

Parenting Stress and the Use of Formal and Informal Child Care: Associations for Fathers and Mothers

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Abstract

We investigated relationships between nonparental care and psychological strains of parenthood. Using data from employed parents of children below 5 years of age ($n = 6,886$ fathers and mothers) from Waves 4 to 11 of the household panel survey Household, Income and Labour Dynamics in Australia (HILDA), we constructed a parenting stress scale from the average of four items ($\alpha = .76$) administered in the Self-Completion Questionnaire. We ran panel random-effects regression models testing associations between amount and type of nonparental care and parenting stress, for both mothers and fathers. We distinguished between formal care, informal and family care (mainly grandparents), and mixed care. Results showed that fathers and mothers' parenting stress is positively associated with hours of nonparental care, but that for both genders parenting stress is significantly lower if the care is provided by informal/family carers.

Keywords

parenting stress, informal childcare, formal childcare, grandparent care, father care

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Introduction

Nonparental childcare is relied on by increasing numbers of dual earner couples, to assist them manage the demands of work and family (Bergmann, 1986; Bianchi & Milkie, 2010; Gornick & Meyers, 2009; Jacobs & Gerson, 2004). Yet little is known about how nonparental childcare relates to the subjective emotional and psychological strains of parenting. Parenting stress arises when parents feel they lack the capacity or resources to meet the role demands placed on them (Cooper, McLanahan, Meadows, & Brooks Gunn, 2009; Harmon & Perry, 2011). Most prior research into parenting stress has focused on mothers, but fathers too can find meeting family role expectations challenging (Cabrera & Mitchell, 2009; Deater-Deckard, 2004; Deater-Deckard & Scarr, 1996). Parenting stress is associated with serious negative consequences for both children and parents, so identifying factors that may minimize or exacerbate it is important to understanding and potentially enhancing family well-being (Anthony et al., 2005; Halpern-Meekin & Turney, 2016). This article draws on Australian panel data from employed parents of preschool children ($n = 68,836$ couples) to examine associations between nonparental care and parenting stress for both mothers and fathers.

Background

Parenting Stress

Parenthood is a complicated and demanding role. It involves highly complex tasks, often undertaken under challenging conditions. The ability to perform these tasks and parent successfully is dependent not only on personal and physical resources but also the emotional, mental, and physical needs of children. Parents are expected to succeed regardless of children's specific needs or challenges, and parents can feel as if they have performed poorly or failed if they are unable to manage their child (Abidin, 1990). Having children is stressful for most parents, especially mothers, who are often the primary carer (Buddelmeyer, Hamermesh, & Wooden, 2017). However, for some it can become very taxing indeed, creating an associated subjective reaction that has been described as "parenting stress" (Anthony et al., 2005; Halpern-Meekin & Turney, 2016). Parenting stress may be understood as a form of role strain. Role strain is people experiencing enduring "hardships, challenges and conflicts . . . as they engage over time in normal social roles" (Pearlin, 1983, p. 8).

Parenting stress involves multiple components, such as feeling overwhelmed by responsibilities, feeling trapped and exhausted, finding parenthood more work than pleasure, and experiencing strains in the parent-child

relationship (Abidin, 1992; Anthony et al., 2005). The demands on parents include meeting children's material needs, like food, housing, and security, as well as their emotional and psychological needs such as for attention and affection (Deater-Deckard 2004). Parenting stress arises when demands surpass the resources available to meet them (Cooper et al., 2009; Harmon & Perry, 2011) and can be experienced as negative feelings about the parent themselves or about their offspring (Deater-Deckard, 2004). Although material or emotional resources are important predictors of parenting stress, subjective experience is key. As Deater-Deckard (2004), observes, "[O]ne parent's 'overactive, demanding' child may be another parent's 'energetic, assertive' child" (p. 7).

Parenting stress is associated with poorer developmental outcomes in children (Creasey & Jarvis, 1994; Deater-Deckard, 2004), child behavior problems, and strained family relationships (Crnic & Acevedo, 1995; Crnic, Gaze, & Hoffman, 2005). Most research into the outcomes for parents has focused on mothers. Parenting stress negatively affects mothers' general well-being and life satisfaction, and is associated with greater psychological distress and poorer mental health than other mothers' experience (Crnic & Greenberg, 1990). Mothers who report high parenting stress can feel less attached to and have more strained relationships with their children and hold more negative perceptions of them (Harmon & Perry, 2011). Parenting stress is also associated with poorer parenting by mothers (Crnic et al., 2005).

