

Depression in children and young people: family risk factors and underlying mechanisms

Dr Iryna Culpin

iryna.culpin@bristol.ac.uk

Bristol Medical School, University of Bristol

Department of Psychology, Manchester Metropolitan University

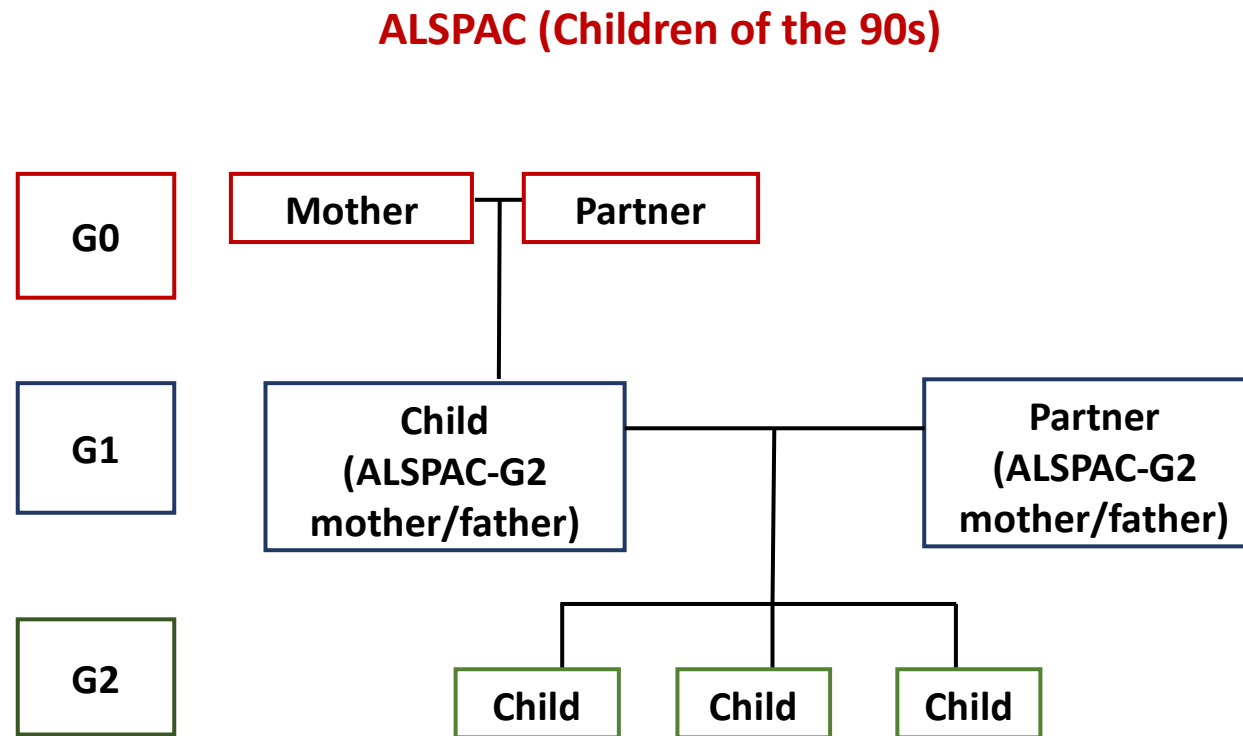


Research overview

- Intergenerational transmission of mental health risks in families
- Emphasis on mechanisms and multiple levels of analyses rather than individual associations
- Specific interest in the role of fathers, their parenting and involvement



Avon Longitudinal Study of Parents and Children



Depression in children and young people

- Early to middle adolescence is a critical period of development where mental health issues are particularly liable to emerge or escalate.
- Depression in childhood and adolescence is a strong risk factor for a number of adverse life outcomes, including poorer mental health, impaired educational attainment and reduced social functioning.
- Average age of onset: between 11 and 14 years.
- One out of three-four young people meet lifetime criteria for a Diagnostic and Statistical Manual of Mental Disorders (DSM) mental disorder.
- Prevalence estimates of subthreshold depressive disorders are generally higher than those of major depression across all age groups.
- Depression (29%) and anxiety (26%) are more prevalent in adolescence than in childhood.
- High prevalence of sleep disorders (44%) and post-traumatic stress (48%) following Covid-19.



Depression in children and young people

Wellcome Open Research

Wellcome Open Research 2019, 4:126 Last updated: 06 DEC 2022



DATA NOTE

REVISED Examining the longitudinal nature of depressive symptoms in the Avon Longitudinal Study of Parents and Children (ALSPAC) [version 2; peer review: 3 approved]

Alex S. F. Kwong ^{1,2}

- Initial low levels of depressive symptoms in late childhood.
- Levels of depressive symptoms start to increase from age 13 to 18 years.
- Depressive symptoms begin to decline until age 22 and begin to rise again to greater levels than previously observed at 18 years.
- Factors that drive increases in depressive symptoms and how their interact to result in potentially different child outcomes is the focus of current research.

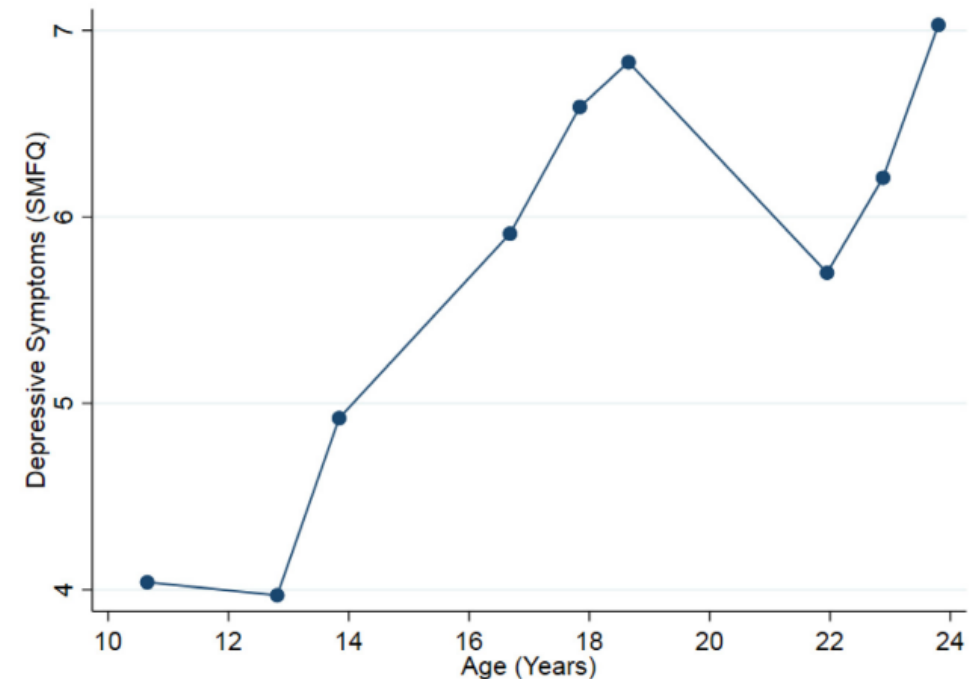


Figure 1. The overall pattern of depressive symptoms in the ALSPAC cohort.

Individual risk factors: sex differences

- Sex differences in mental health are among the most well-established findings in mental health research.
- Among pre-adolescents, either no gender differences in rates of depression or even higher rates in pre-adolescent boys.
- During adolescence, rates of depression are greater among females than among males, with differences persisting into middle adulthood.
- Females report higher prevalence of depression and anxiety than males.
- Males exhibit higher levels of externalising problems (e.g., conduct disorder) and neurodevelopmental issues (e.g., Attention Deficit Hyperactivity Disorder; ADHD)
- Emerging evidence that males and females also differ in developmental trajectories of mental health symptoms in adolescence.



