



Childhood vulnerabilities and outcomes in early adulthood

Literature view and data scoping of longitudinal resources

Vulnerability Technical Report 4

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Executive Summary

This report examined existing research on the longitudinal association between childhood vulnerability and later life outcomes in health, education, and employment. Additionally, a data scoping exercise was conducted on several datasets including the Millennium Cohort Study and Understanding Society to investigate the availability of data on vulnerable children and its suitability for longitudinal analysis.

Literature review

- > The literature review was moderately revealing in terms of identifying which data sources contain which measures of vulnerability. Most evidence has been drawn from BCS70 and the NCDS58, which are contextually less relevant to today.
- > Evidence was weak or lacking for the majority of our 41 vulnerable groups. The search yielded no results for longitudinal research on 21 vulnerable groups.
- > There was strong evidence of the association between specific vulnerabilities and a range of poorer outcomes in adulthood.
- > A particular challenge of this search was the non-reporting of the characteristics of vulnerable groups even though these groups have been included in analyses. This suggests that there may be scope for some limited analysis of older datasets which carry this information.

Data scoping

- > The feasibility of new research was assessed using the two most recent data resources: the Millennium Cohort Study and the UK Household Longitudinal Study/Understanding Society
- > Together with the literature review, the data scoping exercise confirmed the lack of longitudinal data on vulnerable children.
- > The majority of the 41 identified vulnerable groups were not included in these surveys. In the Millennium Cohort Study, data was available for 10 groups in Sweep 1 and 13 groups in Sweep 2.
- > Similarly, in Understanding Society, data was available for 16 groups in Wave 1 and 13 groups in Wave 2.
- > A further challenge was the small sample of particular vulnerable groups, rendering it unsuitable for longitudinal analyses, particularly once attrition was accounted for.

Childhood vulnerability and later life outcomes

This report examines the findings and challenges of conducting a literature review on the longitudinal associations between childhood vulnerability and outcomes later in life. In addition, the results of a data scoping exercise aimed at investigating the availability of data on vulnerable children and its utility for longitudinal analysis is discussed.

Literature review

Overview

The first phase of this project involved a literature review of the evidence for longitudinal associations between each type of pre-specified vulnerable group and health, educational and employment outcomes in early adulthood. The literature review did not seek to determine whether these relationships were causal. Instead, the focus was on potential associations between childhood vulnerability and outcomes in later life.

In this report, health is broadly defined, focusing on umbrella terms such as psychological distress, long term illness or general health as opposed to specific illnesses. Educational attainment tends towards the highest qualification achieved, but also includes objective measures of literacy or numeracy. Exclusion from school is not included on the basis that it is not an outcome experienced in adulthood. Employment relates to occupational social class as well as unemployment, economic inactivity, NEET status and also incorporates a measure of income.

The vulnerable groups inspected by this report include the 32 identified at Phase I¹ and an additional 9 for the preliminary stages of Phase II. This list was drawn up in collaboration with the Children's Commissioners Office and related advisory group members. Since the inception of this strand of research the final list of groups for Phase II has been refined further and consists of 37 groups.

Literature search strategy

The following search structure was found to be the most productive (although this was not the only search structure that was used):

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<vulnerable group> AND "longitudinal" AND "England" AND "health" OR "<employment>" OR "education"
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Descriptive terms in <brackets> can vary within each topic. Health does not vary as we intend to capture health in the broadest terms; the term "education" identifies studies which focus on cognition; and employment has been varied with economic activity and income though differences in results returned with these variations are modest (presumably as economic activity picks up these terms).

The above search structure was used in ISI Web of Science and PubMed. However, the Google Scholar algorithm was vastly superior in identifying relevant publications for this review, such as book chapters, reports, grey literature as well as journal publications – for pragmatic reasons we have used Google Scholar only.

As per the search terms, we included samples from England only and excluded particularly old cohorts. Only large-scale quantitative studies and those from 1958 onwards were included in the literature

¹ <https://www.childrenscommissioner.gov.uk/wp-content/uploads/2017/07/CCO-On-vulnerability-Overveiw.pdf>

review, therefore excluding numerous but small scale qualitative studies on vulnerable groups and quantitative research based on historical data such as the 1946 British National Cohort Study. These parameters also exclude of a wealth of internationally relevant data focussing on vulnerability using the New Zealand Dunedin study.

General findings

Overall, the results of the literature review are moderately revealing in terms of identifying which data sources contain which measures of vulnerability. Most evidence is drawn from British Cohort Study of 1970 (BCS70) and the National Child Development Survey of 1958 (NCDS58), which are contextually less relevant to today.

As was expected, there is strong evidence of the association between specific vulnerabilities and a range of poorer outcomes in adulthood. Although vulnerability encompasses a wide range of adverse circumstances, research tends to focus on a few specific areas. This includes looked after children, families with low incomes, or workless households, trauma and abuse, maltreatment or bullying by peers, and mental illness.

There were a range of consistent messages from the literature including:

- > Being taken into care is predictive of economic inactivity in adulthood, reduced earnings in men (Knapp, 2011) and increased unemployment in men and homelessness (Viner, 2005).
- > Children experiencing trauma through bullying have increased risk of psychological distress in early and late adulthood (Takizawa, 2014; Arseneault, 2011) and self-harming (Fisher, 2012).
- > Child maltreatment by adults or neglect is associated with anxiety, depression, drug and alcohol dependence, conduct disorder (Newbury, 2018), psychotic symptoms (Arseneault, 2011) and physical and mental ill health (Stewart-Brown, 2005) in early adulthood.
- > Childhood adverse life events were strongly correlated with chronic widespread pain (Flouri, 2010) and psychological ill health in adulthood (Jones, 2009).
- > Poorer socio-economic outcomes in adulthood is associated with childhood psychological (Goodman, 2011; Mars, 2014) and physical (Goodman, 2011) ill health.
- > Poor parental mental health is correlated with a greater risk of childhood anti-social behaviour (Kim-Cohen, 2005).

However, evidence was weak or lacking on the majority of our 41 vulnerable groups. The search yielded no results for longitudinal research on 21 vulnerable groups (as listed below). It is not possible to conclude with certainty that no longitudinal evidence on the outcomes of these groups exists due to the limited time and resources available for the literature review. It is unlikely that further resource would generate an evidence base which could meaningfully add to our understanding of the association between early life vulnerability in these groups and the risk of poorer outcomes.

Table 1: Vulnerable groups for which the literature review yielded evidence

Group no.	List of 41 identified vulnerable groups	Evidence from literature review found
Safeguarding concerns or in local authority care		
1	Children looked after/looked after children	✓
2	Children who are subject to child protection plans	
3	Children in a secure detention estate	
4	Children in need	
5	Unaccompanied asylum seeking children	
6	Care leavers	✓
7	Children who are subject to a special guardianship order	✓
8	Adopted children	
Child's health and/or disability		
9	Children who have special educational needs and/or disability (SEND)	✓
10	Children who have mental health difficulties	
11	Children who have physical health issues	
Economic circumstances		
12	Children in workless families	✓
13	Children in low-income families	✓
14	Children who are homeless or who are in insecure/unstable housing	✓
15	Children in poor, sick or deprived places	
Family circumstances/characteristics		
16	Pre-Section 17 children	
17	Teenage parents	✓
18	Children in non-intact families	✓
19	Young carers	
20	Undocumented children and children without legal identity/regular immigration status	
21	Children in 'troubled families'	✓
22	Children whose parents use substances problematically	✓
23	Children whose parents may have limited parenting capacity	
24	Children with domestic violence in the household	✓
25	Children of prisoners	✓
26	Kinship care (formal and informal)	
27	Children with mental health difficulties in the household	✓
Children's educational engagement		
28	NEET/Pre-NEET children	✓
29	Excluded pupils and those at risk of exclusion from school	
Children's involvement in offending or anti-social behavior		
30	Children involved with the criminal justice system/young offenders	
31	Young people who are involved in gangs	

Group no.	List of 41 identified vulnerable groups	Evidence from literature review found
32	Children experiencing crime	
Childhood experience of abuse/exploitation		
33	Children who have experienced childhood trauma/abuse	✓
34	Children who have been victims of modern slavery or trafficking	
35	Major incidents (adverse life events)	
36	At risk of specific harms (e.g. forced marriage, female genital mutilation, radicalisation)	
Missing and absent children		
37	Missing children	
38	Absent children	
Minority populations		
39	Children with BME background	✓
40	Children who are in a gender minority and children who are lesbian, gay, or bisexual	
41	Children of migrants	✓

Limitations

Although the overwhelming majority of the literature described in Appendix A provide a compelling case and robust evidence for the relationship between childhood vulnerability and adverse outcomes in adulthood, a significant portion of these studies use data collected around 40 years ago – the relevance of this evidence base to contemporary society and child welfare systems may be limited.

