



## Child Care from Birth to Eight Years of Age: Its Use and Influence on Child Development

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### About the QLSCD (1998-2010)

This fascicle is based on data from the Québec Longitudinal Study of Child Development (QLSCD 1998-2010) which is being conducted by the Institut de la statistique du Québec (Québec Institute of Statistics) in collaboration with various partners (listed on the back cover). The goal of this study is to gain a better understanding of the trajectories which, during early childhood, lead to children's success or failure in the education system.

The target population of the QLSCD comprises children (singleton births) born to mothers residing in Québec in 1997-1998, with the exception of those whose mother, at the time of the child's birth, was living in certain administrative regions of the province (Nord-du-Québec, Terres-Cries-de-la-Baies-James and Nunavik) or on Indian reserves. Certain children were also excluded because of constraints related to the sample frame or major health problems. The initial sample eligible for longitudinal monitoring comprised 2,120 children. The children were followed annually from the age of 5 months to 8 years, and since then have been followed biannually to the age of 12. During the 2002 round, the data collection period was changed in order to visit all the children in the spring, namely during exam time in the education system. It should be noted that the QLSCD is the first large-scale study based on a sample of such magnitude, representative of Québec newborns, who are being monitored in such an intensive manner throughout childhood.

The QLSCD employs a variety of data collection instruments to gather data on the child, the person most knowledgeable of the child (PMK), her or his spouse/partner (if applicable), and the biological parent(s) not residing in the household (if applicable). During each data collection round, the child is asked to participate in a variety of activities designed to assess development. As of the 2004 round, the child's teacher is also being asked to respond to a questionnaire covering various aspects of the child's development and adjustment to school.

Further information on the methodology of the survey and the sources of data can be accessed on the website of the QLSCD (also known as "I Am, I'll Be"), at: [www.iamillbe.stat.gouv.qc.ca](http://www.iamillbe.stat.gouv.qc.ca).



Child care for children of all ages is a topic that has captured public and media attention in recent years, both nationally and internationally. Whether related to the role of the state in implementing daycare services, the quality of daycare or its effect on child development, the topic is one of concern to many parents, policymakers, researchers and workers in the field. In Québec, the subject of child care has a long history that precedes the new family policy measures regarding daycare

promulgated by the government in 1997 which marked the beginning of subsidized low-cost daycare. In fact, even before these new measures were announced and came into force, the Québec Longitudinal Study of Child Development (see the Box on this page) had made a priority of collecting data on child care in order to gain an insight into its use and effects.

The purpose of this fascicle is to present what the QLSCD tells us about child care for children born in Québec at the end of the 1990s during the first eight years of their lives. It summarizes all the work published on this theme based on the QLSCD and contains previously unpublished data that particularly focus on school daycares. In addition to a detailed examination of the use of child care at various ages, this report presents research on the quality of different types of child care and the effects of prekindergarten daycare on certain aspects of the physical, cognitive, social and emotional development of children. Sprinkled throughout the text will be references to the findings of other research studies which add or provide nuances to ours. However, emphasis is placed on the QLSCD, since it is the only large-scale Québec survey which collects detailed data on both the modalities of child care and various aspects of child development.

Because of the inherent complexity of the study of child care and the ever-evolving context in which it takes place, it seems productive to give a brief introduction to the history of family policy in Québec. Certain aspects of this context should be taken into account to obtain a clear understanding of our findings and can serve as directions for further research.

## Québec family policy and the QLSCD

According to the ecological approach of Bronfenbrenner (1979; see also Bigras and Japel, 2007), a child is at the centre of a system of influences and interactions that will affect his/her development. This was one of the theories on which the educational daycare program in Québec (Ministère de la Famille et des Aînées, MFA, 2007) and the QLSCD were based. According to ecological systems theory, a child experiences various levels of influence. The first level, the micro-system, refers to the influence on child development of the immediate environment – family, school, peer group, neighbourhood and child care. The second, called the mesosystem, comprises connections between immediate environments in the microsystem, such as between parents and a daycare worker. The QLSCD, with its very comprehensive collection of data, provides a means of investigating the potential influences of the first two systems on child development. The third level, called the exosystem, comprises external environmental settings which only indirectly affect development, such as government policies. The fourth level, the macrosystem, refers to the influence of the larger cultural context and the values instilled by society and concretized in legislation, which in turn leave their mark on a child. The last two levels will be covered first in this fascicle so that the analysis of daycare can be more fully understood given the sociopolitical context proper to it.

### A brief description of the new family policy measures introduced in 1997

The nature of the daycare services observed in Québec today is one of the results of the new measures of the government family policy implemented in 1997. It was in the context of this policy that subsidized low-cost daycare was introduced in the province, for children of both prekindergarten and primary school age. To clearly outline the historical context of the QLSCD, a table presenting the evolution of various aspects of family policy since 1997 is presented in the Appendix (Table A.1). The new measures introduced in 1997 covered, other than daycare services, support for families (through various programs and tax measures) and parental leave, three components which are inter-related.

Establishing low-cost universal daycare in Québec had two main goals – fulfill the growing need of mothers who wished to enter or re-enter the labour force or return to school, and reduce the social disparities observed among children in terms of school readiness (Ministère du Conseil exécutif, 1997). To accomplish this, the government put into place measures to gradually open spaces for prekindergarten children to attend daycares regulated by the province through educational childcare centres (CPEs<sup>2</sup> with a maximum of 80 spaces), day care centers, CPE home childcare and school daycares. As part of the legal framework for these daycare services, the province implemented new operating standards such as the obligation to have trained personnel, children-to-daycare worker ratios based on children's age, and the implementation of an educational program in regulated daycares,

among other things. As shown in Table A.1, the target children of the QLSCD were affected by the new family policy measures with regards to daycare. In fact, all of these children were considered eligible for subsidized low-cost daycare in 2000 when they were approximately 2½ years of age (third round of data collection). However, at the time the children entered kindergarten in 2003-2004, school daycares had already been well established.

Therefore, when examining research on daycare in Québec in the context of the QLSCD, it should be kept in mind that the survey began during the period when the changes to family policy were being implemented (1997). Indeed, the QLSCD began when daycare services were in full expansion. The implementation of the educational daycare program and the training of daycare personnel to attain the ratio of two trained workers out of three are only two examples of what was being put into place at the time. This context must be taken into account when interpreting the results.

### Towards a common terminology

Following the implementation of the new family policy measures in 1997, a vocabulary unique to daycare in the province was developed. One of the difficulties for anyone discussing the topic of daycare in Québec is the use of appropriate and accepted terminology. Indeed, the terminology and definitions have evolved in accord with political and social changes. This evolving context has influenced the content of the questions designed to collect data on child care in QLSCD questionnaires (see Appendix A.2). For example, the terms “daycare” and “daycare worker,” commonly used prior to the changes in family policy, now have new definitions, while other terms were coined, such as “*Centre de la petite enfance*” (CPE) (Childcare Centre in a government lexicon), “educational daycare worker” and “home daycare provider.” To add to the problem, research on child care in the province has been published in English using terms that do not always have an equivalent in French adapted to the context of Québec. Box 1 presents the definitions currently in use according to the act governing daycare and the regulations currently in force.

## Box 1

### Definitions of various types of daycare in the current system

#### ***CPEs - Centre de la petite enfance (Childcare Centres)***

A Childcare Centre (CPE) is a non-profit legal person or a cooperative whose board of directors comprises at least two thirds of the parents who are clients or future clients of the childcare centre. It offers spaces for a reduced contribution which is set at \$7 per day. A CPE is authorized to provide child care to a maximum of 80 children in a facility.

#### **Home childcares**

A home childcare is defined as follows: A natural person who is a self-employed worker, recognized by a coordinating office in the manner determined by regulation and who contracts with parents to provide child care in a private residence, in return for payment.

- for up to six children of whom not more than two are under the age of 18 months, including the person's own children under nine years of age, and any other children under nine who ordinarily live with the person and are present while the child care is provided, or
- if the person is assisted by another adult, for up to nine children of whom not more than four are under the age of 18 months, including their own children under nine years of age, and any other children under nine who ordinarily live with them and are present while the childcare is provided.

In the vast majority of cases, these are subsidized spaces (\$7 a day).

#### **Day care centres**

A day care centre is generally a for-profit business that provides daycare services in a facility that can accept a maximum of 80 children. The day care centre permit holder must form, in the permit holder's facility, a parent committee composed of five parents elected by and from among those who are clients of the centre,

other than the permit holder, the members of the board of directors, the members of the staff and persons related to them. Most day care centres have arranged a subsidy with the MFA to provide low-cost spaces (7\$ a day). Certain day care centres, even if regulated, are not subsidized and set their own daily fees.

#### **Daycare services not regulated by law**

In Québec there are also daycares that do not need to be legally recognized because they provide daycare for 6 or fewer children. Organizations or persons who provide such a service are therefore not regulated by law and are not required to have a permit issued by the MFA or to be recognized as home daycare providers by a coordinating office.

- ***Home daycare***

Anyone can accept a maximum of 6 children in her residence without having to be recognized by a coordinating office of home childcares.

- ***In a community organization***

A public or community organization can provide temporary daycare only in the context of its mission or during a particular intervention with parents or children.

- ***Nursery school***

If in operation as of October 25, 2005, a nursery school can provide daycare for children 2 to 5 years of age for periods of up to a maximum of 4 hours a day.

#### **School daycare**

School daycare services are provided to children 5 to 12 years of age,<sup>3</sup> at a cost of \$7 a day. School daycares are administered by school boards and individual schools. They are generally provided in the school itself:

- before classes begin in the morning
- during lunch
- after classes.

Source: © Gouvernement du Québec, 2010. These definitions are, in part, adapted from sections of the Educational Childcare Act, the Educational Childcare Regulation and the Reduced Contribution Regulation.

## Box 2 Terminology

**Child care or types of child care:** In the analyses conducted on QLSCD data, researchers often compare children in various types of child care with those who stay at home with one of the parents, most often the mother. Types of child care or child care then refer to CPEs, regulated home childcare or non-regulated home daycares, day care centres and children cared for at home by a person other than the parents (e.g. relative, babysitter, etc.). Therefore, throughout this fascicle, child care or types of child care refer to care both outside and inside the child's home. In any case, effort is made to specify the particular type or types of care arrangements to which we are referring. It is worth mentioning that there is an expression "non-maternal care" which is used in some articles. It covers all types of child care situations other than being at home with a parent.

**Daycare:** In common English in Québec, daycare is understood to refer to child care outside the home, and does not include child care by a relative or babysitter in the child's own home. Where the text is only referring to child care outside the child's home, the word "daycare" is used.

**CPE facility:** This has been replaced by the simple moniker "CPE." The old term was used in the past when CPEs were also responsible for supervising, coordinating and monitoring regulated home childcares in a given territory.

**CPE home childcare:** This term designated a regulated home childcare service. It was used in the past when home childcares were coordinated by the CPEs (beginning in 1997). Since 2006, regulated home childcares are legally governed by coordinating offices.

### Values underlying the implementation of new family policy measures in 1997

To complete our background section, the aims of the underlying values of the new family policy measures enacted in 1997 were to support families by prioritizing accessibility and fostering equality of opportunity for all when entering the school system, all the while ensuring that benchmarks were set for quality. Indeed, quality was at the heart of the changes to daycare launched in 1997. But what exactly are we talking about in terms of the issue of quality and what can we learn from the QLSCD?

#### Quality of child care – multiple facets

In defining quality, various components can be grouped into two categories – structural quality and process quality. Components such as children-to-daycare-worker ratios, training of daycare workers and their remuneration are examples of what can be found in the category of structural quality. Components such as the daycare worker-child relationship but also daycare worker-parent relationship are examples of the process quality category. In the literature on child development with regards to children in child care, much has been written on the importance of quality of the type of child care, particularly when assessing its effects (Bigras and Japel, 2007; Huntsman, 2008; Peisner-Feinberg, 2004). Therefore, before talking about the effects of child care on child development, we will present analyses conducted on the quality of various types of child care during early childhood and what remains to be done in terms of school daycares.

