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# Gender Differences in Paid and Unpaid Work findings from a

## New Zealand birth cohort

One of the most prominent changes in the labour market over the last five decades has been the increase in women's participation in paid employment. In New Zealand and

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overseas, increasing numbers of women have entered the labour market and have been working increasingly longer hours in paid employment (Callister, 2005a; Goldin, 2006; Jacobsen, 1999; Johnston, 2005). For example, while only 28.4% of New Zealand women aged 15–64 were employed full-time in 1951, by 2001 this proportion had increased to 56.4% (Johnston, 2005).

Although women's participation in paid employment has increased substantially, women continue to bear primary responsibility for housework and child care within the home. The New Zealand

Time Use Survey reported that women spent more hours than men in unpaid work, and that this gender difference was evident across all employment groups, including full-time workers (Statistics New Zealand, 2001a). Time use surveys from other countries have reported similar findings (Aliaga and Winqvist, 2003; Australian Bureau of Statistics, 2006; Fisher et al., 2007; Lader, Short and Gershuny, 2006).

These findings have led to suggestions that women are now bearing a 'double

Discussions of the 'double burden' or 'second shift' (Byrne, 2002; Hochschild, 1989) suggest that women are dissatisfied with the allocation of their time, but few studies have examined this empirically. Studies have also suggested that some men are dissatisfied with their lack of participation in unpaid work, and especially in child care (Hand and Lewis, 2002; Department of Labour, 2007).

A limitation of many previous studies of gender differences in time use and satisfaction with time use is that they satisfaction with time use. The specific aims of the study are:

- to examine gender difference in time spent in paid employment and unpaid work;
- to examine the extent to which males and females are satisfied with their time use.

### Method

### Data and participants

Data were drawn from the Christchurch Health and Development Study, a longitudinal study of a birth cohort of individuals born in Christchurch in 1977. The methodology of and major findings from the Christchurch Health and Development Study have been reviewed previously (Fergusson and Horwood, 2001; Fergusson et al., 1989). The data used for this article were drawn from the age 30 follow-up interview. A total of 987 participants completed the age 30 interview, representing 80% of the surviving cohort at that age.

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burden' or 'second shift' of paid employment and unpaid work (Bratberg, Dahl and Risa, 2002; Byrne, 2002; Hochschild, 1989). For example, Byrne (2002) states that 'the "revolving door model", which assumes that as women take on more paid work, men will compensate by taking on more unpaid work, is an optimistic illusion' (Byrne, 2002, p.34). Similarly, Hochschild claims that 'most women work one shift at the office or factory and a "second shift" at home' (Hochschild, 1989, p.4). However, time use studies have revealed that, when both paid and unpaid employment are considered, women and men spend approximately equal amounts of time in work (Callister, 2005b; Lader, Short and Gershuny, 2006; Statistics New Zealand, 2001b). These findings do not support claims that women are suffering from a 'double burden' of paid and unpaid work and instead suggest that, although women's work is split across two areas, the total time they spend working is similar to that of men.

While previous studies have reported gender differences in time allocation across different areas, few studies have examined whether men and women are satisfied with this time allocation. have been conducted overseas, and it is not clear to what extent their findings will generalise to the New Zealand context. Some limited data from New Zealand have been provided, but are somewhat contradictory and incomplete. For example, the 2010 Social Report (Ministry of Social Development, 2010) found no difference between males and females in terms of satisfaction with work-life balance. On the other hand, data from the 2008 Survey of Working Life (Statistics New Zealand, 2008) suggests that males have a lower rate of satisfaction with work-life balance, although the gender difference was not tested specifically.

A further limitation of previous studies is the use of nationally representative samples of participants that have included a wide range of ages. It is likely that any changing trends in gender differences in time use and satisfaction with time use will be most apparent among younger samples of participants, where gender roles and time use may be quite different from those among older participants.

