

The Determinants of Parental Child Care Time in Canada

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Abstract

Parental care affects whether a child can grow up healthily both physically and psychologically. More and more Canadian parents realize the importance of the time devoted to child care. Using data from the 2006 Census and the 2005 General Social Survey (GSS), this paper analyzes the determinants of the time parents spend looking after children in Canada. The results with the 2006 Census are consistent with those with the 2005 GSS. The characteristics of the parents, such as gender, education level, parental type, working status, immigration status, minority status, and place of residence, as well as the characteristics of children, such as their ages and numbers, all play important roles in determining the time people spend on children rearing. The results show that mothers still spend more time looking after children than fathers, highly-educated parents spend more time than those who are lowly-educated, and immigrants spend less time than non-immigrants. With respect to children's characteristics, the parental child care time is positively related to the number of children in the household, and negatively related to children's age.

Keywords: Parental child care time; Determinants; Child care; Canada

1. Introduction

It is widely believed that parental care plays a crucial role in the healthy development of children. Over the last few decades, there has been an increasing interest in the time spent by parents on child care, and the literature on that topic has increased rapidly. The purpose of this paper is to study the determinants of the time that Canadian parents spend looking after their children.

To begin with, it is important to define parental child care time. Actions related to child care include primary activities and secondary activities. The former include activities where the parents' focus is only on children, while the latter allow parents to do other things at the same time along with looking after children. The parental child care time in this paper and in most of the literature includes time spent on both types of activities.

Previous studies have explored various factors that affect the time parents spend on child care, including gender (Craig, 2006; and Zick and Bryant, 1996), immigrant status (Brandon, 2004), education (Guryan, 2008), working status (Michalopoulos and Robins, 2000), and parental type (Kalenkoski et al., 2007; and Michalopoulos and Robins, 2002). In this paper, I use the 2006 Census as the main dataset and the 2005 General Social Survey (GSS) as a secondary dataset to see how those factors affect the time that Canadian parents spend looking after their children.

Most studies on parental child care time in Canada use time use surveys, and few use Census as the main data source. Both Census and GSS have their merits and drawbacks. By using those two datasets, we can see how these datasets differ from each other on time use study, and the results will be more robust. The sample is restricted to people between 20 and 54 years old with at least one child under 15 years old living at home. Even after the restrictions, there is still a significant proportion of people who report spending zero hours looking after children per week. Thus, I use a Tobit model.

I find that the results from the 2006 Census are consistent with those from the 2005 GSS. Mothers devote more time to child care than fathers, and sole-parents spend less time than couple-parents. Parental child care time is positively related to education level

and to the number of children, and it is negatively related to immigrant status, minority status, household size, household income, and children's age. The results also show that people who live in large cities spend less parental child care time than those who live in small cities.

In the following section, I summarize some existing literature on the determinants of parental child care time. Section 3 describes the data and provides some summary statistics. The econometric model is presented in section 4. Section 5 shows the results of the empirical work and presents how different characteristics affect the time people spend looking after children. Section 6 concludes this paper.

2. Literature Review

This section reviews some of the previous studies that have analyzed the determinants of parental child care time. The review begins with an introduction of the theoretical frameworks used in the former studies, then it presents some literature on the measurement of parental child care time, and lastly it reviews some empirical results.

2.1 Theoretical Frameworks

Recently, there has been an increasing interest in the factors that determine the time parents spend with children. Among the abundant literature, three main theoretical frameworks have been widely used to explain the time parents allocate to look after their children: gender role theory, human capital theory and family system theory.

The gender role theory argues that parents allocate their time to take care of children not according to the maximization of household's utility, but according to the traditional gender role principle that fathers are breadwinners while mothers are housekeepers (Bernard, 1981). Although participation of women in the labour market has been increasing, it is still generally believed that men's central role is earning money to support the household economic foundation and that tasks inside the home are women's primary duties. A key interpretation is that parenting requires two main inputs, money

and time, and that parents specialize according to their comparative advantages so that children receive more money from their father and more time from their mother (Bianchi, 2000). Since looking after children is a meticulous task, the circumspection of women makes them perform better at it. The gender role theory predicts that females spend more time looking after children than males, while males spend more time working than females.

The classic theory of human capital was proposed by Becker (1965). It argues that parents aim to maximize household utility by assigning tasks to each spouse with material and time constraints. This theory assumes that household members rationally choose the amount of time and of physical material on all activities including children rearing and market labour supply. One consequence is that women possess relative advantages on housework and parenting while men are relatively more efficient in the labour market. In addition, men have greater power to avoid housework and children rearing due to their higher economic contribution (Coltrane and Ishii-Kuntz, 1992). Most husbands earn more than their wives and devote more time working; thus they have reasons to spend less time on child care. Woodall (1987) indicates that education and training create assets that increase the quality or productivity of the labour force. Looking after children can be regarded as another kind of human capital investment to increase future household utility. The human capital theory predicts that women who are employed spend less time on child care than women who are not employed. This theory also reflects the relationship between family structure and parental child care time. Single-parents, with fewer resources in both money and available time than parents who live as a couple, are predicted to spend less time taking care of children. With one less adult, the relative cost of time spent with children increases, and rational parents choose to decrease parental child care time for higher utility.

The family systems theory argues that any two or more members in a family make up a family subsystem, and that the subsystems interact with one another (Belsky and Volling, 1987). For instance, the spouses subsystem interacts with the parent-children subsystem (Aldous et al., 1998). The quality of the marital relationship affects the sense of belonging of the spouses and the desire to remain involved in the family system; and

thus it will affect the interaction between parents and children (Aldous et al., 2002). Poor relationship between spouses will make them less emotionally responsible to children. Generally, the father-children subsystem is easier broken by the deterioration of the spouse subsystem than the mother-children subsystem. During conflicts with their wives, men tend to distance themselves from their families, which makes them less involved in the father-children subsystems. The family system theory can also predict that single parents spend less time with their children. Broken families make single parents have less family attachment, and thus their senses of responsibility to their children may be weakened.

2.2 Measurement issues

In the recent literature on parental child care time, scholars have reached a consensus that it is difficult to measure precisely the time parents spend with their children. Two important methods of measurement are widely used to study parental child care time: time diary and stylized questions.

Time diary is regarded as the most valid and effective data collection procedure for time allocation studies. Time diary data present complete time allocation for different activities during a respondent 24-hour period. These data can be collected by interview, by phone-call survey or by mail survey. Moreover, Robinson and Godbey (1997) point out that data collected in those different ways show little difference. Stylized questions is another usual method which consists in asking respondents a list of questions about time allocation on different parenting activities.

Paille (1994) notes that estimates of parental child care time using stylized questions are higher than those using time diaries. The usual interpretation for such difference is that time diaries only measure primary activities, where the parents' attention is fully occupied by their children (Zick and Bryant, 1996). However, time spent on secondary activities such as keeping an eye on children while watching TV should also be regarded as parental child care time. It is commonly agreed that secondary activities make up a large proportion in total parental child care time. Zick and Bryant (1996) estimate that

the time spent on secondary activities accounts for 40% to 70% of the time spent on primary activities. This estimate is based on American data that include the Time Use Longitudinal Panel Study from 1975 to 1981 and the Eleven State Time Use Survey for 1977 and 1978. Robinson (2002) suggests that parental child care time increases by approximately 50% when secondary activities are added. Bianchi (2000) analyzes data from the US Use of Time Survey from 1965 to 1966 and finds that the time spent on secondary activities is nearly 65% of the time spent on primary activities. However, secondary activities are not reported or well presented in most datasets.

Fedick, Pacholok and Gauthier (2005) analyze time use measures in the 1998 Canadian General Social Survey (GSS). They employ that cycle of the GSS because it includes a child care diary. They estimate four different components of time spent on children: 1. time spent on primary activities; 2. total parental child care time; 3. parental child care time collected from the child care module (this data only include household activities with children under 15); and 4. parental child care time from stylized questions. They find that, among all the four measurements, the estimate of the first method (the time spent on primary activities) is the lowest and that the estimate from the stylized questions is the highest. They conclude that the estimate of parental child care time from the total time spent with children is 2.5 to 3.5 times higher than the estimate from time spend on primary activities only. This is quite similar to the result of Bianchi (2000) who estimates that the total time spend on children is three times higher than the estimate from time spend on primary activities. The authors argue that there is no single best way to measure parental child care time and that the choice of measurement depends on the definition of parental child care time. If only time spend on activities on which parents focus mainly on caring and interacting with children is defined as parental child care time, estimates from time spend on primary activities will be the most reliable and appropriate. On the other hand, if the definition of parental child care time includes time indirectly spend with children, the total time spend with children will be a more appropriate estimate.

However, Juster and Stafford (1991) hold a different opinion. They argue that time diary is a better measurement than stylized questions. Firstly, in stylized questions,

respondents are often asked specific questions on how much time they devote to certain child care activities, but many of those activities do not happen in daily or weekly routines. Thus, the use of time for some activities may be wrongly estimated. Secondly, for some widely defined activities, it is not accurate to collect time usage by asking questions like ‘how much time you spend on ... last week’. For example, when asking how much time respondents spend on ordinary household work, the answer will easily be biased. Ordinary household work is a broadly defined concept, which includes doing the laundry, cooking, cleaning, or tidying the room. Respondents can easily miss some activities of ordinary household work, or include activities that are not actually child care activities. Thirdly, without time constrain, stylized question may yield a week with more than 168 hours. The authors indicate that time-use estimates from stylized questions are almost all significantly higher than those from time diaries.

In this paper, my main dataset is the Census of 2006, which collects the information of parental child care time only with a stylized question. I use the 2005 GSS as my secondary dataset, where parental child care time data are collected by both stylized questions and time diaries. To make the results from the two datasets more comparable, I only use the parental child care time data from the stylized question.

