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# Parental employment and child behaviors: Do parenting practices underlie these relationships?

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## **Keywords**

do, behaviors, child, employment, parental, underlie, relationships, practices, these, parenting

## **Disciplines**

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**Key words:** parental employment, parenting practices, child behavior, indirect effects.

## Introduction

Behavioral problems in school-aged children (e.g., hyperactivity, conduct problems, and anti-social behavior) contribute to a range of adverse outcomes for children and their families. These include academic difficulties, problems with relationships (Bussing, Mason, Bell, Porter, & Garvan, 2010; Fergusson, Boden, & Horwood, 2009), psychological distress (Boylan, Vaillancourt, Boyle, & Szatmari, 2007), criminality, and substance abuse in later life (Bussing et al., 2010; Fergusson et al., 2009; Wilens, 2004). These issues are concerning because a considerable number of children in countries such as the UK, US, and Australia experience behavioral problems (Green, McGinnity, Meltzer, Ford, & Goodman, 2005; Pastor, Reuben, & Duran, 2012; Sawyer et al., 2000).

Although a multitude of factors contribute to and influence behavioral problems, recent studies indicate that parental employment (particularly the number of hours in paid employment) may be a contributing factor. For instance, maternal employment during the first year of the child's life is associated with a range of outcomes including cognitive functioning and behavior; behavioral problems appear most pronounced where mothers are not in paid employment or are employed full-time compared with part-time (Berger, Brooks-Gunn, Paxson, & Waldfogel, 2008; Brooks-Gunn, Han, & Waldfogel, 2010; Nomaguchi, 2006). Several factors have been identified as potentially underlying these relationships. It has been suggested, for example, that mothers from a lower socioeconomic background are more likely to work full-time or not be in paid employment (Berger et al. 2008). This is important given that lower socioeconomic status is a risk factor for behavioral problems in children.

These findings are important in light of increasing rates of parental employment. These trends are reflected by the growing number of dual-income families in countries including the US and Australia, driven primarily by increases in employed females including mothers returning to paid employment after having children (Australian Bureau of Statistics 2006; Bureau of Labor Statistics, 2009). However, research examining the associations between parental employment and behavioral outcomes in children is limited. Available studies have focused on maternal employment, and as a result the role of paternal employment is not clear.

Furthermore, most research has focused on maternal employment during the first year of the child's life, but it is important to consider other developmental phases during childhood as behavioral problems can emerge throughout childhood, not just early infancy. The present study addresses some of these issues by focusing on mother and father employment, for children during their early school years (i.e., between ages 4–5 years and 6–7 years). The transition to school, which occurs between 4 and 5 years of age in Australia, is a particularly important period to examine as it can lead to the expression of behavioral problems through exposure to different social situations and demands (Paterson & Sanson, 1999). In addition, there is evidence that many mothers return to work when their youngest child begins school, which could affect parenting and child behavior (Australian Bureau of Statistics 2005).

### **Parental Employment, Parenting Practices, and Child Behavior**

Despite growing research in this area, it is currently unclear how parental employment influences child behavior. One possibility is that parenting practices underlie these relationships (Brooks-Gunn et al., 2010; Strazdins, Clements, Korda, Broom, & D'Souza, 2006). Parenting practices that are more restrictive in nature (e.g., hostile, aggressive, controlling) have been associated with conduct problems, aggression, hyperactivity, and decreased prosocial behaviors in children (Hipwell et al. 2008; McKee et al. 2007; Patrick, Snyder, Schrepferman, & Snyder, 2005; Pevalin, Wade, & Brannigan, 2003; Sheehan & Watson, 2008; Strazdins et al., 2006) possibly by inhibiting self-regulation and development of adaptive socialization processes in children (Baumrind, 1971). In contrast, parenting practices that are more child-centered in nature (e.g., warm, reasoning parenting) have been linked with greater prosocial behaviors (Carlo, Mestre, Samper, Tur, & Armenta, 2011), fewer conduct problems (Patrick et al. 2005), and higher behavioral regulation (von Suchodoletz, Trommsdorff, & Heikamp, 2011); these parenting practices may foster healthy development, self-regulation, and sociability in children (Baumrind, 1971).