Additionally, there was a tendency to focus on health outcomes above all others. As a result, evidence on educational outcomes was especially weak. There is difficulty in identifying longitudinal association between youth vulnerability (across most groups) and educational outcomes due to temporal co-occurrence. For instance, both are measured at the same point in time with few studies looking at vulnerability in early adolescence and consequent later outcomes at 18. A further difficulty is due to outcome/educational destination being reached (generally) during the period of youth exposure (by 18), straying into cross sectional inferences.

A particular challenge of this search is the non-reporting of the characteristics of vulnerable groups even though these groups are included in analyses. In many cases these studies contain no reference to vulnerable groups in the title or the abstract. This challenge is a consequence of the lack of attention paid in previous research to childhood vulnerability as a primary exposure predictive of poorer later life outcomes – if vulnerability is the primary exposure then it would be reported in the abstract. Instead, vulnerability is commonly treated as a mediator or a confounder in the relationship between other more common childhood predictors of later life outcomes such as bullying.

Similarly, there is an unfortunate and common trend towards analysing longitudinal data cross-sectionally. For instance, Collishaw and colleagues (2010)² compare a 1986 adolescent cohort from BCS and a cohort

² Collishaw, S., Maughan, B., Natarajan, L., & Pickles, A. (2010). Trends in adolescent emotional problems in England: a comparison of two national cohorts twenty years apart. *Journal of Child Psychology and Psychiatry*, 51(8), 885-894.

from HSE 2002/3 in 2006, to estimate prevalence of child emotional problems within intact and non-intact families. This is a prevalence comparison rather than a longitudinal investigation. This literature review identifies many similar studies which are not eligible for inclusion but which appear in searches for longitudinal analysis.

This suggests that there is considerable scope for new analysis given the current lack of evidence. The question remains whether the lack of previous research is due to a lack of interest by the research and policy community, or whether the lack of evidence is due to a lack of meaningful data. That many studies identified include vulnerable groups as confounders/mediators suggests that data is available, but it has not been deployed in way which places exposure to vulnerability at the centre of the research question.

Future data resources

There are several datasets beyond the UK birth cohorts which are promising resources and could provide valuable data on this subject in future.

The E-risk study holds a potentially rich source of information on environmental risk incorporating a large sample (>2000 twins) which is specifically focused towards environmental risk factors and hence collects data on a range of childhood vulnerabilities. However, current literature is focused up to age 12 and currently few manuscripts report at age 18. This data source, which is nested inside the original Twins Early Development Study (TEDS), ought to provide a strong evidence base in the near future on the long term impact of child vulnerability.

Similarly, highly relevant research funded by the Nuffield Foundation is due in 2019. This project will investigate the educational trajectories of children in care, including the perspectives of parents, pupils and professionals on the factors affecting educational progress (Berridge, Sebba, Strand, Luke, in progress).

The richest data sources which are freely available at present to accredited researchers are the UK cohort studies and the UK Household Longitudinal Study (Understanding Society). The next stage of the investigation scopes the possibilities of investigating childhood experiences of vulnerability and its associations with health, educational and employment outcomes in early adulthood.

Data scoping

Scoping overview

Concurrent to the literature review was a data scoping exercise assessed the feasibility of new research using 5 datasets: the Millennium Cohort Study, Understanding Society/BHPS, Next Steps, British Cohort Study 1970 and the National Child Development Study 1958. Each dataset was inspected to determine which vulnerable groups are present in the cohort/panel and whether the number of participants with longitudinal data is sufficient for further longitudinal analysis of selected later life outcomes. The findings are presented for the Millennium Cohort and Understanding Society only as these are the most contemporary resources.

The Millennium Cohort represents the most detailed follow up through the early years of all data currently available. Being the most recent birth cohort study it currently holds data up to age 14. One considerable drawback is that the sample specifically excludes children/households who were not on the universal child benefit register in England in 2000/01. This includes those living in institutions and families seeking asylum, both of which constitute vulnerable groups of interest.

Understanding Society has rarely been used to study the long-term outcomes of vulnerable children, so this data scoping exercise was a means to determine the measures of vulnerability captured by the survey. For this report attention has turned wave 1 (2009/10) and wave 2 (2010/11) of Understanding Society as these can provide at least 5 years follow up to track longitudinal outcomes at waves 6 and 7.

Data quality

Although there is a wealth of data on some vulnerable groups such as children in low-income and non-intact families³, a majority of the 41 identified vulnerable groups were not included in these surveys. For instance, in the Millennium Cohort Study, data was available for 10 groups in Sweep 1 (age 9 months) and 14 groups in Sweep 2 (age 3 years). Table 2 shows the vulnerable groups for which data was available and their respective populations within the Millennium Cohort dataset.

Table 2: Vulnerable groups for which data was available in the Millennium Cohort Study

Group no.	Vulnerable groups in the Millennium Cohort	9 months (N)	3 years (N)
7	Children who are subject to a Special Guardianship Order (SGO)	5	6
8	Adopted children	3	17
9	Children who have special educational needs and or disability (SEND)	-	12
12	Children in workless families ⁴	775	2717
13	Children in low-income families (60% of the median)	3979	3385
14	Children who are homeless or who are in insecure/unstable housing	26	10
18	Children in non-intact families ⁵	1895	3123
22	Children whose parents use substances problematically	-	154

³ DWP, 2018

⁴ Main and partner not at work

⁵ Households where the natural mother and father are not present

Group no.	Vulnerable groups in the Millennium Cohort	9 months (N)	3 years (N)
23	Children whose parents may have limited parenting capacity ⁶	1758	3176
24	Children with domestic violence in the household	999	794
25	Children of prisoners	24	1
27	Children with mental health difficulties in the household	-	49
39	Children with BME background	3195	2501
41	Children of migrants	-	2349

Similarly, in Understanding Society, data was available for 16 groups in Wave 1 and 13 groups in Wave 2. Table 3 denotes the data available for the specific vulnerable groups as well as the number of children in the dataset belonging to those groups.

Table 3: Vulnerable groups for which data was available in Understanding Society

Group No.	Vulnerable groups in Understanding Society	Wave 1 (N)	Wave 2 (N)
1	Children Looked After	122	128
7	Children who are subject to a Special Guardianship Order	7	5
8	Households with adopted children	861	588
10	Children who have mental health difficulties ⁷	384	Not available
12	Children in workless families	1906	1525
13	Children in low-income families	9266	9463
14	Children who are homeless or who are in insecure/unstable housing	891	120
15	Children in poor, sick or deprived places	Special access availability	Special access availability
17	Teenage parents	4 (aged 16 years)	6 (age 16 years)
18	Children in non-intact families	2365	2052
19	Young carers	49 (aged 16 years)	61 (aged 16 years)
22	Children whose parents may have limited parenting capacity ⁸	797	885
27	Children with mental health difficulties in the household ⁹	645	960
31	Children in gangs	52	Not available
39	Children with BME background	2813	43
41	Children of migrants	2652	142 ¹⁰

⁶ Limiting long-term illness (or infirmity at age 3)

⁷ Strengths and Difficulties Questionnaire

⁸ Receipt of disability/sickness allowance

⁹ General Health Questionnaire

¹⁰ Feed forward values

A further challenge was the small sample of particular vulnerable groups such as children who are subject to a Special Guardianship Order or teenage parents, which impedes any meaningful analysis of longitudinal outcomes.