2.3 Results of Empirical Studies

Folbre and Yoon (2007) analyze the definition and measurement of parental child care time in four major English-speaking countries: the United States, Canada, the United Kingdom and Australia. The data used for the four countries are time-diary surveys. They find that in Australia and in the UK, secondary child care or supervisory responsibility is well defined, but that it is not in the US and Canada. In the US, a special question regarding “when children are in your care” is used to represent secondary child care and in Canada “looking after children” is used. For the US, the paper uses the American Time Use Survey (ATUS) of 2003 to compare the characteristics of primary activities and supervisory child care, and to present the determinants of time spent on different child care activities. They find that when the number of children in the

household increases, the time for children rearing activities decreases more dramatically than the supervisory time. The increased time parents devote to additional children may be offset by the time older children spend looking after their younger siblings. They use a Tobit model to estimate how mothers' working time affects their parental child care time. The sample includes married or cohabiting people whose youngest child is under 6 but who have no children over 12. They find that when mothers' working time increases, the supervisory time decreases more steeply than the active care time. In addition, college education shows a positive effect on both time on primary activities and on supervisory responsibility; Black and Hispanic ethnicity show negative effects, and weekend days show positive effects.

Quebec is a special province in Canada having the highest proportion of common-law couples and being the only province to adopt a universal daycare program. The Quebec universal daycare program was started in 1997 and offered low-cost daycare for children under five. Stalker and Ornstein (2013) analyze the effect of the universal daycare program on parents' time allocation between child care and work, by using the Canadian censuses of 1996, 2001 and 2006. They divide the sample into ten categories based on both parents' employment status and on who takes the main responsibility of child care. They exclude women over 49 years old, men over 59 years old and couples who work fewer than 15 hours per week. The results indicate that the proportion of families following the traditional strategy (where the father is employed full-time and the mother is not employed and takes care of children) decreased by 5.3 percentage points (from 23.7% to 18.4%) between 1996 and 2006, while in the rest of Canada it decreased only by 0.5 percentage points. They also use a multinomial logistic regression to estimate the difference in the use of non-traditional and traditional strategies in terms of taking care of children between Quebec and the rest of Canada. Strategies are defined based on a combination of three conditions: whether the father works, whether the mother works, and who spends the most time looking after children. The traditional strategy is that father is employed full-time, mother is not employed, and mother spends the most time looking after children. All other combinations refer to non-traditional strategies. The authors find that the number of children is the most

important reason for choosing a traditional strategy. Relative to the change in the rest of Canada, the decline in the proportion using the traditional strategy in Quebec is 4% for legally married couples and 6% for common-law couples. The results show that the lower cost of child care evidently increases the market labour supply of women.

Using the Time Use Survey of the Canadian General Social Survey (GSS) conducted in 1998, Silver (2000) restricts the sample to dual-earner couples with natural children, in order to examine how much time those parents spend with their children. The research finds that full-time employed mothers spend an average of 6.5 hours per day with their children when the children are under 5, and that the time gradually decreases when children get older. The time gap between mothers and fathers is 2.1 hours when children are under 5, 1.6 hours when they are between 5 and 8, 0.8 hours when they are between 9 and 12, and fathers even spend 0.1 more hours per day when children are between 13 and 14. In that paper, the definition of parental child care time includes secondary activities, which means that parental child care time here is not necessarily time focused on children only. The paper argues that when children get older, the nature of child care changes. When children are young, especially under 5, child care is more about primary activities, and when children get in their teens, child care is more about secondary activities. The author holds the opinion that even though gender plays an important role, the age of the children has the largest impact on how much time dual-earner couples spend on children.

There are many factors that affect the time parents spend looking after their children. The most widely discussed ones include gender, education, work status, parental type, and immigration status.

Craig (2006) makes a thorough comparison of how mothers and fathers spend time with children using data from the Australian Bureau of Statistics (ABS) Time Use Survey (TUS) 1997. Only married or common-law couples between 25 and 54 years old with at least one child younger than 12 years old are included in the sample, and students and retirees are excluded. Craig considers three ways to measure child care time, time on all child care primary activities, time on both primary and secondary child care activities, and total time spent with children that is collected by asking 'with whom'

any activity was done. The author used this “company” information to calculate a new variable quantifying the total daily time parents are in the presence of their children. The results show that mothers spend nearly twice as much time on child care as fathers, no matter whether it is for primary activities, for primary and secondary activities together, or for all activities with children. Women also spend more time alone with children than men, with a difference of about one hour and ten minutes per day. The paper indicates that compared to men, women spend more time looking after children, have more rigid timetables, and take more overall responsibility, even when all other characteristics, such as work status, are taken into account.

Recently, some scholars have shown interest in the relationship between parents’ education and the time they spend looking after their children (Sayer and Gauthier, 2004; Craig, 2006). Using data from the 2003-2006 waves of the American Time Use Survey, Guryan et al. (2008) find a significant positive relationship between parents’ education level and parental child care time. The sample includes respondents between 21 and 55 years old who have at least one child under 18 years old. In the paper, the concept of ‘total child care’ refers to primary child care and it is divided into four parts: basic child care, educational child care, recreational child care, and travel child care. The results show that women with a high school education or less spend on average 12.1 hours per week with children, while those with a college degree and those with higher education spend respectively 16.5 hours and 17.0 hours per week. Even when employment rate, age, number of children, marital status, and age of youngest child are controlled for, women with higher education still tend to spend more time with children. In addition, the authors find that parents with higher income prefer to spend more time with children. They also examine data from 14 other countries to see whether this relationship holds elsewhere. The results show that this high-education-more-parental-time pattern also exists in the countries examined by the authors.

Employment status is another important factor that affect the time parents allocate to children rearing. Michalopoulos and Robins (2000) analyze employment and child care choices in Canada and the United States, using data from the 1990 National Child-Care Survey of the US and the 1988 National Child-Care Survey of Canada. They use

a multinomial logit model where parents maximize their utility under certain factors including child-care choice and employment status, which is based on Becker's (1965) time allocation model. The results show that among those who are full-time employed, 22.3% are looking after children themselves in the US and 21.5% of them do the same in Canada. This gap is larger among the part-time employed and the not-employed groups. Among the part-time employed group, 47.5% of American parents rely on parent care and 36.8% of Canadian parents do the same. Among the not-employed group, 69% of American parents rely on parent care but only 58.5% of Canadian parents do so. With the same data source and the same model, Michalopoulos and Robins (2002) analyze the employment and child-care choices of single-parent families in Canada and the United States. They focus on the primary child care activities of single mothers, because single fathers only account for 5 to 10 percent of the sample in both countries. In that paper, women who are married but are not living with their spouses are also regarded as single mothers. The pattern of the results is quite similar to the authors' previous study (Michalopoulos and Robins, 2000), but the child care time gaps between the employed and the not employed are larger. Employed Canadian single mothers tend to rely much less on parental child care than employed American single mothers: among the full-time employed group, 15.8% of American single mothers rely on parent care and only 4.7% of Canadian single mothers do the same; among the part-time employed, 16.1% American single mothers rely on parental child care, compared to only 7.3% for Canadian single mothers; the gap is smaller when they are not employed with 48.8% for American single mothers and 41.6% for Canadian single mothers. The results show that higher income-tax based child-care subsidies, higher hourly child-care prices, lower predicted wage, higher welfare payments, higher children's age, and more children in the family all decrease parental child care time.

Most studies on the effects of family structure on parental child care time report that single parents spend less time than cohabitating or married parents (Marsiglio et al., 2000; Zuzanek, 2001; Hofferth, 2001). However, there are still some studies that indicate that single parents spend more time on child care. Kalenkoski et al. (2007) analyze the effect of family structure on parents' time spent with children in the United

States and the United Kingdom, using the American Time Use Survey from 2003 to 2004 and the United Kingdom Time Use Survey from 2000 to 2001. Only one person per household is included in this sample, since family structure is a family decision instead of an individual decision. The paper uses a Tobit regression model to estimate the difference in time spend on child care for single, cohabitating, and married parents. The conditions in those two countries are quite different. In the US, single parents tend to spend less time with their children than cohabiting or married parents, no matter whether they are men or women, whether it is during the weekend or during weekdays, or for primary child care or passive child care. The only exception is that single fathers spend more time than both cohabiting and married fathers on primary child care on weekdays. In the UK, conditions on weekdays are quite different from those on weekends for both men and women. On weekdays, married mothers spend the minimum time on both primary and passive child care, but on weekends, single mothers spend the minimum time on both kinds of child care. On weekdays, single fathers spend the maximum time on both kinds of child care, but on weekends, single fathers spend the minimum time on both kinds of child care. The results show that there is no significant difference between cohabitating and married parents, but that there is a significant difference between single parents and coupled parents in both countries.

Although not as widely studied as education and gender, immigration status is an important factor that is related to the time parents spend looking after children. Using data from the US 1996 panel of the Survey of Income and Program Participation, Brandon (2004) finds that parents in immigrant families tend to spend more time looking after children than parents in non-immigrant families. However, the pattern is different in Canada. Using data from the General Social Survey of 2010, Zhou (2014) finds that immigrant parents spend about 1.2 fewer hours per day than non-immigrant parents looking after children in Canada. The paper gives some possible interpretations for this phenomenon. Firstly, immigrants strive harder in the labour market so they have less time to spend with their children. Secondly, some more recent immigrants landed with abundant wealth so they would rather choose child care services. Thirdly, since the proportion of low-income families is higher in the immigrant group than in the non-

immigrant group, immigrants tend to get more child care subsidy from government, so they are more likely to choose child care services than the non-immigrants.

To sum up, most of the former studies on the time parents spend looking after their children focus on a few factors that affect parental child care time. The most important factors include gender, work status, immigration status, parental type, minority status and children's age. In order to have a better understanding on how parental child care time is determined in Canada, I conduct with recent data a relatively comprehensive analysis of how parental child care time is affected by characteristics of both parents and children.

3. Data and Summary Statistics

In this paper, I use two Canadian datasets for adjacent years: the 2006 Census public use microdata file (PUMF), and the Time Use Survey of the General Social Survey (GSS) undertaken in 2005. Both datasets have their advantages and disadvantages. The GSS is a good dataset for studying time use and time allocation. It includes both time diary data and stylized questions about time spend on children. We can get a detailed account of the time parents spend looking after their children, and calculate the parental child care time in two ways: using the information directly from the stylized question, and add up the time of all children rearing activities. One inconvenience is that the sample size of the GSS is relatively small, especially after certain sample restrictions. The Census only includes time use data collected by stylized questions but it includes more personal information about the respondents, and the sample size is very large. For instance, the sample size of the public microdata of 2006 Census is 844,476.