In contrast to the substantial body of research on maternal parenting stress, research on fathers and parenting stress is still underdeveloped, albeit growing. This is a significant gap in understanding contemporary families and parental welfare, since fathers have become more involved in active child-care (Altintas & Sullivan, 2016). Yet research on fathers tends to focus not on their own parenting stress, but rather on their role in ameliorating *mothers'* parenting stress (Harmon & Perry, 2011; Nomaguchi, Brown, & Leyman, 2017). This is likely because, historically, mothers have been the primary care-givers, and fathers' family role has been mainly seen in relation to "their ability to procure resources and services that served to shelter mothers from parenting stress" (Harmon & Perry, 2011, p. 176). However, the emergence of the "new father" ideal (Hook & Wolfe, 2012; Pleck & Pleck, 1997) has seen fathers more actively engaged in children's lives, in ways which extend beyond financial contributions.

Accordingly, research has looked at how fathers' physical and emotional involvement, rather than simply their material resources, might alleviate maternal parenting stress. Some scholars found that fathers' emotional support is important for maternal parenting stress (Harmon & Perry, 2011). However, the nature of this relationship was unclear until more detailed

research showed that it is specifically fathers' "hands on" engagement with children in tasks that are "less rewarding" that alleviates maternal parenting stress (Nomaguchi et al., 2017). Fathers' engaging with their children in shared activities—reading and playing—is also associated with lower levels of maternal parenting stress, as is participation in "child-related chores," such as caring for children while mothers did other things, and ferrying children to and from school or sports activities (Nomaguchi et al., 2017). From a role strain theory perspective, mothers' lower parenting stress may be reduced in these instances because some of the caregiving role has been "delegated" to fathers.

Role Delegation and Parenting Stress

Role strain theory posits that strain can be reduced when social roles or components of them are delegated to someone else (Pearlin, 1989). The research discussed above has shown that mothers' parenting stress is lessened when their burden of care is reduced through fathers' hands-on participation. This suggests that role delegation to a co-parent is helpful. That is, sharing role responsibility for everyday parenting with the father of their children is psychologically beneficial to mothers. This interesting finding raises a further question: Is a family relationship of crucial importance to the mitigation of parenting stress through role delegation, or is delegating practical tasks to others similarly effective?

Teasing out the nuance is important because another way in which the burden of care can be reduced for mothers is the use of nonparental or replacement care of children. Care which substitutes for mothers' time with children is fundamental to maternal employment, so replacement care is an essential service assisting families manage the demands of work and family (Bergmann, 1986; Gornick & Meyers, 2009). It has become increasingly prevalent as more mothers have entered the paid workforce, and more children are raised in dual earner households (Bianchi & Milkie, 2010). Nonparental care is usually a commercial arrangement, with employed substitute carers. They perform practical care tasks, but do not share the parenting role as would a father, because they are providing a paid service and not related to the child. Is nonparental care nonetheless useful in mitigating parenting stress?

Nonparental Care and Parenting Stress

As nonparental care becomes more common, it is important to know whether it has a role in mitigating parents' emotional and psychological pressures. It is possible that nonparental care is an exacerbating, rather than an

ameliorating, factor in parental stress. While on the one hand, given that fathers' greater hands-on care mitigates mothers' parenting stress, it could be expected that having nonparental substitutes take over some of the care of children, sharing the time burden and the work involved, would also do so. On the other hand, nonparental care may not give parents much respite from mental stress such as worrying or feeling anxious about their children. Indeed, the scheduling demands and cost of day care may add to parental worries. The use of nonparental care may create more to do, and introduce a stricter timetable to a parent's day (Craig & Powell, 2013). Readyng children, preparing their lunch, packing spare clothes, and ferrying children to and from day care are tasks that must be managed and scheduled. Scheduling pressures could be exacerbated if work hours are long, or if multiple care types are used, such that parents need to make complex arrangements and settle children with a variety of carers (Pillarz & Hill, 2017). Using nonparental care adds to parents' subjective feelings of being rushed or pressed for time, with associations stronger for mothers than for fathers, because they are usually the primary carer (Craig & Powell, 2013). Subjective time pressure threatens well-being and can lead to poorer mental health (Dinh, Strazdins, & Welch, 2017; Rose, Hewitt, & Baxter, 2013; Strazdins, Welsh, Korda, Broom, & Paolucci, 2016). Some parents may have concerns about their children's behavior or welfare while they are with delegated carers (Baxter, Gray, Alexander, Strazdins, & Bittman, 2007). These factors could mean that the practical assistance nonparental care offers is not accompanied by a diminution of subjective stress for parents. Father involvement may relieve mothers' stress precisely because it involves *family* role delegation, which nonparental care does not.

