

Working from home: Do formal or informal telework arrangements provide better work-family outcomes?

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Abstract

Telework arrangements include a suite of options that workplaces provide to meet the growing demand for greater work flexibility and as a strategy to promote work-family balance. However, there has been minimal research comparing formal versus informal telework arrangements, and how they might support employees to manage the competing demands of work and family life. In this paper we examine how formal and informal telework arrangements impact on public sector employees' job satisfaction, time spent on childcare, and satisfaction with the distribution of childcare tasks. We use survey data from public service employees who had access to telework entitlements in Queensland, Australia (n=856). Our analyses showed that formal and informal telework arrangements provide different outcomes to employed women and men with children, particularly in the areas of job satisfaction and satisfaction with the distribution of childcare tasks. These distinctions suggest that it is important for workplaces to consider how the type of telework arrangement offered can affect how successfully and equitably work-family outcomes are achieved.

Key words: work from home, telework, family-friendly leave entitlements, work-family balance

Les contrats de télétravail comprennent une série d'options que les lieux de travail fournissent à satisfaire la demande croissante pour une plus grande souplesse de travail et comme une stratégie visant à promouvoir la conciliation travail-famille. Cependant, il ya eu peu de recherches comparant les régimes de télétravail formels et informels, et comment ils pourraient aider les employés à gérer les demandes concurrentes de travail et la vie familiale. Dans cet article, nous examinons comment le télétravail formel et informel ententes influent sur la satisfaction au travail des employés du secteur public, le temps consacré à la petite enfance, et la satisfaction avec la répartition des tâches de garde d'enfants. Nous utilisons les données de l'enquête auprès des employés de services publics qui ont eu accès à des droits de télétravail dans le Queensland, en Australie (n = 856). Nos analyses ont montré que les ententes de télétravail formels et informels de fournir des résultats différents pour les femmes et les hommes employés ayant des enfants, en particulier dans les domaines de la satisfaction au travail et la satisfaction avec la répartition des tâches de garde d'enfants. Ces distinctions suggèrent qu'il est important pour les lieux de travail pour examiner la façon dont le type de régime de télétravail proposé peut affecter la façon avec succès et équitable conciliation travail-famille les résultats sont atteints.

Mots clés: travail à domicile, télétravail, congés favorables à la famille, équilibre travail-famille

There has been growing interest in workplace flexibility options and the extent to which they assist workers to integrate their working and personal lives (Sheridan and Conway, 2001; Hill, Grzywacz, Allen, Blanchard, Matz-Costa, Shulkin, et al., (2008)). With the growth of information and communication technologies (ICTs), employees with children can more easily integrate family responsibilities with work (Bailey & Kurland, 2002; Whitehouse, Diamond, & Lafferty, 2002). Research in Australia has focused primarily on workplace flexibility in regard to control or autonomy over the number and scheduling of employment hours (Bittman, Hoffman, & Thompson, 2004; Pocock, 2005; Baxter & Chesters, 2010; Charlesworth, Strazdins, O'Brien & Sims, 2011). Arguably, there has been less research on the option of being able to work from home or 'telework' (Burgess & Strachan, 2001). Teleworking has been defined as 'work that is conducted away from the usual place of business but mostly at home and that is often supported by telecommunications, Internet access or computer' (Kossek, Lautsch, & Eaton, 2005:348). It has also been described as 'maintaining electronic contact with an external workplace' (Burgess & Strachan, 2001:54). Both these definitions encapsulate the practice of telework

in the Australian context, with self-employed and home-based workers usually excluded from this group (Myers & Hearn, 2000; Burgess & Strachan, 2001).

At present Australia lags behind other developed countries in terms of telework rates. Data from the Australian Bureau of Statistics (ABS) *2006 Time Use Survey* found only 6 % of all Australian employees had access to telework arrangements (ABS, 2009). More recently the Australian Government's ministry for 'Broadband, Communications and the Digital Economy'¹ has set a target to double the current rate of teleworkers in Australia to 12 % by 2020 (Australian Government, 2012). The impetus of this policy is cost-saving, productivity-increasing, and traffic congestion reducing one. In addition, this initiative coincides with the roll out of a National Broadband Network across Australia. Although the government recognizes that time for work and family might also be increased by reducing commute times, it does not directly recognize the benefits that may also arise as a result of combining family responsibilities with working at home.

While telework is increasingly considered by workplace organizations to be a family-friendly option, the effects of teleworking on employees' wellbeing has shown mixed results in the international literature (Bailey & Kurland 2002). Furthermore, there is limited evidence in Australia to support the claims that increased telework rates will improve work-family balance for employees. Problematically, the outcomes of formal opposed to informal telework practices have received a dearth of attention in telework research. Ojala (2011) confirms this point in her statement, 'Telework in general is studied extensively; the difference between formal telework and informal work at home has not been widely recognized' (p 3). This paper aims to provide fresh insights into work and family outcomes related to formal and informal telework practices in a sample of working parents employed in the public sector, where telework has been provided as part of a well-established work policy since 2002. This paper examines the relationship between utilization of formal and informal telework arrangements on three measures including: job satisfaction, time spent on childcare activities and satisfaction with the distribution of childcare responsibility. Each of these measures taps into different conceptual aspects of the work-family interface.

¹ See http://www.minister.dbcde.gov.au/media/media_releases/2012/001 for greater detail.

