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Understanding the Early Years

Early Childhood Development in the Montréal Study Area, Montréal, Québec

An Analysis of the Communities Survey

SP-687-03-10E

Canada

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Print
English: Cat. No.: HS4-23/2-2008E
ISBN: 978-1-100-14076-6
French: Cat. No.: HS4-23/2-2008F
ISBN: 978-1-100-92939-2

PDF
English: Cat. No.: HS4-23/2-2008E-PDF
ISBN: 978-0-662-48493-6
French: Cat. No.: HS4-23/2-2008F-PDF
ISBN: 978-0-662-08771-7

Foreword

Early childhood is a key time for growth and development as children interact with the world around them: their families, other children, childcare providers, community programmers and more. Research shows that while what happens in early childhood does not *determine* what happens later, it does place children on developmental pathways that become increasingly difficult to alter as time passes.[1]

There is strong consensus that one of the key "enabling conditions" for healthy child development is supportive communities – communities that are safe and secure and that provide access to programs and services for families with children. In turn, the future of our communities is dependent on the healthy development of their children. Given the important role communities play in healthy child development, it is critical that policy and program decisions taken at that level be based on a sound understanding of the outcomes and needs of children in the community.

Understanding the Early Years (UEY) is a national initiative that provides communities with local information that can help them make informed decisions about the most appropriate programs and services for their young children. Information collected through the UEY initiative helps communities understand how their children are doing physically, socially and cognitively, as well as how families and the community are supporting those children. Parents, educators, community organizations and others learn about what is going well in their community and work together to make their community a better place for young children and their families.

This report for the Montréal study area is one of seven community reports produced for the second pilot phase of the UEY initiative. The reports describe the developmental outcomes of young children, and explore how these outcomes are influenced by demographic characteristics and by family and community factors in each of the seven communities that have participated in the initiative since 2001. The seven communities are Hampton/Sussex, New Brunswick; Montréal, Quebec; Niagara Falls, Ontario; Dixie Bloor (Mississauga), Ontario; South Eastman, Manitoba; Saskatoon, Saskatchewan; and Abbotsford, British Columbia.

The Montréal report provides a profile of how young children in the community are doing, based on an analysis of two cycles of data collected in 2001 and 2005 by Statistics Canada, using the Communities Survey (adapted from the National Longitudinal Survey of Children and Youth). Specifically, the report provides findings about the developmental outcomes of kindergarten children, including outcomes relating to their physical health and well-being, cognitive skills and behaviours. The report also explores factors that may be related to these children's outcomes, by looking at changes in demographics, family processes and community factors between 2001 and 2005.

We hope that the Montréal community – parents, educators, schools, businesses and community organizations – can draw useful information from this report. In better understanding how well their youngest citizens are developing and the variables that may influence that development, they can work together to improve the community for their young children.

We also hope that the community profiles in the set of seven reports provide valuable lessons about the needs and strengths of communities with different economic, social and physical characteristics, as well as about factors that enable young children to thrive.

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[1] Moore, 2005:17.

Acknowledgements

This report is the result of collaboration between staff from the Community Development and Partnerships Directorate and the Strategic Policy Research Directorate of Human Resources and Social Development Canada (HRSDC). Management from both directorates – John Connolly, Mireille Laroche, Daniela Dibartolo, Catherine Massé and André Bordeleau – provided guidance and support throughout the writing of the report. Carolyn Scott and Nathalie Rainville from the Community Development and Partnerships Directorate helped write the sections on community context and review the literature on early childhood development. Liz Nieman, in the same directorate, reviewed drafts of the report and provided valuable and constructive comments. Two student research assistants, Mathieu Lévesque and Preston Dériger, also provided important assistance.

The authors would like to acknowledge the Special Surveys Division of Statistics Canada for conducting the Communities Survey in the Understanding the Early Years (UEY) pilot communities, which provided the data presented in this report. The authors would especially like to thank the parents, children and kindergarten teachers who participated in the UEY research activities, and to acknowledge Pierre Lapointe and his research team at the Montréal study site, who provided considerable help with the preparation of this report. Without their participation and assistance, this report would not have been possible.

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Table of Contents

Executive Summary

This report presents survey findings from two cycles of data collection in a 45-km^2 area of Montréal located east of the city centre. The study was conducted by Statistics Canada as part of the second pilot phase of the Understanding the Early Years initiative (UEY-II), using the Communities Survey, a research tool adapted from the National Longitudinal Survey of Children and Youth (NLSCY). The first cycle of data collection took place in 2001, and the second cycle occurred in 2005.

The Communities Survey consisted of two main activities: direct assessments of kindergarten children in the Montréal study area and interviews with parents.[2] The results from the survey paint a portrait of early childhood outcomes at the study site, including outcomes related to physical health and well-being, cognitive skills and behaviour. The parental interviews offered information on a plethora of factors that may have influenced these developmental outcomes. The factors include the demographic characteristics of the children (e.g., age, gender), family income, parental education, parenting practices, childcare arrangements, literacy activities in the home, mutual support among neighbours, neighbourhood quality and safety, and use of the community's recreational, cultural and educational resources.

By analyzing the two cycles of survey data together, the report also offers some insights into changes in demographic characteristics, family processes and community factors in the Montréal study area between 2001 and 2005, and how these changes may have affected the development of kindergarten children living in the community.

To facilitate understanding of the survey results, the developmental outcomes of Montréal children are compared with the averages for the seven UEY-II pilot communities and, where possible, with averages for Canada as a whole.

The remainder of this summary presents highlights from the report.

Montréal Children: Developmental Outcomes

The study results show that the majority of children in the Montréal study area continued to enjoy good health in 2005, although more than one in five had a long-term health condition. The children also demonstrated quite stable performance in the direct cognitive assessments conducted in 2001 and 2005. One third of children showed delayed vocabulary development, a higher proportion than among the UEY-II communities as a whole and twice the national level.

Children performed much better in assessments that were less language-dependent, such as the Number Knowledge Test and Who Am I? assessment, than on the vocabulary test. On the Number Knowledge assessment, the performance of Montréal children was identical to the average performance of children across the seven UEY-II communities. Considerably more children in 2005 than in 2001 reached the 6-year-old equivalent level of number knowledge (66% vs. 51%). On the Who Am I? assessment, the average score in Montréal was close to the average of the UEY-II communities, with 10% of children classified as being delayed in 2005. The corresponding proportion of children in the whole UEY-II sample was 12%.

With respect to emotional development and social behaviours, the percentage of children in the Montréal study area showing signs of hyperactivity dropped considerably over the study period, from 21% in 2001 to 12% in 2005. No statistically significant changes were found, however, in the prevalence of children displaying emotional difficulties and antisocial behaviours: about 1 in 10 children were considered vulnerable in emotional development, while about 15% were prone to aggressive behaviours.

Montréal Children: Demographic Characteristics and Developmental Outcomes

Between 2001 and 2005, the kindergarten population living in the Montréal study area underwent some demographic changes. In 2001, there were about 2,564 kindergarten children, with boys outnumbering girls. By 2005, this number had dropped to 1,661, with girls accounting for a little more than half (52%).

[2] Each interview was conducted with the person deemed most knowledgeable about the child (PMK). About 85% of PMK were mothers.

An increasing proportion of these children (13% in 2005) were born outside North America or Europe. As well, although more than 70% of kindergarteners spoke French as their first language, a growing percentage of them learned another language as their mother tongue. For 28% of children, their mother tongue was neither French nor English.

Gender was one characteristic that appeared to be linked to children's cognitive and behavioural outcomes. For example, the study found that boys were more prone than girls to emotional problems, aggressive behaviours and hyperactivity. The 2005 data also indicate that boys were much more likely to receive low scores for vocabulary skills.

Differences in first language(s) may be more important in explaining differences in vocabulary development than other characteristics, such as gender or birthplace. Children whose first language was neither French nor English were three times as likely as others to experience difficulty learning French or English vocabulary.

Montréal Families: Characteristics

Between 2001 and 2005, the average household income of families at the Montréal study site increased by about $900 (adjusted for inflation), while the proportion of children living in low-income families dropped substantially, from 46% to 36%. However, the average family income in the Montréal study area ($43,586) was still considerably below that of the UEY-II communities ($57,232). The Montréal study area also had a higher than average proportion of low-income families than the UEY-II communities.

In 2001, about 38% of children's mothers were born outside North America and Europe; this proportion increased significantly over the study period to reach 44% in 2005. As well, the proportion of mothers with a university degree or college diploma increased by 38%, up from 43% in 2001 to 59% in 2005, while the percentage who had not completed secondary education fell by 50%, down from 21% in 2001 to 10% in 2005.

In 2005, 63% of children's mothers were engaged in paid employment, a rate identical to the 2001 level and slightly below the average across the UEY-II communities. About 29% of kindergarten children lived in no-earner families in 2005, an increase of 8% over the 2001 figure.

In 2001, about 25% of children's mothers reported they had a chronic health condition. This figure had risen by 68% in 2005, reaching 42%. However, the vast majority of children's mothers (about 90%) rated their general health as good or excellent in 2005.

Changes also occurred in the structure of young children's families in the Montréal study area. A slightly larger proportion of kindergarten children lived in a two-parent family in 2005 than in 2001 (65% vs. 62%). Seventy-four percent lived with one or more siblings in 2005, compared with 70% in 2001.

The study found that family income was associated with vocabulary development. In 2001, children living below the low-income cut-off (LICO – established by Statistics Canada) were about 2.5 times more likely to be delayed in vocabulary development (as assessed using the Peabody Picture Vocabulary Test – Revised [PPVT-R], or its French equivalent) than children living at three times LICO or above (36.4% vs. 15%). By 2005, below-LICO children were 6.5 times more likely to be delayed (52.5% vs. 8%).

Family income may also have indirectly influenced children's outcomes by affecting access to activities important for early childhood development, such as participation in coached or supervised group activities. Children in higher-income families were much more likely to participate in coached sports; music or art lessons; and dance, gym or martial arts classes. They were about 2.6 times more likely than children living below LICO to be enrolled in coached sports (78% vs. 30%). On the other hand, participation in uncoached sports, community clubs or leadership programs did not appear to be associated with family income.

Maternal education level and parental employment were associated with various child outcomes. In both 2001 and 2005, children of less-educated mothers were more likely to receive low PPVT-R scores and to display signs of hyperactivity. The 2005 data also show that these children were more likely to exhibit indirectly aggressive behaviours.

Children in no-earner families were almost twice as likely as children with working parents to receive low PPVT-R scores. The 2001 data also show that children in no-earner families were more likely to exhibit aggressive and indirectly aggressive behaviours, while the 2005 data indicate that this group was more likely to show signs of emotional problems.

Compared with children living in two-parent families, children in single-parent families were more likely to receive low PPVT-R scores, show signs of emotional problems, and exhibit aggressive behaviours and hyperactivity. As well, the 2005 data show that children in single-parent families had a greater tendency to display indirectly aggressive behaviours than children in two-parent families, although this link was not indicated in the 2001 data.

Montréal Families: Family Processes and Non-parental Childcare

The majority of children's families in the Montréal study area functioned well. However, about 22% of children lived in families that functioned at the low level (less well than the majority of families in the UEY-II communities), an increase of 42% over the 2001 figure. The corresponding average across the UEY-II communities was 12% in both 2001 and 2005.

Parents in the Montréal study area showed little change in scores on four measures of parenting between 2001 and 2005. They scored above the UEY-II averages on rational and effective parenting and below the UEY-II norm on consistent and positive parenting.

In 2005, more than 80% of Montréal parents read to their children and taught them numbers either daily or at least a few times a week. Overall, they were considerably more engaged with their children in 2005 than in 2001, with significant increases in the percentages of parents engaged in reading activities or teaching numbers on a daily basis. However, their engagement level remained below the UEY-II averages in 2005.

The use of non-parental childcare in the Montréal study area increased by 22% over the study period: 71% of the kindergarten children in the area were in non-parental care in 2005, compared with 58% in 2001. The average recorded across the UEY-II communities in 2005 was 55%.

The majority of children in non-parental childcare in the Montréal study area were enrolled in before/ after-school programs, with the proportion increasing from 71% in 2001 to 81% in 2005. The proportion attending daycare centres and nursery/preschools fell from about 10% in 2001 to 6.7% in 2005. Care by a relative or non-relative, either at home or outside the home, accounted for another 11% of children who needed non-parental care in 2005.

For children in the Montréal study area, the level of family functioning was strongly associated with vocabulary skills, emotional development and social behaviours. For example, the 2005 data show that 42% of children in families functioning at a low level had delayed vocabulary skills, compared with 27% of children in families functioning at a high level. The 2005 data also indicate that children from families functioning at a low level were more likely to display signs of emotional problems and indirectly aggressive behaviours.

Based on the 2001 results, positive parenting appeared to be related to children's cognitive, emotional and behavioural development. However, the 2005 results did not confirm a link between positive parenting and children's vocabulary development. Consistent parenting was significantly related to better outcomes with respect to vocabulary skills, emotional development, social behaviours and attention spans.

Montréal Community: Neighbourhood Qualities

Parents in the Montréal study area tended to give higher scores than the UEY-II average to schools, health facilities, facilities for children and access to public transport. In contrast, they awarded relatively low scores to neighbourhood safety and cleanliness, as well as residents' involvement. Overall, neighbourhoods in the Montréal study area registered lower scores on most characteristics than averages recorded across the UEY-II communities. The two exceptions were facilities for children and access to public transport.

More than 80% of parents agreed or strongly agreed in both 2001 and 2005 that their neighbourhoods had safe parks and play spaces. However, the percentage agreeing that it was safe for children to play outside declined from 78% in 2001 to 71% in 2005.

The percentages of parents with positive opinions on neighbours' social support increased significantly between 2001 and 2005. For example, the proportion of parents who agreed that neighbours were ready to help one another increased from 76% in 2001 to 80% in 2005.

However, the percentages of parents agreeing that their neighbourhoods were good places to raise children were generally lower in the Montréal study area than across the UEY-II communities.

Montréal Community: Resources for Young Children

The results from the Montréal UEY site indicate that kindergarten children living there had better access to educational, cultural and recreational resources than the average across the UEY-II communities: nearly 87% of parents in 2005 agreed that educational resources were within walking distance or a short bus or car ride, with 81% and 73%, respectively, saying the same about cultural and recreational resources. Corresponding percentages for the UEY-II communities as a whole were 76%, 58% and 56%.

However, the data indicate that in 2005 only about 13% of children in the Montréal UEY community used educational resources, such as book clubs or reading programs, at least weekly or monthly. Moreover, the majority of children did not use any of these resources throughout the year, although the percentages of non-users of educational resources were lower in 2005 than in 2001.

Participation rates with respect to cultural resources were much higher. For example, in 2001, about 81% of children in the Montréal UEY site went to the movies, and close to 65% attended theatres, visited museums or watched spectator sports events. However, most of them used these resources just a few times a year.

Recreational facilities registered the highest use rates among the three types of community resources discussed in this report. Of these, parks or play spaces were the most popular type of facility: more than 70% of children used such facilities at least weekly in 2005.

Pools, including indoor and outdoor facilities, were the next most popular venues; however, the proportion of children using these facilities at least weekly dropped slightly from 42% in 2001 to 39% in 2005. By comparison, the use of recreational/community centres was low, with non-participation rates of 72% in 2001 and 64% in 2005. About 17% of children in the community used recreational/community centres at least weekly or monthly in 2005, a significant increase from 13% in 2001.

In 2005, about 40% of children in the Montréal study area participated in organized sports on a weekly basis, while weekly participation in unorganized sports was as high as 66%. Participation in all types of group activities increased substantially between 2001 and 2005, with participation in community clubs or leadership programs almost doubling. Despite the increases, participation in community group activities remained lower than the average across the UEY-II communities, except for lessons in music, art and non-sporting activities.

Many parents reported difficulties accessing community programs or services. In 2001, the top three difficulties cited by parents were lack of time, program cost and lack of programs for young children. Among the most common barriers, cited by more than 30% of parents in 2005, were lack of time, inconvenient program times, lack of program awareness and lack of programs for young children. Costs associated with programs or services remained a major reason for non-use, mentioned by more than 28% of parents.

While the data indicate an across-the-board increase in the percentages of parents mentioning different types of barriers in 2005, percentages citing most types of institutional barriers – such as the availability of programs – more than doubled over the study period. Also noteworthy was the increase in the percentage of parents mentioning cultural or religious reasons as a barrier. Finally, considerably more parents in 2005 than in 2001 mentioned lack of program awareness as a barrier.

1. Introduction

The nurturing and stimulation that children receive during their first 5 years can affect the rest of their lives. Research shows that neighbourhoods and communities have a major impact on the quality of this nurturing and stimulation, influencing the ability of parents and schools to provide the conditions that will result in the best developmental outcomes for children.

Understanding the Early Years (UEY) is a national initiative that (a) gathers information about the influence of family, neighbourhood and community factors on children's early development and (b) provides this information to families and community organizations so that they can use it in monitoring children's development and creating effective community-based responses. The goal is to help families and their communities make informed decisions about the best and most appropriate policies, programs and services for young children.

The pilot phase of the UEY initiative (UEY-I) was launched with a study in York region (now the North Quadrant of Toronto, Ontario) in 1999. Then, in 2000–2001, five communities – Prince Albert, Saskatchewan; Winnipeg (School District No. 1), Manitoba; Prince Edward Island; and Southwest Newfoundland – joined UEY-I. UEY-I was followed by a second pilot phase (UEY-II), when another seven communities became pilot sites in 2001–2002: Hampton/Sussex, New Brunswick; Montréal, Quebec; Dixie Bloor (Mississauga), Ontario; Niagara Falls, Ontario; South Eastman, Manitoba; Saskatoon, Saskatchewan; and Abbotsford, British Columbia.

This report presents results from the Montréal pilot site. The findings – based on data collected by Statistics Canada in 2001 and 2005 using the Communities Survey – focus on the development of kindergarten children in Montréal in major domains of child development, including physical health and well-being, cognitive skills and behaviour. The report also explores factors that may have influenced developmental outcomes, by looking at changes that took place between 2001 and 2005 in demographic characteristics, family processes and community factors.

The remainder of this chapter offers brief descriptions of Montréal as a milieu for the development of young children, the local UEY project manager and participants, and research activities implemented in the community as part of the overall UEY initiative.

1.1 Montréal UEY Community

The Montréal UEY community[3] is located in an area where the population has access to five Centres locaux de services communautaires, or CLSC: De Rosemont, Hochelaga-Maisonneuve, Olivier-Guimond, Saint-Michel and Villeray. It covers roughly 45 km^2 or 9% of the metropolitan area. The five CLSC are located east of downtown Montréal. The UEY community is home to about 22,000 children under 6 years of age out of a total population of about 279,000. Roughly one third of the 43,000 families in the community have children, and half of those have children under 6.

The most populated areas are located along Saint-Michel and Pie-IX Boulevards and in Villeray CLSC district. The least populated areas are in the De Rosemont and Olivier-Guimond CLSC districts. Forty percent of the community is residential, and 14% is industrial. The study area has 92 parks and green areas, amounting to 11% of the total area and scattered unevenly throughout the neighbourhoods.

The study area is characterized by low average family income and level of formal education. The average annual household income is about $31,000, substantially below the Canadian average of $48,000. Forty-three percent of households are low-income, and the majority of children under 6 years live in neighbourhoods where 20% to 31% of families receive government transfers, unemployment insurance or other welfare payments (the Canadian average is 19%). Forty percent of residents over the age of 15 have not completed high school. In some areas (accounting for more than 14,000 children), up to 70% of adults did not graduate from high school.

[3] In this report, we use "UEY community," "study area," and "UEY site" interchangeably to refer to the UEY project site in Montréal.

In some CLSC districts, more than 42% of the families are headed by a single parent. Here, unemployment can be as high as 18%, with 54% of families being low-income and 44% of the population having no high school diploma. In addition, many neighbourhoods are highly transient, with 19% of families moving in any one year, and contain a high proportion of recent immigrants.

In summary, families with young children in the study area face more challenging socio-economic conditions than families in many other communities across Canada. Only the Olivier-Guimond CLSC district has socio-economic conditions comparable to the Canadian average. All districts in the study area could benefit from more services and better programs to mitigate identified risk factors and support families with young children. However, since risk factors vary from one district to another, it is important that resources be distributed in an appropriate way.

1.2 Understanding the Early Years Pilot Project in Montréal

The UEY project for this study area is managed by Centre 1,2,3 Go! in partnership with the Montréal School Board, which includes 28 primary schools. The Centre is well known in the area, and its objective of helping communities who mobilize themselves around child development is related to the main goals of UEY project.

Research activities related to the UEY project implemented in the Montréal UEY community consisted of the following activities:

Teacher Assessment of Children's Readiness to Learn at School – Kindergarten teachers in the Montréal study area used the Early Development Instrument (EDI) questionnaire, developed by McMaster University, to assess their pupils' readiness to learn prior to Grade 1. The instrument measures the five domains of readiness to learn: physical health and well-being, social competence, emotional maturity, language and cognitive development, and communications skills and general knowledge. All children in their second year of kindergarten in study area elementary schools were assessed, and the results served as an indicator of how these children were supported and prepared during the preschool years for learning and entry into school.