Pillarz and Hill (2017) investigated whether parenting stress arises when nonparental care is unpredictable or unstable. They defined instability in nonparental care arrangements in three ways: when (a) changes in care arrangements require a reconfiguration of family and household routines, which need to be reconciled with work and family demands; (b) the use of multiple providers of care causes flow on effects in arranging schedules and transportation; and when (c) the use of "back-up" providers to cover irregularities in families' care routines is disruptive. However, Pillarz and Ross' (2017) empirical work suggests that on average, the use of multiple providers is not associated with greater parenting stress in mothers. They hypothesize that changes in nonparental care arrangements may assist parents to reconcile work and family demands and thus manage their own parenting stress.

Beyond the use of multiple care providers, it is unknown whether the use of different arrangements or care packages is associated with comparatively more or less parenting stress. Informal arrangements with family or friends

are likely to be more flexible and less rigidly scheduled than childcare centers. Perhaps more importantly, leaving children in the care of someone parents know well may give more psychological comfort than formal day care arrangements. This may be particularly true if the substitute carers are close relatives, such as a parent's own mother or father. Parental childcare is complex mix of supervisory responsibility, practical tasks, and emotional ties (Folbre & Yoon, 2007). In knowing the family intimately and having an emotional connection to the children, grandparents are often thought to provide the "next best thing" to parental care (Craig & Jenkins, 2015; Wheelock & Jones, 2002). Relative and grandparent care is likely to be carried out in ways consistent with the parents' own values and practices (Arber & Timonen, 2012). Thus, delegation to family members including grandparents may be more akin to role sharing between spouses than other forms of nonparental care, with concomitantly higher potential to relieve parenting stress. We investigate this possibility in this article.

Research Focus

Nonparental care holds out the possibility of ameliorating the psychological strains of parenthood. We investigate whether it does so, asking three related research questions.

Research Question 1: Is there a relationship between the use of nonparental care and parenting stress?

Research Question 2: Do relationships between nonparental care and parenting stress differ by the type of care used?

Research Question 3: Are relationships between the use and type of nonparental care and parenting stress the same for fathers, as for mothers?

Before describing the data and methodology, we give an overview of the Australian context in relation to work, family, child-raising, and nonparental childcare.

Institutional Context: Nonparental Care in Australia

Australia is usually grouped with the United States, the United Kingdom, Canada, and New Zealand as a "liberal" welfare state, in which work-family reconciliation and raising children are seen as largely private, not government, responsibilities (Gornick & Meyers, 2009; Lewis, 2009; Orloff, 2009). However, Australia has distinctive features. Historically tax and social policies have favored male breadwinner or one-and-a-half earner families (Apps,

2004). The threat of populating ageing and the associated decline in economic growth have led recent governments to focus rhetorically on increasing productivity through greater female employment (Commonwealth of Australia, 2010). Nonetheless women's workforce participation is low compared with other western nations (OECD, 2016) and most Australians believe that in the early years parental care is best for children (Baxter et al., 2007). Since the mid-1980s, attitudes toward whether women in paid employment can be good mothers have become more conservative (Van Egmond, Baxter, Buchler, & Western, 2010). Australian attitudes have at the same time become more supportive of women's workforce participation and of a more gender-equal distribution of household labor and childcare. Support for the male-breadwinner household model has declined and support for access to satisfactory childcare facilities that enables women to work has increased significantly (Van Egmond et al., 2010).

Contemporaneous with these attitudinal shifts has been an expansion of formal early education and childcare, although demand continues to exceed supply in many areas and costs are high (Adamson & Brennan, 2014). Australian childcare varies by type, covering formal day care and informal arrangements. Households also vary in the packages or patterns of usage. For example, some households may use formal-only or a mix of informal and formal childcare (Baxter et al., 2007; Brady & Perales 2016). Most policy making focus has been on improving access to formal (i.e., center-based) or semi-formal (i.e., nannies) childcare. However, it is very expensive—fees for a child in day care fulltime can be \$30,000 a year (NATSEM, 2013)—and with national average full time earnings at \$79,000 a year (ABS, 2017), many families struggle to find affordable, accessible services. Changing work conditions, including more casual jobs and nonstandard working hours, mean many parents also seek more flexibility than is available through the formal childcare market (Adamson & Brennan, 2017), so many families rely on informal carers, either solely or to plug service gaps (Craig & Jenkins, 2015).

