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# Does poverty moderate within-family relations between children's and parents' mental health?

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## Abstract

Children from lower income backgrounds are more vulnerable to psychopathology but it is unclear why. One possibility is that poverty amplifies the effects of other risk factors, such as parental distress, on child mental health problems. Previous relevant studies often had cross-sectional designs or relied on traditional cross-lagged panel designs, which have methodological drawbacks. Designs that disentangle within- and between-family effects can provide more robust conclusions. To date, no studies have investigated the moderating role of poverty on the relationship between parental and child mental health using a within-family design. This study investigates whether the between- and within-family relations between parental and child mental health differ between people living in poverty and those living in non-poverty. Multigroup autoregressive latent trajectory models with structured residuals were fitted to analyse data collected at ages 3, 5, 7, 11, 14, and 17 from the Millennium Cohort Study; a representative sample of the UK population ( $N = 10,309$ ; ~ 32 poverty). Results indicated that relations between parental distress and child psychopathology were not moderated by poverty at either the between- or within-family levels. This study challenges models that indicate effects will be stronger in the context of poverty, such as the Context of Stress model. Thus, findings suggest that policymakers should prioritize addressing associations between parental and child mental health problems across all poverty levels.

**Keywords** Within-family · Child mental health · Parental distress · Poverty

## Introduction

Poverty, defined as the lack of sufficient financial resources to meet basic living needs, is widely recognized as a significant risk factor for children's mental health problems (Brooks-Gunn & Duncan, 1997). There has been consistent evidence that increasing poverty levels are associated with greater externalising (e.g. conduct problems; Dearing et al.,

2006) and internalising problems (e.g. depression; Wadsworth et al., 2005). Based on 139 independent estimates from research published between 1960 and 2012, a meta-analysis of studies testing the relations between income and conduct problems found a mean weighted effect size of  $r = -.10$  (95% confidence interval  $-0.08$  to  $-0.12$ ) (Piotrowska et al., 2015). A meta-analysis focussing on internalising problems found that depression and anxiety were twice as common among low-income youth than in youth from higher socioeconomic backgrounds (Lemstra et al., 2008).

In order to better understand why poverty has detrimental effects on mental health problems in children and adolescents, researchers have examined a variety of potential underlying psychological processes (Evans & Kim, 2013). For example, according to the Family Stress Model (FSM), family stress and subsequent parental mental health challenges reduce parenting efficacy which, in turn, leads to child conduct problems (Conger et al., 2000; Masarik & Conger, 2017). However, although there are some studies that support the FSM (e.g. Hong et al., 2024) others do not

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(e.g. Piotrowska et al., 2023). Therefore, further research is warranted to explore alternative possibilities.

One alternative is that poverty may amplify the influence of other risks on psychopathology. This possibility is reflected in McLoyd's (1990) Context of Stress model that addresses the complex dynamics of poverty and its impact on mental health problems. This model primarily focuses on how poverty indirectly affects families through mediation processes such as exacerbating parental distress. However, it also proposes that poverty creates a broader context that may amplify the effects of additional stressors by heightening vulnerability to chronic and discrete stressors through diminished coping capacity (e.g. Wadsworth et al., 2011; Shaari et al., 2023).

In line with the suggestions of the Context of Stress model, a number of studies showed that the burden of familial risk stressors varies according to family income (e.g. Chai & Schieman, 2022; Dearing et al., 2006). For instance, Chai and Schieman (2022) investigated the effect of parents struggling to balance their parenting roles due to work-family conflict on the health of their children. They found children living in lower income households had more health problems as a result of work-family conflict associated with problematic parenting practices than children living in families with higher incomes.

Among the best documented risks to child mental health is parental depression (e.g. DesRoches et al., 2023; Langrock et al., 2002). Due to the reciprocal nature of parent-child relations, child mental health problems can also function as stressors for parents (e.g. Speyer et al., 2022; Xerxa et al., 2021). Based on the Context of Stress model (McLoyd, 1990), it might be expected that parents living in poverty may have fewer emotional resources to cope with the emotional pressure of their children's mental health difficulties, leaving them more vulnerable to mental health problems. Likewise, as a result of poverty, children may be more vulnerable to the effect of their parents' mental health problems, which may strengthen the association between parental mental health problems and child internalising/externalising problems (Ryan et al., 2015). Goodman et al. (2011) conducted a meta-analysis of 193 studies examining the strength of the association between maternal depression and children's internalising/externalising problems that supports the Context of Stress model. This review found that the relationship between parent and child mental health problems was stronger in studies focussing on low-income households than those focussing on middle, high or mixed-income households.

The majority of studies, however, examining the role of socioeconomic status in the relationship between child and parental mental health have methodological drawbacks. Most studies are based on cross-sectional data, which makes

it difficult to identify directional effects (Gollob & Reichardt, 1987). Where studies have used longitudinal methods, they have tended to focus on unidirectional effects of parents on their children, without considering the effects of children on their parents (e.g. Flouri et al., 2019). In addition, other methodological limitations include the use of traditional cross-lagged panel models, which do not separate variance within families from variance between families (Hamaker et al., 2015). Failing to account for these distinct sources of variance may result in misleading patterns of effect, especially when processes differ within and between families (Hamaker et al., 2015). If research is focused on understanding the dynamics of people rather than populations, then examining associations "within families" offers a more robust test of causality (Keijsers, 2016).

There are convincing studies using within-family designs and testing the prospective reciprocal relations between parent and child mental health problems (e.g. Lowthian et al., 2023; Speyer et al., 2022; Treanor & Troncoso, 2023). Using the random intercept cross-lagged panel model with the Wales subsample of the Millennium Cohort Study (MCS), Lowthian et al. (2023) examined the within-family relations between maternal distress and child emotional, behavioral, hyperactivity, and peer problems from 9 months to 14 years. The results revealed bidirectional relations for emotional problems as well as a child-to-mother effect for overall problem behavior and peer problems. Similarly, Speyer et al. (2022) investigated the within-family dynamics between parental distress and child internalising/externalising problems using autoregressive latent trajectory modeling with structured residuals (ALT-SR) in children aged 9 months to 17 years from the MCS's UK-wide sample. Their study also found reciprocal relations between parental and child mental health problems.

In addition to reporting reciprocal relations between the parental and child mental health, Treanor and Troncoso (2023) also examined the impact of poverty on parental and child mental health at the between-family level, using data from Growing Up in Scotland. The study found that parents and children who were persistently poor had more mental health problems compared to their peers who were not persistently poor. However, the study did not examine whether poverty moderates the relations between parental and child mental health; instead, it examined the direct effects of poverty on parents and children separately.

While these studies have usefully advanced our understanding of the bidirectional nature of parent-child mental health dynamics, an important gap remains in the literature. It is unclear whether family income (as an indicator of poverty) moderates within-family relations between parental mental health and child mental health. Addressing this gap in the literature is important because examining

these relations in a within-family context provides a more nuanced understanding of how economic hardship interacts with parent-child mental health problems. In turn, clarifying the role of poverty in these within-family mechanisms may lead to developing more effective intervention strategies (Hamaker et al., 2015) and support for families experiencing poverty.