Individual risk factors: sex differences

Empirical Research | [Open Access](#) | [Published: 22 January 2019](#)

Identifying Critical Points of Trajectories of Depressive Symptoms from Childhood to Young Adulthood

[Alex S. F. Kwong](#) , [David Manley](#), [Nicholas J. Timpson](#), [Rebecca M. Pearson](#), [Jon Heron](#), [Hannah Sallis](#), [Evie Stergiakouli](#), [Oliver S. P. Davis](#) & [George Leckie](#)

[Journal of Youth and Adolescence](#) **48**, 815–827 (2019) | [Cite this article](#)

9147 Accesses | **49** Citations | **81** Altmetric | [Metrics](#)

- Similar initial levels of depressive symptoms at age 11 years for males and females.
- Steeper increase in depressive symptoms in females compared to males across adolescence.
- At age 20 years levels of depressive symptoms for both sexes plateau and start to decrease for both sexes.
- Levels of depressive symptoms in females reached peak velocity at age 13.5 years compared to males who reached peak velocity at age 16 years.
- Age of maximum depressive symptoms for females was 19.6 years and 20.4 years for males.

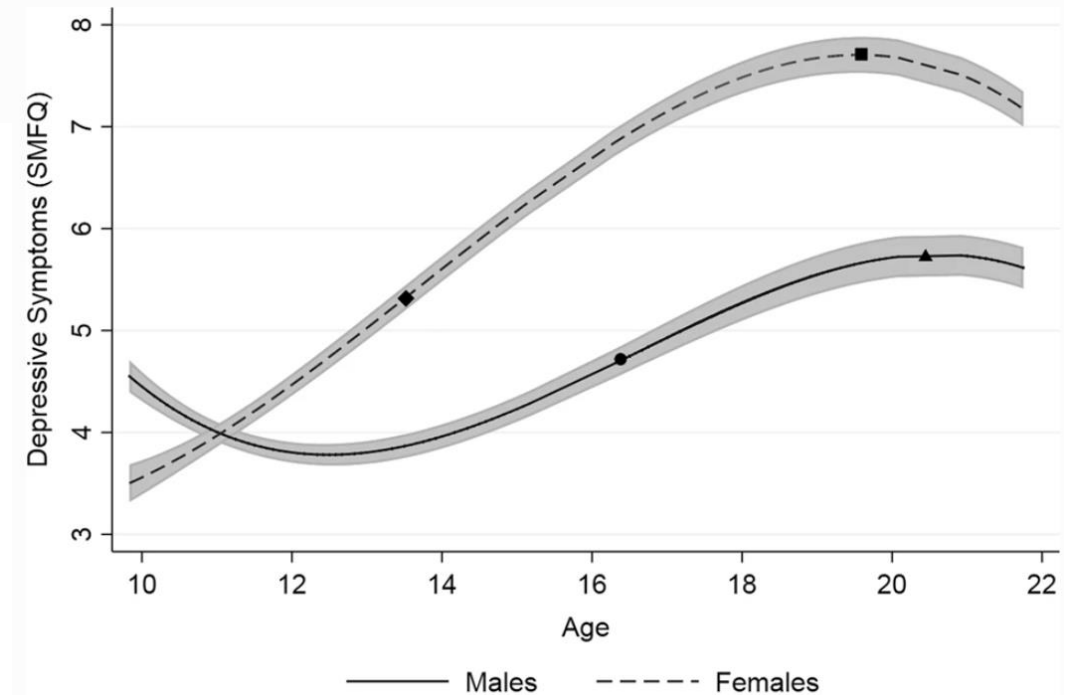


Figure 1. Averaged population mental health trajectories for females and males.

Family risk factors: timing of biological father absence



Journal of Affective Disorders

Volume 314, 1 October 2022, Pages 150-159

Father absence and trajectories of offspring mental health across adolescence and young adulthood: Findings from a UK-birth cohort

Iryna Culpin ^a, Hein Heuvelman ^b, Dheeraj Rai ^{a, c, d}, Rebecca M. Pearson ^{a, e}, Carol Joinson ^{a, e}, Jon Heron ^{a, f}, Jonathan Evans ^{a, c, d}, Alex S.F. Kwong ^{f, g}

- Children who experienced early father absence had similar trajectories of depressive symptoms at age 12 compared to those whose fathers were present.
- However, these trajectories started to deviate from age 14 years, with early father absent children experiencing higher levels of depressive symptoms around ages 16 and 20 years compared to father presence.
- The greatest difference in trajectories of depressive symptoms between early father absent and father present children were observed at age 24 years.

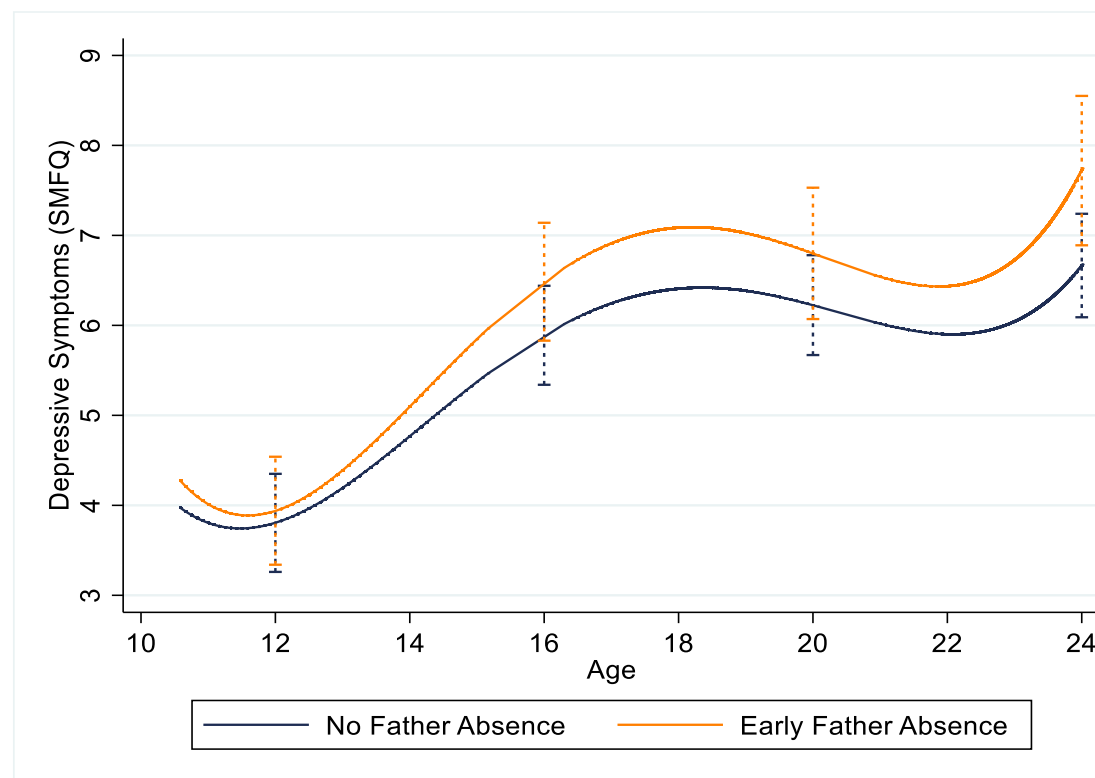


Figure 1. Main effects of father absence early in childhood (birth-5 years) on predicted trajectories of depressive symptoms across childhood, adolescence and young adulthood.

Family risk factors: timing biological father absence

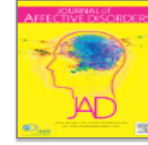


Journal of Affective Disorders

Volume 314, 1 October 2022, Pages 150-159

Father absence and trajectories of offspring mental health across adolescence and young adulthood: Findings from a UK-birth cohort

Iryna Culpin ^a, Hein Heuvelman ^b, Dheeraj Rai ^{a, c, d}, Rebecca M. Pearson ^{a, c}, Carol Joinson ^{a, c}, Jon Heron ^{a, f}, Jonathan Evans ^{a, c, d}, Alex S.F. Kwong ^{e, g}



- Children whose fathers were absent later in childhood, compared to father present, showed similar pattern of depressive symptoms trajectories up to 16 years.
- In contrast to early father absence, later father absence was not associated with increase in depressive symptoms trajectories at ages 20 and 24 years respectively.
- The gap in depressive symptoms trajectories between later father absent and father present children narrowed into early adulthood.