Together with the literature review, the data scoping exercise confirmed the serious lack of longitudinal data on vulnerable children.

Conclusion

The literature review and data scoping exercise showed limited longitudinal research evidence on vulnerable children. Particular groups such as children from low-income or workless families are a relatively well-researched area which has been at the centre of recent government-led secondary analysis. By using English birth cohorts and panel data¹¹, attempts have been made to estimate the life chances of these young people, but to also estimate the economic cost to the Exchequer of the consequences into adulthood of such early economic disadvantage. However, such instances are the exception and other groups such as young carers and unaccompanied asylum seeking children have not been studied longitudinally in England thus far.

Reasons for the lack of data on these young people are numerous. A wide range of measures of vulnerability are routinely excluded from national surveys and birth cohort studies as part of the sample designs to meet fieldwork costs, but potentially because they are by definition vulnerable and considerable unsuitable for inclusion. The notable challenges in conducting longitudinal research on vulnerable children, such as recruitment and attrition, must be addressed to overcome the lack of evidence on their developmental trajectories and needs in early adulthood.

Where longitudinal data is collected on vulnerability, there has been a trend of analysing it cross-sectionally missing out important information about how far vulnerability can predict poorer outcomes. To compound this, it is common to not report the characteristics of vulnerable groups even though they may have been included in analyses. In spite of these limitations, there are emerging datasets such as the E-Risk study where young people have now reach early adulthood, though data access is relatively restricted at present, and recent work on looked-after children funded by the Nuffield foundation could also provide a rich source of data on childhood vulnerability in the near future.

Overall though, there is a striking lack of meaningful longitudinal data which tracks the health, employment and educational outcomes of vulnerable young people. Past longitudinal data collections have incorporated booster samples of disadvantaged households or populations with minority ethnic backgrounds to facilitate robust analysis, uncovering the scale of risks involved in these groups and leading to potential causal explanations which can be addressed by policy. Future data collections ought to consider the specific sampling of a range of common vulnerable groups, or at the very least incorporate items within the data collection which might identify in sufficient detail vulnerable young people who are already part of on-going studies.

¹¹ Improving Lives: Helping Workless Families - indicators and evidence base <https://www.gov.uk/government/publications/improving-lives-helping-workless-families-evidence-base>

Appendix

Study	Vulnerable group	Findings	Data source
<p>Heath, A. F., Colton, M. J., & Aldgate, J. (1994). Failure to Escape: A Longitudinal Study of Foster Children's Educational Attainment. <i>The British Journal of Social Work</i>, 24(3), 241-260.</p> <p>https://doi.org/10.1093/oxfordjournals.bjsw.a056064</p>	Looked after children/ guardianship order	<p>Objective:</p> <ul style="list-style-type: none"> -To examine the long-term educational attainment of foster children <p>Method:</p> <ul style="list-style-type: none"> -49 foster children (26 boys, 23 girls), of approximately Middle School age (8-14) were assessed at the start of the study. <p>Findings:</p> <ul style="list-style-type: none"> -Foster children, who were in long-term, settled placements in middle-class environments continued to demonstrate low educational attainment, suggested difficulty in 'escaping from disadvantage'. There was no difference in attainment or progress between children where the eventual outcome was adoption or custodianship and those who would remain foster children. -Children who can be presumed to have experienced poor parenting and had been removed compulsorily from their parents did not appear to recover educationally as easily as those whose care had been necessitated by parental illness or by crises related to economic hardship. What we appear to see here are the lasting effects of early deprivation or maltreatment. 	The sample consists of 49 foster children (26 boys, 23 girls), of approximately Middle School age (8-14 years) at the start of the study, in ordinary state schools in one county
<p>Knapp, M. et al. (2011). Economic outcomes in adulthood and their associations with antisocial</p>	Looked after children	<p>Objective:</p> <ul style="list-style-type: none"> -To examine the connections between childhood antisocial conduct, attention deficit and anxiety, and adulthood economic consequences. <p>Method:</p> <ul style="list-style-type: none"> -Data from the 1970 British Cohort Study (BCS70) were examined for links between behavioural and emotional problems in childhood, and occupational status and earnings 	1970 British Cohort Study (BCS70) sweeps at age 5, 10,16,26,30, and 34.

<p>conduct, attention deficit and anxiety problems in childhood. <i>Journal of Mental Health Policy and Economics</i>, 14(3), 137-147. http://eprints.lse.ac.uk/38200/</p>		<p>in adulthood, after adjusting for individual and family covariates. Importantly, the analysis incorporated a sub-analysis of children taken into care.</p> <p>Findings:</p> <ul style="list-style-type: none"> -Being taken into care before the age of ten was found to be predictive of economic inactivity at age 30 for men and women and reduced earnings for men. -Factors predicting economic activity included lower family income, higher number of children in household, living in a disadvantaged neighbourhood, low staff–pupil ratio at school and low cognitive attainment. -Childhood mental health problems are strongly linked to adverse adulthood experiences. 	
<p>Viner, R. M., & Taylor, B. (2005). Adult health and social outcomes of children who have been in public care: Population-based Study. <i>Pediatrics</i>, 115(4), 894-9. http://pediatrics.appublications.org/content/115/4/894.short</p>	<p>Looked after children</p>	<p>Objectives:</p> <ul style="list-style-type: none"> -To examine adult socioeconomic, educational, social, and health outcomes of being in public care in childhood. <p>Method:</p> <ul style="list-style-type: none"> - Sample was from the 1970 British birth cohort was followed up at 5 (N = 13135), 10 (14875), 16 (11622), and 30 years (11261). Cases were defined as those ever in statutory or voluntary public care at 5, 10, and 16 years. Self-reported adult outcomes were occupation, educational achievement, general health, psychological morbidity, history of homelessness, school exclusion, and convictions. <p>Findings:</p> <ul style="list-style-type: none"> -A history of state care was associated with significantly poorer economic outcomes, a history of homelessness in both genders and a twofold risk of current unemployment in men. Public care in childhood is associated with adverse adult socioeconomic, educational, legal, and health outcomes in excess of that associated with childhood or adult disadvantage. <p>Note:</p> <ul style="list-style-type: none"> -Both Knapp (2011) & Viner’s work (2005) on BCS70 provide relatively strong evidence that being looked after as a child has a sustained impact on a number of socio-economic outcomes but cannot provide a distinct evidential link to CAN, even where that was the factor leading to out-of-home care. Moreover, the data was first collected more than 45 years ago so its applicability to contemporary society and child welfare systems may be limited. 	<p>The 1970 British birth cohort was followed up at 5 (N = 13135), 10 (N = 14875), 16 (N = 11622), and 30 years (N = 11261).</p>