The primary goal of the present study is to address this gap by building on the ALT-SR approach, following Speyer et al. (2022), to test whether the strength of reciprocal links between parental distress and child psychopathology (internalising/externalising) varies as a function of poverty. Therefore, this study aims to answer the following research question: “What is the impact of poverty on the reciprocal relation between parental distress and child mental health problems (internalising/externalising) at both the between and within-family levels?”

Unlike Speyer et al. (2022), who examined within-family reciprocal relations between parental distress and child mental health without considering the moderating role of poverty, our study examines how poverty impacts these reciprocal dynamics by utilizing the same UK-wide MCS sample. This study makes several novel contributions. It is the first to examine whether poverty moderates the strength of the bidirectional relations between parent and child mental health. It is also first to analyse the effect of poverty in these dynamics at the within-family level using an advanced statistical method, ALT-SR. Thus, it provides a more precise and nuanced understanding of how poverty impacts parent-child mental health interactions.

In line with the Context of Stress model (McLoyd, 1990), we hypothesise that between and within-family reciprocal relations between parental distress and child mental health will be stronger for families in poverty than families with higher income levels. In addition, as some differences in paths have been reported between boys and girls in the association between parental and child mental health (e.g. Lowthian et al., 2023; Speyer et al., 2022; Xerxa et al., 2021) models were fitted separately for both genders. However, considering the limited research available on parent-child mental health relations at the within-family level, we refrain from formulating any specific hypotheses regarding the gender of the child (Speyer et al., 2022).

Key measures of the study are parental distress, child mental health, and poverty. They were chosen based on their theoretical relevance and previous findings in the literature. Parental distress and child mental health problems, including both internalising and externalising problems, were selected based on the study by Speyer et al. (2022), which our study builds upon. Additionally, robust literature supports a significant correlation between parental and child mental health problems, further justifying our focus (e.g.,

Xerxa et al., 2021). Poverty serves as another essential measures, helping us answer our research question. It was chosen based on the Context of Stress model (McLoyd, 1990).

## Methods

### Sample

The MCS is a longitudinal cohort study conducted in the United Kingdom tracking approximately 19,000 children born during the period of 2000–2002 ([www.cls.ioe.ac.uk/mcs](http://www.cls.ioe.ac.uk/mcs)). To achieve a representative sample of the UK population, a geographically clustered sampling approach was employed, with an oversampling of families from high poverty regions, in addition to ethnic minority groups (Connelly & Platt, 2014; Hansen, 2014). To account for stratified cluster sample designs and non-random dropouts, MCS provide design and attrition weights, stratification and clustering variables. We focus on seven data collection sweeps which were conducted when the children were aged 9 months, 3, 5, 7, 11, 14 and 17 years. All children participating in the study up to the age of 17 whose families reported the poverty status of the household at 9 months of contact were included in the study ( $N = 10309$ ; females = 5161; males = 5148).

### Measures

**Child emotional and behavioural problems** The child’s internalising and externalising difficulties were measured using the parent-reported Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). The SDQ is a 25-item scale consisting of five subscales: emotional problems, pro-social behaviour, conduct problems, peer problems, and hyperactivity. The scales consist of five items, each measured on a three-point Likert-type scale of 0–2 with response options “not true”, “somewhat true”, and “definitely true”. Internalising scores were calculated by summing emotional problems and peer problems, while externalising scores were calculated by combining subscales conduct problems and hyperactivity. In order to make the SDQ more appropriate for pre-school children, three items were altered at the age 3 collection point. In the hyperactivity scale, the item “thinks things out before acting” was replaced with “can stop and think before acting”. Additionally, in the conduct scale, the item ‘Often lies or cheats’ was substituted with ‘Frequently argumentative with adults’ and the item ‘Steals from home, school, or elsewhere’ with ‘Can be spiteful to others’ (Croft et al., 2015). In a number of studies, the psychometric characteristics of the SDQ have been validated and documented (e.g. Kersten et al., 2016; Piera Pi-Sunyer et al., 2023). The SDQ subscales demonstrate invariance

longitudinally and across gender (e.g. Murray et al., 2022), ethnicity, and socioeconomic status (e.g. Toseeb et al., 2022) within the context of the MCS. Cronbach's alpha values in the analytic sample demonstrated satisfactory internal consistency across all time points, ranging from 0.60 to 0.78 for internalising problems and from 0.78 to 0.81 for externalising problems (see Online Resource Table 1).

**Parental psychological distress** The Kessler (K6) Scale (Kessler et al., 2002) was used to measure maternal and paternal depression and anxiety symptoms simultaneously with data collection waves monitoring children's mental health problems. The self-reported 6-item scale is used for screening for mental illness across a wide range of dimensions and is rated on a 5-point scale ranging from "never" to "always" (Kessler et al., 2002, 2003). Symptoms of mental health problems are assessed with questions such as "How often did you feel hopeless over the past 30 days?". Psychological distress is measured by summing the items to provide a total score (range: 0–24). The K6 has been found to be internally consistent and reliable in the study sample with Cronbach alpha coefficients ranging from 0.79 to 0.89 (e.g. Flouri et al., 2019).

**Family poverty** The MCS uses banded response questions to measure household income. Interval regression techniques have been used to impute a continuous measure of income (Stewart, 1983). These imputed incomes are equalised based on the Organisation for Economic Co-operation and Development (OECD)'s household equivalence scale (OECD, 2020), which adjusts the income measure for the household size and composition. Families were identified by the MCS team as being below the poverty threshold using a binary variable when their equalised net family income was less than 60% of national median household income when the child was 9 months old (e.g. Fitzsimonset et al., 2017).

## Statistical analysis

To examine the between and within-family processes related to maternal, paternal, and child mental health in the context of being in poverty and non-poverty, an ALT-SR multigroup analysis was conducted for boys and girls separately. The ALT-SR model combines a latent growth curve model and a cross-lagged panel model (Bollen & Zimmer, 2010). The growth curve part of the model captures between-family differences in child and parental mental health problems. The cross-lagged part is fitted to the growth curve's residuals and as such captures within-family dynamics. Specifically, an individual's "within-person" deviation from their own typical trajectory can be observed through analysing

these residuals (Curran et al., 2014; Mund & Nestler, 2019). In all models, stratification variables, clustering variables, and attrition weights were employed to address the complex sampling design and account for non-random dropouts. Models were fitted in Mplus 8.8 (Muthén & Muthén, 1998–2017) using the robust maximum likelihood estimator (MLR) which utilizes full information maximum likelihood (FIML) to account for missing data. The Tucker Lewis Index (TLI) and Comparative Fit Index (CFI) > 0.90 and Root Mean Squared Error of Approximation (RMSEA) < 0.05 were used as cut-off values to indicate acceptable model fit (Kline, 2016). To evaluate competing models in our large sample, we adhered to Cheung and Rensvold's recommendation (2002) to accept the more parsimonious model unless the CFI shows an increase of 0.01 or more in a more complex model. Mplus codes, as well as model results, are available at [https://osf.io/kmwzf/?view\\_only=99297c92f33a4d108c835ba38ef7b686](https://osf.io/kmwzf/?view_only=99297c92f33a4d108c835ba38ef7b686).