Thus, the use of both informal and formal care has increased in Australia over time (Adamson & Brennan, 2017). By 2014, around 30% of single and partnered mothers used day care centers and a further 20% used family day care (Brady & Perales, 2016). Around 40% of Australian mothers rely on relatives to care for their preschool-aged children. Relative-care is most frequently undertaken by grandmothers, especially when children are young (Craig & Jenkins, 2015). Grandparents have always played some part in the rearing of children emotionally, physically, and materially, but grandparenting has become more active in recent decades (Arber & Timonen, 2012). In most advanced economies, grandparents are increasingly a source of regular childcare, supporting parents, particularly mothers, participate in the labor

market (Aassve, Arpino, & Goisis, 2012; Geurts, VanTilburg, Poortman, & Dykstra, 2014; Posdas & Vidal-Fernandez, 2013). This is reflected in Australia, where grandparent care is by far the most common form of informal care, and around 40% of grandparents look after their grandchildren at least once a week (Craig & Jenkins, 2015).

Expectations

Against this contextual backdrop, we expect that increasing hours of nonparental care will be positively associated with parenting stress, but that associations will be moderated by care type. Given differences in time flexibility, cost, and closeness of relationship, we expect that informal family-only care and mixed care will be negatively associated with parenting stress, whereas formal-only will be positively associated with parenting stress. Because Australian women retain more responsibility for managing the household and family arrangements than men (Craig & Brown, 2016; Craig, Powell & Smyth, 2014), we expect to find gender differences in associations between parenting stress and both hours and types of parental care.

Data

We use data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA survey is a large household panel survey with a specific focus on three key research areas: family and household dynamics, income and welfare dynamics, and labor dynamics. The survey commenced in 2001 and there are currently 15 waves of data available. The reference population for the initial wave of the HILDA sample was all members in private dwellings across Australia. From the sampling frame, 11,693 households were identified and interviews with 7,682 responding households were completed resulting in 66% household response rate for Wave 1. From 7,682 responding households, 13,969 responding persons above the age of 15 years were interviewed. The overall Wave 1 sampling frame is representative of Australian households (see Summerfield et al., 2014, for more detail). Data are collected at both a household- and individual-level using a range of survey instruments.

The analytic sample used in this research was constructed using data from the Combined Person Files from Waves 1 to 15 to create a person-period data set so that each respondent has multiple records—one for each wave in which the respondent is observed. The analytic sample was restricted to all responding persons aged 15 years and above who participated in Waves 4 to 11, because there were some inconsistencies in the way information about child

care types was collected between Waves 1 and 3, including information about grandparent care. The analytic sample was further restricted to only include men and women with children under the age of 5 years who were both in employment and in a relationship, either married or cohabiting. HILDA only collects information about childcare arrangements for preschool-aged children from households in which both parents are employed. The analytic sample was unbalanced to include respondents who enter and exit over the course of the survey. The final sample comprises 3,443 men and 3,443 women. Sample characteristics are presented in Table 1.

Measures

Parenting stress was constructed from the average of four items ($\alpha = .76$) administered in the Self-Completion Questionnaire. Respondents were asked to indicate how strongly they agreed or disagreed with statements in relation to children (<17 years) for whom they had parenting responsibility: (a) "Being a parent is harder than I thought"; (b) "I often feel tired, worn out or exhausted by meeting the needs of my children"; (c) "I feel trapped by my responsibilities being a parent"; and (d) "Parenting is much more work than pleasure." Each measure has the same response categories across a 7-point Likert-type scale, ranging from *strongly disagree* (1) to *strongly agree* (7). These measures were adopted from the Panel Study of Income Dynamics Child Development Supplement and the derived scale is an established approach to modeling parenting stress (Nomaguchi et al., 2017). An average closer to 1 indicates that respondents feel *less* parenting stress and an average score closer to 7 indicates that respondents feel *more* parenting stress.