#### *Prekindergarten child care*

The *Groupe de recherche sur l'inadaptation psychosociale de l'enfant* (GRIP) (Research Unit on Children's Psychosocial Maladjustment) focused on the quality of various types of child care used by parents of children 2½ to 5 years of age in their survey entitled *La qualité, ça compte!* (Quality Counts!) (Japel, Tremblay and Côté, 2005) conduc-

ted on the QLSCD cohort.<sup>4</sup> This survey revealed that the majority of child care services, all types combined (CPE facilities, CPE home childcares, non-regulated home daycares and day care centres), obtained a quality score of "minimal," namely that the health and safety of the children were not compromised in general, but that the educational component was minimally present (Japel, Tremblay and Côté, 2005). However, it is important to underline that great variations were observed in quality from one type of child care to another. For example, it has been shown that CPE facilities as well as CPE home childcares are generally of better quality than day care centres and non-regulated home daycares (Japel, Tremblay and Côté, 2005). This study provided information of concern to all stakeholders following the changes in family policy in 1997. Given that one of the aims of the new family policy measures was to foster child development and equality of opportunity, the results showed however that socioeconomically disadvantaged children were more likely to be in daycares that were of lower quality than those attended by children with the highest socioeconomic status. More precisely, children attending a CPE facility received daycare services of equivalent quality whatever their socioeconomic status. On the other hand, CPE home childcares, day care centres and non-regulated home daycares attended by disadvantaged children were of lower quality than those of the same type attended by children at the opposite end of the socioeconomic scale (Japel, Tremblay and Côté, 2005).

Another important survey, *Grandir en qualité* (Québec Survey on the Quality of Educational Daycare), was conducted exclusively on regulated daycares in Québec (Drouin et al., 2004). Its findings were similar in terms of the quality of various types of daycares, but revealed certain differences in day care centres and to a lesser degree in CPE facilities according to the socioeconomic characteristics of the neighbourhood.<sup>5</sup> We can therefore suggest that there is a difference in quality according to the type of daycare and the socioeconomic status of children of pre-kindergarten age.

### School daycare

Researchers at GRIP associated with the QLSCD recently examined the quality of daycare specifically at the time when the children were in kindergarten. They studied 500 school daycares using SACERS (School-Age Care Environment Rating Scale<sup>6</sup>). The findings indicate that the overall quality of school daycares ranged between “minimal” to “good” (Japel, awaiting publication). The various sub-scale scores showed that “health and safety,” “activities” and “staff development” were the categories that were the lowest in quality. These preliminary analyses also revealed weaknesses in terms of the frequency and variety of educational activities provided in school daycares that may be directly related to staff training and development. Having qualified staff to work with school-age children seems important, particularly in the context of the increasing demand for school daycare, as will be discussed further in this fascicle. In a number of their recommendations, the *Conseil supérieur de l'éducation* (2006) has underscored the need to establish a competency or skills profile for jobs in the school daycare setting.

To conclude this section, it is important to state that the quality of child care should be the cornerstone of the analysis of the effects that child care have on child development. However, to date, this quality dimension could not be taken into account in analyses conducted on QLSCD data. Among a number of reasons that can explain this, the under-representation of types of child care attended by children with low socioeconomic status or of non-regulated home daycares in the survey *La qualité, ça compte!* (Quality Counts!) (Japel, Tremblay and Côté, 2005) can no doubt be cited. Moreover, the diversity of the profiles of child care, which include the use of child care and changes in the types of child care experienced prior to kindergarten, constitute other challenges when attempting to research the relationship between the quality of child care and child development among children at school entry.

## Description and effects of child care during early childhood (0-5 years)

### Overall description of early child care

Figure 1 presents an overview of child care during early childhood (5 months to 5 years of age) among children born in Québec at the end of the 1990s, based on data collected annually by the QLSCD (see Box 3). The figure shows the total proportion of children in child care at each age of data collection and their distribution in various types of child care. The data reveal a dramatic increase in the use of child care on the part of parents because of work or school between the first round, when the children were about 5 months old (13%), and the second round, when they were approximately 1½ years of age (57%). Previous studies have shown that for the cohort of children targeted by the QLSCD, it was between the 6<sup>th</sup> and 8<sup>th</sup> month that the majority of mothers entered or returned to the labour force (Desrosiers et al., 2004) and that children were more likely to be in child care because of the parents working. Eligibility for maternity leave on the part of certain mothers at the beginning of the survey probably explains in part these findings. The same study showed that when the children reached the age of 9 months, nearly 60% of mothers entered or returned to the workforce (Desrosiers et al., 2004). With the advent of the *Régime québécois d'assurance parentale (RQAP)* (Québec Parental Insurance Plan) in 2006 which provides longer parental leave, this proportion may have already changed.

### Box 3 Data source

The data on prekindergarten and school daycare presented here are based on the responses to the Computerized Questionnaire Completed by the Interviewer (CQCI) in the 1998 to 2006 rounds of the QLSCD. The age range of the children was approximately 5 months to 5 years during the prekindergarten period and approximately 6 to 8 years during the early elementary school<sup>7</sup> period. The majority of children were finishing kindergarten in the 2004 round, and in the subsequent two rounds, were finishing their first and second year of elementary school. It should be noted that school daycare in Québec is available to children in kindergarten and throughout elementary school. During the various rounds of the survey, one of the parents, in the vast majority of cases the mother, responded to a questionnaire which included a section on child care. According to the year of data collection, various topics were covered – use of child care, main reason for using it, preferences in terms of the type of child care, actual type(s) of child care used, the number of hours a week child care is used, changes in the type of child care, parent-daycare worker relations, etc.

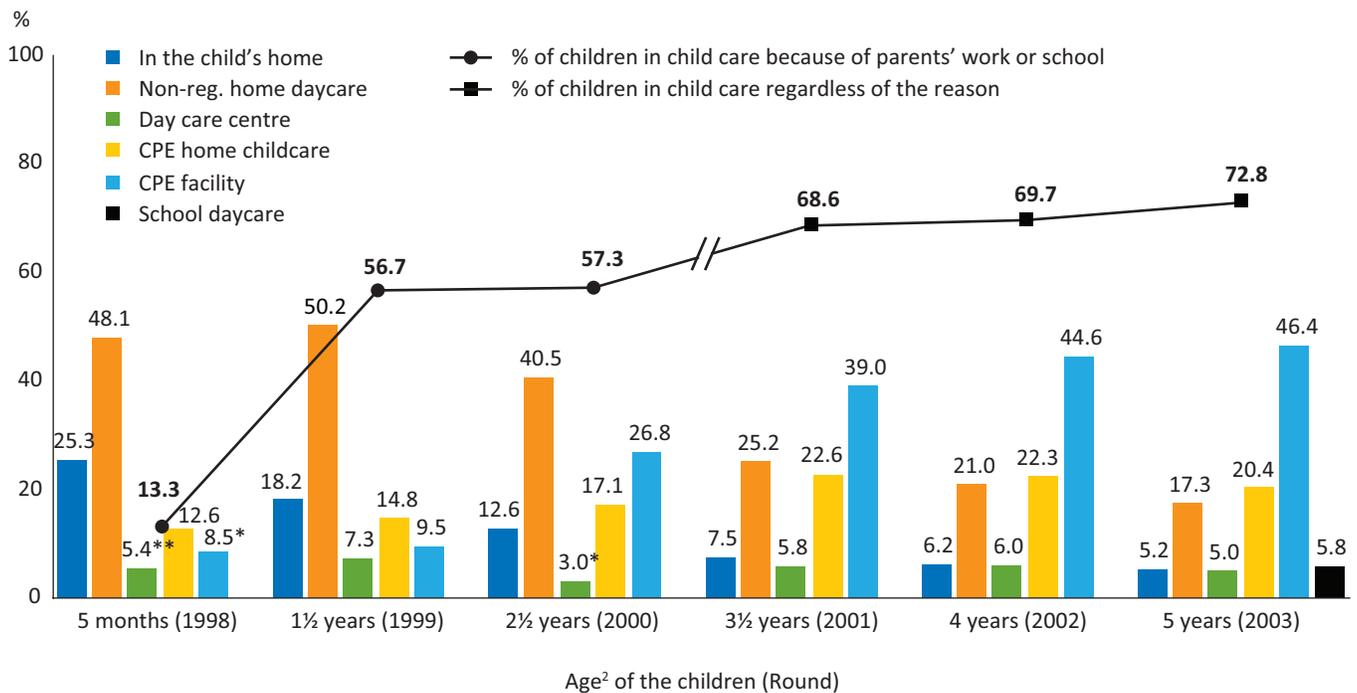
In this fascicle, unpublished data on the use of child care and details on child care arrangements are also presented in light of

various demographic and socioeconomic characteristics of the families. The findings related to the effects of child care on child development are drawn from articles written by researchers and partners of the QLSCD and mainly cover the period preceding the first year of elementary school.

All the unpublished data and those already published by the ISQ have been weighted so that the findings can be generalized to the target population of the QLSCD. Moreover, the complex sample design of the survey was taken into account in calculating the precision of the estimates and in conducting the statistical tests. Unless specified otherwise, the associations presented in the text are statistically significant at the threshold of 0.05.

The results of other analyses conducted on the QLSCD data are the sole responsibility of the authors. They may be based on unweighted data, namely data that have not been adjusted to compensate for higher non-response rates among certain types of families, such as low-income or single-parent households, or those in which the parents speak a language other than French or English. Therefore, though the findings are based on the situation of the children in the families followed by the survey, caution is required in generalizing the results to the target population of the QLSCD. For more details on the survey methodology used, please refer to articles and reports cited in this fascicle.

Figure 1  
**Distribution of children by age and main type of child care regularly used prior to kindergarten, Québec, 1998 to 2003**



Note : It was only at the age of 2½ years (the 2000 round) that all the QLSCD children were eligible for subsidized low-cost childcare spaces. In the 1998 and 1999 rounds of the QLSCD, the nomenclature used for child care was different from that used in subsequent years. Therefore, in Figure 1, for children 5 months and 1½ years of age, the category entitled “non-regulated home daycare” designates home daycares not licensed by the government or approved by a family daycare agency. The category “CPE facility” in the 1998 and 1999 rounds refers to non-profit or government-subsidized childcare centres (see Appendix 1).

1. Because of changes made in the questionnaire over time, the findings of each round are not exactly comparable. The first two rounds covered all children for whom a parent had indicated using child care because of work or school. The presumption is that it referred to using child care regularly. For the 2000 round, the data are restricted to children in child care regularly for these same aforementioned reasons, whereas for the 2001 to 2003 rounds, the findings are based on all children regularly in child care, irrespective of the reasons (see Appendix 1).

2. Indicates the median age of the children at each round. As of the 1999 round, the median age was rounded off (e.g. 1½ years instead of 17 months) to facilitate ease in reading.

\* Coefficient of variation between 15% and 25%; interpret with caution.

\*\* Coefficient of variation higher than 25%; imprecise estimate provided for information purposes only.

Source : Institut de la statistique du Québec, *QLSCD 1998-2010*; adapted from Desrosiers et al. (2004).

Because of changes made to the QLSCD questionnaires (see Appendix A.2), the data on children 3½ to 5 years of age presented in Figure 1 cover all the children who were regularly in child care, irrespective of the main reason their parents were using it. As seen in Figure 1, from the age of about 3½ years, approximately 70% of children were regularly in child care, all main reasons combined. When we examine only the children in child care because of parents' work or school, the percentage is close to that observed at the age of 2½ years (57 %). Therefore, from the age of 3½ years, approximately 13% of all children were regularly in child care for reasons other than parents' work or school, most often to foster their development and socialization. This reason was cited more by parents of children attending CPE facilities, CPE home daycares and day care centres than by parents of children who were in non-regulated home daycares or being taken care of in their own home (data not shown).

In addition, Figure 1 clearly illustrates the decrease in the use of home childcares or non-regulated home daycares in favour of using CPE facilities from the age of 2½ years. We can see in this change, among other things, the effect of the opening of low-cost daycare spaces and the parents' preference for CPE facilities when the children were of prekindergarten age (2½ to 5 years of age) (data not shown; Desrosiers et al., 2004). Around the age of 5 years, namely during the year preceding entry into kindergarten, approximately 50% of the children attending child care regularly were in CPE facilities. In comparison, at this same age, only 20% of children were in CPE home childcares, and a similar percentage was in non-regulated home daycares. The remaining children in child care were divided about equally among other types, namely child care in their own home (5%), in a day care centre (5%) or a school daycare (6%) (children attending kindergarten at four or five years of age).

