Socio-Demographic Differences in the Relationship between Parents' Work-Family Conflict and Children's Mental Health in Australia

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Abstract

Parents' work is a social determinant of children's development. Recent labour market trends are associated with work-family conflict (WFC), which may disproportionately impact some groups. This study investigates the relationship between mothers' WFC and children's mental health and behaviour as they age. It explores differences by mothers' partner status, household financial hardship and fathers' WFC in dual earning families using Australian panel data and mixed-effects multi-level modelling. Results suggest higher maternal WFC is problematic for children of both single and dual earner mothers, but adolescents in single mother homes are particularly vulnerable. In dual earner homes, financial hardship influences how mothers' and fathers' WFC, and the interaction between them, affect children. In dual earner households not experiencing financial hardship, low maternal and low paternal WFC is linked to fewer problems for children as they age; however, in households experiencing hardship, this combination is associated with an upward trajectory of difficulties.

Parents' work-family conflict can have negative implications for parental mental health and behaviour and family functioning. Given the importance of the family and home environment in children's development, it follows that parents' experiences of work-family conflict may impact on children. Furthermore, socio-demographic characteristics may influence how work-family conflict is related to children's socio-emotional development. Some children may be at greater risk of negative impacts because their parents are more likely to experience difficulties managing work and family. Additionally, the strength of the relationship between the work-family interface and children's outcomes may be influenced by socio-demographic characteristics.

In this paper I investigate the relationship between mothers' work-family conflict and children's mental health and behaviour as they age and explore differences by mothers' partner status and household financial hardship. In dual earning couple families, the role of fathers' work-family conflict in moderating the impact of maternal work-family conflict is explored. I find there are differences in the relationship between maternal work-family conflict and children's difficulties by mothers' partner status, while further differences by financial hardship are not statistically significant. In dual earner homes, there are socio-economic differences in the interrelationship between mothers' and fathers' work-family conflict.

Work-family conflict and children's socio-emotional development

Understanding the factors associated with children's wellbeing is important. Emotional and behavioural problems in childhood are related to psychological, social and economic outcomes in adulthood (Heckman et al. 2006, Repetti 2005). For parents, family and work are interconnected domains, and parental work can influence child wellbeing (Bronfenbrenner & Crouter 1982). While parental employment can positively influence families and children, recent instability in the labour market is at odds with strategies to reconcile work and family, and might be detrimental to children's well-being (Breevart & Bakker 2012, Organisation for Economic Co-operation and Development (OECD) 2012). The rise in dual-earner and sole-parent households means balancing paid work and family commitments is an issue for almost all parents, and a source of stress for both mothers and fathers (Adema & Whiteford 2008); but some workers may be more disadvantaged in negotiating the changing labour market circumstances than others (Edgell et al. 2012). Lone parents and parents of lower socio-economic position are more likely to have poorer employment circumstances than other parents and the household context may make the impact of these conditions worse for both parents and their children (Strazdins et al. 2011).

Parents' work conditions may influence their mental health and parenting behaviour (Butterworth et al. 2011, Golden et al. 2013, Marshall et al. 2009, Tanaka & Waldfogel 2007, Usdansky et al. 2011), which have influences on children's development (Chee et al. 2009). A key mediator in the relationship between poor work conditions, parents' health and children's wellbeing is

the parental experience of work-family conflict, which occurs when parents experience difficulties managing the work-family interface. Work–family conflict occurs when an individual has to perform multiple roles (Greenhaus & Beutell 1985) and refers to the challenges posed by juggling these role demands (Westrupp et al. 2016). Work-family conflict links the labour market to parents, family life and children's home environments. Work-family conflict can drain energy and time, resulting in psychological overload and strain (Cooklin et al. 2015), which can affect overall happiness and wellbeing (Aryee, 1992, Frone et al. 1992, Higgins and Duxbury 1992). It influences psychological distress, family and parenting satisfaction and family functioning (Berryhill & Durtschi 2017, Cooklin et al. 2016a, Cooklin et al. 2016b, Marshall et al. 2009, Westrupp et al. 2016) which can then lead to poor outcomes for children (Hart & Kelley 2006, Strazdins et al. 2013, Watkins et al. 2013).

While previous research implicates the role of work-family conflict, and its outcomes, in influencing children's wellbeing, there is a relatively small body of research empirically linking work-family conflict to children's development. Additionally, the consequences of work-family conflict for children in vulnerable families are not clear. The following section discusses the literature that does exist.

Dual earner families

A limited number of studies have shown children of parents who experience higher levels of work-family conflict generally have a higher likelihood of experiencing emotional and behavioural problems. While maternal employment and work stress has been a focus of research, the importance of fathers is being increasingly recognised (Parkes et al. 2017). A number of studies have investigated the role of both mothers' and fathers' work-family conflict in dual earner families. Hart and Kelley (2006) found mothers' work-family conflict predicted children's socio-emotional and behavioural difficulties in children aged one to four years old. In this sample of dual earner families, fathers' work-family conflict was not related to children's behaviour. In a different context, Matias et al. (2017) focused on dual earner parents of preschool aged children in Portugal, and found both parents work-family conflict to be indirectly related to children's skills in emotional regulation.

In cross-sectional Australian research also concentrating on dual-earner families, Strazdins et al. (2013) found both mothers' and fathers' work-family conflict was associated with difficulties in children aged four to five years old. Additionally, Strazdins et al. found mothers' and fathers' work-family conflict may combine to affect child mental health. Compared with children where neither parent reported strain, poorer child mental health was observed when mothers experienced high conflict, and this worsened when fathers also reported high conflict. In longitudinal Australian research with children aged from four to five years old to 12 to 13 years old, Dinh et al. (2017) found there were linkages between both mothers' and fathers' work-family conflict and child wellbeing.

Building on Strazdins et al., Dinh et al. also found that when mothers and fathers both report work-family conflict, children are at a higher risk of poorer mental health beyond the early years.

Socio-demographic differences

As noted by Berryhill and Durtschi (2017), the work-family conflict literature has focused on dual earner couples, however single mothers are more likely to experience challenges integrating work and family, which may impact on children. The research that focuses on single mothers is limited and studies often do not compare the results with mothers in dual earner couples. For example, Dockery et al. (2016) found work-family conflict mediated the association between parents' non-standard work schedules and adolescent children's mental health, but the study focused only on sole-parent families. McLoyd et al. (2008) included comparison groups and examined differences by family structure in the relationship between maternal work-family conflict and children's difficulties. In their sample of African American families with children aged 10 to 12 years old, work-family conflict was only related to children's behaviour for single mothers, but not married or cohabiting mothers. Research by Peng (2017) suggests the pathway from work-family conflict to children's behaviour may differ for single and partnered mothers, however this study focused only on externalising behaviour in adolescents.

As with family structure, examination of socio-economic differences is limited and further research is needed. Financial difficulties may compound the effects of work-family conflict on children because parents may not have the resources to mitigate deleterious effects (Strazdins et al. 2013). While Morris (2004) focused on a sample of low income women with children aged two to four years old and found maternal work-family conflict to predict children's behaviour problems, differences by marital status and the scale of financial difficulties were not analysed. In Australia, Strazdins et al. examined whether family socio-economic position (calculated by combining parent educational attainment, household income and occupational status) moderated the relationship between parental work-family conflict and children's socio-emotional and behavioural difficulties. They found there was no interaction between family socio-economic position and work-family conflict in the effect on child difficulties in dual earner families with children aged four to five; however the authors also examined work-family facilitation and found children in less advantaged families show the greatest benefit when mothers' and fathers' experience their jobs as rewarding and supportive. More research is needed to understand whether work-family conflict affects children in households with limited financial resources and whether the association exists across childhood.

Developmental differences

The relationship between work stress and children's behaviour may change as the child ages, as suggested by attachment theory (Howes et al. 1998). Younger children, dependent on parents, may be particularly affected, and the relationship may weaken as they are exposed to influences outside the

family. On the other hand, older children may be more aware of parental stress and at greater risk of its impacts (Lam et al. 2018).

The studies reviewed in the preceding sections include children aged in early childhood through to adolescence. While some investigate longitudinal associations, most studies focus on children in particular age groups in cross-sectional studies, with many focusing on preschool aged children. In the literature reviewed above, in dual earner families, mothers' work-family conflict was related to children's difficulties at ages one to four, preschool age, and middle childhood to early adolescence; however, one study did not find an association in children aged 10 to 12. In dual earner families, fathers' work-family conflict was not related to children's difficulties at ages one to four, but was found to be related at preschool age and middle childhood to early adolescence. In single mother families, mothers' work-family conflict was found to be related to children's difficulties at ages 10 to 12 and in adolescence.

The reviewed studies provide an incomplete picture of the relationship between parental work-family conflict and children's socio-emotional and behavioural development, particularly with regards to socio-demographic differences. While Dinh et al. (2017) examined how changes in work-family conflict relate to changes in children's difficulties over childhood, variation in the effect of work-family conflict by children's age was not examined. Lund (2012) however, examined the nature of the relationship between maternal work-family conflict and children's socio-emotional problems from birth to early adolescence in a North American study using growth curve analyses. While a relationship with the level of children's problems was found, such that children of mothers with higher conflict had more problems, there was no association between maternal work-family conflict and the rate of change in children's problems as they aged. Further research is needed to confirm these findings in other contexts.

This paper

The preceding literature review provides some evidence that mothers' and fathers' work-family conflict is linked to children's socio-emotional and behavioural difficulties at various times across childhood. Vulnerable children may be disproportionately affected by parental work stress, however, the literature is weak with respect to its investigation of socio-demographic differences in the relationship between work-family conflict and children's difficulties across childhood. The impact of socio-demographic differences in the relationship between work-family conflict and children's development requires further research. Investigation is needed into whether the socio-emotional development of children in less advantaged families is more affected by their parents' experiences of combining work and family. In this paper I aim to address some of the deficiencies in the literature by examining children of both single and partnered mothers, comparing the effects of mothers and

fathers in dual-earning households, looking at differences by financial hardship and examining the relationships from early childhood to adolescence.