Background

Australian data and statistics on telework practices have been variable and limited. ABS *time use survey* data reported that telework was undertaken by 6 % of the working population in Australia (ABS, 2009). This data also found that a higher proportion of teleworkers were in the public sector (9 %) than in the private sector (6 %), and that there were more full-time (7%) than part-time (5%) teleworkers. Kelly, Kelley, Evans & Kelley, (2008) found that teleworkers were more likely to be in professional occupations and they found part-time workers rather than full-timers were more likely to use these arrangements.

Despite variations in exact numbers of teleworkers, trends suggest that telework is increasing in Australian workplaces. Data collected in 2009 by the Household Income and Labour Dynamics Survey in Australia (HILDA) found that the overall number of people working from home had increased to 18 % in 2009 and that most teleworkers tended to have informal rather than formal arrangements. In comparison, another national survey found that 24 % of small and medium businesses in metropolitan and regional areas had employees who carried out some of their work from home (Sensis Business Index Survey, 2009). Although it is difficult to pinpoint exactly how many Australian employees use telework arrangements, and in what form, research concurs that the uptake of telework arrangements depends heavily on the attitudes of management towards employees working from home (Diamond, 2008). Research has found that telework options are more likely to be available to an elite or highly skilled set of workers, than to less skilled or marginalized workers (van den Broek & Keating 2011).

In terms of using telework to facilitate work-family balance, Kelly et al. (2008) found that women were more likely than men to use telework to manage work and family responsibilities. Although, other international studies have found that men are just as motivated as women to work from home for family-related reasons (Golden, 2008, Eldridge & Pabilonia, 2007). Additionally, research by Noonan, Estes and Glass (2007) examined the impact of telework (among a range of work-family policies) on time employees were able to spend on childcare. Their study found that work at home arrangements increased childcare time only for employed mothers, but not for employed fathers. Yet they found that father time spent with children was unrelated to flexible work policy uptake. Interestingly, their study showed that telework was the only workplace flexibility arrangement related to increased child-care time in their study (Noonan et al., 2007: 283). In Australia, Whitehouse et al (2002) found that women who used telework arrangements reported juggling

childcare or housework tasks at the same time as working from home. This suggests that women with children may use telework as a strategy to manage both work and home time demands.

Theoretical perspectives on telework

How does theory inform the debate around telework? Most theoretical frameworks on work at home emerge from the work and family literature. The initial view was that responsibilities from the work and family domains are mutually incompatible and that individuals experience stress when tasks compete or clash across these domains. This conflict can be bi-directional, coming from work to home or from home to work (Greenhaus and Beutell, 1985). From this point of view, teleworking might be viewed as a positive way to integrate the demands of home and work and reduce work-family conflict (Richman, Noble & Johnson, 2002). However, some studies showed that although work-family conflict was reduced by being able to work from home, this could result in a longer total work day (Davis & Polonko, 2001; Sullivan & Lewis, 2001).

Alternatively, a more recent view is that work and family domains are interconnected or integrated, and yet individuals still maintain boundaries around their work or family roles (Nippert-Eng, 1996). Extending this view, Sonnentag & Zijlstra (2006) argue that the usual border between work and home life has a psychological function in that it gives people time to recover from the demands and pressures of work. When people work at home, this boundary can be diminished and work issues may more easily seep into or interfere with family time. Some research has shown that use of telework leads to increased work-family interference for employed mothers, due to increased family responsibilities that accrued when they worked from home (Mills, Duncan & Amyot 2000, Whitehouse, Diamond et al. 2002). Kelly et al (2008) found that women who worked at home reported that family interruptions into work time and expectations to tend to family needs were heightened. Golden, Veiga and Simsek's study (2006) found that this issue of work-family interference was equally problematic for fathers who opted to work from home. In contrast, research by Languiliare (2011) argued that either integrating or segmenting work from home can be complementary strategies for managing work and home responsibilities.

These theoretical perspectives highlight the complex nature of telework for working parents who use these arrangements to meet their work and family commitments. What seems less well understood is the variations that exist in the actual ways in which telework is used by employees. Ojala (2011) notes that

informal telework practice may in many cases be in the form of supplemental or catch-up work done at home. Others suggest that it is primarily the workplace culture that determines the kind of telework arrangements employees use (Peters, Dulk, & Lippe, 2009). Australian research by Pittard (2005) found that even when formal telework arrangements were written into employee's workplace agreements, they were subject to discretion of management and a supportive workplace culture. This attitude of management may be related to conceptions of telework as a privilege rather than a right (van den Broek & Keating, 2011).

The purpose of this paper is to investigate the work and family outcomes associated with different kinds of telework arrangements. Thus, the aim is to examine how the utilisation of formal and informal telework arrangements by public sector employees with children impacts on a range of work and family outcomes. In this study telework options were part of a suite of leave arrangements written into a work family balance policy that were negotiated between employee and employer. Specifically, formal telework arrangements were defined by a written contract that specified the days and time employees could work from home, while informal telework arrangements were negotiated in a need based way with supervisors or management.

Hypotheses

We formulated our hypotheses on telework outcomes based on previous research related to job satisfaction, time spent on childcare and satisfaction with the distribution of such tasks. While research suggests that women generally have higher job satisfaction than men (Hodson, 1989; Long, 2005), Diamond (2008) also found that telework opportunities for all employees were closely linked to job satisfaction. Given this understanding we hypothesize that:

- Telework arrangements will have a greater impact for women than for men on their job satisfaction.