An unconstrained model was initially fitted in which parameter estimates were allowed to vary between the poverty and non-poverty groups. To test whether the between-family component of the model differed by poverty status, the unconstrained model was then compared with a constrained model, wherein intercept covariances were constrained across poverty groups. The model with superior fit was selected to test whether the within-family relationships differed across poverty. This involved comparing a model where the within-families components (both autoregressive and cross-lagged parameters) were fixed equal across poverty groups to one in which they were unconstrained.

As a sensitivity analysis to check that results were consistent across a different definition of poverty, an additional model was tested in which poverty was re-classified as chronic or non-chronic rather than only on the basis of poverty status at 9 months. Chronic poverty was defined as meeting the poverty threshold at each of the age 9 months, 3- and 5-years assessments whereas others were coded as non-chronically poor.

## Results

Descriptive statistics are provided in Online Resource Table 1, whereas correlation matrices for the non-poverty group and the poverty group are presented in Online Resource Tables 2 and 3, respectively.

### Girls subsample between-family associations

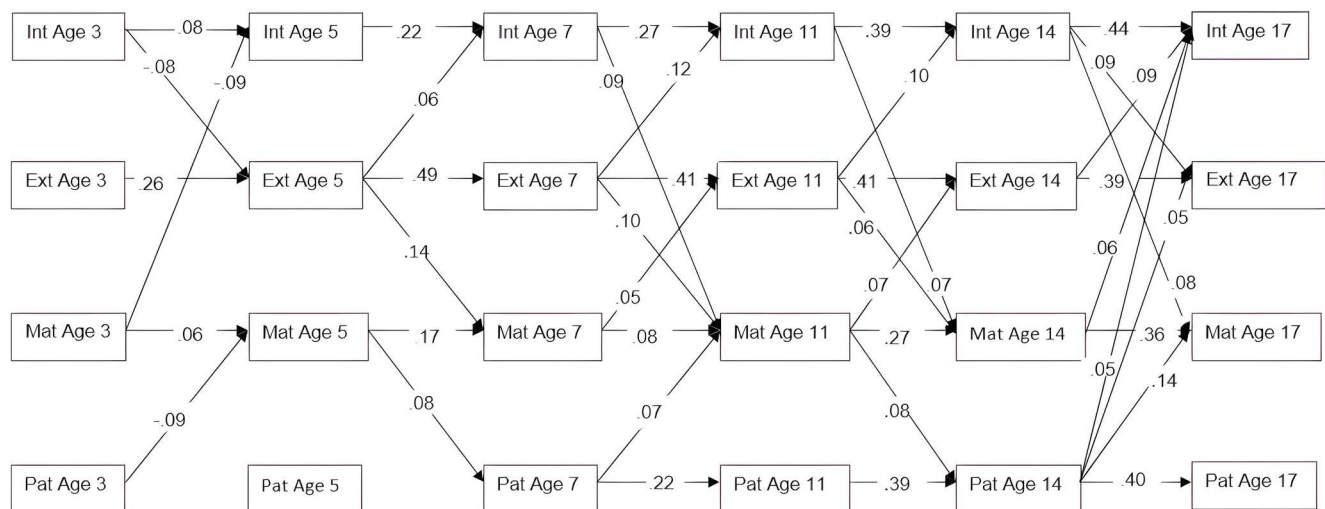
A fully unconstrained model in which parameter estimates were allowed to vary across the poverty ( $N = 1651$ ) and non-poverty ( $N = 3510$ ) groups fitted the data well ( $\chi^2 = 1558.192$ ,



**Table 1** Intercept covariances for girls in the poverty and non-poverty groups

	Non-poverty			Poverty		
	Est.	SE	<i>p</i>	Est.	SE	<i>p</i>
Internalising WITH						
Externalising	0.531***	0.031	< 0.001	0.647***	0.040	< 0.001
Maternal distress	0.474***	0.026	< 0.001	0.575***	0.036	< 0.001
Paternal distress	0.192***	0.030	< 0.001	0.294***	0.064	< 0.001
Externalising WITH						
Maternal distress	0.329***	0.027	< 0.001	0.381***	0.040	< 0.001
Paternal distress	0.099***	0.028	< 0.001	0.213**	0.066	0.001
Maternal Distress WITH						
Paternal distress	0.243***	0.027	< 0.001	0.344***	0.058	< 0.001

\*\*Correlations are significant at  $p < .01$ ; \*\*\*Correlations are significant at  $p < .001$



**Fig. 1** Multi-group ALT-SRs with unconstrained autoregressive and cross-lagged paths for girls, non-poverty group. Note: Int = internalising, Ext = externalising, Mat = maternal distress, Pat = paternal distress

$p < .001$ , CFI = 0.962, TLI = 0.933, and RMSEA = 0.039). A second model that constrained the intercept covariances to be equal across the poverty groups also fit the data well ( $\chi^2 = 1594.362$ ,  $p < .001$ , CFI = 0.961, TLI = 0.932, and RMSEA = 0.039). There was no substantial loss of fit in the constrained model ( $\Delta\text{CFI} = 0.001$ ), indicating that poverty did not moderate the between-family associations of child and parental mental health. Full results for the intercept covariances for both groups are displayed in Table 1.

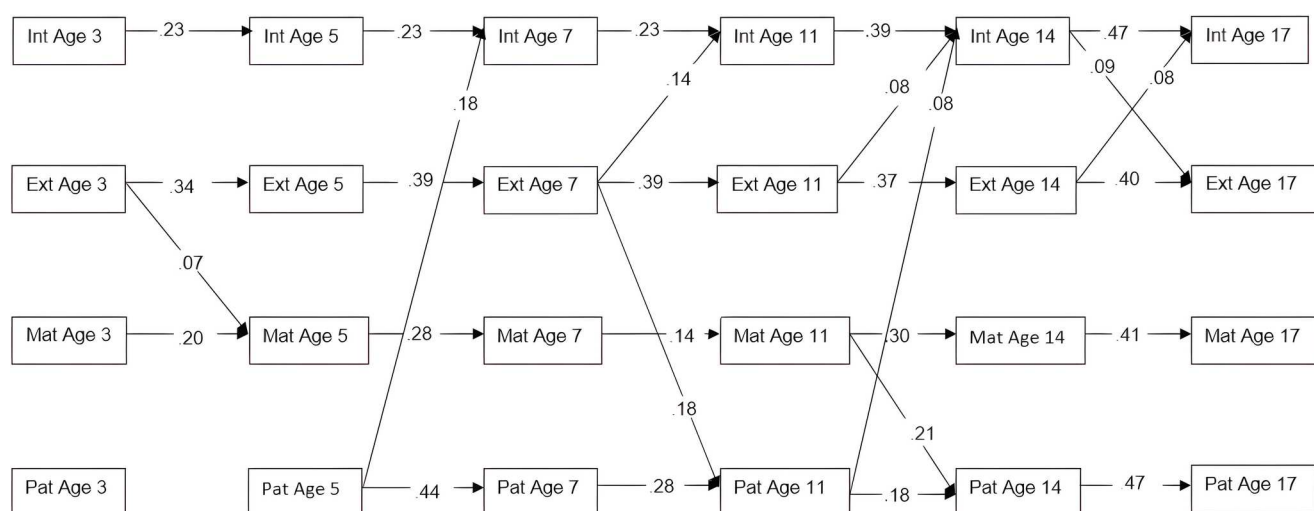
### Girls subsample within-family associations