The following research questions are addressed.

1. How does the relationship between maternal work-family conflict and children's socio-emotional and behavioural development differ between children of single mothers and mothers in dual-earning households, and is there further variation by financial hardship?
2. How does fathers' work-family conflict affect the relationship between mothers' work-family conflict and children's socio-emotional and behavioural development in dual-earner households, and is there variation by financial hardship?

Data and method

The data source is Waves 1 to 6 of *Growing Up in Australia: the Longitudinal Study of Australian Children* (LSAC). The association between parental work-family conflict and children's wellbeing is estimated using mixed effects multi-level models. Further details are provided below.

Data

LSAC is a large scale, nationally representative Australian study of children and families that follows the experiences and wellbeing of two cohorts of children and their families, from infancy to adolescence. LSAC obtains the perspectives of mothers and fathers, and collects information on a broad range of influences on child and family wellbeing. The children in the LSAC were aged zero to one years (the B cohort) and four to five years (the K cohort) at the first wave of the study in 2004. Around 5,000 children in each cohort participated in Wave 1. The families are visited once every two years when they are interviewed and direct observations and assessments are conducted (Australian Institute of Family Studies 2015). Two-year lags allow sufficient time for developments, either within the family, or the workplace to occur (Cooklin et al. 2016b). In 2016 to 2018, when the analyses for this paper were conducted, there were six waves of data available, with approximately three quarters of the original participants retained in the study. In Wave 6 the B cohort were 10 to11 years and the K cohort were 14 to15 years old. The analyses in this study are based on child and parent data from both cohorts over child ages four to 15. Table 1 shows how many children participated in the study by cohort, age group and sex. This study is based on an unbalanced panel. There are 40,143 child-year observations for the outcome measure. After accounting for sample loss due to the exclusion of children of parents who are not working, the primary analytic sample is 27,744 child-year observations.

Table 1 Number of children in LSAC by age, sex and cohort

Age	B cohort		K cohort		Total
	Boys	Girls	Boys	Girls	
0-1	2,608	2,499	-	-	5,107
2-3	2,349	2,257	-	-	4,606
4-5	2,251	2,135	2,536	2,447	9,369
6-7	2,187	2,055	2,276	2,188	8,706
8-9	2,096	1,989	2,211	2,120	8,416
10-11	1,929	1,835	2,132	2,037	7,933
12-13	-	-	2,020	1,936	3,956
14-15	-	-	1,798	1,739	3,537
Total child year observations	*13,420*	*12,770*	*12,973*	*12,467*	*51,630*

Source: Author's calculations based on LSAC Wave 6 data release.

Measures

Dependent variable: children's socio-emotional and behavioural problems

In this paper children's mental health is assessed by variables measuring their socio-emotional and behavioural development. From the age of four, children's socio-emotional and behavioural outcomes were measured at each wave of LSAC using the Strengths and Difficulties Questionnaire (SDQ). The SDQ can be completed by parents and teachers of children aged four to 16 and by youth aged 11 to 16 (Goodman et al. 2010). These analyses utilise the SDQ data provided by the parent who knows the child best (usually the mother), as there are higher rates of missing data for the teacher reports.

I have used the total score, which combines emotional, peer, conduct and hyperactivity problems. Emotional problems include things such as feeling depressed or worried. Peer problems include having few friends and tending to play alone. Conduct problems include behaviours such as losing their temper often or fighting with other children. Hyperactivity problems include having a poor attention span or being easily distracted. Emotional and peer problems are often referred to as internalising problems, while conduct and hyperactivity problems are externalising problems. Scores on the total scale can range from zero to 40, with higher scores indicating more problems. Children's SDQ scores are treated as continuous variables in the analyses. In growth curve models, it is appropriate to use measures in their raw form (as opposed to standardised scores) to highlight changes in behaviour over time (O'Connor et al. 2014). However, as the variable is skewed and the level-2 residuals are skewed, it is transformed by adding a constant of one to all values (because the scale includes zero) and then logging the derived variable. Predicted scores presented in the results section are corrected to concord with the original scale. The results of models using the raw variable and the unadjusted log variable (in which zero values are dropped) are similar but the models using the adjusted log variable offer a substantially better fit to the data.

Independent variable: mothers' work-to-family conflict

LSAC contains four items adapted from Marshall and Barnett's scale (Marshall and Barnett 1993) which measures strains between work and family. Two items assess employment-related constraints on family life and parenting and two assess constraints from family responsibilities that affect work. As this paper is focused on employment-related constraints and pressures on family life, the analyses use the work-to-family conflict scale provided in the LSAC data set. It is a continuous scale, ranging from 1 to five, measuring the mean of the two work-to-family items. These items are: Because of my work responsibilities I have missed out on home or family activities that I would like to have taken part in; Because of my work responsibilities my family time is less enjoyable and more pressured. Response categories are: 1 Strongly disagree, 2 Disagree, 3 Neither agree nor disagree, 4 Agree, 5 Strongly agree (Chronbach's α mothers 0.73, dual earner fathers 0.60). Higher scores on the scale indicate more conflict. In these analyses the variable has been dichotomised to capture those with low conflict (zero to two on the scale) and those with medium or high conflict (scores over two to five).

Moderating variables

Mothers' partner status. The two main categories of working mothers present in the LSAC dataset are working single mothers and working mothers in a dual-earning couple family. Children of working single mothers represent around 8 per cent of all observations and 11 per cent of children of working mothers. Children of dual earner mothers represent around 58 per cent of all observations and 86 per cent of children of working mothers. Another group is partnered mothers who are the sole earner; however this group only represents around 2 per cent of child-year observations in the pooled sample and 3 per cent of children of working mothers. Due to small cell sizes, children of sole earner mothers have been excluded from the analyses.

Household financial hardships. Previous research suggests that an important link in the pathway from income to children's socio-emotional difficulties is material hardship (Gershoff et al. 2007). In LSAC, the primary carer in the household answered how many experiences of financial hardship the household had experienced in the last 12 months due to the shortage of money. It measures exclusions from minimally accepted standards of living due to insufficient financial resources. Financial hardship has been used in other papers to measure differences by disadvantage and evidence suggests it mediates the relationship between socio-economic factors and health (Crowe & Butterworth 2016).

The original measure of financial hardship in LSAC is a seven-point scale which measures the number of 'yes' responses to the following items: Over the last 12 months, due to shortage of money, have any of the following happened?: not been able to pay gas, electricity or telephone bills on time; not being able to pay the mortgage or rent on time; adults or children going without meals; being unable to heat or cool the home; having pawned or sold something; and having sought

assistance from a welfare or community organisation. The majority of households (80 per cent) had not experienced any of these hardships. As a result of this heaping, a binary variable is created to capture households with no experiences and households with any of the listed experiences. Testing of further categories indicated the cell sizes are too small for detailed analyses.

Fathers' work-family conflict. Fathers' work-family conflict is included as a moderating variable for mothers in dual earner households. The categories are the same as for mothers.

Children's age. Children's age is included as a continuous independent variable to see if any effect of work-family conflict changes as children age. Child's age is centred such that the initial status refers to age four, allowing an interpretable intercept within the range of data collection. Exploration of the relationship between children's SDQ scores and age between the ages of four and 15, shows that while problems generally decline as children, there is a slight increase in problems in early adolescence. Therefore, a cubic slope for age is allowed for in the analyses.

Covariates

The models control for a number child and family variables, as well as the mother's characteristics, at each wave. Characteristics of fathers are included in the analyses of dual earner families. The covariates included in the models in this paper are similar to those included in other studies in the field. The covariates and the justification for their inclusion are described below

Study child characteristics

Child's sex. The sex of the study child is controlled for because boys and girls may have different socio-emotional and behavioural trajectories, although the evidence is mixed (Bao et al. 2016, Chen 2008, Eisenberg et al. 2001, Findlay et al. 2009, Garaigordobil 2009).

Whether the child has a serious medical condition. Children's health status may affect their mental health and behaviour and learning outcomes (Cadman et al. 1987). Some children may have trouble communicating (Murray et al. 2009) or experience bullying (Fellinger et al. 2009). Additionally, their parents' level of employment (Loprest & Davidoff 2004) and mental health (Besier et al. 2011) may be affected by caring for some children with a serious medical condition. Whether the child has any medical conditions or disabilities that had lasted or are likely to last for six months or more was assessed at each wave and is included as a categorical variable (yes or no).

Cohort. The study cohort of each child is included in the models. A dummy variable is derived to represent each cohort (0 – B, 1 – K). This is included to control for any period effects (Baxter et al. 2012).

Household characteristics

Number of resident children. The number of resident children in the household at each wave is included as a categorical variable (one child, two children, three or more children). The number of children in the household may affect parents' work and work-conflict (Voydanoff 1988).

Household income. Equivalised weekly household income is included as a continuous variable to control for the relationship between work and income. It includes income from wages or salary, profit or loss from own unincorporated business or share in partnership, any government pension, benefit or allowance or any other regular source prior before tax, salary sacrifice or anything else is taken out. This is calculated by combining the income of both parents in two-parent households, or including only the mother's income in single-parent households, and adjusting for the number of people in the household (Strazdins et al. 2010). Income at each wave is adjusted to the June 2014 Consumer Price Index (CPI) (Australian Bureau of Statistics 2014). This variable is included in its logged form in the analyses. While the effect of financial hardship is the focus of this paper, it is important to include income given evidence linking income to children's development, although there inconsistencies in the literature (Gershoff et al. 2007, Khanam & Nghiem 2016).

Remoteness area of the household. Remoteness area is included as a categorical variable with the following categories: Major city, inner regional, outer regional/remote (combined due to small cell sizes). Remoteness may affect work arrangements which in turn affects work-family conflict (Eddleston & Mulki 2017), as well as access to resources (Phillips 2009).