Communities Survey – Statistics Canada conducted this survey to gather information on a representative sample of second-year kindergarten children in study area elementary schools. Data were collected through interviews with the person most knowledgeable about the child, usually a parent or guardian, and three direct assessment activities with the child. The results were analyzed to determine any relationships between children's development and various family and community factors that could influence that development. (For more information, see Chapter 2.)

Community Mapping Study – This study, carried out by the Montréal study community itself, consisted of the following three components: (1) an analysis of census data on distributions of children aged 0 to 6 years in relation to the socio-economic characteristics of the community (e.g., cultural, ethnic and linguistic diversity; household income; parents' employment and level of education; and level of criminal activity in the community); (2) development of an inventory of local programs and services available for families with young children; and (3) a study to examine in detail the infrastructure and physical environment, risk factors and assets of the UEY community neighbourhoods. The results of this study were mapped to illustrate how community and socio-economic resources, as well as other factors, are linked to children's development.

The EDI and Communities Survey entailed two cycles of data collection, the first on the 2001 cohort of kindergarten children and the second on the 2005 cohort. Both cycles of data collection had the same objectives. However, the fact there were two cycles enabled researchers to assess any changes in children's readiness to learn and how these might have been influenced by changes in the community's characteristics (including demographic and family characteristics) between 2001 and 2005.

By collaborating with the CLSC, as well as with parents and other members of the Montréal study community, the UEY project has helped improve the environment for early childhood development. Publication of the early research findings was welcomed by community members, including teachers, while the training given to parents and teachers has enhanced the capacity of both groups to provide a stimulating environment for young children. In Saint-Michel, a study group has been formed to discuss school successes.

The project results have also prompted Centre 1,2,3 Go! to examine various factors that could affect child development, including the physical environment of neighbourhoods and conditions in kindergarten classes. These evaluations have enabled the Centre to identify problems and make informed decisions on solutions. The published results will also feed into the activities of working groups created to examine early childhood development and readiness for school.

2. Background to the Communities Survey

This chapter presents a summary of theories on early childhood development and offers a brief description of the Communities Survey and its implementation in the Montréal study area. Its purpose is to provide background that can help in understanding what the study is about as well as the analysis of data reported in the following chapters.

2.1 Early Childhood Development: Main Theoretical Perspectives

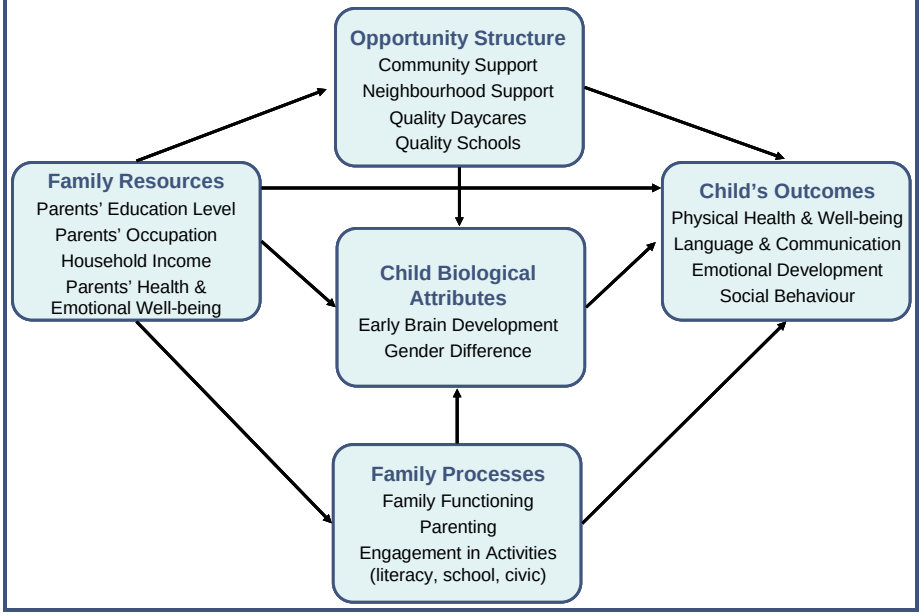
Research on early childhood development has been influenced primarily by three theoretical approaches (Willms 2002). The first approach is represented by "investment theory," an economic theory that presumes that children receive an endowment from their parents. This endowment includes biological attributes as well as their parents' norms, values, preferences, wealth and access to resources. Parents invest time and money in their children, mainly through expenditures on education and health care. Many studies of childhood outcomes are based on this theory.

The second set of theories suggests that childhood outcomes result from family processes and parenting practices. Children are less likely to have behavioural problems or poor cognitive development when their parents are supportive, responsive and affectionate. On the other hand, child development is negatively affected when parents are less engaged in activities beneficial to emotional and intellectual development, or are experiencing marital breakdown, as well as when families function less well as a cohesive unit.

The third group of theories stresses the importance of social context in shaping, constraining and redirecting the actions of individuals (Coleman 1988). This set of theories has sparked a number of recent research projects linking child health and development to community and neighbourhood characteristics. According to this perspective, parents' choices are influenced by the norms of their immediate community and the social supports available to them. For example, the amount of time parents spend with their children is shaped by the culture of the neighbourhood, friendship networks and the types of support provided in the community. Parents' ability to provide a nurturing environment for their children can be either helped or hindered by the neighbourhood and wider community (Willms 2003). For example, the quality and safety of the neighbourhood and of its daycare centres and schools, as well as other social factors such as a strong network of supportive friends and colleagues, play an important role in a child's development.

Theories that emphasize the roles of parenting, family functioning, neighbourhood and community have provided insights into the links between family socio-economic resources and children's developmental outcomes. More important, these theories have shed light on the changes that are possible through the actions of families, the support of community and volunteer agencies, and informed social policy at the local, provincial and national levels (Willms 2003).

Figure 2.1
Social ecological model of development (modified from Willms, D. 2000:43)



However, many studies on childhood development (summarized in Appendix A) indicate that all the factors identified in these theories play a role in a child's developmental outcomes. Thus, a new approach has emerged – the social ecological model of development – that views childhood development as the product of a combination of factors: individual characteristics, the family, the neighbourhood and the larger community (see Figure 2.1). This approach has gained broad acceptance in recent years. Under it, no single factor is predominant in determining a child's developmental outcomes. Rather, all factors interact in complex ways to influence outcomes.

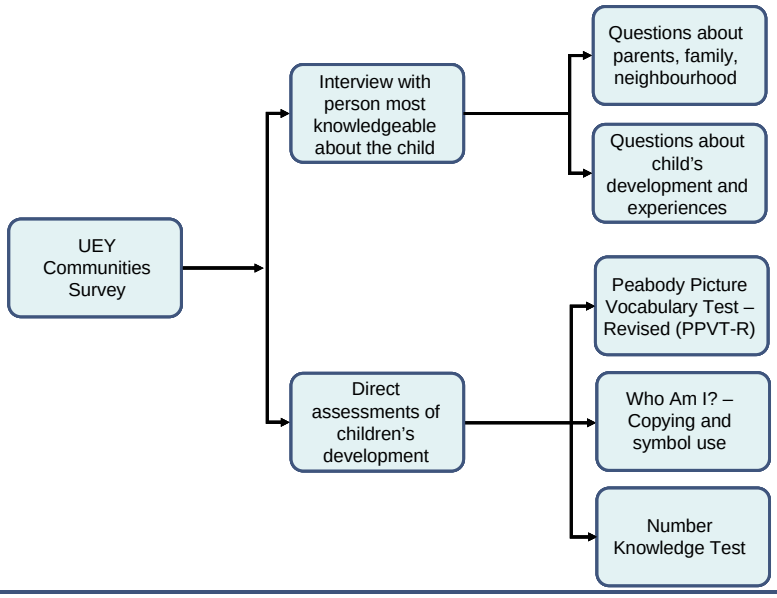
According to this model, studies of developmental outcomes need to include many individual, family and community factors in order to understand how these factors combine to affect a child's development. Research under the Understanding the Early Years (UEY) initiative, particularly the Communities Survey, has been heavily influenced by this social ecological thinking. The basic concepts have guided not only what types of data were collected at the UEY pilot sites but also how the data were analyzed.

2.2 Development and Content of the Communities Survey

The Communities Survey was developed by Human Resources and Social Development Canada and Statistics Canada for the UEY initiative. To ensure that the survey adequately addressed all relevant factors affecting early childhood development, the design phase included a multidisciplinary consultation. The selection of specific priorities and survey questions was then carried out with input and advice from the expert advisory group of the National Longitudinal Survey of Children and Youth (NLSCY), a group consisting of researchers in childhood development and other social sciences, representatives from other federal departments, and representatives from the provinces and territories responsible for childhood development programs.

The Communities Survey takes an ecological or holistic approach to understanding early childhood development and is designed to capture the diversity and dynamics of the factors that may affect children's development. Thus, it measures a set of developmental outcomes for children at 5 years of age, before they enter Grade 1, including those related to physical health, cognitive skills, emotional development and social behaviour. At the same time, it collects information on a broad range of factors that can explain these outcomes. This includes information about the child, the child's parent(s), family and neighbourhood characteristics, and the child's family life and community activity experiences. The Communities Survey employs the instruments used in the NLSCY for the cohort of 5-year-old children, enhanced with supplementary questions on childcare arrangements and use of community resources. Figure 2.2 provides an overview of the instruments used in the Communities Survey.

Figure 2.2
Overview of the Communities Survey



The Communities Survey consists of two parts: interviews with the person most knowledgeable about the child (PMK), usually the child's mother, and direct assessment activities with the participating child. The principal instrument used for interviews with the PMK is a questionnaire that contains two sections: a Child Section, where the PMK answers questions about the child; and an Adult Section, where the PMK provides information about the PMK and PMK's spouse or partner (where applicable), family structure and neighbourhood. The topics and topic contents are summarized in Table 2.1.

Table 2.1 Topics and topic contents in the PMK questionnaire	
Child Section	
Topics	**Content**
Health	General health, injuries, limitations, chronic conditions, use of health services
Behaviour	Positive behaviours such as perseverance and independence as well as negative ones such as hyperactivity and physical aggression
Activities	Participation in non-school activities and interaction with peers
Literacy	Exposure to books and interest in participating in reading and learning activities with parents
Parenting	Methods parents use to control, discipline, encourage and respond to the needs of the child
Family history	Child's family arrangements (e.g., parents' marital status and, if parents are separated/divorced, age of the child at the time)
Childcare	Types of childcare and amount of time spent in childcare
Communication	Ability to understand an oral message and to pass the content on to someone else, as well as the general ability to communicate verbally
Community resources	Availability and use of educational and recreational resources in the community (e.g., museums, community centres) and reasons for not using these resources where available (e.g., inaccessibility or cost)
Socio-demographic characteristics	Ethnicity, country of origin, Aboriginal status, first languages, languages used at home
Adult Section	
Health	General health, physical limitations, chronic conditions, mental health (e.g., depression syndrome)
Education	Highest level of education attained
Income	Household income, sources of income, adequacy of income
Labour market participation	Employment status, occupation, industrial sector, work hours and shifts; if applicable, length of unemployment and reasons for unemployment
Family functioning	Quality of family relationships as indicated by the family's ability to communicate, make decisions and solve problems as a group, discuss feelings and concerns, and feel accepted for who they are
Neighbourhood safety	Perception of the neighbourhood as a safe or dangerous place to raise children, perception of social cohesion or neighbourliness
Social support	Support from friends, family members and members of the community
Socio-demographic characteristics	Immigration, ethnic background, languages spoken by household members, religious affiliation

The second component of the Communities Survey includes three assessment activities that are undertaken with each participating child:

- the Peabody Picture Vocabulary Test – Revised (PPVT-R); French-speaking children received the French equivalent of the PPVT-R, the Échelle de vocabulaire en images Peabody, version révisée (EVIP-R);
- a shortened version of the Who Am I? instrument; and
- the Number Knowledge Test.

These assessment activities are summarized below.

Peabody Picture Vocabulary Test – Revised

The PPVT-R is used to assess a child's level of receptive (or hearing) vocabulary, which can predict achievement in school. The child is given a card bearing four images. The assessor then reads out a word from the test, and the child has to point to the image on the card that the child believes represents that word. Pictures and words become progressively more difficult as the test continues. The PPVT-R was developed by Lloyd and Leota Dunn at the University of Hawaii and is widely used as a measure of receptive vocabulary for any age group (2.5 years to adult).

Who Am I?

The Who Am I? instrument is administered to children upon entry into school. It assesses the cognitive processes that underlie the acquisition of early literacy and numeracy skills. The assessment consists of three scales: symbols (circle, cross, square, triangle and diamond), copying (printing name, letters, numbers, words and sentences) and drawing (a picture of self). However, because of time constraints, the drawing task was removed from the Communities Survey. The child is given a booklet containing various tasks. The child completes as many tasks as he or she can while the assessor turns the pages and gives instructions. The instrument was developed by Molly de Lemos and colleagues at the Australian Council for Educational Research and can be used with children from 3 to 7 years of age.

Number Knowledge Test

This test assesses a child's understanding of the concept of quantity and the system of whole numbers. Children are asked to demonstrate their understanding of quantity (more vs. less), their ability to count objects, their understanding of number sequence and their ability to do simple arithmetic. Children who start school with this intuitive knowledge generally do well in math. Children who do not have this understanding, or who are working in a language that is not their mother tongue, often have difficulty mastering basic arithmetic and demonstrating number sense. The assessment was developed by Robbie Case at the Ontario Institute for Studies in Education, University of Toronto. It can be used with children from about 3.5 to 10.5 years of age. Dr. Case and his colleague Yukari Okamoto at the University of California developed a shortened version of this assessment for the National Longitudinal Survey of Children and Youth. The test is administered orally, and the questions are asked until the child fails to correctly answer more than half the problems in a level.

2.3 How the Communities Survey Was Conducted in Montréal

As in other UEY-II pilot communities, two cycles of Communities Survey data collection took place in the Montréal study area, with the first cycle in 2001 and the second in 2005. Both data collection cycles were completed using a sample of children who were of kindergarten age at the time, and both followed similar procedures. The data collection process used in 2005 is described below as an illustration.

The target population comprised all children enrolled in the second year of kindergarten at Montréal study area schools in the fall of 2004 and who were still attending a school within the community in the winter of 2005 (during the household data collection period). This population was used to select a representative sample of children (and their parents) to participate in the survey. The achieved sample in 2005 included 407 children, representing 1,661 kindergarteners living in the study area. (The sample size in 2001 was 400, representing a kindergarten population of 2,564).

The survey was administered between February and June 2005. Household data were collected in February, March and April by Statistics Canada staff who contacted the parents and conducted interviews by telephone. At the time of the telephone interview, the initial household contact was asked to identify who in the household was the person most knowledgeable about the child. The PMK provided information about the selected child as well as socio-demographic information about the PMK and his or her spouse/partner, if applicable.

The vast majority of PMK were the children's mothers, as shown in the following breakdown of the relationship between PMK and children (averages across the seven UEY-II pilot communities in 2005):[4]

- For 87.9% of the children, the PMK was the mother (86.0% the biological mother and 1.9% the stepmother, adoptive mother or foster mother).
- For 10.8% of the children, the PMK was the father (10.5% the biological father and 0.3% the stepfather, adoptive father or foster father).
- For 1.3% of the children, the PMK was not their parent.

In May and June, Statistics Canada interviewers went into the schools to administer the direct assessment portion of the survey to children whose parents had provided written or verbal consent. Children who were not able to communicate in English or French were not assessed.

[4] Special Surveys Division, Statistics Canada, 2005, *Communities Survey, 2005- User's Guide*. (http://www.statcan.ca/english/sdds/document/5067_D2_T1_V2_E.pdf)

3. Developmental Outcomes of Montréal Young Children – Findings from the Communities Survey

This chapter discusses developmental outcomes of kindergarten children in the Montréal study area, focusing on their physical health, cognitive skills, and emotional and behavioural development. The findings are based on data collected from representative samples of kindergarten children and persons most knowledgeable about the children (PMK) who participated in the Communities Survey in 2001 and 2005. The children underwent three direct assessments designed to evaluate their cognitive skills, while PMK (mostly mothers) were interviewed for their opinions on their children's health, emotional development and behaviour.

Taken together, the data on these 5-year-old children provide valuable information about their abilities, attitudes and behaviours as they begin formal schooling. These attributes are important influences in early scholastic achievement. More significantly, by reflecting how children in the Montréal study area have been faring and how they are supported in their early years, the data provide important insights for the community – parents, caregivers, educators, service providers and others – that can help in developing better programs and services to meet the needs of the community's children.

3.1 Physical Health

Table 3.1 displays the mean values of three common measures of physical development – height, weight and birth weight of children, estimated by PMK during the interviews. The table also shows the percentage of children who suffered from a long-term health condition, such as allergy, bronchitis, mental handicap or epilepsy, as reported by PMK. The average values of these measures for the combined data of the seven UEY-II communities are also provided for comparative purposes.

Table 3.1
Average height, weight and birth weight, and presence of chronic conditions among kindergarten children, Montréal study area and UEY-II communities (2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Height (mean, cm)	110.6	109.3	110.6	110
Weight (mean, kg)	21.2	21.8	21.1	21.1
Birth weight (mean, kg)	3.3	3.3	3.4	3.4
Presence of chronic condition (%)	19.3	22.9	21.9	23.7

During the interviews, PMK were also asked to rate the general physical health of their children as "excellent," "very good," "good," "fair" or "poor."

Figure 3.1
General health of kindergarten children, Montréal study area
(percentages, 2001 and 2005)

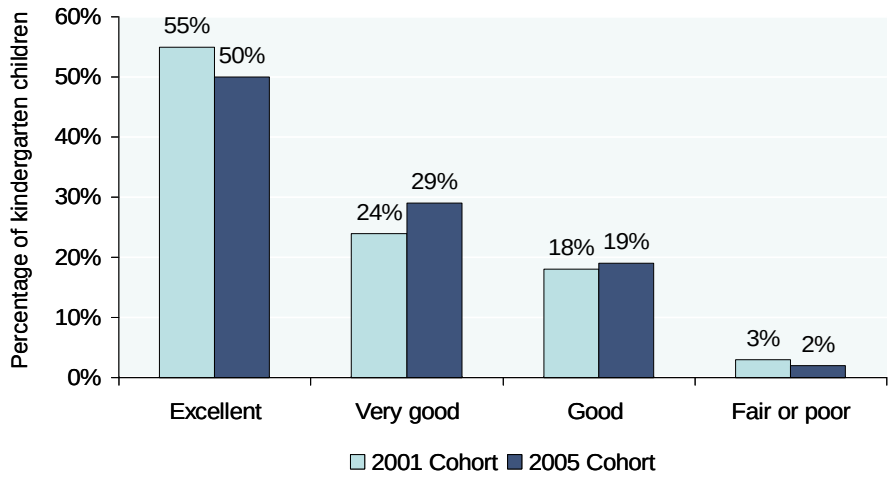


Table 3.1 shows that, in 2005, about 23% of children suffered from at least one long-term health condition, up from about 19% in 2001. However, the vast majority of PMK in both 2001 and 2005 rated their children as being in excellent or very good health (see Figure 3.1). Fewer than 3% of PMK rated their children's health as fair or poor.

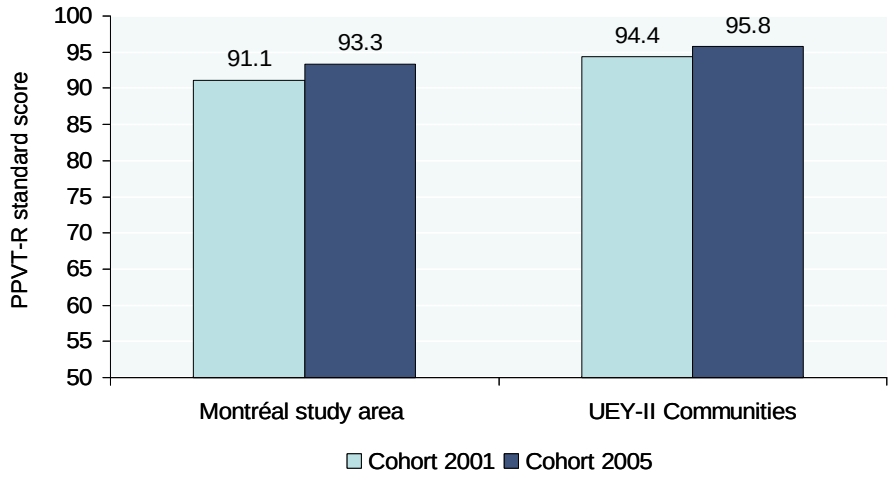
3.2 Cognitive Outcomes

As noted in Chapter 2, the Communities Survey uses three direct assessments to assess kindergarteners' cognitive skills: the Peabody Picture Vocabulary Test – Revised (PPVT-R), Who Am I? and the Number Knowledge Test.

3.2.1 Peabody Picture Vocabulary Test – Revised

The PPVT-R assesses children's level of receptive (or hearing) vocabulary in English (a French version is available to assess the level in that language). The standardized scores on this test range from 40 to 160, with 100 being the national average – a norm established based on the results from the National Longitudinal Survey of Children and Youth (NLSCY). Figure 3.2 shows that the average score of Montréal kindergarteners on receptive vocabulary skills was about 93 in 2005 – above the 2001 average but below the average of the UEY-II communities as well as the national average.