Research has also demonstrated links between parental employment and parenting practices. For example, mothers in part-time employment are more likely to display warm and sensitive parenting practices

compared with those employed full-time or not in paid employment, (Brooks-Gunn et al., 2010; Buehler & O'Brien, 2011; Muller, 1995). In contrast, parents working longer hours (i.e., more than standard full-time work hours) have been identified as more likely to display reduced parental warmth and higher levels of aggression (Berger, 2007).

Theories regarding work-to-family enhancement provide insight into the potential benefits of employment, especially part-time employment, relative to not being in paid employment. The role accumulation hypothesis, for instance, suggests that skills and resources such as coping strategies and social support acquired from one domain (e.g., employment) can spillover and benefit the other domain (e.g., family and parenting) (Greenhaus & Powell, 2006). In contrast, role strain theory provides a possible explanation for potential negative effects of longer work hours on parenting. This theory proposes that individuals possess limited resources, including time, energy, and psychological resources, which require distribution across multiple roles (Grzywacz & Marks, 2000). If employment and parenting compete for these limited resources, it can promote role strain (Greenhaus & Beutell, 1985), which may negatively affect parenting practices.

The relationships between parenting practices, employment, and child behavior raise the possibility that parenting practices may link parental employment (i.e., hours of employment) with their child's behavior. However, this has only been tested in a limited number of studies. Strazdins et al. (2006), for example, found that hostile and ineffective parenting practices mediated the relationship between non-standard parental work schedules and child behavioral problems. Further, Brooks-Gunn et al. (2010) found that maternal sensitivity partially mediated the effects of maternal hours of paid employment on behavioral outcomes during the first year of the child's life. In contrast, Berger et al. (2008) found that parental nurturance or discipline did not mediate the relationship between mothers' first-year employment and behavioral outcomes. In conjunction with theories of work-family balance, these findings suggest that parenting practices may play a role in the relationship between parental employment and child behavioral outcomes, but further investigation is needed.

## **The Present Study**

The present study examined the longitudinal associations between parental employment and subsequent behavioral outcomes in school-aged children. We focused specifically on children aged 4–5 years at baseline and assessed again at 6–7 years, and included measures of mother and father hours of paid employment and parenting practices. Our specific aim was to investigate whether parents' hours of paid employment were associated with child behavior via different parenting practices: parental warmth, inductive reasoning, and hostile parenting practices.

## Method

### Participants

The Longitudinal Study of Australian Children (LSAC), which commenced in 2004, examines the development of a broadly representative sample of infants (aged 0–1 years at baseline) and children (aged 4–5 years at baseline) in Australia. In this paper, we examined data for the infant cohort at age 4–5 years and at two-year follow up at age 6–7 years. The sample included a total of 4,521 children at age 4–5 years with follow-up data available from 4,211 participants. We focused specifically on dual-parent families, which included 3,897 children at Wave 3. When missing data were excluded on the main study variables, the remaining sample size was 2,271 children. Ethical approval to use the LSAC data in this study was obtained from the University of Wollongong's Human Research Ethics Committee.

### Measures

**Parental employment.** Each parent indicated the number of hours of paid employment they worked in a typical week. The following categories, routinely used in an Australian context (Australian Bureau of Statistics 2010), were used to classify work hours: not in paid employment; part-time (1–34 hours/week); full-time (35–40 hours/week); and more than full-time (> 40 hours/week) which we refer to as long work hours in the remainder of this paper. The part-time work category covers a large span of work hours, and there may be considerable differences between someone working, for example, 1 hour a week and another individual working

34 hours a week. Therefore, we split this category into “few hours” (1–15 hours/week) and part-time employment (16–34 hours) (Australian Bureau of Statistics, 2010).