In terms of the average number of hours a week spent in child care, this was approximately 34 hours from the age of 2½ to 5 years (Table 1). However, there were significant variations in time spent in child care according to the ages of the children. As shown in Figure 2, between 1½ and 4 years of age, approximately half of the children regularly in child care spent 40 hours or more a week in one or another type of child care, whereas 10% to 20% of children spent fewer than 20 hours. Of note was the significant increase in the proportion of children in child care 40 hours or more from the age of 5 months to 1½ years (28% vs. 46%). This

rise could be related to the increase in the number of working hours of mothers in the years following the birth. The proportion of children in child care 50 hours or more at the age of 5 years was lower than that observed at the age of 4 (5% vs. 10%). This could be explained by the fact that certain QLSCD children began kindergarten in 2003.

These data obviously present only a series of snapshots over time. It is important to state that the profiles of child care among the children during the prekindergarten period were more diversified than the data at each age lead us to believe. Indeed, great variation was observed among the children, both in the number of years and number of hours spent per week in child care, without counting the possible changes in the type of child care. Figure 3 illustrates certain trends in terms of the use of child care, all types combined. As shown in this figure, approximately 90% of children were in child care at least one round of the study during the years preceding kindergarten. However, only a third of children (35%) were in child care in all the rounds as of the age 1½ years, and only 8% of children began to be in child care at the age of 4 or 5 years. As reported by the parents during data collection when the children were 5 years old, approximately half of the children in child care had experienced at least one change in the type of child care; 33% had experienced one change and 20% at least two (data not shown). In addition, the number of hours varied at each data collection age. Although as of 1½ years of age, approximately half of the children in child care were there 40 hours or more a week (Figure 2), the proportion of children in child care 40 hours or more a week *in all the rounds* as of 1½ years of age was much lower, namely 8% of all children (data not shown). The diversified trajectories of child care could be related not only to the structural changes in daycare in Québec or to parents' preferences but also to changes that punctuate the lives of families, such as moving, parents' employment status or work schedules, the arrival of another child, etc.

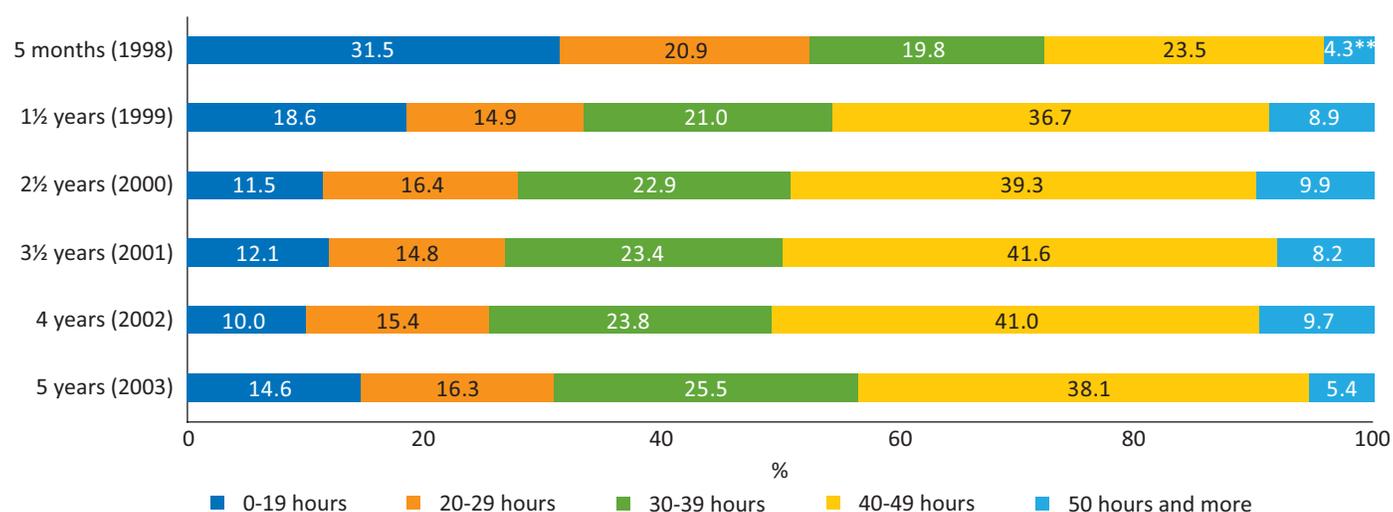
Table 1  
Number of hours in child care regularly prior to kindergarten, by age, Québec, 1998 to 2003

Round	Age <sup>1</sup>	(Minimum – Maximum)	Number of Hours a Week in Child Care	
			Average	C. I. <sup>2</sup>
1998	5 months	(4 months – 8 months)	26.9	25.3-28.6
1999	1½ years	(16 months – 19 months)	32.5	31.7-33.3
2000	2½ years	(27 months – 31 months)	34.7	34.0-35.4
2001	3½ years	(40 months – 44 months)	34.9	34.2-35.5
2002	4 years	(44 months – 55 months)	35.4	34.8-36.1
2003	5 years <sup>3</sup>	(56 months – 68 months)	33.8	32.5-33.9

1. The median age of the children at each round. From the 1999 round on, the median age was rounded off (e.g. 1½ years instead of 17 months) to facilitate reading.
2. Confidence interval at 95%
3. Because of the timeframe during which data were collected in this round, the majority of children had not entered kindergarten.

Source : Institut de la statistique du Québec, QLSCD 1998-2010.

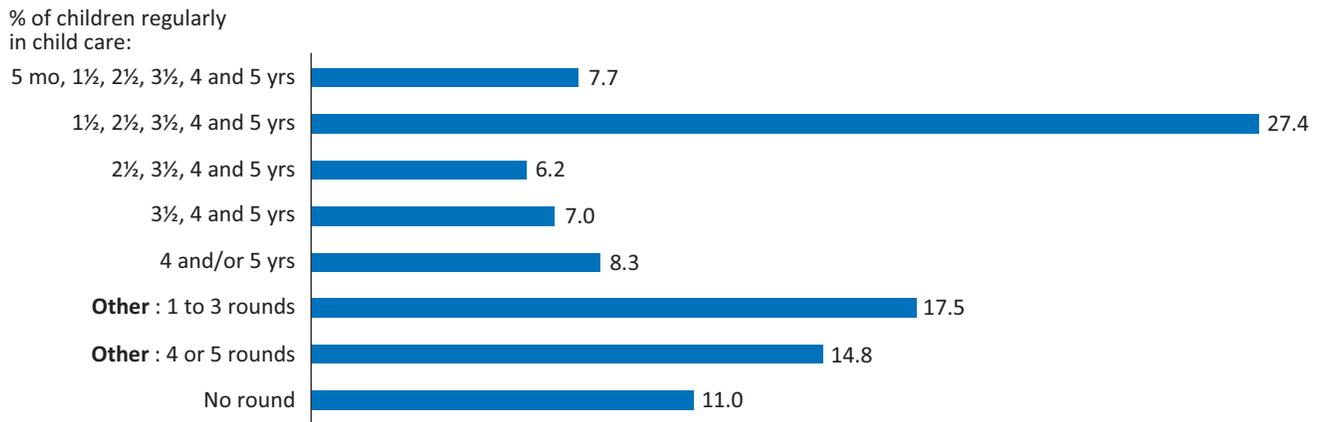
Figure 2  
Distribution of children regularly in child care prior to kindergarten, by age and number of hours a week, Québec, 1998 to 2003



\*\* Coefficient of variation higher than 25 %; imprecise estimate for information purposes only.

Source : Institut de la statistique du Québec, QLSCD 1998-2010.

Figure 3

**Distribution of children regularly in child care prior to kindergarten, by successive age groups or round participation, Québec, 1998 to 2003**


Source : Institut de la statistique du Québec, *QLSCD 1998-2010*; adapted from Desrosiers et al. (2004).

**Certain characteristics related to the use of child care**

To gain a better understanding of the characteristics associated with child care in early childhood, we examined possible associations between using child care and various sociodemographic characteristics of families from when the child was 1½ years of age, namely at the time when the majority of mothers entered or returned to the labour market. The data revealed that irrespective of their age, disadvantaged children were less likely to be in child care (data not shown, and Table 2). For example, in Table 2, which shows sociodemographic characteristics of children regularly in child care at the age of 5 years, 59% of children in low-income households were in child care compared to 77% children with another socioeconomic status. In addition, children with more than one brother or sister were also less likely to be regularly in child care. In terms of immigrant status of the mother or family structure (single-parent or two-parent), differences were observed only in younger children. At the ages of 1½ and 2½ years, children with an immigrant mother or from a single-parent household were less likely to be in child care (data not shown). These findings can in part be attributed to the lower propensity of these mothers to rapidly enter or return to the workforce after the birth of their child (Desrosiers et al., 2004). It is perhaps for this same reason that children living in rural areas were less likely to be in child care at the age of 1½ years, while little or no difference was observed by region among older children (data not shown and Table 2).

Other publications based on QLSCD data have indicated the same findings, namely that children from disadvantaged families are less likely to be regularly in child care before school entry (Desrosiers et al., 2004; Japel, 2008; MSSS and INSPQ, 2007). The QLSCD data have also revealed that when these children were in child care, most were in government-regulated daycares, most commonly in CPE facilities, as indicated by the data collected when the children were 4 years old in 2002 (Desrosiers et al., 2004).<sup>8</sup>

Table 2  
**Proportion of children regularly in child care at the age of 5 years, by certain sociodemographic characteristics, Québec, 2003**

	%	C. I. <sup>2</sup>
<b>Parental employment status (past 12 months)<sup>a</sup></b>		
Single parent in a single-parent family or both parents in a two-parent family were working	81.5	79.3-83.6
Single parent in a single-parent family was not working, one or both parents in a two-parent family were not working	44.7	38.8-50.6
<b>Educational level of the mother<sup>a</sup></b>		
No high school diploma	55.1	48.0-62.1
High school diploma	66.7	61.0-72.3
Post-secondary diploma or certificate (excluding university)	78.2	74.9-81.4
University degree	81.6	77.7-85.2
<b>Low-income household<sup>a, 1</sup></b>		
Yes	58.8	52.4-65.3
No	77.0	74.7-79.3
<b>Immigrant status of the mother</b>		
Born in Canada	73.8	71.4-76.1
Immigrant	67.8	60.0-75.6
<b>Type of household</b>		
Two-parent	72.3	69.8-74.8
Single-parent	76.7	69.8-82.5
<b>Number of brothers and sisters living in the household<sup>a</sup></b>		
None	80.7	75.1-85.6
1	76.6	73.8-79.4
2	65.8	60.8-70.9
3 or more	51.4	42.2-60.7
<b>Location of residence</b>		
Urban	74.4	71.8-76.9
Rural	70.8	65.4-76.3

a. Chi-square test significant at the threshold of 0.05.

1. Based on the low-income cutoff before taxes set by Statistics Canada according to family size and region size where the residence is located – reference year 2002.

2. Confidence interval at 95%.

Source : Institut de la statistique du Québec, *QLSCD 1998-2010*.

A more in-depth analysis of the types of child care at an early age related to the parents' work schedule revealed that atypical work frequently resulted in the non-use or less use of child care (Rochette and Deslauriers, 2003). Since disadvantaged mothers are more likely to have an atypical work schedule (Rochette and Deslauriers, 2003), this may be a contributing factor in a lower use of child care. In a report on infants at risk in Québec based on QLSCD data, Japel (2008) indicated that during all their prekindergarten years, children living in a context characterized by multiple risk factors (namely four or more factors such as low socioeconomic status, dysfunctional family, maternal depression or low level of social support), were proportionally less likely to be in child care.