Figure 3.2
Kindergarten children's receptive vocabulary skills scores, assessed using the PPVT-R, Montréal study area and UEY-II communities (means, 2001 and 2005)



Means, however, may only represent how well an average child performs or most children perform on a test. Some children may perform extremely well, while some may perform much worse. To identify the proportion of children who are potentially at risk in this developmental domain, we separated them into three groups based on their PPVT-R scores. Thus, we classified children who received a standard PPVT-R score below 85 as being "delayed" in vocabulary development, children with scores higher than 115 as being "advanced" and children scoring between 85 and 115 as being "average."

The classification of PPVT-R scores is based on the NLSCY results, which indicate that about 70% of 5-year-old Canadian children score between 85 and 115 (i.e., within one standard deviation of the national average, with the standard deviation being 15), 15% of children score below 85 and the other 15% score higher than 115.[5] If a child in the Montréal study area scored under 85 on the PPVT-R, that child was deemed weaker in English or French vocabulary skills than the majority (85%) of Canadian children of the same age.

[5] This assumes the distribution of PPVT-R scores for the NLSCY national sample is a normal distribution.

Figure 3.3
Kindergarten children classified as being delayed, average or advanced in their receptive vocabulary skills, assessed using the PPVT-R, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

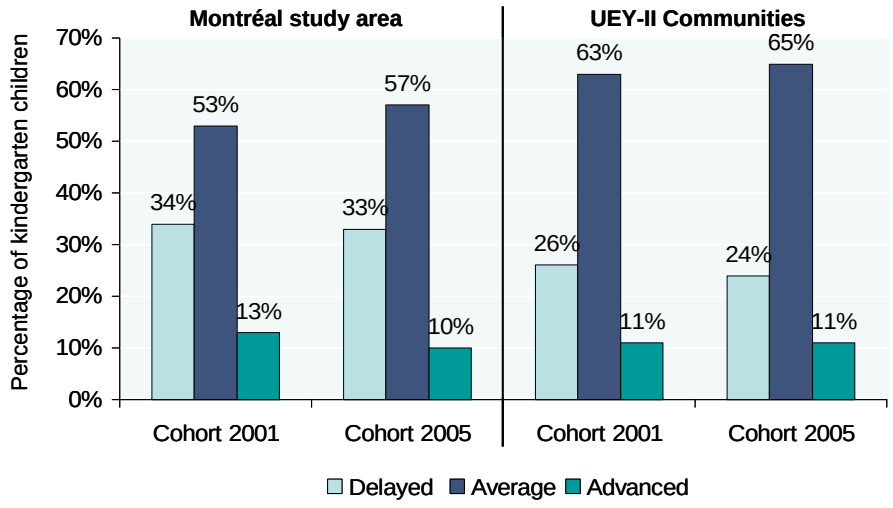


Figure 3.3 presents the study results based on this classification of vocabulary development. It shows that in 2005, about 67% of kindergarteners in the Montréal UEY site were at or above the average level of vocabulary development. This percentage is about the same as that recorded in 2001 (66%) and considerably below the average of the UEY-II communities (76% in 2005). Thus, up to a third of kindergarteners in the Montréal UEY study area were experiencing a delay in their English or French vocabulary development, substantially more than the average across the UEY-II communities (24%) and twice the national average (15%).

3.2.2 Who Am I?

Who Am I? is a developmental assessment designed to assess children's ability to conceptualize and reconstruct a geometric shape, and the ability to understand and use conventional symbols, such as numbers, letters and words. Because the tasks are not particularly language-dependent, the Who Am I? tool can be used to assess the development of children whose knowledge of English or French is limited.

The scores used to measure children's performance on the Who Am I? assessment range from 10 to 40. To identify the proportion of kindergarten children in the Montréal study area performing less well than the majority of children in the UEY-II communities, we established a threshold based on the mean score of the UEY-II communities. Findings from 2005[6] indicate that the average score for children across the UEY-II communities was 32.6, with a standard deviation of 3.9. This implies that, if the scores were distributed normally, about 70% of UEY-II kindergarteners would be expected to score between 28.7 and 36.5. We thus classified children who scored below 28.7 as being "delayed" in copying skills and symbol use and those scoring higher than 36.5 as being "advanced." Children scoring below 28.7 were considered less developed in copying skills and symbol use than the majority (85%) of UEY-II children.

[6] Due to the large number of missing values in the Who Am I? results from 2001, only the results from the 2005 data collection cycle are discussed in this report.

Figure 3.4
Kindergarten children's developmental scores, assessed using Who Am I?, Montréal study area and UEY-II communities (means, 2005)

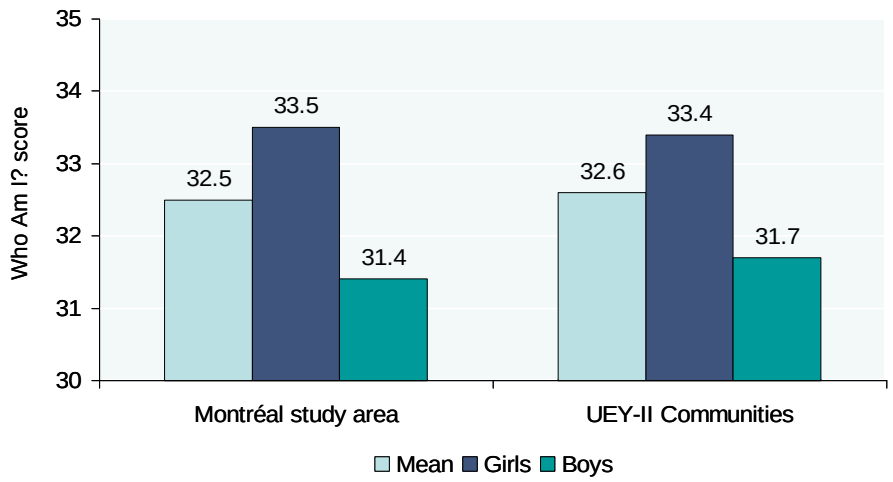


Figure 3.4 shows that the average Who Am I? score of children in the Montréal study area in 2005 was 32.5 out of the total of 40, a result almost identical to the average of the UEY-II communities. In addition, the results illustrated in Figure 3.5 indicate that 90% of children in the Montréal study area were at or above the average level in copying skills and symbol use, close to the average of the UEY-II communities. Only 10% of 5-year-old children in the Montréal UEY site were classified as delayed in copying skills and symbol use, a slightly lower percentage than the average (12%) among the UEY-II communities.

Figure 3.5
Kindergarten children classified as being delayed, average or advanced in development, assessed using Who Am I?, Montréal study area and UEY-II communities (percentages, 2005)

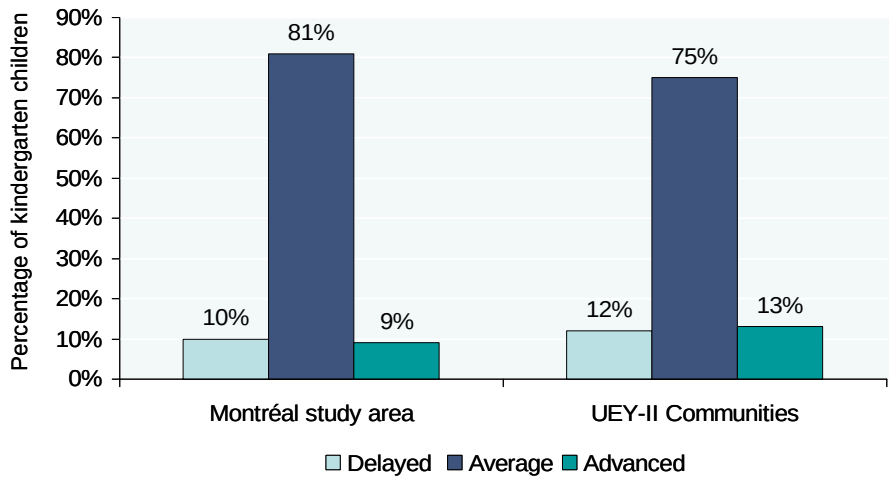
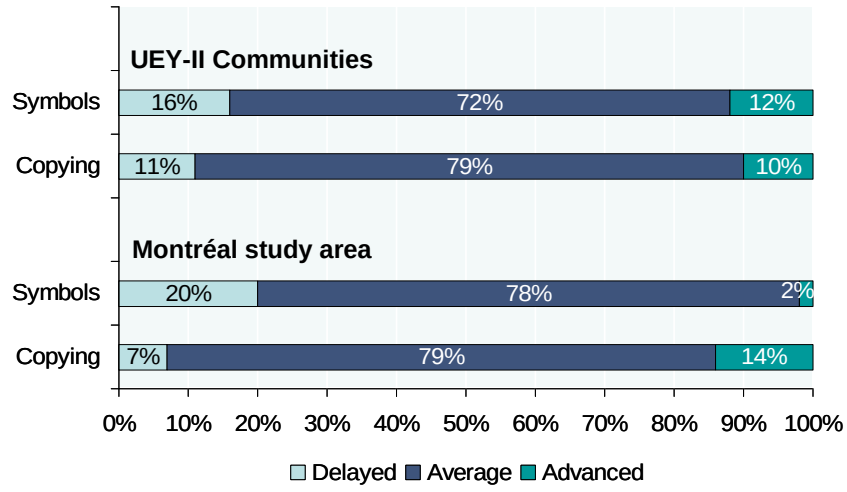


Figure 3.6 provides a further look at the two components of the Who Am I? assessment: copying skills and symbol use. The results indicate that children in the Montréal study area were slightly stronger in copying skills than in symbol use: 93% were average or advanced in copying skills, while about 80% were average or advanced in symbol use. As well, Montréal children were slightly stronger in copying skills than the average of the UEY-II sample.

Figure 3.6
Kindergarten children classified as being delayed, average or advanced in copying skills and symbol use, assessed using Who Am I?, Montréal study area and UEY-II communities (percentages, 2005)

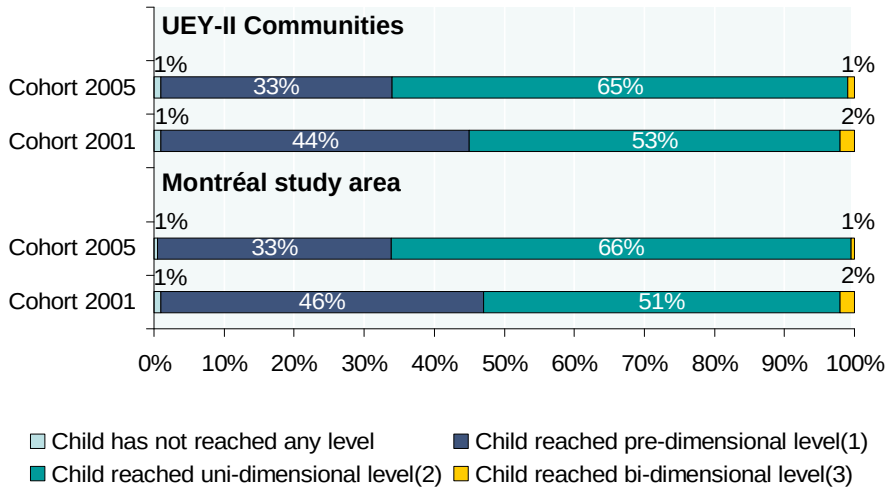


3.2.3 Number Knowledge Test

The Number Knowledge Test assesses children's understanding of the numbering system, which is the basis of addition and subtraction. During the test, children are asked to demonstrate their understanding of quantity (more vs. less), ability to count objects, understanding of number sequence, and ability to do simple arithmetic.

The test contains questions organized into three developmental levels; each level provides the conceptual building block for knowledge at the next level. The three levels are designed to assess whether a child has reached the 4-year-old (level 1 – pre-dimensional), 6-year-old (level 2 – uni-dimensional) or 8-year-old (level 3 – bi-dimensional) equivalent of intuitive knowledge of numbers.

Figure 3.7
Kindergarten children classified according to intuitive number knowledge level, assessed using the Number Knowledge Test, Montréal study area and UEY-II communities (percentages, 2001 and 2005)



Results from 2005, as illustrated in Figure 3.7, show that fewer than 1% of Montréal children tested failed to reach level 1 (the 4-year-old equivalent). The vast majority (99%) reached either level 1 (33%) or level 2 (66% – the 6-year-old equivalent). Fewer than 1% achieved level 3 (the 8-year-old equivalent). These results were significantly better than those registered in 2001, when 46% of children reached level 1 and only 53% achieved level 2. The Number Knowledge results for the Montréal study area were identical to the average of the UEY-II communities.

3.3 Emotional and Behavioural Outcomes

As part of the Communities Survey, PMK were interviewed to provide information on children's social, emotional and behavioural development. The questions, designed to discover the extent to which children exhibit various signs of developmental problems, were organized according to four behavioural measures:

Anxiety/emotional problems: assesses the degree to which children seem unhappy or depressed; tend to be solitary; are nervous, high strung or tense; or have trouble enjoying themselves.

Physical aggression/conduct disorder: assesses the degree to which children are physically aggressive toward other people (including by kicking, biting or hitting). It also reflects behaviours related to threatening, bullying and cruelty to other children.

Indirect aggression: assesses the degree to which children who are angry with someone will try to make others dislike that person; become friends with someone else to take revenge on the person; say negative things about people behind their backs; or tell secrets to a third person.

Hyperactivity/inattention: assesses the degree to which children are restless or fidgety; cannot concentrate or pay attention for long; are impulsive; have difficulty waiting their turn; or cannot settle down to any task for more than a few moments.

For each of these four measures, the higher the score, the more the child exhibits behaviours consistent with those identified in the measure. For the purposes of this study, we designated scores equal to or greater than the 85th percentile score of the whole UEY-II sample as representing signs of behavioural problems. If a child's aggression score was equal to or greater than the 85th percentile score, the child was deemed to be more aggressive than 85 out of 100 children who were assessed on this indicator of behaviour.

Figure 3.8 presents the percentages of kindergarten children in the Montréal study area who were considered vulnerable in emotional and behavioural development, based on the UEY-II thresholds discussed above. The findings can be summarized as follows:

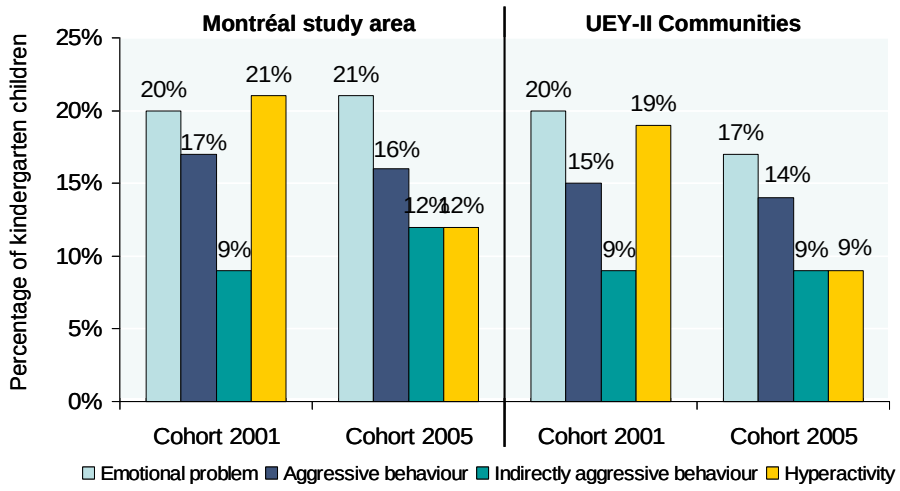
1) In 2005, about one in five children (21%) displayed signs of emotional problems – similar to the proportion recorded in 2001 and slightly higher than the average (17%) of the UEY-II communities in 2005.

2) In 2005, about 16% of children exhibited above-average levels of aggressive behaviour – similar to the 2001 level and slightly higher than the average (14%) of the UEY-II communities in 2005.

3) About 1 in 10 children (9%) showed indirectly aggressive behaviours in 2001. This percentage rose to 12% in 2005, an increase of 33% over 2001.

4) In 2001, about one in five children (21%) were considered hyperactive, with the proportion falling to 12% in 2005 – still higher than the 2005 average (9%) among the UEY-II communities.

Figure 3.8
Kindergarten children showing signs of emotional and behavioural problems (scoring higher than the 85th percentile), Montréal study area and UEY-II communities (percentages, 2001 and 2005)



3.4 Summary

Overall, results from the Communities Survey indicate that the majority of kindergarten children in the Montréal study area continued to enjoy good health in 2005, although more than one in five had a long-term health condition. There was also some evidence that the proportion suffering from long-term health conditions increased slightly but significantly between 2001 and 2005.

The study also found that children in the study area performed similarly in the direct cognitive assessments in both survey years. With one third of children performing below the national average in vocabulary development, the Montréal UEY site had a higher proportion of children who were vulnerable in this domain than the UEY-II communities overall.

However, children in the Montréal UEY study area performed much better in assessments that were less language-dependent. On the Number Knowledge assessment, the Montréal children performed as well as the average of the UEY-II communities. Moreover, a considerably higher proportion of children in 2005 than in 2001 reached the 6-year-old equivalent level of number knowledge (66% vs. 51%). On the Who Am I? assessment, the average Montréal score was close to the average of the UEY-II communities, with 10% of children classified as being in the delayed category in 2005. The corresponding proportion of children in the whole UEY-II sample was 12%.

The Montréal children's differing relative performance on the PPVT-R and Who Am I? assessments may be at least partly due to the high proportion of children who did not speak English or French as their first language. For these children, the receptive vocabulary score should not be used as an indicator of cognitive development. However, the vocabulary score still has important implications for the developmental challenges facing these children, including their academic performance in school. If progress can be made in this area, children's chances of reaching their full potential in school will be greatly improved.

In the domains of emotional development and behaviour, it is noteworthy that the proportion of hyperactive children in the Montréal study area dropped considerably over the study period, from 21% in 2001 to 12% in 2005.

However, no statistically significant changes were found between the 2001 and 2005 results in the prevalence of children displaying emotional difficulties and antisocial behaviours: About 1 in 10 children were considered vulnerable in emotional development, while a little more than 15% were prone to aggressive behaviours. The percentage of children exhibiting indirectly aggressive behaviours climbed over the study period.

As briefly discussed in Chapter 2, an extensive literature on early childhood development indicates that young children's development is related to a wide range of demographic factors, family resources, parenting practices, and physical and socio-economic environments. These include the gender of the child, income level of the child's household, parents' education level and employment situation, and family structure. In addition, children's experiences in the home and community, such as the relationships with parents, literacy activities in the home, and opportunities to participate in group activities in the community, have been linked to early developmental outcomes. In the following chapter, we will present more data from the Communities Survey and discuss the various factors that may have affected the development of children living in the Montréal UEY community.

4. Montréal Young Children, Their Families and the Community

In this chapter, we draw on results from the 2001 and 2005 data collection cycles of the Communities Survey in the Montréal study area to discuss how circumstances may have changed for kindergarten children during that 4-year period, and to explore how the changes may have affected these children. As in Chapter 3, results for Montréal are compared, where appropriate, with averages across the seven communities participating in the second pilot phase of the Understanding the Early Years (UEY-II) initiative.

The information presented in this chapter is based on analysis of interviews with persons most knowledgeable about the children (PMK) that were conducted by Statistics Canada as part of the Communities Survey. These PMK (the majority of whom were the children's mothers) provided information on representative samples of children enrolled in kindergarten programs in the Montréal study area in 2001 and 2005.

4.1 Children: Demographic Characteristics and Developmental Outcomes

4.1.1 Gender, birthplace and first language(s) of kindergarten children

As part of the Communities Survey, information was collected on major demographic characteristics of children in the Montréal study area: gender, birthplace and first language(s) learned at home. Research shows that these major demographic variables are often related to children's developmental outcomes.

As shown in Table 4.1, in 2001, just over half (52%) of the kindergarten children in the Montréal study area were boys. This gender ratio was reversed in 2005, with the proportion of girls being slightly higher than that of boys (52% vs. 48%).

The data also indicate that the Montréal UEY community is becoming increasingly ethnically and culturally diverse. Although the majority of kindergarten children were born in Canada, the proportion declined from 91% in 2001 to 87% in 2005. Over the same period, the proportion of children born outside North America and Europe increased by more than 67%, up from about 8% in 2001 to 13% in 2005.

The growing diversity of the Montréal study area is perhaps more succinctly reflected in the changing picture of the first language(s) acquired at home. The 2001 data indicate the Montréal study area was a mainly French-speaking community, with more than 70% of kindergarten children speaking French as their first language. In 2005, French was still the first language of about 71% of kindergarteners, but there was a higher proportion (about 4.4%) of children who had at least one other first language. The corresponding proportion in 2001 was 2.6%. In addition, data from both survey years show that more than 28% of children had a first language that was neither French nor English. This group includes children who were born in non-English-speaking or non-French-speaking countries, as well as children of recent immigrants from those countries.