Against this background, this study uses data from a birth cohort of New Zealand-born 30-year-olds to examine gender differences in time use and

### Measures

Time use

The age 30 participants were asked to report the hours per week they usually spent undertaking the following activities: paid employment; housework (household maintenance, cooking, gardening, shopping for groceries, etc); and child care (including looking after children, after-school activities, sports, etc). Where the number of hours varied from week to week, participants were asked to estimate an average. Participants who reported having a cohabiting partner at age 30 were also asked to estimate the number of hours per week that their partner spends in each type of activity. The reports of time use were used to construct a series of variables representing total time spent per week (in hours) for participants and their partners in a range of areas:

- paid employment: this was the total number of hours per week spent in all paid employment;
- child care: this was the total number of hours per week spent looking after dependent children (weekly childcare hours that exceeded 112 were truncated to 112);

- housework: this was the total number of hours per week spent doing all housework activities, including, cooking, cleaning, gardening, and any other activities considered to be housework (weekly housework hours that exceeded 84 were truncated to 84);
- total work time: this was the sum of the number of hours per week spent in paid employment, child care and housework (total work hours that exceeded 112 were truncated to 112).

### Satisfaction with time use

As part of the age 30 interview participants were asked a series of questions about their satisfaction with their time use. Those who reported having a cohabiting partner were also asked a series of questions about their satisfaction with the allocation of time between themselves and their partner.

### Gender

Gender was the participant's sex reported at the birth interview.

### Statistical analyses

Differences between means were tested for statistical significance using a t-test for independent means. Differences between proportions were tested for statistical significance using a chi-squared test for independence. All statistical analyses were conducted using SAS 9.1 (SAS Institute, 2003).

### Results

### Gender differences in time use

Table 1 compares the mean hours per week that men and women spent in paid employment, child care and housework,

Table 1: Mean hours per week spent in paid and unpaid work for males and females

	Males (N=478)	Females (N=509)	р
Paid employment	40.3	28.0	<.0001
Child care	7.7	23.7	<.0001
Housework	6.0	10.6	<.0001
Total work hours	54.2	61.5	<.0001

and the total hours spent in paid and unpaid work (housework, child care and paid employment combined). The table shows that there were significant differences in time use between men and women. Men spent significantly more time than women in paid employment (p<.0001), on average 12.3 hours longer per week. Women spent significantly more time than men caring for children (p<.0001), with women spending on average 16 hours more than men per week on child care. Women also spent significantly more time than men doing housework activities (p<.0001), with the actual gap being 4.6 hours per week. Overall, women spent slightly but significantly more time than men in all work activities (p<.0001), the gap being approximately 7 hours per week, or an hour a day.

In order to examine the consistency of gender differences in participants' self-reported time use, participants' estimates of their own time use were compared to their estimates of their partner's time use. Table 2 shows the mean hours per week spent in different activities by participants without partners and by participants with partners. For participants with partners, the table also shows the mean hours per week that participants estimated their partner spends on various activities. Each comparison has been tested for statistical

significance using a t-test for independent means and the p-value for significance from this test is reported in the table.

The table shows that gender differences in time allocation across different domains were fairly consistent across the three groups (participants without partners, participants with partners, and participants' partners). In all three groups, men spent significantly more time than women in paid employment (all p<.0007), while women spent significantly more time than men in child care (all p<.0005) and housework (all p<.0001). There were, however, some differences in the gender gap in total work time between the three groups. Among participants with and without partners, women spent significantly more hours than men in total work (p<02). However, among participants' partners, male partners spent slightly but significantly longer than female partners in total work (p<.02). Inspection of the means for different components of the total work measure suggests that the source of this difference lies in estimates of child care time. Compared to participants' self-reports of their own child care time, participants' estimates of their partner's child care time tended to overestimate the time that male partners spent in child care and

Table 2: Mean hours per week spent in paid and unpaid work for males and females with and without partners