Certain aspects of the mother-child relationship or mother-daycare worker relationship can also be in play to explain a lower use of child care. A greater tendency to maternal overprotectiveness may be associated with lower use of child care (Geoffroy, 2009). A first examination of QLSCD data on the relationship between parents and daycare providers when the children were 3½ years of age (2000 round) and in regulated daycares, reveals that proportionally fewer mothers in low-income families "strongly agreed" that when the child was having problems at home, they felt comfortable talking about it with the daycare worker or person taking care of the child (58% vs. 74%) or felt comfortable communicating dissatisfaction with certain aspects of the daycare service (55% vs. 70%) (data not shown). We will not attempt to explain these findings here. However, it seems important to show these in order to open the door to research on cultural or socio-emotional factors that could be related to the use of child care.

### Effects of child care in early childhood on child development

Parents, the scientific community and public authorities continue to question the positive or negative effects of child care on child development. There are no simple answers with regards to this issue – many nuances must be made when examining the findings of various longitudinal surveys on the theme of child development, conducted both here and elsewhere. This section presents a set of findings from the QLSCD organized according to the three dimensions of child development – physical, cognitive and socio-emotional.



### The physical dimension: health and eating habits

One of the concerns of parents who use child care is the impact it can have on the health of their children, particularly with regards to communicable diseases. The QLSCD data have shed light on associations between child care during early childhood and the physical health of children, in particular the prevalence of respiratory infections, dental caries and the use of antibiotics. Associations between child care and certain eating behaviours were also explored.

#### *Infections of the respiratory tract and antibiotic treatment under the age of 5 years*

Analyses conducted by Paquet and Hamel (2003) based on QLSCD data revealed that children at the age of 2½ years having attended a day care centre or CPE facility at 1½ and 2½ years were more likely to have contracted at least one respiratory tract infection in the previous 3 months than children who were not in daycare because of work or school on the part of the parents, irrespective of their socioeconomic status. These children were also more likely to have been perceived as having a lower health status or having seen a general practitioner in their first few years of life.

Again, based on QLSCD data, Dubois and Girard (2005) were interested in exploring the factors associated with antibiotic use in children between 1½ and 4 years of age. Their analyses revealed a positive association between using child care outside the home and taking antibiotics in the 6 months preceding each annual data collection, even when all other factors were entered in the model. Therefore, children in daycares compared to children in their own home, whether babysat or not, were more likely to have been given many antibiotic treatments between the age of 1½ and 4 years. However, the authors emphasize the protective effect of breastfeeding related to taking antibiotics before the age of 2½ years, and this whether or not the children were in daycare outside the home. According to the authors, these findings seem to support those obtained in other studies revealing that breastfeeding can play a protective role in terms of health in infancy and early childhood. The higher probability of taking antibiotics among children in child care outside the home can perhaps reflect the increased risk of contracting various types of infections (Dubois and Girard, 2002). However, certain studies conducted here or elsewhere suggest that over time children in daycare experience considerably fewer infections in the upper respiratory tract, otitis media and conjunctivae (Collet et al., 1994, cited in Canadian Paediatric Society, 2009b) and can even be more immune and contract fewer infections than children who stayed at home, once they begin attending school (see for example Palacio-Quentin et al., 1999; Presser, 1988).

*Oral health – fewer dental caries in early childhood for toddlers in certain types of child care*

Based on QLSCD data collected from birth to 4 years of age, Paquet and Hamel (2005) noted that even when considering the influence of many characteristics such as socioeconomic status, children having attended a day care centre or a CPE facility from the ages of 1½ to 4 years were less likely to have had dental caries (treated or not). More recently, it was observed that children having attended the aforementioned types of child care at any of the data collection rounds from the age of 1½ years were more likely to have already seen a dentist by the age of 6 years (MSSS and INSPQ, 2007). Although it cannot be demonstrated, the more positive findings observed in children with regards to oral health can perhaps be attributed to prevention activities (ranging from a good diet to beginning to brush the teeth) or screening done in certain types of child care.

*Type of child care and certain eating behaviours*

Prior to kindergarten, many children regularly eat meals in daycares. This other environment in which meals are eaten provides an opportunity to learn more about their diet and eating behaviours. Moreover, in general, the more structured environment in a daycare compared to the child's home no doubt constitutes a favourable component for eating meals at a regular time.

Analyses conducted on the QLSCD data have shown that children at the age of 2½ years who were not in child care (because of parents' work or school) were more likely than other children to be fussy with food (18% vs. 14%) or eat at irregular hours (15% vs. 11%). These children were also less inclined to eat vegetables every day (Dubois and Girard, 2002). These analyses also showed that children at 2½ years of age who were not in child care, similar to those who were in child care in their own home, were less likely to eat fruit daily. These two groups of children were also more likely to have fatty foods or sugary foods, soft drinks or other sugary drinks, on a daily basis (Dubois and Girard, 2002). However, since these results are based on bivariate analyses, it is not possible to discern the real influence of attending a type of child care on the differences observed in eating practices and behaviours of the young children. Indeed, since diet and eating behaviours were also significantly associated with the socioeconomic status of the family, it may be that the association observed between the consumption of certain categories of food (or certain behaviors with regards to food) and the type of child care can be attributed to the fact that children in daycare (outside the home) come from families with higher socioeconomic status rather than the simple fact of attending daycare as such.<sup>9</sup>



**The cognitive dimension**

Because of the strong association between cognitive and language skills in children at school entry and their future success in school, numerous researchers have been interested in the factors associated with the development of these skills in early childhood.

*School readiness and pre-mathematics skills*

Analyses based on QLSCD data (Geoffroy, 2009) have shown that non-parental child care on regular basis may be beneficial for vulnerable children, such as those whose mothers have not completed high school. The findings indicate that vulnerable children who spend considerable time in child care between the ages of 5 months and 4 years seem to be better equipped in certain aspects of school readiness and future success in school.

Furthermore, Japel (2008) recently observed a positive association between the children's number of years in any type of child care from the age of 5 months to 5 years and pre-mathematics skills in kindergarten. The analysis examined the number of years in which children had experienced vulnerability (see the Section entitled "Certain characteristics related to the use of child care"). However, the proportion of explained variance for this analysis was relatively weak, namely 5%. Other factors that were not measured may have played a role here.

*Vocabulary assessment*

The Peabody Picture Vocabulary Test (PPVT), which assesses the number of words understood by a child (receptive vocabulary), is frequently used in the QLSCD and other surveys on child care. One of the analyses revealed that children in child care (including that at home) at each round of the QLSCD from the age of 2½ years to the year preceding entry into kindergarten, and those regularly participating in educational activities at the age of 3½ years (e.g. nursery school), were less likely than other children to show a delay in vocabulary acquisition at the end of kindergarten. They were less likely to be in the lowest quintile (20%) of the PPVT rather than in the middle and upper quintiles (Desrosiers and Ducharme, 2006). Japel (2008) also observed a positive association between the number of years in any type of child care from the age of 5 months to the age of 5 years and the performance of the children in cognitive tests such as the PPVT.

However, Desrosiers and Ducharme (2006) did not observe any significant differences in PPVT results related to being in kindergarten or not at 4 years of age or by the main type of child care in the year preceding entry into kindergarten. Moreover, though a positive association was observed between more time spent in child care during early childhood, all types combined, and better performance in receptive vocabulary at school entry, this became non-significant when a set of other factors were entered in the model, such as socioeconomic trajectories or stimulation activities in the family setting such as reading to the child (Desrosiers and Ducharme, 2006, 2008). The results of this analysis suggest that the positive association between child care at the age of 2½ years and better results in vocabulary acquisition in kindergarten may be attributable to a more favourable family environment than to child care itself.

Therefore, the frequency of reading to the child, particularly among mothers who were not working, seems to be a more determining factor related to receptive vocabulary from 4 to 6 years of age than being in child care (Desrosiers and Ducharme, 2006, 2008; Lefebvre and Merrigan, 1998). According to certain authors, vocabulary is acquired more in the context of informal exchanges among children and between adults and children than in the context of prekindergarten school or child care attendance (Capuano et al., 2001). This could explain the fact that no significant influence on PPVT performance was observed as a result of the children being in child care.<sup>10</sup>

Finally, it should be emphasized that the number of years spent in child care may also not be associated with reading performance in the first year of primary school, when such factors as the stimulation level in the family are entered in the model (Tétreault, Desrosiers and Cardin, 2009).

### **The socio-emotional dimension**

The effects of child care on the socio-emotional development of children constitute another concern of parents, policymakers and researchers. Although many factors are involved in socio-emotional development such as mother-child attachment, anxiety, depression and social interaction, analyses conducted on QLSCD data have essentially focused on aggressivity. Indeed, the influence of child care on aggression has been a topic of debate for two decades, especially in the wake of research conducted by Belsky (1988), who was one of the first to demonstrate more aggressive behaviour among children who have been in child care. Although severely criticized for certain methodological shortcomings, his research continues to be widely cited. On the other hand, a whole school of literature on the theme of aggression (see for example Tremblay, 2008; Tremblay, Gervais and Petitclerc, 2008) emphasizes the need to intervene early, since it is during early childhood that the child learns to manage his/her aggressivity, and in this sense, child care may play a key role in prevention, screening and intervention.

#### *Child care at an early age and its association with aggression*

Côté et al. (2007) have shown that, based on data from the QLSCD cohort, being in child care at a very early age can have a protective effect on disadvantaged children in terms of physical aggression. Physical aggression was defined in this article as behaviours such as biting, hitting, fighting, kicking and bullying. The authors observed that when

various characteristics of the mother or household are entered in the model, having been in any type of child care in the first round of the QLSCD when the children were between 4 and 8 months of age was associated with a lower probability of having a high level of physical aggression in the prekindergarten period (from 17 to 60 months) among children whose mother did not have a high school diploma. Although the authors talk about a positive influence related to child care before the age of 9 months, only 13% of children were in child care in the first round of the QLSCD, and most were between 4 and 5 months of age at that time. Among children whose mother did not have a high school diploma, only 10% had attended child care before the age of 9 months, namely only 2% of all children targeted by the survey.<sup>11</sup> These low percentages are related to the fact that a sizeable proportion of mothers were still on maternity leave at the time.

#### *Number of years in child care and possible influence on aggression*

Japel (2008) does not observe an association between any type of child care and physical aggression in kindergarten. She observed that when the number of years in which the children had been in a state of vulnerability is considered (namely when four or more risk factors were present; see the Section entitled "Certain characteristics related to the use of child care"), the number of years the children had spent in child care was not associated with the level of physical aggression seen in kindergarten.

### **Child care in the prekindergarten period – beneficial or not?**

It is difficult and daresay risky to suggest a general conclusion on the effects of non-parental child care on child development among the QLSCD-targeted children, particularly given that the data on the socio-emotional dimension comprise fertile ground and have been little studied, and that the quality dimension was not taken into account in the studies cited. To paraphrase Sphancer (2006), we can say that in terms of the influence of daycare on child development, issues remain persistent, but clear answers remain elusive. Therefore it seems important to highlight sometimes contradictory findings obtained in various studies, both those reported here and those found in the international literature related to child care's influence on cognitive development (see, for example, the Canadian Paediatric Society's review of the literature, 2009a) or on socio-emotional development (Belsky, 2005; Besemer, 2007; Bigras and Cantin, 2008; Bigras and Japel, 2007; Côté et al., 2008; and Huntsman, 2008).

The diversity of findings can perhaps be explained by differences related to the type of child care examined and what exactly was measured in terms of characteristics, i.e. duration (years in child care), frequency (hours per week) and/or age of first child care experience. Taken as a whole, the findings obtained to date using QLSCD data, combined with those of other large-scale longitudinal studies, seem to suggest, however, that children from disadvantaged families can benefit from regular child care, at least, with regards to certain aspects of their development. Given the varying quality observed among childcare facilities and daycare centres in Québec (Drouin et al., 2004; Japel, Tremblay and Côté, 2005), large-scale studies including quality assessment would be needed to better understand the impact of non-parental child care on child development.