Table 4.1
Distribution of kindergarten children by gender, birthplace and first language(s), Montréal study area and UEY-II communities (percentages, 2001 and 2005)

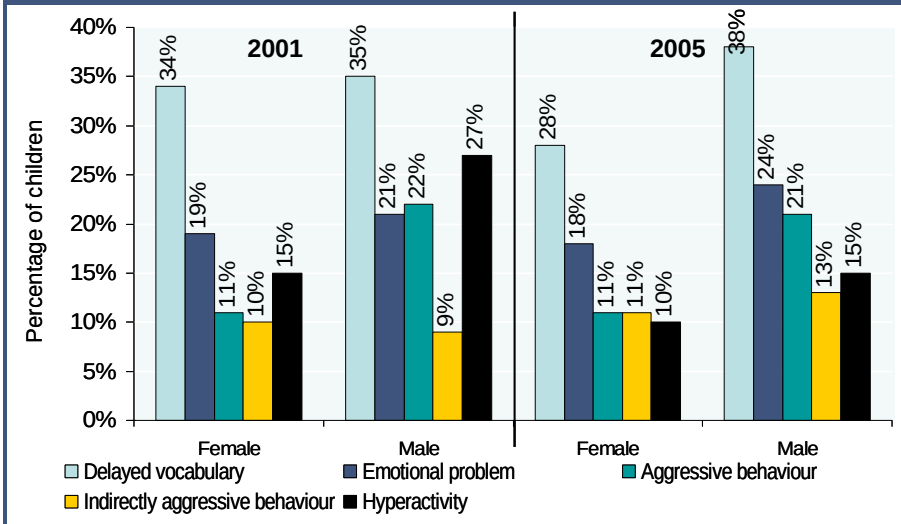
	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Gender				
Girls	47.8	51.8	48.7	49.1
Boys	52.2	48.2	51.3	50.9
Birthplace				
Canada	91.1	86.8	94.0	92.5
United States	0.5	0.2	0.6	0.9
Europe	0.8	0.2	0.6	0.8
Asia	0.5	1.0	0.8	1.0
Other	7.1	11.7	4.0	4.7
First language(s) learned at home				
French only	69.4	66.1	23.7	14.8
French & other (no English)	1.3	3.7	0.4	0.8
English & French only	0.3	0.5	0.3	0.2
English & French & other	-	0.2	-	0.1
English only	0.8	0.5	56.7	65.2
English & other (no French)	-	0.2	0.8	1.9
Neither English nor French	28.3	28.7	18.0	17.0
Total	100.0	100.0	100.0	100.0

4.1.2 Demographic characteristics and developmental outcomes

Research has identified gender as an important factor influencing children's developmental outcomes. At the beginning of kindergarten, girls are generally slightly better than boys in reading and prosocial skills, about the same in math and general knowledge, and less likely to engage in problem behaviours. These gender differences were apparent among kindergarten children in the Montréal study area (see Figure 4.1).

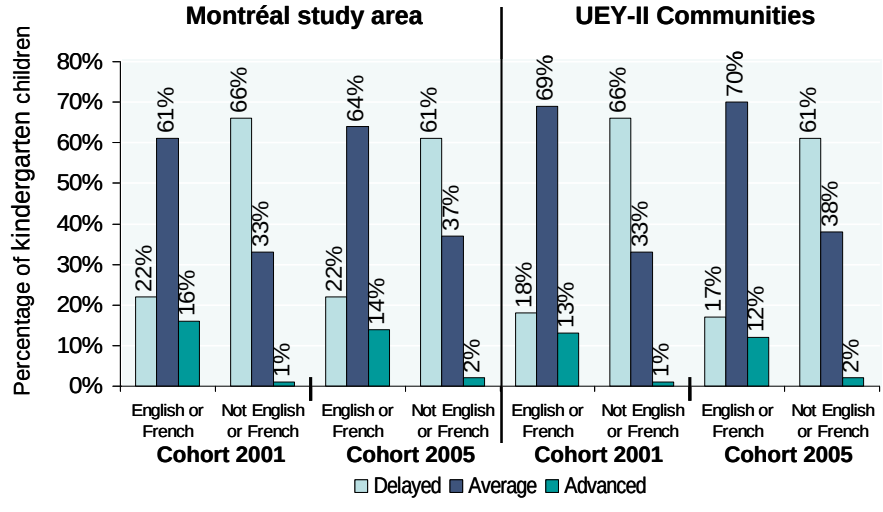
In both survey years, boys were twice as likely as girls to be physically aggressive (22% vs. 11% in 2001 and 21% vs. 11% in 2005). There were also considerably more hyperactive boys than girls (27% vs. 15% in 2001 and 15% vs. 10% in 2005). Although the 2001 data did not show gender differences in vocabulary development and emotional problems, the 2005 data indicated that boys were much more likely than girls to be delayed in vocabulary development (38% vs. 28%), as measured by the Peabody Picture Vocabulary Test – Revised (PPVT-R); boys were also more prone to emotional problems than girls (24% vs. 18%).

Figure 4.1
Gender and kindergarten children's developmental outcomes, Montréal study area (percentages, 2001 and 2005)



Research shows that children's ethnicity, birthplace and first languages are also important in explaining differences in developmental outcomes, especially in language skills. Figure 4.2 illustrates the relationship between first language(s) learned at home and the likelihood of receiving delayed PPVT-R scores for kindergarteners in the Montréal study area and UEY-II communities.

Figure 4.2
First language(s) learned at home and receptive language development, Montréal study area and UEY-II communities (percentages, 2001 and 2005)



As expected, first language was strongly related to language skills as assessed using the PPVT-R. In fact, mother tongue may be more important in explaining differences among children in the Montréal study area than other characteristics such as birthplace. Findings from both 2001 and 2005 indicate that over 60% of children whose first language was neither English nor French received low PPVT-R scores. In contrast, only 22% of Francophone and Anglophone children were found to be delayed in vocabulary development. In other words, children whose first language was neither French nor English were three times as likely as others to experience difficulty in learning French or English vocabulary.

4.2 Families: Characteristics and Resources for Children's Development

This section describes families of kindergarten children in the Montréal study area with respect to household income; parents' birthplace, level of education and labour market participation; parents' health; and family structure. The descriptive data for the Montréal study area, as well as for the whole UEY-II sample, are presented in Tables 4.2 to 4.6. The section also presents analyses that explore the relationships between these family resource variables and some developmental outcomes.

4.2.1 Household income

Table 4.2
Distribution of kindergarten children by household income, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

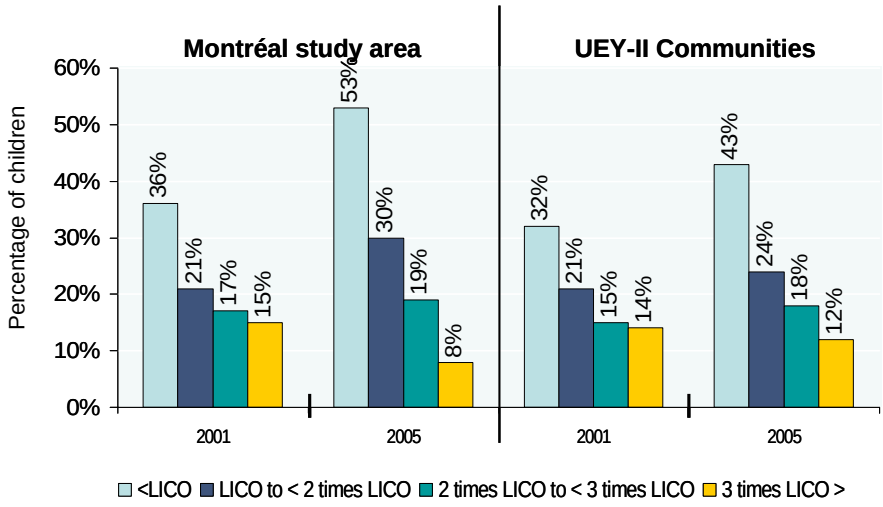
	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Household income				
Mean (dollars, inflation-adjusted)	$42,681	$43,585	$51,898	$57,231
Below LICO	46.0	35.6	22.4	29.4
LICO to less than 2 times LICO	35.3	35.1	35.6	37.7
2 times LICO to less than 3 times LICO	12.0	16.7	24.3	20.6
3 times LICO or above	6.7	12.5	17.7	12.3
Total	100.0	100.0	100.0	100.0

Table 4.2 displays the average household income for children's families in the Montréal study area, adjusted for the inflation.[7] It also presents the distribution of kindergarten children in the Montréal study area by family income status. The income status was measured by dividing household income by the value of low-income cut-off (LICO) as reported by Statistics Canada. The low-income threshold or value takes into account differing urban and family sizes and is updated annually using the Consumer Price Index.

The average household income for children in the Montréal study area, adjusted for inflation, increased by nearly $900 between 2001 and 2005. As a result, the percentage of children living below LICO dropped by about 23%, down from 46% in 2001 to about 36% in 2005. Despite this improvement, the average family income in the Montréal study area remained well below the average of the UEY-II communities in 2005 ($43,585 vs. $57,231). As well, the proportion of children living below LICO in the Montréal study area remained substantially higher than the average of the UEY-II communities in 2005 (35.6% vs. 29.4%).

[7] Adjusted income is calculated using changes in provincial inflation rates between 2001 and 2005. The inflation rate is measured by the ratio of Consumer Price Index (CPI) between the two survey years, that is, CPI2005/CPI2001. For Quebec, this inflation rate was 9.4%. The adjusted household income in 2005 = estimated household income in 2005 / (1+inflation).

Figure 4.3
Household income level and kindergarten children with low vocabulary scores, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

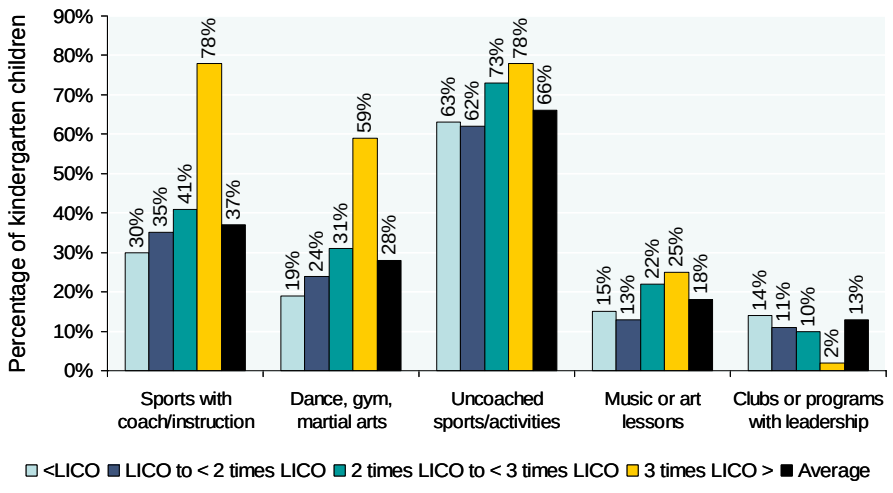


As shown in Figure 4.3, there is a strong relationship between low family income and low vocabulary scores, with the percentage of low PPVT-R scores declining as family income level increases. In 2001, children living below LICO in the Montréal study area were about 2.5 times more likely than those in families with the highest income level (three times LICO or above) to be classified as delayed in vocabulary development (36% vs. 15%). The corresponding gap in 2005 appeared to have more than doubled, reaching 6.5 times (53% vs. 8%).

The data also indicate that children with vocabulary difficulties came from all income groups, indicating that income is not the only factor influencing children's vocabulary development. Other factors, such as parental education and parenting practices, can also affect vocabulary scores and school success.

Research shows that family income is strongly linked to children's participation in early childhood activities, particularly coached or supervised group activities. These activities are important to children because they build the foundation for core skills and success in school. In addition, children learn to socialize with their peers during these activities. Thus, by affecting children's access to early childhood activities, family income may also have indirect influence on children's outcomes.

Figure 4.4
Household income level and kindergarten children's participation in sports, other physical activities, music or art lessons, and clubs or leadership programs, Montréal study area (percentages, 2005)



As illustrated in Figure 4.4, children in families with higher incomes were much more likely to participate in coached sports, music or art lessons, and dance, gym or martial arts classes. For example, children with the highest family income level (three times LICO or above) were about 2.6 times more likely than children living below LICO to be enrolled in coached sports (78.3% vs. 30.4%). On the other hand, participation in uncoached sports and clubs or leadership programs did not appear to be greatly influenced by family income.

4.2.2 Parents' birthplace

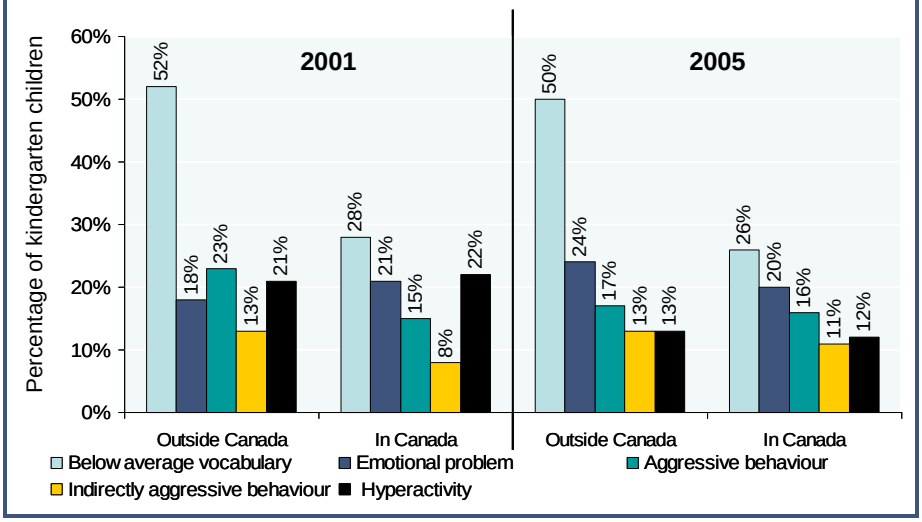
The Montréal study area's increasingly multicultural composition is reflected in the changing proportion of PMK born outside North America and Europe, which increased significantly between 2001 and 2005 (see Table 4.3). In 2001, about 38% of PMK in the Montréal UEY site were born in Asian or other countries; by 2005 that proportion had increased to about 44%.

Table 4.3
Distribution of kindergarten children by PMK birthplace, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
PMK birthplace				
Canada	56.2	52.6	70.7	69.5
United States	0.2	-	1.0	1.1
Europe	5.3	3.1	5.0	2.5
Asia	2.9	4.1	7.1	6.8
Other	35.4	40.2	16.2	15.2
Not stated	-	-	-	4.9
Total	100.0	100.0	100.0	100.0

The data in Figure 4.5 suggest that there is a significant relationship between PMK birthplace (born in Canada vs. other countries) and children's developmental outcomes.

Figure 4.5
PMK birthplace and developmetal outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)



For example, figures for both 2001 and 2005 indicate that children of foreign-born PMK were much more likely to experience delayed vocabulary development: about half received low PPVT-R scores in both years, compared with fewer than 30% of children of Canadian-born PMK. In addition, the 2005 data show that children of foreign-born parents were slightly more likely to exhibit signs of emotional problems.

PMK born outside Canada reflect a variety of norms, values, ethnicities, cultures and linguistic backgrounds. Some characteristics – such as belonging to a racial or ethnic minority group – could represent challenges related to labour market participation, health status and civic participation. Thus, further studies are required to unravel the underlying relationship between parental birthplace and the various developmental outcomes of young children.

4.2.3 Parents' level of education and employment status

Across Canada, the percentage of young children's mothers who have a university degree or college diploma has been increasing steadily since the 1980s. Similar trends can be observed across the UEY-II communities, including the Montréal UEY site. As shown in Table 4.4, between 2001 and 2005, the percentage of PMK in the Montréal study area who had a university degree or college diploma increased by about 38%, from 42.5% in 2001 to 58.8% in 2005. At the same time, the proportion of PMK who had not completed secondary school declined by just over 50%, from about 20.9% in 2001 to 10.1% in 2005.

Table 4.4
Distribution of kindergarten children by PMK education level and PMK and parents' employment status, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	2005	2001	2005
PMK education level				
Less than secondary school	20.9	10.1	16.8	10.4
Secondary school	13.4	10.1	17.6	18.5
Beyond secondary school	23.3	21.0	26.4	20.3
College or university	42.5	58.8	39.1	50.7
PMK employment status				
Currently working	64.1	63.0	66.0	68.2
Not working/worked last year	5.6	5.7	6.1	7.1
Not working/did not work last year	30.3	31.4	27.9	24.7
Parents' employment status				
At least one parent working	73.5	71.2	80.5	82.1
No parent working	26.5	28.8	19.5	17.9
Total	100.0	100.0	100.0	100.0

In 2005, 63% of PMK were in paid employment, a percentage similar to that in 2001 but slightly below the average of the UEY-II communities. The data also show that about 29% of kindergarten children lived in no-earner families in 2005, an increase of 8% over the 2001 figure.

Research indicates that maternal education level is positively associated with children's academic achievement. Figure 4.6a illustrates the relationship between PMK educational level and children's PPVT-R scores: in both 2001 and 2005, PMK with lower education levels were more likely to have children who received low PPVT-R scores, while PMK with higher education levels were more likely to have children who received normal or advanced scores.

Figure 4.6a
PMK education level and vocabulary outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)

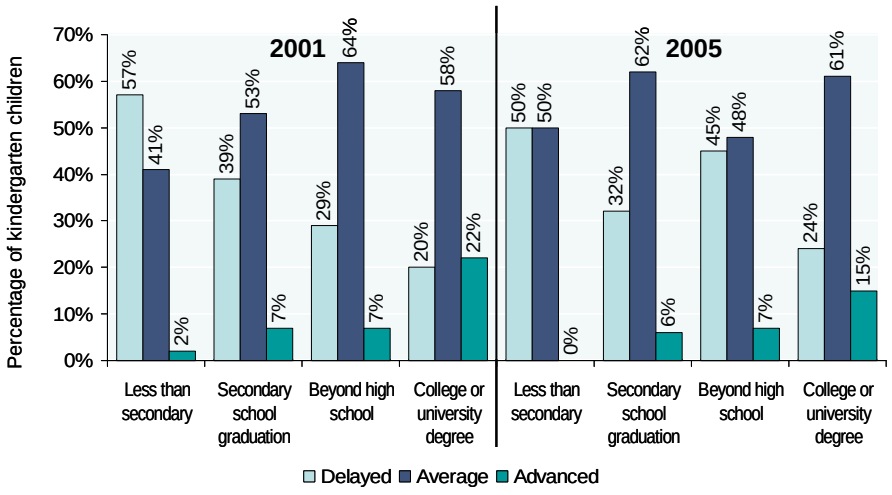


Figure 4.6b presents data on the percentages of children showing signs of emotional problems, hyperactivity, and aggressive and indirectly aggressive behaviours in relation to PMK educational level. Both the 2001 and 2005 results show that the higher the PMK level of education, the less likely the child was to display signs of hyperactivity. The 2005 data also provide some evidence that children of less educated PMK were more likely to exhibit indirectly aggressive behaviours.

Figure 4.6b
PMK education level and emotional and behavioural outcomes of kindergarten children, Niagara Falls (percentages, 2001 and 2005)

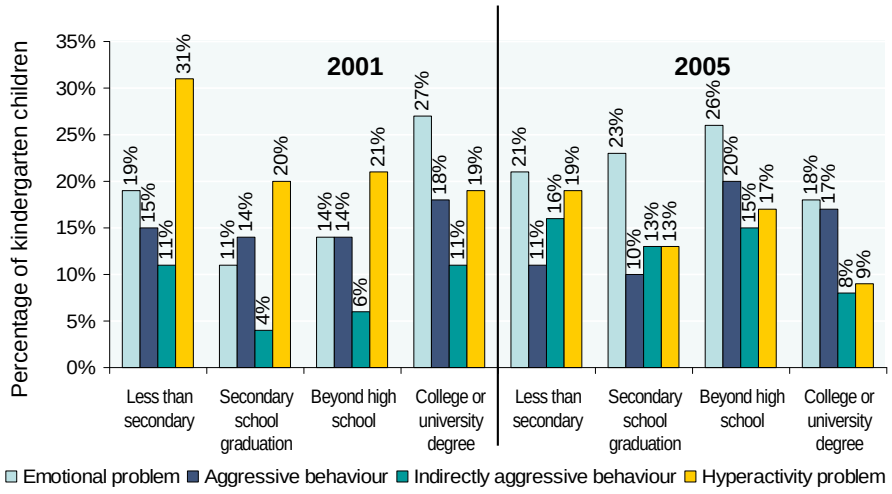
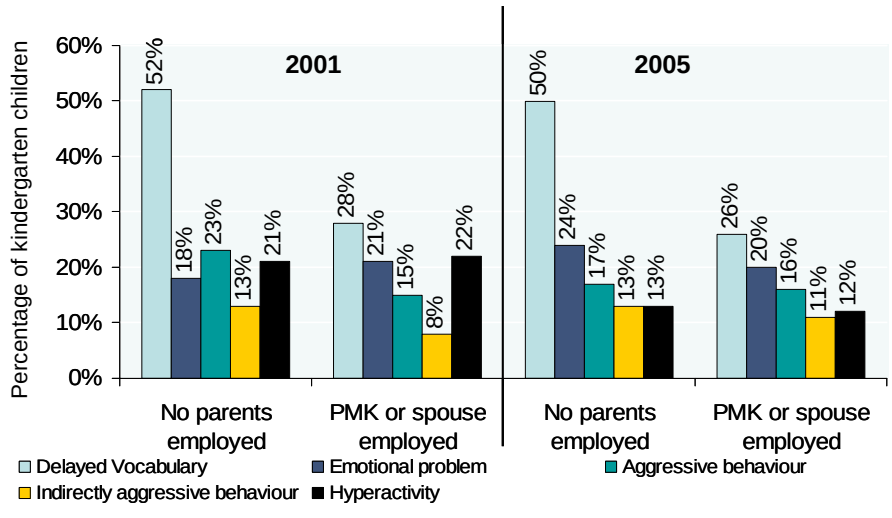


Figure 4.7
Parents' employment status and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)



Parents' employment status contributes to family income and can thus have an impact on resources available for raising children. At the same time, parents' employment can also directly affect children's health and educational outcomes. For example, compared with non-working parents, working parents tend to place more emphasis on independence training for children, which can be an asset for children as they learn. On the other hand, working parents may not be able to spend as much time with children as non-working parents, which can negatively affect children's outcomes.