**Parenting Practices.** The LSAC included items assessing parenting practices of both mothers and fathers from the Child Rearing Questionnaire (Paterson & Sanson, 1999). We focused specifically on the warm parenting, inductive reasoning, and hostile parenting subscales (Sanson, Smart, & Mission, 2011; Cussen, Sciberra, Ukoumne, Efron, 2012). The warm-parenting subscale consisted of six items, assessing how often the parent hugged the child, had “warm, close times together” with the child, and expressed affection towards the child. This scale had appropriate levels of internal consistency for mothers (Cronbach’s  $\alpha = .87$ ) and fathers (Cronbach’s  $\alpha = .88$ ). The inductive-reasoning scale consisted of five items assessing whether the parent explained to their child the consequences of behaviors and the need to follow rules. Levels of internal consistency were appropriate for mothers (Cronbach’s  $\alpha = .90$ ) and fathers (Cronbach’s  $\alpha = .90$ ). The hostile-parenting subscale consisted of four items asking parents to indicate how often they had been angry with their child (e.g., “I have been angry with this child”) over the past 6 months. Levels of internal consistency for mothers (Cronbach’s  $\alpha = .82$ ) and fathers (Cronbach’s  $\alpha = .81$ ) were appropriate. Higher scores on each parenting subscale are representative of higher levels of warmth, inductive reasoning, and hostility respectively.

**Child behavior.** Child behavior at ages 4–5 years and 6–7 years was assessed using the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997; Goodman & Scott, 1999). This 25-item questionnaire assesses child behavior on a three-point scale (not true, somewhat true, and certainly true) across five dimensions. For the purposes of this paper, we focused on three specific subscales. The conduct problems subscale included five items assessing obedience (“Generally obedient, usually does what adults request”) and temper (“Often has temper tantrums or hot tempers”) (Cronbach’s  $\alpha = .67$ ). The hyperactivity-inattention subscale comprised five items encompassing factors such as restlessness (“Restless, overactive, cannot stay still for long”) and attention (“Easily distracted, concentration wanders”) (Cronbach’s  $\alpha = .72$ ). Finally, the prosocial behavior subscale included items such as “kind to younger children” and “often volunteers to help others” (Cronbach’s  $\alpha = .67$ ). The internal consistencies of these scales are slightly low, but still appropriate and similar

with figures obtained in other samples (Goodman, 2001). Higher scores on these subscales are indicative of higher levels of conduct problems, hyperactivity-inattention, and prosocial behavior respectively. We used SDQ data derived from an interview with “Parent 1,” the parent deemed most knowledgeable about the child (in most cases this was the child’s mother).

**Covariates.** Demographic characteristics such as child gender, partner employment status (i.e., employed or not-employed), household income, and parent education level, were included as covariates in the analyses. Household income was assessed by a single item (“Before income tax is taken out, what is your present yearly income [for you and partner combined]?), with respondents answering this question by selecting one of 15 response categories (from “nil income” to “AU\$2,499 per week”). Approximately 10% of participants did not answer this question but were retained in the analysis by splitting the sample into approximately quartiles and including a missing category. Parental education (high school, trade/diploma/certificate, or university degree) was determined from two questions regarding the highest year of high school completed and the highest qualification attained.

## **Statistical Analysis**

The hypotheses were investigated using a two-wave panel mediation model (Little, Preacher, & Selig, & Card, 2007). This involved examining whether maternal employment measured when the child was aged 4–5 years was indirectly associated with behavioral outcomes at age 6–7 years via mothers’ parenting practices at age 4–5 years (see Figure 1). A separate model was tested for each child behavior (i.e., separate models for conduct problems, hyperactivity-inattention, prosocial behavior), but all models included the three parenting subscales as mediators (hostile parenting, warm parenting, inductive reasoning). All models included child gender, mothers’ education, fathers’ employment status, fathers’ parenting practices, and child behaviors at age 4–5 years as covariates. Controlling for fathers’ employment and parenting practices was important for demonstrating independent associations of mother employment and parenting with child behavior. This analytic approach was replicated with father employment as the independent variable and fathers’ parenting practices as

mediators, controlling for child gender, fathers' education, mothers' employment status, mothers' parenting practices, and child behavioral outcomes at age 4–5 years.