Without portnor			With partner						
Without partner -		Self			Partner				
	Males (N=169)	Females (N=167)	р	Males (N=309)	Females (N=342)	р	Male partner (N=335)	Female partner (N=316)	р
Paid employment	36.1	28.7	<.0007	42.6	27.7	<.0001	44.2	27.1	<.0001
Child care	3.1	14.8	<.0001	10.2	28.0	<.0001	13.8	20.7	<.0005
Housework	5.3	8.3	<.0001	7.1	13.5	<.0001	6.6	12.4	<.0001
Total work hours	44.4	50.8	<.02	59.6	66.2	<.0009	64.0	59.3	<.02

Table 3: Satisfaction with time use for males and females

	Males (%)	Females (%)	р
How satisfied are you with the allocation of time (for work, housework, child care) between you and your partner?			
Not at all satisfied	3.2	3.5	
Somewhat satisfied	34.3	39.2	
Very satisfied	62.5	57.3	>.40
How satisfied are you with your current work-life balance?			
Not at all satisfied	8.0	7.5	
Somewhat satisfied	51.5	43.2	
Very satisfied	40.6	49.3	<.03
How satisfied are you with the balance between work and parenting in your life?			
Not at all satisfied	7.5	8.0	
Somewhat satisfied	63.4	42.3	
Very satisfied	29.1	49.8	<.0005
To what extent has your involvement in parenting and childrearing been limited by your need to earn money through paid work?			
Not at all	20.9	62.6	
Somewhat	39.6	22.4	
A great deal	39.6	15.0	<.0001
Which of these statements best describes how you feel about the allocation of child care time between you and your partner?			
I would like to do a larger share of the child care	41.5	6.6	
I would like my partner to do a larger share	0.0	14.4	
I am happy with the allocation of child care time	58.5	79.0	<.0001

underestimate the time that female partners spent in child care.

### Satisfaction with time use

Table 3 shows the responses of males and females to a series of questions about their satisfaction with time use and work-life balance. For each question the responses have been compared using a chi-squared test for independence. The table reports the p-value for significance from this test. Only one question (overall work-life balance) allowed for a partnered versus unpartnered participant comparison, for which there was no statistically significant difference between partnered and

unpartnered cohort members (p > .20).

The table shows that men and women reported similar levels of satisfaction with the overall time allocation between themselves and their partners, with 62.5% of men and 57.3% of women reporting that they were very satisfied with the time allocation within their partnership (p>.40). There were, however, gender differences in the extent to which men and women were satisfied with specific areas of time allocation. Women tended to be more satisfied than men with their work-life balance (p<.03), with women more likely than men to report that they were very satisfied (49.3% versus 40.6%)

and less likely to report that they were somewhat satisfied (43.2% versus 51.5%). However, the largest gender differences in satisfaction were those that related to satisfaction with time spent in child care. Overall, women were more satisfied than men with the balance between work and parenting in their lives (p<.0005), with 49.8% of women reporting that they were 'very satisfied' with this aspect of their lives, compared to 29.1% of men. Men were more likely than women to report that their involvement in child care had been limited by their need to earn money through paid work (p<.0001), with 39.6% of men reporting that their involvement had been limited 'a great deal' and 39.6% reporting that it had been limited 'somewhat', compared to 15% and 22.4% of women respectively. The majority of women (62.6%) reported that their involvement in child care had been limited 'not at all' through their involvement in paid employment, compared to only 20.9% of men. Finally, women were more likely than men to report that they were happy with the allocation of child care time within their partnership (p<.0001), with 79% of women reporting that they were happy compared to 58.5% of men. Men reported a desire to become more involved in child care, with 41.5% of men reporting that they would like to do a larger share of the child care compared to only 6.6% of women. However, few women (14.4%) reported a desire for their partners to become more involved in child care.

### Discussion

This study examined gender differences in time use and satisfaction with time use in a birth cohort of New Zealand-born 30-year-olds. The main findings from the study were:

- There were clear gender differences in time allocation across different areas, with men spending more time than women in paid employment and women spending more time than men in child care and housework.
- Overall, women spent significantly more time than males in all paid and unpaid work (paid employment, child care and housework combined).