Whether the family resides in an area with a low Socio-Economic Indexes for Areas (SEIFA) score. Neighbourhood disadvantage may affect ability to seek support, as well as children's access to resources. SEIFA is a product developed by the Australian Bureau of Statistics that ranks areas in Australia according to relative socio-economic advantage and disadvantage. The indexes are based on information from the five-yearly Census. Whether the family lives in an area with a SEIFA index of relative socio-economic advantage and disadvantage score below 1000 was calculated and is included as a binary variable. Previous Australian research indicates neighbourhood disadvantage may be correlated with children's socio-emotional development (Edwards 2005).

Whether there is a non-biological parent in household. Whether there is a non-biological parent living in the household is included as a categorical variable at each wave, because some research suggests living with a non-biological parent may be associated with poorer emotional well-being for children (Amato 2005, Bramlett & Blumberg 2007). For single parent families where the parent is biologically related to the child, the answer is coded to 'No'.

Parental characteristics

Parents' highest education level. Parental educational attainment is linked to both work characteristics (OECD 2012) and children's development (Boe et al. 2013). Mothers' (and fathers in dual earner analyses) highest level of educational attainment is included as a categorical variable with the following categories: Did not finish year 12, finished year 12 but no further education, certificate or diploma level qualifications, and bachelor degree or higher.

Whether the parent has a serious medical condition. Whether the mother (or father in dual earner analyses) has any medical conditions or disabilities that had lasted or were likely to last for six months or more was assessed at each wave and is included as a categorical variable (yes or no). Having a serious medical condition may impact on parents' work (Beatty & Joffe 2006) and children's wellbeing (Korneluk & Lee 1998).

Parents' age. Parents' age may affect the development of the study child. Older parents have been linked to better outcomes for children (Barclay & Myrskyla 2016). Mothers' age (and fathers' age where relevant) is included as a continuous variable. Parents' age is centred for the analyses.

Analytical approach

As a panel survey, in the LSAC dataset there are two basic levels: each child, and each occasion at which they are assessed. Whilst some researchers pool the observations across children and waves for analysis, this fails to account for the dependence or correlation of units that belong to the same cluster. Analytical techniques need to account for multiple records per family over time.

Mixed effects multi-level growth curve modelling is used to estimate the association between maternal work-family conflict and children's socio-emotional and behavioural trajectories, and examine whether the relationship differs by socio-demographic characteristics. This technique accounts for observations that are clustered by child, and therefore likely to have correlated errors. Growth curve models, a type of multilevel model, explicitly model the shape of trajectories of individuals over time and how these trajectories vary by covariates, and randomly (Rabe-Hesketh & Skrondal 2012). Theoretically, developmental trajectories are likely to vary across children. Growth curve models are also flexible and efficient for unbalanced and variably spaced longitudinal data[1], and predictors can be time-invariant or time-varying (Singer & Willett 2003). For these reasons, estimation of the association between maternal work-family conflict and children's developmental trajectories is conducted using mixed effects multi-level growth curve modelling (command xtmixed in Stata 14, StataCorp 2015).

[1] Children are not all the same age at each wave (e.g. some children were just over 4 at Wave 1, while others were nearly 6) and the time between waves varies for each child.

Analyses are estimated with Level 1 as age (i.e. within individual effects) and Level 2 as children (i.e. between individual effects). The models allow for a random intercept and a random slope for age. These effects allow for between-child variability in initial levels of children's difficulties and in the way they change as they age. Only the lower-order (linear) term for age used in the fixed part of the model is allowed to vary randomly between children. This is deemed to be a reasonable approach in the literature (Rabe-Hesketh & Skrondal 2012). An unstructured covariance matrix is specified for the random effects.

The general growth curve model, for the repeatedly measured variable y_{ti} of individual i at occasion t, may be expressed as follows:

$$y_{ti} = (\beta_1 + \zeta_{1i}) + (\beta_2 + \zeta_{2i})X_{ti} + \epsilon_{ti}$$

where β_1 is the mean intercept; β_2 is the mean slope; ζ_{1i} is a random cluster intercept for child *i*, the deviation of child *i*'s intercept from the mean intercept β_1; ζ_{2i} is a random slope for child *i*, the deviation of child *i*'s slope from the mean slope β_2; X_{ti} is a level 1 predictor for occasion *t* for child *i*; and ϵ_{ti} is the individual error term. The significance of the random effects in each model are systematically examined by comparing nested models and conducting likelihood-ratio tests (Hamilton 2013). To evaluate model fit, three goodness of fit indices are used: the deviance statistic (-2 log-likelihood), Akaike Information Criterion (AIC), and Bayesian Information Criterion (BIC). Smaller numbers on all three measures indicate a better model fit.

Preliminary analyses are conducted to analyse within- and across-child variation in socio-emotional scores. First, an unconditional means model is run with only individual-level random intercepts and no explanatory variables. The results indicate two-thirds (65 per cent) of the variance in scores is due to differences across children, with the remaining proportion attributable to differences within children themselves. Second, an unconditional growth model adds child age to the model with a random slope. The results indicate the difference in within-child variation in scores attributable to age is 20 per cent.

Two sets of models are estimated. The first set investigate differences by mothers' partner status and financial hardship in the relationship between maternal work-family conflict and children's socio-emotional and behavioural trajectories. In light of research suggesting the role of mothers' work stress needs to be considered in the context of fathers', the second set of models investigate differences by partners' work-family conflict and financial hardship for dual earner mothers. The moderating effect of children's age, hardship, partner status or fathers' work-family conflict on maternal work-family conflict is tested using interactions. Each set includes three models. First, the model includes the key analytical variables. Then covariates, including financial hardship, are added. Then interactions between the key analytical variables and financial hardship are added.

Results

Descriptive analyses

Table 2 displays summary statistics for the sample. Overall, medium or high work-family conflict is more common than low conflict. Compared with dual earner mothers, a higher proportion of single mothers have medium or higher work-family conflict. Dual earner fathers report higher work-family conflict levels than dual earner mothers. Only 12 per cent of families in which both parents work experience financial hardship. In single mother families in which the mother is employed, 33 per cent of families experience financial hardship.

Table 2 Descriptive statistics for variables by family structure for children aged 4 and over

	Dual earner family	Employed single mother	Total
SDQ score (mean, std. dev.)	7.2 (4.9)	9.0 (5.5)	7.5 (5.0)
Children's age (mean, std. dev.)	9.1 (3.1)	9.6 (3.1)	9.2 (3.1)
Mothers' work-family conflict (num., %)			
Low	8,091 (35.6)	853 (25.9)	8,944 (34.4)
Medium/high	14,640 (64.4)	2,445 (74.4)	17,084 (65.6)
Fathers' work-family conflict (num., %)			
Low	4,016 (21.5)	-	-
Medium/high	14,657 (78.5)	-	-
Household financial hardship			
No financial hardship	21,625 (87.6)	2,410 (66.9)	24,034 (84.9)
Any financial hardship	3,068 (12.4)	1,192 (33.1)	4,260 (15.1)
Number of children (num., %)			
1 child	1,921 (7.7)	870 (23.8)	2,791 (9.7)
2 children	12,652 (50.1)	1,660 (45.4)	14,311 (49.8)
3 or more children	10,486 (41.9)	1,125 (30.8)	11,611 (40.4)
Equivalised household income (CPI adjusted, mean in $, std dev.)	1,240.0 (822.5)	573.0 (356.7)	1,155.1 (809.9)
Remoteness area (num., %)			
Major city	15,972 (63.8)	2,280 (62.5)	18,251 (63.7)
Inner regional	5,422 (21.7)	865 (23.7)	6,287 (21.9)
Outer regional/remote	3,632 (14.5)	502 (13.8)	4,134 (14.4)
Live in a low SEIFA area (num., %)			
No	14,821 (59.4)	1,847 (50.5)	16,668 (58.1)
Yes	10,239 (40.9)	1,808 (49.5)	12,046 (42.0)
Non-biological parent in home (num., %)			
No	23,497 (93.8)	3,641 (99.6)	27,137 (94.5)
Yes	1,557 (6.2)	14 (0.4)	1,571 (5.5)
Mother's highest education (num., %)			
Did not complete Year 12	2,267 (9.1)	465 (12.8)	2,732 (9.6)
Completed Year 12	2,708 (10.8)	360 (9.9)	3,068 (10.7)
Certificate or Diploma	9,804 (39.3)	1,798 (49.3)	11,601 (40.5)
Bachelor degree or higher	10,195 (40.8)	1,023 (28.1)	11,218 (39.2)
Mother's occupation skill level (num., %)			
1 (high)	9,794 (39.3)	1,085 (29.8)	10,878 (38.1)

Table 2 Descriptive statistics for variables by family structure for children aged 4 and over

	Dual earner family	Employed single mother	Total
2 & 3 (medium)	4,536 (18.8)	634 (17.4)	5,170 (18.1)
4 & 5 (low)	10,616 (42.6)	1,920 (52.8)	12,536 (43.9)
Mother has a serious medical condition (num., %)			
No	22,547 (90.6)	3,133 (86.7)	25,680 (90.1)
Yes	2,346 (9.4)	479 (13.3)	2,824 (9.9)
Mother's age (mean, std dev.)	39.8 (5.6)	39.6 (6.8)	39.7 (5.8)
Father's highest education (num., %)			
Did not complete Year 12	2,374 (9.7)	-	-
Completed Year 12	1,902 (7.7)	-	-
Certificate or Diploma	12,072 (49.2)	-	-
Bachelor degree or higher	8,210 (33.4)	-	-
Father's occupation skill level (num., %)			
1 (high)	10,516 (42.8)	-	-
2 & 3 (medium)	7,956 (31.9)	-	-
4 & 5 (low)	6,463 (25.9)	-	-
Father has a serious medical condition (num., %)			
No	22,703 (91.5)	-	-
Yes	2,099 (8.5)	-	-
Father's age (mean, std dev.)	42.0 (6.4)	-	-
Study child's sex (num., %)			
Male	12,654 (50.5)	1,832 (50.1)	14,486 (50.5)
Female	12,406 (49.5)	1,823 (49.9)	14,228 (50.0)
Study child has serious medical condition (num., %)			
No	22,975 (92.3)	3,288 (91.0)	26,262 (92.1)
Yes	1,923 (7.7)	324 (9.0)	2,247 (7.9)
Cohort			
Infant (B)	9,942 (39.7)	1,332 (36.4)	11,274 (39.3)
Kindergarten (K)	15,118 (60.3)	2,323 (63.6)	17,440 (61.7)

Source: Author's calculations based on LSAC Wave 6 data release. Note: Pooled data, column percentages in brackets for categorical variables. Totals may differ between variables due to missing data. Proportions may not sum to 100% due to rounding.

