

THE DAILY LIVES OF CANADIAN PARENTS: CORRELATES OF TIME USE

by

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DALHOUSIE UNIVERSITY
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TABLE OF CONTENTS

LIST OF TABLES	vi
ABSTRACT	vii
LIST OF ABBREVIATIONS USED	viii
ACKNOWLEDGEMENTS	ix
CHAPTER 1: INTRODUCTION	1
1.1 BACKGROUND	1
1.2 HYPOTHESES	4
CHAPTER 2: DATA	7
2.1 VARIABLES	7
2.1.1 Dependent Variables	7
2.1.2 Independent Variables	9
CHAPTER 3: METHODS	12
CHAPTER 4: RESULTS	14
4.1 PRIMARY CHILD CARE	14
4.1.1 Married Fathers and Married Mothers	14
4.1.1.1 Married Fathers and Mothers: Estimates Consistent with Literature	15
4.1.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature	15
4.1.2 Married Mothers and Single Mothers	15
4.1.3 Pooled Estimates	18
4.2 DOMESTIC LABOUR	20
4.2.1 Married Fathers and Married Mothers	20
4.2.1.1 Married Fathers and Mothers: Estimates Consistent with Literature	20
4.2.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature	21
4.2.2 Married Mothers and Single Mothers	21
4.2.3 Pooled Estimates	23
4.3 PERSONAL CARE	25
4.3.1 Married Fathers and Married Mothers	25
4.3.1.1 Married Fathers and Mothers: Estimates Consistent with Literature	25
4.3.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature	26
4.3.2 Married Mothers and Single Mothers	26
4.3.3 Pooled Estimates	28
4.4 SLEEPING	30

4.4.1 Married Fathers and Married Mothers	30
4.4.1.1 Married Fathers and Mothers: Estimates Consistent with Literature	30
4.4.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature	31
4.4.2 Married Mothers and Single Mothers	31
4.4.3 Pooled Estimates	33
4.5 LEISURE	35
4.5.1 Married Fathers and Married Mothers	35
4.5.1.1 Married Fathers and Mothers: Estimates Consistent with Literature	35
4.5.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature	35
4.5.2 Married Mothers and Single Mothers	36
4.5.3 Pooled Estimates	38
CHAPTER 5: STUDY LIMITATIONS	40
CHAPTER 6: CONCLUSION	41
REFERENCES	43
Appendix 1: Codes of Dependent Variables in GSS 2005 Survey	45
Appendix 2: Married Fathers, Married Mothers and Single Mothers with Zeroes in the Five Time Use Categories	46

LIST OF TABLES

Table 1: Mean daily hours of married fathers, married mothers and single mothers in five time uses	8
Table 2: Mean of married fathers, married mothers and single mothers in determinants.....	11
Table 3: Estimation predictions of main correlates on parents' time uses	12
Table 4: Tobit estimates of hours a day spent in primary child care	17
Table 5: Tobit estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on primary child care	19
Table 6: Tobit estimates of hours a day spent on domestic labour	22
Table 7: Tobit estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on domestic labour	24
Table 8: OLS estimates of hours a day spent on personal care	27
Table 9: OLS estimates of main variables in pooled estimates with 'married mothers'dummy, hours a day spent on personal care	29
Table 10: OLS estimates of hours a day spent on sleeping	32
Table 11: OLS estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on sleeping	34
Table 12: OLS estimates of hours a day spent on leisure	37
Table 13: OLS estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on leisure	39

ABSTRACT

This study focuses on how children's characteristics (number and age) and parental characteristics (e.g. employment status, education) and day of the week are linked to parents' daily time allocations to primary child care, domestic labour, personal care, sleeping and leisure. Also, I compare gender and marital status differences in the determinants of parents' daily time allocations to activities studied. I find that children's characteristics are most important to parents' primary child care time and to married mothers' and single mothers' domestic labour time. Day of the week and parental characteristics such as employment status are also associated with parents' time allocations to the activities studied. As well, I find that Canadian married mothers spend much less time on sleeping than married fathers.

LIST OF ABBREVIATIONS USED

GSS General Social Survey

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Although now more mothers participate in the labour market, their primary childcare time, which means taking care of children as the main task, has actually increased (Bianchi, 2000; Fisher, McCulloch, & Gershuny, 1999; A. H. Gauthier, Smeeding, & Furstenberg, 2004; Sandberg & Hofferth, 2001). To assure enough primary childcare time, parents adjust their daily time uses by rescheduling (e.g. housework on weekends) and squeezing their time from doing other activities (e.g. sleeping or leisure) (Craig, 2006). However, ‘time crunch’ has become another issue in families with children, which further leads to well-being and health problems (Burton & Phipps, 2010; Council of Economic Advisers, 1999; Duxbury & Chris, 2009; Phipps, Burton, & Osberg, 2001). Hence, it is necessary to adjust or set relevant social policies to alleviate this problem. Exploring which factors and how these factors associate with parent’s time allocation to daily life will help government make effective policies about this ‘time crunch’ issue.

My thesis focuses on the correlates of Canadian parents’ (married fathers, married mothers¹ and single mothers) time allocations to daily activities (primary child care, domestic labour, personal care, sleeping and leisure). Also, I investigate if there are some differences in gender and marital status in the determinants of these five time allocations.

Differently from other Canadian time use research, I use the most recent GSS data (Canadian General Social Survey Cycle 19 Time Use 2005) and set ‘single mothers’ as a

¹ Married fathers and mothers refer to married or cohabiting fathers and mothers.

separate group. I find that Canadian parents with more children spend more time on primary child care. This result differs from previous research showing that the number of children only has a positive association with married mothers' primary child care time (Craig & Bittman, 2005; Craig & Mullan, 2012; Folbre & Yoon, 2007; A. H. Gauthier, Smeeding, & Furstenberg, 2004), but has no association with married fathers' primary child care (A. H. Gauthier, Smeeding, & Furstenberg, 2004; Sayer, Gauthier, & Furstenberg, 2004). On the other hand, I find that only mothers increase domestic labour time if they have more children, which is consistent with the findings of Miller and Mulvey (2000). Craig (2006) showed that having more children was negatively associated with mothers' personal care, sleeping and leisure time, whereas I find that having more children only has a negative association with married mothers' sleeping time and married fathers' and single mothers' leisure time.

Previous research has found that younger children absorbed more parents' child care time (Craig & Bittman, 2005; Craig & Mullan, 2012; Folbre & Yoon, 2007; Miller & Mulvey, 2000; Sayer, Gauthier, & Furstenberg, 2004), which is consistent with my findings. In addition, I find that parents devote less time to domestic labour when they have younger children. This is consistent with the findings of Marshall (2006). Previous research has found that parents spend more time on primary child care if they are employed part-time or are nonemployed (Craig & Bittman, 2005; Folbre & Yoon, 2007; A. H. Gauthier, Smeeding, & Furstenberg, 2004; Sayer, Gauthier, & Furstenberg, 2004). I find that part-time employment status is associated with their time allocations not only to primary child care but also to the other four activities.

I also find that parents with higher education spend more time on primary child care, which is consistent with the findings of Craig and Bittman (2005). Fathers with more education spend less time on domestic labour in my study while Craig (2006) found that employed married fathers with higher education spend more time on domestic labour. I do not find any significant association between higher education and married fathers' leisure time or married mothers' sleeping time while Craig (2006) found that higher education was negatively associated with married mothers' sleeping time and employed married fathers' leisure time.