## Description and effects of school daycare on children 6 to 8 years of age

### Overall description of school daycares

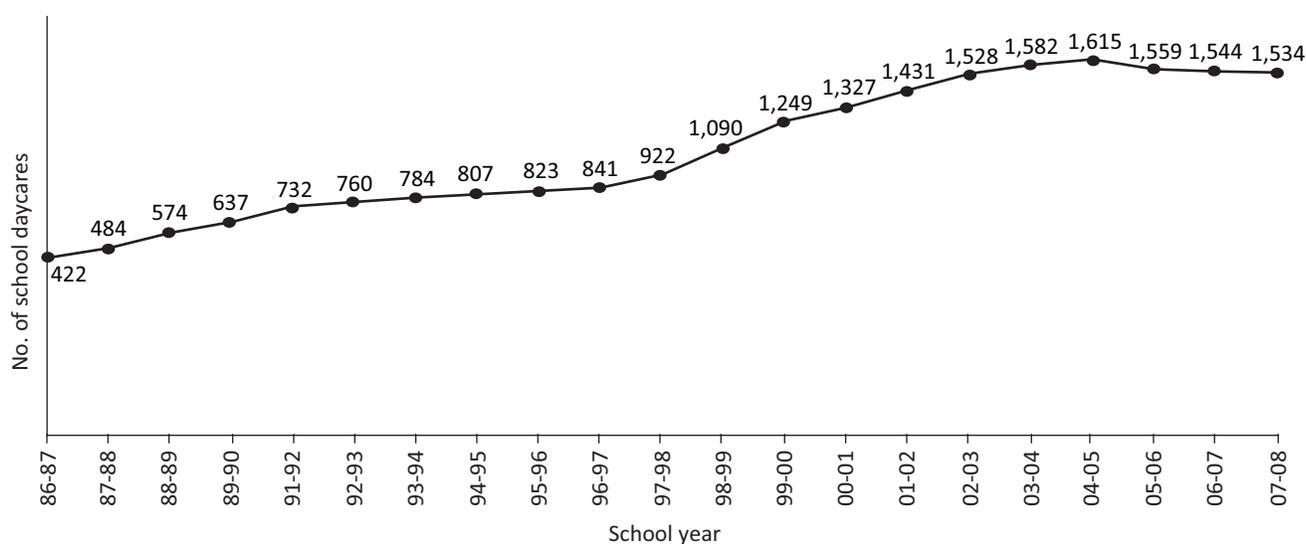
Data from the 2004 to 2006 rounds of the QLSCD provide an unpublished overview of children in school daycare from kindergarten to Grade 2 (2<sup>nd</sup> year of primary school) who were born in Québec in 1997-1998. The new family policy measures related to daycare announced in 1997 providing subsidized low-cost daycare also covered school daycares. Since then, the rate of using school daycares has continued to increase. Figure 4 illustrates the growth of school daycares (SD) according to data from the *Association des services de garde en milieu scolaire du Québec* (ASGEMSQ) (Québec Association of School Daycares).<sup>12</sup> We can see that the number of school daycares more than tripled in a timespan of 20 years. Table 3 shows the growth by region. Therefore, after subsidized low-cost daycare was introduced, we can see that the number of school daycares in all regions of Québec increased. Relatively remote regions, namely Abitibi-Témiscamingue, Nord-du-Québec, Saguenay-Lac-Saint-Jean, Côte-Nord, Bas-Saint-Laurent, Gaspésie-Îles-de-la-Madeleine, experienced a 177 % growth rate between 1997-1998 and 2004-2005, whereas Montreal had a growth rate of 15% in the same timeframe. This table clearly demonstrates the magnitude of the increase in school daycares in regions other than Montreal, because of factors such as the subsidized low-cost program for daycare in schools.



According to QLSCD data, 47% of children born in Québec in 1997-1998 attended a school daycare from kindergarten<sup>13</sup> to Grade 2 in elementary school, while 14% had never attended a school daycare (data not shown). The percentage of children in school daycares decreased between kindergarten and Grade 2, going from 50% to 44% (see Figure 5).

Certain characteristics distinguish children who had spent time in a school daycare during each of these three rounds of the QLSCD from those who hadn't. Children in low-income households<sup>14</sup> were less likely than other children to have been in school daycare during any one of these years (kindergarten: 39% vs. 53%; Grade 1: 37% vs. 54%; Grade 2: 27% vs. 49%) (see Figure 6).

Figure 4  
Growth of school daycares in Québec, from 1986–1987 to 2007–2008



Note : Data for the year 1990-1991 are missing.

Source : Association des services de garde en milieu scolaire du Québec (Québec Association of School Daycares), *Rapport d'activités 2007–2008* (Report on Activities 2007–2008).

Table 3  
Number and growth rates of school daycares, by region and school year, Québec, 1997-1998, 2000-2001, 2004-2005

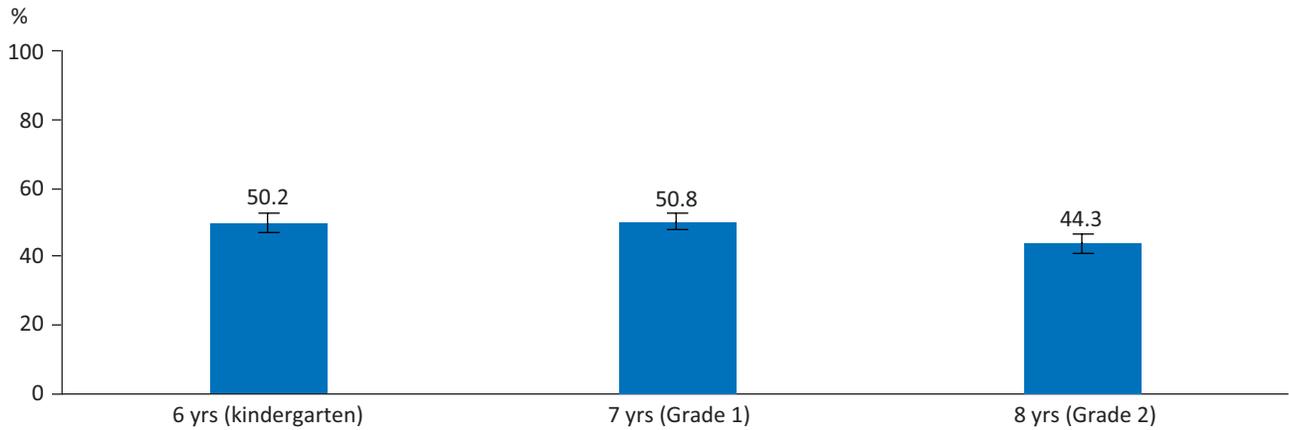
Region	Number of school daycares			Growth rate (%)		
	1997-1998	2000-2001	2004-2005	1997-1998 to 2000-2001	2000-2001 to 2004-2005	1997-1998 to 2004-2005
<b>Greater Montreal Region</b>	<b>273</b>	<b>302</b>	<b>313</b>	<b>11</b>	<b>4</b>	<b>15</b>
Montréal	273	302	313	11	4	15
<b>Ring around Greater Montreal</b>	<b>339</b>	<b>512</b>	<b>597</b>	<b>51</b>	<b>17</b>	<b>76</b>
Montérégie	184	277	323	51	17	76
Laurentides	55	100	116	82	16	111
Lanaudière	41	74	79	80	7	93
Laval	59	61	79	3	30	34
<b>Greater Québec City Region</b>	<b>101</b>	<b>114</b>	<b>146</b>	<b>13</b>	<b>28</b>	<b>45</b>
Québec city	101	114	146	13	28	45
<b>Medium-sized Admin. Regions</b>	<b>146</b>	<b>301</b>	<b>380</b>	<b>106</b>	<b>26</b>	<b>160</b>
Outaouais	46	74	84	61	14	83
Chaudière-Appalaches	38	67	94	76	40	147
Estrie	36	55	85	53	55	136
Mauricie	17	48	52	182	8	206
Centre-du-Québec	9	57	65	533	14	622
<b>Relatively Remote Regions</b>	<b>64</b>	<b>119</b>	<b>177</b>	<b>86</b>	<b>49</b>	<b>177</b>
Abitibi-Témiscamingue	14	21	34	50	62	143
Nord-du-Québec	0	3	3	-	0	-
Saguenay-Lac-Saint-Jean	19	39	63	105	62	232
Côte-Nord	12	19	23	58	21	92
Bas-Saint-Laurent	15	26	32	73	23	113
Gaspésie-Îles-de-la-Madeleine	4	11	22	175	100	450
<b>All of Québec</b>	<b>923</b>	<b>1 348</b>	<b>1 613</b>	<b>46%</b>	<b>20%</b>	<b>75%</b>

Source : Ministère de l'Éducation, du Loisir et du Sport, *Déclaration des clientèles scolaires* (DCS) (Declaration of School Enrolment), drawn from the Conseil supérieur de l'éducation (2006).

The findings were similar in terms of the parents' employment status or education level; these two characteristics were strongly associated with each other. With otherwise equal characteristics, children in families in which both parents or the single parent was working were more likely to attend school daycare when compared to other children in families in which one or both parents were unemployed (kindergarten: 58% vs. 24%; Grade 1: 58% vs. 26%; Grade 2: 50% vs. 19%) (see Table A.3 in the Appendix). This was also the case for children whose mother had a post-secondary diploma or university degree compared to children whose mother did not have a high school diploma (consistently observed from kindergarten to Grade 2) (See Figure 7).

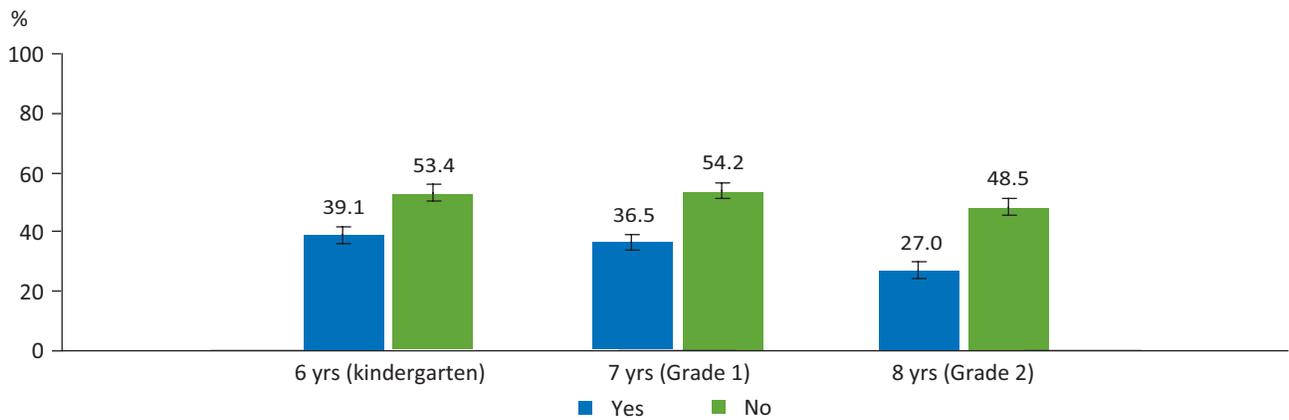
Siblings are also a factor associated with attending school daycare. Indeed, the fact of having at least two brothers or sisters was associated with lower use of school daycare. From kindergarten to Grade 2, 64%, 68% and 60% of children respectively who did not have siblings during these rounds had attended school daycare versus 42%, 43% and 36% of children who had at least two brothers or sisters (see Table A.3 in the Appendix). This suggests that children in a larger family have either an older brother or sister that can babysit them at home or that their mother is not active in the labour force. Another explanation is that when there are more children in the household, it may be more advantageous to pay someone to come into the home to take care of them. It should be noted that being in a single- or two-parent family and the mother's immigrant status were not associated with using school daycare.

