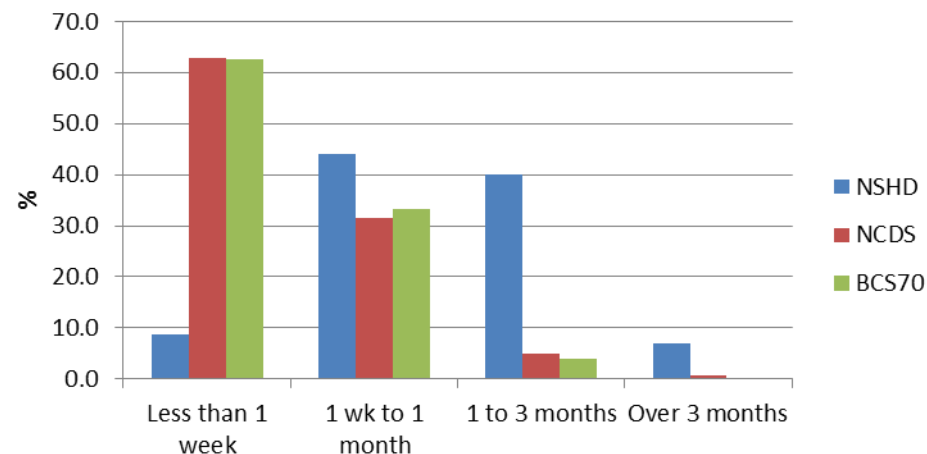
- Birthweight
- Absence from school due to ill health Child behaviour:
 - NSHD: 6 to 10 years
 - NCDS: 11 and 16 years
 - BCS70: 10 years
- Child behaviour:
 - Internalising and externalising
 - NSHD only (teacher rated at age 13 and 15)
 - Rutter behaviour scale
 - Factor analysis to separate out internalising and externalising
 - NCDS (teacher rated at age 16)
 - BCS70 (parent rated at age 16)