On weekends, I find that married mothers spend less time on primary child care while there is no significant relationship between weekends and fathers' primary child care time. This differs from Craig and Bittman (2005) who found fathers spent significantly more time on their primary child care on weekends. And I find that parents spend more time on domestic labour, personal care, sleeping and also leisure on Saturday or/and Sunday while Craig (2006) found that the weekends was not associated with employed married mothers' leisure time.

By testing if there were differences between married fathers and mothers, I find that married mothers spend much less time on sleeping than married fathers. Other small differences exist in some correlates interacted with married mothers, such as married mothers with one child spend less time on domestic labour than married fathers. For married mothers and single mothers, there was no difference on primary child care and

personal care, but there were some small significant differences in some correlates interacted with married mothers in other three activities, such as married mothers with university education spend more time on sleeping than single mothers. Also, I find that mothers reschedule their primary child care to weekdays and pick up more domestic labour, personal care, sleeping and leisure on weekends.

1.2 HYPOTHESES

Canadian parents' time allocation to primary childcare has been investigated by being compared across different counties and within Canada over different time periods (A. H. Gauthier, Smeeding, & Furstenberg, 2004; Monna & Gauthier, 2008; Sayer, Gauthier, & Furstenberg, 2004). No Canadian research provides empirical facts about how Canadian parents operate in their other daily activities (e.g. sleeping or housework) versus primary child care. Hence, given the documented increase in Canadian parents' primary child care (A. H. Gauthier, Smeeding, & Furstenberg, 2004), a reasonable assumption is that they might reschedule their time uses and/or squeeze time doing other activities, I expand existing research by studying parents' time spent on both primary child care and other activities.

I ask, specifically, how children's characteristics, parental characteristics and day of the week affect Canadian parents' time allocations to primary child care, domestic labour, personal care, sleeping and leisure? Are the patterns the same for married mothers and fathers? Are they the same for married mothers and single mothers? Do they reschedule their time uses and/or squeeze their time spent on other activities? Based on the literature

discussed in the previous section, only considering the five main correlates (number of children, age of children, respondent employment status, education and weekends), my hypotheses are:

- 1) The more children there are, the more time parents will spend on primary child care and domestic labour and less time on personal care, sleeping and leisure;
- 2) The younger the children are, the more time parents will spend on primary child care and domestic labour and less time on personal care, sleeping and leisure;
- 3) Parents with part-time employment or nonemployment spend more time on all time uses. Parents with higher education spend more time on primary child care but less time on other four time uses. During weekends, parents spend more time on time uses except primary child care;
- 4) These associations may differ for married mothers and fathers, given differences in traditional roles, and also may differ for married mothers and single mothers, given the extreme shortages of time available to single mothers.
- 5) Parents may reschedule their time uses except primary child care to weekends, given limited time resource.

As expected, my results show that all parents devote more time to primary child care if they have more children or younger children as well as have higher education or are part-time employed or nonemployed. Also, Married fathers and mothers spend less time on domestic labour if they have higher education; mothers spend less time on primary child care on weekends but during weekends all parents devote more time to other four activities. Gender and marital differences appear in different determinants of the

activities. However, not as expected, only mothers spend more time on domestic labour if they have more children. Also, parents spend less time on domestic labour if they have younger children.

CHAPTER 2: DATA

This study uses data from Canadian General Social Survey Cycle 19 Time Use 2005, because this survey provides detailed information of individual's time use (in minutes) in a day and this 2005 data has not been studied in Canadians' time uses research. The target population is all individuals 15 years old in ten provinces, excluding full-time institutional residents and residents of the Yukon, Northwest Territories and Nunavut. The 2005 Cycle 19 of GSS was collected using a Random Digit Dialing from January 2005 to December 2005. The response rate is 58.6% and the total size of this cycle is 19,597 (Social and Aboriginal Statistics Division, 2006).

For my study, I selected a sample of prime aged (25-54 years old) people with at least one child less than 18 years old in the household, because prime aged people are most likely to have children and live with them. I excluded individuals from families with three generations living together, because other adults in the household can take care of the children and this will affect fathers' and mothers' time allocations to their primary child care (Sayer, Gauthier, & Furstenberg, 2004). The sample size for single fathers here was only 141 and that is why I only consider married mothers (sample size 1661), married fathers (sample size 1101) and single mothers (sample size 663) in my research. Considering weights in my study, the sample I studied is representative of the population. It should be noticed that these married fathers and mothers here are not couples.

2.1 VARIABLES

2.1.1 Dependent Variables

I selected five categories of time use for my study. These are primary child care, domestic labour, personal care, sleeping and leisure. The definitions and codes can be seen in Appendix 1. In my sample, on average, married mothers spend more time than married fathers on these time uses except leisure (see Table 1). The largest time differences between married mothers and married fathers are in domestic labour (1.39 hours) and in primary child care (0.81 hours), but married fathers enjoy only about 4 minutes more leisure than married mothers on daily average. Also, married mothers devote more time to all these five time use activities than single mothers do. The largest time differences between mothers and single mothers still exist in domestic labour (0.36 hours) and in primary child care (0.68 hours) but these differences are smaller than the differences between married mothers and married fathers.

Table 1: Mean daily hours of married fathers, married mothers and single mothers in five time uses

Time Use Category	Married Fathers	Married Mothers	Single Mothers
	Mean	Mean	Mean
Primary child care	0.85 (0.04)	1.66 (0.06)	0.98 (0.06)
Domestic labour	1.76 (0.07)	3.15 (0.07)	2.79 (0.12)
Personal care	1.90 (0.04)	2.08 (0.04)	1.94 (0.06)
Sleeping	7.91 (0.05)	8.26 (0.05)	8.20 (0.11)
Leisure	3.86 (0.09)	3.79 (0.08)	3.64 (0.14)

Source: GSS Time Use 2005.

Note: Standard errors are in the parentheses.

2.1.2 Independent Variables

Independent variables include: number of children, age of the youngest child (less than 18 years old), respondent employment status, partner's working hours (if respondent has a partner), annual household income, respondent with activity limitations, respondent age, respondent education and day of the week (see Table 2). It should be noticed that I use 'two or more children' in 'single mothers' column because of the very small samples of single mothers with two or with more than two children.

In this sample, full-time employment means that people work 30 hours or over a week, part-time employment means that people work less than 30 hours a week and nonemployment means that people are not in the labour force at the time the survey was carried out. Household annual income is labeled in 12 levels in 2005 General Social Survey, for example, level 7 is the amount of income \$30,000-\$39,999. I took the middle points from each level except level 1 (no income). I use the logarithm of income as my measure of income, given the possibility that income is most important for time use when income is low. Education is measured with two categorical variables: "university" is a parent who has a bachelor degree/master/doctorate and "college" is a parent who has diploma/certificate from community college or trade/technical.

From Table 2, means of these explanatory variables for married fathers and married mothers are almost the same (e.g. 32% fathers and 34% of mothers have one child) except for employment, where the probability of full-time employment for married fathers is 33 percentage points higher than for married mothers. Single mothers are 12

percentage points more likely than married mothers to have just one child. Married mothers are 17 percentage points more likely to have a youngest child aged 0-4 years old than single mothers. Also, the probability of full-time employment for single mothers is 15 percentage points higher than for married mothers and single mothers' annual household income is \$29,800 less than married mothers'. These indicate that more married fathers and more single mothers work in full-time employment than married mothers; single mothers have fewer children and less annual household income than married mothers.