The within-family associations were examined in the model fixing the between-family intercept covariances equal across poverty groups. Standardized significant autoregressive and cross-lagged parameters in non-poverty and poverty groups are displayed in Figs. 1 and 2, respectively.

In the non-poverty group, the only positive cross-lagged effect of maternal distress on child internalising problems was observed between the ages of 14 and 17, where higher

maternal distress was related to higher internalising problems. On the other hand, there was a negative cross lagged effect between maternal distress at age 3 and child internalising at age 5, signifying that increasing maternal distress was related to a decrease in internalising problems. In addition, there was an association between paternal distress at age 14 and increase in internalising problems at age 17. Regarding externalising problems, children aged 11 and 14 were affected by maternal distress at ages 7 and 11, respectively. In addition, paternal distress at age 14 was associated with an increase in externalising problems at age 17. Regarding the effect of child mental health on parental distress, within-family cross-lagged effects of internalising problems on increased maternal distress were found from the ages of 7 to 17. Externalising problems at ages 5, 7 and 11 were related to an increase in maternal distress at ages 7, 11 and 14, respectively. In contrast, paternal distress was not affected by children's mental health problems.

In the poverty group, an effect from parent to child, particularly where paternal distress at ages 5 and 11 was



**Fig. 2** Multi-group ALT-SRs with unconstrained autoregressive and cross-lagged paths for girls, poverty group. Note: Int = internalising, Ext = externalising, Mat = maternal distress, Pat = paternal distress.

Only paths with statistically significant results ( $p < .05$ ) are presented. Children's ages are in accordance with their respective median ages at the time of data collection

**Table 2** Intercept covariances for boys in the non-poverty and poverty groups

	Non-poverty			Poverty		
	Est.	SE	<i>p</i>	Est.	SE	<i>p</i>
Internalising WITH						
Externalising	0.526***	0.027	< 0.001	0.555***	0.040	< 0.001
Maternal distress	0.482***	0.026	< 0.001	0.515***	0.045	< 0.001
Paternal distress	0.224***	0.033	< 0.001	0.247**	0.084	0.003
Externalising WITH						
Maternal distress	0.371***	0.024	< 0.001	0.334***	0.041	< 0.001
Paternal distress	0.176***	0.030	< 0.001	0.253***	0.063	< 0.001
Maternal Distress WITH						
Paternal distress	0.209***	0.028	< 0.001	0.273***	0.067	< 0.001

\*\*Correlations are significant at  $p < .01$ ; \*\*\*Correlations are significant at  $p < .001$

associated with an increase in the child's internalising problems at ages 7 and 14 was observed, respectively. Additionally, a child-to-parent effect was also observed. Externalising behaviour at age 3 was associated with heightened maternal distress at age 5, and externalising behaviour at age 7 was associated with increased paternal distress at age 11.

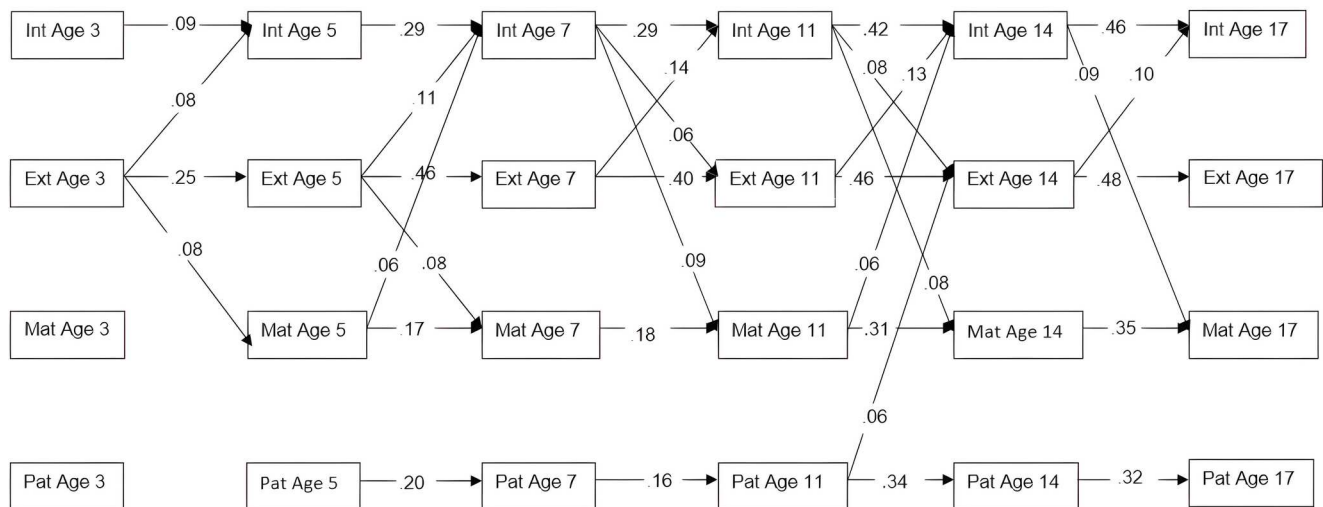
A model which additionally constrained the autoregressive and cross-lagged paths to be equal in the poverty and non-poverty groups also fit the data well ( $\chi^2 = 1687.049$ ,  $p < .001$ , CFI = .960, TLI = .945, and RMSEA = .035). Comparison of the fit indices of those models ( $\Delta\text{CFI} = 0.001$ ) shows that poverty did not moderate the within-family associations between child and parental mental health measures. Significant autoregressive and cross-lagged parameters from the constrained model are presented in Online Resource Fig. 1. Full results with confidence intervals are showing in Online Resource Tables 4, 5, 6, 7 and 8.