The proportion of study children who are male is similar between the two family structure groups. A slightly higher proportion of children of employed single mothers have a serious medical condition compared with children in dual earner households. Dual earner families are more likely to have three or more children than employed single mothers in the sample. Equivalised weekly household income in dual earner homes is more than double that of employed single mothers. A similar proportion of children in employed single mother and dual earner homes live in major cities. A slightly higher proportion of employed single mothers live in an area with a lower SEIFA score compared with dual earner households. Only around 6 per cent of children in dual earner households live with a parent they are not biologically related to. Compared with employed single mothers, and dual earner fathers, a higher proportion of dual earner mothers have a bachelor degree or higher. A

slightly higher proportion of employed single mothers have a serious medical condition compared with both dual earner mothers and fathers. The mean age is similar between the two groups of mothers, but fathers are slightly older on average.

The results of the multi-level models comparing children of employed single mothers and mothers in dual earning couples are presented below (Table 3). Then the analysis is confined to children of mothers in dual earning couples and compares results by fathers' work-family conflict (Table 4).

Comparisons between single and dual earner mothers

The results of the first set of growth curve models which examine differences by mothers' partner status and financial hardship are shown in Table 3.

Table 3 Results of growth curve models for children's socio-emotional and behavioural problems (logged adjusted total SDQ score) by mothers' partner status, mothers' work-family conflict (WFC) and financial hardship

	Model 1 (27,267 obs.)		Model 2 (26,611 obs.)		Model 3 (26,611 obs.)	
Fixed effects	β	SE	β	SE	β	SE
Intercept	2.109*	0.014	2.155*	0.025	2.158*	0.025
Single employed mother (ref. = dual earner mother)	0.174*	0.036	0.147*	0.037	0.163*	0.045
Mother has med/high WFC (ref. = low)	0.060*	0.013	0.063*	0.013	0.058*	0.014
Mothers' partner status × Mothers' WFC	-0.088*	0.041	-0.088*	0.042	-0.108*	0.051
Financial hardship (ref. = no hardship)	-	-	0.049*	0.017	0.021	0.032
Mothers' partner status × Financial hardship	-	-	-	-	-0.029	0.077
Mothers' WFC × Financial hardship	-	-	-	-	0.041	0.038
Mothers' partner status × WFC × Financial hardship	-	-	-	-	0.034	0.090
Children's age	-0.076*	0.008	-0.057*	0.008	-0.058*	0.008
Children's age^2	0.008*	0.002	0.008*	0.002	0.008*	0.002
Children's age^3	0.000*	0.000	0.000*	0.000	0.000*	0.000
Interactions with children's age						
Mothers' partner status	-0.010†	0.006	-0.009	0.006	-0.012†	0.007
Mothers' WFC	0.000	0.002	0.001	0.002	0.001	0.002
Mothers' partner status × Mothers' WFC	0.016*	0.007	0.017*	0.007	0.021*	0.008
Financial hardship	-	-	0.002	0.003	0.006	0.006
Mothers' partner status × Financial hardship	-	-	-	-	0.008	0.013
Mothers' WFC × Financial hardship	-	-	-	-	-0.007	0.007
Mothers' partner status × Mothers' WFC × Financial hardship	-	-	-	-	-0.007	0.015

Table 3 Results of growth curve models for children's socio-emotional and behavioural problems (logged adjusted total SDQ score) by mothers' partner status, mothers' work-family conflict (WFC) and financial hardship

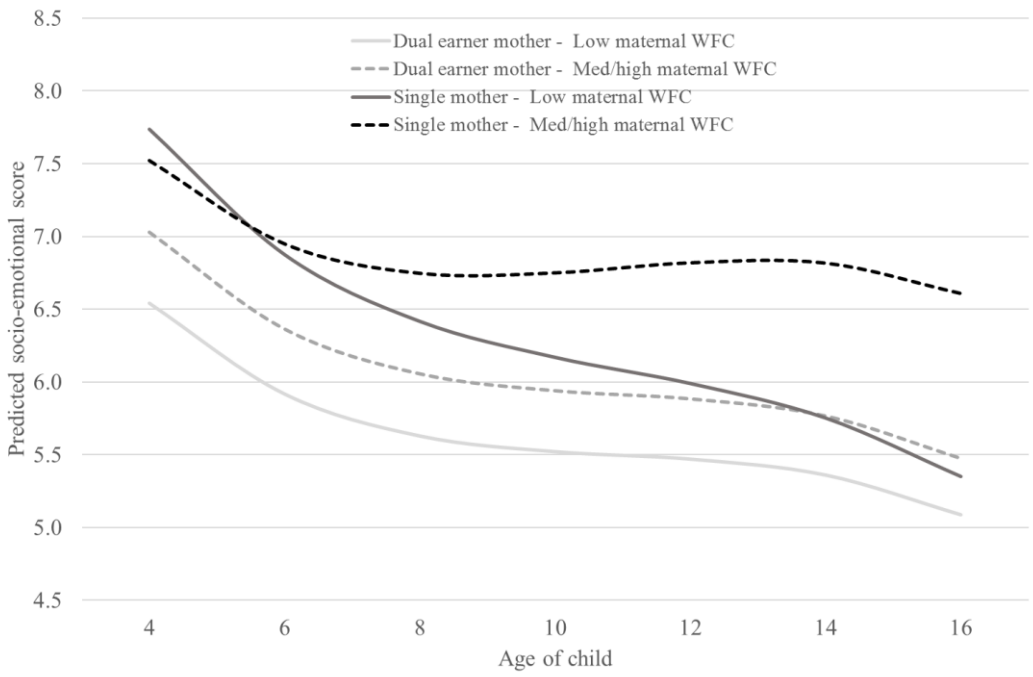
	Model 1 (27,267 obs.)		Model 2 (26,611 obs.)		Model 3 (26,611 obs.)	
Socio-demographic & health controls						
Child sex (ref. = boy)	-	-	-0.150*	0.012	-0.150*	-0.150*
Child has serious medical condition (ref. = no)	-	-	0.137*	0.013	0.137*	0.013
Number of children in household (ref. = 1)						
2	-	-	-0.300†	0.017	-0.300†	0.017
3 or more	-	-	-0.093*	0.018	-0.093*	0.018
Non-biological parent in household (ref. = no)	-	-	0.127*	0.020	0.128*	0.020
Equivalised weekly household income (log, centred)	-	-	-0.030*	0.007	-0.031*	0.007
Remoteness area (ref. = major city)						
Inner regional	-	-	-0.023†	0.014	-0.023†	0.014
Outer regional/remote	-	-	-0.006	0.016	-0.006	0.016
Low SEIFA area (ref. = no)	-	-	0.043*	0.009	0.043*	0.009
Mothers' educational attainment (ref. = Certificate or Diploma)						
Less than Year 12	-	-	0.047*	0.009	0.048*	0.009
Completed Year 12	-	-	-0.030†	0.018	-0.030†	0.018
Bachelor degree or higher	-	-	-0.098*	0.013	-0.098*	0.013
Mothers' age (centred)	-	-	-0.011*	0.001	-0.011*	0.001
Mother has serious medical condition (ref. = no)	-	-	0.032*	0.005	0.032*	0.005
Cohort (ref. = B)	-	-	-0.018	0.012	-0.018	0.012
Variance components	Estimate	SE	Estimate	SE	Estimate	SE
Level 1 error (within individual) - σ	0.381*	0.002	0.382*	0.002	0.382*	0.002
Level 2 (between individual)						
Intercept (Initial status) - σ	0.479*	0.007	0.451*	0.007	0.451*	0.007
Children's age (Rate of change) - σ	0.051*	0.001	0.050*	0.001	0.050*	0.001
Correlation between intercept and age	-0.087	0.030	-0.111	0.030	-0.112	0.030
Model fit statistics						
Deviance	42,354.77		40,714.88		40.712.36	
AIC	42,382.77		40,776.88		40,786.36	
BIC	42,497.76		41,030.74		41,089.35	

Source: Author's calculations based on LSAC Wave 6 data release. *Notes*: *p<0.05, †p<0.10. Random effects vary by child with unstructured residuals. Continuous variables are centred.

In Model 1, mothers' partner status and work-family conflict are statistically significantly related to the initial level of children's problems. Single parenthood and higher maternal work-family conflict are related to a higher level of difficulties for children. Additionally, mothers' partner status is marginally related to the trajectory of problems over time, with children of single mothers

experiencing a slower rate of decline in problems over time. The interaction between partner status and mothers' work-family conflict is statistically significant, and children's age further moderates the relationship.

When the covariates are included in Model 2 the results are broadly similar. This suggests that the background characteristics included in the model do not explain the relationship between family structure, mothers' work-family conflict and changes in children's socio-emotional behavioural problems. The results of Model 2 are shown in Figure 1. For children in dual earner families, the results indicate higher maternal work-family conflict is associated with a higher level of problems across childhood, and the rate of change is stable. For children in single mother homes, the relationship between maternal work-family conflict and children's socio-emotional problems depends on the age of the child. For children in single mother families, low work-family conflict is associated with more problems in early childhood, but the declining trajectory into adolescence is steeper compared with other groups; while higher maternal work-family conflict is associated with a lower rate of decline in problems.



Source: Author's calculations based on LSAC Wave 6 data release. Note: Chart displays results of Model 2 holding all other variables at their means.