<p>Power et al. (2002). Childhood and adulthood risk factors for socio-economic differentials in psychological distress: evidence from the 1958 British birth cohort. <i>Social Science & Medicine</i>, 55(11), 1989-2004. http://www.sciencedirect.com/science/article/pii/S0277953601003252?via%3Dihub</p>	<p>Looked after children</p>	<p>Objectives: -To identify potential childhood and adulthood risk factors that influence psychological status.</p> <p>Methods: -Using NCDS58, a range of measures were assessed longitudinally between 7-33 years. This included qualifications on leaving school, job strain and insecurity, early child-bearing, financial hardship, and whether the participant had been in care by age 16 (local authority or voluntary care).</p> <p>Findings: -In terms of being in care, institutional care influenced psychological status in adulthood for men but not women.</p>	<p>1958 British National Child Development Study (NCDS85), age 7, 16, 22, 33</p>
<p>Jackson, S. & Ajayi, S. (2007) Foster care and higher education. <i>Adoption & Fostering</i>, 31, 62–72. http://docs.scie-socialcareonline.org.uk/fulltext/73912.pdf</p>	<p>Care leaver</p>	<p>Objective: - To explore the educational attainment of young people who had been in care, particularly in higher education</p> <p>Methods: -The criteria for inclusion were that the young person had been looked after for a year or more, was in care at the age of 16 and had been offered a place to study at degree level in a higher education institution. Three successive cohorts of university or college entrants were tracked through their university careers, the first group up to the first year after graduation, the second for two years and the third group for their first year only. (First cohort N=46, second cohort N=37, third cohort N=46).</p> <p>Findings: -6% of carers go on to University, compared with 39% of the general population in 2007</p> <p>-Despite their success in obtaining university places, many of the students struggled to</p>	<p>Study of young people who had been in care at the age of 16 and had been offered a place to study at degree level in a higher education institution.</p>

		cope with the academic demands of their chosen courses. They tended to attribute this to the frequent interruptions to their education caused by the volatility of their birth families, changes of placement and periods out of school.	
Johnson, S. et al. (2009). Academic attainment and special educational needs in extremely preterm children at 11 years of age: the EPICure study. <i>British Medical Journal</i> , 94(4), 283-9. http://fn.bmj.com/content/94/4/F283.short	Children with SEND	<p>Objective: -To assess academic attainment and special educational needs in extremely preterm children in middle childhood.</p> <p>Methods: -The sample comprised of extremely preterm (≤ 25 weeks) survivors born in the UK and Ireland in 1995, re-assessed at age 11.</p> <p>Findings: -Extremely preterm children had significantly lower scores for cognitive ability, reading, mathematics. 29 (13%) of them attended special school. In mainstream schools, 105 (57%) extremely preterm children had SEN (OR 10; 6 to 18) and 103 (55%) required SEN resource provision (OR 10; 6 to 18). - Extremely preterm survivors remain at high risk for learning impairments and poor academic attainment in middle childhood.</p>	EPICure Study at birth and 11 years
Fauth, R. C., Platt, L., & Parsons, S. (2017).The development of behaviour problems among disabled and non-disabled children in England. <i>Journal of Applied Developmental Psychology</i> , 52, 48-58. https://www.sciencedirect.com/scie	Children with SEND	<p>Objective: -This study identifies the incidence and development of children with disability developing problem behaviors (i.e., conduct, peer, hyperactivity, and emotional problems) during the early years. It also examined the developmental trajectories of children with disabilities and their peers from early to middle childhood.</p> <p>Methods: -Using the Millennium Cohort Study and a measure of disability anchored in the UK legal definition, we estimate growth curve models tracking behavior problems from ages 3 to 7.</p> <p>Findings: -Disabled children exhibit more behavior problems than non-disabled children at age 3, and their trajectories from ages 3 to 7 do not converge. Rather, children with disabilities, particularly boys, show increasing gaps in peer problems, hyperactivity, and emotional problems over time. We find little evidence that parenting moderates these associations.</p>	MCS age 3-7 years

nce/article/pii/S0193397317301740			
Mars, B. et al. (2014). Clinical and social outcomes of adolescent self-harm: population based birth cohort study. British Medical Journal, 349, 1-13. http://www.bmj.com/content/349/bmj.g5954	Children who have mental health difficulties	<p>Objective: -To investigate the mental health, substance use, educational, and occupational outcomes of adolescents who self-harm in a general population sample, and to examine whether these outcomes differ longitudinally according to self-reported suicidal intent.</p> <p>Methods: -Data on lifetime history of self-harm with and without suicidal intent were available for 4799 respondents who completed a detailed self-harm questionnaire at age 16 years from the ALSPAC.</p> <p>Findings: -Suicidal self-harm, but not self-harm without suicidal intent, in adolescence was associated with poorer educational and employment outcomes in early adulthood.</p>	Avon Longitudinal Study of Parents and Children (ALSPAC), a UK birth cohort of children born in 1991-92. Age 16, 18, 19 and 21 years
Green, H. et al. (2005). Mental Health of Children and Young People in Great Britain, 2004. NHS Digital: 1-4039-8637-1. http://digital.nhs.uk/catalogue/PUB06116	Children who have mental health difficulties	<p>Objective: - To examine the prevalence of mental disorders among 5 to 16 year olds in 2004.</p> <p>Method: -The sample was drawn from the Child Benefit records held by the Department for Work and Pensions' Child Benefit Centre (CBC). The sample design consisted of a sample of postal sectors and within these, a sample of addresses. The postal sectors were then selected by ONS (who conducted the study). The sample consisted of 12,294 children.</p> <p>Findings: -In 2004, 8% of 5 to 10 year olds and 12% of 11 to 16 year olds had a clinically diagnosed mental health condition. Up to 25% of children show signs of mental health problems with more than half continuing through into adulthood.</p>	The survey of the mental health of children and young people living in private households in Great Britain 2004, age 5-16 years.
Goldman-Mellor et al., (2016). Committed to work but vulnerable: Self-perceptions and mental health in	Children with mental health difficulties / NEET status later life (NEET as outcome)	<p>Objective: -To examine the relationship between childhood mental health, mental health and substance-use disorders at age 18, and work-related self-perceptions.</p> <p>Methods: -E-Risk longitudinal study of 2232 registered twins in England and Wales 1994-95. Four types of work-related self-perceptions were measured: commitment to work, job-search effort, professional/technical skills, "soft" skills (e.g., teamwork, decision-making, and</p>	Environmental Risk (E-Risk) longitudinal study, age 5, 7, 10, 12 and 18

<p>NEET 18 year olds from a contemporary British cohort. <i>Journal of Child Psychological Psychiatry</i>, 57(2), 196-203. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4789764/</p>		<p>communication), and optimism about getting ahead. In addition, childhood mental health and mental health at 18 was examined.</p> <p>Findings:</p> <ul style="list-style-type: none"> -At age 18, 11.6% of participants were NEET. Nearly 60% of NEET (vs. 35% of non-NEET) youths had already experienced ≥ 1 mental health problem in childhood/adolescence (depression, ADHD, CD). Associations of NEET status with concurrent mental health problems (at age 18) were independent of pre-existing mental health vulnerability in childhood. -Pre-existing mental health conditions entirely explained mental health at 18, independently of NEET status. NEET is a correlate of poor mental health at 18 and is unlikely to be caused directly by poor mental health at early adolescence. 	
<p>Taggart, B. et al (2015). Effective pre-school, primary and secondary education project (EPPSE 3-16+): How pre-school influences children and young people's attainment and developmental outcomes over time. Department for Education. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/455670/</p>	<p>Children in poverty</p>	<p>Objective:</p> <ul style="list-style-type: none"> -To explore the impact of early years education on attainment and developmental outcomes over time <p>Methods:</p> <ul style="list-style-type: none"> -The sample was from the Effective Pre-school, Primary and Secondary Education Project of 3,000 children followed between ages 3 and 16, in 6 LAs in England. <p>Findings:</p> <ul style="list-style-type: none"> -Pre-school influenced outcomes throughout primary school especially if it was high quality. At age 11, high quality pre-school was especially important for boys, pupils with SEN and those from disadvantaged backgrounds. High quality pre-school enhanced maths outcomes for disadvantaged pupils and for those of low qualified parents. -Related to vulnerability, parental qualifications predicted later life (age 16) cognition in maths to the greatest extent (0.74) followed by SES (0.66). By contrast, poverty measured through FSM (0.37) and health conditions in early life were had a weaker association with cognition. 	<p>The Effective Pre-school, Primary and Secondary Education Project (EPPSE), a longitudinal study (1997 – 2014). Age 3-16.</p>