In terms of time, Australian research shows that women continue to do more childcare and housework than men (Craig, 2007; Baxter, Hewitt & Haynes, 2008). However, men with children have become more involved in their children's lives than in the past (Bittman, Hoffman, Thompson, 2004; Craig, Mullan & Blaxland 2010). With involved fatherhood, men with children may seek to establish formal telework arrangements in order to share more equally childcare responsibilities with their partners. Further, some research has shown that telework

arrangements give parents a better opportunity to fit their jobs around their children's schedules (Natti, Tammelin, Anttila & Ojala, 2011). On this basis we hypothesize that:

- Employees who use formal or informal telework arrangements will spend more time on childcare than those who do not work from home.
- Employees who use formal telework arrangements will report higher levels of satisfaction with the distribution of childcare responsibilities between themselves and their partner than those who use informal telework arrangements.

Method and sample description

The data for this paper come from an online survey conducted in November 2008, which was part of a larger study which investigated a broad range of work family balance initiatives including utilisation of family-supportive work leave arrangements. The participants were recruited through their membership in a public sector union. The larger study included 3905 employees from both small and large public sector agencies. The sample for this study (n=856) was restricted to employees who had dependent children (under 15 years) and whose spouses were also employed (full or part time but not necessarily working in the public sector). Restricting the sample to couples with children who are both working allowed a more detailed focus on variables relevant to establishing balance among dual earner couples.

A sizeable proportion (41%) of the sample was from households where both parents worked full-time. The sample was aged between 18 and 68 years old. The largest proportion of the sample were aged 40-49 years (48 %), 28% were 30-39 years of age, 19 % were aged 50+, the remaining 5 % were under 29 years of age. As these working parents were older and mostly full-time it was not surprising that they mostly had school-age children (64 %). Their average hours of work were 38.73 hours per week (SD=10.35). Only 9 % of employees worked long hours (49 or more hours). Tenure was high among these employees, with 48 % of respondents employed for 10 or more years with their current public service employer. The majority of the sample was employed in administrative positions (64%) that were non-supervisory roles (59%). Supervisory roles were held by 23 % of employees; 18 % of employees held managerial roles.

Table 1 about here

Telework utilization

Telework was available to this group of public sector employees as part of a suite of leave entitlements in the workplace work and family balance policy. The survey instrument examined awareness about policy entitlements and asked respondents to report whether work at home arrangements were available within their organisation. Fewer than 5% of survey respondents were not aware that telework entitlements were available to employees. The survey asked respondents to report the extent to which they had worked at home in the past 12 months. Response options for utilisation were 0 = not used at all, 1 = used once or twice, 2 = used regularly. Respondents also reported whether they had a formal arrangement that was written into their work contract or whether they had worked from home by negotiating an informal arrangement with their supervisor. Preliminary analysis showed that employees who regularly worked at home had formal arrangements, whereas those who had only worked at home once or twice reported that they had done so by negotiating an informal arrangement with their supervisor. To assess utilisation of work from home arrangements two dichotomous variables were created: 'informal work from home' (1=Yes, 0= Otherwise) and regular formal work from home (1=Yes, 0= Otherwise). The baseline category equal to zero for each of these dichotomous variables, was 'no utilisation of telework'.

Dependent measures for models

The dependent measures chosen to assess the outcomes of telework covered aspects specific to both work and family domains. Firstly, job satisfaction was assessed by using the scale developed by Ware, Cook & Wall (1979). This involved 14 items that examined a diverse range of aspects of work including 'the physical conditions of work', 'your fellow workers' 'your rate of pay' and 'your chance of promotion'. Respondents rated these items using a 7 point likert scale, ranging from extremely dissatisfied (1) to extremely satisfied (7). The internal consistency (Cronbach's alpha) for this measure was .87 for this sample. Secondly, two questions relating to family outcomes were measured; childcare hours and respondents satisfaction with the distribution of childcare between themselves and their partner. Childcare hours in this study included time respondents spent playing with children, looking after their personal care, teaching or actively supervising them, and transporting them to school, child care or other activities. Respondents were asked to record how much time (in hours per

week) they typically spent on such childcare activities. Respondents were asked to indicate their level of satisfaction with the distribution of childcare responsibilities between themselves and their partner. Respondents indicated their satisfaction using a 7 point likert scale with response options that ranged from extremely dissatisfied (1) to extremely satisfied (7).

Control variables

A range of demographic variables that have been associated with work-family balance outcomes were included in all the analytic models (Peters, Tijdens & Wetzels, 2004). These were age, gender (coded 1=women, 0=men), whether the respondent had school-age children under 15 years in the household (coded 1=yes, 0=respondents with pre-school age children), whether the respondent held a supervisory/managerial role (coded 1=yes, 0=no), worked full-time (coded 1=yes, 0=no), worked long hours which was defined as 49 or more hours (coded 1=yes, 0=no). We controlled for work-interfering in home life (WIH) because of its relationship to each of the dependent measures. Although WIH could be investigated as a moderator between utilisation of telework and the dependent outcomes, we argue that conceptual complexity associated with the work and family interface remains underdeveloped (Carlson, Grzywacz & Zivnuska, 2009) and therefore we chose to examine it as a control variable in this paper. For the analyses predicting the two family outcomes, we asked respondents about the extent of their childcare responsibility that was shared with their partner. Respondents could indicate this by using the following options: ‘someone else’s responsibility’, ‘shared responsibility with my partner’, ‘entirely my responsibility’. Two indicator variables were developed to assess the extent of childcare responsibility. Shared parenting, coded as 1=shared with my partner, 0=otherwise. Childcare is entirely my responsibility, coded as my responsibility=1, 0=otherwise. Respondents who indicated that someone else was mostly responsible for childcare in the household were the reference category.