By using two datasets, the result will be more robust. Both datasets contain similar stylized questions on “hours spend looking after children last week, without pay”, and the literal expressions of the question are very close¹. Thus, we have the same

¹ In the 2006 Census, the question is ‘Last week, how many hours did this person spend doing the following activities: looking after one or more of this person's own children, or the children of others, without pay?’ In the 2005 GSS, it is: ‘Last week, how many hours did you spend looking after one or more of the children in your household, without pay?’

dependent variable that is total hours spent looking after children per week without pay. I apply the same restrictions to both datasets, pick the same or similar independent variables, and use the same methodology, to make the results more comparable.

The Census is conducted every five years. The 2006 Census microdata include two files: the Individual File and the Hierarchical File. The former contains data of individual respondents, and the latter contains combined data from the family, household and dwelling universes. In this paper, I use data from the individual file. There is a total of 844,476 observations in the 2006 Census, representing 2.7% of the Canadian population. The respondents are picked from all Canadian residents, with institutional and foreign residents being excluded. The reason I do not use the more recent 2011 National Household Survey is that there is no question about time spent looking after children in that survey.

The 2005 Time Use Survey of the GSS is the fourth cycle of a series of time use surveys first conducted in 1986 by the Social and Aboriginal Statistics Division of Statistics Canada. The target population includes all individuals aged 15 and above who are living in Canada. There are 19,597 respondents in the sample who are collected by the Random Digit Dialing methods, and are interviewed by the Computer Assisted Telephone Interviewing (CATI). Thus, those who do not have a phone (which accounts for 2% of the population) are excluded from the sample.

3.1 Sample Restrictions

I apply five restrictions on the sample of the 2006 Census. Firstly, I drop individuals who have no children living at home, since the objective is to study the behaviour of parents. Secondly, I restrict the sample to individuals aged between 20 and 54 years old, at which ages people are more likely to be parents. Thus, the age restriction decreases the possibility that the children that the respondents looked after were their grandchildren. Otherwise, the possibility that the respondents spend time looking after others' children without pay is very slim, when volunteer work is already excluded in the original sample. Thirdly, I exclude those who are non-permanent residents. There

are three categories in the Immigrant status group: non-permanent residents, non-immigrants, and immigrants. In this paper, immigrant status is assumed to be one of the factors that affects the time parents spend looking after children, so I drop the non-permanent residents who are neither immigrants nor non-immigrants. Fourthly, in order to make values of the dependent variables and independent variables effective, I drop individuals whose answers are not available or not applicable when referring to hours spend looking after children, household size, household income, presence of children in Census family households, labour force status, and visible minority population.

Even after the four restrictions, I found that there are still 33.9% of the respondents who reported spending no hours per week looking after their children, which seems abnormal. Those zero hours may be real, but they may also reflect some misreporting. After checking, I found that 4.2% of the parents with children between 0 and 1 year old reported spending zero hours per week looking after their children, that 4.6% of the parents with children between 2 and 5 years old did the same and that it was the case for 9.7% of the parents with children between 6 and 14 years old. However, up to 50% of the parents whose children are between 15 and 24 years old reported spending zero hours per week looking after them. When the sample is restricted to those whose children are less than 15 years old, only 8.2% of the respondents in the sample said that they spent zero hours per week looking after their children, which is more reasonable. This is the sample that I use in this study.

Similar restrictions are set on the sample of the 2005 GSS. The sample of the 2005 GSS is also restricted to people aged 20 to 54 years old with at least one child less than 15 years old. The proportion of respondents who reported spending zero hours per week looking after children is smaller, at 3.5%.

After all restrictions imposed, there are 155,752 observations in the 2006 Census sample, and there are 4,214 observations in the 2005 GSS sample.

3.2 Variables

3.2.1 Dependent Variables

The topic of this paper is to study the factors that affect the time parents spend looking after children in Canada. Thus, the dependent variable is the number of hours Canadian parents spend looking after children per week.

In the 2006 Census, the answer is given in categories which include: ‘no hours of child care’, ‘less than 5 hours of child care’, ‘5 to 14 hours of child care’, ‘15 to 29 hours of child care’, ‘30 to 59 hours of child care’, and ‘60 hours or more of child care’. There are several ways to use these data, such as ordered procedures and converting the category values to numbers. I choose to convert the category values to numbers, because it is easier to interpret and makes the results from the two datasets more comparable. I convert the first five categories to 0 hours, 2.5 hours, 9.5 hours, 22 hours and 44.5 hours respectively, which are the midpoints of each category. For the last category (60 hours or more), I use the information in the 2005 GSS which provides the actual number of hours. For those who spend 60 hours per week or more, the mean parental child care time is 89.3 hours per week, which is the value that I assign to that category in the 2006 Census. That value is used for the summary statistics. For the regressions, I will use a Tobit model with both left and right censoring (0 and 60 hours).

In the 2005 GSS, there are two methods to estimate the time parents spend looking after their children. One is using the time diary and adding the time of all parental activities together, and the other is using the value of the stylized question “hours looking after children in household without pay”. To make the estimates of the two datasets comparable, I use the value of the answer of the stylized question directly as the dependent variable. In the 2005 GSS, the answer is given as specific number of hours, not in categories.

3.2.2 Independent Variables

Many factors may affect the time parents spend looking after their children. According to the former literature, they include gender, education level, parental type, immigration status, minority status, working status, age and number of children, income, age of the respondent, household size, and place of residence. This section provides a description of the main explanatory variables.

With respect to education level, there are 13 categories in the 2006 Census. I aggregate them into four new categories: less than high school, high school, college or equivalent, and undergraduate or more². For the 2005 GSS, bachelor's degree, master's degree and doctorate are originally put in the same category. To be consistent for the two datasets, I divide the education level categories as in the 2005 GSS in the same four groups as those in the 2006 Census: less than high school, high school, college or equivalent, and undergraduate or more³.

Regarding parental status, in both datasets, I construct a dummy variable for sole-parents. In both the 2006 Census and the 2005 GSS, when the respondent reports "divorced", "separated", "never married" or "widowed", the value of sole-parents is 1, if the respondent reports "now married" or "living common-law", the value of sole-parents is 0.

There are twelve categories of visible minority⁴ in the 2006 Census, and I merge them into one single category that is "minority", as opposed to "not a visible minority". There is no information about respondents' minority status in the 2005 GSS. For both datasets, I construct a working status dummy variable, which is equal to one when the respondent is employed, and is equal to zero when the respondent is unemployed or not in the labour force.

There are three children age groups in the 2006 Census after sample restrictions, and similarly the 2005 GSS contains a variable indicating the age of the youngest child. In addition, there is a variable in the 2005 GSS that is not in the 2006 Census, which is the number of children in the household. Thus I use this variable only in the regressions of the 2005 GSS. In both datasets, the variables Age and Household Income are recoded

² In the 2006 Census sample, "less than high school" includes the category "none". "High school or less" includes the category "high school graduation certificate or equivalency certificate". "College or equivalent" includes the following categories: "other trades certificate or diploma", "registered apprenticeship certificate", and "college, CEGEP or other non-university certificate or diploma". "Undergraduate or more" includes the following categories: "university certificate or diploma below bachelor level", "bachelor's degree", "university certificate or diploma above bachelor level", "degree in medicine, dentistry, veterinary medicine or optometry", "master's degree", and "earned doctorate degree".

³ In the 2005 GSS sample, "less than high school" includes "some secondary, elementary or no schooling". "High school" includes "high school diploma". "College or equivalent" includes "diploma or certificate from community college", and "some university or community college". "University or above" includes "doctorate, masters, and bachelors' degree".

⁴ The categories of visible minority include: Chinese, South Asian, Black, Filipino, Latin American, Southeast Asian, Arab, West Asian, Korean, Japanese, Visible minority, n.i.e. and Multiple visible minority.

using the midpoints of the categories respectively.

Regarding the region of residence, there are 11 categories in the 2006 Census, and I reclassify them into six categories which include Atlantic, Quebec, Ontario, Prairies, British Columbia, and Northern Canada⁵. A similar reclassification is imposed on the 2005 GSS, except that Northern Canada is not included. For the 2006 Census, I also construct a dummy variable for the large metropolitan areas which is equal to one for the respondent who live in one of the listed major Census metropolitan areas⁶, and equal to zero when the respondents live in regions that are not in that group. There is no information about Census metropolitan area in the 2005 GSS.

3.3 Summary Statistics

Table 1 shows the distributions and mean values of the independent variables for the 2006 Census and the 2005 GSS. In the 2006 Census, 54.4% of my observations are females and 45.6% are males. There are more females than males because the sample is restricted to people who live with children. With respect to education, 12.5% of the observations have less than high school education level, and 29.4% have undergraduate degree or higher education. The table shows that 13.9% of the respondents in the sample are single parents, while a quarter of the observations are immigrants. Furthermore, 19.0% are visible minority and 79.9% are employed. Regarding children's age, one in five of the respondents have at least one child between 0 and 1 year old, about a third have at least one child between 2 and 5 years old, and 72% have at least one child between 6 and 14 years old. Note that the sum of the three categories is not equal to 1, because some parents have children in more than one age group. With respect to province of residence, 23% live in Quebec and 40% live in Ontario. In addition, 68%

⁵ The Atlantic region of Canada comprises four provinces: Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick. The Prairies region of Canada comprises three provinces: Manitoba, Saskatchewan and Alberta. The Northern Canada region comprise Yukon Territory, the Northwest Territories and Nunavut in the 2006 Census.