RB455 Effective pre-school primary and secondary education project.pdf			
<p>Flouri, E., & Buchanan, A. (2004). Childhood families of homeless and poor adults in Britain: A prospective study. <i>Journal of Economic Psychology</i>, 25(1), 1-14.</p> <p>https://www.sciencedirect.com/science/article/pii/S0167487002001691</p>	<p>Children in poverty Children in homeless or in insecure/unstable housing</p>	<p>Objective: - To investigate the role of early fathers and mothers involvement in social and economic disadvantage (experience of homelessness, state benefits receipt, and subsidized housing) in adult life.</p> <p>Methods: -The sample was from the NCDS58 age 7, 23 and 33 years.</p> <p>Findings: -Non-intact family, domestic tension, emotional problems at age 7 and involvement with the police at age 16 were not associated with the risk of ever being homeless between 23 and 33, state benefits receipts at 33, living in subsidized housing for men or women. -The single exception was the significantly lower risk in males for the risk of living in subsidised housing at age 33 for those from intact families.</p>	<p>NCDS58 age 7, 23 and 33</p>
<p>Sloggett, A., & Joshi, H. (1998). Deprivation indicators are predictors of the UK ONS Longitudinal Study. <i>Journal of Epidemiology & Community</i></p>	<p>Children in poor, sick or deprived places</p>	<p>Objective: -To investigate the association between social deprivation in electoral wards and various life events. Life events include mortality, self-reported long term illness, and for women: still-birth, underweight birth, teenage motherhood, and sole registered birth.</p> <p>Method: -The study comprised of a random sample of more than 300,000 people enumerated at the 1981 census, and aged 10 to 64 in 1981, and were followed up in 1992.</p> <p>Findings: -All outcomes, except risk of stillbirth, show a clear, significant, and approximately linear association with social deprivation of ward of residence in 1981.</p>	<p>1981 and 1992 census</p>

<p>Health, 52(4), 228-233. http://jech.bmj.com/content/52/4/228.short</p>		<p>-Associations are much stronger for outcomes where a greater "social" component can be constructed (teenage birth, sole registered birth) than for outcomes that are probably more physiologically determined (mortality, stillbirth, low birth weight). When adjustment is made for personal disadvantage, the simple associations with local area deprivation are all attenuated, especially for those living in the more deprived areas. -These associations seem to be largely because residence in more deprived areas is associated with personal disadvantage, which is more damaging to life chances than area of residence.</p>	
<p>Newbury, J. et al. (2016). Why Are Children in Urban Neighborhoods at Increased Risk for Psychotic Symptoms? Findings From a UK Longitudinal Cohort Study. <i>Schizophrenia Bulletin</i>, 42(6), 1372-1383. https://academic.oup.com/schizophreniabulletin/article/42/6/1372/2399413</p>	<p>Children in poor, sick or deprived places</p>	<p>Objective: -To investigate whether specific features of urban neighbourhoods increase children’s risk for psychotic symptoms, given that an urban upbringing is associated with a 2-fold adulthood psychosis risk. Method: - The E-Risk longitudinal study sample comprised of 2232 registered twins in England and Wales 1994-95. Neighborhood-level characteristics were assessed for each family via a geodemographic discriminator indexing neighborhood-level deprivation, postal surveys, and in-home interviews with the children’s mothers. Children were interviewed about psychotic symptoms at age 12. Findings: -Urban residency at age 5 (OR = 1.80, 95% CI = 1.16–2.77) and age-12 (OR = 1.76, 95% CI = 1.15–2.69) were both significantly associated with childhood psychotic symptoms, but not with age 12 anxiety, depression, or antisocial behavior. This association was not explained by family SES, family psychiatric history, or maternal psychosis. -Low social cohesion and crime victimization in the neighborhood explained nearly a quarter of the association between urbanicity and childhood psychotic symptoms after considering family-level confounders.</p>	<p>Environmental Risk (E-Risk) Longitudinal Twin Study , age 5 and 12</p>
<p>Liao, T. (2003). Mental health, teenage motherhood, and age at first birth among British women in the</p>	<p>Teenage parents</p>	<p>Objective: -To assess the medium to long-term mental health effects of teenage motherhood. Methods: -Using the BHPS, the study examined four groups of women: teenage mothers, teenage non-mothers, and mothers of two older age groups. Analysis was performed on the first 10 waves the British Household Panel Survey (1991-2000).</p>	<p>British Household Panel Survey (1991-2000) at time of pregnancy and 5 years postpartum</p>

<p>1990s.ISER working paper series 2003-33. https://www.econstor.eu/handle/10419/92020</p>		<p>Findings:</p> <ul style="list-style-type: none"> - Teenage mothers tend to have a significantly higher level of depression in the medium term postpartum -Older mothers tend to have a smaller likelihood of depression than younger mothers, but the effects are curvilinear, and that motherhood may not enhance a mother’s well-being until the child is at least no longer a toddler. 	
<p>Flouri, E. & Buchanan, A. (2003). The role of father involvement in children’s later mental health. <i>Journal of Adolescence</i>, 26, 63–78. http://www.sciencedirect.com/science/article/pii/S0140197102001161</p>	<p>Non intact families</p>	<p>Objective:</p> <ul style="list-style-type: none"> -To examine if father involvement protects against emotional and behavioural problems in adolescence and psychological distress in adult life. (Note: study looked at father involvement rather than father absence) <p>Methods:</p> <ul style="list-style-type: none"> -Data from National Child Development Study (NCDS) to explore father involvement at age 7 and emotional and behavioural problems at age 16, and between father involvement at age 16 and psychological distress at age 33. (N=8441). <p>Findings:</p> <ul style="list-style-type: none"> -Father involvement at age 7 protected against psychological maladjustment in adolescents from non-intact families, and father involvement at age 16 protected against adult psychological distress in women. -Domestic tension in parental family at age 7 was not related to psychological distress at age 33. Domestic tension in parental family at age 16 and current manual socio-economic status were positively related to psychological distress at age 33. 	<p>National Child Development Study (NCDS), age 7, 16 and 33</p>
<p>Goodman, A., Joyce, R., Smith, J. P. (2011). The long shadow cast by childhood physical and mental problems on adult life. <i>Proceedings of the National Academy of</i></p>	<p>“Troubled” families Children whose parents use substances problematically</p>	<p>Objective:</p> <ul style="list-style-type: none"> -To compare long-term adult socioeconomic status impact from having experienced psychological and physical health problems in childhood. <p>Methods:</p> <ul style="list-style-type: none"> -The sample was from the NCDS 58. Child measures of psych and physical measures at 7 and 14 and relative adult measures of the same outcomes. Family difficulties during childhood were included in the analysis. These measures included a range of difficulties related to housing; financial; physical illness or disability; death of child’s parent and divorce. 	<p>British National Child Development Study, age 7, 14 and 50.</p>