Table 2: Mean of married fathers, married mothers and single mothers in determinants

Variable	Married Fathers	Married Mothers	Single Mothers
	Mean	Mean	Mean
Number of children			
One child	0.32	0.34	0.46
Two children	0.46	0.47	---
Two or more children	0.78	0.81	0.54
Three or more children	0.23	0.20	---
Age of the youngest child			
Youngest aged 0-4	0.34	0.32	0.15
Youngest aged 5-11	0.30	0.31	0.34
Youngest aged 12-18	0.25	0.25	0.34
Employment			
Full-time	0.87	0.54	0.69
Part-time	0.03	0.14	0.11
Nonemployed	0.08	0.27	0.20
Part-time or nonemployed	0.11	0.41	0.31
Partner's paid work (hours a week)	34.13	43.49	---
Year household income (\$10,000)	7.39	7.04	4.06
Respondent with activity limitations	0.08	0.10	0.15
Age			
25-34	0.19	0.25	0.23
35-44	0.44	0.44	0.42
45-54	0.37	0.31	0.34
Education			
University	0.31	0.31	0.20
College	0.28	0.33	0.34
Some university/college or below	0.40	0.36	0.46
Day of the week			
Weekdays	0.73	0.70	0.72
Saturday	0.14	0.15	0.13
Sunday	0.14	0.15	0.16

Source: GSS Time Use 2005.

CHAPTER 3: METHODS

Based on the literature review, determinants such as number of children, age of the youngest child, respondent's employment status, partner's work hours, annual household income, respondent with activity limitations, respondent's age, respondent's education, and day of the week are expected to affect parents' daily time use. So, my basic model is:

$$\begin{aligned}
 T_{ij} = & \alpha_{ij} + \beta_1 \text{ number of children}_{ij} + \beta_2 \text{ youngest child age}_{ij} + \beta_3 \text{ employment}_{ij} \\
 & + \beta_4 \text{ partner's workhrs}_{ij} + \beta_5 \text{ annual income}_{ij} \\
 & + \beta_6 \text{ activity limitations}_{ij} + \beta_7 \text{ age}_{ij} + \beta_8 \text{ education}_{ij} + \beta_9 \text{ weekend}_{ij} \\
 & + \mu_{ij} ;
 \end{aligned}$$

Where i stands for the five activities (1 is primary child care, 2 is domestic labour, 3 is personal care, 4 is sleeping and 5 is leisure) and j stands for the individual. This model is estimated separately for the three types of parents, who are married fathers, married mothers and single mothers. As well, I test whether there are differences in correlates of time uses in pooled estimates. My specific hypotheses of main correlates are concluded in the Table 3.

Table 3: Estimation predictions of main correlates on parents' time uses

Estimation Predictions					
Coefficient	Primary Child Care	Domestic Labour	Personal Care	Sleeping	Leisure
β_1 (Number of Children)	+	+	-	-	-
β_2 (Youngest Child Age)	+	+	-	-	-
β_3 (Employment)	+	+	+	+	+
β_8 (Education)	+	-	-	-	-
β_9 (Weekends)	-	+	+	+	+

Note: “+” stands for a positive relationship and “-” stands for a negative relationship.

I find that there are lots of zeroes reported for primary child care (66% for married fathers, 25% for married mothers and 52% for single mothers) (see Appendix 2); also, 15% of married fathers reported zeroes for domestic labour. Note that a zero may be reported if the parent was cooking and taking care of children was only a secondary activity, or married fathers were on a business day. Based on so many zeroes, I ran Tobit regressions for parents' primary child care and domestic labour. Parent reports for zero hours were much lower for personal care, sleeping and leisure. So, I run OLS regressions for each of these activities.

CHAPTER 4: RESULTS

4.1 PRIMARY CHILD CARE

4.1.1 Married Fathers and Married Mothers

In Table 4, both number and age of children are positively associated with married fathers' and mothers' time allocations to primary child care. Compared to married fathers and mothers (those with positive hours²) with two children, those with one child spend less time on primary child care but those with three or more children do not spend significantly different time. As expected, married fathers and mothers with a youngest child aged 0-4 spend more time while those with a youngest child aged 12-18 spend less time on primary child care time in comparison with those with a youngest child aged 5-11 years old.

Also, with part-time employment or nonemployment or university education, married fathers and mothers spend more time on primary child care in comparison with those with full-time employment or a high school degree or below. However, on weekends, married mothers spend less time caring for their children than they do on weekdays while married fathers do not spend significantly different time.

Married fathers who are aged 25-34 or 45-54 spend less time on primary child care than those who are aged 35-44. Compared to married mothers who are aged 35-44, those who are aged 25-34 spend more time while those are aged 45-54 spend less time on primary child care.

² 'Those with positive hours' are compared between groups because of the regressions of primary child care running in Tobit regressions.

4.1.1.1 Married Fathers and Mothers: Estimates Consistent with Literature

Previous research has found that married mothers spend more time on primary child care if they have more and younger children or are part-time employed or nonemployed (Craig & Bittman, 2005; Folbre & Yoon, 2007; Sayer, Gauthier, & Furstenberg, 2004). And married fathers devote more time to primary child care time if they have younger children or are part-time employed or nonemployed (Craig & Bittman, 2005; Sayer, Gauthier, & Furstenberg, 2004). Besides, Sayer, Gauthier and Furstenberg (2004) found that Canadian fathers' primary child care was not associated with weekends. My results are consistent with these above.

4.1.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature

Sayer, Gauthier and Furstenberg (2004) found that number of children was not associated with married fathers' primary child care time, whereas I find that more children is associated with more primary child care time from married fathers. Also, Sayer, Gauthier and Furstenberg (2004) found that Canadian married mothers' primary child care time was not associated with weekends, whereas I find married mothers decrease their primary child care time on weekends.

4.1.2 Married Mothers and Single Mothers

In Table 4, the correlates have a similar pattern for single mothers as married mothers. As expected, single mothers with two or more children spend more time on primary child care than those with only one child. Compared to single mothers with a youngest child aged 5-11, those with a youngest child aged 0-4 spend more time while those with a

youngest child aged 12-18 spend less time on primary child care. Also, with part-time employment or nonemployment or with a university education, single mothers devote more time to primary child care. Single mothers also spend less time on primary child care on weekends than they do on weekdays.