Figure 4.7 indicates that parents' employment status is strongly associated with cognitive, emotional and behavioural outcomes for children in the Montréal study area. For example, in both 2001 and 2005, children in no-earner families were about twice as likely as those with working parents to receive low PPVT-R scores. The 2001 data also show that children in no-earner families were more likely to exhibit aggressive and indirectly aggressive behaviours, while the 2005 data indicate that this group was also more likely to show signs of emotional problems.

4.2.4 Parents' health

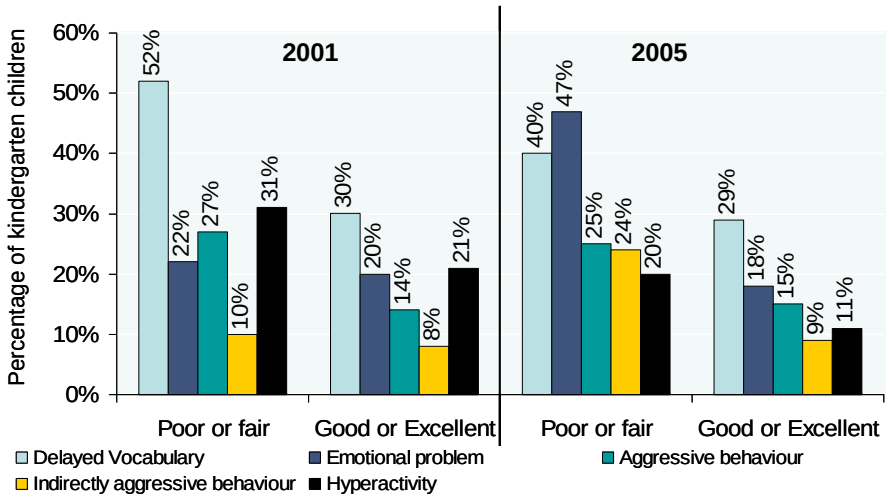
Parents' health, especially a mother's physical and emotional health, can affect the level as well as the quality of time and attention that they can devote to their children. Since parent–child interaction is instrumental in the healthy development of children, the poor health of parents is likely to negatively affect a child's development.

Table 4.5
Distribution of kindergarten children by PMK health status, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
PMK health status				
Excellent	34.3	28.1	33.4	33.1
Very good	32.9	32.6	37.0	38.1
Good	22.6	29.2	21.0	22.3
Fair	8.0	8.1	6.5	4.9
Poor	2.3	2.0	2.1	1.5
PMK with chronic condition				
Yes	25.3	42.5	35.7	40.5
No	74.7	57.5	64.3	59.3
Total	100.0	100.0	100.0	100.0

As shown in Table 4.5, in 2001, about 25% of PMK reported they had a chronic health condition. By 2005, this proportion had climbed to about 43%, although the vast majority of PMK (about 90%) rated themselves as having generally good to excellent health. Figure 4.8 illustrates how poor PMK health is linked to children's developmental outcomes in the Montréal study area.

Figure 4.8
PMK health status and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)



It can be seen from both the 2001 and 2005 data that poor PMK health could be a risk factor for children in the Montréal study area on various fronts, including vocabulary skills, problem behaviours and hyperactivity. Children with PMK in poor health were more likely than other children to register low PPVT-R scores and to exhibit aggressive behaviours and signs of hyperactivity. In addition, the 2005 results show that children with PMK in poor health also tended to show signs of emotional problems or indirectly aggressive behaviours.

4.2.5 Family structure

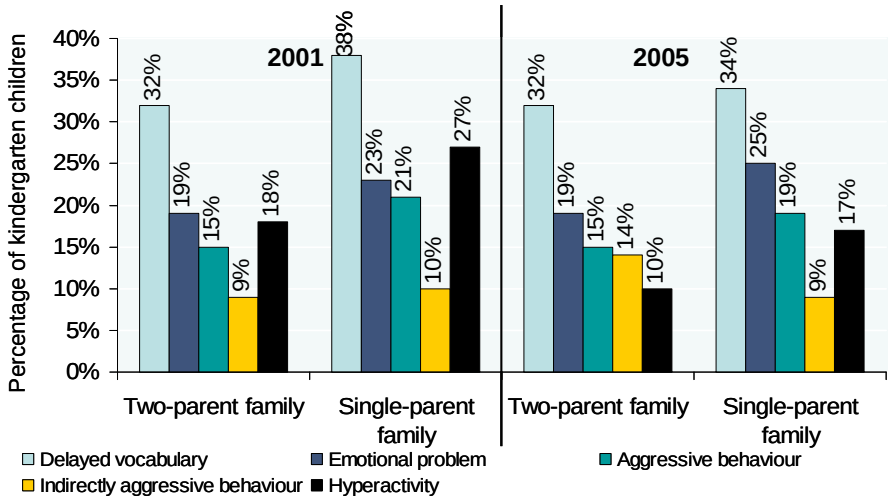
Family structure and size affect the quantity, as well as the quality, of time and attention parents devote to their children. They also influence the financial resources available for each child. Single-parent families are more likely to have low family incomes, which means they face more challenges and stresses in raising their children. In addition, larger family sizes can reduce the amount of resources available for each child and thus negatively affect developmental outcomes.

As shown in Table 4.6, changes occurred in the structure of young children's families in the Montréal study area between 2001 and 2005. More children lived in a two-parent family in 2005 than in 2001 (64.9% vs. 61.5%), and more children had one or more siblings (73.6% vs. 69.8%).

Table 4.6 Distribution of kindergarten children by family structure, Montréal study area and UEY-II communities (percentages, 2001 and 2005)				
	Montréal study area		UEY-II communities	
	2001	2005	2001	2005
Number of parents in household				
Two parents	61.5	64.9	69.5	75.4
One parent	34.5	34.4	28.0	24.1
Child does not live with a parent	4.0	0.7	2.5	0.4
Number of children (0–17 years) in household				
One child	30.2	26.4	23.3	18.6
Two children	41.5	45.1	44.2	46.9
Three children	17.5	21.4	21.7	24.2
More than three children	10.8	7.1	10.8	10.3
Total	100.0	100.0	100.0	100.0

As shown in Figure 4.9, results from both 2001 and 2005 suggest that children in single-parent families were more likely than those in two-parent families to show signs of emotional problems or exhibit aggressive behaviours and hyperactivity. The data also show that a higher percentage of children from single-parent families received low PPVT-R scores. In addition, the 2005 data indicate that children in single-parent families were more likely to display indirectly aggressive behaviours, although this tendency was not observed in the 2001 data.

Figure 4.9
Family structure (one- or two-parent family) and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)



4.3 Families: Family Processes and Children's Developmental Outcomes

This section focuses on some major family processes related to children's developmental outcomes: family functioning, parent–child interactions, parents' engagement in learning activities with their children, and childcare arrangements.

4.3.1 Family functioning

Family functioning refers primarily to the cohesiveness and adaptability of the family. It is more about how well the family functions as a unit than the relationships between spouses or between parents and their children. Studies have shown that family functioning is related to children's developmental outcomes, especially children's behaviours.

In both cycles of data collection for the Communities Survey, information was gathered on whether PMK thought their family members were able to communicate and discuss feelings and concerns among themselves; make decisions and solve problems collectively; get along well with one another; and feel accepted for who they are.

Table 4.7
Distribution of kindergarten children by level of family functioning, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Family functioning				
Mean (rescaled to 100)	76.7	72.7	76.3	75.1
High level (mean + 1 standard deviation)	27.4	15.4	23.2	18.6
Average level (within 1 standard deviation)	57.1	62.8	64.4	69.5
Low level (mean – 1 standard deviation)	15.5	21.9	12.4	11.9
Total	100.0	100.0	100.0	100.0

As indicated in Table 4.7, the mean score on family functioning for the Montréal UEY community in 2005 was 72.7, lower than in 2001 as well as the average of the UEY-II communities. However, means indicate only how well families function on average. They tell us nothing about what proportion of families function above or below the "normal" range or how above or below normal functioning may affect children's developmental outcomes. To explore this issue further, we classified family functioning into three levels: "high," "average" and "low." A family functioning score that was one standard deviation below the UEY-II sample mean represented a low level of family functioning, a score one standard deviation higher than the UEY-II sample mean represented a high level of family functioning, and scores within one standard deviation of the mean were scores for an average or normal level of family functioning.

Based on this classification, the majority of children's families (about 78%) in the Montréal study area functioned at the high or average level in 2005. This percentage was lower than that registered in 2001 (85%). In addition, about 22% of children in the Montréal study area lived in families functioning at the low level in 2005, an increase of 42% over the 2001 figure. Across the UEY-II sample, about 12% of children lived in low-functioning families in both 2001 and 2005.

Figure 4.10
Family functioning and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)

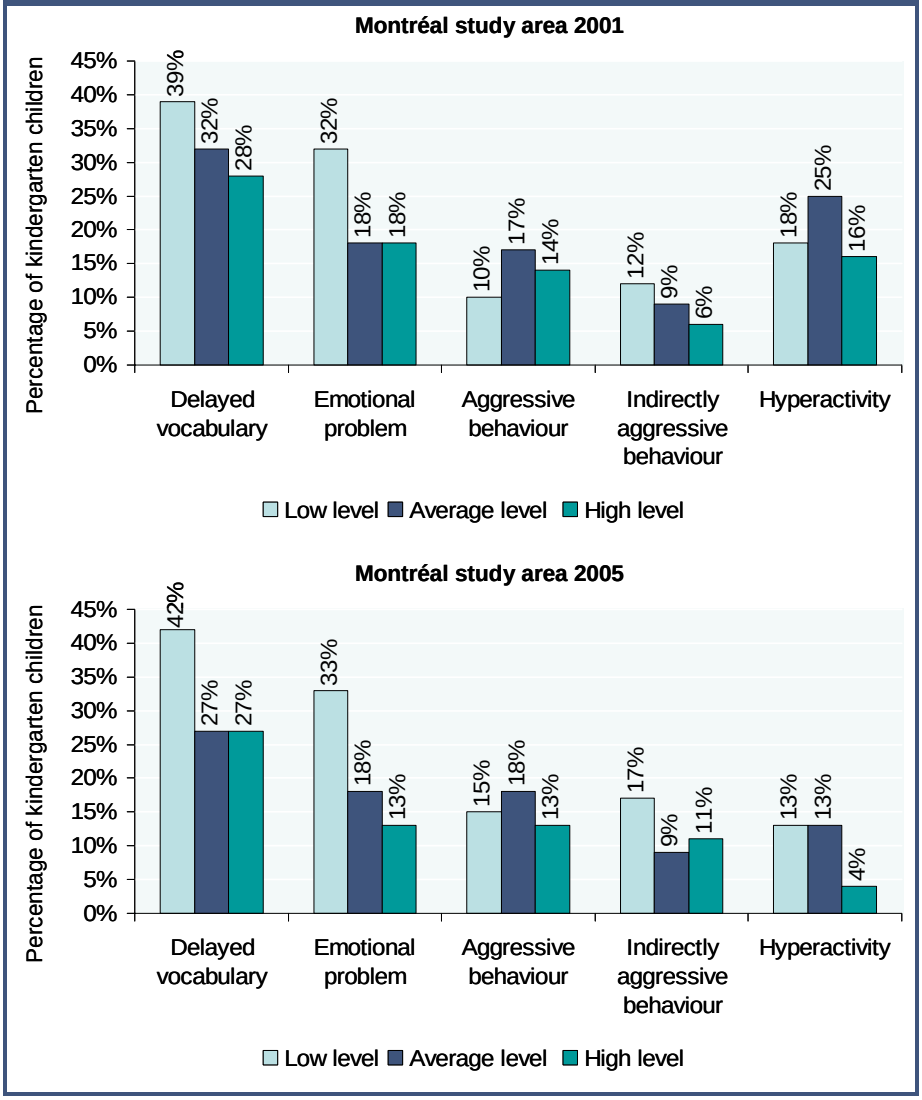


Figure 4.10 presents results illustrating the relationship between family functioning and children's developmental outcomes in the Montréal study area. These show that, in both 2001 and 2005, family functioning was strongly associated with children's vocabulary skills, emotional development and social behaviours. For example, the 2005 data show that 42% of children in families functioning at the low level had delayed vocabulary skills, compared with 27% of children in families functioning at the high level. The gap recorded in 2001 was smaller, with 39% of children in families functioning at the low level and 28% of children in families functioning at the high level receiving low PPVT-R scores. The 2005 data also indicate that children in families functioning at the low level were more likely than other children to display signs of emotional problems or exhibit indirectly aggressive behaviours.

4.3.2 Parent–child interactions

Family environment factors contributing to children's developmental outcomes include parent–child interactions and the degree of cognitive stimulation in the home. Children who experience positive interactions with a nurturing, involved parent have been found to have better school and social outcomes than others.

The Communities Survey explored parent–child interactions according to whether they were "positive," "consistent," "rational" or "effective." The positive parent–child interactions score was based on PMK responses to questions asking how often they praise their children, how often they talk and play with their children, and how often they laugh together. The consistent parent–child interactions score was based on PMK responses to questions asking how often children get away with things for which they should have been punished and how often PMK make sure their child follows a command to do something. The rational parent–child interaction score was based on PMK responses to questions on how they react to their children's misbehaviour. For example, if a child misbehaved, did the parents scold or shout at the child, calmly discuss the problem, use physical punishment, or describe alternative and acceptable ways of behaving? Lastly, the effective parent–child interactions score was based on PMK responses to questions on whether they were often annoyed with their child for saying or doing forbidden things, often angry when they punished their child, and often had to discipline the child repeatedly for the same thing.

Table 4.8 presents the mean scores on the four measures of parent–child interactions (parenting styles), with original scores rescaled on a 100-point scale to facilitate comparisons. Higher scores indicate higher performance on each measure. The results indicate that PMK in the Montréal study area scored about the same on all four measures in both 2001 and 2005 – above the UEY-II averages on rational and effective parenting measures and below the UEY-II norm on consistent and positive parenting measures.

Table 4.8
Mean scores on four measures of parent–child interactions, Montréal study area and UEY-II communities (rescaled on a 100-point scale, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Parent–child interactions				
Positive parent–child interaction	69.6	70.9	72.1	74.1
Effective parent–child interaction	71.1	69.4	60.6	66.4
Consistent parent–child interaction	62.3	61.4	67.3	68.7
Rational parent–child interaction	59.5	60.3	41.8	40.9

To explore how poor parenting practices were associated with developmental outcomes, we classified the parenting scores into three levels – "high," "average" and "low" – based on the means and standard deviations of the UEY-II communities sample (in the same way that we established family functioning levels).

The analyses presented in Table 4.9 indicate that the majority of PMK in the Montréal UEY community (about 85%) performed at the average or high level on positive and effective parenting practices, based on the UEY-II norms in 2005. At the same time, 75% of PMK performed at the average or high level on consistent parenting. However, about 15% to 25% of children in the Montréal study area experienced low-level parenting practices.

Table 4.9
Distribution of kindergarten children by level of parenting, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Positive parenting				
High level	8.3	8.4	10.9	14.6
Average level	73.2	76.3	76.2	75.3
Low level	18.5	15.4	12.9	10.1
Effective parenting				
High level	24.2	20.6	18.9	16.9
Average level	65.0	64.6	67.0	69.7
Low level	10.8	14.7	14.1	13.4
Consistent parenting				
High level	4.9	7.6	13.1	16.9
Average level	70.2	66.9	69.4	68.0
Low level	24.8	25.4	17.4	15.1

Figure 4.11
Positive parenting and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)

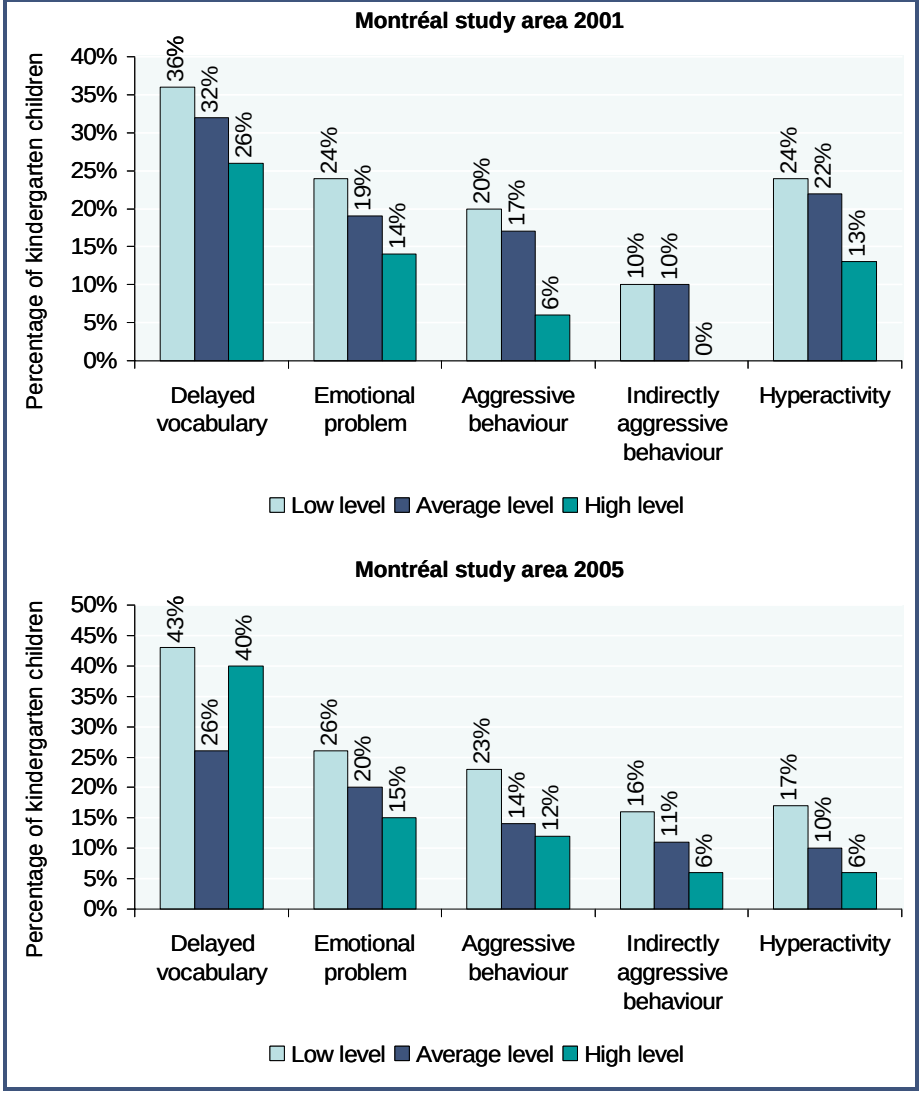


Figure 4.11 displays the relationship between positive parenting and various developmental outcomes. Based on the 2001 results, positive parenting appeared to be related to cognitive, emotional and behavioural development, with considerably higher percentages of children in families with low-level positive parenting recording low PPVT-R scores and showing signs of emotional problems as well as aggressive behaviours and hyperactivity. The results from 2005 further confirmed the role of positive parenting in emotional development, hyperactivity, and direct and indirectly aggressive behaviours. However, data from that year did not confirm a relationship between positive parenting and vocabulary development.