Hours of nonparental care was derived by summarizing the number of hours respondents reported their child(ren) spend in all types of care while they and their partner work in an average week, specifically: (a) the child's brother or sister, (b) child's grandparent who lives with us, (c) child's grandparent who lives elsewhere, (d) other relative who lives with us, (e) other relative who lives elsewhere, (f) a friend or neighbor coming to our home, (g) a friend or neighbor in their home, (h) a paid sitter or nanny, (i) family day care, (j) long day center at workplace, (k) private or community long day care center, (l) kindergarten or preschool, and (m) other.

Child care package was constructed by grouping child care types into a set of five categories: (a) care undertaken by me or partner only, (b) informal/family care only, (c) formal care only, and (d) mixed care. Informal and family care includes child care provided by the child's grandparents, brother or sister, relatives, friends, and neighbors. Grandparents are by far the main providers of informal care, constituting nearly 70% of this category. Formal care

Table 1. Descriptive Statistics.

	Men		Women		Couple	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Parenting stress	3.4	0.01	3.74	0.01		
Nonparental care hours					22.64	0.29
Childcare packages						
Me/partner-only					4.9	
Grandparents-only					6.7	
Informal-only					4.5	
Formal-only					38.1	
Mixed					42.8	
Parental care hours	16.5	0.20	35.7	0.37		
Partner's care hours	35.7	0.37	16.	0.20		
<i>Household labor force status</i>						
2.0 (full-time + full-time)					25.6	
1.5 (full-time + part-time)					70.3	
1.0 (part-time + part-time)					4.1	
Tertiary qualifications	41.6		58.3			
Married					83.3	
Age	36.1	0.10	34.1	0.04		
Born outside of Australia	50.5		40.5			
Subjective time pressure	2.43	0.01	2.14	0.01		
SF-36—General Health	71.9	0.28	73.7	0.72		
SF-46—Mental Health	76.5	0.24	75.3	0.23		

is care provided by a paid sitter or nanny, family day care, long day care, private or community long day care, or kindergarten/preschool. Mixed care is from a combination of informal and formal care providers.

Several control variables that may have an independent relationship with parenting stress were included in the models: parent's and partner's parental care hours, age of youngest own resident child, household labor force status, respondent's highest level of qualifications, marital status, subjective time pressure, overall general health, and mental health statuses. Parental care hours and partner's parental care hours were derived from the number of hours and minutes respondents reported spent playing with their children, including helping them with personal care, teaching, coaching or actively supervising them, or getting them to child care, school, and other activities. Age of youngest child was included as a continuous variable in which a higher score on the dependent variable indicated that those with

older children experienced less parenting stress. Household labor force status was constructed using both respondent and their partner's labor force status. For the purposes of analysis, the response categories are as follows: 1 = "2.0—Both respondent and partner employed full-time" (reference category); 2 = "1.5—Respondent employed full-time and partner employed part-time"; and 3 = "1.0—Both respondent and partner employed part-time." Respondent's highest level of qualifications was constructed by using a dummy variable wherein 1 = obtained a bachelor's degree or above). Marital status was a dichotomous variable indicating 0 = Married and 1 = Cohabiting. Subjective time pressure was derived from the question: "how often do you feel rushed or pressed for time?" Responses ranged from 1 = *almost always* to 5 = *never*. Measures for overall general health and mental health derived from the SF-36 are included. Both measures are on a scale that ranges from 0 to 100 with 0, indicating poorer general and mental health. Because of space constraints we do not discuss all control variables in the text.

Analytic Strategy

To test associations between nonparental care and parenting stress, we estimate panel random-effects regression models. Random-effects models are applicable for using panel data such as the HILDA data because they allow for estimation of between-individual differences using individual-specific intercepts that account for unobserved heterogeneity, which may affect parenting stress. In this research, parenting stress is modelled as a function of hours of nonparental care, child care package, and other socioeconomic factors. The full model is represented rotationally as

$$PS_{it} = \alpha + C_{it}\beta_1 + P_{it}\beta_2 + X_{it}\beta_3 + C_{it}\beta_4 + \nu_{it} + \varepsilon_{it}$$

where subscripts i and t denote individual and time, respectively; PS represents parenting stress; C is a continuous variable that represents hours of nonparental care; P is a vector of dichotomous variables representing child-care packages; X is a vector of control variables, including hours of care for both respondent and partner, household labor force status, household income logged, education, marital status, age, subjective time pressure, and ratings of general and mental health from the SF-36; ν is the person-specific intercept capturing the random effect; ε is the error term; and β_1 to β_4 are the coefficients for the independent variables that will be estimated.