The analytic strategy

For each of the dependent variables, a hierarchical Ordinary Least Square Regression (OLS) was conducted using STATA (version 11). A hierarchical regression allows subsets of variables to be added one step at a time to examine whether the addition of the variables into the model increases explanatory power. At each step the increase in the proportion of variance that is accounted for by the addition of the set of variables, is reported and

noted by a change in the R^2 and this change is tested. For each of the dependent variables the control variables were entered at step one. At step two the effect of telework was examined by creating two dummy variables: formal telework and informal telework and coded as (1=Yes, 0= Otherwise). The baseline category equal to zero for each of the dummy variables, is 'no utilisation of telework' and was compared to both use of formal and informal telework. To examine differences between formal and informal telework the Beta coefficients for each are compared to determine if they differ in their effect on the dependent variable. At step three the interaction terms of gender by formal and gender by informal arrangements were entered. The following section describes the results of the models. Descriptive statistics for all variables in the analysis are in table 1. These are shown separately for men and women, and t-tests are used to indicate whether gender differences are significant.

Preliminary results

We firstly present a descriptive analysis of the independent and dependent variables, and report preliminary associations. In this sample less than half of employees (34%) had used telework in the past 12 months, and only 7 % of employees had a formal arrangement to work at home. The majority of employees who had teleworked in the past 12 months had done this informally (n=293, 27%). Men and women were equally likely to telework, although men were more likely (10%), than women (5%), to have a formal arrangement in place. This might be related to men's higher seniority which gives them greater autonomy and formal flexibility over their work schedule. The results showed that teleworkers in this sample were far more likely to be full-time rather than part-timer workers (26% versus 8%). This finding aligned more closely with teleworker patterns in the ABS (2009) data, rather than Kelly et al.'s (2008) findings.

Men and women in this sample reported a moderate level of work interfering in home life (WIH), with an average score of 3.9 on a 7 point scale where 7 referred to a high level of interference from work into home life, but there were no gender differences (t-test=.94, *ns*). The majority of respondents reported sharing responsibility for childcare activities with their partner (60%). Interestingly, 34 per cent reported childcare was mainly their responsibility and only 5 % reported it was mostly their partner's responsibility. However, a greater proportion of women than men reported that childcare was predominately their responsibility (52% versus 7%). Men were significantly more likely to report that they shared childcare activities with their partner (82% versus

46%). These discrepancies point to perceptual differences around shared parenting between men and women and may be related to gender role expectations (Craig, 2007).

In addition, women who worked part-time in comparison with women who worked fulltime were somewhat more likely to report that childcare was mostly their responsibility (59% versus 47%). This is not so unusual given that many women employed part-time do so to spend more time with their children, but it highlights the high level of childcare responsibilities for many of the fulltime working women in this sample. Indeed, women recorded greater hours spent on childcare than men (38 hours per week versus 15 hours per week). These reported hours on childcare are consistent with data from a recent Australian longitudinal panel survey showing parents time use (AIFS, 2007). Not surprisingly, employed parents with preschool age children reported more childcare hours than parents with school age children, as did women working part-time in comparison to women working fulltime (54 hours per week versus 30 hours for women working fulltime). Parents in this sample who shared childcare responsibility with their partners were somewhat more likely to use telework arrangements than those who did not (36% versus 28%).

Overall, employed parents were generally quite satisfied with how they negotiated their childcare responsibilities between themselves and their partner, with an average score of 4.9, which on a 7 point scale represents a slightly higher than mid-point level for satisfaction. Women in the sample reported being less satisfied (mean = 4.8) than the men (mean = 5.1), which is not surprising given that the majority of these women worked fulltime and did an average of 30 hours of childcare per week. However, satisfaction with childcare responsibilities between full and part-time women in the sample was relatively similar; presumably, this can be explained by other factors relating to preferences, as part-time women were slightly more likely to report that childcare was mostly their responsibility (fulltime women average satisfaction score= 4.79, part-time women average score =4.68, although t-tests showed this was not significantly different (t-test= -0.70, *ns*).

Regression Analyses

Job satisfaction

In this section, we examine the regression analyses. Firstly, the regression results predicting job satisfaction are shown in table 2. Coefficients in table 2 show that after we account for the control variables, telework was positively associated with job satisfaction, and that users of formal or informal arrangements had significantly

higher job satisfaction than employees who did not use telework. The coefficients at step 2 suggest that use of a formal telework arrangement showed a slightly greater positive effect on job satisfaction than use of an informal arrangement. However, in step 3, when we included the gender interactions, there were significant findings for formal telework arrangements only. To examine this effect, we calculated predicted scores which showed that job satisfaction was significantly higher with the use of formal arrangements for women than men (5.5 versus 4.7, see figure 1 for graphical representation of predicted scores). Separate analyses for women and men showed that job satisfaction scores were higher for women who used formal than informal telework and that these differences were significant ($t\text{-test}=-5.3$, $p=0.00$), whereas for men there were no differences in jobs satisfaction scores between informal and formal teleworkers ($t\text{-test}=.84$, $p=.39$). Together these findings support our first hypothesis - *Telework arrangements will have a greater impact for women than men on their job satisfaction..* However, it was formal telework arrangements that increased job satisfaction the most among women.