⁶ These include Halifax, Moncton-Saint John, Quebec, Montreal, Sherbrooke - Trois-Rivières, Ottawa-Gatineau, Oshawa, Toronto, Hamilton, St. Catharines-Niagara, Kitchener, London, Windsor, Brantford - Guelph - Barrie, Kingston - Peterborough, Greater Sudbury/Grand Sudbury - Thunder Bay, Winnipeg, Regina - Saskatoon, Calgary, Edmonton, Vancouver, Victoria, and Kelowna - Abbotsford.

of the observations live in one of the large metropolitan areas. The average time spent looking after children in the sample is 36.7 hours per week. The average age of the respondents is 37.6 years old, the average household income is \$69,800 per year, and the average household size is 4 persons.

In the 2005 GSS, the distributions of gender, parental status, immigration status working status and province of residence are similar to those of the 2006 Census. Regarding the education level, 9% of the observations have less than high school education, and 30% obtained an undergraduate or above university degree. The average time parents spend looking after children in the 2005 GSS is about 42 hours per week, which is slightly higher than that of the 2006 Census. While the average age of the observations is 37.9 years old, the average household income is \$56,000 per year, and the average household size is 4. The mean age of the youngest child is 6.3 years old, and the average number of children is 2.

Table 2 to Table 4 show the average time spent looking after children in the 2006 Census for the whole sample and the subsamples divided by gender and immigration status (Table 2), parental type (Table 3) and education level (Table 4). Tables 5 to 7 present the same information for the 2005 GSS. From Table 2, we can see that females spend 46.3 hours per week looking after children while men only spend 25.3 hours. With respect to education, people with higher education than college spend less time than those with less education. When looking at parental status, single parents and couple parents spend a similar amount of time per week on children. Immigrants spend ten hours per week less time looking after children than non-immigrant. Similarly, members of visible minorities spend less time on child care than those who do not belong to a minority. People who are employed spend nearly 17 hours less per week taking care of children than those who are not employed. Those who have children between 0 and 1 year old spend 49.2 hours per week looking after children, those who have at least one child between 2 and 5 years old spend 44.7 hours per week, while those who have at least one child between 6 and 14 years old spend only 32.8 hours per week. We can conclude that the younger the children, the more time parents spend looking after them. Regarding province, people who live in Quebec spend the least time

on children with 32.5 hours per week. In addition, people who live in large metropolitan areas spend less time on child care than those who live elsewhere.

From Table 2, we can see that the patterns of the female subsample, the male subsample, the immigrant subsample and the non-immigrant subsample are similar as that of the whole sample. However, the gap between sole-parents and couple-parents is smaller in the female subsample than in the male subsample. The gaps between the employed and the not employed, among children's age categories, and among the provinces are all much smaller in the male subsample than in the female subsample. The gap between the large CMAs and the smaller areas is higher in the immigrant subsample than in the non-immigrant subsample.

From Table 3, we can see that the mean parental child care time of sole-parents is less than that of couple-parents for both fathers and mothers. There are differences in the sole-father sample with respect of some characteristics. Firstly, employed sole-fathers spend more time than non-employed sole-fathers, which is different from the conclusion from the whole sample that employed people spend less time looking after children. Perhaps sole fathers who have jobs are more responsible towards their children than those who do not work. Secondly, sole fathers who have children between 2 and 5 years old spend the most time on child care, which contradicts the conclusion from the whole sample that people who have children between 0 and 1 years old spend the most time looking after children. For children between 0 and 1 years old, the time spent by mothers includes breastfeeding, where fathers can provide little help. So fathers, especially sole-fathers, spend more time looking after children who are 2 to 5 years old, because they have a comparative advantage taking care of children at this age group, and they have no spouse to share child care work. Finally, sole fathers who live in Ontario spend the least time looking after children, while in the whole sample it was people who live in Quebec spent the least time. In contrast, patterns in the couple-mother and the couple-father subsamples are similar to those of the whole sample.

From Table 4, we can see that the patterns in the various education categories are similar to those of the whole sample, with some differences. In the high school subsample, sole-parents spend less time looking after children than couple-parents,

while in the other education subsamples sole-parents spend more time.

Tables 5 to Table 7 show the weighted average time spent looking after children in the 2005 GSS for the whole sample and for the subsamples divided by gender and immigration status (Table 5), parental type (Table 6) and education level (Table 7). The pattern for the whole sample of the 2005 GSS is similar to that of the whole sample of the 2006 Census. The patterns of all subsamples are also similar to those of the whole sample with a few differences. For the male subsample, sole-parents spend more time looking after children than couple-parents, with 38.1 hours per week versus 26.1 hours per week. There seems no certain pattern of the relationship between education level and parental child care time in the subsamples. Unlike the whole sample where people who live in Quebec spend the least time looking after children, in the less than high school subgroup and the high school subgroup people who live in the Prairies spend the least time, while the immigrant subsample and in the Undergraduate-or-above subsample people who live in British Columbia spend the least time.

4. Econometrics Model

The Ordinary Least Square (OLS) is the simplest and most widely used econometric method. However, it is not the most appropriate framework here because I have a significant proportion of observations that spend zero hours per week looking after children. Additionally, in the 2006 Census, some people spend more than 60 hours per week looking after children. For the summary statistics, I assigned 89.3 hours per week to those who spend more than 60 hours per week based on calculation of the GSS data, but I do differently for the regressions. A large proportion of observations in the sample spend more than 60 hours per week. In this case, using the OLS model could lead to biased estimates of the coefficients of independent variables.

Thus, in this paper, I use a Tobit model, which is a better framework because the dependent variable is left censored at 0 for both datasets, and right censored at 60 in the 2006 Census.

$$y_i^* = \alpha + \beta X_i + \mu_i, \quad \mu_i \sim N(0, \sigma^2)$$

$$y_i = 0 \quad \text{if } y_i^* \leq 0$$

$$y_i = 60 \quad \text{if } y_i^* \geq 60$$

$$y_i = y_i^* \quad \text{if } 0 < y_i^* < 60$$

Here y_i is the time respondent i spend looking after children per week ($i=1, \dots, N$), and X_i is a vector of covariates. This model assumes that y_i^* , the latent variable has a linear relationship with the independent variables X_i , and that it has a normal, homoscedastic distribution with a linear conditional mean (Wooldridge, 2013). This model indicates that the observable variable y_i is equal to the latent variable y_i^* if y_i^* is positive and less than 60; otherwise y_i equals to zero or 60 (Wooldridge, 2013).

5. Empirical Results

Tables 8 to 10 present the results of the Tobit regressions with the 2006 Census data by gender and immigration status (Table 8), by parental status (Table 9) and by education level (Table 10). Table 11 presents the results with GSS 2005 by gender and immigration status, and Table 12 does the same by education level. Regression results by parental type with GSS 2005 are omitted because the sample sizes of those subgroups are too small, which makes most of results not significant. This section discusses the empirical results separately according to the different factors that affect the time parents spend looking after children. The signs of the estimates of the coefficients in the 2006 Census and the 2005 GSS are identical except for the variables *Less than high school*, *Household income*, and *Prairies*. Also, the magnitudes of most GSS estimates are larger.

5.1 Gender and Parental Type

Although participation rates of females in the labour market have been increasing, females still seem to take more responsibility on child care than males (Bianchi, 2000;

Hill et al., 2004). Results of both the 2006 Census and the 2005 GSS show that females spend more time looking after children than males in Canada. Regarding the regression results with the 2006 Census, Table 8 shows that females spend 18.8 more hours per week than males on child rearing. Furthermore, the results of all subgroups present significant gaps between females and males. Looking at some specific characteristics, the gap for the non-immigrant subgroup is larger than the one in the immigrant subgroup, perhaps because immigrants are more constrained, and that both spouses have to share the work with children. Moreover, the gap is smaller when education level increases, a possible reason being that highly-educated people value more the development of their children and thus are more willing to share child care with their spouses. Regression results with the 2005 GSS are alike. Females spend 26.4 more hours per week than males on child care, but the pattern of the gap with respect to education level is opposite to the one with the 2006 Census. Table 12 shows that the female-male gap with the GSS data is larger for higher education level subgroups.

Results about parental type are consistent with the findings of earlier studies (Marsiglio et al., 2000; Zuzanek, 2001; Hofferth, 2001). Single parents allocate less time looking after children than couple parents. The results with the 2006 Census show that sole-parents spend 8.7 fewer hours per week than couple-parents. Results for all subgroups show an identical pattern. However, the gap between sole parents and couple parents in the male subgroup is much larger than the one in the female subgroup. With respect to education, the sole-couple gap is the largest in the *high school* subgroup while it is the smallest in the *college or equivalent* subgroup.

The results with the 2005 GSS show that sole-parents spend 0.4 fewer hours per week than couple-parents, but the result is not significant. The signs of the coefficient of *sole-parents* vary in different subgroups, and most of them are not significant even at the 10% level, except for the *male* and the *college or equivalent* subgroups. The results show that sole-fathers spend 13.2 more hours per week than couple-fathers, which contradict to the result with the Census data. It is hard to tell which results with which data are more reasonable. On the one hand, without their spouses to share work of child care, men need to spend more time looking after children themselves. On the

other hand, without their spouses to share housework and earning-money responsibility, single fathers are more constrained with time, so they have less time to take care of their children. In the *college or equivalent* subgroup, sole-parents spend 4 fewer hours per week than two-parents at the 10% level, which is similar to the results with the Census data.

5.2 Education

Education is an important determinant on how much time parents spend looking after children (Gauthier et al., 2001; Hill and Stafford, 1985). However, the direction of the effect of education level on parental child care time varies in previous studies. Some scholars such as Zick and Bryant (1996) argue that parents with higher education level spend more time on child care, while other scholars such as Zaiceva and Zimmermann (2014) find that there is no noteworthy pattern of the relationship between education level and parental child care time. Results in this paper stand on the middle of these two opposite views.

Table 8 shows that compared to those who completed high school, individuals whose highest education is less than high school spend 0.3 fewer hours, those who attended college or the equivalent spend 2.4 more hours, and those who attained an undergraduate study or more spend 2.2 more hours looking after children per week. However, the estimate of the coefficient of *less than high school* is not significant. The opinion that people with higher education spend more time seems to stand, but the significant difference exists only between two groups, low education level and high education level. Specifically, low education level refers to high school or less, and high education level refers to college or above. There is no remarkable difference neither between the *less than high school* group and the *high school* group, nor between the *college or equivalent* group and the *undergraduate or more* group. Relatively high-educated parents tend to be more aware of the importance of parental rearing, and they are more willing to invest time on cultivating their children's characteristics and human capital.