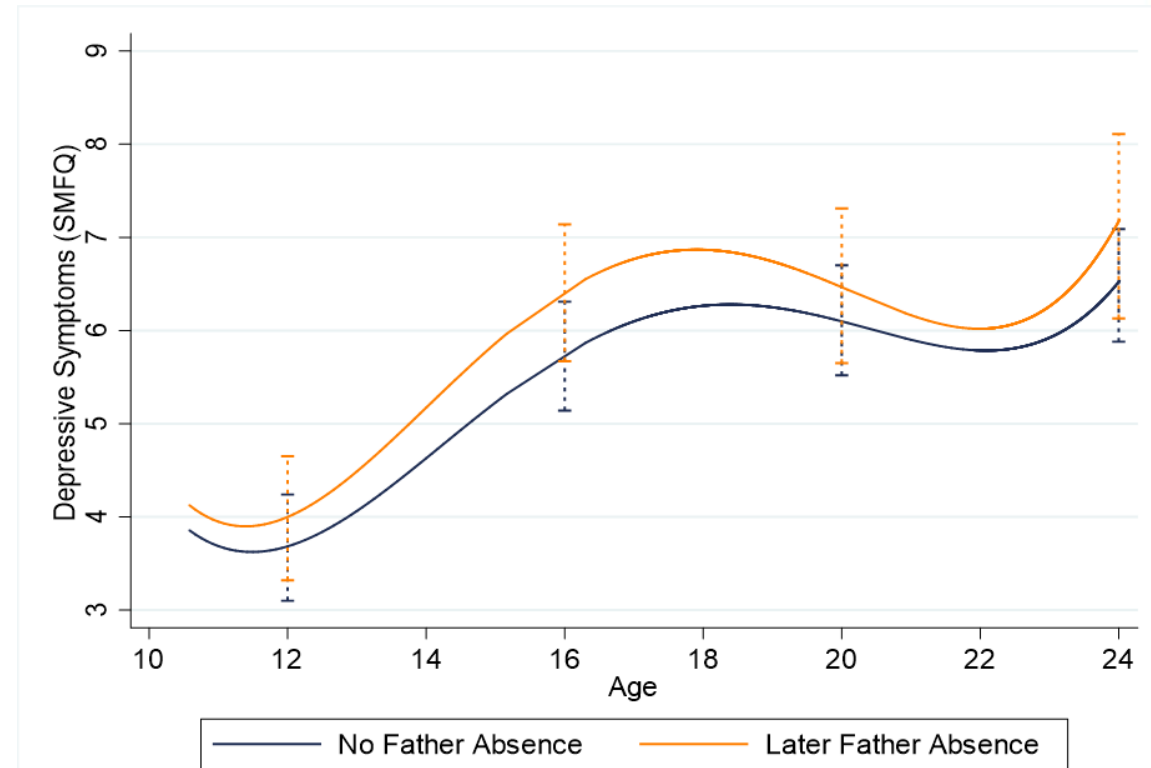


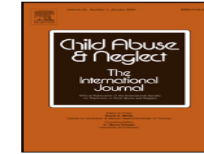
Figure 2. Main effects of father absence later in childhood (5-10 years) on predicted trajectories of depressive symptoms across childhood, adolescence and young adulthood.

Family risk factors: characteristics of fathering



Contents lists available at [ScienceDirect](#)

Child Abuse & Neglect



Research article

The association between characteristics of fathering in infancy and depressive symptoms in adolescence: A UK birth cohort study

Jonathan Scourfield^{a,*}, Iryna Culpin^b, David Gunnell^b, Caroline Dale^c, Carol Joinson^b, Jon Heron^b, Simon M. Collin^b

^a School of Social Sciences, Cardiff University, United Kingdom

^b School of Social and Community Medicine, University of Bristol, United Kingdom

^c University College, London, United Kingdom



- Quality of father's parenting is an important predictor of child mental health in adolescence, but less is known about specific aspects of fathering that are important.
- Fathers attitudes to and experiences of childcare at 8 weeks, 8 and 21 months were examined as predictors of depression at age 16 years.
- Are these effects independent of maternal and paternal depression, parental social class, and challenging life events in adolescence?



Family risk factors: characteristics of fathering

Table 1

Responses to questions about fathering at 21 months.

Below are some opinions that some people have about being a parent. Please indicate what your feelings are	This is exactly how I feel	This is often how I feel	This is how I sometimes feel	I never feel this way	Missing data
	n (%)				
<i>Paternal confidence scores at 21 months</i>					
Parenthood is something a man learns naturally	1820 (29.6%)	1841 (29.9%)	1674 (27.2%)	717 (11.6%)	104 (1.7%)
I often worry whether my child is eating enough	208 (3.4%)	422 (6.9%)	1808 (29.4%)	3677 (59.7%)	41 (0.7%)
Trying to get my child to eat the right food makes me very anxious	89 (1.4%)	236 (3.8%)	1597 (25.9%)	4193 (68.1%)	41 (0.7%)
I feel pretty sure that I'm doing the right thing for my child	3297 (53.6%)	2435 (39.6%)	326 (5.3%)	56 (0.9%)	42 (0.7%)
I feel anxious if someone else is looking after my child	423 (6.9%)	683 (11.1%)	2629 (42.7%)	2372 (38.5%)	49 (0.8%)
<i>Paternal enjoyment scores at 21 months</i>					
Having a young child is absolutely exhausting	658 (10.7%)	1377 (22.4%)	3361 (54.6%)	725 (11.8%)	35 (0.6%)
Toddlers are fun	3656 (59.4%)	2149 (34.9%)	304 (4.9%)	15 (0.2%)	32 (0.5%)
I really love my toddler	5813 (94.4%)	271 (4.4%)	34 (0.6%)	15 (0.2%)	23 (0.6%)
I am glad that we had this child when we did	5286 (85.9%)	548 (8.9%)	211 (3.4%)	65 (1.1%)	46 (0.7%)
My toddler never gets on my nerves	700 (11.4%)	2067 (33.6%)	2412 (29.2%)	925 (15.0%)	52 (0.8%)
I don't mind the mess that surrounds a toddler	1719 (27.9%)	2227 (36.2%)	1763 (28.2%)	394 (6.4%)	53 (0.9%)
It is a great pleasure to watch my child grow	5502 (89.4%)	528 (8.6%)	80 (1.3%)	14 (0.2%)	32 (0.5%)
My child gives me great joy	5341 (86.8%)	669 (10.9%)	102 (1.7%)	10 (0.2%)	34 (0.6%)
<i>Paternal discipline scores at 21 months</i>					
The best way to calm a child is to cuddle him/her	2500 (40.6%)	2489 (40.4%)	1110 (18.0%)	30 (0.5%)	27 (0.4%)
Toddlers should be allowed to eat whenever they ask for food	705 (11.5%)	1324 (21.5%)	2809 (45.6%)	1276 (20.7%)	42 (0.7%)
A smack is the best way to discipline a child	229 (3.7%)	527 (8.6%)	3654 (54.9%)	1695 (27.5%)	51 (0.8%)
<i>Potential paternal abuse scores at 21 months</i>					
There are times when a child's continuous whining can make a parent want to hit him/her	191 (3.1%)	331 (5.4%)	3020 (49.1%)	2582 (41.9%)	32 (0.5%)
Parents can feel exasperated when they want to calm the child down and nothing works	1046 (17%)	1349 (21.9%)	3006 (48.8%)	675 (11.0%)	80 (1.3%)
I really cannot bear it when my child cries	254 (4.1%)	682 (11.1%)	3389 (55.1%)	1790 (29.1%)	41 (0.7%)
I am afraid to be left alone with the toddler because I think I might be violent	17 (0.3%)	14 (0.2%)	67 (1.1%)	6019 (97.8%)	39 (0.6%)
I feel desperate when my child goes on complaining and being difficult	54 (0.9%)	274 (4.5%)	2378 (38.6%)	3396 (55.2%)	54 (0.9%)
My child's demands sometimes bring intense feelings of anger	42 (0.7%)	106 (1.7%)	1631 (26.5%)	4337 (70.5%)	40 (0.6%)

Family risk factors: characteristics of fathering



Contents lists available at [ScienceDirect](#)

Child Abuse & Neglect



Research article

The association between characteristics of fathering in infancy and depressive symptoms in adolescence: A UK birth cohort study

Jonathan Scourfield^{a,*}, Iryna Culpin^b, David Gunnell^b, Caroline Dale^c, Carol Joinson^b, Jon Heron^b, Simon M. Collin^b

^a School of Social Sciences, Cardiff University, United Kingdom

^b School of Social and Community Medicine, University of Bristol, United Kingdom

^c University College, London, United Kingdom



- Indication of potential paternal abuse was associated with increased risk of depressive symptoms at age 16 years.
- Some evidence that children living in higher social class households were at higher risk of depressive symptoms with increasing scores in paternal abuse.
- No evidence of these effects in lower social class categories.
- Effects were independent of parental depression and challenging life events in adolescence.