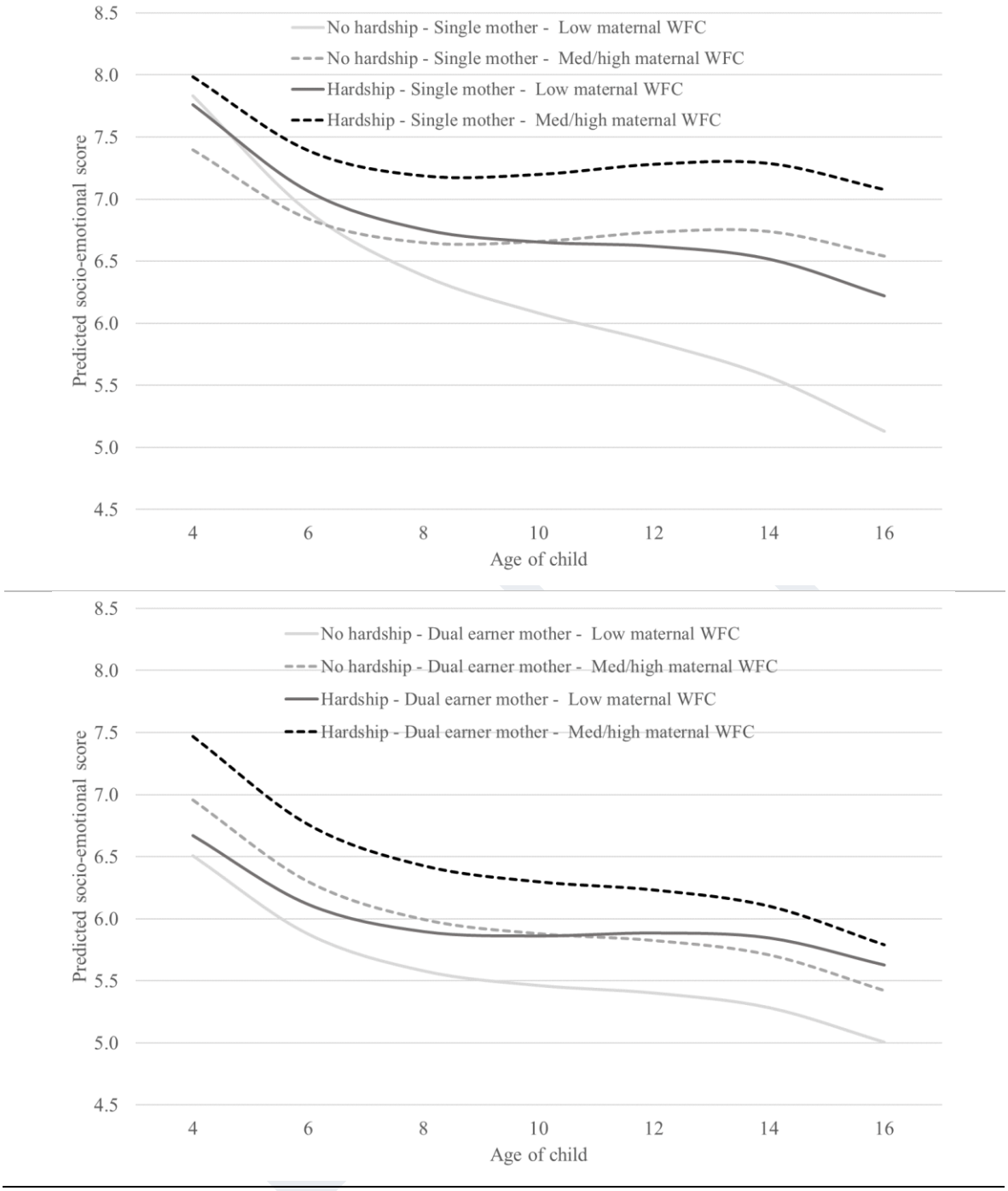
Figure 1 Predicted socio-emotional difficulties scores by mothers' work-family conflict, partner status and children's age

With respect to the covariates included in Model 2, in addition to financial hardship, household income and maternal education are significant predictors of children's level of socio-emotional and behavioural problems. Other covariates are also significant predictors of children's socio-emotional and behavioural problems. For example, boys, children with a medical condition, children with a non-biological parent, only children, children of younger mothers, and children of

mothers with a medical condition have higher levels of problems. The scale of these effects varied, however, with the effect of maternal work-family conflict in Model 2 demonstrating a moderate effect size compared with the covariates.

In Model 3, mothers' partner status and work-family conflict are interacted with financial hardship to test whether the relationships differ further by socio-economic variables. Mothers' partner status and work-family conflict remain statistically significant predictors of the level of children's problems. The interaction between partner status and work-family conflict also remains a statistically significant predictor of the level of children's problems, and it remains related to the trajectory over time, with predicted difficulties scores similar to those shown in Figure 1. The interactions with financial hardship are not statistically significant and the addition of these interactions does not explain the interrelationship between mothers' partner status and work-family conflict observed in Models 1 and 2. Nonetheless, Figure 2 shows predicted socio-emotional difficulties scores by mothers' work-family conflict, mothers' partner status and household financial hardships as children age to help understand whether the trajectory associated with low work-family conflict in single mother households varies by financial hardship.

The top panel shows the results for children in families with a single mother while the bottom panel shows the results for dual-earner families. Children with the highest level of socio-emotional difficulties across childhood are children in single-mother households experiencing higher maternal work-family conflict and household financial hardship. The trajectory associated with low maternal work-family conflict in single mother households differs between households who are and are not experiencing financial hardship, with a steeper declining trajectory seen only in households not experiencing hardship. Overall, children with the lowest level of problems across childhood are those in dual-earner households, not experiencing hardship with low maternal work-family conflict. In dual-earner households, higher maternal work-family conflict is associated with a higher level of problems across childhood if the family is experiencing financial hardship.



Source: Author's calculations based on LSAC Wave 6 data release. Note: Chart displays results of Model 3 holding all other variables at their means.

Figure 2 Predicted socio-emotional difficulties scores by mothers' work-family conflict, mothers' partner status, financial hardship and children's age

While there are slight differences in the effect of work-family conflict by financial hardship, it does not significantly affect the influence of maternal work-family conflict on children's socio-emotional development once differences by family structure are accounted for; however, further variation may occur within two-parent families, which is the focus of the next stage of analysis.

Comparisons within dual earner families

The next set of models focus on dual earning couple families. Father's work-family conflict is added to investigate how partners' work stress may shape the relationship between maternal work-family conflict and children's difficulties. Results are shown in Table 4.

Table 4 Results of growth curve models for children's socio-emotional and behavioural problems (logged adjusted total SDQ score) by mothers' work-family conflict, fathers' work-family conflict and financial hardship in dual earner families

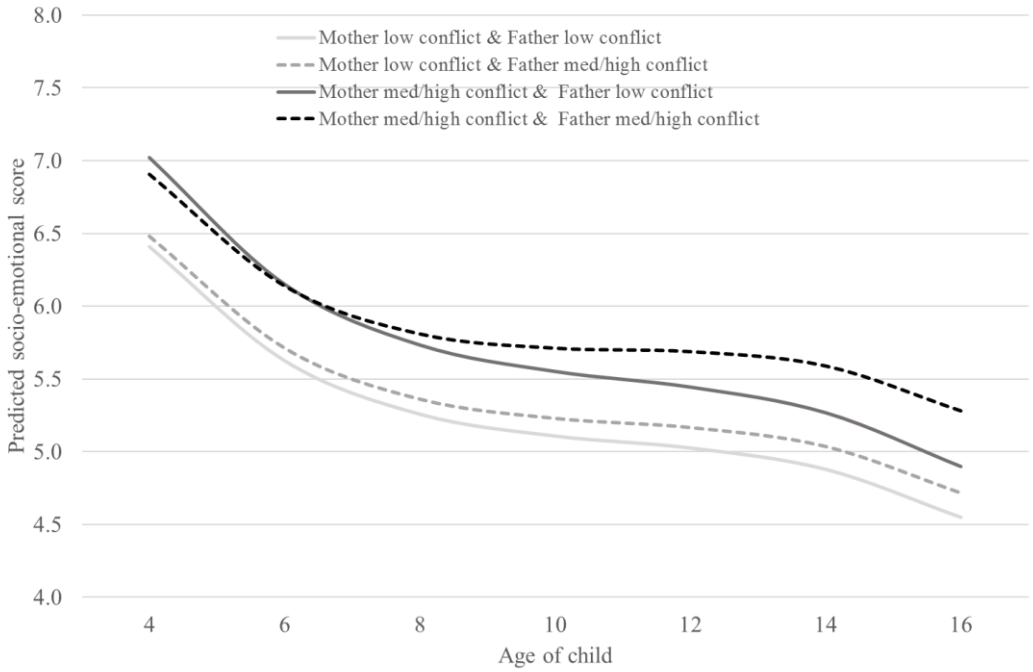
	Model 1 (18,203 obs.)		Model 2 (17,482 obs.)		Model 3 (17,482 obs).	
Fixed effects	β	SE	β	SE	β	SE
Intercept	2.101*	0.026	2.208*	0.038	2.232*	0.038
Mother has med/high WFC (ref. = low)	0.069*	0.031	0.079*	0.031	0.043	0.033
Father has med/high WFC (ref. = low)	0.005	0.027	0.010	0.027	-0.021	0.028
Mothers' WFC × Fathers' WFC	-0.016	0.034	-0.024	0.035	0.016	0.037
Financial hardship (ref. = no hardship)	-	-	0.028	0.023	-0.263*	0.080
Mothers' WFC × Financial hardship	-	-	-	-	0.374*	0.104
Fathers' WFC × Financial hardship	-	-	-	-	0.337*	0.091
Mothers' WFC × Fathers' WFC × Financial hardship	-	-	-	-	-0.418*	0.116
Children's age	-0.092*	0.010	-0.074*	0.011	-0.077*	0.011
Children's age^2	0.010*	0.002	0.010*	0.002	0.009*	0.002
Children's age^3	0.000*	0.000	0.000*	0.000	0.000*	0.000
Interactions with children's age						
Mothers' WFC	0.000	0.005	-0.002	0.005	0.003	0.005
Fathers' WFC	0.002	0.004	0.002	0.005	0.006	0.005
Mothers' WFC × Fathers' WFC	0.003	0.006	0.005	0.006	0.000	0.006
Financial hardship	-	-	0.007†	0.004	0.044*	0.014
Mothers' WFC × Financial hardship	-	-	-	-	-0.044*	0.018
Fathers' WFC × Financial hardship	-	-	-	-	-0.044*	0.016
Mothers' WFC × Fathers' WFC × Financial hardship	-	-	-	-	0.051*	0.021
Socio-demographic & health controls						
Child sex (ref. = boy)	-	-	-0.152*	0.014	-0.152*	0.014
Child has serious medical condition (ref. = no)	-	-	0.136*	0.016	0.136*	0.016
Number of children in household (ref. = 1)						
2	-	-	-0.055*	0.023	-0.053*	0.023
3 or more	-	-	-0.129*	0.024	-0.127*	0.024
Non-biological parent in household (ref. = no)	-	-	0.107*	0.031	0.106*	0.031
Equivalised weekly household income (log, centred)	-	-	-0.029*	0.010	-0.030*	0.010
Remoteness area (ref. = major city)						
Inner regional	-	-	-0.041*	0.017	-0.042*	0.017