### Boys subsample between-family associations

A fully unconstrained model, allowing parameter estimates to vary between poverty ( $N = 1636$ ) and non-poverty ( $N = 3512$ ) groups, demonstrated a good fit to the data ( $\chi^2 = 1530.148$ ,  $p < .001$ , CFI = .965, TLI = 0.938, and RMSEA = 0.039). A second model, where the intercept covariances were constrained to be equal across the poverty groups, also showed a good fit to the data ( $\chi^2 = 1544.276$ ,  $p < .001$ , CFI = 0.965, TLI = 0.939, and RMSEA = 0.039). CFI did not differ between those models, indicating that poverty did not significantly moderate the relation between parental and child mental health between families. Full results for the intercept covariances for both groups are displayed in Table 2.

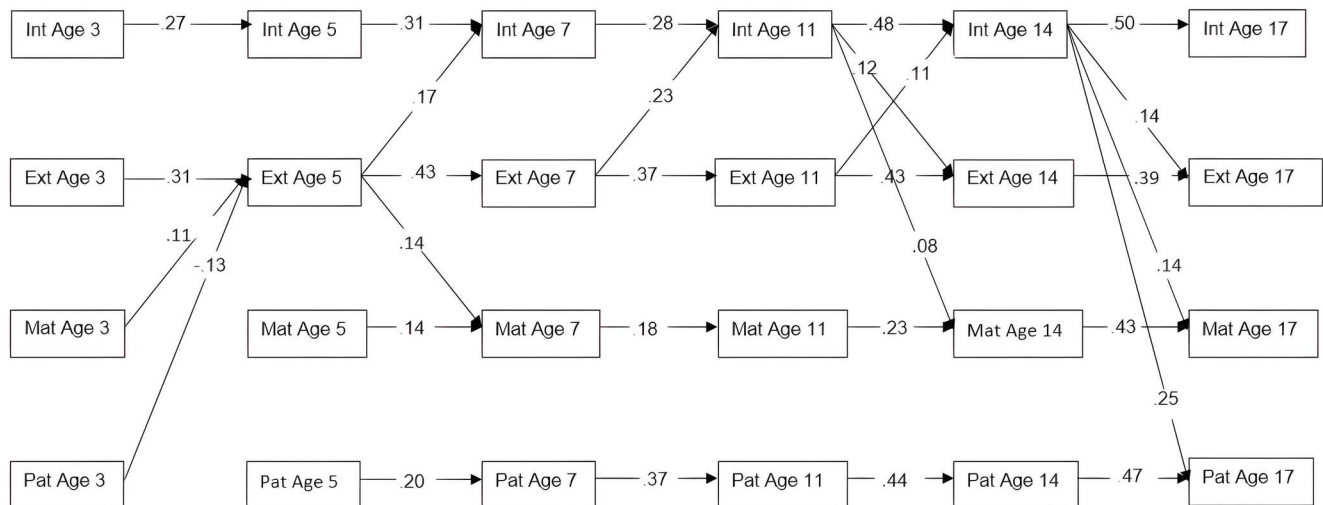
### Boys subsample within-family associations

The model, which held the between-family intercept covariances constant across poverty groups, was used to analyse



**Fig. 3** Multi-group ALT-SRs with unconstrained autoregressive and cross-lagged paths for boys, non-poverty group. Note: Int = internalising, Ext = externalising, Mat = maternal psychological distress,

Pat = paternal mental health. Only paths with statistically significant results ( $p < .05$ ) are presented. Children's ages are in accordance with their respective median ages at the time of data collection



**Fig. 4** Multi-group ALT-SRs with unconstrained autoregressive and cross-lagged paths for boys, poverty group. Note: Int = internalising, Ext = externalising, Mat = maternal psychological distress, Pat = paternal

mental health. Only paths with statistically significant results ( $p < .05$ ) are presented. Children's ages are corresponding to their respective median ages at the time of data collection

within-family associations. Figures 3 and 4 show the standardized significant autoregressive and cross-lagged parameters for non-poverty and poverty groups, respectively.

In the non-poverty group, a within-family association was found between maternal distress at ages 5 and 11 and an increase in internalising problems at ages 7 and 14, respectively. Additionally, paternal distress at age 11 was related to increased externalising problems at age 14. When examining the child-to-parent effect, internalising problems between ages 7 and 14 were consistently associated with a within-family increase in maternal distress during adolescence. In addition, externalising problems at age 3 and 5

were associated with an increase in maternal distress at age 5 and 7, respectively.

Regarding the poverty group, the cross-lagged associations between paternal distress at age 3 and externalising behaviour at age 5 were negatively correlated with each other, while maternal distress at age 3 and externalising behaviour at age 5 were positively correlated with each other. A child-to-parent effect was observed in the relation between child internalising problems at age 11 and an increase in maternal distress at age 14. Furthermore, child internalising problems at age 14 were related to increased maternal and paternal distress at age 17. Additionally, externalising problems at



age 5 were associated with increased maternal distress at age 7.

Also, a model that included additional constraints on the autoregressive and cross-lagged paths to be equal for poverty and nonpoverty groups fits the data well ( $\chi^2 = 1619.065$ ,  $p < .001$ , CFI = .965, TLI = .951, and RMSEA = .034). The model fit indices for these models indicated no differences, suggesting that poverty did not moderate the within-family associations between child and parental mental health problems. Significant constrained autoregressive and cross-lag parameters are presented in Online Resource Fig. 2. Full results with confidence intervals are shown Online Resource Tables 9, 10, 11, 12 and 13.

## Sensitivity analyses

Sensitivity analysis repeated the modelling categorising families as being in chronic poverty (between child ages 9 months and 5 years) or not rather than only defining poverty in terms of family income at 9 months. The model fixing between-family intercept covariances across poverty groups was chosen as fit indices indicated no loss of fit when compared to an unconstrained model, for boys or girls. The results were consistent with the main multigroup analyses. For females, the model that constrained within-family parameter estimates to be equal in the chronic poverty and non-chronic poverty groups fitted the data well ( $\chi^2 = 1629.477$ ,  $p < .001$ , CFI = 0.949, TLI = 0.929, RMSEA = 0.037), with fit statistics similar to the unconstrained model ( $\chi^2 = 1569.072$ ,  $p < .001$ , CFI = 0.948, TLI = .910 and RMSEA = 0.042). Competing models did not show a substantial loss of fit ( $\Delta\text{CFI} = 0.001$ ), indicating that being in chronically poverty was not a moderator.

The pattern was similar in males. Both unconstrained and constrained models fit the data well. Model fit for the unconstrained model was  $\chi^2 = 1327.153$ ,  $p < .001$ , CFI = 0.958, TLI = 0.927 and RMSEA = 0.038, while model fit for the constrained model was  $\chi^2 = 1427.570$ ,  $p < .001$ , CFI = 0.957, TLI = 0.941 and RMSEA = 0.034. A substantial loss of fit was not observed ( $\Delta\text{CFI} = 0.001$ ), indicating that chronic poverty status did not moderate the within-family relation between parental and child mental health problems.