<p><i>Sciences of the United States of America</i>, 108(15), 6032-6037. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3076863/</p>		<p>Findings:</p> <ul style="list-style-type: none"> -There was a large and statistically significant impact of childhood psychological problems on family income that reach a peak of 28% lower net family income by age 50. -Contributing to this loss are reduced conscientiousness, lower probabilities of being married, being at work, and the stability of both behaviors during the adult years. The experience of adult psychological problems is a major pathway through which these effects occur. - Childhood psychological health predicts late life income and economic success than does childhood physical health. 	
<p>Viner, R. M., & Taylor B. (2007). Adult outcomes of binge drinking in adolescence: findings from a UK national birth cohort. <i>Journal of Epidemiology & Community Health</i>, 61, 902-907. http://jech.bmj.com/content/61/10/902.full</p>	<p>Children whose parents use substances problematically</p>	<p>Objective:</p> <ul style="list-style-type: none"> -To determine the effects of binge drinking in adolescence on health in adulthood <p>Methods:</p> <ul style="list-style-type: none"> -The sample was from the Longitudinal birth cohort: 1970 British Birth Cohort Study surveys at 16 years (1986) and 30 years (2000). A total of 11 622 subjects participated at age 16 years and 11 261 subjects participated at age 30 years. <p>Findings:</p> <ul style="list-style-type: none"> -Adolescent binge drinking predicated an increased risk of adult alcohol dependence, illicit drug use, psychiatric morbidity amongst other health related outcomes. -These associations appear to be distinct from those associated with habitual frequent alcohol use. 	<p>1970 British Birth Cohort Study surveys at 16 years (1986) and 30 years (2000).</p>
<p>Murray, J. & Farrington, D. P. (2005). Parental imprisonment: Long-lasting effects on boys' anti-social behaviour and</p>	<p>Children of prisoners</p>	<p>Objective:</p> <ul style="list-style-type: none"> -To examine the development of offending and antisocial behaviour in a group of males over time. <p>Methods:</p> <ul style="list-style-type: none"> -The study compared boys separated by parental imprisonment during their first 10 years of life with four control groups: boys who did not experience separation, boys separated by hospital or death, boys separated for other reasons (usually disharmony), and boys whose parents were only imprisoned before their birth. Individual, parenting, 	<p>Cambridge Study in Delinquent Development (CSDD), age 8-11, 14 and 40</p>

<p>delinquency through the life course. The Journal of Child Psychology and Psychiatry, 46(12), 1269-1278. http://onlinelibrary.wiley.com/doi/10.1111/j.1469-7610.2005.01433.x/full#b9</p>		<p>and family risk factors for delinquency were measured when boys were aged 8–11. Eleven antisocial and delinquent outcomes were assessed between ages 14 and 40. Findings: -Separation because of parental imprisonment predicted all antisocial–delinquent outcomes compared to the four control conditions. -Separation caused by parental imprisonment was also strongly associated with many other childhood risk factors for delinquency. After controlling for parental convictions and other childhood risk factors, separation caused by parental imprisonment still predicted several antisocial–delinquent outcomes, even up to age 32, compared with other types of separation.</p>	
<p>Murray, J. & Farrington, D. P. (2008). Parental imprisonment: Long lasting effects on boys’ internalising problems through the life course. <i>The Journal of Child Psychology and Psychiatry</i>, 46(12), 1269-1278. https://doi.org/10.1111/j.1469-7610.2005.01433.x</p>	<p>Children of prisoners</p>	<p>Objective: -To investigate the effects of parental imprisonment on boys’ internalising problems throughout their adolescence and adulthood. Methods: -Using prospective longitudinal data from the Cambridge Study in Delinquent Development, we compared boys separated because of parental imprisonment during their first 10 years of life with four control groups: boys who did not experience separation, boys separated because of hospitalization or death, boys separated for other reasons (usually parental disharmony), and boys whose parents were only imprisoned before the boys’ births. -Individual, parenting, and family risk factors for internalizing problems were measured when boys were ages 8–11 years. Findings: -Separation because of parental imprisonment predicted boys’ internalizing problems from age 14 to 48. -Separation because of parental imprisonment also predicted the co-occurrence of internalizing and antisocial problems.</p>	<p>Cambridge Study in Delinquent Development (CSDD), 8-11 years, 14 years, 48 years</p>
<p>Kim-Cohen, J., Moffitt, T. E., Taylor, A. (2005).</p>	<p>Children with mental health</p>	<p>Objective: -To study the association between maternal depression during the children’s first 5 years of life and children’s anti-social behaviour (ASB) at age 7 years</p>	<p>E-risk study, age 5 and 7</p>

<p>Maternal depression and children's anti-social behaviour: Nature and nurture effects. <i>Arch Gen Psychiatr</i>, 62(2), 173-181. https://jamanetwork.com/journals/jamapsychiatry/fullarticle/208278</p>	<p>in the household</p>	<p>Methods: -Data was used from the E-Risk Study, a representative British cohort of 1116 twin pairs assessed at 5 and 7 years of age.</p> <p>Findings: -Maternal depression predicted child ASB, and children exposed to their mother's depression between ages 5 and 7 years showed a subsequent increase in ASB by age 7 years.</p> <p>- Parental history of Anti-social personality disorder (ASPD) symptoms accounted for approximately one third of the observed association between maternal depression and children's ASB, but maternal depression continued to significantly predict children's ASB.</p> <p>- The combination of depression and ASPD symptoms in mothers posed the greatest risk for children's ASB.</p>	
<p>Bynner, J. and Parsons, S., (2002). Social Exclusion and the Transition from School to Work: The Case of Young People Not in Education, Employment, or Training (NEET), <i>Journal of Vocational Behavior</i>, 60(2), 289-309. https://www.sciencedirect.com/science/article/abs/pii</p>	<p>NEET/Pre-NEET</p>	<p>Objective: - To assess the penalty in identity capital terms attached to NEET status in the teens, over and above the penalty attached to lack of qualifications and other disadvantaging factors in young people's early lives.</p> <p>Method: - Data source: Longitudinal data from the 1970 British Birth Cohort Study (BCS70) - Antecedents to NEET: Physical characteristics (low birth weight), family circumstances at age 10 (including inner city neighborhood and receipt of state benefits and free school meals), cultural capital of the home (manual social class and parents showed little or no interest in cohort member's education), educational achievement (combined reading and math score at age 10 in the lowest quartile range, few hobbies of any kind at age 10, and no qualifications at age 16) - Outcomes: the variables taken to signify identity capital comprise occupational and marital status, self-assessed physical health, mental health. - Sample size: n=930, 470 boys and 460 girls - 3 stage analytical approach: (1) operationalization of NEET based on the BCS70 21-</p>	<p>1970 British Birth Cohort Study surveyed at age 21</p>

[/S0001879101918688](#)

year occupational history data. Analysis was restricted to those who had left school at the minimum age of 16 and were not in full-time education in January 1987. (2) Used a logistic regression model to assess separately for young men and women the variables that predicted the status of NEET. (3) used a logistic regression model to assess separately for young men and young women the effect of NEET status on the various outcomes.

- To maintain a comparable sample size of 930 cases across all analyses missing values were imputed.

Relevant findings:

- The results support the hypothesis that NEET status has a negative effect on the adult outcomes associated with identity capital formation, particularly for young women.

- For young men the effects of NEET status in the late teens could be seen mainly through poor labor market performance, especially through the continuation of NEET status itself at age. These effects reduced slightly when controls for qualifications were included. Young men who had experienced NEET were over three times as likely as those who had avoided NEET to not be in education, employment, or training at age 21, after taking account of qualifications and early life experiences.

- Other outcomes such as depression and fatalistic attitudes, dissatisfaction with life, lack of a sense of control, and experiencing problems in life all had significant odds ratios for young men in the model without controls. When controls were applied these odds ratios reduced in size, failing to maintain statistical significance in the model with maximum controls.

- For young women in the study, these outcomes were different. NEET's effects were not only sustained in relation to labor market outcomes, but also extending to early marriage or cohabiting, feelings of dissatisfaction with life, lack of a sense of control, and experiencing problems in life. NEET maintained statistically significant odds ratios for all of these outcomes even in the model with maximum controls.