Table 4 Results of growth curve models for children's socio-emotional and behavioural problems (logged adjusted total SDQ score) by mothers' work-family conflict, fathers' work-family conflict and financial hardship in dual earner families

	Model 1 (18,203 obs.)		Model 2 (17,482 obs.)		Model 3 (17,482 obs).	
Outer regional/remote	-	-	-0.030	0.020	-0.031	0.020
Low SEIFA area (ref. = no)	-	-	0.031*	0.012	0.03 1*	0.012
Mothers' educational attainment (ref. = Certificate or Diploma)						
Less than Year 12	-	-	0.035	0.024	0.034	0.024
Completed Year 12	-	-	-0.008	0.022	-0.008	0.022
Bachelor degree or higher	-	-	-0.072*	0.015	-0.071*	0.015
Mothers' age (centred)	-	-	-0.011*	0.002	-0.011*	0.002
Mother has serious medical condition (ref. = no)	-	-	0.033*	0.015	0.033*	0.015
Fathers' educational attainment (ref. = Certificate or Diploma)						
Less than Year 12	-	-	0.014	0.024	0.014	0.024
Completed Year 12	-	-	-0.038	0.025	-0.038	0.025
Bachelor degree or higher	-	-	-0.072*	0.016	-0.073*	0.016
Fathers' age (centred)	-	-	0.001	0.002	0.001	0.002
Father has serious medical condition (ref. = no)	-	-	0.010	0.015	0.011	0.015
Cohort (ref. = B)	-	-	-0.019	0.015	-0.018	0.015
Variance components	Estimate	SE	Estimate	SE	Estimate	SE
Level 1 error (within individual) - σ	0.384*	0.003	0.386*	0.003	0.386*	0.003
Level 2 (between individual)						
Intercept (Initial status) - σ	0.487*	0.009	0.458*	0.009	0.458*	0.009
Children's age (Rate of change) - σ	0.052*	0.002	0.051*	0.002	0.051*	0.002
Correlation between intercept and age	-0.120	0.035	-0.134	0.037	-0.134	0.037
Model fit statistics						
Deviance	29,210.42		27,677.85		27,660.77	
AIC	29,238.42		27,749.84		27,744.77	
BIC	29,347.75		28,029.53		28,071.07	

Source: Author's calculations based on LSAC Wave 6 data release. *Notes*: *p<0.05, †p<0.10. Random effects vary by child with unstructured residuals. Continuous variables are centred.

In dual earner families, there is a main effect for mothers' work-family conflict. As in the previous stage, children of mothers with higher work-family conflict have more problems; however, fathers' work-family conflict is not a statistically significant predictor of children's difficulties. The interaction between mothers' and fathers' work-family conflict is not statistically significant, however Figure 3, suggests children in families in which both the mother and the father have lower work-family conflict have lower problems across childhood, and children in families with higher levels of both maternal and paternal work-family conflict have more socio-emotional difficulties from mid-childhood.

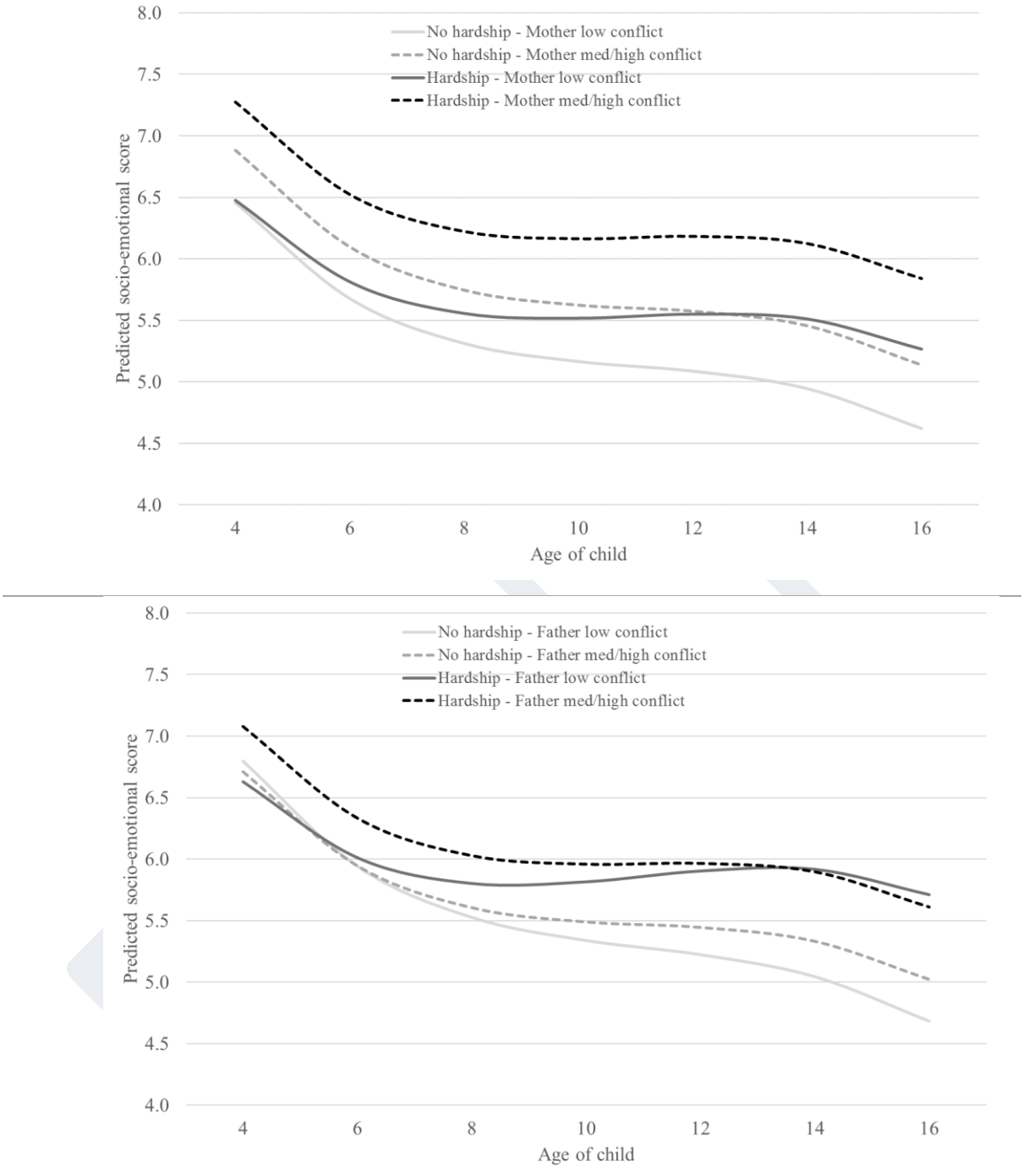


Source: Author's calculations based on LSAC Wave 6 data release. Note: Chart displays results of Model 2 holding all other variables at their means.

Figure 3 Predicted socio-emotional difficulties scores by mother's work-family conflict, fathers' work-family conflict, and children's age for children in dual earning families

In Model 2, the effect sizes of the main effects of parental work-family conflict are largely unchanged once the covariates are added. While financial hardship is not a significant predictor of children's difficulties in dual earner families, household income and both mothers' and fathers' education are significant predictors of children's level of socio-emotional and behavioural problems. Other covariates are also significant predictors of children's socio-emotional and behavioural problems. For example, boys, children with a medical condition, children with a non-biological parent, only children, children of younger mothers, and children living in major cities have higher levels of problems.

In the next model, variation by financial hardship in the effect of parental work-family conflict is allowed for. The results of this model indicate differences by financial hardship in the effects of both mothers' and fathers' work-family conflict on the level of children's problems in dual earner families. They also suggest variation by financial hardship in the effects on the way children change. These results are shown in Figure 4.



Source: Author's calculations based on LSAC Wave 6 data release. Note: Chart displays results of Model 3 holding all other variables at their means.