Environmental risk factors: socio-economic adversity



- Exposure to socioeconomic adversity is a strong risk of depression.
- Role of individual factors, such as Locus of Control (LoC; 16 years), that may explain this association are not well understood.
- Depression diagnosis was established using the Clinical Interview Schedule Revised (CIS-R) at 18 years.
- Indicators of early socio-economic adversity were collected from birth to 5 years and modelled as a composite measure (latent factor).
- Analyses controlled for child's sex, maternal and paternal depression and maternal cognitive style.

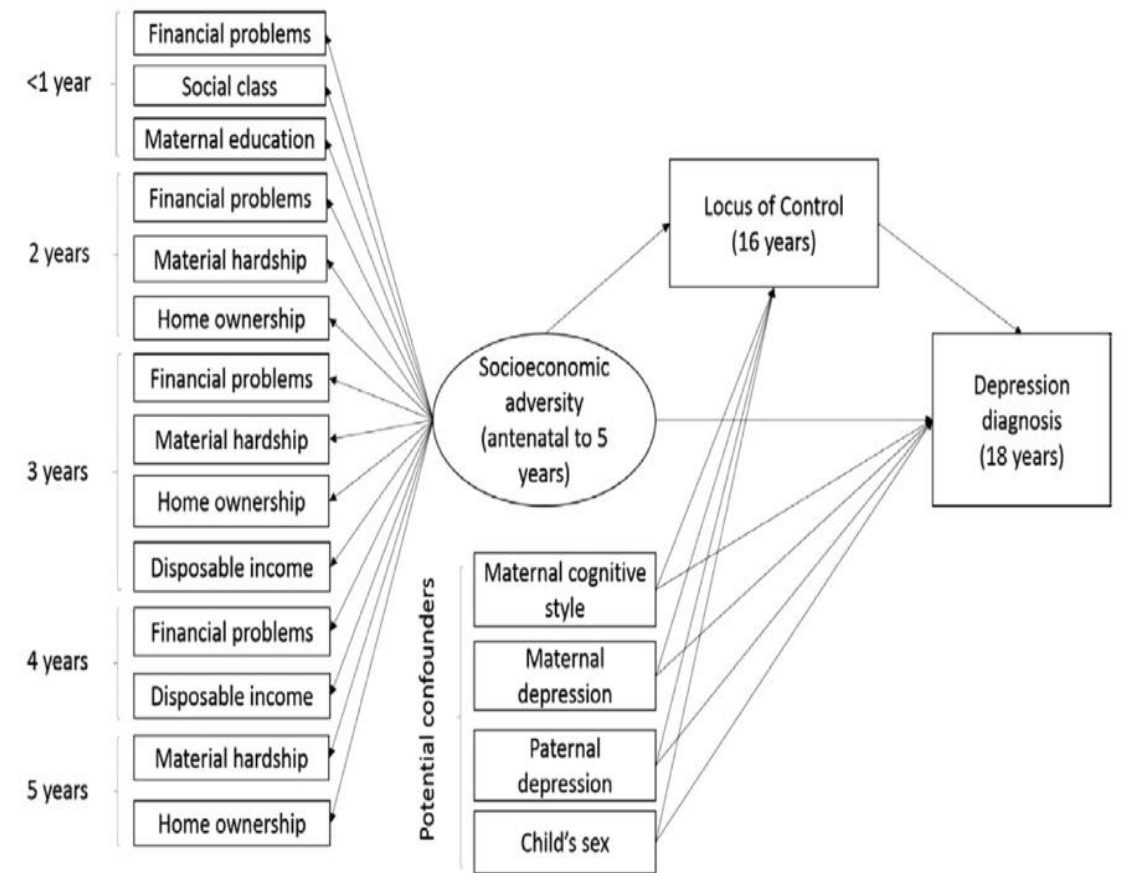
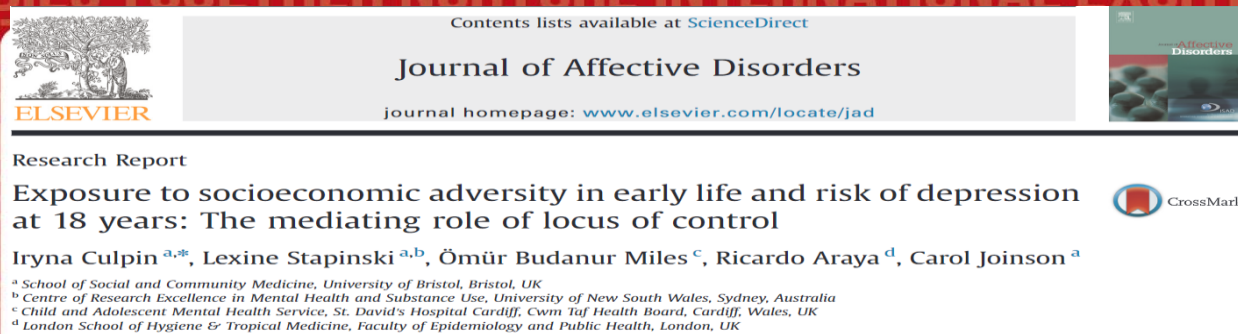


Figure 1. Hypothesised associations among socioeconomic adversity in early life, locus of control and depression diagnosis at 18 years, adjusted for potential confounders.

Environmental risk factors: socioeconomic adversity



- Exposure to socioeconomic adversity was associated with more external LoC orientation at 16 years.
- External LoC orientation was higher risk of depression diagnosis at 18 years.
- Although attenuated, there was evidence of a direct association between early socioeconomic adversity and depression at 18 years.
- External LoC explained approximately 34% of this association.
- No evidence that these associations differed by gender.