However, within the *immigrant* subgroup, the *less than high school* group spends

significantly less time on child care than the *high school* group, with a gap of 2.7 hours. In addition, immigrants with college education or equivalent spend more time looking after children than immigrants with university education. In contrast, non-immigrants with college education or equivalent spend less time looking after children than non-immigrants with undergraduate education or more. Table 9 shows that for sole-parents, the *less than high school* group spends more time looking after children than the *high school* group, while for couple-parents the pattern is opposite. In addition, the gaps between the different education levels in the sole-parents groups are much larger than those in the couple-parents groups. Sole parents are more constrained and thus their parental child care time is more volatile with education level. The educated persons who become sole parents perhaps value their children more than the less educated ones and are willing to spend time with them.

Table 11 shows that the estimates of education coefficients of the 2005 GSS are similar to those of the 2006 Census, except for the effect of *less than high school*. Compared to those with high school education, individuals whose highest education is less than high school spend 1.3 more hours, those who attended college or equivalent spend 5.4 more hours, and those with university education spend 3.5 more hours looking after children per week. It is worth to mention that estimates of *less than high school* in the whole sample and all sub-groups are not significant at the 10% level.

5.3 Immigration and Minority

Consistent with former studies, immigrants behave differently with respect to time spent on child care (Miller et al., 2013; Kim and Fram 2009). The results with the 2006 Census show that immigration status and minority status are both important determinants of the time parents spend looking after children. Table 8 shows that immigrants spend 6.5 fewer hours per week on parental child care time than non-immigrants, perhaps because they need to work harder to succeed in Canadian labour market and thus have less time for their children. The minority spend 7.2 fewer hours per week than the non-minority on child care, maybe because they have trouble taking

care of their children.

Results with the 2005 GSS are consistent with those of the 2006 Census with respect to immigration status. Table 11 shows that immigrants spend 8.7 fewer hours per week taking care of children than non-immigrants. For both the 2006 Census and the 2005 GSS, the gap between immigrants and non-immigrants is larger in the female subgroup than in the male subgroup, and the gap is largest within the *less than high school* subgroup. A possible reason behind this phenomenon is that immigrants need to spend a lot of time in the labour market struggling to survive at new living circumstance, especially the low-educated immigrants.

The gap between the minority and the non-minority is also larger in the *female* subgroup than that in the *male* subgroup. Additionally, Table 10 shows that the gap becomes smaller when the education level increases.

5.4 Working Status

As the results show, working status, along with gender, is a crucial factor that determines parental child care time (Douthitt, 1989; Michelson, 1990). Results with the 2006 Census indicate that people who work spend 9.9 fewer hours per week looking after children than those who do not work. This support the conclusion of Gauthier et al. (2004) that employment has a negative effect on parental child care time.

The gap is larger in the *female* subgroup and the *non-immigrant* subgroup. Among the education levels, the gap is largest in the *college or equivalent* subgroup, and smallest in the *less than high school* subgroup. Interestingly, the sole-father subgroup is the only one that does not show a negative relationship between parental child care time and employment. Table 9 shows that, within the *sole-father* subgroup, individuals who work spend 2.1 more hours per week taking care of children than those who do not work, a difference which is significant at the 10% level. Few former studies have discussed this phenomenon, and there is no widely accepted explanation of it. In my opinion, the ability of a man to find and handle a job is positively correlated with the sense of responsibility towards his children. Thus, a man with a job tends to take more

responsibility and spend more time looking after his children.

Results with the 2005 GSS are consistent with those from the 2006 Census for the whole sample and for all subgroups except the subgroups divided by parental type.

5.5 Characteristics of Children

The results about the characteristics of children are identical with those of most former studies that parental child care time with children is negatively related with children's age and positively related to the number of children (Sayer and Gauthier, 2004; Zick and Byrant, 1996).

In the 2006 Census, children's ages are divided into three categories. Table 8 shows that parents in the *0-1 years* category spend 7.8 more hours per week than people in the *2-5 years* category (people who have at least one child between 2 and 5 years old), and individuals in the *6-14 years* category spend 7.1 fewer hours per week looking after children than those in the *2-5 years* category. The gaps are markedly larger within the *female* subgroup than within the *male* subgroup.

In the 2005 GSS, children's age is collected as the age of the youngest child. Table 11 shows that when age of the youngest child increases by one year, parents spend 1.6 fewer hours per week on child care. The gap is also larger in the *female* than in the *male* subgroup. As many studies have noticed, when children are young, parental activities tend to be primary child care activities such as feeding, washing, and dressing, which are very time-intensive. When children grow older, child care activities are more about supervising, which can be done while the parents are doing other things.

The effect of children's age is stronger for females than for males, which is consistent with the finding of Silver (2000) that the female-male gap becomes smaller when children are older. From Table 8, we can see that when children move from the *0-1 year* category to the *2-5 years* category, females decrease their time spent looking after them by 15.6 hours per week while males decrease it by 1.3 hours. With the GSS data, Table 11 shows that when the age of the youngest child increases by one year, females cut parental child care time by 2.1 hours per week while male only decrease it

by one hour.

Consistent with the finding of Carlin and Flood (1997), there exists a positive relationship between the number of children and parental child care time. From Table 11, we can see that parents spend 4.9 more hours per week looking after children when there is one more child in the household. The effect of the number of children varies across different education subgroups. The effect in the *less than high school* subgroup is the largest, followed by the *undergraduate or more* subgroup, the *college or equivalent* subgroup, and the *high school* subgroup. Within the *less than high school* subgroup, the effect of one more child on parental child care time is a 7.8 hour increase, while within the *high school* subgroup, it is only 3.4 hours.

5.6 Location of Residence

According to the results from the 2006 Census, compared to people living in Ontario, people living in the Atlantic, the Prairies, British Columbia and Northern Canada spend more time looking after children, with gaps of 0.3 hours, 1.7 hours, 2.1 hours and 6.5 hours per week respectively. Only individuals who live Quebec spend less parental child care time than those living in Ontario, and the gap is large at 5.9 hours. This result may reflect the influence of the Quebec universal daycare program on child care choices (Stalker and Ornstein, 2013). Because of the low cost of daycare, parents in Quebec can spend less time looking after children themselves. People who live in Northern Canada spend the highest amount of time on child care, with a significant gap of 5.9 hours compared to Ontario. The reason may be that the universalization of child care services in Northern Canada is lower than in other provinces. It is worth to mention that the estimates of the coefficients of *Atlantic* are not significant in the whole sample and in any of the subgroups except for the *couple-mother* subgroup and the *college or equivalent* subgroup. Taking only significant estimates into consideration, patterns in all subgroups are identical with that of the whole sample.

Results from the 2005 GSS on *province* are consistent with those from the 2006

Census. However, only the estimates of *Atlantic* and *Quebec* are significant. The result seems to complement that of the Census, in which estimates of *Atlantic* are not significant. It confirms that people who live in Atlantic spend more time looking after children than those who live in Ontario.

From Table 8, we can see that people who live in large CMAs spend 0.6 fewer hours per week on parental child care time than those who live in smaller areas. The pattern holds for all subgroups, taking only significant results into consideration. Easier access to child care service and heavier workload in big cities may play a vital role explaining this difference.

5.7 Other Characteristics of Parents

Most former studies indicate that age does not play an important role in parental child care time determination (Gustavus et al., 1981), but some studies find that age shows some effect (Leibowitz et al., 1974). My finding is consistent with the former view. From Table 8, we can see that there is a negative relationship between age and parental child care time. However, the effect of age is small. All subgroups except the *sole-mother* and the *sole-father* subgroups show the same pattern. Table 9 shows that sole parents spend more time looking after children when they are older, and the gap is also tiny. Estimates of coefficient Age^2 are small in the whole sample and in all subgroups.

Income is another controversial factor that affects parental child care time. Some scholars find that upper-income levels lead to spending more time looking after children (Huston et al., 2002). On the contrary, some scholars find that people with higher income tend to reduce parental child care time and are more likely to choose paid child care (Hirshberg et al., 2005). My finding supports the later opinion. Table 8 shows that when household income increases by \$10,000, parents spend 0.6 fewer hours per week on child care. Taking only significant results into consideration, results of all the subgroups show a negative relationship between household income and parental child care time. Results from the 2005 GSS with respect to household income are not

significant for the whole sample and for most of the subgroups.

As expected, the regression results of both the 2006 Census and the 2005 GSS report a negative relationship between household size and parental child care time. Results with the 2006 Census imply that when there is one more person in the household, individuals spend one fewer hour on child care. Results with the 2005 GSS report a larger gap of 2 hours. There is, however, an exception for the *couple-mother* subgroup. Table 9 shows that couple-mothers tend to spend 1.9 more hours per week looking after children when there is one more person in the household. The explanation behind the relationship between household size and parental child care time is ambiguous. In theory, when there are more adults in the household, the time spent looking after children by each person would decrease due to sharing of work among family members. However, if the one more person is a child, the consequence would be opposite. Parents need to spend more time on child care. Thus, I think we cannot simply look at the pure effect of household size on parental child care time.

6. Conclusion

In this paper, I have analyzed what determines the time parents spend looking after children in Canada. Among the previous studies regarding the determinants of parental child care time, few scholars have used Census as the main data resource. With a large sample size and abundant information, I think that the Census is a good data source for studying parental child care time. This paper uses data from both the 2006 Census and the 2005 General Social Survey (GSS), allowing a comparison of the two datasets and making the results more robust.

With respect to parental child care time, it is widely recognized that the following factors play vital roles in determining how much time parents spend looking after children: gender, education, parental types, immigration status, minority status, working status, age of parents, household income, household size, age of children, the number of children, and place of residence. This paper presents with recent data a comprehensive analysis of how those factors affect the time Canadian parents spend on

child care.