Table 2 about here

Figure 1 about here

Table 3 about here

Childcare hours

Our results found that telework arrangements were not a significant predictor of time spent on childcare (see Table 3). Women using formal telework arrangements reported on average 42 hours of childcare per week while women who used informal arrangements reported an average of 40 hours per week. For men using informal telework, childcare was on average 13 hours per week compared to 15 hours per week if using a formal arrangement. While there was a small difference in hours spent on childcare by women and men who used formal rather than informal telework arrangements (2 hours), this was not statistically significant. In addition, our results show that work interfering in home life (WIH) was not significantly associated with the number of childcare hours undertaken by women or men. Our findings showed that hours spent on childcare are primarily accounted for by the control factors, and mainly gender and employment status (whether employees work fulltime or part-time). These control variables accounted for 36 % of the variance in childcare

hours. Therefore, our third hypothesis – *employees who use formal and informal telework arrangements will spend more time on childcare than those who do not work from home* – is not supported by the results.

Table 4 about here

Satisfaction with distribution of childcare responsibility

In the analyses predicting satisfaction with the distribution of childcare responsibility, our results show unsurprisingly that if childcare is shared between partners, this is associated with higher satisfaction (see Table 4). However, if childcare is the sole responsibility of only one person, then this satisfaction decreased. When we examined the interactions between telework and gender, we found differences between men and women in respect to formal telework arrangements only. Post estimation tests showed that men who used formal telework arrangements had higher satisfaction with the distribution of childcare responsibility than men who used informal telework arrangements or did not telework (see Figure 2). This might be because formal arrangements allow them to participate to a greater extent in childcare, and on a more regular basis. Higher satisfaction for men was found between men who used formal opposed to informal telework arrangements and this difference was significant ($p < .001$).

In contrast, women who used formal telework arrangements had significantly lower satisfaction with the distribution of childcare ($p < .001$) than women who used informal telework arrangements (see Figure 2). Therefore, informal telework arrangements worked better for employed women, whereas formal arrangements worked better for employed men in terms of this outcome. For men, formal arrangements were associated with higher levels of satisfaction with how they shared childcare with their partner. Therefore, the third hypothesis - *employees who use formal telework arrangements will report higher levels of satisfaction with the distribution of childcare responsibilities between themselves and their partner than those who use informal telework arrangements* – is only true for men, but not women in our study.

Figure 2 about here

Discussion

This paper examined how formal and informal telework arrangements were associated with different aspects of work and family balance for employed parents. We distinguished formal as regular use and informal as ad-hoc

or needs-based use. This approach was different to previous research that viewed telework as mostly overtime or supplemental work. Theoretically, our paper highlights the complex nature of work and family issues and supports the notion that telework may further blur the boundaries between work and family domains, and responsibilities mothers and fathers undertake in each context.

Our findings suggest that for employed parents, how they share and distribute childcare is an important indicator of work-family balance. Women's use of informal telework arrangements appears to provide optimum satisfaction with childcare distribution with partners. This finding may be related to expectations that formal telework arrangements also formalise women's greater responsibility for childcare. In contrast, such gendered expectations might not be as strong for men who use formal telework arrangements. It is possible that with informal telework arrangements, expectations around childcare responsibility for women might be less binding. The unpredictable nature of childcare, might further explain why women prefer informal telework arrangements, with mothers more likely than fathers to respond to crises such as children's illness (Craig, 2007). However, we can only speculate here and it is likely that there might be a complexity of reasons why informal telework arrangements were associated with better outcomes for women, and likewise formal telework arrangements for men. Interestingly, our study found that employees who shared childcare responsibility were more likely to have used some form of telework arrangement. This finding shows promising benefits for parents and their children in terms of more equitable share of care.

In terms of job satisfaction, we found formal arrangements were more conducive to women's job satisfaction than men's. These findings are consistent with the view that job satisfaction for women may be related to having a job that allows them to be able to respond to family needs and responsibilities. Furthermore, where policies formalised may create greater control for women over managing work and family responsibilities, this could contribute to decreased stress at work and increased job satisfaction. Yet, while on one hand formal telework is associated with women's job satisfaction it may conversely place greater pressure on women in terms of family expectations for them to maintain primary caring responsibility for children (Kelly et al. 2008).

There are a number of limitations in our study to be noted. Firstly, it was not clear from the survey data whether employees who utilized telework arrangements were doing so to meet a pressing work deadline or whether it was used primarily to meet family commitments. In other words, the reasons for telework use cannot

be confirmed in our study. Secondly, in terms of the data which were collected via self-report methods, variance is a concern, and directions of causality cannot be established. Lastly, the sample of public servants in this study included only a relatively small proportion of employees who made use of telework arrangements. Future research could benefit from larger samples of teleworkers to better understand how effective they are in facilitating work-family balance.