Figure 4.12
Consistent parenting and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)

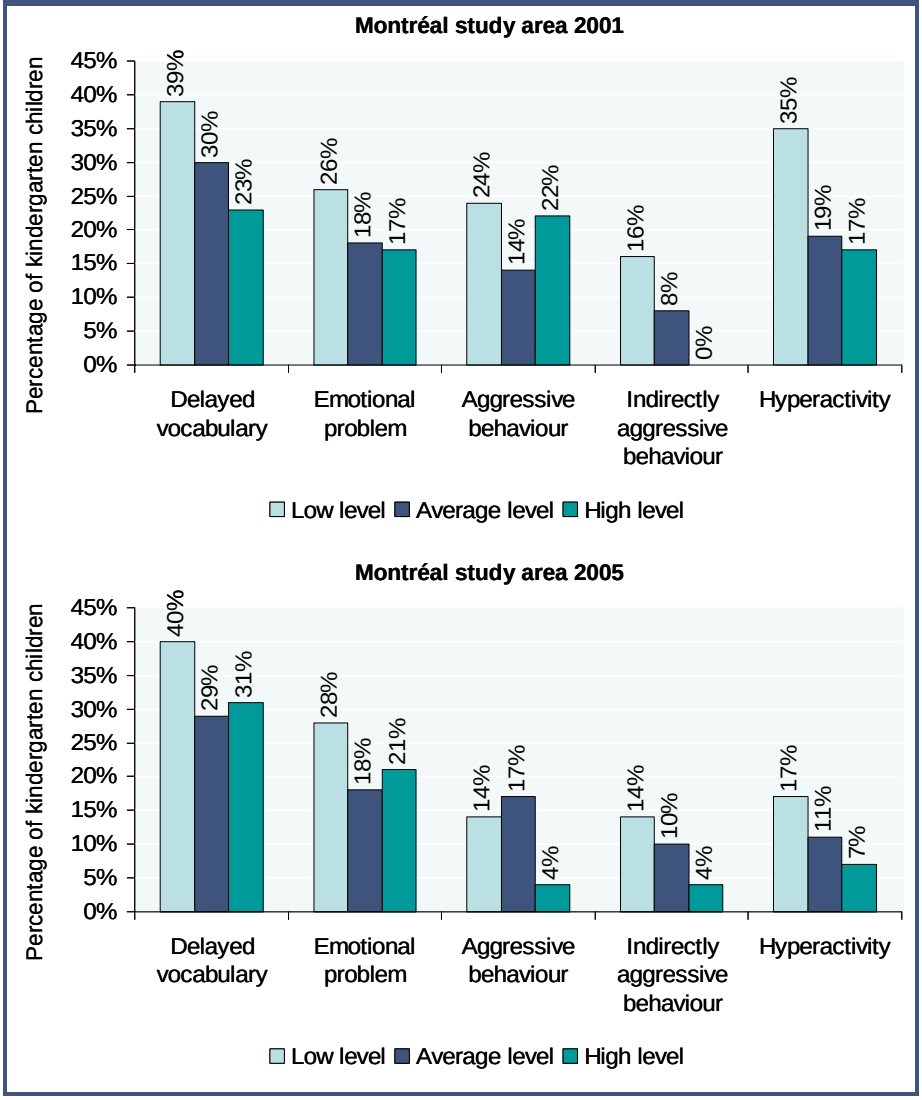


Figure 4.12 presents data on the role of consistent parenting practices in various developmental outcomes for children in the Montréal study area. The results from both 2001 and 2005 indicate that consistent parenting was significantly related to better outcomes for children in vocabulary skills, emotional development, indirectly aggressive behaviours and hyperactivity. While the 2001 data did not provide strong evidence on how consistent parenting was related to aggressive behaviours, findings from 2005 show that a much higher proportion of children in families with low-level consistent parenting displayed aggressive behaviours than children in families with high-level consistent in parenting (14% vs. 4%).

4.3.3 Engagement in literacy activities at home

Parents who engage in literacy-related activities with their children can have a major influence on developmental outcomes. In particular, studies find that the amount of time parents spend reading to their children can significantly affect their development regardless of a family's socio-economic status. As part of the Communities Survey, PMK were asked whether and how often they were engaged with their children in learning activities at home. These activities included reading and telling stories to their children, teaching them numbers and words, teaching them how to read and encouraging them to use numbers in daily activities.

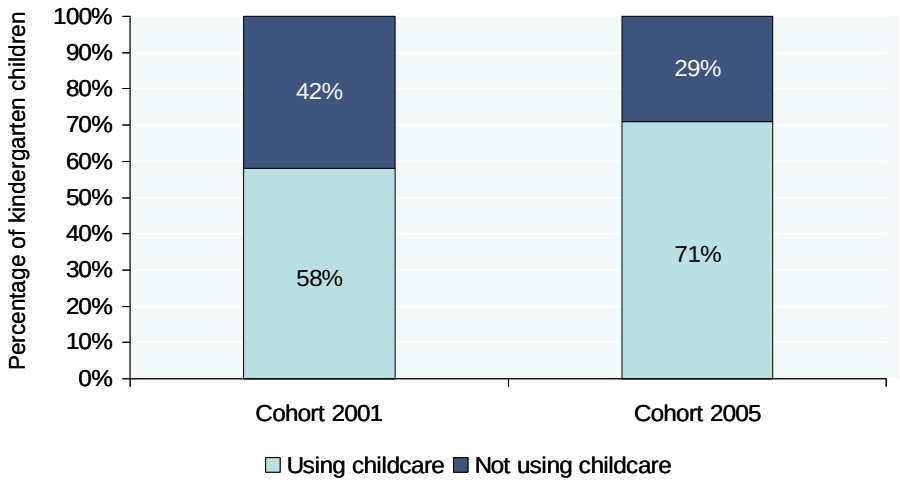
Table 4.10 Distribution of kindergarten children by literacy activities at home, Montréal study area and UEY-II communities (percentages, 2001 and 2005)				
	Montréal study area		UEY-II communities	
	2001	2005	2001	2005
How often is child read to?				
Daily	28.5	40.3	58.1	67.9
A few times a week	44.5	42.5	30.2	25.2
Once a week	12.0	7.6	5.5	3.1
A few times a month	4.8	5.2	2.4	1.8
Rarely	10.3	4.4	3.8	1.9
How often is child taught numbers?				
Daily	35.4	47.7	45.7	53.4
A few times a week	42.4	37.6	38.3	33.4
Once a week	8.8	6.9	7.7	6.3
A few times a month	5.7	3.0	3.7	2.3
Rarely	7.8	4.7	4.7	4.2
How often is child taught words?				
Daily	23.1	25.5	39.9	48.5
A few times a week	34.7	35.9	31.3	29.8
Once a week	10.5	8.9	8.3	7.2
A few times a month	7.0	6.1	4.6	3.0
Rarely	24.6	23.4	15.9	11.2
Total	100.0	100.0	100.0	100.0

As shown in Table 4.11, data from both 2001 and 2005 indicate that the majority of parents in the Montréal UEY site were actively engaged in providing their children with a stimulating home environment. For example, in 2005, more than 80% of PMK read to their child or taught their child numbers either daily or at least a few times a week. The proportion of PMK engaged in these activities daily increased substantially between 2001 and 2005. However, daily engagement by Montréal PMK remained below the UEY-II averages in 2005.

4.3.4 Childcare arrangements

National data for Canada indicate that about half of children aged 0 to 5 years are in childcare while their parents are engaged in paid work or further education and training. For these children, childcare is an important factor in their development.

Figure 4.13
Distribution of kindergarten children by use of childcare, Montréal study area (percentages, 2001 and 2005)



The use of non-parental childcare in the Montréal study area increased by 22% between 2001 and 2005, with 71% of children in non-parental care in 2005, compared with 58% in 2001. The data also indicate that the use of non-parental childcare in the Montréal study area was considerably higher than the average across the UEY-II communities.

Table 4.11
Distribution of kindergarten children by main type of childcare arrangement, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
Main type of childcare arrangement	**2001**	**2005**	**2001**	**2005**
Other's home – non-relative	2.2	2.0	23.9	27.4
Own home – non-relative	2.2	0.7	6.0	4.8
Other's home – relative	6.3	4.5	12.5	15.8
Own home – relative (non-sibling)	4.5	3.2	9.0	9.3
Own home – sibling	1.3	0.7	1.6	2.0
Daycare centre	2.2	3.2	11.4	11.5
Before/after-school programs	71.0	80.9	30.6	26.3
Nursery/preschool	7.6	3.5	3.1	1.2
Child in own care	0.9	0.3	0.5	0.6
Other	1.8	1.0	1.4	1.1
Total	100.0	100.0	100.0	100.0

As Table 4.11 shows, the majority of children in non-parental childcare in the Montréal study area were enrolled in before/after-school programs, with the percentage increasing from 71% in 2001 to 81% in 2005. The next most popular form of care was care by a relative, which accounted for about 12% of children in 2001 and 9% in 2005. About 10% of children attended daycare centres and nursery/preschools in 2001, with the percentage falling to 6.7% in 2005. Non-relatives provided care for 4.4% of children who needed non-parental care in 2001 but for only 2.7% in 2005.

4.4 Community: Neighbourhoods and Resources for Young Children

Neighbourhoods and communities provide important resources and activities such as daycare centres, schools, libraries and public pools, where children can play, learn and interact with adults and peers. Studies on the role of neighbourhoods and communities in child development indicate that both the social and physical characteristics of a community are important to a child's development. These characteristics include physical aspects relating to risk of injury or access to public facilities for children, neighbourhood/community safety, neighbourhood resources, community cohesion, quality of role models, and residents' engagement in community activities.

4.4.1 Neighbourhood environment for young children

To assess the neighbourhood environment for children, PMK were interviewed about their perceptions of their neighbourhood as a place to raise young children. For example, they were asked to rate neighbourhood features such as the prevalence of families with young children, quality of schools and nursery schools, adequacy of recreational and health facilities for children, residents' community involvement and access to public transport. PMK rated each of these features as "excellent," "very good," "good," "fair" or "poor."

Table 4.12
PMK responses to questions regarding neighbourhood quality for raising young children, Montréal study area and UEY-II communities
(means, scale range: excellent [10] to poor [0], 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	2005	2001	2005
Lots of families with children	6.2	5.9	6.4	6.5
Good schools, nursery schools	6.3	6.1	6.8	6.9
Adequate facilities for children	6.1	6.2	6.1	6.1
Neighbourhood safe and clean	5.4	5.3	6.4	6.6
Presence of health facilities	6.1	6.0	5.8	5.8
Actively involved residents	4.8	4.9	5.3	5.7
Accessible public transport	8.0	7.5	6.3	5.6

Table 4.12 presents results summarizing PMK responses to a variety of questions concerning neighbourhood quality. As shown, results from 2001 and 2005 are similar. Generally, PMK in the Montréal study area gave higher scores to schools, health facilities and facilities for children – in particular, access to public transport. On the other hand, neighbourhood safety and cleanliness, as well as residents' involvement, received relatively low scores. Compared with the average across the UEY-II communities, PMK in the Montréal study area generally gave lower scores to most neighbourhood features, with the exception of facilities for children and access to public transport.

PMK perceptions of neighbourhood safety and support from neighbours were explored in more detail. For example, they were asked to indicate their level of concern for their children's safety while walking and playing in the neighbourhood. They were also asked to respond to a separate group of questions on whether neighbours cooperated to solve problems, helped one another, watched out for one another's children, and provided children with role models. Table 4.13 presents the results, with PMK responses broadly grouped into positive or negative categories.

As shown, in both 2001 and 2005, more than 80% of PMK in the Montréal study area agreed or strongly agreed that their neighbourhood had safe parks and play spaces. However, the percentage of PMK agreeing it was safe for children to play outside declined from 78% in 2001 to 71% in 2005. As well, between 2001 and 2005, there were significant increases in the percentages of PMK with favourable opinions about the social support received from neighbours. For example, in 2001, about 76% of PMK agreed that neighbours were ready to help one another. This proportion rose to 80% in 2005. However, the percentages of PMK in the Montréal study area who agreed or strongly agreed that their neighbourhoods were good places to raise children were lower than the average percentages across the UEY-II communities.

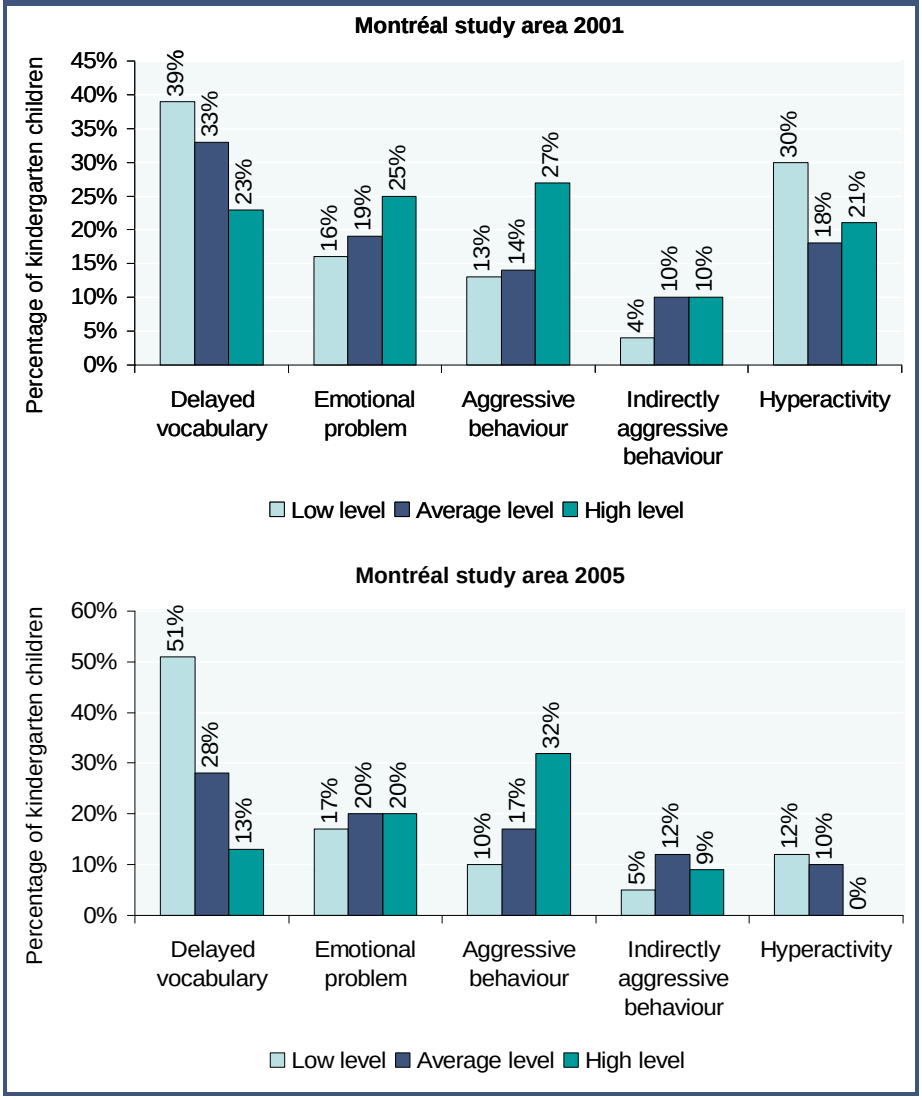
Table 4.13
Distribution of kindergarten children by PMK responses on neighbourhood safety and neighbour support, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
It is safe to walk after dark				
Strongly agree/agree	62.9	69.1	73.4	77.8
Strongly disagree/disagree	37.1	30.9	26.5	22.2
It is safe to play outside				
Strongly agree/agree	78.1	71.9	86.1	88.2
Strongly disagree/disagree	21.9	28.1	13.9	12.7
There are safe parks and play spaces				
Strongly agree/agree	82.5	83.4	84.3	84.7
Strongly disagree/disagree	17.5	16.6	15.6	15.4
Neighbours deal with problems together				
Strongly agree/agree	57.8	64.3	86.1	88.2
Strongly disagree/disagree	42.2	35.7	13.9	12.7
There are adults for children to look up to				
Strongly agree/agree	66.4	69.6	82.4	86.2
Strongly disagree/disagree	33.6	30.4	27.6	13.8
Neighbours are willing to help one another				
Strongly agree/agree	76.3	80.1	87.0	89.6
Strongly disagree/disagree	23.7	19.9	12.9	10.4
Neighbours watch out for children's safety				
Strongly agree/agree	74.9	75.2	84.4	89.6
Strongly disagree/disagree	25.1	24.8	15.6	10.4
Neighbours watch out for trouble				
Strongly agree/agree	71.6	75.9	84.5	88.0
Strongly disagree/disagree	28.4	24.1	15.5	12.1
Total	100.0	100.0	100.0	100.0

Figures 4.14 and 4.15 present the analyses that explore the extent to which neighbourhood quality and social support were related to the developmental outcomes of children in the Montréal UEY site.

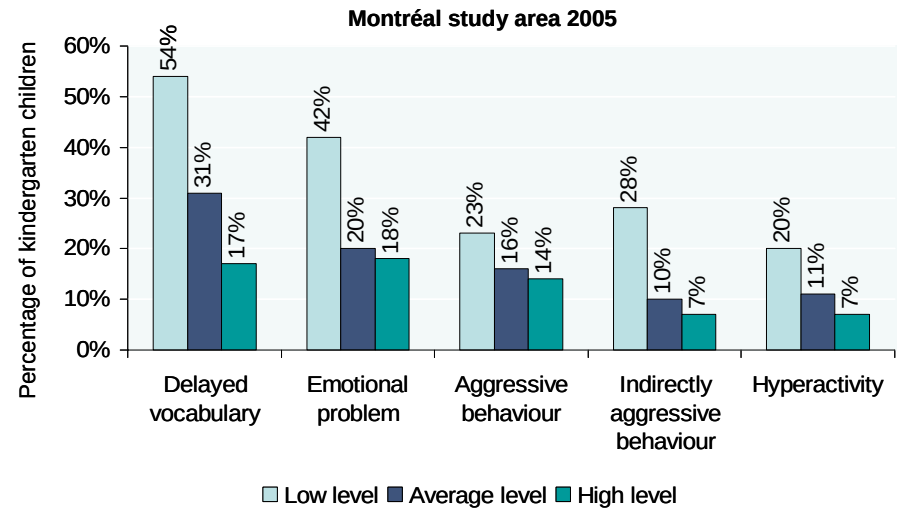
In Figure 4.14, neighbourhoods in the Montréal study area are classified into three quality levels – "low," "average" or "high" – based on the mean and standard deviation of the UEY-II sample. Both the 2001 and 2005 results indicate that the level of neighbourhood quality was significantly associated with children's vocabulary development: children living in areas with high-level neighbourhood quality appeared much less vulnerable in this domain of development than children in other areas. The data also show that children living in areas with high-level neighbourhood quality were less likely than others to display signs of hyperactivity.

Figure 4.14
Neighbourhood quality and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)



In addition, the 2005 data provide some evidence that neighbourhood social support may be important in explaining differences in social behaviours, as well as differences in vocabulary development, among children in the Montréal study area (see Figure 4.15). Overall, children living in neighbourhoods where residents showed a high level of cooperation had better outcomes: they were much less likely to receive low PPVT-R scores, as well as less likely to display signs of emotional problems and exhibit aggressive or indirectly aggressive behaviours. The results also suggest that neighbourhood social support may have had a positive impact on children's ability to concentrate.

Figure 4.15
Neighbourhood social support and developmental outcomes of kindergarten children, Montréal study area (percentages, 2005)



4.4.2 Use of community resources

Young children can benefit from using neighbourhood resources that enable them to participate in various educational, cultural and recreational activities – activities that are believed to have important implications for their development. The following tables show the percentages of kindergarten children making use of such resources.

Table 4.14a shows the proportions of Montréal study area kindergarteners using educational resources apart from libraries, such as book clubs, reading programs, science centres, family resources centres and drop-in programs. The data indicate that book clubs or reading programs were the most frequently used programs or services. However, data for 2005 indicate that only about 13% of children in the Montréal UEY community used those educational resources at least weekly or monthly. The rates of non-use of educational resources were high: the majority of children did not make any use of these resources during the year. Nevertheless, the percentages of non-users of educational resources declined in 2005 compared with 2001.

Table 4.14a
Distribution of kindergarten children by use of educational resources, Montréal study area (percentages, 2001 and 2005; figures for UEY-II communities in *italics*)

	At least weekly		At least monthly		A few times a year		Not at all	
Book clubs/reading programs								
2001	4.1	*8.2*	3.3	*5.5*	5.1	*10.6*	87.6	*75.7*
2005	8.2	*10.0*	4.7	*6.2*	9.7	*12.2*	77.4	*71.6*
Education or science centres								
2001	2.5	*1.6*	4.5	*5.3*	18.1	*30.3*	74.8	*62.9*
2005	2.5	*1.8*	5.5	*4.8*	26.7	*32.3*	65.3	*61.1*
Family resources centres								
2001	1.0	*3.4*	0.8	*4.0*	5.1	*11.6*	93.1	*81.0*
2005	2.0	*4.2*	2.0	*5.5*	5.7	*12.9*	90.4	*77.4*

Table 4.14b shows the percentages of children in the Montréal UEY site who used or participated in cultural resources or activities, such as art museums, theatres, musical performances, sports events and movies in 2001 and 2005. The data indicate that participation in cultural activities was much higher than in educational activities. For example, in 2001, about 81% of children in the Montréal UEY site went to the movies and about 65% attended theatres or plays. However, in both years, most children who used cultural resources used them infrequently. For example, in 2005, most of the children attending theatres, museums and sports events did so only a few times a year.

Table 4.14b
Distribution of kindergarten children by use of cultural resources, Montréal study area (percentages, 2001 and 2005; figures for UEY-II communities in *italics*)

		At least weekly		At least monthly		A few times a year		Not at all	
Movies									
	2001	5.6	*3.5*	23.0	*22.9*	52.3	*55.6*	19.2	*17.9*
	2005	19.2	*6.4*	30.1	*23.9*	36.1	*51.0*	14.6	*18.7*
Theatres or plays									
	2001	0.7	*0.9*	10.1	*6.2*	54.6	*52.1*	34.6	*40.8*
	2005	2.5	*1.5*	10.9	*5.3*	53.1	*51.2*	33.5	*41.9*
Museums									
	2001	0.2	*0.5*	3.6	*4.4*	43.2	*49.6*	53.0	*45.6*
	2005	1.2	*0.6*	6.4	*5.5*	49.5	*54.8*	42.9	*39.0*
Sports events									
	2001	2.8	*9.5*	2.8	*9.4*	26.8	*32.6*	67.6	*48.4*
	2005	7.7	*11.9*	6.4	*12.2*	27.3	*34.4*	58.6	*41.4*

Overall, the proportions of non-users were considerably lower in 2005 than in 2001. For example, in 2005, about 15% of children in the Montréal study area did not go to the movies at all; the corresponding percentage in 2001 was 19%. In addition, the 2005 data indicate that, compared with peers across the UEY-II communities, Montréal children were more likely to go to movies and the theatre and less likely to go to museums or sports events.