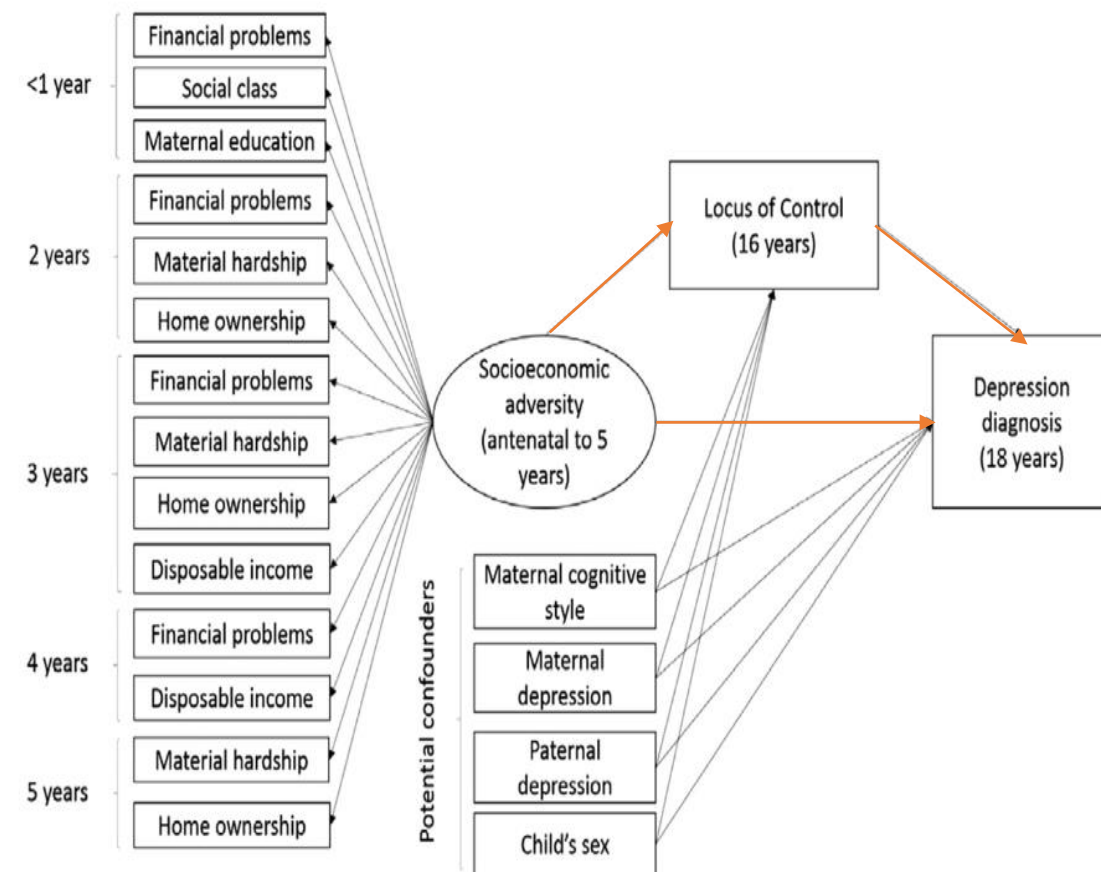


Figure 1. Hypothesised associations among socioeconomic adversity in early life, locus of control and depression diagnosis at 18 years, adjusted for potential confounders.

Parental risk factors: parenting and parent-child relationship

Specific domains of early parenting, their heritability and differential association with adolescent behavioural and emotional disorders and academic achievement

[Iryna Culpin](#) ✉, [Marc H. Bornstein](#), [Diane L. Putnick](#), [Hannah Sallis](#), [Ruby Lee](#), [Miguel Cordero](#), [Priya Rajyaguru](#), [Katarzyna Kordas](#), [Tim Cadman](#) & [Rebecca M. Pearson](#)

European Child & Adolescent Psychiatry **29**, 1401–1409 (2020) | [Cite this article](#)

2412 Accesses | 2 Citations | 2 Altmetric | [Metrics](#)

- Mother-child interactions and the quality of early parenting are associated with mental health and socio-emotional development.
- However, parenting is a complex construct, often cast along three main domains:
 - Warmth and enjoyment (e.g., sensitivity, involvement, warmth)
 - Conflict and harsh discipline (e.g., control, excessive monitoring)
 - Activities that promote learning (e.g., stimulation)
- Importance of specific aspects of parenting for particular child outcomes is not well-understood.



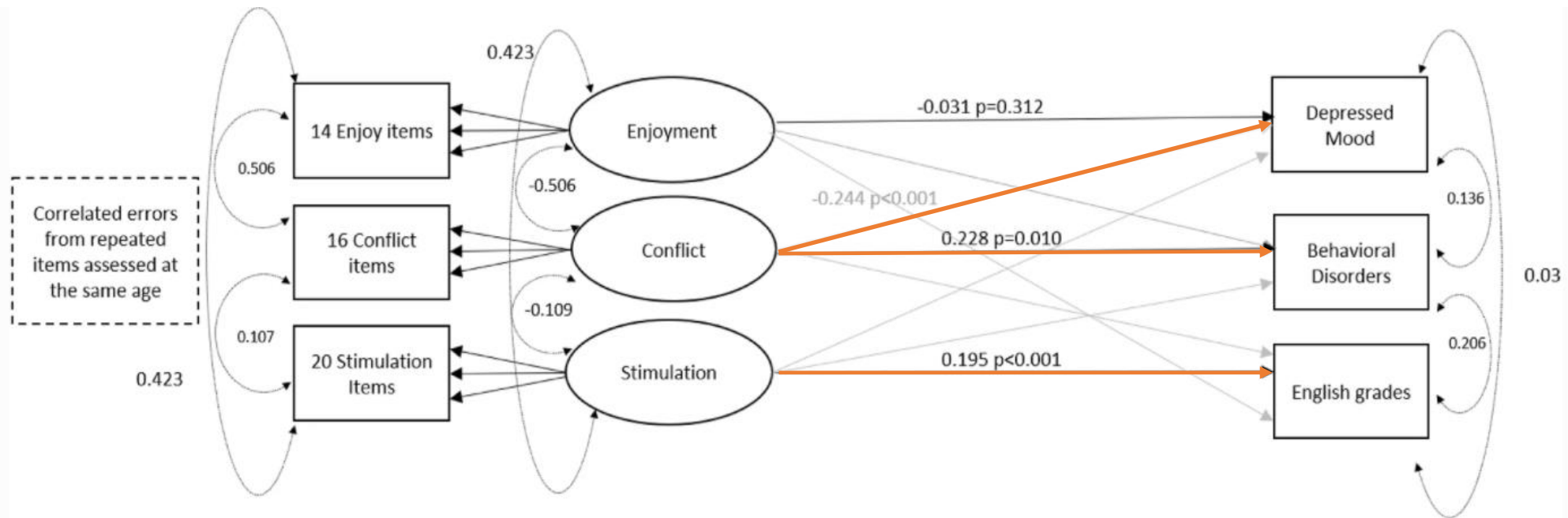
Parental risk factors: parenting and parent-child relationship

Specific domains of early parenting, their heritability and differential association with adolescent behavioural and emotional disorders and academic achievement

Iryna Culpin , Marc H. Bornstein, Diane L. Putnick, Hannah Sallis, Ruby Lee, Miguel Cordero, Priya Rajyaguru, Katarzyna Kordas, Tim Cadman & Rebecca M. Pearson

European Child & Adolescent Psychiatry **29**, 1401–1409 (2020) | [Cite this article](#)

2412 Accesses | 2 Citations | 2 Altmetric | [Metrics](#)



Parental risk factors: maternal depression and parenting

Wellcome Open Research

Search

BROWSE

GATEWAYS & COLLECTIONS

HOW TO PUBLISH

ABOUT




BLOG

503 Views | 46 Downloads | 0 Citations

CITE

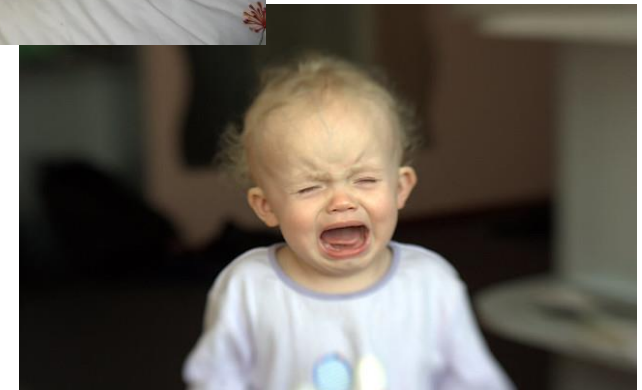
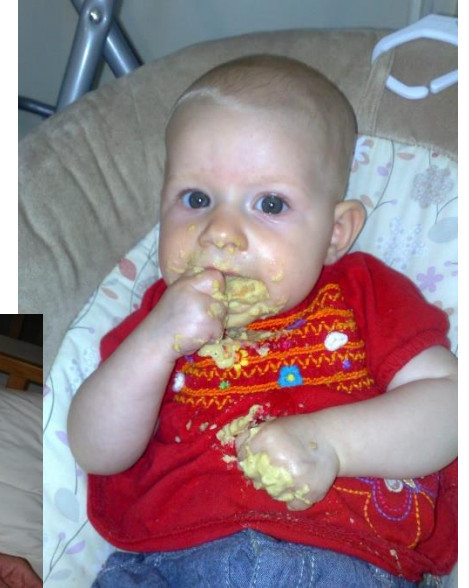
RESEARCH ARTICLE

REVIS^{ED} Maternal postnatal depression and offspring depression at age 24 years in a UK-birth cohort: the mediating role of maternal nurturing behaviours concerning feeding, crying and sleeping [version 2; peer review: 2 approved]

Iryna Culpin , Gemma Hammerton, Marc H. Bornstein, Jon Heron , Jonathan Evans, Tim Cadman, Hannah M. Sallis, Kate Tilling, Alan Stein, Alex S.F. Kwong , Rebecca M. Pearson

This article is included in [Avon Longitudinal Study of Parents and Children \(ALSPAC\)](#) gateway

- Maternal postnatal depression (PND) is a strong risk factor for adverse mental health in childhood and adolescence.
- Maternal sensitivity is often disrupted by depression and may explain the link between maternal and child mental health.
- Maternal nurturing activities essential to infant care and their potential explanatory role in transmission of mental health risks from mother to child received less research attention.
- Attending to infant's basic needs may be particularly challenging for mothers who experience depression.