Table 4: Tobit estimates of hours a day spent in primary child care

Primary Child Care						
Variable	Married Fathers (1101)	S.E.	Married Mothers (1661)	S.E.	Single Mothers (663)	S.E.
Constant	-1.61	1.69	1.08	1.52	1.84*	1.09
One child	-0.29****	0.09	-0.36****	0.11	---	---
Two or more children	---	---	---	---	0.19*	0.11
Three or more children	-0.09	0.12	0.31	0.20	---	---
Youngest Child aged 0-4	1.01****	0.14	1.49****	0.14	1.31****	0.23
Youngest Child aged 12-18	-0.58****	0.07	-0.47****	0.15	-0.46****	0.10
Part-time	---	---	0.46****	0.13	---	---
Nonemployed	---	---	1.06****	0.19	---	---
Part-time or nonemployed	0.74****	0.18	---	---	0.50****	0.15
Partner's Paid Work (hours a week)	0.004	0.003	-0.006	0.006	---	---
Year Household Income (\$10,000)	0.21	0.15	0.03	0.14	-0.09	0.10
Respondent with Activity Limitations	0.09	0.16	-0.18	0.14	-0.04	0.13
25-34	-0.36**	0.16	0.57****	0.16	0.25	0.17
45-54	-0.50****	0.09	-0.48****	0.13	-0.56****	0.10
University	0.25**	0.11	0.38**	0.15	0.35**	0.15
College	0.19*	0.10	0.005	0.12	0.10	0.12
Saturday	0.21	0.13	-0.75****	0.12	-0.68****	0.15
Sunday	0.08	0.14	-0.50***	0.16	-0.40****	0.11

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Sample size is in parentheses under each parent group but this regression is run by weights. S.E. stands for standard errors.

Two children group is omitted for married fathers and married mothers; one child group is omitted for single mothers.

The other omitted groups for married fathers, married mothers and single mothers are: respondent's the youngest child is 5-11 years old, respondent is full-time employed, respondent is 35-44 years old, respondent educational level is some university or college or below and survey day are weekdays.

4.1.3 Pooled Estimates

Comparing the coefficients between married fathers and mothers in Table 4, it is noticeable that the main correlates like ‘one child’, ‘youngest child aged 0-4’, ‘university’, ‘Saturday’ and ‘Sunday’ have larger effects on married mothers while the main correlates like ‘youngest child aged 12-18’ and ‘college’ have larger effects on married fathers. For example, married mothers with a university education spend about 23 minutes³ more as married fathers with a university education spend only 15 minutes more on primary child care than those with a high school degree or below.

Testing if these differences truly exist or not in pooled estimates, see Table 5, I find, with three or more children or with a youngest child aged 0-4, that married mothers significantly devote more time to primary child care than married fathers, and, on weekends, married mothers spend less time on primary child care than married fathers.

Also comparing the coefficients between married mothers and single mothers in Table 4, the main correlates like ‘youngest child aged 0-4’, ‘youngest child aged 12-18’, ‘university’, ‘Saturday’ and ‘Sunday’ have larger effects on married mothers. For example, on Sunday, married mothers spend 30 minutes less as single mothers spend 24 minutes less on primary child care than on weekdays. However, in Table 5 (the pooled estimates), there are no significant differences between married mothers’ and single mothers’ primary child care time.

³ Convert the hours into minutes by multiplying the coefficients by 60.

Table 5: Tobit estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on primary child care

Primary Child Care				
Variable	Married Fathers and Mothers		Married Mothers and Single Mothers	
	Married Fathers		Single Mothers	
	Coef.	S.E.	Coef.	S.E.
One child	-0.29****	0.09	---	---
Two or more children	---	---	0.19*	0.11
Three or more children	-0.09	0.12	---	---
Youngest aged 0-4	1.01****	0.14	1.31***	0.23
Youngest aged 12-18	-0.58****	0.07	-0.46****	0.10
Part-time or nonemployed	0.74****	0.18	0.49****	0.15
University	0.25***	0.11	0.35*	0.15
College	0.19*	0.10	0.10	0.12
Saturday	0.21	0.13	-0.68***	0.15
Sunday	0.08	0.14	-0.40****	0.11
	Married Mothers Dummy		Married Mothers Dummy	
Married Mothers	2.97	2.26	-0.80	1.61
	Interactions		Interactions	
One child*Married Mothers	-0.05	0.15	---	---
Two or more children*Married Mothers	---	---	0.23	0.15
Three or more children*Married Mothers	0.40*	0.24	---	---
Youngest aged 0-4*Married Mothers	0.53***	0.20	0.31	0.26
Youngest aged 12-18*Married Mothers	0.11	0.17	-0.01	0.16
Part-time or nonemployed*Married Mothers	0.08	0.22	0.32	0.19
University*Married Mothers	0.11	0.19	0.001	0.210
College*Married Mothers	-0.23	0.16	-0.07	0.16
Saturday*Married Mothers	-0.95****	0.18	-0.02	0.19
Sunday*Married Mothers	-0.58***	0.22	-0.09	0.17
Number of Observations	2762		2542	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Coef. stands for coefficient and S.E. stands for standard errors.

Pooled married fathers and mothers are based on married fathers' variables, so variables of and interactions with 'two or more children' are excluded; pooled single mothers and married mothers are based on single mothers' variables, so variables of and interactions with 'one child' and 'three or more children' are excluded.

4.2 DOMESTIC LABOUR

4.2.1 Married Fathers and Married Mothers

In Table 6, only married mothers (those with positive hours⁴) with one child significantly spend less time on domestic labour than those with two children, and number of children is not associated with married fathers' domestic labour time. Both married fathers and mothers with a youngest child aged 0-4 spend less time on domestic labour than those with a youngest child aged 5-11.

Also, with part-time employment or nonemployment or on weekends, married fathers and married mothers devote more time to domestic labour than those with full-time employment or on weekdays. However, married fathers and mothers with university education spend less time on domestic labour than those with high school degree or below. Besides, married mothers devote more time to domestic labour as their partners work more hours a week.

4.2.1.1 Married Fathers and Mothers: Estimates Consistent with Literature

Previous research found that married mothers with more children spent more time on domestic labour and those with higher education spent less time (Miller & Mulvey, 2000), and both married fathers and mothers spent more time on their domestic labour on Sunday (Craig, 2006). My results are consistent with these above.

⁴ 'Those with positive hours' are compared between groups because of the regressions of domestic labour running in Tobit regressions.

4.2.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature

However, Miller and Mulvey (2000) found that married mothers with younger children spent more time on domestic labour, whereas I find that they spend less time on domestic labour time. And Craig (2006) found higher education was not associated with mothers' domestic labour time, whereas I find that having higher education decreases married mothers' domestic labour time.

4.2.2 Married Mothers and Single Mothers

In Domestic labour, the correlates also have a similar pattern on single mothers as on married mothers. See Table 6, compared to single mothers with one child, those with two or more children devote more time to domestic labour. Single mothers with a youngest child aged 0-4 devote less time to domestic labour than those with a youngest child aged 5-11. Also, with a part-time employment or nonemployment or on weekends, single mothers spend more time on domestic labour than those with full-time employment or on weekdays.

Table 6: Tobit estimates of hours a day spent on domestic labour

Domestic Labour						
Variable	Married Fathers (1101)	S.E.	Married Mothers (1661)	S.E.	Single Mothers (663)	S.E.
Constant	-0.28	2.26	3.34*	1.87	2.71	1.74
One child	0.13	0.19	-0.49****	0.14	---	---
Two or more children	---	---	---	---	0.56***	0.21
Three or more children	0.13	0.23	0.16	0.19	---	---
Youngest Child aged 0-4	-0.35*	0.19	-0.42**	0.17	-0.60**	0.30
Youngest Child aged 12-18	0.15	0.22	0.23	0.19	-0.03	0.28
Part-time	---	---	0.62****	0.19	---	---
Nonemployed	---	---	1.25****	0.16	---	---
Part-time or nonemployed	1.40****	0.34	---	---	0.70**	0.28
Partner's Paid Work (hours a week)	0.008	0.006	0.012**	0.005	---	---
Year Household Income (\$10,000)	0.14	0.20	-0.12	0.17	-0.09	0.17
Respondent with Activity Limitations	-0.29	0.30	0.19	0.23	0.21	0.27
25-34	0.04	0.22	0.30	0.18	-0.18	0.28
45-54	-0.03	0.20	0.17	0.18	0.20	0.26
University	-0.44**	0.18	-0.46***	0.16	0.20	0.30
College	0.13	0.22	0.02	0.17	0.21	0.28
Saturday	1.61****	0.32	1.18****	0.22	1.49****	0.43
Sunday	1.15****	0.23	1.12****	0.21	1.67****	0.32

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Sample size is in parentheses under each parent group but this regression is run by weights. S.E. stands for standard errors.