Fisher, H. et al. (2012). Bullying

Children who have

Objective:

-To test whether frequent bullying victimisation in childhood increases the likelihood of

The Environmental Risk (E-Risk) longitudinal

<p>victimisation and risk of self-harm in early adolescence: longitudinal cohort study. <i>British Medical Journal</i>, 344, e2683. https://www.bmj.com/content/344/bmj.e2683</p>	<p>experienced childhood trauma/abuse</p>	<p>self-harming in early adolescence and to identify which bullied children are at highest risk of self-harm. Method: -The E-Risk longitudinal study sample comprised of 2232 registered twins in England and Wales 1994-95; bullying reports before age 10; outcome is self-harm at age 12. Findings: -Children who experienced childhood trauma/abuse via frequent bullying at or before aged 10 had a greater risk of self-harming at age 12. The association held for mother reported and child reported bullying and for both sexes. -Previous physical maltreatment by an adult, family history of suicide and child mental health difficulties (ADHD, anxiety, conduct disorder, depression, and psychotic symptoms) increased the risk for self-harm in bullied children. -Note that E-Risk is a twin sample, which could have a different risk profile to singleton samples. However, the prevalence of childhood maltreatment in the E risk sample matches recent UK general population estimates (Radford et al, 2013).</p>	<p>study, assessed at age 5,7, 10 and 12 years.</p>
<p>Newbury, J. B., et al. (2018). Measuring childhood maltreatment to predict early-adult psychopathology: Comparison of prospective informant-reports and retrospective self-reports. <i>Journal of Psychiatric Research</i> 96, 57-64. http://www.journalofpsychiatricresearch</p>	<p>Children who have experienced childhood trauma/abuse</p>	<p>Objective: - To assess agreement between prospective informant-reports and retrospective self-reports of childhood maltreatment, and the comparative utility of both reports for predicting psychiatric problems at age 18. Method: - The E-Risk longitudinal study comprised of 2232 registered twins in England and Wales 1994-95. Prospective reports of maltreatment were recorded at each wave. At 18 years, self-reported experiences of physical, sexual and emotional abuse, and physical and emotional neglect for the period before they were 12 years old was assessed. Early adult outcomes that were measured included depression, anxiety, self-harming/suicide, cannabis/alcohol abuse and conduct disorder at 18. Findings: -Maltreatment during childhood was significantly more likely to present a range of psychiatric problems in early adulthood including depression, anxiety, self-injurious behavior, alcohol/cannabis dependence, and conduct disorder. These associations were apparent regardless of how maltreatment was measured.</p>	<p>Environmental Risk (E-Risk) Longitudinal Twin Study, Age 5 and assessed at each wave until age 18.</p>

arch.com/article/S0022-3956(17)30797-5/pdf		<p>-Note that E-Risk is a twin sample, which could have a different risk profile to singleton samples. However, the prevalence of childhood maltreatment in the E risk sample matches recent UK general population estimates (Radford et al, 2013).</p>	
<p>Lereya, S. T., et al. (2015). Adult mental health consequences of peer bullying and maltreatment in childhood. <i>Lancet Psychiatry</i>, 2, 524-31. http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366(15)00165-0.pdf</p>	<p>Children who have experienced childhood trauma/abuse</p>	<p>Objectives: -The adult mental health consequences of childhood maltreatment by adults are well documented. Maltreatment by peers (ie, bullying) has also been shown to have long-term adverse effects. We aimed to determine whether these effects are just due to being exposed to both maltreatment and bullying or whether bullying has a unique effect.</p> <p>Methods: -Using ALSPAC, 4026 children were studied from 8 weeks to 16 years. Maltreatment was assessed as physical, emotional, or sexual abuse, or severe maladaptive parenting (or both) between ages 8 weeks and 8-6 years, as reported by the mother in questionnaires, and being bullied was assessed with child reports at 8, 10, and 13 years using the previously validated Bullying and Friendship Interview Schedule.</p> <p>Findings: - Those who were only being maltreated were not at increased risk for any mental health problem compared with children who were not maltreated or bullied. By contrast, those who were both maltreated and bullied were at increased risk for overall mental health problems, anxiety, and depression and self-harm compared with typically developing peers.</p>	<p>Avon Longitudinal Study of Parents and Children in the UK, 8 weeks, 8-10 years, 13 years, and 16 years</p>
<p>Stewart-Brown, S. L., Fletcher, L., & Wadsworth, M. E. J. (2005). Parent–child relationships and health problems in adulthood in three UK national birth cohort studies. <i>European Journal</i></p>	<p>Children with childhood experiences of trauma/abuse</p>	<p>Objective: -To assess if parent–child relationships that are perceived as poor in adolescence are associated with subsequent self-reported ill health in adulthood.</p> <p>Method: -The study used three UK birth cohorts (1946, 1958, and 1970) at ages 16-43 years.</p> <p>Findings: -Reports of abuse and neglect (1946 cohort), poor quality relationship with mother and father (1958 cohort), and a range of negative relationship descriptors (1970 cohort) predicted reports of three or more illnesses or health problems in adulthood. -Poor quality parent-child relationships could be a risk factor for poor health outcomes in adulthood</p>	<p>UK birth cohort studies: 1946, 1958 and 1970 cohorts</p>

<p>of Public Health, 15(6), 640–646. https://academic.oup.com/eurpub/article/15/6/640/440103</p>			
<p>Takizawa, R., Maughan, B., & Arseneault, L. (2014). Adult Health Outcomes of Childhood Bullying Victimization: Evidence From a Five-Decade Longitudinal British Birth Cohort. <i>American Journal of Psychiatry</i>, 171(7), 777-84. https://www.ncbi.nlm.nih.gov/pubmed/24743774</p>	<p>Children who have experienced childhood trauma/abuse</p>	<p>Objectives: -To examine the midlife outcomes of childhood bullying victimisation.</p> <p>Methods: -The sample was from the NCDS58, measures of interest included bullying at 7 and 11 and suicidality and depression, alcohol dependence at 45 years, psychological distress at 23 and 50 years and general health at both ages.</p> <p>Findings: -Participants who were bullied in childhood had increased levels of psychological distress at ages 23 and 50. The effects were similar to those of being placed in public or substitute care and an index of multiple childhood adversities.</p> <p>Conclusion: Children in public care were not a primary focus but were shown to be associated with poorer later life outcomes than their non-cared for counterparts.</p>	<p>British National Child Development Study (NCDS58), age 7, 11, 23, 24 and 50.</p>
<p>Arseneault, L., et al. (2011). Childhood Trauma and Children's Emerging Psychotic Symptoms: A Genetically</p>	<p>Children who have experienced childhood trauma/abuse</p>	<p>Objective: -To estimate the risk of developing psychotic symptoms associated with maltreatment, bullying, and accidents in a nationally representative U.K. cohort of young twins</p> <p>Method: -The E-Risk longitudinal study sample comprised of 2232 registered twins in England and Wales 1994-95. Mothers were interviewed during home visits when children were ages 5, 7, 10, and 12 on whether the children had experienced maltreatment by an adult, bullying by peers, or involvement in an accident. At age 12, children were asked about</p>	<p>Environmental Risk Longitudinal Twin Study at age 5, 7, 10 and 12</p>