- This gender difference was approximately one hour per day.
- For the most part, the same gender differences were reflected in participants' estimates of their partners' time use, suggesting that there was little gender bias in time estimates. The only exception was that participants tended to overestimate the time that male partners spent in child care and underestimate the time that female partners spent in child care.
- While men and women reported similar levels of satisfaction with overall time allocation within their partnerships, there were gender differences in satisfaction with both work-life balance and the allocation of child care time. Specifically, men were less satisfied than women with both their work-life balance and work-parenting balance and reported that they would like to be more involved in child care.

These findings indicate that there are gender differences in the ways in which men and women allocate their time to different areas, with men spending more time in paid employment and women spending more time in child care and housework. This gender division of labour is consistent with traditional gender roles, with men taking primary responsibility for financial support and women taking primary responsibility for the home and family. This finding is interesting given that the data for this study were drawn from a relatively young cohort, born in 1977 and raised during a period in which there was a strong focus on improving female participation in education and employment and questioning traditional gender roles (for examples, see Eccles, 1986; New Zealand Council for Educational Research, 1988; Ruble, Cohen and Ruble, 1984; Sadker and Sadker, 1994).

Although there were considerable gender differences in the allocation of time across different activities, the gender gap in the total time that men and women spent in all paid and unpaid work was smaller, with women spending approximately an hour longer than men per day in all paid and unpaid work.

This difference of one hour per day would equate to approximately one extra 14-hour day of work every fortnight. Previous research has reported that, although there are large differences in the time that men and women spend in different activities, the gender gap in the total hours spent in all paid and unpaid work is smaller, typically less than one hour per day (Australian Bureau of Statistics, 2006; Callister, 2005a; Fisher et al., 2007; Statistics New Zealand, 2001b). In contrast to the results of the current study, some of these studies have reported that when paid and unpaid work are combined there is no gender

more likely than women to report being 'somewhat satisfied' with their work-life balance, and less likely than women to report being 'very satisfied'. Also, many men reported that their involvement in child care had been limited by their employment and that they desired a better work-parenting balance, with more than 40% reporting that they would like to do a larger share of the child care than they currently do. In contrast, the clear majority of women were satisfied with the allocation of child care time and their work-parenting balance, and did not feel that their involvement in child care was limited by their employment.

### It is interesting to note that while men [i.e 41.5%] in the current study had a strong desire to be more involved in child care, this desire was not strongly supported by women [i.e. 14.4%].

gap in total work hours (Fisher et al., 2007; Statistics New Zealand, 2001b). This difference may be accounted for in part by the specific activities included in each time use measure. For example, many previous studies of time use have included commuting time in measures of time spent in paid employment (Fisher et al., 2007; Statistics New Zealand, 2001b), while the current study did not. Including commuting time would increase estimates of time spent in paid employment, which would likely increase men's total work hours more than women's given that men have higher rates of participation in paid employment than women.

Overall, both men and women reported high levels of satisfaction with their time use. More than 90% of men and women reported being 'very' or 'somewhat' satisfied with their work-life balance and the allocation of time within their partnership. However, the results of this study did identify two areas of dissatisfaction with time use: a lower level of satisfaction amongst men regarding overall work-life balance, and men's dissatisfaction with their lack of involvement in child care. Men were

These findings do not support claims that women are dissatisfied with their 'double burden' of paid and unpaid work, and instead suggest that most women are happy with the balance between paid and unpaid work in their lives.

The findings regarding lower levels of satisfaction with work-life balance among men is in agreement with the suggestive evidence provided by the New Zealand Survey of Working Life 2008 (Statistics New Zealand, 2008), but diverges somewhat from the evidence provided by the 2010 Social Report (Ministry of Social Development 2010), in which 79% of female employees and 77% of male employees reported being satisfied with work-life balance. These discrepancies may be due to methodological differences between the present study and the data provided by the Social Report and Survey of Working Life. Also, a desire among men for greater participation in child care has been noted previously in both New Zealand and Australian data (Hand and Lewis, 2002; Department of Labour, 2007).