As the independent variables in this paper (employment hours) were categorical, an analytic technique developed by Hayes and Preacher (2012) was used for testing mediation using categorical independent variables. This procedure used dummy coding to compare each work hour category to the reference category of part-time work (i.e., 16–34 hours). These analyses were performed using IBM SPSS version 19. The significance of each indirect effect was assessed using bootstrapping, with 5,000 bootstrap resamples. For each model, the following effects are reported in the text: (1) the relationships between parent employment and parenting practices (a paths); (2) the relationships between parenting practices and child behavior at age 6–7 years (b paths); (3) the direct relationship between parent employment and child behavior at age 6–7 years (c paths); and, (4) the indirect path linking parent employment to child behavior through parenting practices.

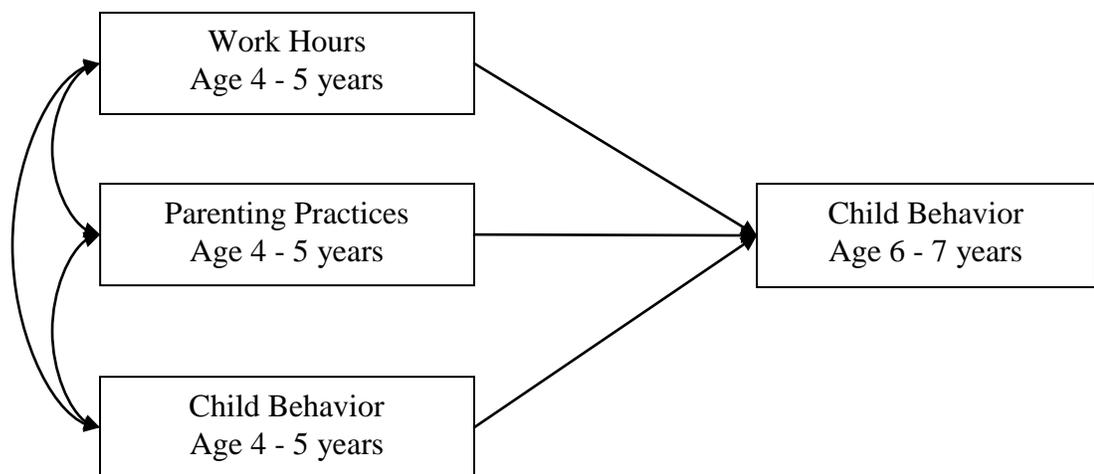


Figure 1. The two-wave panel model examining the relationships between parental work hours, parenting practices, and child behavior.

## Results

### Descriptive Statistics

The demographic characteristics of the present participants are shown in Table 1. The sample consisted of 2,271 Australian children aged 4–5 years at baseline (52% boys, 48% girls). Hours of paid employment differed between mothers and fathers ( $\chi^2 [3] = 2849.76, p < .001$ ) with mothers significantly more likely to work part-time and fathers more likely to work long hours. Education levels also different between mothers and fathers ( $\chi^2 [2] = 58.20, p < .001$ ); fathers were more likely to have a diploma/certificate/trade compared to mothers, whereas mothers were more likely to have completed a university degree.

Table 1. Demographic characteristics of the present sample.

	n	%
Child Gender		
Male	1157	51.3
Female	1114	48.7
Paid Employment: Mothers		
Not employed	716	31.5
1 – 15 (few work hours)	514	22.6
16 – 34 hours (part-time)	691	30.4
35 – 40 hours (full-time)	223	9.8
> 40 hours	127	5.6
Paid Employment: Fathers		
Not employed	82	3.6
1 – 15 (few work hours)	24	1.1
16 – 34 hours (part-time)	110	4.8
35 – 40 hours (full-time)	770	33.9
> 40 hours	1285	56.6
Mother education		
≤ High School	454	20.0