Parental risk factors: maternal depression and parenting

Wellcome Open Research Search

BROWSE GATEWAYS & COLLECTIONS HOW TO PUBLISH ABOUT BLOG

503 Views | 46 Downloads | 0 Citations CITE

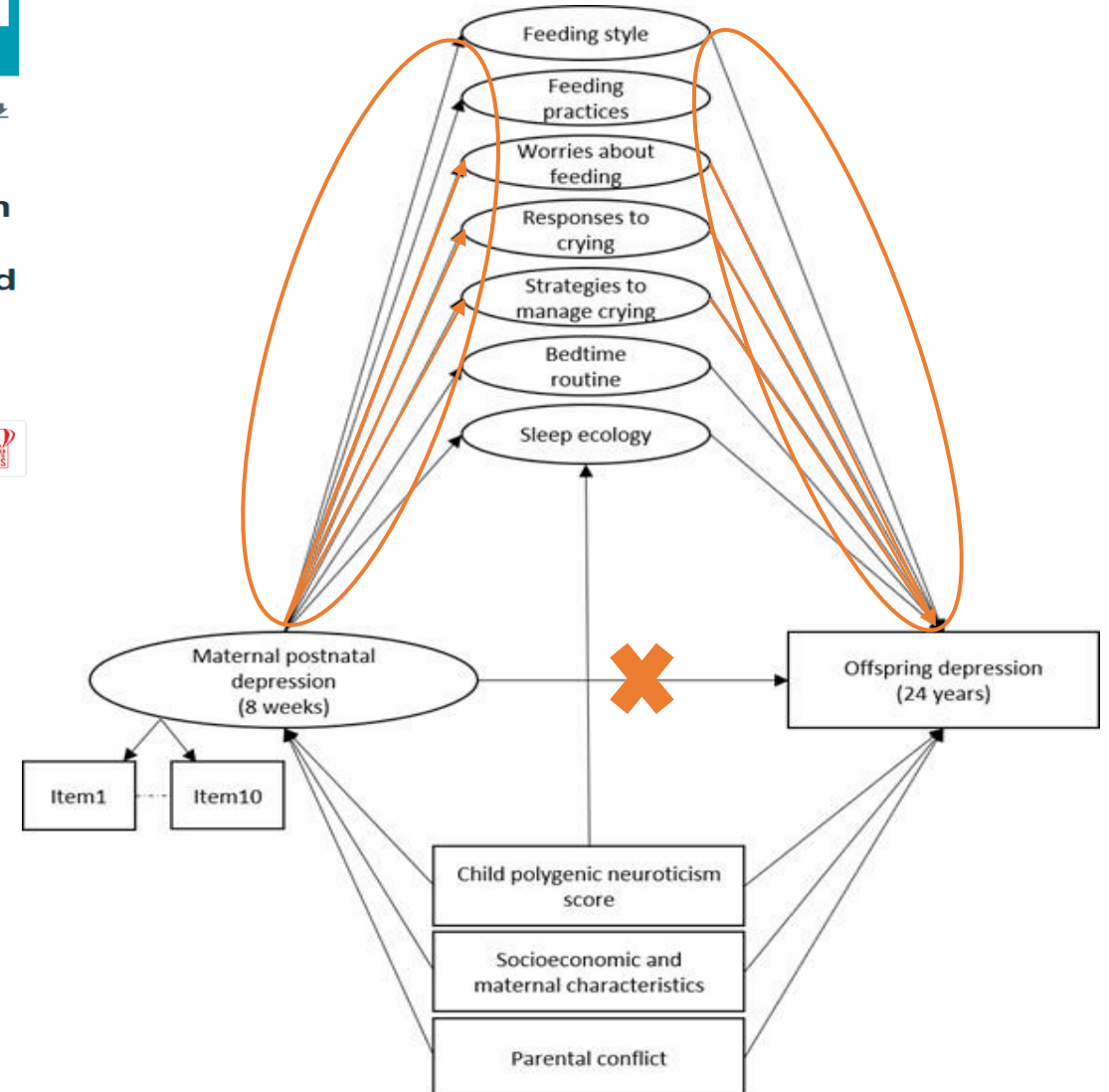
RESEARCH ARTICLE

REVISED **Maternal postnatal depression and offspring depression at age 24 years in a UK-birth cohort: the mediating role of maternal nurturing behaviours concerning feeding, crying and sleeping [version 2; peer review: 2 approved]**

Iryna Culpin, Gemma Hammerton, Marc H. Bornstein, Jon Heron, Jonathan Evans, Tim Cadman, Hannah M. Sallis, Kate Tilling, Alan Stein, Alex S.F. Kwong, Rebecca M. Pearson

This article is included in [Avon Longitudinal Study of Parents and Children \(ALSPAC\)](#) gateway

- Maternal PND was associated with less optimal responses and strategies to manage crying, as well as higher levels of worries about feeding.
- These dimensions of maternal nurturing behaviours were also associated with higher risk of offspring depression in early adulthood and explained the association between maternal and offspring depression.
- Once the indirect pathways through maternal nurturing behaviours were accounted for, there was no evidence of an association between maternal and offspring depression.



Parental risk factors: maternal depression and paternal involvement



Journal Information
Journal TOC

APA PsycArticles: Journal Article

Maternal postnatal depressive symptoms and offspring emotional and behavioral development at age 7 years in a U.K. birth cohort: The role of paternal involvement.

© Request Permissions

Culpin, I., Hammerton, G., Stein, A., Bornstein, M. H., Tiemeier, H., Cadman, T., Fredriksen, E., Evans, J., Miller, T., Dermott, E., Heron, J., Sallis, H. M., & Pearson, R. M. (2022). Maternal postnatal depressive symptoms and offspring emotional and behavioral development at age 7 years in a U.K. birth cohort: The role of paternal involvement. *Developmental Psychology*. Advance online publication. <https://doi.org/10.1037/dev0001482>