To explore which factors contribute to any association between use and/or type of nonparental care and parenting stress, this research estimates a set of models which sequentially estimate key explanatory variables. All models are stratified by sex. In the first set of models, a lone continuous variable estimates the relationship between hours of nonparental care and parenting stress for mothers and fathers. In the second set of models, a set of dichotomous variables measuring child care packages is added. This estimates the relationship between child care packages and parenting stress. In the third set of models, controls are included.

Results

The results from the panel random-effect regression models are presented in Table 2. The outcome variable is parenting stress and results are stratified by sex to show associations with the explanatory variables and statistical controls for both fathers and mothers.

Models 1A (fathers) and 1B (mothers) in Table 2 present the estimated coefficients for hours of nonparental care without statistical controls. The coefficients give the raw change in parenting stress for a 1-unit increase in hours of nonparental care. These models indicate that both mothers and fathers experience greater parenting stress as hours of nonparental care go up ($p < .001$). The increase is greater for fathers than mothers but this gender difference is not statistically significant. Although this result is consistent with our expectation that more hours of nonparental care would be associated with higher levels of parenting stress for both men and women, the R^2 statistic for these models is 0.01, indicating that hours of nonparental care explain very little of the sample variance in parenting stress for either mothers or fathers.

In Models 2A (fathers) and 2B (mothers), the relationship between the use of different child care packages and parenting stress was estimated, together with hours of nonparental care. Informal/family-only care was the only child care arrangement that was significantly associated with parenting stress. The association was negative. The magnitude of the informal/family-only coefficient for mothers was larger than for fathers, suggesting that the use of this type of care is more effective in reducing parenting stress for mothers than fathers. This difference between mothers and fathers is statistically significant. The R^2 statistic for these models is 0.01, indicating that the addition of child care packages explained very little of the sample variance in parenting stress.

These results partially support our expectations that different child care packages would be associated with parenting stress. We expected that mothers and fathers who use formal-only would have higher levels of parenting stress than parents who themselves or their partner exclusively provide care

Table 2. Random-Effects Regression Model Estimates.

Variable	IA—Fathers		IB—Mothers		2A—Fathers		2B—Mothers		3A—Fathers		3B—Mothers	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Nonparental care hours	0.03***	0.01	0.02***	0.01	0.03***	0.01	0.03***	0.01	0.03***	0.01	0.01*	0.01
Childcare Packages (Ref. Me/Partner-only)												
Informal/family-only care					-0.17**	0.07	-0.21**	0.08	-0.16**	0.07	-0.16**	0.08
Formal-only					-0.07	0.07	-0.12	0.07	-0.10	0.07	-0.10	0.07
Mixed					-0.06	0.07	-0.05	0.07	-0.06	0.07	-0.06	0.07
Controls												
Parental care hours									0.08	0.01	0.01**	0.01
Partner's care hours									0.01	0.01	0.02**	0.01
Age of youngest children									-0.27	0.33	-0.68**	0.37
Household labor force (2.0)												
1.5 (Full-time + Part-time)									-0.01*	0.03	0.09**	0.03
1.0 (Part-time + Part-time)									0.03	0.09	0.03	0.08
Tertiary qualifications									0.14***	0.05	0.11**	0.05
Household Income Logged									-0.03	0.02	-0.04**	0.02
Married									0.06	0.05	-0.15***	0.05
Age									0.01	0.01	0.01***	0.01
Subjective Time Pressure									-0.14***	0.02	-0.22***	0.02
SF-36—General Health									-0.01***	0.01	-0.01***	0.02
SF-46—Mental Health									-0.01***	0.01	-0.01***	0.01
N (observations)	3,343		3,343		3,343		3,343		3,343		3,346	
N (groups)	1,272		1,246		1,272		1,246		1,272		1,246	
R ²	0.1		0.1		0.1		0.1		0.14		0.20	
Prob (F)	.00		.00		.00		.00		.00		.00	

*p < .05. **p < .01. ***p < .0001.

or use informal care, including family care, because of the relative inflexibility of more formal modes of child care. However, the formal-only and mixed care coefficients were negatively associated with parenting stress for parents of both sexes, although informal/family-only care was the lone significant coefficient.