In general, the results with the 2005 GSS are consistent with those with the 2006 Census. The directions of the effects of the independent variables in the 2006 Census and the 2005 GSS are similar. However, the magnitudes of most coefficient estimates are larger with the 2005 GSS.

Consistent with most former studies, mothers spend considerably more time looking after children than fathers, with the gap of 18.8 hours per week with the 2006 Census and 26.4 hours per week with the 2005 GSS. In terms of parental type, the results show that sole-parents spend less time on child care, and this gap is larger in the female subgroup.

With respect to the effect of education, highly-educated people tend to spend more time looking after children, and the boundary lies at the level of college education. There seems to be no significant difference between people who attended high school and those with less than high school, and between people who obtained college education and those who obtained more than college education. Parental child care time is vital in the development of children, but not everyone realizes it. Those with higher education are more likely to realize the importance of time with children.

Regarding to the effects of other characteristics of parents, immigrants spend less time on children than their non-immigrant counterparts, with a gap of 6.5 hours with the 2006 Census and 8.7 hours with the 2005 GSS. In addition, there is a significant negative relationship between parental child care time and minority status. As expected, people without a job spend a larger amount of time on child care than people who work. It is interesting that sole-fathers do not follow this pattern, as those who work spend more time than those who do not work. This may be due to the positive relationship between people's sense of responsibility and the likelihood for them to have a job. Further study needs to be conducted to seek the reason behind this phenomenon. Household size is negatively related to parental child care time, but the effect is not large. In terms of place of residence, individuals who live in Quebec spend less parental child care time than those who live in other provinces, and those who live in large CMAs spend less parental child care time than those who live in smaller areas.

When it comes to the effects of children's characteristics, the time parents spend looking after children is positively related to the number of children, and negatively related to children's age.

There exist some shortcomings with this paper. Firstly, the comparability of results between the 2006 Census and the 2005 GSS is limited, especially for the dependent variable. The time parents spend looking after children is recorded as specific numbers in the 2005 GSS, while it is recorded in categories in the 2006 Census. Converting those categories to specific values by simply using the midpoint method may lead to inaccuracies, especially because people who spend more than 60 hours looking after children per week are all put in the same category. Those measurement errors may explain why the average time spent looking after children with the 2006 Census is lower than that with the 2005 GSS. Secondly, there may be endogeneity problems due to omitted variable bias and other measurement errors. Thirdly, since there is no detailed information about parental child care time allocation in the 2006 Census, I can only know how much these factors affect parental child care time, but the results do not show details of why they affect parental child care time.

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Table 1Means of the Independent Variables,
the 2006 Census & the 2005 GSS

Explanatory Variables	Census2006	GSS2005
<i>Gender</i>		
Female	54.4	51.8
Male	45.6	48.2
<i>Education</i>		
Less than high school	12.5	8.9
High school	23.7	15.6
College or equivalent	34.4	45.4
Undergraduate or more	29.4	29.7
<i>Parental status</i>		
Sole-parents	13.9	10.9
Couple-parents	86.1	89.1
<i>Immigration status</i>		
Immigrants	25.5	20.4
Non-immigrants	74.5	79.6
<i>Minority status</i>		
Minority	19.0	
Not Minority	81.0	
<i>Working status</i>		
Employed	79.9	77.8
Not employed	20.1	22.2
<i>Children's age</i>		
0-1 years	19.4	
2-5 years	34.9	
6-14 years	71.8	
<i>Province</i>		
Atlantic	6.8	7.2
Quebec	23.2	23.5
Ontario	40.0	38.7
Prairies	17.4	17.3
BC	12.2	13.3
Northern Canada	0.4	
<i>City Scale</i>		
Large CMAs	68.1	
Smaller areas	31.9	
<i>Time Spent Looking After Children</i>	36.7	42.3
<i>Age</i>	37.6	37.9
<i>Household Income</i>	69,800	56,000
<i>Household Size</i>	4.1	4.0
<i>Age of the Youngest Child</i>		6.3
<i>Number of Children</i>		2.0
Observations	155,752	4,214

Table 2

Average time spent looking after children (hours per week)
of people aged 20 to 54 with at least one child less than 15 years old,
by gender and immigration status,
the 2006 Census

Explanatory Variables	All	Female	Male	Immigrants	Non-immigrants
<i>Total</i>	36.7				
<i>Gender</i>					
Female	46.3				
Male	25.3				
<i>Education</i>					
Less than high school	37.7	48.7	26.1	27.1	40.9
High school or less	37.0	46.0	25.4	29.1	39.4
College or equivalent	37.9	47.5	26.7	31.2	39.4
Undergraduate or more	34.8	44.4	23.1	28.9	38.2
<i>Parental status</i>					
Sole-parents	37.5	43.5	19.6	27.3	40.1
Couple-parents	36.6	47.0	25.7	29.5	39.1
<i>Immigration status</i>					
Immigrants	29.3	37.9	19.2		
Non-immigrants	39.3	49.2	27.4		
<i>Minority status</i>					
Minority	28.5	36.7	18.5	27.8	35.1
Not minority	38.7	48.6	26.8	32.4	39.4
<i>Working status</i>					
Employed	33.3	42.2	24.8	25.6	35.7
Not employed	50.4	57.0	29.7	40.5	55.0
<i>Children's age</i>					
0-1years	49.2	66.4	29.9	41.2	51.7
2-5 years	44.7	57.4	29.9	35.6	47.8
6-14 years	32.8	40.8	23.2	26.0	35.2
<i>Province</i>					
Atlantic	42.4	52.6	29.7	34.4	42.8
Quebec	32.5	40.1	23.4	27.8	33.4
Ontario	35.9	45.4	24.6	28.6	39.9
Prairies	40.6	52.3	26.9	32.4	42.3
BC	38.4	48.9	25.9	30.4	42.7
Northern Canada	48.8	56.5	39.4	35.3	49.4
<i>City scale</i>					
Large CMAs	35.0	44.3	23.9	28.8	38.4
Smaller areas	40.4	50.7	28.1	36.5	40.6
Observations	155,752	84,656	71,096	39,695	116,057

Table 3

Average time spent looking after children (hours per week)
of people aged 20 to 54 with at least one child less than 15 years old,
by parental status,
the 2006 Census

Explanatory Variables	All	Sole- mother	Couple- mother	Sole- father	Couple- father
<i>Total</i>	36.7	43.5	47.0	19.6	25.7
<i>Education</i>					
Less than high school	37.7	47.7	49.2	21.0	26.8
High school	37.0	40.3	47.7	13.9	27.0
College or equivalent	37.9	45.8	47.9	24.4	26.8
Undergraduate or more	34.8	40.1	44.9	22.2	23.2
<i>Immigration status</i>					
Immigrants	29.3	32.9	38.8	9.9	19.8
Non-immigrants	39.3	46.2	50.0	21.9	27.9
<i>Minority status</i>					
Minority	28.5	30.0	38.1	6.8	19.5
Not minority	38.7	46.5	49.2	22.7	27.2
<i>Working status</i>					
Employed	33.3	40.4	42.6	20.7	25.0
Not employed	50.4	50.5	58.7	16.5	32.8
<i>Children's age</i>					
0-1 years	49.2	64.8	66.6	21.8	30.0
2-5 years	44.7	55.8	57.7	30.7	29.9
6-14 years	32.8	39.9	41.0	18.2	23.7
<i>Province</i>					
Atlantic	42.4	53.6	52.4	25.7	30.0
Quebec	32.5	37.3	40.8	19.8	23.7
Ontario	35.9	42.5	46.1	16.0	25.3
Prairies	40.6	48.9	53.1	22.7	27.3
BC	38.4	45.1	49.8	22.2	26.2
Northern Canada	48.8	45.7	59.7	34.1	40.2
<i>City scale</i>					
Large CMAs	35.0	41.0	45.1	17.1	24.5
Smaller areas	40.4	48.7	51.2	24.5	28.4
Observations	155,752	16,286	68,370	5,405	65,691

Table 4

Average time spent looking after children (hours per week)
of people aged 20 to 54 with at least one child less than 15 years old,
by education level,
the 2006 Census

Explanatory Variables	All	Less than high school	High school	College or equivalent	Under- graduate or more
<i>Total</i>	36.7	37.7	37.0	37.9	34.8
<i>Gender</i>					
Female	46.3	48.7	46.0	47.5	44.4
Male	25.3	26.1	25.4	26.7	23.1
<i>Parental status</i>					
Sole-parents	37.5	40.6	32.6	41.2	36.2
Couple-parents	36.6	36.9	37.9	37.4	34.7
<i>Immigration status</i>					
Immigrants	29.3	27.1	29.1	31.2	28.9
Non-immigrants	39.3	40.9	39.4	39.4	38.2
<i>Minority status</i>					
Minority	28.5	26.0	27.6	30.6	28.5
Not minority	38.7	40.1	39.1	38.9	37.2
<i>Working status</i>					
Employed	33.3	31.5	33.2	34.9	32.1
Not employed	50.4	48.9	49.5	53.5	49.3
<i>Children's age</i>					
0-1years	49.2	49.0	50.1	49.9	48.0
2-5 years	44.7	46.9	46.5	45.7	41.5
6-14 years	32.8	34.7	33.2	34.2	29.7
<i>Province</i>					
Atlantic	42.4	41.9	43.0	43.4	40.6
Quebec	32.5	34.2	32.5	32.8	31.2
Ontario	35.9	35.6	35.5	38.1	34.1
Prairies	40.6	42.0	41.5	40.8	38.6
BC	38.4	38.9	38.1	40.8	36.2
Northern Canada	48.8	48.0	44.5	54.1	45.1
<i>City scale</i>					
Large CMAs	35.0	34.3	34.8	36.9	33.7
Smaller areas	40.4	41.6	41.2	39.6	39.5
Observations	155,752	19,565	36,930	53,514	45,743

Table 5

Weighted average time spent looking after children (hours per week)
of people aged 20 to 54 with at least one child less than 15 years old,
by gender and immigration status,
the 2005 GSS