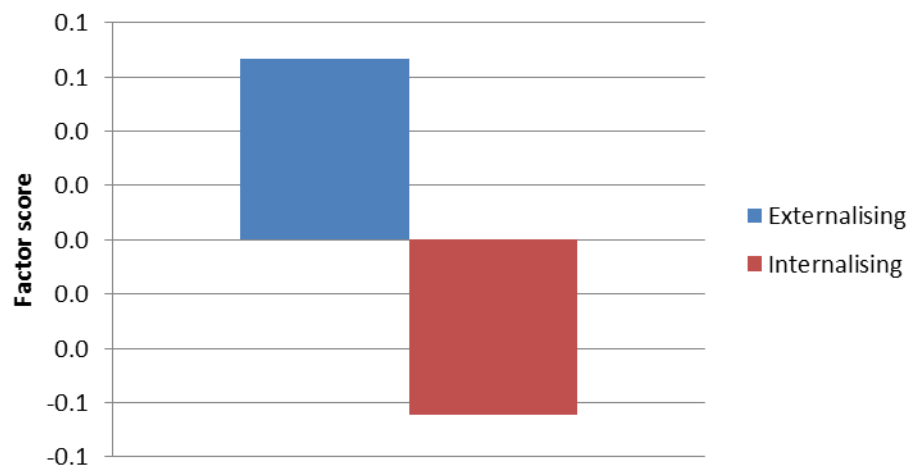
Low birthweight



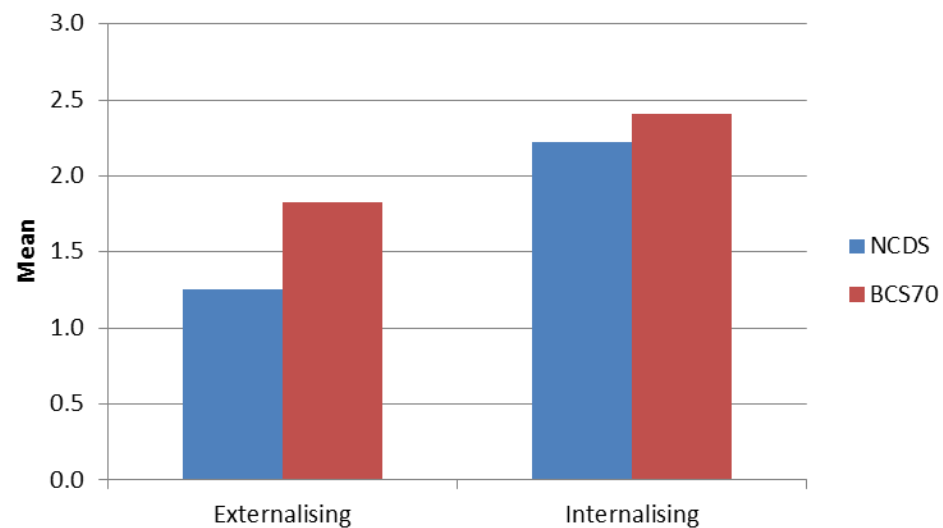
Absence from school due to ill health



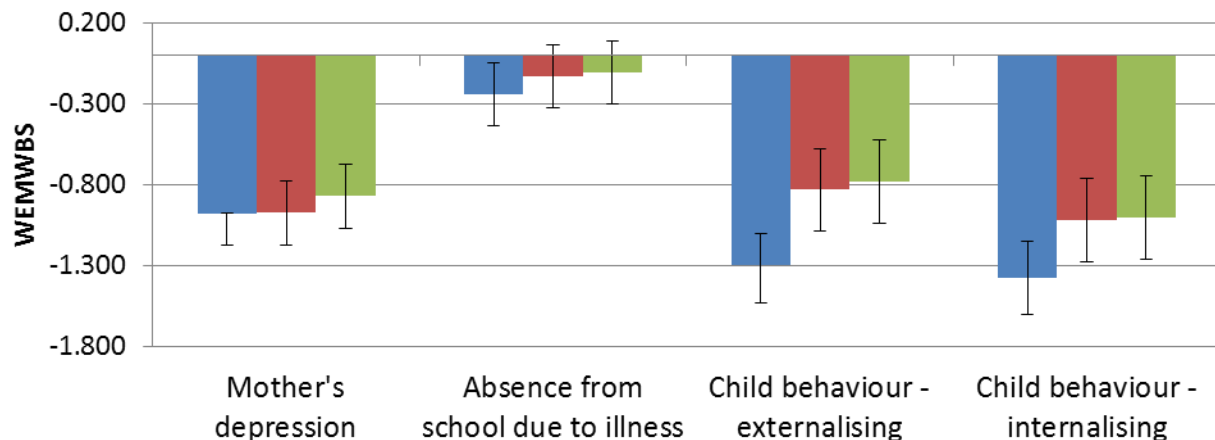
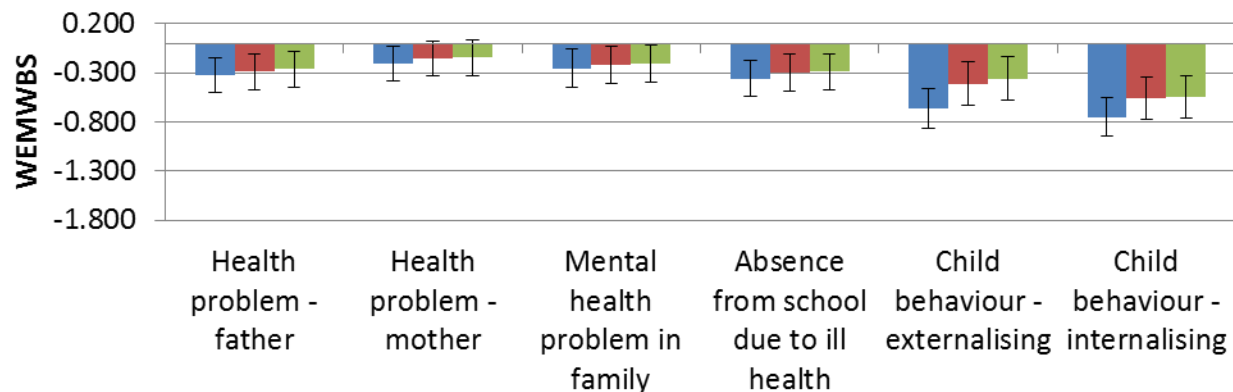
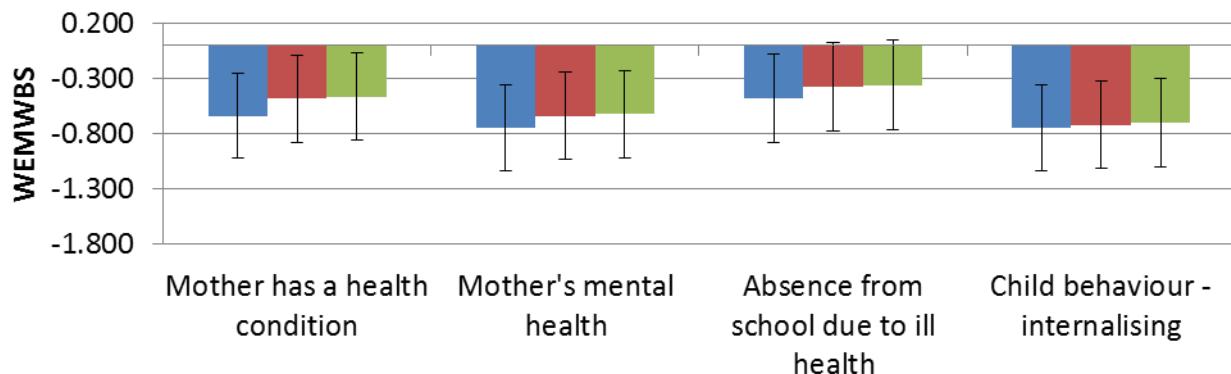
Child behaviour - NSHD