It is interesting to note that while men in the current study had a strong desire to be more involved in child care, this desire was not strongly supported by women. Only 14.4% of women wanted their partner to do a larger share of the child care, compared to 41.5% of men wanting to do a larger share. A similar pattern was observed in an evaluation of New Zealand parental leave policy, which revealed that more than half (51%) of fathers would be interested in having some of their partner's paid parental leave transferred to them, but only 28% of mothers reported that they would

transferring paid leave to male partners is uncommon: a 2005/06 evaluation of parental leave in New Zealand revealed that only 1% of fathers had a portion of their partner's paid parental leave transferred to them (Department of Labour, 2007). Qualitative studies have suggested that there may be social and cultural barriers within the workplace that prevent men from participating more fully in child care. Men have reported difficulties obtaining the flexible working arrangements or part-time employment

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consider such a transfer (Department of Labour, 2007). These findings suggest that, while male partners may desire a more equitable sharing of child care time, in some cases female partners may be unwilling to give up a portion of their child care time to their partner.

### Policy implications

Discussions about work-life balance in New Zealand and overseas have tended to focus on women's difficulties balancing work and parenting (Byrne, 2002; Ministry of Women's Affairs, 2002). However, the findings from this study suggest that achieving work-life balance, and especially work-parenting balance, is more problematic for men than for women. This suggests that policies are needed to enable men to better balance work and parenting in their lives.

Currently in New Zealand, eligible mothers are entitled to 14 weeks paid parental leave and 52 weeks unpaid leave, and can transfer some or all of this entitlement to their partners. However,

that are often provided to women caring for children (Hand and Lewis, 2002; Department of Labour, 2008). This suggests that policies are needed to encourage employers to provide men with the same options for child care as are available to women, including flexible working hours and part-time work, to enable greater male participation in child care and improve work-life balance for men

### Limitations

A limitation of this study is that the time use data were based on retrospective self-report estimates rather than time use diaries. Time diary methods are generally regarded as preferable to retrospective reports because they provide a more accurate estimate of the length of time spent in different activities (Bonke, 2005; Kan, 2008). However, the gender differences in time use reported in the current study were mostly consistent with those reported previously in studies using time diaries (Australian Bureau

of Statistics, 2006; Fisher et al., 2007; Statistics New Zealand, 2001b), suggesting that the findings of the current study were not substantially affected by the choice of time measure.

A further issue is that the range of possible leisure activities considered in the present study is somewhat limited. The use of measures with a larger range of possible activities could provide more information with respect to gender differences in time allocation and the extent to which specific activities contribute to satisfaction or dissatisfaction with work-life balance. An example of a more comprehensive range of activities is given by the New Zealand Time Use Survey 2010 (Statistics New Zealand, 2010), which has reported gender differences in time allocation across a variety of activities.

This limitation notwithstanding, the results of the current study suggest that there are gender differences in the ways in which young New Zealand adults allocate their time to different activities, but that the total time spent in all work activities is similar for men and women. While most individuals are satisfied with the time allocation and work-life balance in their lives, there was a tendency for men to report greater dissatisfaction with child care arrangements and a desire to be more involved in caring for their children. These findings suggest that there may be a need for policies to enable men to achieve a better balance between work and parenting in their lives.