Explanatory Variables	All	Female	Male	Immigrants	Non-immigrants
<i>Total</i>	42.3				
<i>Gender</i>					
Female	57.0				
Male	26.6				
<i>Education</i>					
Less than high school	40.6	53.9	28.0	29.6	43.1
High school	39.2	53.8	23.6	33.3	40.3
College or equivalent	44.3	57.9	28.5	41.4	44.8
Undergraduate or above	41.4	58.1	24.9	36.3	43.7
<i>Parental status</i>					
Sole-parents	48.7	51.2	38.1	46.8	49.1
Couple-parents	41.5	58.1	26.1	36.5	42.9
<i>Immigration status</i>					
Immigrants	37.2	49.8	22.5		
Non-immigrants	43.6	58.9	27.6		
<i>Working status</i>					
Employed	35.4	48.5	25.1	30.2	36.7
Not employed	66.4	73.7	40.0	57.2	69.3
<i>Province</i>					
Atlantic	48.8	61.6	34.0	49.8	48.8
Quebec	38.3	50.6	24.7	36.3	38.6
Ontario	43.2	57.7	27.4	37.6	45.4
Prairies	43.3	60.2	25.1	41.2	43.7
BC	42.0	59.3	25.4	33.3	45.5
Observations	4,214	2,517	1,697	704	3,510

Table 6

Weighted average time spent looking after children (hours per week)
of people aged 20 to 54 with at least one child less than 15 years old,
by parental type,
the 2005 GSS

Explanatory Variables	All	Sole- mother	Couple- mother	Sole- father	Couple- father
<i>Total</i>	42.3	51.2	58.1	38.1	26.1
<i>Education</i>					
Less than high school	40.6	46.7	57.0	45.3	26.5
High school	39.2	53.5	53.9	37.8	22.8
College or equivalent	44.3	52.4	59.1	34.9	28.2
Undergraduate or above	41.4	49.0	59.2	36.5	24.6
<i>Immigration status</i>					
Immigrants	37.2	48.0	50.1	36.4	22.3
Non-immigrants	43.6	51.8	60.5	38.3	27.0
<i>Working status</i>					
Employed	35.4	44.0	49.5	35.7	24.6
Not employed	66.4	68.5	74.6	64.4	39.1
<i>Province</i>					
Atlantic	48.8	57.0	62.8	54.2	33.0
Quebec	38.3	43.8	52.1	28.4	24.4
Ontario	43.2	53.9	58.4	44.2	27.0
Prairies	43.3	55.9	61.0	50.4	24.4
BC	42.0	49.4	61.9	36.7	24.6
Observations	4,214	650	1,867	124	1,573

Table 7

Weighted average time spent looking after children (hours per week)
of people aged 20 to 54 with at least one child less than 15 years old,
by education level,
the 2005 GSS

Explanatory Variables	All	Less than high school	High school	College	Under-graduate or above
<i>Total</i>	42.3	40.6	39.2	44.3	41.4
<i>Gender</i>					
Female	57.0	53.9	53.8	57.9	58.1
Male	26.6	28.0	23.6	28.5	24.9
<i>Parental status</i>					
Sole-parents	48.7	46.4	50.4	49.4	46.5
Couple-parents	41.5	39.2	37.7	43.6	41.0
<i>Immigration status</i>					
Immigrants	37.2	29.6	33.3	41.4	36.3
Non-immigrants	43.6	43.1	40.3	44.8	43.7
<i>Working status</i>					
Employed	35.4	31.9	31.4	37.9	34.4
Not employed	66.4	56.4	63.2	69.7	69.8
<i>Province</i>					
Atlantic	48.8	44.7	49.0	49.4	49.6
Quebec	38.3	39.8	38.7	37.0	39.5
Ontario	43.2	40.2	38.2	45.6	42.8
Prairies	43.3	39.2	36.2	48.0	41.6
BC	42.0	42.8	40.3	46.8	35.5
Observations	4,214	392	650	1,954	1,201

Table 8

Tobit regression results on parental child care time, left censored at 0 and right censored at 60, by gender and immigration status, the 2006 Census

Explanatory Variables	All	Female	Male	Immigrants	Non-immigrants
<i>Female</i>	18.773***			16.569***	19.528***
(Ref.: Male)	(0.156)			(0.292)	(0.185)
<i>Education</i>					
(Ref.: High school)					
Less than high school	-0.314 (0.264)	-0.350 (0.423)	-0.453* (0.325)	-2.746*** (0.505)	0.242 (0.310)
College or equivalent	2.434*** (0.200)	3.384*** (0.311)	1.208*** (0.253)	2.947*** (0.408)	2.440*** (0.230)
Undergraduate or more	2.201*** (0.215)	2.977*** (0.334)	0.840*** (0.273)	1.068*** (0.372)	3.037*** (0.266)
<i>Sole-parents</i>	-8.706***	-7.215***	-12.255***	-8.625***	-9.256***
(Ref.: Two-parents)	(0.237)	(0.324)	(0.391)	(0.477)	(0.276)
<i>Immigrants</i>	-6.457***	-7.416***	-5.626***		
(Ref.: Non-immigrants)	(0.253)	(0.398)	(0.316)		
<i>Minority</i>	-7.242***	-10.060***	-4.142***	-5.000***	-8.802***
(Ref.: Not minority)	(0.280)	(0.435)	(0.353)	(0.313)	(0.596)
<i>Age²</i>	-0.003***	-0.005***	-0.002***	-0.001***	-0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
<i>Work</i>	-9.881***	-12.046***	-3.937***	-7.987***	-11.055***
(Ref.: Not work)	(0.203)	(0.281)	(0.316)	(0.344)	(0.250)
<i>Household income</i>	-0.061***	-0.089***	-0.031***	-0.005	-0.083***
	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)
<i>Household size</i>	-0.957***	-0.473***	-1.394***	-1.109***	-0.987***
	(0.078)	(0.121)	(0.099)	(0.128)	(0.097)
<i>Children's age</i>					
(Ref.: 2-5 years)					
0-1 years	7.751*** (0.236)	15.572*** (0.388)	1.297*** (0.287)	8.720*** (0.422)	7.220*** (0.284)
6-14 years	-7.107*** (0.221)	-9.742*** (0.351)	-4.260*** (0.275)	-6.629*** (0.392)	-7.076*** (0.267)
<i>Province</i>					
(Ref.: Ontario)					
Atlantic	0.349 (0.325)	0.687 (0.509)	0.190 (0.408)	1.206 (1.381)	-0.325 (0.346)
Quebec	-5.869*** (0.197)	-9.022*** (0.307)	-2.763*** (0.248)	-2.064*** (0.400)	-6.871*** (0.229)
Prairies	1.676***	3.319***	0.091	2.619***	1.086***

	(0.219)	(0.347)	(0.271)	(0.448)	(0.254)
BC	2.114***	3.394***	0.976***	1.658***	2.249***
	(0.244)	(0.384)	(0.305)	(0.385)	(0.311)
Northern Canada	6.454***	3.796**	9.678***	-0.019	6.297***
	(1.220)	(1.915)	(1.518)	(5.286)	(1.277)
<i>Large CMAs</i>	-0.605***	-1.003***	-0.353	-4.925***	0.041
<i>(Ref.: Smaller areas)</i>	(0.179)	(0.282)	(0.223)	(0.582)	(0.192)
<i>Constant</i>	50.127***	75.295***	41.720***	40.052***	53.364***
	(0.497)	(0.734)	(0.633)	(1.011)	(0.602)
Observations	155,752	84,656	71,096	39,695	116,057
Spend 0 hours looking after children (%)	8.2	6.3	10.5	12.1	6.9
Spend more than 60 hours looking after children (%)	24.9	35.4	12.5	17.4	27.5

NOTES: Standard errors (in parenthesis).

* Statistical significance at 10% level.

** Statistical significance at 5% level.

*** Statistical significance at 1% level.

Table 9

Tobit regression results on parental child care time, left censored at 0 and right censored at 60, by family structure, the 2006 Census

Explanatory Variables	Sole-mother	Couple-mother	Sole-father	Couple-father
<i>Education</i>				
<i>(Ref.: High school or less)</i>				
Less than high school	1.809* (0.984)	-1.946*** (0.463)	1.652 (1.330)	-1.385*** (0.331)
College or equivalent	6.667*** (0.804)	1.687*** (0.329)	4.233*** (1.175)	0.212 (0.255)
Undergraduate or more	5.112*** (0.983)	1.652*** (0.345)	4.920*** (1.449)	-0.290 (0.274)
<i>Immigrants</i>	-7.191*** (1.111)	-7.778*** (0.412)	-4.125*** (1.572)	-5.582*** (0.317)
<i>(Ref.: Non-immigrants)</i>				
<i>Minority</i>	-12.380*** (1.176)	-8.950*** (0.454)	-6.388*** (1.645)	-3.249*** (0.356)
<i>(Ref.: Not minority)</i>				
<i>Age²</i>	0.001*** (0.001)	-0.012*** (0.000)	0.018*** (0.001)	-0.006*** (0.000)
<i>Work</i>	-6.624*** (0.763)	-13.184*** (0.295)	2.125* (1.115)	-6.213*** (0.331)
<i>(Ref.: Not work)</i>				
<i>Household Income</i>	-0.264*** (0.012)	-0.036*** (0.003)	-0.120*** (0.014)	-0.005* (0.003)
<i>Household size</i>	-2.462*** (0.303)	1.871*** (0.134)	-4.514*** (0.416)	0.063 (0.103)
<i>Children's age</i>				
<i>(Ref.: 2-5 years)</i>				
0-1 years	19.717*** (1.321)	12.623*** (0.392)	0.914 (2.719)	0.052 (0.282)
6-14 years	-15.513*** (0.937)	-8.722*** (0.368)	-16.419*** (1.518)	-3.534*** (0.274)
<i>Province</i>				
<i>(Ref.: Ontario)</i>				
Atlantic	1.522 (1.337)	0.983* (0.536)	0.338 (2.116)	0.456 (0.407)
Quebec	-11.007*** (0.828)	-8.642*** (0.320)	-6.514*** (1.215)	-2.675*** (0.248)
Prairies	1.908** (0.955)	3.179*** (0.360)	2.020 (1.350)	-0.305 (0.272)
BC	0.322 (1.067)	3.808*** (0.398)	1.956 (1.538)	0.845*** (0.305)
Northern Canada	-4.147 (4.620)	5.378*** (2.068)	14.552*** (5.442)	8.096*** (1.573)
<i>Large CMAs</i>	-1.057	-0.838***	-3.104***	0.054

<i>(Ref.: Smaller areas)</i>	(0.760)	(0.294)	(1.076)	(0.224)
<i>Constant</i>	68.016***	72.405***	31.308***	42.495***
	(1.694)	(0.774)	(2.797)	(0.639)
Observations	16,286	68,370	5,405	65,691
Spend 0 hours looking after children (%)	13.5	4.6	38.4	8.2
Spend more than 60 hours looking after children (%)	34.7	35.5	12.8	12.5

NOTES: Standard errors (in parenthesis).