Get Access



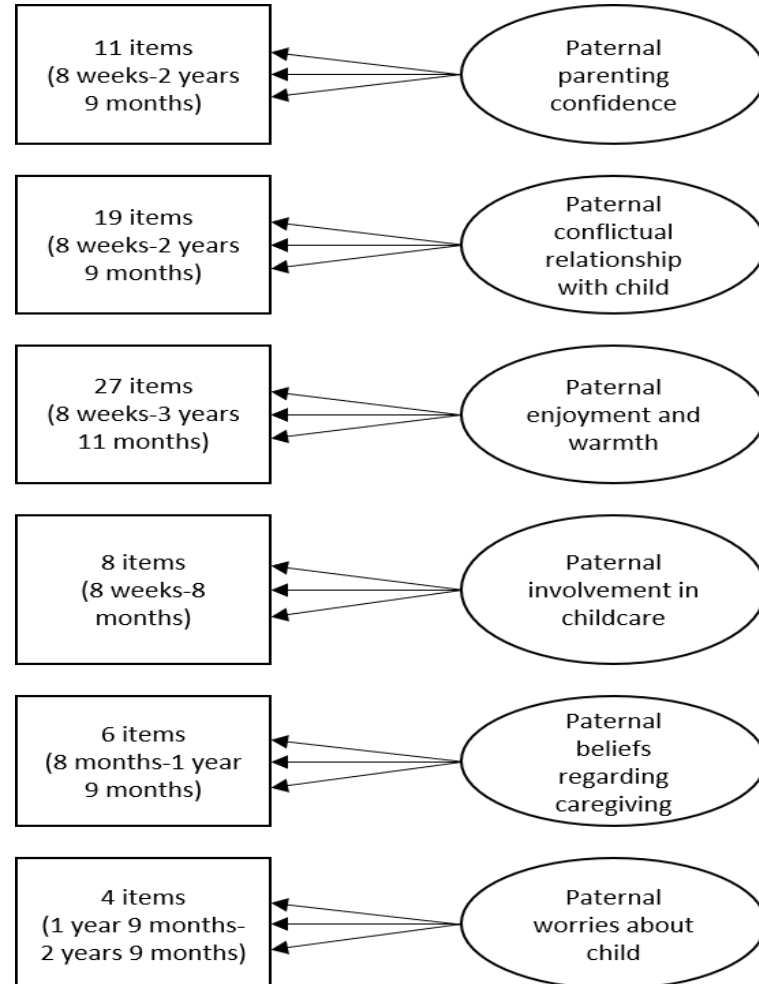
The accepted manuscript
version of this article will be
publicly available on
11/17/2023

- Existing research is predominantly focused on maternal sensitivity and parenting in the context of maternal depression.
- Role of paternal parenting and involvement for child mental health in families with mothers experiencing depression is not well understood.
- Paternal involvement may be particularly important in the context of maternal depression because of the role that fathers play in supporting the mother and caring for the child.

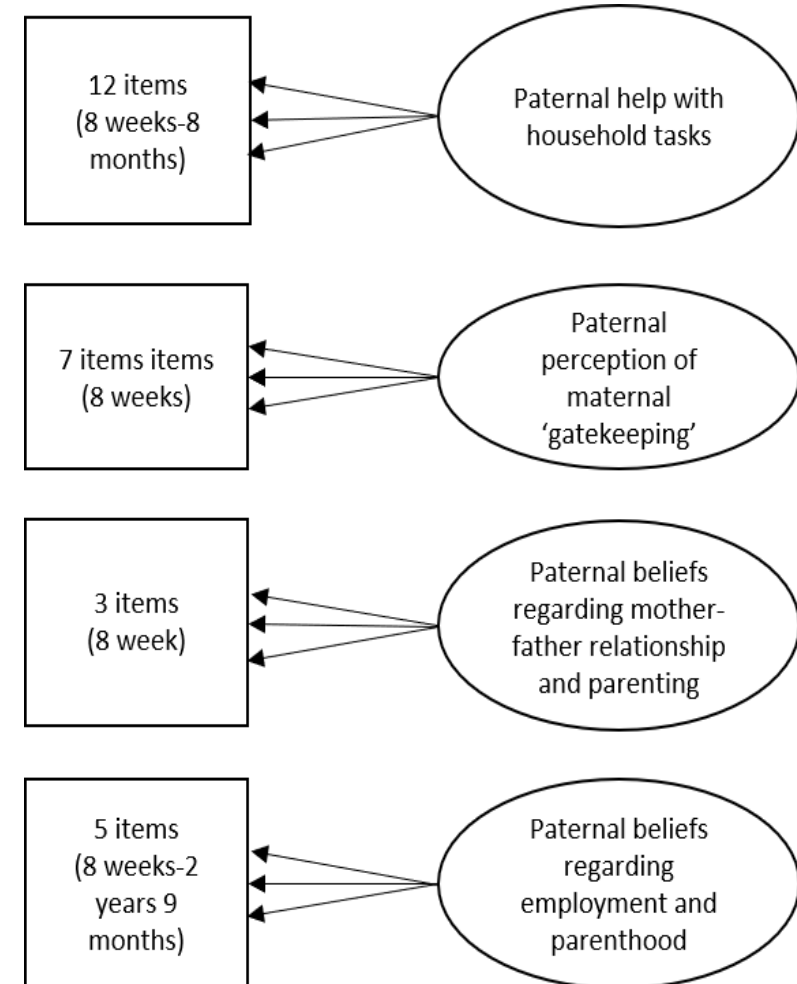


Parental risk factors: maternal depression and paternal involvement

Child-focused paternal involvement (behavioural, affective and cognitive dimensions)