In conclusion, it is evident from this study that the different outcomes that formal and informal telework arrangements provide to men and women are important for workplaces organisations to note within policy and through their negotiations with employees. As our study shows that subscribing to one type of telework arrangement may not provide the same work-family benefits to men and women. Furthermore, the findings highlighted in this study have implications in regards to fostering employee satisfaction and work-family balance. Our findings also indicate that there are broad implications for employees to consider in terms of their work (career development and training) and family (responsibilities and time demands) when negotiating their telework arrangements. Organisations need to recognise that formal or more frequent telework arrangements as well as informal or less frequent arrangements may be useful for different employees at different times. Fundamentally there appears to be no one-size-fits-all approach to telework for all employees to benefit. Therefore, improving the knowledge about and frequency of telework uptake is important, so too is the flexibility of such arrangements. Increased knowledge about the outcomes of telework will assist human resource (HR) practitioners to more effectively implement telework arrangements.

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Notes on Contributors

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References

- ABS. (2009). Australian Bureau of Statistics: Australian Social Trends; Catalogue: 4102.
- Australian Institute of Family Studies (AIFS) (2007). A snapshot of how Australian Families spend their time. Retrieved from the AIFS website <http://www.aifs.gov.au/institute/pubs/snapshots/familytime.html>.
- Australian Government. (2012). Hon Conroy, Stephen, Minister for Broadband, Communications and the Digital Economy. Media Release: First Australian Telework Week to showcase the benefits of working from home. Sourced http://www.dbcde.gov.au/digital_economy/programs_and_initiatives/telework.
- Bailey, D. & Kurland, B. (2002). A review of telework research: findings, new directions, and lessons for the study of modern work. *Journal of Organizational Behavior* **23**: 383-400.
- Baxter, J. & Chesters, J. (2010). Perceptions of Work-Family Balance: How Effective are Family-Friendly Policies? Paper presented at the 11th Australian Institute of Family Studies Conference, Melbourne, July 2010.
- Baxter, J., Hewitt, B. and Haynes, M. (2008). Lifecourse Transitions and Housework: Marriage, Parenthood and Time on Housework. *Journal of Marriage and Family*. 70(2): 259-272.
- Bittman, M., Hoffman, S., & Thompson, D. (2004). Men's uptake of family-friendly employment provisions. *Australian Government Department of Family and Community Services Policy Research Paper* (22).
- Broek, D, van den & Keating, E. 2011. Rights to a process for the masses or select privileges for the few? Telework policy and labour market inequality in Australia. *Policy Studies*, 32:1, 21-33
- Burgess, J., & Strachan, G. (2001). The Home as the Workplace: Developments in Homeworking in Australia. *Conference of the Canadian Industrial Relations Association, University of Laval, Quebec*.
- Burgess, J., & Strachan, G. (2005) Integrating Work and Family Responsibilities: Policies for Lifting Women's Labour Activity Rates. *Just Policy*, No. 5 March:5-12.
- Carlson, D. S., Grzywacz, J. G., & Zivnuska, S. (2009). Is work-family balance more than conflict and enrichment? *Human Relations*, 62(10), 1459-1486.
- Charlesworth S., Strazdins, L., O'Brien & Sims, S. (2011). Parents' jobs in Australia: Work hours polarisation and the consequences for job quality and gender equality. *Australian Journal of Labour Economics*, 14, (1): 35-57.
- Craig, L. (2007). *Contemporary motherhood: The impact of children on adult time*. Ashgate Publishing, Aldershot.

- Craig, L., Mullan, K., & Blaxland, M. (2010) Parenthood, policy and work-family time in Australia 1992--2006. *Work Employment Society*, Vol. 24(1): 27-45
- Davis, D., & Polonko, K. (2001). Telework in the United States: Telework America survey 2001. Scottsdale, AZ: International Telework Association and Council.
- Diamond, C. (2008). Telework management and work practices: the case of an Australian telecentre. *Int. J. Services Technology and Management*, Vol. 9, No. 2:93-102
- Eldridge L. & Pabilonia, S. W. (2007). Are those who bring work home really working longer hours? BLS working paper no. 406, Washington, DC: May.
- Golden, T. D. (2008). Limited Access: Disparities in Flexible Work Schedules and Work-at-home. *Journal of Family Economic Issues*, 29, 86-109.
- Golden, T. D., Veiga, J.F., & Simsek, Z. (2006). Telecommuting's differential impact on work-family conflict: Is there no place like home? *Journal of Applied Psychology* **91**(6): 1340-1350.
- Greenhaus, J. H. & Beutell, N. J. (1985). Sources of Conflict between Work and Family Roles. *The Academy of Management Review* **10**(1): 76-88.
- Hill, E. J., Grzywacz, J. G., Allen, S., Blanchard, V. L., Matz-Costa, C., Shulkin, S., et al. (2008). Defining and conceptualizing workplace flexibility. *Community, Work & Family*, *11*(2), 149-163.
- HILDA (2009) Household Income and Labour Dynamics Survey, The University of Melbourne, Melbourne Institute of Applied Economic and Social Research.
- Hodson, R. (1989). Why aren't women more dissatisfied with their jobs. *The Sociological Quarterly*. Vol 30, 3, pp 385-399.
- Kelly, C.G.E., Kelley, S.M.C., Evans, M.D.R., & Kelley, J. (2008). Attitudes toward home-based employment for mothers of young children: Australian evidence. *International Journal of Social Welfare*. 19:33-44.
- Kossek, E. E., Lautsch, B.A., & Eaton, S, (2005). Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work-family effectiveness. *Journal of Vocational Behavior* 68: 347-367.
- Long, A. (2005). Happily Ever After? A Study of Job Satisfaction in Australia. *Economic Record* 81(255): 303-321.