Table 4.14c presents the percentages of children in the Montréal UEY community using recreational facilities. As shown, recreational facilities registered the highest rates of use among the three types of community resources discussed in this section. Parks or play spaces were the most popular resources, being used by more than 70% of children at least weekly in 2005, up from 63% in 2005.

Table 4.14c
Distribution of kindergarten children by use of recreational resources, Montréal study area (percentages, 2001 and 2005; figures for UEY-II communities in *italics*)

		At least weekly		At least monthly		A few times a year		Not at all	
Parks or play spaces									
	2001	62.6	*63.6*	18.7	*19.7*	16.2	*13.5*	2.5	*3.2*
	2005	70.7	*65.9*	17.2	*18.9*	9.1	*10.9*	3.0	*4.3*
Recreational/community centres									
	2001	7.4	*13.3*	5.6	*14.6*	15.2	*23.4*	71.8	*48.8*
	2005	8.4	*12.9*	8.9	*17.1*	19.1	*26.7*	63.6	*43.3*
Indoor, outdoor or wading pools									
	2001	42.3	*38.4*	19.9	*23.8*	25.4	*27.9*	12.3	*9.9*
	2005	39.4	*34.1*	23.2	*26.6*	25.9	*29.3*	11.6	*10.0*

Pools, including indoor and outdoor facilities, were the next most popular venues for children; however, the proportion of children using these facilities at least weekly dropped slightly from 42% in 2001 to 39% in 2005. By comparison, use of recreational/community centres was low, with non-participation rates of 72% in 2001 and 64% in 2005. However, about 17% of children used recreational/community centres at least weekly or monthly in 2005, a significant increase from 13% in 2001.

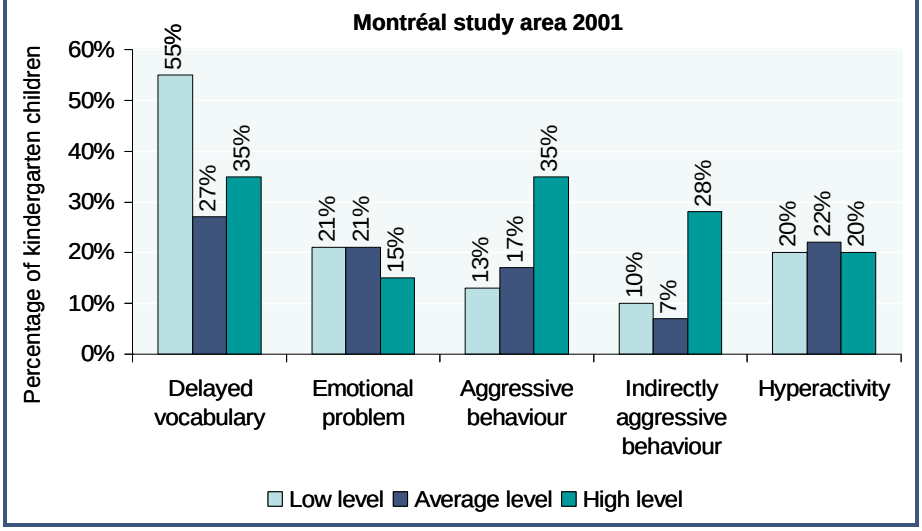
Table 4.15
Distribution of kindergarten children participating at least weekly in sports and recreational activities, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Organized sports with coaching/instruction	33.8	39.7	40.2	45.0
Other organized activity with coaching/instruction (e.g., dance, gymnastics or martial arts)	18.0	27.9	25.0	31.0
Unorganized sports or physical activity	54.5	66.4	62.9	69.0
Lessons in music, art, non-sport activity	9.7	17.0	14.0	14.9
Clubs, groups or community leadership programs (e.g., Beavers, Sparks)	5.7	11.0	21.6	23.9

Table 4.15 deals with children's participation in group activities. It presents PMK responses to questions about how often their child participated in organized and unorganized sports, other coached activities and the arts, and attended clubs or community leadership programs, such as Beavers or Sparks.

In 2005, about 40% of children in the Montréal study area participated in organized sports at least weekly, while weekly participation in unorganized sports was as high as 66%. The results also show that participation in all types of group activities increased substantially between 2001 and 2005, with participation in community clubs or leadership programs almost doubling over this period. Despite these increases, participation in group activities by children in the Montréal study area remained below the average across the UEY-II communities, with the exception of lessons in music, art and non-sport activities.

Figure 4.16
Use of community resources and developmental outcomes of kindergarten children, Montréal study area (percentages, 2001 and 2005)



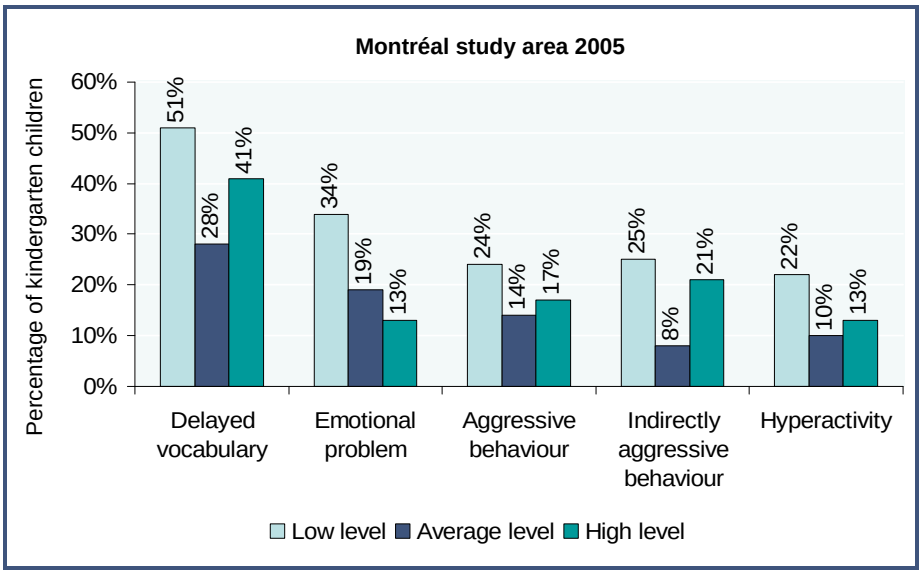


Figure 4.16 shows the relationship between use of community resources and children's developmental outcomes. In these preliminary analyses, children in the Montréal UEY site were classified into three categories: "low-level user," "average-level user" and "high-level user" of community resources, based on an index created to indicate the extent to which a child used community resources, including educational, cultural and recreational resources. Results from both years confirm a significant relationship between use of community resources and vocabulary skills: low-level users were much more likely to receive delayed PPVT-R scores than others. The 2005 data also provide some evidence that children's emotional development and behaviours can be affected by their level of community resource use. For example, in 2005, a much higher proportion of low-level users showed signs of emotional problems than did average- or high-level users (34% vs. 19% and 13%).

4.4.3 Accessibility of community resources and reasons for not using them

Table 4.16
Distribution of PMK confirming that community resources are within short distances (by walking, bus or car), Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	2005	2001	2005
Educational resources	88.1	87.4	75.2	75.8
Cultural resources	82.6	81.3	58.7	57.9
Recreational resources	69.8	72.9	57.9	56.3

Given the relatively low level of community resource use (see Tables 4.14a to 4.14c), PMK were also asked whether educational, cultural and recreational resources were located within walking distance or a short drive or bus ride. The results, presented in Table 4.16, indicate that children in the Montréal UEY community had better access, on average, to educational, cultural and recreational resources than children across the UEY-II communities. For example, about 87% of PMK in 2005 reported easy access to educational resources, while 81% said the same about access to cultural resources. Across the UEY-II communities, the corresponding percentages were 76% and 58% respectively. Fewer PMK (73%) in the Montréal study area agreed they had easy access to recreational resources; however, this percentage was still considerably higher than the average across the UEY-II communities (56%).

Perceptions of resource availability did not necessarily translate into actual use of resources. For example, although over 87% of PMK in the Montréal UEY community said that educational programs and services were nearby, fewer than one in four children used these resources in 2005 (see Table 4.14a).

Many PMK reported that they had difficulty accessing programs and services. The most commonly cited reasons in 2005 were "not enough time," "program times not convenient," "unaware of programs" and "programs [available only] for older children" (see Table 4.17). Costs associated with programs or services, which ranked fifth in this list of barriers, were mentioned by more than 28% of PMK in 2005. In contrast, the top three access barriers cited in 2001 were "not enough time," "program costs" and "programs [available only] for older children."

Table 4.17
Reasons given by PMK for not using community programs or services, Montréal study area and UEY-II communities (percentages, 2001 and 2005)

	Montréal study area		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Situational				
Not enough time	31.0	41.5	41.0	41.6
Unaware of programs	14.0	29.3	23.8	29.7
Health reasons	3.2	3.4	3.1	3.2
Institutional				
Program costs	25.2	28.2	31.7	31.3
Program times not convenient	15.5	30.2	29.9	33.1
Programs for older children	20.2	29.0	27.6	28.4
Programs of interest unavailable	6.5	13.8	13.4	17.6
Not enough spaces	4.3	8.9	7.5	9.0
Commute difficulty	8.2	17.0	15.9	18.2
Programs not in preferred language	1.5	3.2	2.8	2.4
Dispositional				
Concerned about safety	4.8	11.1	8.3	8.9
Concerned about quality	2.3	6.4	5.1	6.1
Cultural or religious reasons	0.2	4.9	1.1	3.1

Reasons for not using community programs and services can be grouped as follows:

- situational: those due to the parents' circumstances in life, such as lack of time (because of work or family responsibilities) and health conditions;
- institutional: practices and procedures (on the part of service providers) that hinder participation, such as fees, program offerings, scheduling and accessibility; and
- dispositional: parents' attitudes toward programs or services.

The results indicate an across-the-board increase between 2001 and 2005 in the percentages of PMK citing barriers. However, the percentages mentioning institutional and dispositional barriers showed the biggest increases. See, for example, the percentages mentioning safety and quality concerns, lack of program availability and difficulty commuting to facilities. Also of interest is the rise in the percentage of PMK mentioning cultural or religious reasons as an access barrier (from 0.2% in 2001 to 4.9% in 2005).

In addition, the results show that situational, institutional and dispositional factors can combine to affect the accessibility of resources. For example, "not enough time" is a situational barrier made worse by an institutional barrier: "program times not convenient." Mitigating these effects requires concerted efforts from all community members, both service providers and service users.

4.5 Summary

4.5.1 Young children in the Montréal study area

Between 2001 and 2005, the number of kindergarten children living in the Montréal UEY site fell from 2,564 to 1,661, with the proportion born outside North America or Europe reaching 13%. By 2005, girls outnumbered boys (52% vs. 48%) – a reverse of the situation in 2001. Although more than 70% of kindergarteners spoke French as their first language, a growing percentage learned another language as their mother tongue. About 28% of children had a first language other than French or English.

Gender was one characteristic that appeared to be linked to children's cognitive and behavioural outcomes. For example, the study found that boys were more prone to emotional problems, aggressive behaviours and hyperactivity. The 2005 data also indicated that boys were much more likely than girls to receive low PPVT-R scores.

First language(s) may be particularly important in explaining differences in vocabulary development (more significant than gender or birthplace, for example): children whose first language was neither French nor English were three times as likely as other children to experience difficulty learning French or English vocabulary.

4.5.2 Characteristics of children's families

Children's families in the Montréal UEY site are also changing. Between 2001 and 2005, the average household income increased by about $900 (adjusted for inflation), and the proportion of children living in low-income families dropped substantially, from 46% to 36%. However, the average family income ($43,586) in the Montréal study area was still considerably below the average of the UEY-II communities ($57,232). As well, the Montréal study area had a higher proportion of low-income families than the average among the UEY-II communities.

In 2001, about 38% of PMK were born outside North America and Europe; this proportion had increased by 2005 to reach 44%. Over the same period, the proportion of PMK with a university degree or college diploma increased by 38%, from 43% to 59%, while the percentage of PMK who had not completed secondary education declined by 50%, from 21% to 10%.

In 2005, 63% of PMK were engaged in paid employment, the same as in 2001 but slightly below the average of the UEY-II communities. About 29% of kindergarten children lived in no-earner families in 2005, up by 8% since 2001.

In 2001, about 25% of PMK reported they had a chronic health condition; this figure climbed by 68% to reach 42% in 2005. However, the vast majority of PMK (about 90%) rated their general health as good to excellent in 2005.

Changes was also evident in family structure. Slightly more kindergarten children lived in a two-parent family in 2005 than in 2001 (65% vs. 62%). Seventy-four percent had one or more siblings in the home in 2005 compared with 70% in 2001.

The study found that family income was related to low vocabulary scores: in 2001, children living below LICO were about 2.5 times more likely to be delayed in vocabulary development than children whose family incomes were three times LICO or above (36.4% vs. 15%). By 2005, below-LICO children were 6.5 times as likely to be delayed in vocabulary development (52.5% vs. 8%).

Family income may also have indirectly influenced children's outcomes, by affecting children's participation in activities such as coached or supervised group activities. Children with the highest family income level were more likely than other children to participate in coached sports; music or art lessons; and dance, gym or martial arts classes. They were also much more likely than children living below LICO to be enrolled in coached sports (78% vs. 30%). On the other hand, participation in activities such as uncoached sports, community clubs or leadership programs did not show much association with family income.

Maternal education level and parental employment status were associated with various child outcomes. In both 2001 and 2005, children of PMK with lower education levels were more likely to receive low PPVT-R scores and to display signs of hyperactivity. The 2005 data also indicated that these children were more likely to exhibit indirectly aggressive behaviours.

Children with no parents working were almost twice as likely as children with working parents to receive low PPVT-R scores. The 2001 data also show that a higher percentage of children in no-earner families exhibited aggressive and indirectly aggressive behaviours, while the 2005 data indicate that this group contained more children with signs of emotional problems.

Children in the Montréal study area who lived in single-parent families were more likely than children living in two-parent families to receive low PPVT-R scores, show signs of emotional problems, and exhibit aggressive behaviours and hyperactivity. The 2005 data also indicate that children in single-parent families were more likely to display indirectly aggressive behaviours than children in two-parent families.

4.5.3 Family processes and non-parental childcare

The majority of children's families in the Montréal study area functioned well. In 2005, about 22% of children lived in families that functioned at the low level (less well than the majority of families in the UEY-II communities), an increase of 42% over the 2001 figure. The corresponding average for the UEY-II communities was about 12% in both 2001 and 2005.

The scores of PMK in the Montréal study area on all four measures of parenting showed little change between 2001 and 2005. Montréal PMK scored above the UEY-II averages on rational and effective parenting measures and below the UEY-II norm on consistent and positive parenting measures.

In 2005, more than 80% of Montréal PMK read to their children and taught them numbers either daily or at least a few times a week. Overall, they registered a considerably higher level of engagement in 2005 than in 2001, with significant increases in the proportions of PMK engaged in these activities on a daily basis. However, their level of engagement remained below the UEY-II averages in 2005.

The use of non-parental childcare in the Montréal study area increased by 22% between 2001 and 2005 (58% vs. 71%). This level of use of non-parental childcare was considerably higher than the average across the UEY-II communities.

The majority of children in non-parental childcare in the Montréal study area were enrolled in before/after-school programs, with the percentage increasing from 71% in 2001 to 81% in 2005. About 10% attended daycare centres and nursery/preschools in 2001, whereas only 6.7% did in 2005. Care by a relative or non-relative, either at home or outside the home, accounted for 11% of children who needed non-parental care in 2005.

The level of family functioning was strongly associated with the vocabulary skills, emotional development and behaviours of children in the Montréal study area. For example, the 2005 data show that 42% of children in families functioning at a low level had delayed vocabulary development, compared with 27% of children in families functioning at a high level. The 2005 data also indicate that children in families functioning at a low level were considerably more likely to show signs of emotional problems and indirectly aggressive behaviours than others.

Based on the 2001 results, positive parenting appeared to be related to children's cognitive, emotional and behavioural development. However, the results from 2005 did not confirm the role of positive parenting in children's vocabulary development. Results from both survey years indicate that consistent parenting was significantly related to better outcomes, including in vocabulary skills, emotional development, social behaviours and attention spans.

4.5.4 Community: neighbourhoods and resources for young children

PMK in the Montréal study area gave relatively high scores to schools, health facilities, facilities for children and access to public transport. However, they awarded relatively low scores to neighbourhood safety and cleanliness, and residents' involvement. Overall, the scores from the Montréal study area were lower than the UEY-II averages on most neighbourhood measures, except facilities for children and access to public transport.

In 2001 and 2005, more than 80% of PMK agreed or strongly agreed that their neighbourhood provided safe parks and play spaces. However, the percentage of PMK agreeing it was safe for children to play outside declined from 78% in 2001 to 71% in 2005.

The percentages of PMK with positive opinions on neighbours' social support increased significantly between 2001 and 2005. For example, in 2001, about 76% of PMK agreed that neighbours were ready to help one another. This percentage increased to 80% in 2005. However, the percentages of PMK agreeing that their neighbourhoods were good places to raise children were generally lower in the Montréal study area than across the UEY-II communities.

4.5.5 Use of community resources

The results from the Montréal UEY site indicate that kindergarten children living there had better access to educational, cultural and recreational resources than the average across the UEY-II communities: nearly 87% of PMK in 2005 agreed that educational resources were within walking distance or a short bus or car ride, with 81% and 73%, respectively, saying the same about cultural and recreational resources. Corresponding percentages for the UEY-II communities as a whole were 76%, 58% and 56%.

However, the data indicate that in 2005 only about 13% of children in the Montréal UEY community used educational resources, such as book clubs or reading programs, at least weekly or monthly. Moreover, the majority of children did not use any of these resources throughout the year, although the percentages of non-users of educational resources fell in 2005 compared with 2001.

Participation rates in cultural resources were much higher than in educational resources. For example, in 2001, about 81% of children in the Montréal UEY site went to the movies, and close to 65% attended theatres, visited museums and watched spectator sports events. However, most of them utilized these resources just a few times a year.

Recreational facilities registered the highest use rates among the three types of community resources discussed in this report. Of these, parks or play spaces were the most popular type of facility: more than 70% of children in the Montréal UEY study area used such facilities at least weekly in 2005.

Pools, including indoor and outdoor facilities, were the next most popular venues; however, the proportion of children using these facilities at least weekly dropped slightly, from 42% in 2001 to 39% in 2005. By comparison, the use of recreational/community centres was low, with non-participation rates of 72% in 2001 and 64% in 2005. About 17% of children in the community used recreational/community centres at least weekly or monthly in 2005, a significant increase from 13% in 2001.

In 2005, about 40% of children in the Montréal study area participated in organized sports on a weekly basis, while weekly participation in unorganized sports was as high as 66%. Participation in all types of group activities increased substantially between 2001 and 2005, with participation in community clubs or leadership programs almost doubling. Despite the increases, participation in community group activities remained lower than the average across the UEY-II communities, except for lessons in music, art and non-sporting activities.

Many PMK reported difficulties accessing community programs or services. Among the most common reasons, cited by more than 30% of PMK in 2005, were "not enough time," "program times inconvenient," "unaware of programs" and "programs [available only] for older children." Costs remained a major reason for non-use, mentioned by more than 28% of PMK. In 2001, the top three reasons cited by PMK were "not enough time," "program costs" and "programs [available only] for older children."

While the data indicate across-the-board increases in the percentages of PMK mentioning different types of barriers in 2005, the percentages of PMK citing institutional barriers – such as the unavailability of programs – more than doubled over the study period. Also noteworthy was the increase in the percentage of PMK mentioning cultural or religious reasons as a barrier. Finally, considerably more PMK in 2005 than in 2001 mentioned lack of program awareness as a barrier.

5. Concluding Remarks

The Communities Survey collects information on a wide battery of child, family and neighbourhood characteristics for the Understanding the Early Years (UEY) communities through interviews with parents and direct assessments of children's cognitive skills. It thus enables us to explore relationships between children's developmental outcomes and various individual, family and community factors. This report has presented results from preliminary analyses of this rich database.

As discussed in Chapter 2 (and Appendix A), numerous studies have examined the relationships between young children's development and resources and processes within the family and community. Studies that analyzed the first round of data collected in the UEY pilot communities have also enriched the existing literature by exploring these relationships within Canadian communities.

Rather than merely corroborate the findings from these studies, a major thrust of the current study has been to discover whether any of the factors and processes affecting early childhood development changed in the community between 2001 and 2005. The other focus has been to assess whether any of these changes have influenced young children's developmental outcomes. Readers can interpret the data results and draw conclusions in light of their own community context, as well as in reference to the existing literature, including findings from previous studies at the UEY pilot sites.