Figure 5  
**Proportion of children regularly in school daycare, by age, Québec, 2004 to 2006**



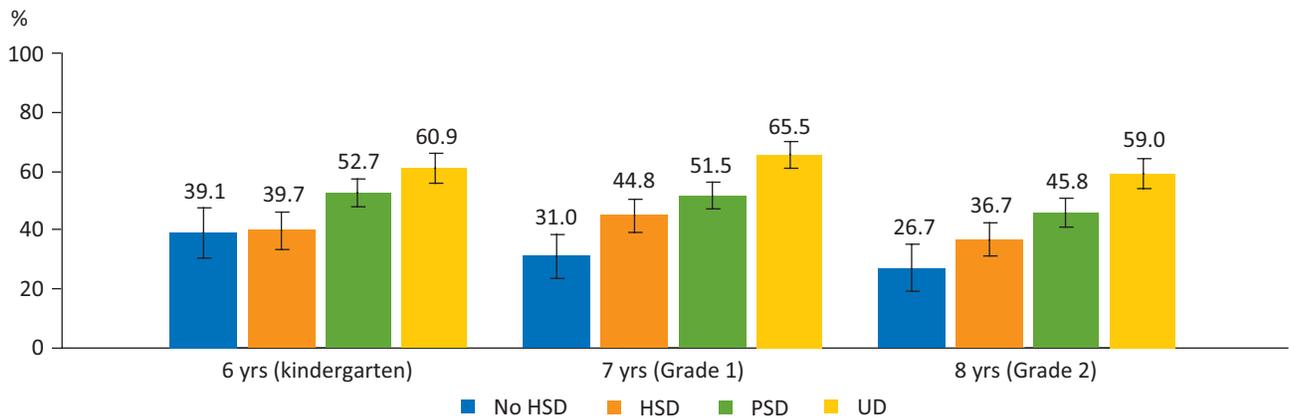
Source : Institut de la statistique du Québec, QLSCD 1998-2010.

Figure 6  
**Proportion of children regularly in school daycare, by age and whether they were living in a low-income household, Québec, 2004 to 2006**



Source : Institut de la statistique du Québec, QLSCD 1998-2010.

Figure 7  
**Proportion of children regularly in school daycare, by age and mother's education level, Québec, 2004 to 2006**



1. HSD = High School Diploma; PSD = Post-Secondary Diploma; UD = University Degree.

Source : Institut de la statistique du Québec, QLSCD 1998-2010.

In general, various analyses based on QLSCD data show that being in daycare, both during early childhood and at the beginning of primary school, is significantly associated with the socioeconomic characteristics of families. Although this is not surprising, questions can still be raised as to the low attendance of children from families that could probably benefit from the structure that school daycares provide, such as a time period to do school work that has been mandatory for children in school daycare since 1999.

**Complementary information**

The QLSCD data do not provide a means of distinguishing between children who are in a school daycare only during the lunch period, those who are in it sporadically, and those who are in it regularly (morning, noon and evening, every weekday). However, data from

the files of the Ministère de l'Éducation, du Loisir et du Sport, which are compiled on September 30 of each school year, can inform on this topic. Table 4 presents the distribution of the target children of the QLSCD by the frequency of school daycare attendance. There was a decrease in regular use of daycare between kindergarten and Grade 2 (61% to 54%) with a corresponding increase in lunchtime daycare (25% to 33%).

The QLSCD data provide a portrait of the number of hours a week spent by children in a school daycare. For school-age children, the average number of hours decreased from 14 in kindergarten to 12 hours in Grades 1 and 2 (Table 5). However, as seen in Figure 8, a sizeable proportion of children, namely between 18% and 28% according to level, were in school daycare more than 15 hours a week.

Table 4  
**Distribution of children<sup>1</sup> in school daycare by attendance profile and grade level, Québec, 2003 to 2006**

	Kindergarten	Grade 1	Grade 2
	2003-2004	2004-2005	2005-2006
	%		
Regularly in school daycare	60.9	57.5	53.6
Sporadically in school daycare	14.6	14.3	13.5
In lunchtime school daycare	24.5	28.2	32.8

1. The data here concern only the QLSCD children. These results were obtained by matching files of the QLSCD with those of the Ministère de l'Éducation, du Loisir et du Sport.

Sources : Institut de la statistique du Québec, *QLSCD 1998-2010* and *Fichier de déclaration des clientèles scolaires* (Declaration of School Enrolment) of the Ministère de l'Éducation, du Loisir et du Sport.

Table 5  
**Number of hours a week in school daycare, by age, Québec, 2004 to 2006**

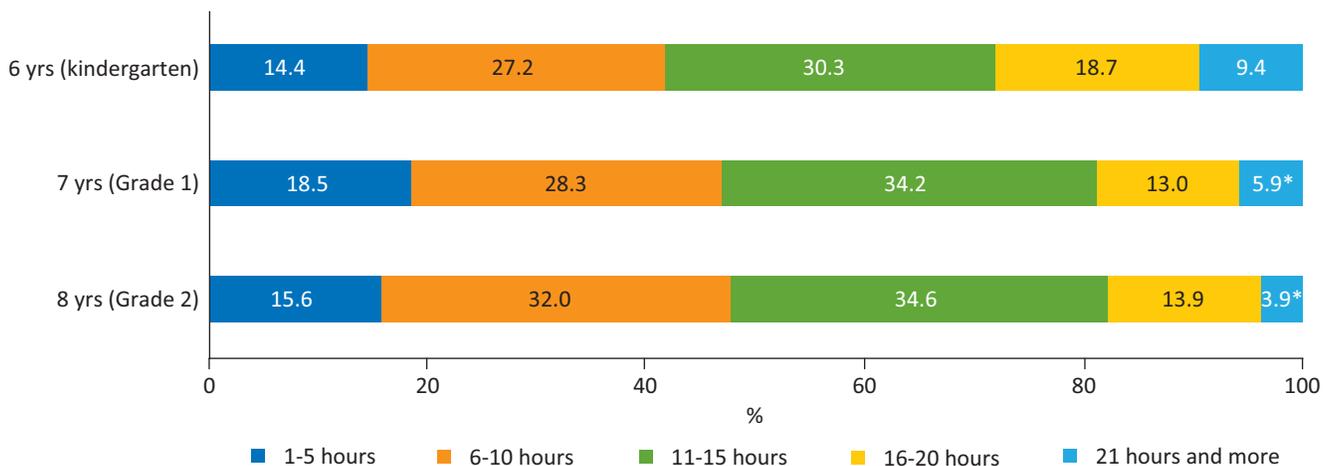
Round	School year	Age <sup>1</sup>	(Minimum – Maximum Age)	Number of hours a week in school daycare	
				Average	C.I. <sup>2</sup>
2004	Kindergarten	6 years	(68 months – 80 months)	13.6	13.1-14.2
2005	Grade 1	7 years	(80 months – 91 months)	11.9	11.5-12.4
2006	Grade 2	8 years	(92 months – 103 months)	11.9	11.4-12.4

1. Median age of children at each round.

2. Confidence interval at 95%.

Source : Institut de la statistique du Québec, *QLSCD 1998-2010*.

Figure 8  
**Distribution of children by number of hours a week spent in school daycare at 6, 7, and 8 years of age, Québec, 2004 to 2006**



\* Coefficient of variation between 15% and 25%; interpret with caution.

Source : Institut de la statistique du Québec, *QLSCD 1998-2010*.

## School daycare – an unexplored research topic

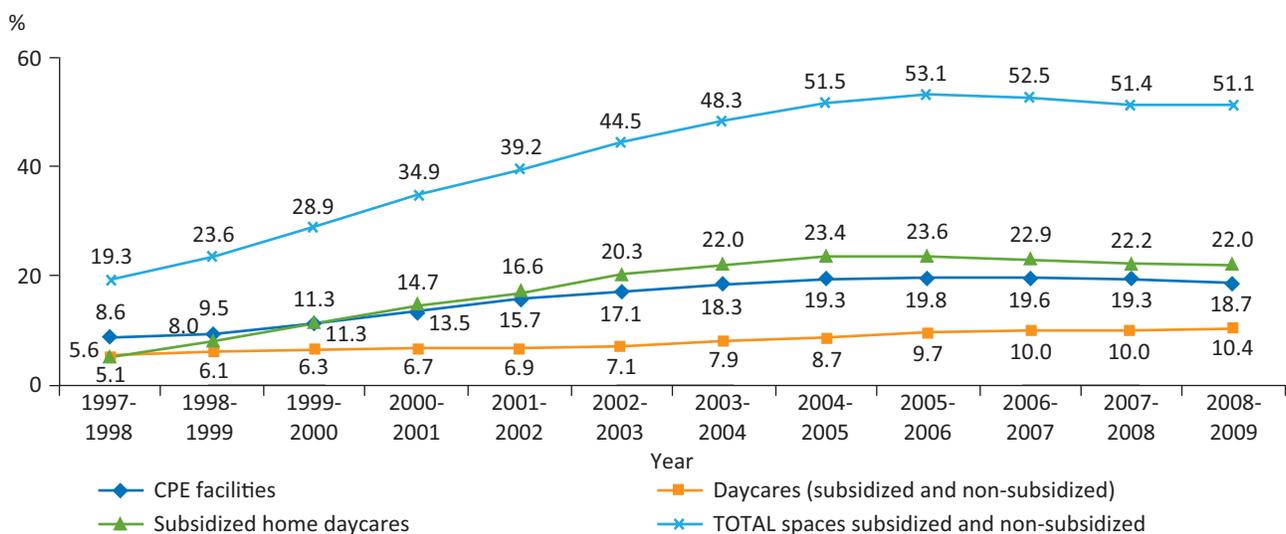
As a research subject, school daycare has been neglected. In the U.S., certain studies have begun to identify associations between attendance in afterschool programs, school achievement and delinquency (Kane, 2004; NICHD, 2004). Indeed, the structure and types of activities can vary, but it seems that how children spend their time after school is a good predictor of academic achievement and the manifestation or not of delinquent behaviours (Vandell, Reisner and Pierce, 2007). However, in Québec, although school daycares saw a rapid expansion following the new family policy measures implemented in 1997, the effects of attending daycare remain poorly known. Even the recent Ménard report (Groupe d'action sur la persévérance et la réussite scolaires au Québec, 2009) made few recommendations with regards to school-age children. Much discussion focuses on issues concerning children 0 to 5 years of age and ways of preventing dropouts in high school, but aspects related to elementary school are barely covered. Yet we have seen that children rapidly leave school daycare when they reach school age, and a notable decrease in use of daycare is already observed between kindergarten and Grade 2. Many questions remain unanswered. What do the children do after class? Are they supervised at home? These lead to further questions. At what age can a child be at home alone? What are the future risks for the children given the observation that those least likely to attend daycare are from disadvantaged families? Some of these aspects are documented in the QLSCD and present interesting possibilities for future analyses.

## Child care – a sociopolitical context in constant evolution

As we have seen, the QLSCD children were eligible for subsidized low-cost daycare beginning in 2000. The findings here refer to the period during which the number of daycares was significantly increasing in both prekindergarten and school settings. An interesting question to pose would be the following: if a survey was launched now, would the findings be the same? In observing the supply of child care spaces for the whole of Québec, we see that it has considerably increased since the beginning of the QLSCD (see Figure 9). For example, the rate of subsidized and non-subsidized spaces for children 0 to 4 years of age grew from 19 per 100 children in 1997–1998 to 51 per 100 in 2008–2009. It was the category of subsidized home childcares that saw the greatest increase in the rate of spaces between 1997–1998 and 2005–2006, more than quadrupling, and the rate for CPE spaces doubled during the same time-frame. Note that home childcares, subsidized or not, respond to a need expressed by parents, who have indicated they prefer this type of child care for children under 2 years of age (Bureau de la statistique, 1999; ISQ, 2001, 2006).<sup>15</sup> Since no data are available on non-subsidized home daycares, it is not possible to document growth in this type of child care. Finally, as seen in Figure 9, except for subsidized and non-subsidized day care centres, 2006–2007 seems to be the time when a slight decrease in the rate of spaces began to be observed for children 0 to 4 years of age. This coincided with an increase in the number of births registered in the province.

Figure 9

**Growth in subsidized and non-subsidized child care spaces available for children 0–4 years of age, Québec, from 1997–1998 to 2008–2009<sup>1</sup>**



1. Excluding non-subsidized home daycares for which data are not available.

Sources : Statistics Canada, *Demographic Estimates*, and *Rapports annuels de gestion du ministère de la Famille et des Aînés* (Annual Management Reports of the Ministry of the Family and Seniors), 1998-1999 to 2008-2009.

Compiled by : Institut de la statistique du Québec.