Two children group is omitted for married fathers and married mothers; one child group is omitted for single mothers.

The other omitted groups for married fathers, married mothers and single mothers are: respondent's the youngest child is 5-11 years old, respondent is full-time employed, respondent is 35-44 years old, respondent educational level is some university or college or below and survey day are weekdays.

4.2.3 Pooled Estimates

Comparing the coefficients between married fathers and mothers in Table 6, the main correlates like 'one child', 'youngest child age 0-4' and 'university' have larger effects on married mothers while the main correlates like 'Saturday' and 'Sunday' have larger effects on married fathers. For example, married mothers with a youngest child aged 0-4 spend about 25 minutes less and married fathers with a youngest child aged 0-4 spend 21 minutes less on domestic labour than those with a youngest child aged 5-11. Also test these in pooled estimates of Table 7, I find, with one child, that married mothers significantly devote more time to domestic labour than married fathers.

Comparing the coefficients between married mothers and single mothers in Table 6, the main correlates of 'youngest child aged 0-4', 'Saturday' and 'Sunday' have larger effects on single mothers while a correlate like 'university' has larger effect on married mothers. For example, single mothers spend about 1 hour and 40 minutes more as married mothers spend only about 1 hour and 7 minutes more on domestic labour on weekends than on weekdays. However, in pooled estimates of Table 7, it shows, on Sunday or with university education, that married mothers spend less time on domestic labour than single mothers.

Table 7: Tobit estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on domestic labour

Domestic Labour				
Variable	Married Fathers and Mothers		Married Mothers and Single Mothers	
	Married Fathers		Single Mothers	
	Coef.	S.E.	Coef.	S.E.
One child	0.13	0.19	---	---
Two or more children	---	---	0.52***	0.20
Three or more children	0.13	0.23	----	---
Youngest Child aged 0-4	-0.35*	0.19	-0.60**	0.30
Youngest Child aged 12-18	0.15	0.22	-0.07	0.25
Part-time or nonemployed	1.40****	0.34	0.77***	0.27
University	-0.44**	0.18	0.21	0.30
College	0.13	0.22	0.16	0.25
Saturday	1.61****	0.32	1.43****	0.39
Sunday	1.15****	0.23	1.68****	0.32
	Married Mothers Dummy		Married Mothers Dummy	
Married Mothers	3.92	2.94	0.93	2.33
	Interactions		Interactions	
One child*Married Mothers	-0.60**	0.24	---	---
Two or more children*Married Mothers	---	---	0.03	0.24
Three or more children*Married Mothers	0.03	0.30	---	---
Youngest aged 0-4*Married Mothers	-0.02	0.26	0.30	0.34
Youngest aged 12-18*Married Mothers	0.07	0.29	0.20	0.30
Part-time or nonemployed*Married Mothers	-0.39	0.36	0.22	0.30
University*Married Mothers	-0.03	0.25	-0.80**	0.33
College*Married Mothers	-0.16	0.28	-0.21	0.30
Saturday*Married Mothers	-0.42	0.39	-0.36	0.44
Sunday*Married Mothers	-0.03	0.31	-0.62*	0.38
Number of Observations	2762		2542	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Coef. stands for coefficient and S.E. stands for standard errors.

Pooled married fathers and mothers are based on married fathers' variables, so variables of and interactions with 'two or more children' are excluded; pooled single mothers and married mothers are based on single mothers' variables, so variables of and interactions with 'one child' and 'three or more children' are excluded.

4.3 PERSONAL CARE

4.3.1 Married Fathers and Married Mothers

In Table 8, married fathers with one child or with a youngest child aged 12-18 devote more time to personal care than those with two children or a youngest child aged 5-11. However, number and age of children are not associated with married mothers' personal care time. As expected, married fathers with part-time employment or nonemployment spend more time on personal care than those with full-time employment, but only nonemployed married mothers devote more time to personal care than those with full-time employment.

And higher education is not associated with parents' personal care time. However, both married fathers and mothers devote more to personal care on weekends than on weekdays. Also, married fathers aged 45-54 spend more time on personal care than those aged 35-44, and married mothers spend a little more time on personal care if their partners work more hours in paid work during a week.

4.3.1.1 Married Fathers and Mothers: Estimates Consistent with Literature

Craig (2006) found that higher education was not associated with parents' personal care time, and the number of children was not associated with mothers' personal care. These are consistent with my findings.

4.3.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature

However, Craig (2006) found that number of children was not associated with fathers' personal care, whereas I find having less children increases married fathers' personal care. Also, I find married fathers and mothers increase their personal care time on both Saturday and Sunday, but Craig (2006) found fathers and mothers only increased their personal care time on one day of the weekends.

4.3.2 Married Mothers and Single Mothers

As is true for married mothers, in Table 8, the number of children and age of children are not associated with single mothers' personal care time. However, single mothers with part-time employment or nonemployment devote more time to personal care than those with full-time employment, and they spend more time on their personal care on Saturday than on weekdays.

Table 8: OLS estimates of hours a day spent on personal care

Personal Care						
Variable	Married Fathers (1101)	S.E.	Married Mothers (1661)	S.E.	Single Mothers (663)	S.E.
Constant	1.63	1.43	0.12	1.21	0.25	0.98
One child	0.17*	0.10	-0.06	0.09	---	---
Two or more children	---	---	---	---	-0.10	0.12
Three or more children	-0.03	0.13	0.05	0.13	---	---
Youngest Child aged 0-4	0.04	0.11	-0.12	0.13	0.01	0.15
Youngest Child aged 12-18	-0.30***	0.11	-0.10	0.11	0.06	0.15
Part-time	---	---	0.15	0.12	---	---
Nonemployed	---	---	0.27**	0.11	---	---
Part-time or nonemployed	0.60****	0.19	---	---	0.39**	0.17
Partner's Paid Work (hours a week)	-0.003	0.004	0.005*	0.003	---	---
Year Household Income (\$10,000)	0.02	0.13	0.15	0.11	0.15	0.10
Respondent with Activity Limitations	0.006	0.18	0.17	0.15	0.06	0.14
25-34	-0.30	0.14	-0.15	0.13	-0.16	0.13
45-54	0.25**	0.11	-0.06	0.11	-0.003	0.14 9
University	-0.13	0.11	-0.11	0.10	0.04	0.21
College	-0.08	0.11	-0.09	0.10	-0.10	0.13
Saturday	0.61****	0.16	0.46****	0.14	0.40**	0.20
Sunday	0.62****	0.17	0.48****	0.15	0.38	0.23
R Square	0.0794		0.0355		0.0400	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Sample size is in parentheses under each parent group but this regression is run by weights. S.E. stands for standard errors.