- Languilaire, J. (2001). Integrating and segmenting, and essential combination to reach work/non-work balance. Paper presented at the 4th Community, Work and Family, May 19-21 2011, Tampere, Finland.
- Mills, R.S.L., Duncan, K.A., & Amyot, J.J. (2000). Home-based employment and work-family conflict: A Canadian study. In C.B. Hennon, S. Loker, & R. Walker (Eds). *Gender and Home-Based Employment*. Westport, CT: Auburn House.
- Myers, N & Hearn, G. (2000). Communication and Control: Case Studies in Australian Telecommuting. *Australian Journal of Communication* Vol. 27 (2), 39-64
- Naati, J., Tammelin, M., Anttila, T & Ojala, S. (2011). Work at home and time use in Finland. *New Technology, Work and Employment*, 26 (1): 68-77.
- Nippert-Eng, C. (1996). *Home and work: Negotiating boundaries through everyday life*. Chicago: University of Chicago Press.
- Noonan, M. C., S. B. Estes, Glass, (2007). Do workplace flexibility policies influence time spent in domestic labor? *Journal Of Family Issues*, vol 28(2): 263-288.
- Ojala, S (2011). Supplemental work at home among Finnish wage earners: involuntary overtime or taking the advantage of flexibility? *Nordic Journal of Working Life Studies*. Volume 1(2): 2-21.
- Peters, P., Dulk, den L., & Lippe, T. van der. (2009). The effects of time-spatial flexibility and new working conditions on employees' work-life balance: the Dutch case. *Community, Work & Family*, 12(3): 279_297.
- Peters, P, Dulk, L., den & Ruijter, J. de (2010). May I work from home? Views of the employment relationship reflected in line managers' telework attitudes in six financial-sector organizations. *Equality, Diversity and Inclusion: An International Journal*, 29(5), 517-531
- Peters, P., Tijdens, K.G., & Wetzels, C. (2004). Employees' opportunities, preferences, and practices in telecommuting adoption. *Information & Management* 41 (2004) 469-482.
- Pittard, M. (2005) Rethinking place of work:federal labour law framework for contemporary home-based work and its prospects in Australia. *Law in Context*, 23, (1), 148-181.
- Pocock, B. (2005). 'Work-life 'balance' in Australia: Limited progress, dim prospects', *Asia Pacific Journal of Human Resources*, 43 (2): 198-209.
- Richman, A., Noble, K., & Johnson, A. (2002). When the workplace is many places. The extent and nature of off-site work today. Watertown, MA: WFD Consulting Inc.

- Rose, J., Hewitt, B. & Baxter, J. (2011) Women and part-time employment: Easing or squeezing time pressure? *Journal of Sociology* first published on November 7, 2011, DOI: 10.1177/1440783311419907.
- Sensis Business Index Survey (2009). Retrieved from the Telework Australia website.
<http://www.teleworkaustralia.net.au/resources/researchreports.asp>
- Sheridan, A. & Conway, L. (2001). Workplace flexibility: reconciling the needs of employers and employees. *Women in Management Review* **16**(1): 5.
- Sonnentag, S. & Zijlstra, F. (2006). Job Characteristics and Off-Job Activities as Predictors of Need for Recovery, Well-Being, and Fatigue. *Journal of Applied Psychology*, 91(2): 330-350
- Sullivan, C. and Lewis, S. (2001), 'Home-based telework, gender and the synchronization of work and family: Perspective of teleworkers and their co-residents', *Gender, Work and Organisation*, 8, 2, April, 123-145.
- Warr, P., J. Cook, et al. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology* **52**(2): 129-148.
- Whitehouse, G., Diamond, C., & Lafferty, G. (2002). Assessing the benefits of telework: Australian case study evidence. *New Zealand Journal of Industrial Relations*, 27(3), 257-268.

Table 1: Description of variables in the analysis

	Mean (or %) S.D.	
	Women N=519	Men N=337
<i>Dependent Variables</i>		
Job satisfaction ^{a (1-7)}	4.6 (1.2)***	4.3 (1.2)
Time spent on childcare activities (hours per week)	38.8 (18.3)***	15.8 (13.5)
Satisfaction with distribution of childcare ^{a (1-7)}	4.8 (1.6)	5.1 (1.4)***
Not doing any work from home	.66	.66
Informal work from home arrangement	.29	.24
Formal work from home arrangement with employer	.05	.10*
<i>Control variables</i>		
Age	41 (7.1)	45 (6.9)***
School age children	.62	.62
Fulltime work	.67	.96***
Supervisory role	.36	.49
Long hours (49 + hours)	.08	.11
WIH	3.8 (1.4)	3.9 (1.4)
Childcare is shared with my partner, 1=yes	.46	.82***
Childcare is entirely my responsibility, 1=yes	.52***	.07

* p<0.05, **p<0.01, ***p<0.001.