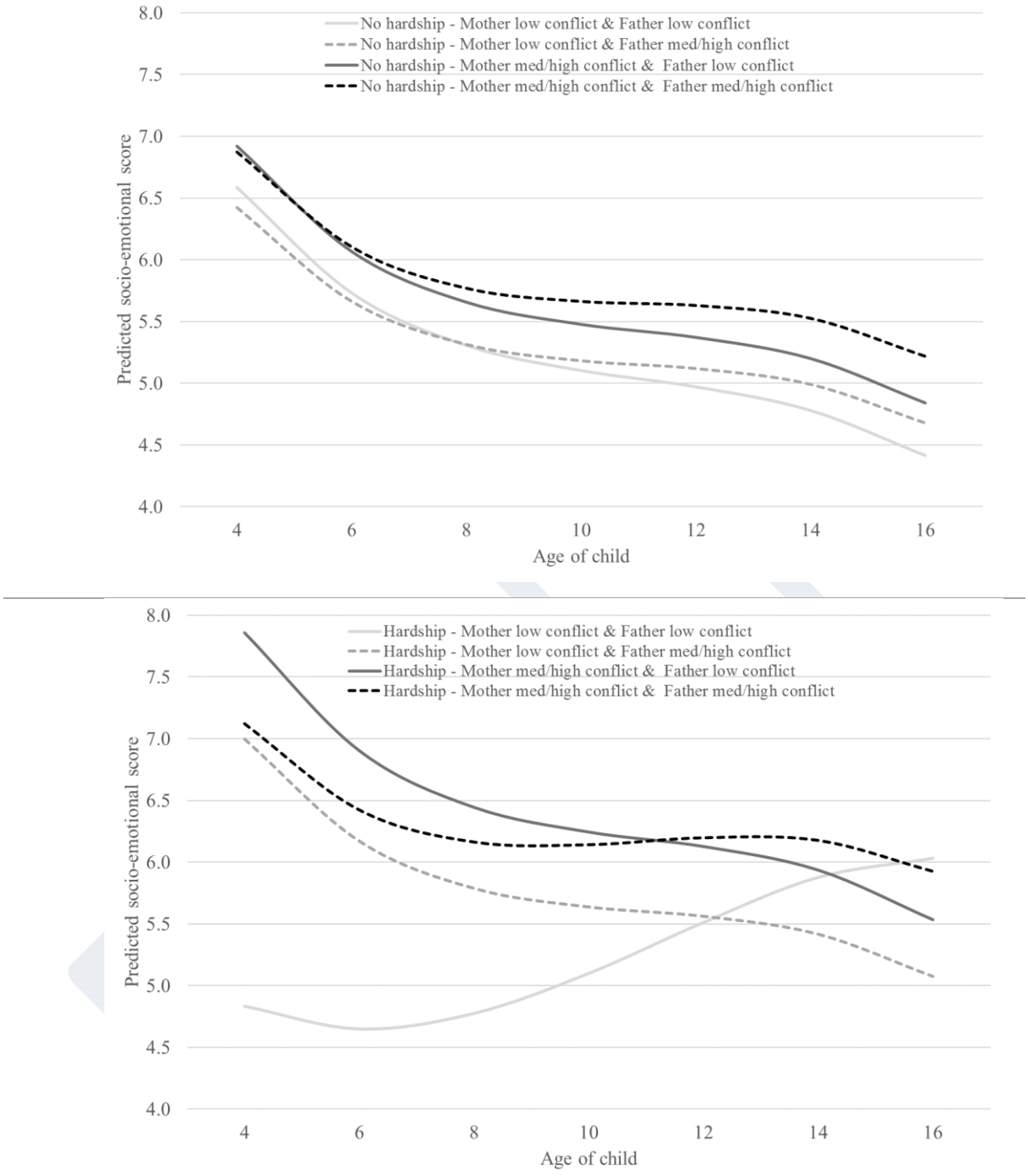
Figure 4 Predicted socio-emotional difficulties scores by mothers' work-family conflict, financial hardship and children's age (top) and by fathers' work-family conflict, financial hardship and children's age (bottom) for children in dual earning families

With respect to mothers' work-family conflict (top panel), higher conflict is related to more difficulties for children in households with and without hardship, but the gap between children of mothers' with low or higher conflict is greater in households experiencing hardship. Additionally, the trajectories associated with low maternal work-family conflict differ, with an increase in problems for children in households experiencing hardship. With respect to fathers' work-family conflict (bottom

panel), in families without hardship the harmful effects of higher conflict emerge in mid-childhood. In contrast, in families experiencing financial hardship, the effects converge over childhood, and by late adolescence children of fathers with low conflict have more problems.

The three-way interaction between mothers' work-family conflict, fathers' work-family conflict and financial hardship is statistically significant, and there is further variation by children's age. This interrelationship is shown in Figure 5. In dual earner families who are not experiencing financial hardship, children with the steepest decline in problems are those in families in which neither parent has higher work-family conflict. Problems are slightly higher by adolescence if the mother has low conflict but the father has higher conflict. In early to late childhood, problems are notably higher if the mother has higher work-family conflict, even if the father has lower conflict; however, children whose parents both have higher work-family conflict levels develop more socio-emotional problems as they age.

In dual earner families who are experiencing financial hardship, the pattern of results is quite different. When the mother has higher work-family conflict, fathers' lower work-family conflict is associated with slightly more problems in early to mid- childhood than fathers' higher conflict; however the high-high combination is associated with more problems in adolescence. While the combination of low maternal and low paternal work-family conflict is associated with fewer problems until late childhood, this combination is associated with a steep increase in problems as children age. The combination of low maternal work-family conflict and high paternal work-family conflict is associated with a declining trajectory of problems in families experiencing financial hardship.



Source: Author's calculations based on LSAC Wave 6 data release. Note: Chart displays results of Model 3 holding all other variables at their means.

Figure 5 Predicted socio-emotional difficulties scores by mothers' work-family conflict, fathers' work-family conflict, financial hardship and children's age for children in dual earning families

Variance components and model fit

The variance components are presented in the middle sections of Table 3 and Table 4 as standard deviations and can be interpreted on the same scale as the fixed effects. The random effects for the intercept indicate that initial levels of problems are diverse in the sample, with children at age four or five differing in their initial SDQ scores. The random effects of children's age suggest there is also variability between children in the way they changed over time, suggesting different trajectories of change in the sample. However, the negative correlation between variability in children's initial levels and the variability in the rate of change in all models indicates the differences between children diminish over time. The results suggest it is important to keep in mind that the trajectories presented above are for average children, and children vary in their socio-emotional trajectories. In both stages of analysis, adding the socio-demographic covariates explains a small proportion of the variance in children's initial status and rate of change; however, adding the interactions with financial hardship do not further explain any variability and there remains variance unaccounted for in both children's initial levels of problems and in their trajectories. These results indicate there are other factors, not included in these models, that may help to explain why children vary in both their level of socio-emotional difficulties in early childhood and in the way they develop. Adding the socio-demographic controls in all stages substantially improves the fit of the models, while adding the interactions with financial hardship does not appear to add much value in terms of model fit. Exploring differences in the effects of work-family conflict by financial hardship is a key goal of this paper, and while differences are statistically significant in the second set of models, unfortunately this analysis does not help to explain much further variation in children's difficulties after accounting for the main effects.

Summary of results

The results indicate family structure affects the impact of maternal work-family conflict on children's socio-emotional and behavioural development. For children of dual-earner mothers, there is a clear level effect of work-family conflict where children of mothers with higher conflict have more problems across childhood. For children of single mothers, work-family conflict is related to both the level and the rate of change in problems across childhood. In early childhood, children of single mothers with lower conflict have more problems than children of mothers with higher conflict; however, higher maternal work-family conflict is associated with a slower rate of decline in problems while lower conflict is associated with steeper decline in problems across childhood. While the differences by financial hardship are not statistically significant, the predicted scores suggest children with the highest level of socio-emotional difficulties over time are children in single-mother households experiencing higher maternal work-family conflict and financial hardship.

The results for dual earner families reinforce the finding that mothers' work-family conflict is related to the level of children's problems across childhood. From mid-childhood, when fathers' also

have higher work-family conflict children have more problems, and when fathers have lower conflict children have less problems, but this effect is not statistically significant. Examination of differences by financial hardship in dual earner families suggests there are socio-economic differences in how mothers' and fathers' work-family conflict affect children and in how mothers' and father's work stress combines to influence children. In families not experiencing financial hardship, when mothers' and fathers' both have higher conflict children have more problems from mid-childhood, but the effect of fathers' work-family conflict appears secondary to mothers'. In families experiencing financial hardship, fathers' work-family conflict has more impact when the mother has lower work-family conflict. The combination of low maternal and low paternal work-family conflict is associated with lower problems until late childhood, but an increasing trajectory of problems. The combination of low maternal and high paternal work-family conflict is associated with a declining trajectory of problems over time. When the mother has higher work-family conflict, fathers' lower conflict is associated with more problems in early childhood than the high-high combination; however the differences disappear over childhood.

Discussion

This paper examines the association between parental work-family conflict and children's socio-emotional and behavioural development in families with different socio-demographic characteristics. The discussion is focused around the research questions that guided the analyses.

Differences by mothers' partner status and financial hardship

The first research question concerns how the relationship between maternal work-family conflict and children's socio-emotional and behavioural development differs between children of single mothers and mothers in dual-earning households. The results suggest the relationship between maternal work-family conflict and children's wellbeing as they age differs depending on the partnership status of the mother. Higher maternal work-family conflict or having a single mother is associated with more socio-emotional difficulties in children; however, children in single mother families with higher maternal work-family conflict have a higher level of problems from mid-childhood. The finding that there is a relationship between maternal work-family conflict and children's difficulties in both dual earner and single mother families supports previous research (Dinh et al. 2017, Dockery et al. 2016, Hart & Kelley 2006, Matias et al. 2017, Strazdins et al. 2013); while the finding of differences in the relationship supports McLoyd et al. (2008) and Peng (2017). Lund (2012) found maternal work-family conflict was related to the level but not the rate of change in difficulties, but in this paper mothers' partnership status affects how mothers' work-family conflict is related to both level and the trajectory of problems. In dual-earner families, mothers' work-family conflict is related to the level of difficulties, while in single mother families it is related to both the level and the rate of change. In dual earner families, mothers' work-family is related to an increased level of difficulties across

childhood, which is consistent with the range of cross-sectional studies reporting relationships at various ages. In single mother families, children of mothers with low work-family conflict record higher scores in early childhood, but the declining trajectory into adolescence is steeper compared with other groups. This may indicate that in single mother families, older children and adolescents are particularly sensitive to higher maternal work stress and at greater risk of its impacts. Older children may be more aware of parental stress (Lam et al. 2018), or be more negatively affected by the time-based elements of work-family conflict.