Two children group is omitted for married fathers and married mothers; one child group is omitted for single mothers.

The other omitted groups for married fathers, married mothers and single mothers are: respondent's the youngest child is 5-11 years old, respondent is full-time employed, respondent is 35-44 years old, respondent educational level is some university or college or below and survey day are weekdays.

4.3.3 Pooled Estimates

Comparing the coefficients between married fathers and mothers in Table 8, the main correlates like 'one child', 'youngest child aged 12-18', 'Saturday' and 'Sunday' have larger effects on married fathers. For example, married fathers devote about 1 hour and 14 minutes more to personal care on weekends than weekdays while married mothers devote only about less than 1 hour more. However, in Table 9 (the pooled estimates), it shows, with one child or part-time employment or nonemployment, that married mothers spend less time on personal care than married fathers.

Also in comparison with the coefficients between married mothers and single mothers (see Table 8), the main correlates like 'Saturday' and 'Sunday' have larger effects on married mothers. For example, married mothers devote about 28 minutes more as single mothers spend 24 minutes more on personal care on Saturday than on weekdays. However, in Table 9, there is no significant difference between married mothers and single mothers in the main correlates.

Table 9: OLS estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on personal care

Personal Care				
Variable	Married Fathers and Mothers		Married Mothers and Single Mothers	
	Married Fathers		Single Mothers	
	Coef.	S.E.	Coef.	S.E.
One child	0.17*	0.10	---	---
Two or more children	---	---	-0.10	0.12
Three or more children	-0.03	0.13	---	---
Youngest Child aged 0-4	0.04	0.11	0.02	0.15
Youngest Child aged 12-18	-0.30***	0.11	0.06	0.15
Part-time or nonemployed	0.60****	0.19	0.38**	0.17
University	-0.13	0.11	0.04	0.21
College	-0.08	0.11	-0.10	0.13
Saturday	0.61****	0.16	0.40**	0.20
Sunday	0.62****	0.17	0.38	0.23
	Married Mothers Dummy		Married Mothers Dummy	
Married Mothers	-1.46	1.87	0.57	1.29
	Interactions		Interactions	
One child*Married Mothers	-0.23*	0.14	---	---
Two or more children*Married Mothers	---	---	0.19	0.14
Three or more children*Married Mothers	0.08	0.18	---	---
Youngest aged 0-4*Married Mothers	-0.15	0.17	-0.10	0.19
Youngest aged 12-18*Married Mothers	0.20	0.16	-0.14	0.19
Part-time or nonemployed*Married Mothers	-0.38*	0.21	-0.17	0.19
University*Married Mothers	0.01	0.16	-0.16	0.23
College*Married Mothers	-0.02	0.15	-0.03	0.16
Saturday*Married Mothers	-0.15	0.21	0.03	0.24
Sunday*Married Mothers	-0.14	0.22	0.12	0.27
R Square	0.0557		0.0339	
Number of Observations	2762		2542	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Coef. stands for coefficient and S.E. stands for standard errors.

Pooled married fathers and mothers are based on married fathers' variables, so variables of and interactions with 'two or more children' are excluded; pooled single mothers and married mothers are based on single mothers' variables, so variables of and interactions with 'one child' and 'three or more children' are excluded.

4.4 SLEEPING

4.4.1 Married Fathers and Married Mothers

In Table 10, married fathers with a youngest child aged 12-18 spend less time on sleeping than those with a youngest child aged 5-11, and married mothers with one child have more sleeping time than those with two children. With part-time employment or nonemployment, married fathers enjoy more sleeping time than those with full-time employment, but only married mothers with nonemployment have more sleeping time than those with full-time employment. It is quite interesting that married fathers lose some sleeping time if their partners work more hours in paid work during a week.

Besides, married fathers with college education have less sleep than those with high school degree or below while higher education is not associated with married mothers' sleeping time. On weekends, married mothers pick up more sleep than on weekdays, as married fathers only have more sleep on Sunday than on weekdays. In addition, married fathers with activity limitation spend more time on sleeping than those without this problem.

4.4.1.1 Married Fathers and Mothers: Estimates Consistent with Literature

Craig (2006) found that both fathers and mothers increase their sleeping time on Sunday, which is consistent with my findings.

4.4.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature

However, Craig (2006) found that the number of children was not associated with parents' sleeping time, whereas I find that having less children increases married mothers' sleeping time. Also Craig (2006) found that higher education decreased fathers' sleeping time while I find that this case decreases married mothers' sleeping time.

4.4.2 Married Mothers and Single Mothers

For single mothers (see Table 10), number and age of children are not associated with their sleeping time, but they do have more sleep if they are part-time employed or nonemployed. Single mothers with university education spend less time on sleeping than those with high school degree or below but they take more sleep over the weekends than on weekdays.

Table 10: OLS estimates of hours a day spent on sleeping

Sleeping						
Variable	Married Fathers (1101)	S.E.	Married Mothers (1661)	S.E.	Single Mothers (663)	S.E.
Constant	10.66****	1.68	6.39****	1.25	10.03****	1.87
One child	0.09	0.13	0.35****	0.11	---	---
Two or more children	---	---	---	---	-0.05	0.20
Three or more children	-0.05	0.16	0.13	0.12	---	---
Youngest Child aged 0-4	-0.17	0.15	-0.18	0.13	-0.06	0.30
Youngest Child aged 12-18	-0.28*	0.15	0.04	0.12	-0.21	0.24
Part-time	---	---	-0.06	0.12	---	---
Nonemployed	---	---	0.42****	0.12	---	---
Part-time or nonemployed	0.51**	0.26	---	---	0.96***	0.31
Partner's Paid Work (hours a week)	-0.009**	0.004	-0.004	0.003	---	---
Year Household Income (\$10,000)	-0.23	0.15	0.13	0.11	-0.19	0.18
Respondent with Activity Limitations	0.59***	0.22	0.25	0.18	-0.19	0.29
25-34	0.07	0.17	0.10	0.13	-0.08	0.29
45-54	0.16	0.14	-0.09	0.12	-0.17	0.26
University	0.09	0.15	0.12	0.12	-0.90***	0.28
College	-0.40***	0.14	0.04	0.11	-0.01	0.24
Saturday	0.28	0.18	0.83****	0.15	0.66**	0.27
Sunday	1.32****	0.18	1.00****	0.14	1.20****	0.31
R Square	0.1104		0.0847		0.138	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Sample size is in parentheses under each parent group but this regression is run by weights. S.E. stands for standard errors.

Two children group is omitted for married fathers and married mothers; one child group is omitted for single mothers.

The other omitted groups for married fathers, married mothers and single mothers are: respondent's the youngest child is 5-11 years old, respondent is full-time employed, respondent is 35-44 years old, respondent educational level is some university or college or below and survey day are weekdays.

4.4.3 Pooled Estimates

Comparing the coefficients between married fathers and mothers in Table 10, the main correlates like 'youngest child aged 12-18', 'college' and 'Sunday' have larger effects on married fathers while the main correlates like 'one child' and 'Saturday' have larger effects on married mothers. For example, married fathers spend about 1 hour and 19 minutes more as married mothers spend 1 hour more on Sunday than on weekdays. The results show, in Table 11 (pooled estimates), that all married mothers spend much less time on sleeping than married fathers. Even though, with college education or on Saturday, married mothers increase a little more time to sleeping but still their sleeping time is much less than married fathers.