<p>Sensitive Longitudinal Cohort Study. <i>The American Journal of Psychiatry</i>, 168(1), 65-72. http://psychiatryonline.org/doi/abs/10.1176/appi.ajp.2010.10040567</p>		<p>bullying experiences and psychotic symptoms. Children's reports of psychotic symptoms were verified by clinicians. Findings: -Children who experienced maltreatment by an adult or bullying by peers were more likely to report psychotic symptoms at age 12. -The risk associated with childhood trauma remained significant controlling for children's gender, socioeconomic deprivation, and IQ; for children's early symptoms of internalizing or externalizing problems; and for children's genetic liability to developing psychosis.</p>	
<p>Roberts, R., O'Connor, T., Dunn, J., & Golding, J. (2004). The effects of child sexual abuse in later family life; mental health, parenting and adjustment of offspring. <i>Child Abuse & Neglect</i> 28, 525–545. https://www.ncbi.nlm.nih.gov/pubmed/15159068</p>	<p>Children who have experienced childhood trauma/abuse</p>	<p>Objective: -To investigate links between child sexual abuse (occurring before 13 years) and later mental health, family organization, parenting behaviours, and adjustment in offspring. Method: -The study used a subsample of ALSPAC. Sample size of 8292 families met inclusion criteria for identifiable family type and completed self-report data on prior sexual assault. Findings: -After adjustment for other childhood adversity, prior child sexual abuse was associated with outcomes in adulthood, including current membership of a non-traditional family type (single mother and stepfather) poorer psychological well-being, teenage pregnancy, parenting behaviours, and adjustment problems in the victim's later offspring. -The relationship of child sexual abuse with aspects of the parent-child relationship in later life were mediated in part by mother's mental health. -Child sexual abuse has long-term repercussions for adult mental health, parenting relationships, and child adjustment in the succeeding generation</p>	<p>ALSPAC, 21 months up until 17 years</p>
<p>Sidebotham, P., & Golding, J. (2001). Child maltreatment in the "Children of the nineties": A</p>	<p>Children who have experienced childhood abuse/trauma</p>	<p>Objective: -The study aimed to identify and validate factors within the parental background affecting risk of child maltreatment. Methods: -The study uses the Avon Longitudinal Study of Parents and Children ("Children of the</p>	<p>Avon Longitudinal Study of Parents and Children ("Children of the Nineties") Age 0-6.</p>

<p>longitudinal study of parental risk factors. <i>Child Abuse & Neglect</i>, 25(9), 1177-1200 https://www.sciencedirect.com/science/article/abs/pii/S0145213401002617</p>		<p>Nineties”), a cohort of children born in Avon in 1991 through 1992. Data on the childhood and psychiatric histories of the parents, along with other data on the social and family environments, have been collected through postal questionnaires from early antenatal booking onwards.</p> <p>Findings:</p> <p>-Using logistic regression analysis, significant risk factors within the mothers’ backgrounds were age < 20; lower educational achievement; history of sexual abuse; child guidance or psychiatry; absence of her father during childhood; and a previous history of psychiatric illness.</p> <p>-Significant factors in the fathers’ backgrounds were age < 20; lower educational achievement; having been in care during childhood; and a history of psychiatric illness.</p>	
<p>Flouri, E., Tzavidis, N., Kallis, C. (2010). Adverse life events, area socioeconomic disadvantage, and psychopathology and resilience in young children: the importance of risk factors’ accumulation and protective factors’ specificity. <i>European Child & Adolescent Psychiatry</i> (19), 535–546. https://link.springer.com/content/pdf/10.1007%2Fs00</p>	<p>Children who have experienced childhood abuse/trauma (Adverse life event)</p>	<p>Objective:</p> <p>-To investigate the relationship between protective factors and preschool children’s emotional/behavioral adjustment in the face of contextual risk</p> <p>Methods:</p> <p>- Data were from the first two sweeps of the UK’s Millennium Cohort Study was used in this study. The final sample comprised of 4,748 three year olds children. Sweep 1 took place when the children were aged 9 months, and Sweep 2 took place when the children were around 3 years.</p> <p>-‘Distal family risks’ is defined as adverse life events between birth and Sweep 1, and ‘proximal family risks’ is operationalised as adverse events that occurred between Sweep 1 and Sweep 2. Area risk describes area socioeconomic disadvantage.</p> <p>Findings:</p> <p>-At baseline, proximal family risk, distal family risk and area risk were all associated with broad psychopathology</p> <p>-The area risk/broad psychopathology association remained significant even after family risk was controlled but not after family level socioeconomic disadvantage was controlled.</p> <p>-Non-verbal ability moderated the effect of proximal family risk on conduct and emotional problems, and developmental milestones moderated the effect of proximal family risk on conduct problems.</p>	<p>Millennium Cohort Study, Sweep 1 and 2 (between birth to 3 years).</p>

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<p>Jones, G. T., Power, C., & Macfarlane, G. J. (2009). Adverse events in childhood and chronic widespread pain in adult life: Results from the 1958 British Birth Cohort Study. <i>Pain Volume 143</i>(1–2), 92-96.</p> <p>https://www.sciencedirect.com/science/article/pii/S0304395909000955</p>	<p>Children who have experienced childhood abuse/trauma (Adverse life event)</p>	<p>Objective: -The study examines the relationship between childhood physical and psychological adversity and chronic widespread pain (CWP) in adulthood.</p> <p>Method: - Data from the 1958 British Birth Cohort Study was used -At 7 years data were collected, by parental report, on physically traumatic events (hospitalisation following a road traffic accident, or for surgery); and factors indicating poor social and psychological environment (periods in local authority care, death of a parent; or parental divorce, alcoholism, or financial hardship). -CWP was assessed at 45 years using self-completion questionnaires.</p> <p>Findings: -There was no association between childhood surgery and CWP in adulthood (relative risk: 1.0; 95%CI: 0.9–1.1).</p> <p>-However, children who had been hospitalised following a road traffic accident experienced a significant increase in the risk of future CWP (1.5; 1.05–2.1).</p> <p>- Children who had resided in institutional care also experienced an increase in the risk of CWP (1.7; 1.3–2.4) as did those who experienced maternal death (2.0; 1.08–3.7) and familial financial hardship (1.6; 1.3–1.9). Further these associations were not explained by adult psychological distress or social class.</p>	<p>1958 British Birth Cohort Study</p>
<p>Shalev, I., et al. (2013). Exposure to violence during childhood is associate with telomere erosion from 5 to 10 years of age: A longitudinal study. <i>Molecular</i></p>	<p>Domestic violence in the household Children who have experienced childhood abuse/trauma</p>	<p>Objective: -To examine the longitudinal effect of exposure to violence in the household (maternal domestic violence, frequent bullying victimization and physical maltreatment by an adult) on children’s telomere erosion, a biomarker of stress linked to cellular aging, disease and mortality.</p> <p>Methods: -236 children (49% females; 42% with one or more violence exposures) recruited from the Environmental-Risk Longitudinal Twin Study, a nationally representative 1994–1995 birth cohort. Children’s telomere length was measured in baseline (age 5) and followed up at age 10.</p>	<p>E-Risk Longitudinal Twin Study, 1994-1995 birth cohort at age 5 and 10.</p>

<p><i>Psychiatry</i>, 18, 579-581. https://www.nature.com/articles/mp201232</p>		<p>Findings:</p> <ul style="list-style-type: none"> -Compared with their counterparts, children who experienced two or more kinds of violence exposure showed significantly more telomere erosion between age-5 baseline and age-10 follow-up measurements, even after adjusting for sex, socioeconomic status and body mass index. - Exposure to violence within the household is linked to telomere erosion. The effects of cumulative childhood stress caused by exposure to domestic violence are observable at a young age and have the potential to impact life-long health. 	
	<p>Children of migrants; children from minority ethnic background</p>	<p>These groups have not been documented here due to the high volume research evidence which has focused on the health, education and employment outcomes of these young people.</p> <p>For example, a range of administrative datasets (National Pupil Database), official statistics (ONS Longitudinal Study), birth cohorts (particularly the Millennium cohort), panel surveys (Understanding Society) and research council funded longitudinal studies (MRC DASH study) or funded by City Health Authorities (RELACHS) have specific focus on these groups, either oversampling these group at the design stage or being regionally located in areas of high ethnic density.</p>	



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