* Statistical significance at 10% level.

** Statistical significance at 5% level.

*** Statistical significance at 1% level.

Table 10

Tobit regression results on parental child care time, left censored at 0 and right censored at 60, by education level, the 2006 Census

Explanatory Variables	Less than high school	High school	College or equivalent	Under-graduate or more
<i>Female</i>	22.290***	20.142***	18.385***	16.690***
(Ref.: Male)	(0.550)	(0.355)	(0.264)	(0.246)
<i>Sole-parents</i>	-10.903***	-14.990***	-4.747***	-4.763***
(Ref.: Two-parents)	(0.702)	(0.487)	(0.406)	(0.464)
<i>Immigrants</i>	-8.765***	-6.158***	-5.726***	-6.129***
(Ref.: Non-immigrants)	(0.939)	(0.599)	(0.454)	(0.361)
<i>Minority</i>	-10.385***	-8.443***	-6.753***	-5.816***
(Ref.: Not minority)	(1.037)	(0.657)	(0.529)	(0.385)
<i>Age²</i>	-0.004***	-0.001***	-0.004***	-0.004***
	(0.000)	(0.000)	(0.000)	(0.000)
<i>Work</i>	-8.984***	-9.481***	-10.885***	-9.849***
(Ref.: Not work)	(0.589)	(0.432)	(0.368)	(0.347)
<i>Household income</i>	-0.098***	-0.106***	-0.059***	-0.030***
	(0.010)	(0.005)	(0.004)	(0.003)
<i>Household size</i>	-0.669***	-1.412***	-0.619***	-0.463***
	(0.236)	(0.172)	(0.139)	(0.127)
<i>Children's age</i>				
(Ref.: 2-5 years)				
0-1 years	6.493***	8.318***	7.212***	7.803***
	(0.797)	(0.553)	(0.409)	(0.359)
6-14 years	-6.994***	-8.593***	-6.920***	-6.701***
	(0.749)	(0.510)	(0.379)	(0.344)
<i>Province</i>				
(Ref.: Ontario)				
Atlantic	-1.519	-0.155	0.870*	0.930
	(1.069)	(0.729)	(0.525)	(0.568)
Quebec	-4.997***	-5.724***	-6.798***	-5.188***
	(0.679)	(0.473)	(0.323)	(0.312)
Prairies	1.931***	2.812***	1.073***	1.375***
	(0.713)	(0.479)	(0.376)	(0.360)
BC	3.671***	1.924***	2.454***	1.683***
	(0.913)	(0.524)	(0.432)	(0.374)
Northern Canada	2.721	1.829	13.611***	5.371**
	(2.480)	(3.253)	(2.204)	(2.538)
<i>Large CMAs</i>	-1.638***	-1.045***	0.373	-0.747**
(Ref.: Smaller areas)	(0.581)	(0.393)	(0.283)	(0.335)

<i>Constant</i>	51.936***	54.636***	52.486***	48.278***
	(1.490)	(1.054)	(0.845)	(0.828)
Observations	19,565	36,930	53,514	45,743
Spend 0 hours looking after children (%)	12.6	11.2	6.7	5.8
Spend more than 60 hours looking after children (%)	28.6	26.4	25.8	21.1

NOTES: Standard errors (in parenthesis).

* Statistical significance at 10% level.

** Statistical significance at 5% level.

*** Statistical significance at 1% level.

Table 11

Tobit regression results on parental child care time, censored at 0, by gender and immigration status, the 2005 GSS

Explanatory Variables	All	Female	Male	Immigrants	Non-immigrants
<i>Female</i>	26.419***			23.175***	27.363***
(Ref.: Male)	(1.147)			(2.552)	(1.286)
<i>Education</i>					
(Ref.: High school)					
Less than high school	1.302 (2.356)	0.509 (3.526)	2.493 (2.929)	-2.240 (3.966)	2.425 (2.747)
College or equivalent	5.352*** (1.543)	8.205*** (2.425)	3.301* (1.723)	8.463** (3.433)	4.834*** (1.707)
Undergraduate or more	3.478** (1.684)	7.177*** (2.752)	0.576 (1.800)	7.383** (3.185)	2.254 (1.960)
<i>Sole-parents</i>	-0.396 (1.958)	-3.953 (2.517)	13.184*** (3.007)	5.683 (4.040)	-1.342 (2.204)
(Ref.: Two-parents)					
<i>Immigrants</i>	-8.666*** (1.372)	-11.896*** (2.068)	-4.603*** (1.633)		
(Ref.: Non-immigrants)					
<i>Age²</i>	-0.001 (0.001)	-0.001 (0.002)	-0.001 (0.001)	-0.000 (0.002)	-0.000 (0.001)
<i>Work</i>	-24.041*** (1.597)	-21.276*** (1.983)	-16.160*** (3.029)	-16.618*** (3.353)	-22.241*** (1.803)
(Ref.: Not work)					
<i>Household income</i>	0.023 (0.018)	-0.015 (0.028)	0.036* (0.020)	-0.062* (0.034)	0.048** (0.021)
<i>Household size</i>	-1.959** (0.963)	-0.995 (1.430)	-2.869*** (1.071)	-1.043 (1.478)	-2.190* (1.164)
<i>Age of the youngest children</i>	-1.586*** (0.151)	-2.144*** (0.249)	-0.955*** (0.178)	-1.502*** (0.304)	-1.610*** (0.175)
<i>Number of children</i>	4.938*** (1.132)	4.940*** (1.693)	5.134*** (1.293)	4.865*** (1.799)	5.071*** (1.359)
<i>Province</i>					
(Ref.: Ontario)					
Atlantic	3.937*** (1.384)	2.945 (1.944)	4.576** (1.943)	10.422** (4.139)	3.599** (1.497)
Quebec	-7.189*** (1.330)	-10.613*** (2.035)	-4.638*** (1.599)	-5.399 (3.551)	-7.655*** (1.457)
Prairies	-1.258 (1.558)	1.216 (2.333)	-3.777** (1.913)	0.764 (3.227)	-1.602 (1.754)
BC	0.733 (1.710)	1.040 (2.744)	-0.839 (1.885)	-2.872 (2.643)	2.052 (2.146)
<i>Constant</i>	52.922***	80.625***	48.242***	39.854***	53.216***

	(3.409)	(4.900)	(4.530)	(7.564)	(3.821)
Observations	4,214	2,517	1,697	704	3,510
Spend 0 hours looking after children (%)	3.5	2.1	5.7	3.6	3.5

NOTES: Standard errors (in parenthesis).

* Statistical significance at 10% level.

** Statistical significance at 5% level.

*** Statistical significance at 1% level.

Table 12

Tobit regression results on parental child care time, censored at 0, by education level, the 2005 GSS

Explanatory Variables	Less than high school	High school	College or equivalent	Undergraduate or more
<i>Female</i>	21.344***	23.198***	27.359***	28.099***
(Ref.: Male)	(4.742)	(3.260)	(1.668)	(1.856)
<i>Sole-parents</i>	-5.730	7.183	-4.128*	2.440
(Ref.: Two-parents)	(4.920)	(5.629)	(2.464)	(3.520)
<i>Immigrants</i>	-15.595***	-8.212**	-8.275***	-7.960***
(Ref.: Non-immigrants)	(4.933)	(3.482)	(2.436)	(2.072)
<i>Age²</i>	-0.001	-0.002	-0.001	0.001
	(0.004)	(0.003)	(0.002)	(0.002)
<i>Work</i>	-14.656***	-20.636***	-22.551***	-22.190***
(Ref.: Not work)	(4.800)	(3.834)	(2.391)	(3.110)
<i>Household income</i>	-0.085	0.103**	0.033	-0.022
	(0.077)	(0.050)	(0.024)	(0.030)
<i>Household size</i>	-3.818	-0.346	-3.025**	-1.160
	(2.759)	(2.111)	(1.393)	(1.769)
<i>Age of the youngest children</i>	-1.531***	-1.306***	-1.459***	-1.982***
	(0.516)	(0.369)	(0.226)	(0.273)
<i>Number of children</i>	7.814**	3.436	4.650***	6.269***
	(3.920)	(2.718)	(1.633)	(1.963)
<i>Province</i>				
(Ref.: Ontario)				
Atlantic	-0.591	9.434***	2.913	2.664
	(6.136)	(3.608)	(2.065)	(2.154)
Quebec	-7.755	0.613	-9.955***	-6.398***
	(5.872)	(3.698)	(1.923)	(2.231)
Prairies	-6.397	-4.983	0.762	-0.842
	(6.561)	(3.592)	(2.367)	(2.683)
BC	2.070	2.800	1.480	-2.350
	(8.178)	(4.180)	(2.490)	(2.877)
<i>Constant</i>	63.323***	44.987***	63.066***	53.494***
	(12.730)	(7.596)	(5.129)	(5.919)
Observations	392	650	1,954	1,201
Spend 0 hours looking after children (%)	3.3	5.7	2.9	3.5

NOTES: Standard errors (in parenthesis).

* Statistical significance at 10% level.

** Statistical significance at 5% level.

*** Statistical significance at 1% level.