## Discussion

This is the first study to explicitly compare within-family relations between parental and child mental health difficulties between families in poverty and non-poverty, using a large nationally representative sample. As the study built on an ALT-SR model, a statistical design that provides

more direct understanding into within-family dynamics, it was possible to make more robust conclusions compared to traditional cross-lagged model that conflate within- and between-family effects (Hamaker et al., 2015).

This study examined whether the strength of the between and within-family relations between parental and child mental health throughout child and adolescent development differ between families living in poverty and those that are not living in poverty. We hypothesised that there would be a stronger association for families living in poverty on the basis of the Context of Stress model (McLoyd, 1990). However, we found no difference between the groups in terms of the strength of parent-child mental health relations. This was found when poverty was based on family circumstances when the child was aged 9 months and in our sensitivity analysis where poverty was defined in terms of chronic poverty, and non-chronic poverty.

In the poverty group, we expected to observe stronger cross-lagged relations than in the non-poverty group at the within-family level. Not only were the differences between poverty groups non-significant; inspection of the coefficients in the unconstrained model showed that the pattern of results was opposite to our prediction, further emphasising the incompatibility of the results with our hypothesis. The results of our study also did not indicate any differences between the poverty groups at the between-family level. These results are contrary to McLoyd's (1990) Context of Stress framework that suggests that financial hardship depletes the resources of individuals to cope with other difficulties in their lives. In addition, our results are inconsistent with the results of the meta-analysis presented by Goodman et al. (2011) showing that the effect sizes of the relations between maternal depression and child mental health problems are larger in low-income families. The results are also not consistent with previous longitudinal research examining poverty moderation between risk stressors and child mental health problems as well (e.g. Chai & Schieman, 2022; Dearing et al., 2006).

A number of reasons may account for the differences between our results and the findings of previous studies. Using a study design that differentiates within and between person differences, we applied a rigorous methodological approach. This may explain the difference between our results and Goodman et al.'s (2011) meta-analysis, which contains a large number of cross-sectional studies. In addition, while some studies that have examined moderation of environmental risk factors for child mental health by family poverty using longitudinal designs, they have not focused on parental mental health problems as a risk factor focusing instead on other stressors such as work – family conflict (e.g. Chai & Schieman, 2022). The distinction between studies concentrating on other stressors and our research

may arise from the more chronic and stable nature of parental mental health problems. Mental health issues often persist over time (Ravens-Sieberer et al., 2015), leading to a more direct and consistent impact on child mental health through diminished emotional availability (Curran, 2016) and reduced capacity for supportive parenting (Elgar et al., 2007). In contrast, stressors like work – family conflict may be more dynamic, fluctuating in response to external factors like poverty, where limited resources exacerbate the challenges of balancing work and family demands (Allen et al., 2019).

Our results, which indicate no significant difference in the strength of parent-child mental health relations between families in poverty and non-poverty at both within- and between family level, indicate robustness of within-family dynamics across socioeconomic contexts. The findings of this study challenge models indicating poverty exacerbates the effects of parental distress on the mental health of children, such as the Context of Stress model (McLoyd, 1990). If these findings replicate, then it may lead to a re-evaluation of theoretical frameworks that emphasize such roles for poverty in magnifying the effects of risk factors, such as parental mental health problems, on mental health problems of children.

Additionally, if the effect of parental distress is consistent irrespective of income level, then this has implications for intervention targeting. Specifically, it would provide a stronger basis for targeting child mental health problems across all socioeconomic strata. Nevertheless, it is important to note that even if children in poverty are not more sensitive to the changes in their parents' mental health problems, it is well-documented that the prevalence of mental health problems is higher in low SES contexts (Brooks-Gunn & Duncan, 1997) and the level of parental distress is also higher in families with low incomes (Early Head Start Research and Evaluation Project, 2006). Therefore, it will still be important to prioritize that group when conducting prevention and treatment efforts.

The study has a number of strengths, such as a statistical approach that disentangles between- family effects from within-family effects, and a large representative sample of the population and an examination of children over an extended developmental span. However, some limitations of our study must be considered. It is important to note that while ALT-SR models control for stable differences in mental health problems between families, they are susceptible to time-varying confounds such as daily stressors. It should also be noted that poverty is a time-varying factor. Our main analyses were based only on poverty at age 9. In addition, using an income threshold to define families as either in poverty or not presents another limitation. Families above and below the threshold may be experiencing similar

levels of financial stress, resulting in an insensitive measure of socioeconomic stress. Our sensitivity analyses, which measured chronic poverty from early childhood through to age 5, aimed to mitigate this limitation by capturing the effects of sustained financial hardship. Self-reported income may also be influenced by measurement error. However, response bias and random error were found to be quite low in a review of self-reported income measures (Moore & Welniak, 2000). Lastly, a potential issue is common method variance. Children's problems were rated by their parents, and parents who are in distress may inflate the level of their children's behavioural and emotional problems (Kroes et al., 2003). Work involving multiple raters will be required to investigate this possibility.

Since this study is the first to examine the role of poverty in the relationship between parental distress and child mental health at the within-family level, replicating the results across a variety of populations and settings will assist in validating and expanding these findings, assuring the generalizability of the findings and their relevance in different cultural and socioeconomic contexts. We also recommend that future research explores other potential moderators that may influence the relationship between parental distress and mental health in children (e.g., social support, neighbourhood environment).

## Conclusion

In conclusion, our study does not support the Context of Stress model regarding the moderating effect of poverty on the relationship between parental distress and children's mental health at both within- and between family levels. Longitudinal studies examining the moderating effect of poverty on links between familial risk factors and child mental health problems has identified a moderating role for poverty. However, these studies did not examine the risk factor of parental mental health with the exception of Goodman et al.'s (2011) study which was limited by cross-sectional data. Our findings from a large scale longitudinal study indicated that the relationships between parental and child mental health did not differ across poverty levels.

Our study, unlike previous research, examines how poverty influences the mental health of both parents and children at the within-family level, which offers a more nuanced understanding of poverty's impact on mental health in families. By doing so, our findings provide further impetus for researchers to examine the moderating effects of poverty on risk factors for child mental health problems using within-family designs, thereby contributing to the development of more effective interventions for mental health issues among children.

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**Data availability** The datasets from the Millennium Cohort Study utilized in this study are accessible through the UK Data Service under standard conditions (<https://beta.ukdataservice.ac.uk/datacatalogue/series/series?id=2000031>).

## Declarations

**Ethical approval** A secondary analysis of the MCS dataset was conducted in the present study. All sweeps received ethical approval from the UK National Health Service Research Ethics Committee. Ethical approval references for the MCS are MREC/01/6/19; MREC/03/2/022; 05/MRE02/46; 07/MRE03/32; 11/YH/0203; 13/LO/1786; 17/NE/0341 for each sweep from 1 to 7, respectively. The data were retrieved for research purposes from the UK Data Archive on December 7, 2021. The writers are not permitted to have access to any information that could potentially identify individual participants during and after the data collection process. For the information concerning the ethical process of the MCS in detail, see <https://cls.ucl.ac.uk/wp-content/uploads/2017/07/MCS-Ethical-Approval-and-Consent-2019.pdf>.