In the third set of models, 3A and 3B, the coefficients for statistical controls were estimated alongside hours of nonparental care and child care packages. The addition of controls substantially improved the predictive power of the models, such that they explained around 17% (R^2 0.17) of the sample variation in parenting stress for fathers and 24% (R^2 0.24) of the sample variation in parenting stress for mothers. With the inclusion of statistical controls, there was a slight increase in the coefficient for hours of nonparental care for fathers. The relationship between child care packages and parenting stress remained the same: informal/family-only care is the only package significantly associated with parenting stress. The magnitude of the coefficients for both fathers and mothers was, however, slightly smaller. In the final model, the magnitude of the coefficient for both fathers and mothers is the same ($-0.16, p < .05$). This indicates that the difference between fathers' and mothers' use of informal/family-only care found in the previous model was partially due to the differences in mothers' sociodemographic characteristics.

In these final models, the significant negative coefficients for time stress show that the less time pressured fathers and mothers feel, the less parenting stress they experience, and the significant negative coefficients for general and mental health indicate that better general and mental health is associated with less parenting stress. These findings are consistent with prior research showing time pressure and poor health diminish parental well-being (Dinh et al., 2017; Rose et al., 2013; Strazdins et al., 2016; Craig & Brown, 2016).

Discussion and Conclusion

This article drew on longitudinal data over a 15-year time span from employed couples with children below 5 years old, to investigate links between nonparental care and parenting stress. Parenthood is a demanding role, with success highly dependent on parents' personal and material resources and the availability of adequate support. For working fathers and mothers, especially in dual earner couples, managing family care and paid work commitments is complex and challenging. Nonparental substitute childcare is one way in which parents can navigate these complexities. Here, we investigated its relationship to parenting stress, the psychological strain arising when role demands exceed parents' perceptions that they have the capacity to meet them (Anthony et al., 2005; Halpern-Meekin & Turney, 2016). Following

Nomaguchi et al. (2017), we used a scale measure composed of several elements capturing aspects of how parents feel about the role and their efficacy. We were interested in the effect of care hours and of care type, and whether fathers and mothers' parenting stress was affected similarly or differently by these two dimensions of nonparental care.

We found, first, that more hours of nonparental care was associated with higher levels of parenting stress for fathers and mothers. This was not unexpected, as in some respects using nonparental care adds to parental role demand. Prior research has found a positive relationship between nonparental child care and subjective time pressure (feeling rushed or pressed for time), likely related to associated additional tasks such as readying and transporting children to day care, meeting tight deadlines if children need to arrive and be collected at certain times, and the need to manage an employer/employee relationship (Craig & Powell, 2013). However, in that research associations between nonparental care and being rushed were particularly strong for women, and our current Craig results for parenting stress were surprisingly similar for both genders. This may mean fathers are sharing more responsibility for the tasks described above, or that the combined demands on both partners contribute to subjective role strain for each. A further potential explanation was that greater hours of nonparental care are used as couples supply more labor to the market, which also exacerbates some aspects of parenting stress (Craig & Churchill, 2018). However, this positive association remains in the final model after controlling for household employment configuration, suggesting that this is not the entire reason.

Although the extra tasks and scheduling pressure generated by substitute care may be part of the explanation, the finding that it exacerbates parenting stress is interesting given that previous research found that when fathers undertook more physical care of their children or participated in "child-related chores," mothers experienced less parenting stress (Nomaguchi et al., 2017). Our results show that replacement care, which presumably involves substitute carers also performing these practical tasks in lieu of parents doing so, does not function like this. So why the difference? It seems plausible that, as implied by Moen and Dempster-Mcalin (1987) role delegation is helpful in mitigating role strain, and that sharing care with a fellow parent constitutes role delegation but outsourcing does not. That is, a partner can take over part of the parenting role, relieving the other of sole responsibility, but substitute care does not relieve parents of role responsibility in the same way. Thus, outsourcing childcare might offer practical help, but not emotional relief and support sufficient to relieve parents of subjective stress and feelings of role overload. Our findings suggest that while nonparental care may ensure children are supervised, and relieve parents of some child-related chores, it is not

psychologically beneficial as is the active input of a co-parent. An implication is that there is something uniquely supportive about practical help that involves being joined in the project of parenting by someone with a close relationship to the child.