Diploma/Certificate/Trade	840	37.0
University Degree	977	43.0
Father education		
≤ High School	392	17.3
Diploma/Certificate/Trade	1063	46.8
University Degree	800	35.2

There were some differences between participants included in the final sample and those excluded because of missing data. For example, excluded children were more likely to have a mother,  $p < .001$ , or a father,  $p < .001$ , who were not in paid employment. Qualification levels of mothers,  $p < .001$ , and fathers,  $p < .001$ , were also lower for children excluded from the final sample. These children also had lower scores on the prosocial scale,  $p < .001$ , and higher scores on the hyperactivity-inattention,  $p < .001$ , and conduct problems scales,  $p < .001$ . However, there were no significant differences in terms of child gender. Table 2 shows the parenting practices and child behavior scores for the sample at baseline, with Table 3 showing the univariate associations among these variables. These associations demonstrate some overlap between parenting practices between mothers and fathers.

Table 2. Descriptive statistics for parenting practices and child behavior (conduct problems, hyperactivity-inattention, and prosocial behavior) at baseline.

	M	SD	Range
Hostile (m)	12.58	4.83	4 - 30
Reasoning (m)	21.18	2.87	12 - 25
Warm (m)	26.99	2.76	16 - 30
Hostile (f)	11.51	4.72	4 - 30
Reasoning (f)	20.16	3.05	12 - 25
Warm (f)	25.49	3.21	16 - 30
Conduct problems	2.02	1.74	0 - 10
Hyperactive-inattention	3.15	2.04	0 - 10

Prosocial behavior	7.79	1.72	0 - 10
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Table 3. Correlations between parenting practices for each parent and child behavior (i.e., conduct problems, hyperactivity-inattention, and prosocial behavior) at baseline.

	Hostile (m)	Reasoning (m)	Warm (m)	Hostile (f)	Reasoning (f)	Warm (f)	Conduct	Hyperactive
Reasoning (m)	-.04							
Warm (m)	-.20**	.49**						
Hostile (f)	.31**	-.03	-.12**					
Reasoning (f)	-.01	.25**	.13**	-.08**				
Warm (f)	-.08**	.13**	.24**	-.22**	.51**			
Conduct	.44**	-.02	-.19**	.27**	-.01	-.13**		
Hyperactive	.31**	-.03	-.09**	.20**	-.05*	-.10**	.44**	
Prosocial	-.22**	.18**	.26**	-.14**	.08**	.15**	-.37**	-.33**

Note: f: father parenting; m: mother parenting; \*  $p < .05$ ; \*\*  $p < .001$ .

### Hyperactivity-Inattention

**Maternal employment and child hyperactivity-inattention.** In the first model, we tested whether maternal employment was associated with child hyperactivity-inattention through maternal parenting practices. The results indicated that maternal employment was associated with parenting practices (i.e., a paths). Mothers who worked few hours,  $\beta = .71, p = .007$ , and long hours,  $\beta = -.91, p = .037$ , had lower hostile-parenting scores. Mothers who were not in paid employment had lower warm-parenting scores,  $\beta = -.31, p = .027$ . Hostile parenting practices when children were aged 4–5 years was positively associated with child hyperactivity-inattention at age 6–7 years,  $\beta = .03, p = .001$  (i.e., b path).

There were direct effects linking maternal employment when children were aged 4–5 years to child hyperactivity-inattention at age 6–7 years (i.e., c path). Full-time employment was associated with higher child

hyperactivity-inattention scores,  $\beta = .48$ ,  $p < .001$ . The indirect effect linking few work hours and lower hyperactivity-inattention through lower hostile-parenting scores was significant,  $\beta = .024$ , 95% confidence interval  $(-.047, -.005)$ . There was also a significant indirect effect linking long work hours to lower child hyperactivity-inattention scores through lower hostile parenting scores,  $\beta = -.031$   $(-.069, -.003)$ .