The second part to the first research question concerns how the relationships by mothers' partner status further vary by financial hardship. Examination of predicted scores indicates maternal work-family conflict varies slightly by financial hardship in single mother and dual-earner families. Children in families, especially single mother families, experiencing both higher maternal work-family conflict and financial hardships have the highest level of problems across childhood. Previous literature with respect to this research question is limited, but this pattern of results supports arguments that the challenges of balancing work and family may be felt more in single mother households and households experiencing financial difficulties (Berryhill & Durtschi 2017, Strazdins et al. 2013). It must be noted though, the interrelationship between mothers' partner status, work-family conflict and financial hardship is not statistically significant and household financial hardships appear to have limited influence once family structure is accounted for.

The differences between children in single mother and dual earner households may be accounted for by differential access to resources in homes with different family structures. Single mothers have lower household incomes and are more likely to experience financial difficulties, even if they do not report one of the experiences of financial hardship. In single mother families, children of mothers with low conflict have higher problems initially. The results of other research indicate shorter work hours are related to lower work-family conflict for women (Baxter & Alexander 2008, Cooklin et al. 2014, Fein & Skinner 2015, Hosking & Western 2008, Kinnunen & Mauno 1998, Roetgers & Craig 2014, Stier et al. 2012). The relationship between low conflict and more problems for young children could be related to underemployment, lower incomes and less access to resources. On the other hand, children of single mothers with higher work-family conflict have the highest level of problems as they age. Single mothers, even those who do not report experiences financial hardship, may not have the financial, time or emotional resources to mitigate the effects of high work stress on their children.

Differences by fathers' work-family conflict and financial hardship in dual earner families

The results suggest mothers' work stress influences children in dual earner households, but the relationship is influenced by other household factors. The second research question addresses the effect fathers' work-family conflict may have on the impact of mothers' work-family conflict on

children. In dual earner families there is a main effect of mothers' work-family conflict but fathers' work-family conflict is not related to children's difficulties. This is similar to Hart and Kelley (2006), but inconsistent with Matias et al. (2017), Strazdins et al. (2013) and Dinh et al. (2017). The interaction between mothers' work-family conflict and fathers' work-family conflict is not significant; however the predicted scores indicate children in households with both high maternal and paternal work-family conflict develop more problems into adolescence, while children in households with both low maternal and low paternal conflict have the lowest level of problems. While the interrelationship is not statistically significant, the pattern of results shown by the predicted scores is consistent with other Australian research (Dinh et al. 2017, Strazdins et al. 2013). Overall, however, fathers' work-family conflict has a small influence on the impact of mothers' work-family conflict on children.

In general, the results of this paper indicate children in dual earner families are more sensitive to mothers' work-family conflict than fathers'; however the second research question also addresses how the experience of financial hardship affects how mothers' and fathers' work-family conflict combine to affect children's socio-emotional and behavioural development in dual-earner households. Financial hardship influences the effect of both mothers' and fathers' work-family conflict and how they interact to affect children. This is in contrast to Strazdins et al. (2013), noting that a different measure of disadvantage was used. In families without hardship, if the mother has low conflict, having a father with higher conflict slightly increases problems from mid-childhood; if the mother has higher conflict, also having a father with higher conflict increases problems to a greater degree. These results are in line with the patterns seen in previous research with general samples (Dinh et al. 2017, Strazdins et al. 2013). In contrast, however, are the results for families experiencing financial hardship. If the mother has higher conflict, a father with low conflict is associated with slightly more problems in early childhood than a father with higher conflict, but the trajectories cross in early adolescence and teenagers of parents who both have higher conflict have more problems. On the other hand, if the mother has lower conflict, having a father with low conflict is associated with lower levels of problems in early childhood, but an increasing trajectory of problems; while a father with higher conflict is associated with a declining trajectory of problems and the lowest level of problems by adolescence.

In families experiencing financial hardship, children could be influenced by fathers' work through other mechanisms. The results associated with the low conflict trajectories suggest work-family conflict for fathers is not the only work stressor in families experiencing financial hardship. The results of previous research indicate longer work hours are associated with increased levels of work-family conflict for mothers and fathers (Baxter & Alexander 2008, Cooklin et al. 2014, 2015, Fein & Skinner 2015, Hosking & Western 2008, Roetgers & Craig 2014, Stier et al. 2012, Westrupp et al. 2016). Taking the results of these studies and this paper together suggests the upward trajectory in problems associated with having both a mother and a father with low work-family conflict is

related to shorter work hours, and potentially the stress associated with underemployment in lower income families as children develop. Where the mother has low work-family conflict in families experiencing financial hardship, having a father with higher conflict appears to protect children against developing socio-emotional and behavioural problems. A father with higher conflict is probably working longer hours, and possibly earning a higher income which may mitigate the effects of higher paternal work stress, as long as the mother has low conflict. Although not directly comparable with this research, previous literature supports this finding. Parkes et al. (2017) and Lam et al. (2018) found a relationship between fathers' longer work hours and better child behaviour. The authors of both papers note that longer work hours of fathers' may have implications for higher levels of financial resources and more affluent lifestyles resulting in low levels of difficulties in children.

The possible impact of fathers' work hours in different families needs to be considered in the context of choice and opportunity regarding work hours. Under- and over-employment is unevenly distributed by socio-economic status, and may affect families differently to either be an additional stressor that exacerbates the effects of maternal work-family conflict, or a protective factor, across childhood and adolescence. In more advantaged families, long work hours create strain, and reductions in hours may alleviate conflict and the impact on children. In other families, underemployment and associated lower incomes may create stress for parents experiencing financial hardship. The quality of some part-time jobs may also play a role (Strazdins et al. 2010), as they are more likely to lack essential conditions for managing work and family, which may create strain for fathers and the mental health of older children may be particularly affected in households with high financial stress.

Limitations and future directions

In considering the findings of this paper it should be noted the analyses are based on a general population sample and the differences in children's wellbeing by parental work-family conflict are small; they are, however, on par with the effect sizes of the covariates included in the models such as mothers' education. There are several other limitations of this study that should be considered. Firstly, there is potential bias in parental reports of children's emotional and behavioural problems (Johnson et al. 2013). The measure of children's socio-emotional and behavioural problems used in this paper is based on parental reports. Particularly, reports of the primary caregiver, which in most cases is the mother. Mothers' with higher work-family conflict may perceive more problems in their children, but work-family conflict may not actually affect children's behaviour. Additionally, in this paper I have made an assumption about the direction of the association between parents' work-family conflict and children's difficulties. I have assumed parents' work-family conflict affects children, however socio-emotional and behavioural problems in children may heighten parents' sense of work-family conflict. Furthermore, there may be reciprocal associations between parents' work-family conflict and children's difficulties (Berryhill & Durtschi 2017, Strazdins et al. 2013). Future studies could use

interviewers' observational measures of children's difficulties and researchers could try to assess socio-demographic differences in reciprocal relationships.

Additionally, although longitudinal data is utilised, this study examines concurrent relationships, and causal interpretation cannot be placed on the results. Future research could incorporate lags or investigate the effects of cumulative or longer term work-family conflict and financial hardship on children. Additionally, the variance components of the multi-level modelling approach indicate variability in children's initial socio-emotional difficulties, and in their trajectories, that was unaccounted for. This indicates the models do not account for the full-range of factors that could affect the relationship between maternal work-family conflict and children's socio-emotional difficulties, and the mechanisms linking work-family conflict and children's problems in different families requires further investigation, for example through qualitative research. As noted by Peng (2017), the pathway from work-family conflict to children's behaviour may differ for single and partnered mothers, or households experiencing different levels of financial stress. Future research could try to understand these mechanisms in an Australian context by conducting in-depth interviews with parents and children.

These analyses suggest fathers' work-family conflict may function differently in households in differing levels of financial stress, depending on mothers' work-family conflict. In light of other research linking shorter work hours to lower work-family conflict, this findings of this paper suggest fathers' work hours may influence children differently depending on context. Given what we know about the effects of high work stress on children, if low paternal conflict is associated with more problems in some households, then work-family conflict is not the most relevant stressor to examine. Future research could explore how the pathway between fathers' work, work stress, psychological distress, parenting behaviour and children's mental health differs depending on financial hardship and other household factors.

Conclusion

This paper focuses on whether there are socio-demographic differences in the relationship between parents' work-family conflict and children's socio-emotional and behavioural trajectories. I find differences in the relationship between maternal work-family conflict and children's difficulties by mothers' partner status. Higher maternal work-family conflict is problematic for children of both single and dual earner mothers. Adolescents in single mother homes appear to be particularly vulnerable to higher maternal work-family conflict, while children in dual earner homes in which the mother has higher conflict have more problems at any age.

Additionally, there are socio-economic differences in the interrelationship between mothers' and fathers' work-family conflict on children's socio-emotional trajectories in dual earner homes. In households not experiencing financial hardship, older children and adolescents benefit from lower

work-family conflict for both parents. In dual earner households experiencing financial hardship, fathers' low work-family conflict is associated with more problems for young children if the mother has higher conflict, and an increase in problems for older children if the mother has low conflict. Due to the association between work-family conflict and work hours, these effects could be associated with the effects of paternal under- and over-employment in families.

The results indicate higher maternal work-family conflict is problematic for all children at any age. Additionally, adolescent children in single mother homes or in dual earner households experiencing financial stress may be particularly vulnerable. The findings raise concerns for children of mothers who struggle to reconcile the demands of work and family, particularly in vulnerable families. In Australian society, work-family reconciliation is a private matter, without wide-ranging institutional support. The findings of this paper have implications for policies that require disadvantaged mothers to work and the provision of effective structural and socio-emotional supports for working mothers and their children across childhood. The findings also suggest children are sensitive to family dynamics around work and the work stress experienced by both parents in different ways depending on the financial circumstances of the family. There may be differential effects of fathers' work hours and the problems paternal underemployment poses in families facing financial difficulties.

This paper highlights the importance of looking at the effects of work stress through a socio-demographic lens. There are intergenerational implications of work stress. If parents' work and work stress affect children more adversely in certain families, this has implications for understanding the role of parental employment in addressing disadvantage and how disadvantage is transmitted across generations. The growth curve analyses particularly highlight the impact parental work-family conflict may have on older children, providing a case for the argument work-family conflict is not a short-term issue for new parents, but a life course issue that affects families and children over a long time period.

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