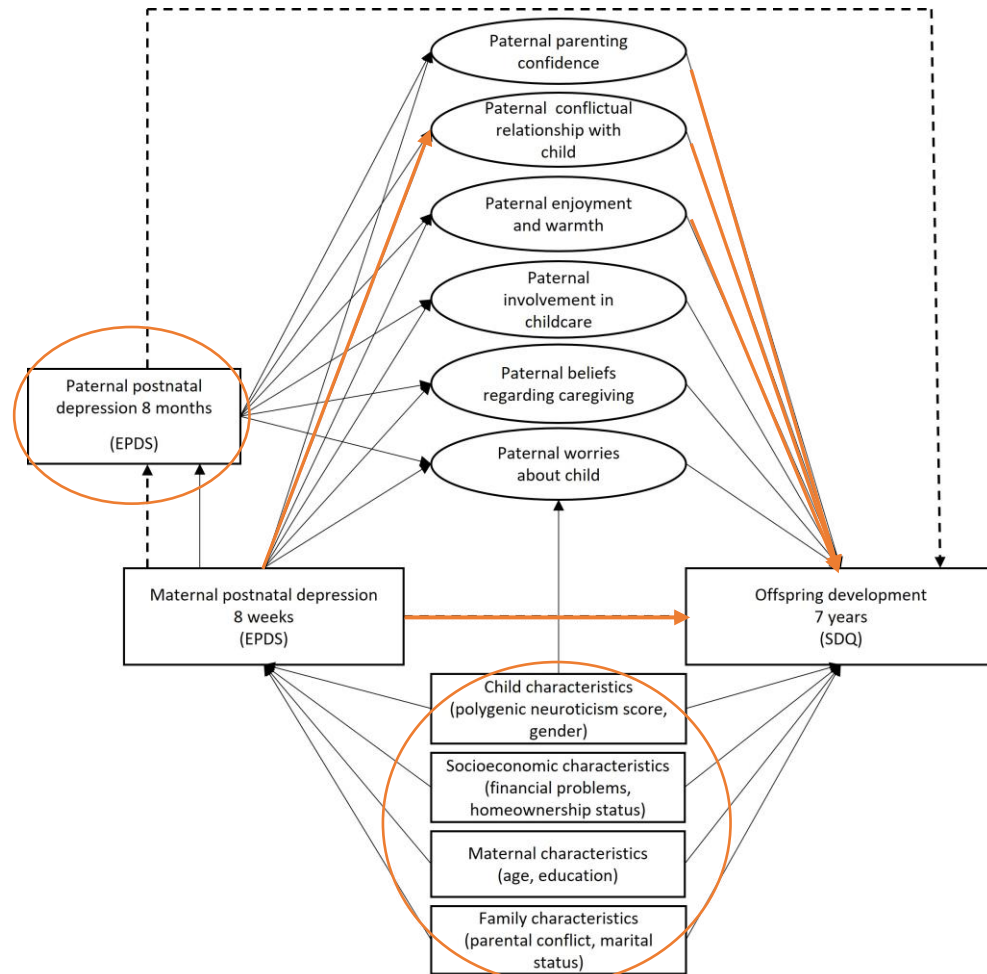


Mother-influenced paternal involvement

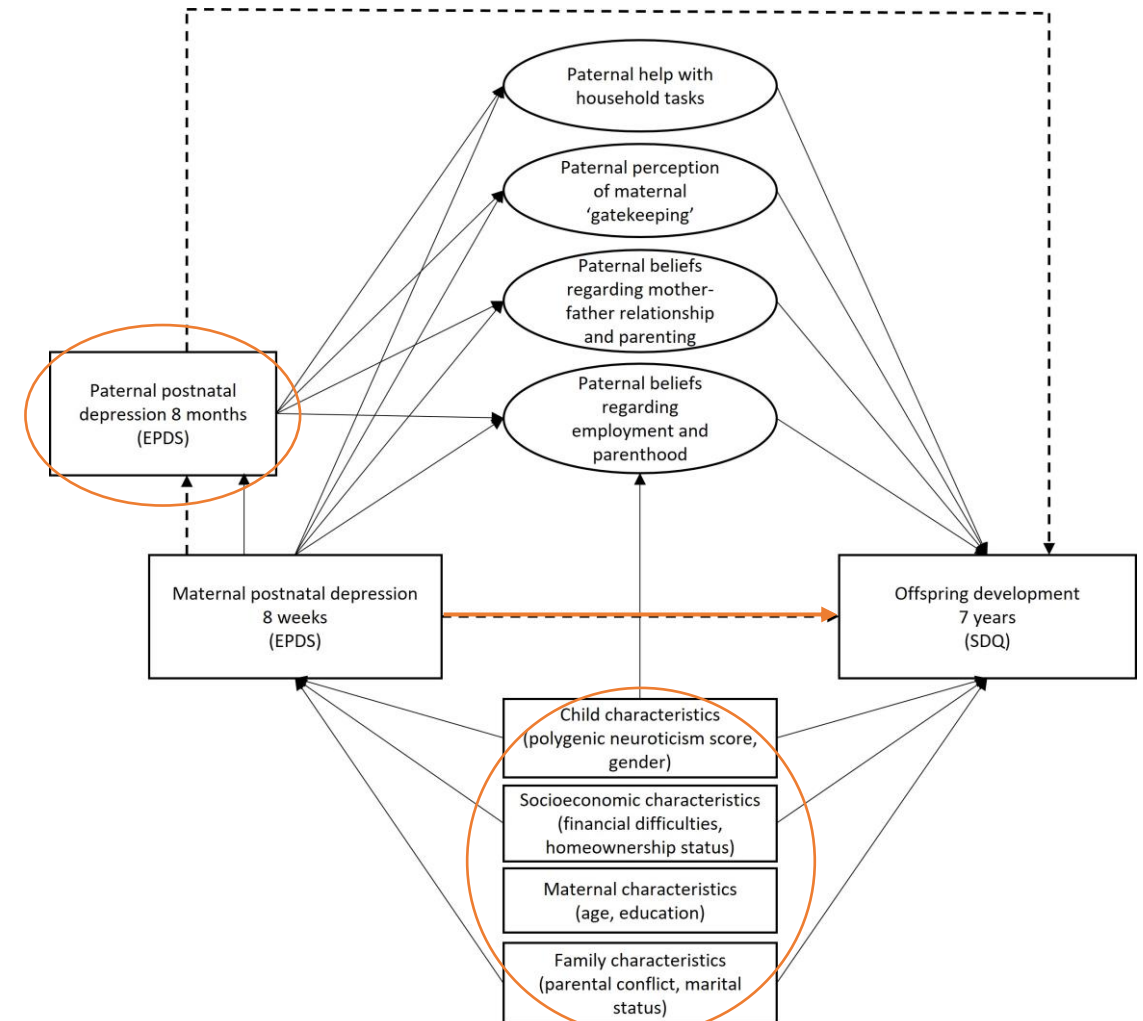


Parental risk factors: maternal depression and paternal involvement

Child-focused paternal involvement



Mother-influenced paternal involvement



Parental risk factors: paternal depression and paternal involvement

Paternal postnatal depression and offspring emotional and behavioural development at age 7 years in a UK-birth cohort: the mediating role of paternal confidence, warmth and conflict

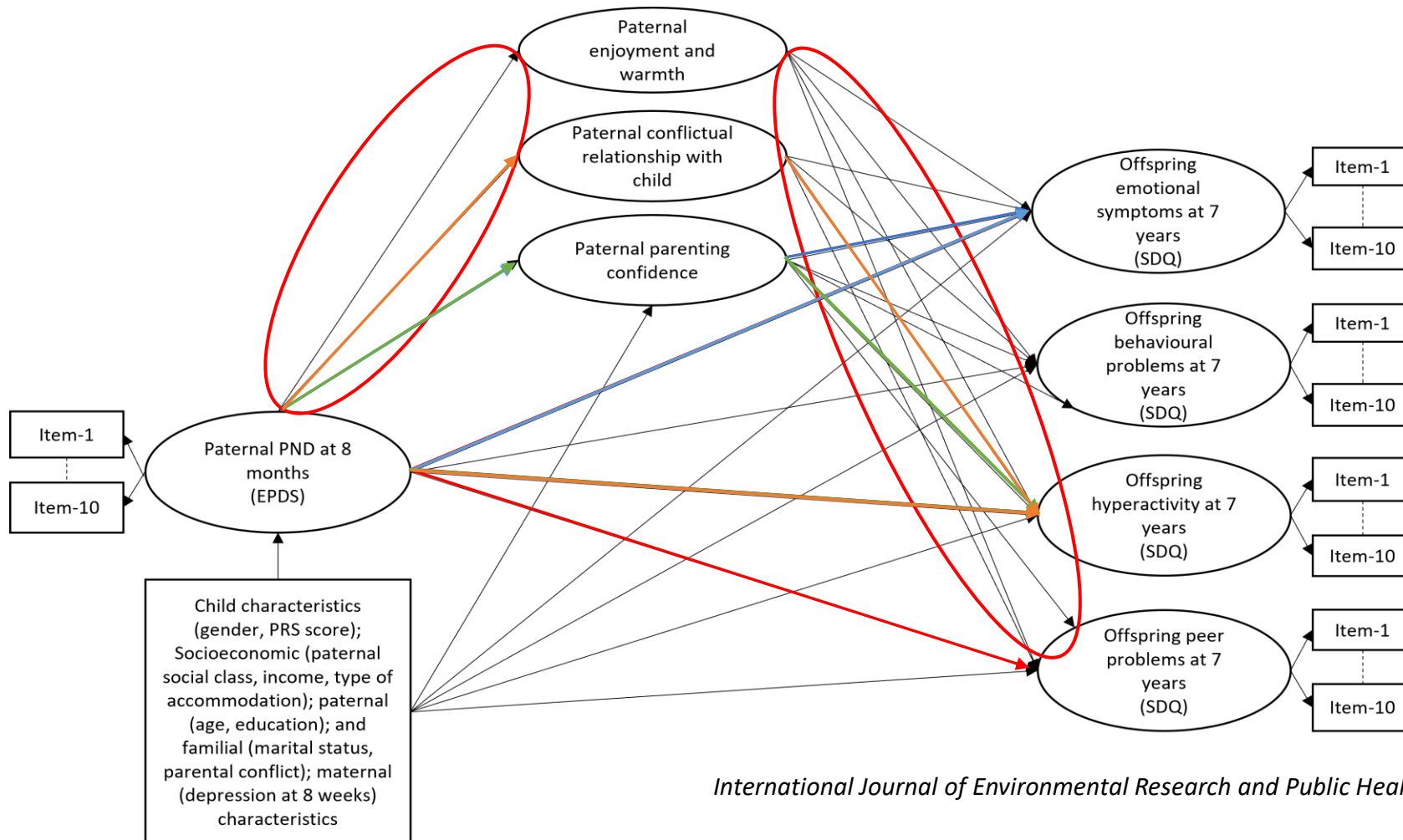
International Journal of Environmental Research and Public Health, under review.

- Mounting evidence supports increased risk of postnatal depression in men (estimated prevalence approximately 10.4%).
- Strong reciprocal relationships between maternal and paternal depression.
- Increasingly evidence highlights adverse impact of paternal postnatal depression on child development, including mental health.
- However, the evidence base is even more limited when it comes to mechanisms that transmit adverse effects of paternal depression on the child.



Parental risk factors: paternal depression and paternal involvement

Paternal postnatal depression and offspring emotional and behavioural development at age 7 years in a UK-birth cohort: the mediating role of paternal confidence, warmth and conflict



International Journal of Environmental Research and Public Health, under review.