**Consent to participate** Parents provided written informed consent.

**Competing interests** The authors have declared that no competing interests exist.

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## References

- Allen, T. D., French, K. A., Braun, M. T., & Fletcher, K. (2019). The passage of time in work-family research: Toward a more dynamic perspective. *Journal of Vocational Behavior*, 110, 245–257. <https://doi.org/10.1016/j.jvb.2018.11.013>
- Bollen, K. A., & Zimmer, C. (2010). An overview of the autoregressive latent trajectory (ALT) model. In van K. Montfort, J. Oud, & A. Satorra (Eds.), *Longitudinal research with latent variables* (pp. 153–176). Springer.
- Brooks-Gunn, J., & Duncan, G. J. (1997). The effects of poverty on children. *The Future of Children*, 7(2), 55–71. <https://doi.org/10.2307/1602387>
- Chai, L., & Schieman, S. (2022). Work-to-family conflict and children's problems with school, friends, and health: Household economic conditions and couple relationship quality as contingencies. *Journal of Family Issues*, 43(6), 1555–1578. <https://doi.org/10.1177/0192513X211026953>
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9(2), 233–255. [https://doi.org/10.1207/S15328007SEM0902\\_5](https://doi.org/10.1207/S15328007SEM0902_5)
- Conger, K. J., Rueter, M. A., & Conger, R. D. (2000). The role of economic pressure in the lives of parents and their adolescents: The family stress model. In L. J. Crockett, & R. K. Silbereisen (Eds.), *Negotiating adolescence in times of social change* (pp. 201–223). Cambridge University Press.
- Connelly, R., & Platt, L. (2014). Cohort profile: UK millennium cohort study (MSC). *International Journal of Epidemiology*, 43(6), 1719–1725. <https://doi.org/10.1093/ije/dyu001>
- Croft, S., Stride, C., Maughan, B., & Rowe, R. (2015). Validity of the strengths and difficulties questionnaire in preschool-aged children. *Pediatrics (Evanston)*, 135(5), e1210–e1219. <https://doi.org/10.1542/peds.2014-2920>
- Curran, T. (2016). Emotional availability and social skills: A link between mother-child depressive symptoms. *Interpersona: An International Journal on Personal Relationships*, 10(2), 149–160. <https://doi.org/10.5964/ijpr.v10i2.211>
- Curran, P. J., Howard, A. L., Bainter, S. A., Lane, S. T., & McGinley, J. S. (2014). The separation of between-person and within-person components of individual change over time: A latent curve model with structured residuals. *Journal of Consulting and Clinical Psychology*, 82(5), 879–894. <https://doi.org/10.1037/a0035297>
- Dearing, E., McCartney, K., & Taylor, B. A. (2006). Within-child associations between family income and externalizing and internalizing problems. *Developmental Psychology*, 42(2), 237–252. <https://doi.org/10.1037/0012-1649.42.2.237>
- DesRoches, D., Mattheisen, M., Plessen, K. J., Pagsberg, A. K., Marin-Dragu, S., Orr, M., & Meier, S. M. (2023). The impact of parental mental health diagnoses, trauma, and coping mechanisms on their children's well-being. *Child Psychiatry and Human Development*. <https://doi.org/10.1007/s10578-023-01626-6>
- Early Head Start Research and Evaluation Project. (2006). *Depression in the lives of early head start families: Research to practice brief*. Retrieved May 4, 2025, from [https://acf.gov/sites/default/files/documents/opre/research\\_brief\\_depression.pdf](https://acf.gov/sites/default/files/documents/opre/research_brief_depression.pdf)
- Elgar, F. J., Mills, R. S. L., McGrath, P. J., Waschbusch, D. A., & Brownridge, D. A. (2007). Maternal and paternal depressive symptoms and child maladjustment: The mediating role of parental behavior. *Journal of Abnormal Child Psychology*, 35, 943–955.
- Evans, G. W., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives*, 7(1), 43–48. <https://doi.org/10.1111/cdep.12013>