**Paternal employment and child hyperactivity-inattention.** In the model examining paternal employment, paternal parenting practices, and child hyperactivity-inattention, long work hours was associated with lower inductive reasoning scores,  $\beta = -.67$ ,  $p = .030$ . There was also a significant relationship between few employment hours when children were aged 4–5 years and lower child hyperactivity-inattention scores at age 6–7 years,  $\beta = -.99$ ,  $p = .015$ . There were no significant effects of parenting practices on child hyperactivity-inattention, or any indirect effects between paternal employment and child hyperactivity-inattention.

## Conduct Problems

**Maternal employment and child conduct problems.** In the model examining the associations between maternal employment, maternal parenting practices, and child conduct problems, few work hours,  $\beta = -.72$ ,  $p = .004$ , and long work hours,  $\beta = .89$ ,  $p = .034$ , were significantly associated with lower hostile-parenting scores. Not being in paid employment was significantly associated with lower warm-parenting scores,  $\beta = -.33$ ,  $p = .018$ . Hostile parenting when children were aged 4–5 years was positively associated with child conduct problems at age 6–7 years,  $\beta = .04$ ,  $p < .001$ . No direct effects linking maternal employment with child conduct problems reached significance.

However, there were significant indirect effects linking maternal employment when children were aged 4–5 years to child conduct problems at age 6–7 years. Few work hours,  $\beta = -.026$   $(-.047, -.007)$ , and long work hours,  $\beta = -.032$   $(-.066, -.003)$ , were both significantly associated with lower child conduct-problem scores through lower hostile parenting scores.

**Paternal employment and child conduct problems.** The model examining associations between paternal employment, paternal parenting practices, and conduct problems indicated that long work hours was

significantly associated with lower inductive reasoning scores,  $\beta = .67$ ,  $p = .028$ . However, neither parenting practices nor paternal employment were significantly associated with child conduct problems.

## **Prosocial Behaviors**

**Maternal employment and child prosocial behaviors.** The model examining maternal employment, maternal parenting practices, and prosocial behavior indicated that few work hours was associated with lower hostile-parenting scores,  $\beta = -.79$ ,  $p = .003$ , and lower warm-parenting scores,  $\beta = -.29$ ,  $p = .047$ . Full-time work hours was associated with lower inductive-reasoning scores,  $\beta = -.48$ ,  $p = .027$ , whereas mothers not in paid employment had lower warm-parenting scores,  $\beta = -.33$ ,  $p = .018$ . Hostile parenting when children were aged 4–5 years was inversely associated with child prosocial behavior at age 6–7 years,  $\beta = -.015$ ,  $p = .020$ . In contrast, warm parenting practices were positively associated with child prosocial behavior,  $\beta = .07$ ,  $p < .001$ .

Maternal employment when children were aged 4–5 years was not directly associated with child prosocial behavior at age 6–7 years. However, there was a significant indirect effect linking few work hours to higher child prosocial-behavior scores through lower hostile-parenting scores,  $\beta = .012$  (.001, .030). In addition, long work hours,  $\beta = -.021$  (–.045, –.001) and no paid employment,  $\beta = -.023$  (–.047, –.004) were indirectly associated with lower child prosocial-behavior through lower warm-parenting scores.

**Paternal employment and child prosocial behaviors.** The model examining paternal employment, paternal parenting practices, and child prosocial behavior revealed that long work hours was significantly associated with lower reasoning-scores,  $\beta = -.67$ ,  $p = .030$ . Long work hours when children were aged 4–5 years was also linked to higher child prosocial-behavior scores at age 6–7 years,  $\beta = .38$ ,  $p = .008$ . However, parenting practices were not significantly associated with child prosocial behavior and no indirect effects linking paternal employment with child prosocial behavior reached significance.

## **Discussion**

This study investigated whether warm, inductive reasoning, and hostile parenting practices linked parents' hours of paid employment when children were aged 4–5 years with child behavior at age 6–7 years. Given the differing nature of the respective findings, results for maternal and paternal employment are discussed separately.