Supporting this interpretation were our findings on the relationship between care packages and parenting stress. The use of informal/family-only care was associated with significantly lower levels of parenting stress for both fathers and mothers. This stood in contrast with the other child care types and was net of controls including employment status and both parental and nonparental care hours. That is, of all the care packages, informal/family-only care was the only one we found to mediate the relationship between nonparental care hours and parenting stress. Furthermore, it did so for both genders. It is known that care arrangements, especially grandparent care (the major component of informal/family care) has advantages over other child care packages (Craig & Jenkins, 2016). Informal/family care is more flexible than formal care providers, they are more accommodating for parents with nonstandard work schedules or when children are sick, and using their help is generally not a commercial transaction (Goodfellow & Lavery, 2003; Qu & Wise, 2004). Our findings take us further than prior research in showing for the first time that family care also yields a demonstrable psychological benefit to parents. It is associated with less parenting stress. We interpret this as indicating that drawing on one's own relatives is, like mothers enlisting fathers' involvement, more than task delegation only. In a way akin to co-parenting, it involves sharing not only practical but also emotional aspects of the role, and our results suggest that this combination makes it uniquely valuable to parental well-being.

Including fathers in this study of parenting stress was timely given their growing family involvement and the rise in dual earner households and yielded the further new finding that the stress mitigation associated with informal/family care was felt by parents of both genders. It was again rather unexpected to find that informal/family care was as strongly associated with fathers' as with mothers' parenting stress, however, given that in Australia women still retain most responsibility for managing the home, even if they are employed (Craig, Powell, & Smyth, 2014). Notwithstanding this prevalent gender division of labor, fathers also experience parenting stress, and family care was associated with lower levels of parenting stress among fathers. The implication is that assistance from extended family alleviates parenting stress for both partners in dual earner households, regardless of which parent does most care.

The findings may also reflect the challenges encountered by parents using other types of child care. Formal care is the most common child care package

used by Australian parents, yet there are numerous issues including quality, cost, and fit. Although there have been efforts to reduce costs in recent years, expense remains a barrier for families, particularly those with multiple children (Brady & Perales, 2016). Formal care does not meet the needs of all family types, including those with parents working nonstandard schedules such as nights and weekends (Breunig, Weiss, Yamauchi, Gong, & Mercante, 2011; Nowak, Naude, & Thomas, 2013). A place in formal day care is not always available, especially in a convenient location (Adamson & Brennan, 2014). The need to transport children at set times, especially infants below a year old, can be taxing; and parents may prefer they are cared for in their own home (Adamson & Brennan, 2017). Some parents worry that care centers do not cater for the particular needs of their children (Gray, Baxter, & Alexander, 2008). Our results suggest that within this context, although formal care is an essential service increasingly used to assist working families manage their practical care responsibilities, it does not offer parents sufficient psychological relief and emotional support to mitigate parenting stress.

The results of this study have policy implications. In Australia, institutional support (such as parental leave, flexible hours, and affordable child-care) for combining work and family is thin (Pocock, 2003). The drawbacks of Australian formal care noted above are reinforced by cultural attitudes toward maternal employment and a normative preference that mothers care for young children (Van Egmond et al., 2010). However, the lack of work–family support is increasingly at odds with current government rhetoric, which promotes greater workforce participation among women as a solution to the forthcoming challenges of population ageing and declining productivity (Commonwealth of Australia, 2010). The pitch is to both ends of the working age spectrum, with young mothers being encouraged to return to work more quickly after childbirth, and matured-aged women to work longer as the old age pension age is raised and they have insufficient to live on in retirement. The two may be incompatible, however, which presents a conundrum for policy makers, parents, and the grandparents who provide the bulk of informal family care.

Our results give new insight as to why in Australia many older women step in to help with childcare so that their adult children can work, rather than being employed themselves. That informal/family care (mostly grandparent care) is an effective way of reducing parenting stress for mothers and fathers, will be subjectively evident to families that choose such arrangements. Of course, grandparent care is not available for all and is not possible unless grandparents have the time and financial security to provide it. If both younger and older women need to devote increasingly more time to market work, pressures to use nonfamilial care will rise. In encouraging this

outcome, it is incumbent on governments to acknowledge the stresses involved and ensure that families can access affordable, conveniently located care that fits their needs and values, and that policy regarding labor force participation is underpinned by a supportive and flexible high-quality care infrastructure. Countries such as the Nordic social democracies offer more such support, and there the use of nonparental care is higher, the intensity of informal care including grandparent care is lower, and the proportion of women in the workforce is larger (Glaser, Price, Di Gessa, Montserrat, & Tinker, 2013; OECD, 2016). Future cross-national research could investigate whether the connections we have found between nonparental care and parenting stress are country specific and differ across policy context according to the quality, cost, and availability of the nonfamilial care infrastructure.


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