- Fitzsimons, E., Goodman, A., Kelly, E., & Smith, J. P. (2017). Poverty dynamics and parental mental health: Determinants of childhood mental health in the UK. *Social Science & Medicine*, 175, 43–51. <https://doi.org/10.1016/j.socscimed.2016.12.040>
- Flouri, E., Sarmadi, Z., & Francesconi, M. (2019). Paternal psychological distress and child problem behavior from early childhood to middle adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, 58(4), 453–458.
- Gollob, H. F., & Reichardt, C. S. (1987). Taking account of time lags in causal models. *Child Development*, 58(1), 80–92. <https://doi.org/10.2307/1130293>
- Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38(5), 581–586. <https://doi.org/10.1111/j.1469-7610.1997.tb01545.x>
- Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. *Clinical Child and Family Psychology Review*, 14(1), 1–27. <https://doi.org/10.1007/s10567-010-0080-1>
- Hamaker, E. L., Kuiper, R. M., & Grasman, R. P. P. (2015). A critique of the cross-lagged panel model. *Psychological Methods*, 20(1), 102–116. <https://doi.org/10.1037/a0038889>
- Hansen, K. (2014). *Millennium Cohort Study: A guide to the datasets (Eighth Edition) first, second, third, fourth and fifth surveys*. Centre for Longitudinal Studies. Retrieved April 20, 2021, from <http://cls.ucl.ac.uk/wp-content/uploads/2017/07/MCS-Guide-to-the-Datasets-022014.pdf>
- Hong, R. Y., Ding, X. P., Chan, K. M. Y., & Yeung, W. J. J. (2024). The influence of socio-economic status on child temperament and psychological symptom profiles. *The British Journal of Psychology*. <https://doi.org/10.1111/bjop.12701>
- Keijsers, L. (2016). Parental monitoring and adolescent problem behaviors. *International Journal of Behavioral Development*, 40(3), 271–281. <https://doi.org/10.1177/0165025415592515>
- Kersten, P., Czuba, K., McPherson, K., Dudley, M., Elder, H., Tauroa, R., & Vandal, A. (2016). A systematic review of evidence for the psychometric properties of the strengths and difficulties questionnaire. *International Journal of Behavioral Development*, 40(1), 64–75. <https://doi.org/10.1177/0165025415570647>
- Kessler, R., Andrews, G., Colpe, L., Hiripi, E., Mroczek, D., Normand, S., Walters, E., & Zaslavsky, A. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32(6), 959–976. <https://doi.org/10.1017/S0033291702006074>
- Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S. L. T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry*, 60(2), 184–189. <https://doi.org/10.1001/archpsyc.60.2.184>
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). The Guilford Press.
- Kroes, G., Veerman, J. W., & De Bruyn, E. E. J. (2003). Bias in parental reports? Maternal psychopathology and the reporting of problem behavior in clinic-referred children. *European Journal of Psychological Assessment: Official Organ of the European Association of Psychological Assessment*, 19(3), 195–203. <https://doi.org/10.1027/1015-5759.19.3.195>
- Langrock, A., Compas, B., Keller, G., Merchant, M., & Copeland, M. (2002). Coping with the stress of parental depression: Parents' reports of children's coping, emotional, and behavioral problems. *Journal of Clinical Child and Adolescent Psychology*, 31(3), 312–324. <https://doi.org/10.1207/153744202760082577>
- Lemstra, M., Neudorf, C., D'Arcy, C., Kunst, A., Warren, L. M., & Bennett, N. R. (2008). A systematic review of depressed mood and anxiety by SES in youth aged 10–15 years. *Canadian Journal of Public Health*, 99(2), 125–129. <https://doi.org/10.1007/BF03405459>
- Lowthian, E., Bedston, S., Kristensen, S. M., Akbari, A., Fry, R., Huxley, K., Johnson, R., Kim, H. S., Owen, R. K., Taylor, C., & Griffiths, L. (2023). Maternal mental health and children's problem behaviours: A bi-directional relationship? *Research on Child and Adolescent Psychopathology*, 51(11), 1611–1626. <https://doi.org/10.1007/s10802-023-01086-5>
- Masarik, A. S., & Conger, R. D. (2017). Stress and child development: A review of the family stress model. *Current Opinion in Psychology*, 13, 85–90. <https://doi.org/10.1016/j.copsyc.2016.05.008>
- McLoyd, V. C. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Development*, 61(2), 311–346. <https://doi.org/10.2307/1131096>
- Moore, J. C., & Welniak, E. J. (2000). Income measurement error in surveys: A review. *Journal of Official Statistics*, 16(4), 331.
- Mund, M., & Nestler, S. (2019). Beyond the cross-lagged panel model: Next-generation statistical tools for analyzing interdependencies across the life course. *Advances in Life Course Research*, 41, 100249. <https://doi.org/10.1016/j.alcr.2018.10.002>
- Murray, A. L., Speyer, L. G., Hall, H. A., Valdebenito, S., & Hughes, C. (2022). A longitudinal and gender invariance analysis of the strengths and difficulties questionnaire across ages 3, 5, 7, 11, 14, and 17 in a large U.K.-representative sample. *Assessment (Odessa Fla)*, 29(6), 1248–1261. <https://doi.org/10.1177/10731911211009312>
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.) Muthén & Muthén.
- OECD (2020). *Compare your income—Methodology and conceptual issues*. Retrived March 12, 2022, from <https://www.oecd.org/statistics/Compare-your-income-methodology.pdf>
- Piera Pi-Sunyer, B., Andrews, J. L., Orben, A., Speyer, L. G., & Blake-more, S. (2023). The relationship between perceived income inequality, adverse mental health and interpersonal difficulties in UK adolescents. *Journal of Child Psychology and Psychiatry*, 64(3), 417–425. <https://doi.org/10.1111/jcpp.13719>
- Piotrowska, P. J., Stride, C. B., Croft, S. E., & Rowe, R. (2015). Socio-economic status and antisocial behaviour among children and adolescents: A systematic review and meta-analysis. *Clinical Psychology Review*, 35, 47–55. <https://doi.org/10.1016/j.cpr.2014.11.003>
- Piotrowska, P. J., Stride, C. B., Maughan, B., Ford, T., McIntyre, N. A., & Rowe, R. (2023). Understanding the relationship between family income and conduct problems: Findings from the mental health of children and young people survey. *Psychological Medicine*, 53(9), 3987–3994. <https://doi.org/10.1017/S0033291722000654>
- Ravens-Sieberer, U., Otto, C., Kriston, L., Rothenberger, A., Döpfner, M., Herpertz-Dahlmann, B., Barkmann, C., Schön, G., Hölling, H., Schulte-Markwort, M., & Klasen, F. (2015). The longitudinal BELLA study: Design, methods and first results on the course of mental health problems. *European Child & Adolescent Psychiatry*, 24(6), 651–663. <https://doi.org/10.1007/s00787-014-0638-4>
- Ryan, R. M., Claessens, A., & Markowitz, A. J. (2015). Associations between family structure change and child behavior problems: The moderating effect of family income. *Child Development*, 86(1), 112–127. <https://doi.org/10.1111/cdev.12283>
- Shaari, M. S., Nasir, N. M., Harun, N. H., Muhsain, S. N. F., & Ridzuan, A. R. (2023). Exploring the relationship between tertiary education and child maltreatment: An ARDL analysis. *Journal of Human Earth and Future*, 4(1), 10–22. <https://doi.org/10.28991/HEF-2022-03-04-05>
- Speyer, L. G., Hall, H. A., Hang, Y., Hughes, C., & Murray, A. L. (2022). Within-family relations of mental health problems across



- childhood and adolescence. *Journal of Child Psychology and Psychiatry*. <https://doi.org/10.1111/jcpp.13572>
- Stewart, M. B. (1983). On least squares Estimation when the dependent variable is grouped. *The Review of Economic Studies*, 50(4), 737–753. <https://doi.org/10.2307/2297773>
- Toseeb, U., Oginni, O., Rowe, R., & Patalay, P. (2022). Measurement invariance of the strengths and difficulties questionnaire across socioeconomic status and ethnicity from ages 3 to 17 years: A population cohort study. *Plos One*, 17(12), e0278385. <https://doi.org/10.1371/journal.pone.0278385>
- Treanor, M., & Troncoso, P. (2023). The indivisibility of parental and child mental health and why poverty matters. *Journal of Adolescent Health*, 73(3), 470–477. <https://doi.org/10.1016/j.jadohealth.2023.04.012>
- Wadsworth, M. E., Raviv, T., Compas, B. E., & Connor-Smith, J. K. (2005). Parent and adolescent responses to poverty-related stress: Tests of mediated and moderated coping models. *Journal of Child and Family Studies*, 14(2), 283–298. <https://doi.org/10.1007/s10826-005-5056-2>
- Wadsworth, M. E., Raviv, T., Santiago, C. D., & Etter, E. M. (2011). Testing the adaptation to poverty-related stress model: Predicting psychopathology symptoms in families facing economic hardship. *Journal of Clinical Child and Adolescent Psychology*, 40(4), 646–657. <https://doi.org/10.1080/15374416.2011.581622>
- Xerxa, Y., Rescorla, L. A., Ende, J., Hillegers, M. H. J., Verhulst, F. C., & Tiemeier, H. (2021). From parent to child to parent: Associations between parent and offspring psychopathology. *Child Development*, 92(1), 291–307. <https://doi.org/10.1111/cdev.13402>

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