### ***Mother Employment and Parenting Practices***

The findings for mothers indicate significant relationships between hours of paid employment and parenting practices (Berger, 2007; Brooks-Gunn et al., 2010; Buehler & O'Brien, 2011; Muller, 1995). Compared to part-time work, mothers not in paid employment exhibited more hostile and less warm-parenting practices. In contrast, mothers employed in few or long hours demonstrated lower hostile-parenting practices than those in part-time work.

The nature of the associations noted above can be understood within the context of work-family balance. Role strain theory, for instance, offers insight into the nature of the association between full-time work and lower inductive reasoning in mothers. This theory proposes that individuals have finite levels of resources to be allocated across multiple domains of life (Greenhaus & Beutell, 1985). When work and family compete for these resources, it can create role strain and adversely affect functioning. For some mothers, working full-time may lead to role strain because there are insufficient resources to balance work and family life. This could feasibly affect parenting practices, since psychological distress and a lack of energy may contribute to parenting practices that are more authoritarian in nature (e.g., inductive reasoning) and limit authoritative parenting (Berger, 2007).

However, these findings do not imply that mothers should avoid paid employment, because paid employment has obvious and important benefits as demonstrated by work-to-family enhancement research. Specifically, role accumulation can occur when access to resources in one domain such as work (e.g., coping strategies and self-efficacy) spill over and have a positive influence on parenting and family functioning (Greenhaus & Powell, 2006). The present results suggest that mothers not in paid employment may not be exposed to these benefits. Further, the benefits of paid employment on parenting may depend on the hours worked. Few hours of paid

employment, for instance, may benefit parenting because role accumulation is combined with lower role strain. In contrast, full-time work hours may be related to higher rates of negative behavior in some cases because greater role strain outweighs the benefits of role accumulation.

An unexpected finding was that long work hours were linked with lower hostile-parenting, which is in contrast with previous research. However, it is important to note that most existing studies have focused on the effects of maternal employment during the first year of the child's life. Since we examined school-aged children, our results are not directly comparable and the effect of long work hours may be different according to the age of the child. The potential benefits of long work hours may reflect a combination of role accumulation and other factors such as socio-economic status which moderate the effects of role strain. Household income may be particularly important in relation to parent employment and parenting (Berger, 2007). In the present study, we found that mothers who worked longer hours had greater household income, which may indicate increased financial resources and fewer financial pressures; these factors could offset detrimental effects of role strain.

### ***Mother Employment and Child Behavior***

Maternal employment when children were aged 4–5 years was significantly associated with child behavior at age 6–7 years, directly and indirectly via maternal parenting practices. Hostile parenting practices were significantly associated with all three behaviors in children, and was the primary pathway through which employment impacted on child behavior. Few hours of paid employment was significantly associated with less conduct problems and higher prosocial behavior in children through lower hostile parenting practices. Long work hours were associated with lower conduct problems and hyperactivity-inattention through lower hostile parenting practices. These findings are consistent with existing research indicating restrictive parenting practices are linked with behavioral problems in children, possibly through inhibiting self-regulation and adaptive socialization processes (Baumrind, 1971). Therefore, few and long work hours, by virtue of their association with less hostile parenting practices, may reduce behavioral problems by fostering self-regulation and adaptive social relationships and networks in children.

No paid employment and long work hours were significantly associated with lower prosocial behaviors in children via lower warm parenting practices. It is possible that parents who develop a positive emotional relationship with the child are better able to promote prosocial behavior through encouragement of self-regulation and sociability (Baumrind, 1971; Carlo et al., 2011). The effects of no paid employment are consistent with role accumulation theory discussed above. However, the effects of long work hours on less prosocial behavior through less-warm parenting practices appear in conflict with role accumulation theory. This pathway requires more investigation, but it is possible that long work hours may have differential effects on parenting practices.