Also, comparing the coefficients between married mothers and single mothers in Table 10, the main correlates like 'university' and 'Sunday' have larger effects on single mothers while one main correlate like 'Saturday' has larger effect on married mothers. For example, single mothers devote 1 hour and 12 minutes more as married mothers devote 1 hour more to sleep on Sunday than on weekdays. However, there is no significant difference between these two groups on weekends in Table 11. The differences appear in employment and education, that is, with part-time employment or nonemployment, married mothers have less sleep than single mothers, and with university education, married mothers have more sleep than single mothers.

Table 11: OLS estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on sleeping

Sleeping				
Variable	Married Fathers and Mothers		Married Mothers and Single Mothers	
	Married Fathers		Single Mothers	
	Coef.	S.E.	Coef.	S.E.
One child	0.09	0.13	---	---
Two or more children	---	---	-0.05	0.19
Three or more children	-0.05	0.16	---	---
Youngest Child aged 0-4	-0.17	0.15	-0.06	0.30
Youngest Child aged 12-18	-0.28*	0.15	-0.20	0.24
Part-time or nonemployed	0.51**	0.26	0.96***	0.31
University	0.09	0.15	-0.90****	0.28
College	-0.40***	0.14	-0.01	0.24
Saturday	0.28	0.18	0.66***	0.26
Sunday	1.32****	0.18	1.19****	0.31
	Married Mothers Dummy		Married Mothers Dummy	
Married Mothers	-4.04*	2.09	-2.08	2.22
	Interactions		Interactions	
One child*Married Mothers	0.28	0.17	---	---
Two or more children*Married Mothers	---	---	-0.26	0.22
Three or more children*Married Mothers	0.18	0.20	---	---
Youngest aged 0-4*Married Mothers	0.03	0.20	-0.05	0.33
Youngest aged 12-18*Married Mothers	0.31	0.19	0.24	0.27
Part-time or nonemployed*Married Mothers	-0.28	0.27	-0.66**	0.32
University*Married Mothers	0.02	0.20	0.95***	0.31
College*Married Mothers	0.40**	0.18	0.02	0.26
Saturday*Married Mothers	0.56**	0.24	0.07	0.30
Sunday*Married Mothers	-0.32	0.23	-0.22	0.34
R Square	0.1012		0.0874	
Number of Observations	2762		2542	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Coef. stands for coefficient and S.E. stands for standard errors.

Pooled married fathers and mothers are based on married fathers' variables, so variables of and interactions with 'two or more children' are excluded; pooled single mothers and married mothers are based on single mothers' variables, so variables of and interactions with 'one child' and 'three or more children' are excluded.

4.5 LEISURE

4.5.1 Married Fathers and Married Mothers

In Table 12, married fathers with three or more children have less leisure time than those with two children, and married fathers and mothers with a youngest child aged 0-4 have less leisure time than those with a youngest child aged 5-11. As expected, both married fathers and mothers with part-time employment or nonemployment enjoy more leisure time than those with full-time employment. It is also interesting that married fathers and married mothers both have less leisure time if their partners work more hours in paid jobs in a week.

Besides, married mothers with university education have less leisure time than those with high school degree or below, and both married fathers and mothers spend more time on leisure on weekends than on weekdays.

4.5.1.1 Married Fathers and Mothers: Estimates Consistent with Literature

Craig (2006) found that having more children decreased fathers' leisure time and fathers increased leisure time on Saturday, which is consistent with my findings.

4.5.1.2 Married Fathers and Mothers: Estimates Not Consistent with Literature

However, Craig (2006) found that having higher education decreased fathers' leisure time, whereas I find that this case decreases married mothers' leisure time. Also, Craig

(2006) found that weekends were not associated with mothers' leisure time, whereas I find a positive relationship between weekends and married mothers' leisure time.

4.5.2 Married Mothers and Single Mothers

Single mothers with two or more children spend less time on leisure than those with only one child (see Table 12). However, single mothers with part-time employment or nonemployment enjoy more leisure time than those with full-time employment, and they also devote more time to leisure on weekends than on weekdays.

Table 12: OLS estimates of hours a day spent on leisure

Variable	Leisure					
	Married Fathers (1101)	S.E.	Married Mothers (1661)	S.E.	Single Mothers (663)	S.E.
Constant	2.10	3.19	4.33**	2.09	2.70	2.09
One child	0.07	0.21	0.27	0.17	---	---
Two or more children	---	---	---	---	-0.92****	0.26
Three or more children	-0.43*	0.26	-0.28	0.22	---	---
Youngest Child aged 0-4	-0.56**	0.22	-0.77****	0.20	-0.29	0.39
Youngest Child aged 12-18	0.21	0.24	-0.12	0.20	-0.02	0.29
Part-time	---	---	0.96****	0.21	---	---
Nonemployed	---	---	1.46****	0.20	---	---
Part-time or nonemployed	1.61****	0.33	---	---	1.09****	0.30
Partner's Paid Work (hours a week)	-0.01**	0.01	-0.02***	0.01	---	---
Year Household Income (\$10,000)	0.12	0.28	-0.06	0.19	0.05	0.20
Respondent with Activity Limitations	0.03	0.33	-0.13	0.26	0.54	0.40
25-34	0.36	0.27	-0.11	0.20	-0.01	0.35
45-54	0.43*	0.22	0.27	0.19	-0.05	0.30
University	-0.24	0.22	-0.38**	0.19	-0.40	0.35
College	0.09	0.23	0.01	0.18	0.03	0.30
Saturday	2.70****	0.33	1.98****	0.24	2.78****	0.45
Sunday	2.86****	0.36	1.58****	0.24	1.77****	0.39
R Square	0.2028		0.1560		0.1894	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Sample size is in parentheses under each parent group but this regression is run by weights. S.E. stands for standard errors.

Two children group is omitted for married fathers and married mothers; one child group is omitted for single mothers.

The other omitted groups for married fathers, married mothers and single mothers are: respondent's the youngest child is 5-11 years old, respondent is full-time employed, respondent is 35-44 years old, respondent educational level is some university or college or below and survey day are weekdays.

4.5.3 Pooled Estimates

Comparing the coefficients between married fathers and mothers in Table 12, the main correlates like ‘youngest child aged 0-4’, ‘partner’s paid work’ and ‘university’ have larger effects on married mothers while the main correlates like ‘three or more children’, ‘Saturday’ and ‘Sunday’ have larger effects on married fathers. For example, married fathers devote about 5 hours and 34 minutes more and married mothers devote about 3 hours and 34 minutes more to leisure on weekends than on weekdays. Table 13 of the pooled estimates shows that married mothers spend significantly less time on leisure than married fathers on Saturday and Sunday.

Also, comparing the coefficients between married mothers and single mothers in Table 12, the main correlates like ‘Saturday’ and ‘Sunday’ have larger effects on single mothers while one main correlate like ‘university’ has a larger effect on married mothers. For example, single mothers spend about 4 hours and 34 minutes more on leisure on weekends than on weekdays, which is higher than married mothers do. However, in Table 13, there is no significant difference between them in the weekends correlates. The only difference appears in the number of children, that is, with two or more children, married mothers enjoy more leisure time than single mothers.