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### References

- Aliaga, C. and K. Winqvist (2003) 'How women and men spend their time: results from 13 European countries', *Statistics in Focus:* population and social conditions, Eurostat
- Australian Bureau of Statistics (2006) *How Australians Use Their Time*, Canberra: Australian Bureau of Statistics
- Bonke, J. (2005) 'Paid work and unpaid work: diary information versus questionnaire information', Social Indicators Research, 70, pp.349-68
- Bratberg, E., S. Dahl and A.E. Risa (2002) "The double burden": do combinations of career and family obligations increase sickness absence among women?', *European Sociological Review*, 18, pp.233-49
- Byrne, L. (2002) Women Combining Paid Work and Parenting, working paper 8, Albany and Palmerston North: Labour Market Dynamics Research Association
- Callister, P. (2005a) The Changing Distribution of Paid and Unpaid Work in New Zealand, Wellington: The Treasury
- Callister, P. (2005b) 'Overworked families? Changes in the paid working hours of families with young children, 1986 to 2001', Social Policy Journal of New Zealand, 24
- Department of Labour (2007) Parental Leave in New Zealand: 2005/2006 evaluation, Wellington: Department of Labour
- Department of Labour (2008) Work-Life Balance and Flexibility in New Zealand, Wellington: Department of Labour
- Eccles, J.S. (1986) 'Gender-roles and women's achievement', *Educational Researcher*, 15, pp.15-19
- Fergusson, D.M. and L.J. Horwood (2001) 'The Christchurch Health and Development Study: review of findings on child and adolescent mental health', *Australian and New Zealand Journal of Psychiatry*, 35 (3), pp.287-96
- Fergusson, D.M., L.J. Horwood, F.T. Shannon and J.M. Lawton (1989) 'The Christchurch Child Development Study: a review of epidemiological findings', *Paediatric and Perinatal Epidemiology*, 3 (3), pp.278-301
- Fisher, K., M. Egerton, J.I. Gershuny and J.P. Robinson (2007) 'Gender convergence in the American Heritage Time Use Study (AHTUS)', Social Indicators Research, 82 (1), pp.1-33
- Goldin, C. (2006) 'The quiet revolution that transformed women's employment, education, and family', *American Economic Review*, 96 (2), pp.1-21

- Hand, K. and V. Lewis (2002) 'Fathers' views on family life and paid work', *Family Matters*, 61, Autumn, pp.26-9
- Hochschild, A.R. (1989) The Second Shift: working parents and the revolution at home, New York: Viking
- Jacobsen, J.P. (1999) 'Labor force participation', *Quarterly Review of Economics and Finance*, 39 (5), pp.597-610
- Johnston, G. (2005) Women's Participation in the Labour Force, Wellington: The Treasury
- Kan, M.Y. (2008) 'Measuring housework participation: the gap between "stylised" questionnaire estimates and diary-based estimates', Social Indicators Research, 86, pp.381-400
- Lader, D., S. Short and J.I. Gershuny (2006) *The Time Use Survey,* 2005: how we spend our time, London: Office for National Statistics
- Ministry of Social Development (2010) *The Social Report*, Wellington:
  Ministry of Social Development, retrieved from http://socialreport.msd.
- Ministry of Women's Affairs (2002) Work and Family Balance: a policy perspective, Wellington: Ministry of Women's Affairs
- New Zealand Council for Educational Research (1988) 'Equal opportunity in education for girls and women (general overview)', in *Royal Commission on Social Policy*, the April report (vol. 3, part 2), Wellington: Government Printer
- Ruble, T.L., R. Cohen and D.N. Ruble (1984) 'Sex stereotypes: occupational barriers for women', *American Behavioral Scientist*, 27, pp.339-56
- Sadker, M. and D.M. Sadker (1994) Failing at Fairness: how America's schools cheat girls, New York: Maxwell Macmillan International
- SAS Institute (2003) SAS 9.1, Cary: SAS Institute Inc
- Statistics New Zealand (2001a) Around the Clock: findings from the New Zealand Time Use Survey 1998–99, Wellington: Statistics New Zealand and Ministry of Women's Affairs
- Statistics New Zealand (2001b) *Gender and Unpaid Work: findings from the Time Use Survey*, Wellington: Statistics New Zealand
- Statistics New Zealand (2008) Survey of Working Life: March 2008 quarter, Wellington: Statistics New Zealand, retrieved from http://www.stats.govt.nz/browse\_for\_stats/income-and-work/employment\_and\_unemployment/survey-of-working-life-info-releases.aspx
- Statistics New Zealand (2010) *Time Use Survey 2009/10*, Wellington: Statistics New Zealand, retrieved from http://www.stats.govt.nz/browse\_for\_stats/people\_and\_communities/time\_use.aspx