There was also evidence for direct effects between maternal employment and child behavior. In particular, few work hours was significantly associated with lower hyperactivity-inattention whereas full-time work was associated with higher hyperactivity-inattention. The reasons for these direct relationships are not clear; however, it is possible that there is less direct supervision of children when mothers are employed in full-time work, which may have implications for hyperactivity-inattention. Perhaps more likely is that other parental and family factors not measured in this study also link maternal employment with child behaviors.

The results of this study are consistent with research indicating more behavioral problems in children when the mother worked full-time or was not in paid employment relative to those employed part-time (Berger et al., 2008; Brooks-Gunn et al., 2010; Nomaguchi, 2006). However, the present study focused on school-aged children, whereas previous studies examined infants. Therefore, although many of the results are similar and indicate the importance of maternal employment, the results are not directly comparable.

### **Paternal employment**

We observed few associations between paternal employment, parenting practices, and child behavior. Consistent with findings for maternal employment, few work hours for fathers was significantly associated with lower hyperactivity-inattention in children. Long work hours was also associated with lower inductive reasoning, and higher prosocial behavior in children. The lack of results for fathers may reflect traditional gender roles, whereby mothers are generally more involved in child rearing. Gender roles are continually

evolving, but in many families, mothers still spend more time with the children and take on more parenting responsibilities than fathers (Baxter, 2009). Importantly, mothers appear to spend time with their children regardless of the amount of paid employment, whereas for fathers there is an inverse association between hours of paid employment and time spent with their children (Baxter, 2009). As such, it is possible that the effects of employment on parenting and child behavior are greater for mothers given the trend for them to spend more time with their children.

### **Strengths and weaknesses**

The primary strengths of this study relate to the inclusion of both maternal and paternal variables, and the formal approach to testing the indirect effects via parenting practices. Consideration of long work hours is also important given that a considerable proportion of employees (15%–25%) in countries such as Australia, the UK, and the US work more than the standard full-time work hours (Australia Bureau of Statistics 2011; Bureau of Labor Statistics 2011; Office for National Statistics, 2012).

There are, however, several limitations of this research. One important limitation of this paper is that only a limited number of parenting practices were assessed. Therefore, although the present results are meaningful, future research could add to the findings by exploring other components that would allow understanding of other aspects of family functioning, such as authoritative and authoritarian parenting.

Furthermore, the longitudinal relationships between paternal employment, parenting practices, and child behaviors are likely to be complex and affected by additional factors that were not assessed in this study. The level of parent-child involvement, for example, may moderate many of the associations found and potentially account for the differing results for mothers and fathers. There may also be unexplored interaction effects between different parenting practices and child behaviors (Meteyer & Perry-Jenkins, 2009). Future research across a greater number of time points may also provide more insight into these complex longitudinal relationships. Further, the use of multiple-source ratings of parenting practices and behavioral outcomes would likely help with any underestimates of negative parenting and child behaviors due to possible biases in the parent-most-knowledgeable and self-report measures used in this study. Finally, there were considerable

missing data across the two time points; given that there were some differences between those included and excluded from the study due to missing data, this may have biased some of the results.

### *Conclusions*

Few studies have examined whether parenting practices underlie the relationships between parental employment and child behaviors. Our findings demonstrate that parenting practices link maternal work hours and behavioral outcomes in children. The present findings have a number of important policy implications in a range of countries given the rise in dual-income families. The results clearly indicate, for example, that paid employment (particularly for mothers) is associated with parenting practices and, subsequently, child behaviors. In some instances, paid employment (e.g., full time work hours) may not be beneficial due to the strain of balancing work and family demands. However, these results do not imply that mothers should necessarily work less, as long work hours were also associated with benefits to parenting practices and child behaviors. Rather, they suggest that there may be a need for governments and employers to encourage more flexible work arrangements (e.g., flexible start and finish times) and greater supports (e.g., affordable and accessible child care) for parents. Such flexibility may allow mothers to spend more time with their children, while balancing multiple roles. This will be important in ensuring that parents are engaged as productive members of the workforce and are also able to meet family demands.

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