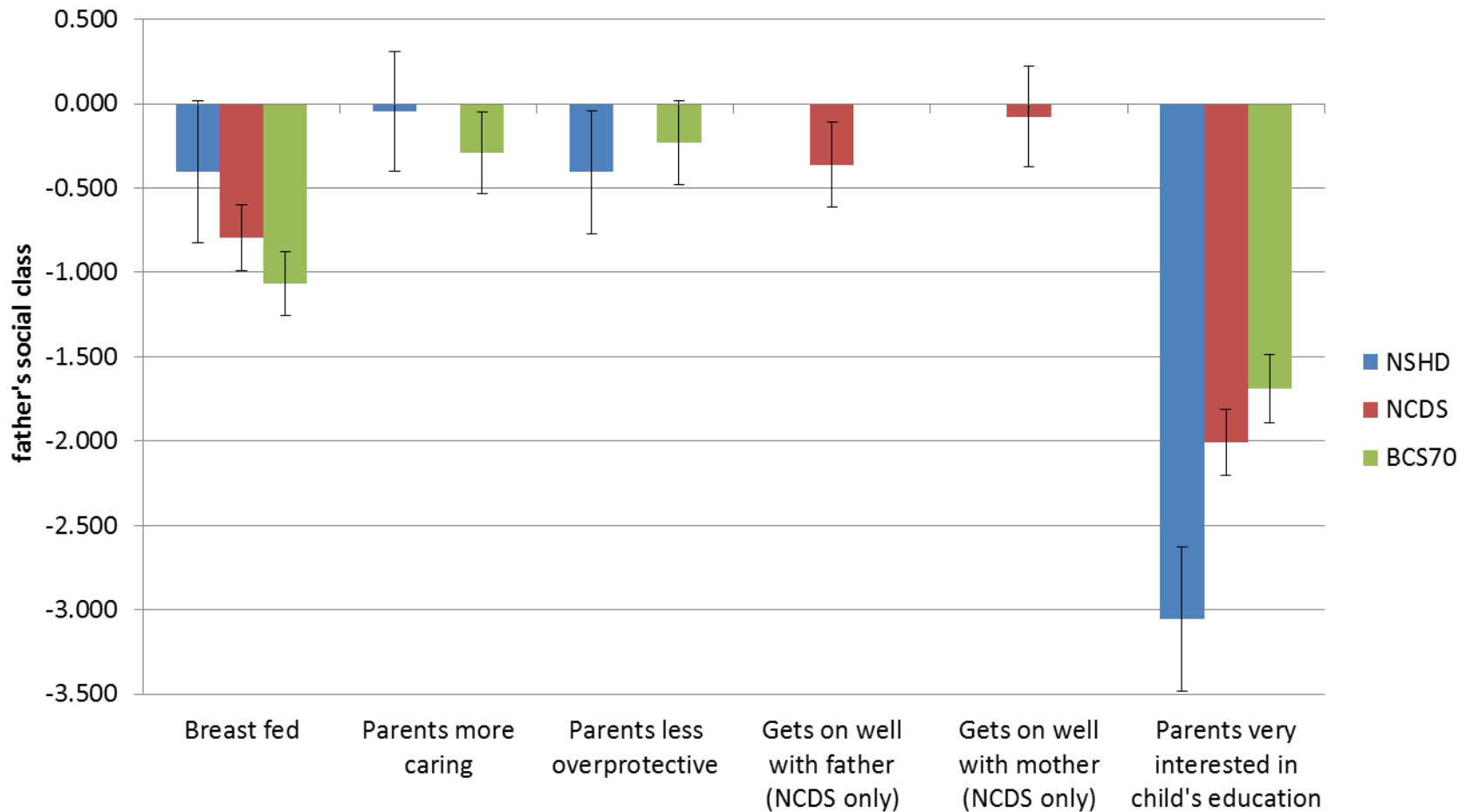
Child behaviour - NCDS and BCS70



Parental and child health



Father's social class and child rearing



Father's social class and family instability