If a longitudinal study were launched today, it would not be possible to predict the findings we would obtain. Experience with the QLSCD indicates that particular attention should be devoted to the quality and the type of child care used, especially in a context where the percentage of subsidized low-cost spaces available in regulated home daycares matches that available in CPEs. Furthermore, attention should be given to children in non-regulated home daycares for whom we have few or no data. In this regard, we can add that the increase in the dollar amount of provincial tax credits for children in non-subsidized child care (Ministère des finances du Québec, 2009) may increase the use of this type of child care. Indeed, with this tax measure, non-subsidized child care, whether a home daycare or a day care centre, become alternatives to regulated daycares because the cost is close to the \$7-a-day contribution families make, once family income and the tax credit are factored in. If this hypothesis were to be confirmed, it raises another argument for collecting data that takes into account this relatively new reality. It would be interesting to explore the effects of these tax measures on children, given that studies on quality conducted when subsidized low-cost daycare was being introduced emphasized the concern about quality in non-regulated daycares (Bigras and Japel, 2007). Finally, the reform of the *Loi sur les centres de la petite enfance et autres services de garde à l'enfance* (An Act respecting childcare centres and childcare services) adopted in 2005 significantly transformed CPEs by transferring the responsibility of managing and supporting home childcares, from them to coordinating offices. This reorganization led to many layoffs of "conseillères pédagogiques" (pedagogical advisors) in the government-regulated child care network. Results of both the *La qualité, ça compte!* and *Grandir en qualité* surveys on quality were obtained prior to the changes in the law, and would therefore need to be re-examined in light of these changes.

Other changes such as the increase in the immigrant population since the end of the 1990s (Girard, 2008) undoubtedly raise further questions related to the evolution of child care in Québec and its effects. In this regard, it is important to emphasize that the QLSCD data do not provide a means of in-depth exploration of child care arrangements by the parents' country of origin. In addition, because they are based on a cohort of children born in Québec, the data do not provide a means of analyzing child care among children who arrived in Québec after their birth. On this topic, the Ministère de l'Emploi, de la Solidarité sociale et de la Famille published a review of the literature in 2004 on the arrival and integration of immigrant children or immigrant families with regards to child care (Ciceri et al., 2004). The report underlined the importance of conducting more research on this topic.

## Conclusion

In conclusion, it is clear that a whole set of factors should be considered when analyzing child care in light of the Bronfenbrenner "ecology of human development" model. The model sheds light on the complexity of interactions that can affect child development, notably factors related to the child such as age, temperament, gender, factors related to the family such as socioeconomic status, and

contextual factors such as the type and quality of child care, etc. We can readily comprehend the difficulty of taking into account a set of factors in a single study or in disaggregating these to identify those that most likely have an effect on child development. The findings obtained here should also be interpreted in the sociopolitical context in which child care has been evolving in Québec, particularly the state of educational daycare.

In this regard, the QLSCD constitutes an invaluable and unique source of data in terms of providing a portrait of child care among children born in Québec at the end of the 1990s. Since this longitudinal survey covers a period in which major changes occurred in the supply and structure of child care as well as certain legislation affecting families such as parental leave, it provides a unique database for examining the evolution of child care in this province.

More specifically, the data collected during the first eight rounds of the QLSCD have provided a means of analyzing child care during both early childhood and the first few years of elementary school. They reveal that children from disadvantaged families are less likely to have their children in child care, both before their children enter school and after. In addition, the profiles of child care use are quite diversified, both in types of child care and number of hours a week spent there. In short, the QLSCD data clearly illustrate that *being in child care* can have many meanings. The diversity of profiles should be taken into account in the analysis and interpretation of the effects of child care on child development.

In conclusion, we should emphasize that irrespective of the research topic, a point of consensus in the scientific community is the importance of the quality of child care provided, during both early childhood and school-age years. By quality is generally meant services based on trained and well-paid personnel, appropriate adult-child ratios that fulfill the needs of children, and the provision of a stimulating and safe environment, to name but a few characteristics. The quality aspect, combined with QLSCD findings indicating lower use of child care among certain families, suggests that ongoing improvements in child care as well as support for vulnerable families are essential conditions for fostering the development of children in Québec.

## Appendix

Table A.1  
History of Québec family policy and the QLSCD, 1997–2007

Round of the QLSCD	Median age of the QLSCD children	History of Québec family policy
1997		<p>The Ministère de la Famille et de l'Enfance (MFE) is created.</p> <p>Formed by the merger of the <i>Secrétariat à la famille</i> and the <i>Office des services de garde à l'enfance</i>, the MFE was given the responsibility of family affairs.</p> <p>Enactment of the new family policy measures described in the White Paper entitled <i>Children at the Heart of Our Choices</i>.</p> <p>The three major policy directions are financial support for parents, child care and parental leave.</p> <p>Aspects of the policy comprise:</p> <ol style="list-style-type: none"> <li>1. The gradual implementation of educational childcares for young children, school daycares and full-time kindergarten.</li> <li>2. The plan to create a parental leave insurance plan more generous than the federal government's one at the time.</li> </ol> <p>In September 1997, children 4 years of age are eligible for low-cost subsidized childcare (\$5 a day). Parental leave under the employment insurance plan is 10 weeks.</p>
1998 Round 1	5 months	In September 1998, children 3 years of age are eligible for low-cost subsidized childcare.
1999 Round 2	1½ year	In September 1999, children 2 years of age are eligible for low-cost subsidized childcare.
2000 Round 3	2½ years	<p>The duration of parental leave under the unemployment insurance plan is extended.</p> <p>The federal government increases the duration of parental leave under the employment insurance plan from 10 to 35 weeks. By taking into account maternity leave, new parents can therefore benefit from paid leave of up to 50 weeks. Payments under the plan are also increased.</p> <p>In September 2000, children under 2 years of age are eligible for subsidized low-cost childcare.</p>
2001 Round 4	3½ years	No major changes in the family policy.
2002 Round 5	4 years	No major changes in the family policy.
2003 Round 6	5 years	<p>The Ministère de l'Emploi, de la Solidarité sociale et de la Famille (MESF) is created.</p> <p>Formed by the merger of the MFE and the Ministère de l'Emploi et de la Solidarité sociale, the new MESF becomes responsible for issues related to the family and family policy. However, seniors are not one of the target populations of this ministry, and become the responsibility of the Ministère de la Santé et des Services sociaux.</p>
2004 Round 7	6 years	<p>Increase in the required contribution of parents for certain subsidized childcares (CPEs and school daycares).</p> <p>Fees for parents in the Québec network of CPEs and school daycares increase from \$5 to \$7 a day.</p> <p>Provincial action plan presented to the legislature entitled <i>Un Québec digne de ses enfants</i> (A Québec Worthy of its Children).</p> <p>With the same perspective in mind as the UN resolution on the rights of children, this action plan has four priorities: 1) the health and well-being of children; 2) access to quality education; 3) protection against abuse, exploitation and violence, and 4) the creation of a favourable environment for children.</p>

Table A.1 (count'd)  
**History of Québec family policy and the QLSCD, 1997–2007**

Round of the QLSCD	Median age of the QLSCD children	History of Québec family policy
2005 Round 8	7 years	<p>The Ministère de la Famille, des Aînés et de la Condition féminine is created.</p> <p>The Ministère de l'Emploi, de la Solidarité sociale et de la Famille is divided in two. One half becomes the Ministère de la Famille, des Aînés et de la Condition féminine that assumes responsibility for family issues and family policy. However, parental leave insurance is managed by the new Ministère de l'Emploi et de la Solidarité sociale.</p> <p>Enactment by order in council (i.e. not presented for a vote at the National Assembly) of Bill 124 on educational childcares. The reform of the <i>Loi sur les centres de la petite enfance et autres services de garde à l'enfance</i> (An Act respecting childcare centres and childcare services) is the most important transformation of CPEs since their creation in 1997. The responsibility of managing and supporting home childcares by CPEs is transferred to coordinating offices.</p>
2006 Round 9	8 years	<p>Beginning of the parental leave program, part of the Québec family policy. It is available to families in the context of the <i>Régime québécois d'assurance parentale</i> (Québec Parental Insurance Plan).</p> <p>Compared to measures of the federal employment insurance program applicable in the rest of Canada, the Québec Parental Insurance Plan is more accessible, more flexible and provides higher allowances for parents who, whether mother or father, can stay at home with their child during the first year of his/her life.</p> <p>The Québec Parental Leave Plan offers the following:</p> <ul style="list-style-type: none"> <li>• Income replacement rates related to the duration of parental leave, maximum insurable remuneration and longer duration of payments</li> <li>• Coverage of the self-employed</li> <li>• Leave exclusive for fathers</li> <li>• No waiting period.</li> </ul> <p>On June 1 2006, 164 CPEs are designated coordinating offices assuming the management of regulated home childcares.</p> <p>The transfer of the responsibility of managing and supporting home childcares to coordinating offices leads to the layoff of many "conseillères pédagogiques" (pedagogical advisors) in the government-regulated child care network.</p> <p>In 2006, according to the new classification plan, the "responsables des services de garde en milieu scolaire (SGMS)" (school daycare providers) become "techniciennes en service de garde" (daycare "technicians"<sup>1</sup>).</p> <p>The year 2006 was marked by the enactment of the <i>Loi sur l'équité salariale</i> (Pay and Equity Act), which applies to educational daycare workers in CPEs and educational daycare workers and "technicians" in school daycares.</p> <p>In August 2006, the <i>Règlement sur les services de garde éducatifs</i> (Educational Childcare Regulation) replaces the <i>Règlement sur les centres de la petite enfance</i> (Regulation respecting childcare centres) and the <i>Règlement sur les garderies</i> (Regulation respecting day care centres). As of 2006, there are few differences between the regulations of a CPE and those of a regulated day care centres. In terms of the qualifications of personnel, in both of these types of child care, the regulations indicate that at least two-thirds of the staff taking care of children must have recognized training.</p>
2007 (no QLSCD data collection)	9 years	<p>The Ministère de la Famille, des Aînés et de la Condition féminine becomes the Ministère de la Famille et des Aînés.</p> <p>The laws and regulations governing daycares become the responsibility of the following ministries: the Ministère de la Famille et des Aînés and the Ministère de l'Éducation, du Loisir et du Sport.</p> <p>The Ministère de l'Éducation, du Loisir et du Sport adds 90 minutes of class time a week to elementary school as of the beginning of the 2006-2007 school year, which reduces the number of hours of educational personnel in school daycares and the operating hours of school daycares from then on. Data on school daycare attendance collected in the 2008 and 2010 rounds of the QLSCD from parents of the children in Grade 4 and Grade 6 respectively of elementary school will be analyzed in the near future.</p>

1. The term "technician" is widely used in Québec for certain job titles that are unrelated to what would commonly be described as "technical" work in English. It is simply a designation for a certain level of employment in government or para-governmental organizations, whether anything "technical" per se is involved or not.

Sources : Berger, Héroux and Shéridan (2008); Famille en mouvance et dynamique intergénérationnelle (2005).

## Appendix A.2

### Changes to certain questions on child care during early childhood (QLSCD, 1998–2003)

Data on child care is collected in each round of the QLSCD using the *Computerized Questionnaire Completed by the Interviewer* (CQCI, CAR section).

The main goal of this section is to collect basic data on child care arrangements of the target child at each round of the QLSCD, as of when the child was 5 months old. Therefore the data primarily cover the child care arrangements at the time of data collection.

Many questions were taken in their entirety directly from the *National Longitudinal Survey of Children and Youth* (NLSCY), while other questions were adapted to the context of Québec. Questions were also designed by researchers or professionals of the MFA who are associated with the QLSCD.

With the goal of better fulfilling the needs of QLSCD partners and account for changes in educational daycare in Québec since 1998, changes were made to certain questions over time.

#### Regular or occasional child care

As shown in Table A.2, in rounds 1998 to 2000 parents were asked whether they used any type of child care, “Yes” or “No,” because of *work or school*. As of the 2000 round, the parents must specify whether child care was regular or occasional. Only parents of children in child care regularly are then asked to respond to questions on the number of hours a week as well as questions on the type of child care they used. Therefore, as of 2000, the estimates presented in this fascicle cover only children regularly in child care. This resulted in the exclusion of between 4% and 6% of children whose parents used child care occasionally. By presuming that children in child care in the 1998 and 1999 rounds were for the most part in child care regularly, these exclusions should have a minimal impact on the comparability of data at the various ages of the children.