Table 13: OLS estimates of main variables in pooled estimates with 'married mothers' dummy, hours a day spent on leisure

Leisure				
Variable	Married Fathers and Mothers		Married Mothers and Single Mothers	
	Married Fathers		Single Mothers	
	Coef.	S.E.	Coef.	S.E.
One child	0.07	0.21	---	---
Two or more children	---	---	-0.92****	0.26
Three or more children	-0.43*	0.26	---	---
Youngest Child aged 0-4	-0.56***	0.22	-0.29	0.39
Youngest Child aged 12-18	0.21	0.24	-0.02	0.29
Part-time or nonemployed	1.61****	0.33	1.08****	0.30
University	-0.24	0.22	-0.39	0.35
College	0.09	0.23	0.04	0.30
Saturday	2.70****	0.33	2.78****	0.45
Sunday	2.86****	0.36	1.77****	0.39
	Married Mothers Dummy		Married Mothers Dummy	
Married Mothers	2.46	3.81	2.63	2.89
	Interactions		Interactions	
One child*Married Mothers	0.22	0.27	---	---
Two or more children*Married Mothers	---	---	0.61**	0.30
Three or more children*Married Mothers	0.16	0.34	---	---
Youngest aged 0-4*Married Mothers	-0.17	0.30	-0.42	0.43
Youngest aged 12-18*Married Mothers	-0.34	0.31	-0.16	0.35
Part-time or nonemployed*Married Mothers	-0.35	0.37	0.004	0.338
University*Married Mothers	-0.15	0.29	0.13	0.40
College*Married Mothers	-0.12	0.30	-0.10	0.35
Saturday*Married Mothers	-0.71*	0.41	-0.71	0.52
Sunday*Married Mothers	-1.28***	0.43	-0.04	0.46
R Square	0.1784		0.1464	
Number of Observations	2762		2542	

Source: GSS Time Use 2005 * P-value < 0.10 ** P-value < 0.05 *** P-value < 0.01 **** P-value < 0.001.

Notes: Coef. stands for coefficient and S.E. stands for standard errors.

Pooled married fathers and mothers are based on married fathers' variables, so variables of and interactions with 'two or more children' are excluded; pooled single mothers and married mothers are based on single mothers' variables, so variables of and interactions with 'one child' and 'three or more children' are excluded.

CHAPTER 5: STUDY LIMITATIONS

Nonparental care institutions have developed fast during recent years. For example, in Canada, almost half of the pre-school children whose mothers are employed attend Early Childhood Education and Care (Cleveland, Forer, Hyatt, Japel, & Krashinsky, 2008). Craig (2006) found that nonparental care has some impact on parents' time allocations, such as sleeping and domestic labour. Unfortunately, there is no specific information about nonparental care in GSS cycle 19 for me to include this in my model. Since policy has improved nonparental care in Canada, especially in Quebec and Manitoba, there might be an impact of nonparental care on Canadian parents' time allocations in daily life.

Besides, having a disabled child at home may absorb much mothers' primary child care time. This is not included in this study because of the shortage of information in the GSS time use 2005. Teenagers (over 12 years older) at home may help parents take care of their little sisters or brothers, but my study does not include their impacts on their parents' daily time allocations. Because this study only uses data in a single year to analyze Canadian parents' daily time allocations to primary child care, domestic labour, personal care, sleeping and leisure, further research can investigate these time uses in more years to see the changes.

CHAPTER 6: CONCLUSION

Children's number and age, parental education and employment status, and day of the week are associated with Canadian parents' time allocations. As more and younger children absorb fathers and mothers child care time, more financial support may be considered to help those parents so that, for example, they could pay babysitters to take care of children. It should be noticed that, facing time crunch issue, Canadian parents choose to reschedule their time of leisure, sleeping, personal care and domestic labour to weekends as Canadian mothers reschedule their child care time on weekdays.

There is no significant difference of time spent on primary child care and domestic labour between married fathers and mothers in my study, which indicates that the gender gap of child care and housework disappears for Canadian parents, especially for parents with the same high level of education (e.g. university degree). This result supports the findings of Marshall (2006), that men are spending more time taking care of children and doing housework in Canada.

As Canadian mothers (more than half with full-time jobs in my study) choose to devote more time to child care on weekdays, when most are also doing day jobs, it is easy to sense the time pressure on weekdays for those mothers. However, on weekends, they have to spend more time on other activities (e.g. housework and personal care). Even though they tend to enjoy more time of sleeping and leisure on weekends, they still spend less time than fathers, especially on sleeping. These indicate that Canadian mothers, especially full-time employed mothers, might feel much more time-stressed, which may

cause mothers' health problems or further influence their children's health or future outcomes. Facing this problem, some policies may be introduced, such as some public workshops to help mothers deal with time management or time crunch; or provision of much more flexible working time if children are sick; setting more non-profit institutions to take care of children if their parents have some emergency at night or on a holiday.

Besides, it should also be noticed that my results do not show much difference in the correlates of child care between married mothers and single mothers. Given the extreme shortage of time available to single mothers, it leads to more worries about single mothers' well-being and health situation. Relevant policies for mothers may consider the time and income shortage of single mothers, for example, reducing the working hours requirement for being eligible for paid maternal leave or increasing the replacement rates for maternity leave of single mothers.

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Appendix 1: Codes of Dependent Variables in GSS 2005 Survey

- 1) Sleeping (GSS codes DUR450 and 460): Night sleep/essential sleep and naps/lying down.
- 2) Domestic labour (GSS codes DVDOM, DUR302 and DUR310): Meal preparation, baking, preserving food, home brewing, food (or meal) cleanup, indoor cleaning, outdoor cleaning, laundry, ironing, folding, mending/shoe care, dressmaking and sewing, interior maintenance and repair, exterior maintenance and repair, vehicle maintenance, other home improvements, gardening/ground maintenance, pet care, care of house plants, household administration, stacking and cutting firewood, other domestic/household work, unpacking groceries, packing or unpacking luggage and/or car, packing and unpacking for a move of the household, travel for domestic, shopping for every day goods and products, and shopping for durable household goods.
- 3) Personal care (GSS codes DVPERSON - DUR450 - DUR460): Washing, dressing, personal medical care (at home), private prayer, meditation and other informal spiritual activities, meals at home/snacks/coffee/other meals at another place, restaurant meals, relaxing, thinking, resting, smoking, other personal care or private activities, travel: personal, travel to restaurant meals, and travel for other personal activities.
- 4) Leisure (GSS codes DVENTERT, DVSPORT and DVMEDIA): Entertainment activity codes, sports/hobbies activity codes and media/communication activity codes.
- 5) Primary child care (GSS code CHLDDOMS): this code records the duration for respondent taking care of child/children as the primary activity when he or she is carrying some other activities at the same time.

Appendix 2: Married Fathers, Married Mothers and Single Mothers with Zeroes in the Five Time Use Categories

Time Use Category	Married Fathers	Married Mothers	Single Mothers
Primary child care	66% (0.04)	25% (0.02)	52% (0.05)
Domestic labour	15% (0.01)	2% (0.002)	3% (0.01)
Personal care	1% (0.001)	0.5% (0.001)	1% (0.002)
Sleeping	0.005% (0.00005)	0% (0)	0% (0)
Leisure	2% (0.002)	2% (0.002)	3% (0.01)

Source: GSS Time Use 2005.

Note: Standard errors are in the parentheses.