^a Higher scores refer to greater satisfaction

Table 2: Regression model predicting job satisfaction

	Step 1	Step 2	Step3
<i>Intercept</i>	5.68	5.64	5.70
<i>Control variables</i>			
Age	-.00	-.00	-.00
School age children in hh ¹ , 1=yes	-.10	-.07	-.07
Fulltime, 1=yes	.01	.03	.01
Long work hours 49+, 1=yes	-.17	-.19	-.17
Supervisor/manager, 1=yes	.61***	.55***	.55***
Work Interference with Home (WIH)	-.38***	-.38***	-.38***
Gender, 1=women	.30***	.29**	.28**
<i>Work from home arrangements</i>			
Informal work from home		.39***	.28
Formal work from home arrangement		.60***	.27
<i>Interaction terms</i>			
Gender x Informal work at home			.16
Gender x Formal work from home arrangement			.67*
Adjusted R ²	.23***	.25*	.29**

* p<0.05, **p<0.01, ***p<0.001

Table 3: Regression model predicting typical weekly hours spent on childcare

	Step 1	Step 2	Step3
<i>Intercept</i>	85.55	85.17	86.17
<i>Control variables</i>			
Age	-.1.13***	-.1.16***	-.1.15***
School age children in hh ¹ , 1=yes	-.16.96***	-.16.77***	-.16.65***
Fulltime, 1=yes	-.14.49***	-.14.38***	-.14.54***
Long work hours 49+, 1=yes	.56	.38	.87
Supervisor/manager, 1=yes	-.09	-.51	-.53
Work Interference with Home (WIH)	.22	.19	.22
Gender, 1=women	10.59***	10.35***	8.39*
Childcare is shared with my partner, 1=yes	8.26***	8.53*	8.42*
Childcare is entirely my responsibility, 1=yes	17.70***	18.31***	18.31***
<i>Work from home arrangements</i>			
Informal work from home		3.12	-.42
Formal work from home arrangement		4.39	1.35
<i>Interaction terms</i>			
Gender x Informal work at home			5.6
Gender x Formal work from home arrangement			5.9
Adjusted R ²	.36***	.36	.36

* p<0.05, **p<0.01, ***p<0.001

Table 4: Regression model predicting satisfaction with the distribution of childcare

	Step 1	Step 2	Step3
<i>Intercept</i>	5.71	5.71	5.71
<i>Control variables</i>			
Age	-.00	-.00	-.00
School age children in hh ¹ , 1=yes	-.08	-.07	-.06
Fulltime, 1=yes	.02	.03	.04
Long work hours 49+, 1=yes	.08	.06	.08
Supervisor/manager, 1=yes	-.01	-.04	-.03
Work Interference with Home (WIH)	-.22***	-.23***	-.23***
Gender, 1=women	.12	.10	.11
Childcare is shared with my partner, 1=yes	.54**	.55**	.55**
Childcare is entirely my responsibility, 1=yes	-.75**	-.73**	-.72**
<i>Work from home arrangements</i>			
Informal work from home		.23*	.05
Formal work from home arrangement		.09	.55*
<i>Interaction terms</i>			
Gender x Informal work at home			-.96
Gender x Formal work from home arrangement			5.9*
Adjusted R ²	.19	.19**	.24*

* p<0.05, **p<0.01, ***p<0.001

Figure 1: Predicted job satisfaction by type of telework arrangement

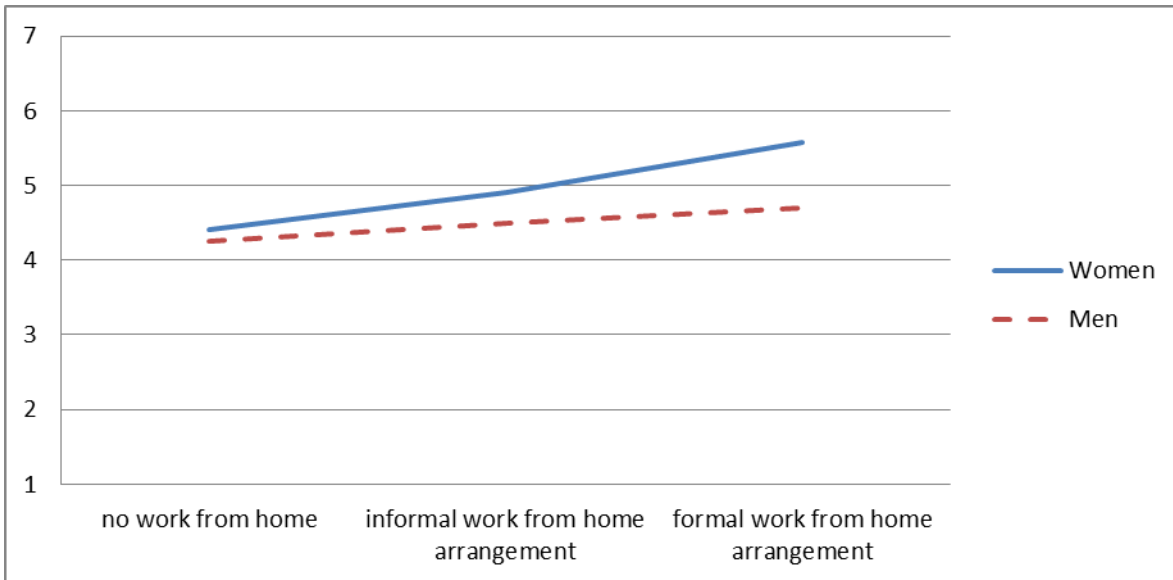


Figure 2: Predicted satisfaction with the distribution of childcare by type of telework arrangement