#### Reasons for using child care

While in the first three rounds of the QLSCD (1998 to 2000), data collected on the topic focused on child care *because of work or school on the part of the parents*, as of 2001, questions cover child care irrespective of the reason for using it. However a question was added to discover the *main reason* for using child care. The most frequent reason for regular child care has been because of work or school on the part of the parents, but it is possible that working parents might specify child development and socialization as the primary reason. Therefore, in this fascicle, the analyses are not restricted to children in child care regularly *mainly* because of work or school as of the 2001 round.

#### Types of child care used

During each round, parents were asked a question on the various types of child care used. Because of the changes introduced in the educational daycare system in Québec, the following questions had to be re-formulated:

- 1998 round: “Which of the following methods of child care do you currently use while you (and your spouse/partner) are at work or studying? Care provided in someone else’s home by a non-relative?” “Is the person providing this care licensed by the government or approved by a family daycare agency?”

1999 round: The following was added in parentheses after “non-relative”: “home daycare”

2000 round: The following was added in parentheses after “non-relative”: “home daycare” The last question becomes: “In the care provided by this person monitored by a child-care centre that holds a Quebec government permit?”

- 1998 round: “Do you currently use: Care in someone else’s home by a relative?” “Is the person providing this care licensed by the government or approved by a family daycare agency?”

1999 round: “Do you currently use while you (and your spouse/partner) are at work or studying: Care in someone else’s home by a relative?” “Is the person providing this care licensed by the government or approved by a family daycare agency?”

2000 round: “Do you currently use while you (and your spouse/partner) are at work or studying: Care in someone else’s home by a relative?” The second question becomes: “Is the care provided by this person monitored by a child-care centre that holds a Quebec government permit?”

- 1998 round: “Do you currently use: Care in a daycare centre (including at workplace)?” “Is the child care program or daycare centre operated on a profit or non-profit basis (include government sponsored care)?”

1999 round: “Do you currently use while you (and your spouse/partner) are at work or studying: Care in a daycare centre (including at workplace)?” “Is the child care program or daycare centre operated on a profit or non-profit basis (include government sponsored care)?”

2000 round: “Do you currently use while you (and your spouse/partner) are at work or studying: Care in a daycare centre (including at workplace)?” The second question becomes: “In the care provided by this person monitored by a childcare centre that holds a Quebec government permit?”

To learn more about the questions on child care, please access the QLSCD website at: [www.jesuisjeserai.stat.gouv.qc.ca](http://www.jesuisjeserai.stat.gouv.qc.ca)

Table A.2  
History of the main question on child care in the QLSCD, by round, Québec, 1998–2003

Round (median age)	Question in the CQCI (section CAR)	Response choices
1998 (5 months)	Q1A. Do you currently use child care such as daycare or babysitting while you (and your spouse/partner) are at work or studying?	YES NO
1999 (1½ years)	Q1A3. Do you currently use child care such as daycare, babysitting or care by a relative or other caregiver while you (and your spouse/partner) are at work or studying?	Yes NO
2000 (2½ years)	Q1A3. Do you currently use child care such as daycare, babysitting or care by a relative or other caregiver while you (and your spouse/partner) are at work or studying?	YES, ON A REGULAR BASIS YES, ON A OCCASIONAL BASIS NO
2001 (3½ years)	Q1A3. Do you currently use child care such as daycare, babysitting or care by a relative or other caregiver? <sup>1</sup>	YES, ON A REGULAR BASIS YES, ON A OCCASIONAL BASIS NO
2002 (4 years)	Q1A3. Do you currently use child care such as daycare, babysitting or care by a relative or other caregiver? <sup>2</sup>	YES, ON A REGULAR BASIS YES, ON A OCCASIONAL BASIS NO
2003 (5 years)	Q1A3. Do you currently use child care such as daycare, a school day care, babysitting or care by a relative or other caregiver? <sup>2</sup>	YES, ON A REGULAR BASIS YES, ON A OCCASIONAL BASIS NO

1. Parents who had used any type of child care regularly were asked the following: “What is the main reason for your regular use of childcare services?” The response choices were the following: “1) Work/studies; 2) Voluntary work; 3) Sports and leisure activities; 4) Rest and relaxation; 5) Shopping and other chores; 6) Family obligations; 7) Child development and socialization; 8) Other (specify).”

2. Parents who had used any type of child care **regularly or occasionally** were asked the following: “What is the main reason for your use of child care services?” The response choices were the same in the 2001 round.

Source : Institut de la statistique du Québec, *QLSCD 1998-2010*.

Table A.3  
**Proportion of children regularly attending school daycare, by certain sociodemographic characteristics, Québec, 2004 to 2006**

	6 years (Kindergarten)				7 years (Grade 1)				8 years (Grade 2)			
	Yes		No		Yes		No		Yes		No	
	%	C. I. <sup>1</sup>	%	C. I. <sup>1</sup>	%	C. I. <sup>1</sup>	%	C. I. <sup>1</sup>	%	C. I. <sup>1</sup>	%	C. I. <sup>1</sup>
<b>Low-income household<sup>2</sup></b>												
Yes	39.1	32.2-46.0	60.9	54.0-67.8	36.5	29.8-43.3	63.5	56.7-70.2	27.0	20.8-34.0	73.0	66.0-79.2
No	53.4	50.4-56.4	46.6	43.6-49.6	54.2	51.4-57.0	45.8	43.0-48.6	48.5	45.4-51.6	51.5	48.4-54.6
<b>Mother's education level</b>												
No high school diploma	39.1	30.5-47.6	60.9	52.4-69.5	31.0	23.7-38.4	69.0	61.6-76.3	26.7	19.2-35.3	73.3	64.7-80.8
High school diploma	39.7	33.5-46.0	60.3	54.0-66.5	44.8	39.2-50.4	55.2	49.6-60.8	36.7	31.0-42.3	63.3	57.7-69.0
Post-secondary diploma or certificate (non-university)	52.7	48.0-57.4	47.3	42.6-52.0	51.5	47.1-56.0	48.5	44.0-52.9	45.8	40.8-50.8	54.2	49.2-59.2
University degree	60.9	55.8-65.9	39.1	34.1-44.2	65.5	61.0-70.0	34.5	30.0-39.0	59.0	53.9-64.1	41.0	35.9-46.1
<b>Mother's immigrant status</b>												
Born in Canada	51.3	48.5-54.1	48.7	45.9-51.5	50.5	47.9-53.0	49.5	47.0-52.1	44.7	41.8-47.7	55.3	52.3-58.2
Immigrant	44.6	34.9-54.3	55.4	45.7-65.1	52.4	43.4-61.4	47.6	38.6-56.6	42.5	32.8-52.2	57.5	47.8-67.2
<b>No. of brothers and sisters living in the household</b>												
None	63.8	56.2-71.5	36.2	28.5-43.8	68.2	60.9-75.4	31.8	24.6-39.1	59.6	50.3-68.9	40.4	31.1-49.7
1	54.6	50.6-58.7	45.4	41.3-49.4	54.4	50.8-57.9	45.6	42.1-49.2	48.5	44.5-52.5	51.5	47.5-55.5
2	41.5	35.9-47.1	58.5	52.9-64.1	43.0	37.9-48.1	57.0	51.9-62.1	35.5	30.4-40.6	64.5	59.4-69.6
3 or more	29.8*	20.4-40.6	70.2	59.4-79.6	30.8	22.5-39.1	69.2	60.9-77.5	28.8	21.1-37.5	71.2	62.5-78.9
<b>Type of household</b>												
Two-parent	49.3	46.1-52.5	50.7	47.5-53.9	49.3	46.5-52.0	50.7	48.0-53.5	42.9	39.8-46.0	57.1	54.0-60.2
Single-parent	54.8	47.4-62.2	45.2	37.8-52.6	58.6	52.1-65.1	41.4	34.9-47.9	52.5	45.3-59.7	47.5	40.3-54.7
<b>Parents' employment status (past 12 months)</b>												
Single parent in a single-parent family or both parents in a two-parent family were working	58.0	54.8-61.1	42.0	38.9-45.2	57.9	55.0-60.8	42.1	39.2-45.0	50.6	47.4-53.8	49.4	46.2-52.6
Single parent in a single-parent family was not working, one or both parents in a two-parent family were not working	23.9	18.1-29.7	76.1	70.3-81.9	26.2	20.8-31.7	73.8	68.3-79.2	18.7*	12.8-25.9	81.3	74.1-87.2

1. Confidence interval at 95%.

2. According to the low-income cutoff set by Statistics Canada based on family size and size of census metropolitan area (CMA) in which the residence is located.

\* Coefficient of variation between 15% and 25%; interpret with caution.

Source : Institut de la statistique du Québec, *QLSCD 1998-2010*.

## Notes

1. Claudine Giguère is a Research Agent and Hélène Desrosiers is a Coordinator in the *Direction des enquêtes longitudinales et sociales* (Department of Longitudinal and Social Surveys) at the *Institut de la statistique du Québec* (Québec Institute of Statistics).
2. The French acronym CPE refers to *Centre de la petite enfance*, the literal translation of which would be “Early Childhood Centre.” The French acronym will be used throughout the text, since English-speaking Québécois also use this term. Refer to Box 1 for a detailed definition.
3. These services are also available for children 4 years of age who are in prekindergarten, also known as preschool.
4. Data collection and analyses in the *La qualité, ça compte!* survey were the entire responsibility of GRIP.
5. For more detail on various Canadian and Québec studies on the quality of daycare, see Bigras and Japel, 2007.
6. SACERS (Harms, Vineberg-Jacobs and Romano-White, 1996) or its Québec-adapted version *Échelle d'évaluation : environnement de garde scolaire* (Harms, Vineberg-Jacobs and Romano-White, 1998) is the current scientific reference for evaluating daycare in Québec.
7. The term “elementary school” is widely used in Canada for “primary school.”
8. As the authors indicated at the time, this finding may be attributed to “the fact that because of Québec family policy, low-income families can benefit from a reduction in or exemption from low-cost daycare fees, a direct incentive to use these services.”
9. For more information, the reader can refer to Part B of the recent article by the Canadian Paediatric Society (2009b) which contains a review of the literature on the topic of the association between attending daycare and injuries or infections in children.
10. It should be noted that studies based on data from the *National Longitudinal Survey of Children and Youth* (NLSCY) provide contradictory findings related to the effect of child care on vocabulary acquisition among Canadian children (Gagné, 2003; Geoffroy et al., 2007; Lefebvre and Merrigan, 2000). While Geoffroy et al. (2007) note that attending any type of child care may foster vocabulary acquisition among children from socioeconomically disadvantaged households, other research (Gagné, 2003; Lefebvre and Merrigan, 2000) could not disaggregate the protective effects of certain types of child care or prekindergarten education on vocabulary acquisition among Canadian children, whether or not they were vulnerable in terms of socioeconomic status. Gagné (2003) observed that in terms of the PPVT, being in child care could even have a slightly negative effect on children whose mother’s parenting skills were higher than average and who had a higher education level.
11. Calculated by the Institut de la statistique du Québec (ISQ).
12. According to the ASGEMSQ, these data may differ slightly from those of the Ministère de l’Éducation, du Loisir et du Sport because the definition of what constitutes a school daycare is not the same for these two organizations.  
  
The annual report entitled “Rapport d’activités 2008/2009” (Report on Activities 2008/2009) is available (in French only) from the Association des services de garde en milieu scolaire du Québec (ASGEMSQ) (Québec Association of School Daycare Services) – <http://www.asgemsq.qc.ca/qui-sommes-nous/rapport-annuel.html> — (514) 334-4653.
13. Kindergarten is accessible to children 4 years of age from disadvantaged households as well as to children with a handicap. School daycares are also accessible to these children. The QLSCD data do not provide a means of presenting a representative portrait of these two specific groups.
14. According to the low-income cutoff (before taxes) set by Statistics Canada, based on the size of the family and the Census Metropolitan Area (CMA) in which they live.
15. It should be noted that a question on parents’ preferences with regards to type of child care was only introduced in the QLSCD when the children were 2½ years of age.

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