However, results presented here that appear to reflect changes (or no changes) at the community level should be interpreted with caution for a number of reasons. First, the results are based on relatively small samples. Second, the sample of children (and their parents) who participated in the 2001 survey may have different demographic characteristics from those who participated in the 2005 survey. Third, as Willms (2003) points out, UEY was designed to include a broad range of measures so that communities could get a general profile of their young children. To measure change in this context, especially UEY's impact on child development, would require more accurate measurement tools and studies of longer duration. Fourth, the data analyses presented in this report are mostly based on simple, bilateral cross-tabulations. To verify the nature of the relationships between individual, family and community factors and children's developmental outcomes, as well as to infer causal relationships, would require more rigorous analyses, using complex statistical models, or experimental research.

This report has presented only a small proportion of information gathered using the Communities Survey. Much more information can be drawn from this wealth of data through further work designed to address questions such as:

- What are the key factors associated with various children's outcomes as well as with their participation in different activities at home and in the communities?
- How do these factors compare in the way they affect developmental outcomes?
- Do these impacts change as circumstances change?

With the data from the Communities Survey, it is also possible to determine who is more likely to report lack of time or program costs as barriers to use of community resources, who is more likely to use educational, recreational and cultural resources, and whether the profiles of children and their families using different kinds of resources differ.

However, because the Communities Survey was designed to provide a broad picture of the participating communities, it is not an ideal tool for gathering the sort of detailed information required for planning concrete community action. For example, the Communities Survey has helped us identify some of the barriers inhibiting access to early childhood programs and services available in the community. Yet it does not provide information on what barriers are associated with specific community programs or services, what kinds of programs or services parents are looking for but are not yet available, or what types of programs or services are avoided because of their costs. New community-based data collections may have to be initiated in order to acquire such specific information.

A more significant contribution of the Communities Survey may lie in the example it has set for the types of data that need to be collected and the types of data collection strategies that need to be adopted by the community. By presenting data from the Communities Survey, this report is helping the UEY initiative achieve its twin goals of providing community-specific information related to early childhood development and encouraging evidence-based decision making at the community level.

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Appendix A

Early Childhood Development: Findings from Research

The literature on early childhood development is vast. For the purposes of this study, this section provides an overview of studies that focus on four categories of developmental influences. These categories are individual child characteristics, family resources, family processes and opportunity structures. They are similar to the categories illustrated in Figure 2.1.

1. Individual Child Characteristics

Individual child characteristics refer to a child's biological attributes and to demographic characteristics such as gender and ethnic and cultural background. The emotional, cognitive and behavioural characteristics of the child – which not only influence developmental outcomes but are outcomes in themselves – are also considered in this category.

Gender

Research has identified gender as an important factor in developmental outcomes. On entering kindergarten, girls are generally slightly better than boys in reading skills and prosocial behaviour (i.e., behaviour intended to benefit others), are about the same as boys in mathematics and general knowledge, and are less likely to exhibit problem behaviours than boys (Maxwell & Clifford 2004). These gender differences are found in Canadian data (i.e., National Longitudinal Survey of Children and Youth – NLSCY) as well as in data from other countries including the United States, the United Kingdom and Australia.

Ethnicity, place of birth and first language

Children's ethnicity, place of birth and first language are also significant in explaining some differences among young children. For instance, a 2002 study (cited in Noble et al. 2005) found that African American, Hispanic and other children had lower math and reading skills at the beginning of kindergarten than Caucasian or Asian children. Another study found that racial disparities in school readiness are important and can be persistent (Noble et al. 2005). Worswick (2001) finds that Canadian children of immigrants whose first language is either English or French have especially high outcomes in reading and writing compared with those whose first language is neither English nor French.

However, having immigrant parents is not necessarily a risk indicator for psychiatric disorder or poor school performance (Munroe-Blum et al. 1988). Children of new immigrants, despite generally higher poverty rates, are less likely to have mental health problems than non-immigrant children (Beiser et al. 1998). Worswick's study (2001) also shows that immigrant children who initially perform poorly in Canadian schools can catch up with non-immigrant children in reading, writing and mathematics by age 13.

Social competence

Studies that have examined the social competence of young children (e.g., responsiveness, flexibility, empathy, caring, communication skills and sense of humour) find that these characteristics are very important in child development (Parrila et al. 2002). Prosocial skills result in improved health and well-being, greater participation in the community and active engagement in socially beneficial behaviours, such as sharing, offering help, cooperating, showing concern for others and promoting positive social relationships (Parrila et al. 2002:4). Conversely, antisocial or aggressive behaviour is often associated with negative developmental outcomes. A difficult temperament in infancy has also been linked to later emotional and social problems. For example, boys showing signs of antisocial behaviour in kindergarten were delinquent in adolescence (Bertrand 2001). In contrast, good-natured and obedient children are less likely to manifest behavioural problems such as hyperactivity, physical aggression and oppositional behaviour (Willms 2002).

Emotional development

Studies focusing on emotional development reveal that emotions can also help or hinder the growth of skills in children and are at the centre of children's lives. Emotions affect their sense of well-being, sense of self and understanding of the world (Daly 2004). Emotions provide the basis for human attachments and social interaction with others. Children do best when their self-esteem, self-confidence and self-reliance are nurtured, because "a confident, trusting child, secure in his belief in his own particular abilities and what it is

that makes him unique, will play, concentrate, love, give and communicate better" (Daly 2004:23). As well, children with strong emotional skills are less often upset, are more relaxed, are more focused on tasks at hand, are more socially skilled, have fewer behavioural problems, and are in general better prepared for life and learning (Daly 2004).

2. Family Resources Factors

Socio-economic status

A major conclusion from childhood studies is that early childhood outcomes are strongly related to families' socio-economic status. As summarized by Bertrand, "from birth to death, higher socio-economic status is related to better academic achievement, lower rates of illness and even lower rates of accidents and suicides" (2001:4). The term "socio-economic status" refers to the relative position of a family or individual in society, based on access to or control over wealth, prestige and power (Willms 2000). In early childhood research, socio-economic status is often represented by a combination of factors including the family's income, the parents' level of education and their occupation.

Willms (2002) finds that children in high socio-economic status families are less likely than those in low socio-economic status families to score below national averages in vocabulary, mathematics, and motor and social skills. Results from other studies indicate that socio-economic status often affects other aspects of life such as the family environment. For example, it is related to the amount and quality of verbal interactions between parents and children, which ultimately affect children's language and cognitive development (Papalia et al. 2004).

Family income

Among the factors contributing to socio-economic status, family income has received the most attention in studies of child development. Hernandez (1993) emphasizes that the family income indicates the level of economic resources available to a child. Many studies find that family income and wealth are significantly associated with the health and educational performance of children.[8] Ross and Robert (1999) report that over 35% of children in low-income families exhibit delayed vocabulary development, compared with 10% of children in higher-income families. A study of American Indian families also showed that when family income is no longer below the poverty line, there is a significant reduction in behavioural symptoms of oppositional/defiant and conduct disorder (Willms n.d). A recent study by Phipps and Lethbridge (2006) also concluded that higher income is almost always associated with better outcomes for children, particularly cognitive and behavioural outcomes. These findings indicate that a large number of Canadian children face risks associated with low family income. For example, recent statistics from the NLSCY reveal that about 35% of Canadian children experience at least one low-income year, while 11% live in low-income families for at least 5 or 6 years (findings from three cycles of NLSCY data) (Phipps & Lethbridge 2006).

Parents' level of education

The parents' level of education also directly affects a child's health and educational outcomes: the higher the parents' education level, the higher the child's attainment tends to be.[9] Leibowitz (1974) argues that this is because educated parents are likely to spend more quality time with their children than less educated parents. More important, as Parcel and Menaghan (1994) suggest, parental education is perhaps one of the most significant factors affecting a child's developmental outcomes because education reflects the knowledge, experience and aspirations that parents bring to their children.

Parents' labour market participation

The parents' employment and work schedule have also been shown to directly affect a child's health and educational outcomes. Hoffman (1989) explains that parents in dual-earner families place more emphasis than other parents on independence training for children. The research finds that independence is a beneficial characteristic when children are involved in learning activities (Thomas 2006).

[8] For instance, Sewell and Hauser (1975), Cornia (1984), Haveman and Wolfe (1994), Hill and O'Neill (1994), Lipman et al. (1994) and Dooley et al. (1998).
[9] See Haveman and Wolfe (1995) for a review of these studies.

Parents' health

Parents' health, especially the mother's physical and emotional health, can affect the amount and quality of time and attention that parents devote to their children. Since time and attention are instrumental in the healthy development of children, parents affected by depression or addictions will likely negatively impact a child's development. Willms supports this view, explaining that "mothers suffering from post-partum depression can adversely affect the quality of maternal-infant interactions, resulting in poorer social and cognitive developmental outcomes" (n.d.:11). Significant levels of parental depression, especially maternal depression, also increase a child's tendency to develop anxiety and behavioural problems (Landy & Tam 1998). Gerhardt expands on this finding by explaining how mothers who drink, take recreational drugs and have poor eating habits affect their children's stress response, making them overly fussy or temperamental (2004).

The health of the mother also directly affects the health and educational outcomes of her child. For example, children born to healthy mothers tend to have higher birth weights and, as a result, experience fewer health problems (Barrera 1990). Graham (1972) and Schultz (1987) also report that children of healthy mothers are healthier than children of unhealthy mothers. Poor parental mental health has been identified as a risk factor for psychiatric disturbances in immigrant and refugee children (McCloskey & Locke 1995; Mghir et al. 1995).

Family structure

Studies find that single-parent families, families suffering marital breakdown, families in which the mother gave birth at a young age, and large families with little social support can negatively affect early childhood development. Kohen et al. (1998) and Willms (2002), for example, find that behavioural problems in children are related to many factors including female-headed households, large households and younger maternal age. Willms (2002) also finds that children who live in single-parent families are more likely to have behavioural problems than children who live with teenaged mothers but who have a second parental figure. Additionally, the risk of intellectual delays, as well as mental, emotional or physical health problems, increases for children aged 4 to 11 years who live in single-parent or adolescent-parent homes (Landy & Tam 1998).

Family size affects children's developmental outcomes because siblings compete for the limited time and financial resources of their parents. The larger the number of siblings, the less parental time and money there are for each child (Becker & Tomes 1976). In particular, as Hanushek (1987) suggests, private time spent with individual children, which is necessary to a child's development, decreases as family size increases. However, Hernandez (1989, 1993) argues that siblings who grow up in a large family can share the companionship of childhood, and this can influence childhood development in a positive way.

A number of studies find that single-parent status can have a significant negative impact on children's educational attainment.[10] Krein and Beller (1988) find that this negative effect increases with the number of years spent in this type of family structure, and the impact is greater for boys than girls. Other studies find that single-parent status is strongly associated with psychiatric disorders, poor school performance and social problems.[11] Also, because single parents often have to survive on only one income, they are likely to face more challenges and stress in raising their children (HRSDC and Healthy Manitoba 2003). Children living in single-parent families thus tend to be exposed to more parental stress and, as a result, may feel more distressed, depressed, fearful, sad, rejected and worried than children who live with two parents (Judith et al. 1980, 1989).

A mother's age at the birth of her child is associated with the child's developmental outcomes, including health and cognitive skills (Shariff & Ahn 1995; Hill & O'Neill 1994). The older the mother at childbirth, the better the child's developmental outcomes (Dahinten & Willms 2002), with children of adolescent mothers showing less favourable outcomes in most aspects of development. This may be because teenaged mothers tend to have lower socio-economic status and are more likely to raise their children as single parents. According to Parcel and Menaghan (1994), it may also reflect the fact that a mother's maturity, sense of control and patience, which affect child development, all tend to increase with age.

[10] Blau and Duncan (1967), Freeman (1974), Featherman and Hauser (1978), Haveman et al. (1991), Sandefur et al. (1992) and McLanahan and Sandefur (1994).
[11] Dooley and Lipman (1996), Curtis et al. (1996), Dooley et al. (1998) and Curtis et al. (2004).

3. Family Processes Factors

The family has tremendous influence on the healthy development of children. It is where children spend the majority of their time, especially in the first 5 years of life, and where they learn skills, values and attitudes that will help them participate in society and build self-esteem (Canadian Council on Social Development 2006).

Parent–child interactions

Research shows that the most important family processes include parenting style (the ways in which parents interact with their children), the cohesiveness of the family and the extent to which children are regularly engaged in learning activities (Willms 2003; Phipps & Lethbridge 2006). These factors help protect children from the impact of low socio-economic status and may explain why not all children in low-income families are unhealthy and not all children in middle- to high-income families are healthy.

Specifically, studies consistently indicate that positive and authoritarian parenting – by parents who are firm but loving and who set realistic standards as well as clear and consistent rules for their children – is related to better developmental outcomes in health, social competence, academic achievement, school completion, and emotional and behavioural development (Patterson et al. 1989; Chao & Willms 1998; Hoghughi 1998; Landy & Tam 1998; Ross et al. 1998; Feinstein & Symons 1999; Miller et al. 2002; Papalia et al. 2004). On the other hand, Kagan (1994) and Beiser et al. (1998) find that poor parenting (uncaring on the one hand or overprotective on the other) is strongly related to children's emotional and behavioural problems, sometimes more so than other family characteristics. A study by Landy and Tam (1998) finds that parenting practices are crucial to the development of at-risk children, such as those with a teenaged mother or those in a single-parent family, a dysfunctional family or a family with less social support.

Family cohesion

Research has shown that family cohesion is another important factor affecting healthy child development. Family cohesion refers to how well family members communicate with each other, work together, and how well family members function as a unit. Positive family functioning can help mitigate the influence of other factors in child development, such as family income and family structure (Schaffer 1998). In Canada, while the majority of children grow up in families that are functioning well, there is a small percentage who do not. (Human Resources and Development Canada and Statistics Canada 2000-2001). Children living in dysfunctional families are about 35% more likely to display signs of problematic behaviour such as aggression or difficult temperament than their counterparts living in families that are functioning well (Racine, Y. and Boyle, M. 2002). This relationship between family functioning and behaviour problems is particularly evident when examining the display of signs associated with aggressive behaviours, such as getting into fights, kicking, biting and/or destroying belongings.

Parents' level of engagement

Parents who are highly engaged with their children have a major influence on their children's development (Rutter 1990). Parental attention during a child's early years – specifically, the extent to which the parent is emotionally available – is particularly crucial to development (Gerhardt 2004). Furthermore, studies find that the time parents spend reading to their children has a significant impact on the children's development regardless of the family's socio-economic status (Willms 2003; FSU Center for Prevention and Early Intervention Policy 2005).

4. Opportunity Structures: Neighbourhood and Community Factors

As an African proverb says, "it takes an entire village to raise a child." Researchers also point out that children's "readiness for school success is a community responsibility, not just the responsibility of parents and preschool teachers" (Maxwell & Clifford 2004:2).

It is true that neighbourhoods and communities have always been at the centre of the learning and developmental activities of young children. They provide opportunities for children to play, learn, and interact with adults and peers by providing important resources and activities such as daycare, schools, libraries, public pools and parenting groups. However, research on community effects has been limited

until recently (Connor & Brink 1999). The important role of the community in the development of young children is just beginning to be recognized and explored.

A general conclusion from studies of the role of communities in child development is that both the physical and social characteristics of a community are important (Jencks & Mayer 1990; Canadian Institute for Health Information 2006). These characteristics include physical conditions relating to the risk of injury to children, access to public facilities for children, neighbourhood/community safety (e.g., crime rates), neighbourhood affluence/resources, quality of childcare and schools, community cohesion, quality of role models, participation in community activities and the community's willingness to intervene for the common good (Connor & Brink 1999; Curtis et al. 2004; Hertzman & Kohen 2003; Canadian Institute for Health Information 2006).

Neighbourhood affluence

Studies find that neighbourhood affluence is an important community characteristic. Affluent communities often have more resources and opportunities for young children and their families. Hertzman and Kohen (2003) find that a neighbourhood with plentiful resources promotes child well-being by providing stimulating activities. Specifically, their study finds that affluent neighbourhoods can have a positive effect on children's IQ scores and verbal abilities. Another study (Canadian Institute for Health Information 2006) finds that neighbourhood affluence has a significant impact on children's health, even after the effects of parental income, demographic characteristics and health factors are taken into account.. Willms also concludes that "children's development is more likely to flourish if families have access to educational, cultural and recreational resources: These are important not only because they contribute directly to children's development, but also because they foster social support and increase social capital within the community" (2003:34).

Childcare quality

Childcare is second in importance to the family as the place where most early childhood development occurs, and over the years there has been an increasing reliance on childcare by non-relatives (Shonkoff & Phillips 2000). The quality of childcare is thus an important factor in the overall quality of community educational resources. Quality in childcare is defined by the types of interactions between children and care providers, resources within the care environment and the types of activities children are engaged in while in care.

The influence of childcare on child development can be positive or negative, depending on the quality of care (Friendly et al. n.d.). Studies find that children attending high-quality care tend to be more confident and self-regulated, while those attending low-quality care tend to be less cooperative and exhibit more behavioural problems (Doherty 1991; Connor & Brink 1999; Gagné 2003). High-quality childcare can also protect children against the effects of negative family experiences (Shonkoff & Phillips 2000) or low socio-economic status. A study by Raver and Knitze (2002:13) finds that low-income children in high-quality childcare are significantly better off, cognitively and emotionally, than similar children in poor-quality settings. In general, children attending centre-based care demonstrate higher cognitive and language outcomes and a higher level of school readiness than children in other types of settings (Connor & Brink 1999; O'Brien et al. 1994; Lipps & Yiptong 1999).

School environment

Schools are an integral part of any community. Since children spend a great deal of time in school, their experiences there can have a major impact on their overall well-being. This impact is so profound that it has been claimed that education is key to children's capacity development (Canadian Council on Social Development n.d. B).

A number of factors influence a child's success in school. For instance, research has shown that successful children are those who were nurtured or stimulated prior to entering school. Within the school setting, it is how teachers interact with children that ultimately affects children's social and emotional outcomes (Raver & Knitze 2002). This interaction in turn can be affected by the way children behave. Children who act in antisocial ways tend to be less accepted by classmates and teachers, and receive less instruction and positive feedback (Raver & Knitze 2002). Teachers themselves can also perpetuate high levels of misbehaviour from children by ignoring problem behaviours or dealing too harshly with them (Raver & Knitze 2002).

There are 10 key ways that schools and/or communities can assist childhood development (Maxwell & Clifford 2004:2).

- Smooth the transition between home and school.
- Strive for continuity between early care and education programs and elementary schools.
- Help children learn and make sense of their world.
- Make a commitment to every child's success.
- Show they are committed to every teacher's success.
- Introduce and expand strategies that have been shown to improve achievement.
- Function as learning organizations that change their practices if they do not help children.
- Serve children in communities.
- Take responsibility for results.
- Maintain strong leadership.

Community cohesion

Cohesive communities – those whose members are well connected and identify strongly with the community – have an important positive influence on child development and contribute to improved outcomes (Canadian Council on Social Development 2006). These communities offer parents and children an opportunity to interact with one another and with other families to share information, reduce uncertainty and lessen parental anxiety (Moore 2005). Children who grow up in this type of environment tend to be more prosocial. As Parrila et al. note, "parents that rated their neighbours as better role models or as more supportive or helpful tended to rate their children as more prosocial" (2002:35). Wilson (1987) also finds that neighbours' socio-economic status, educational level and performance, and values can influence children's ambition and drive.

Social support

Research also shows that neighbourhoods that have high levels of engagement and are willing to intervene for the common good tend to be better places to raise children. This is because "(a) the high local expectations for informal social control and mutual support of children allow child surveillance and other parenting tasks to be shared with neighbours, and (b) parents are linked to each other through their participation in community activities, including organized worship and support of local schools" (Jones et al. 2002:7). In contrast, an absence of community networks often results in family isolation, lower levels of trust between neighbours and lack of political mobilization, all of which can lead to fewer amenities (Jones et al. 2002).

Peer interactions

Children's peers are another important element in child development. They are part of the process of growing up and help children learn how to interact with others. Establishing relationships with others is one of the most important developmental tasks of early childhood, and the preschool years are a time when social skills expand dramatically. The socialization process is so important during this stage of life that "the success with which young children accomplish this objective can affect whether they will walk pathways to competence or deviance as they move into middle childhood and adolescent years" (Shonkoff & Phillips 2000:180). Socialization teaches children the standards and values of society and allows them to become integrated into their larger social world (Daly 2004).

At 9 to 12 months of age, infants begin to watch other people, thus starting the socialization process (Shonkoff & Phillips 2000). Attachments developed early in life can lay the foundation for later social relationships and happiness. As Daly states, "no one can become fully human without social experiences" (2004:134). Close friendships have been linked to better social and academic outcomes (Canadian Council on Social Development 2006). Friendships also increase self-esteem and feelings of self-worth (Daly 2004). On the other hand, being rejected as a child is related to psychiatric problems and poor academic

achievement (Shonkoff & Phillips 2000). However, it is not close friendships in themselves that are important to healthy development; these friendships have to be with prosocial peers.

5. UEY Findings on Neighbourhood and Community Factors

At the core of the Understanding the Early Years (UEY) research is an intent to discover the relative importance of individual, family and community factors in the development of young children and their readiness to learn. The purpose is to provide communities with critical insights into what actions might be most effective in further improving children's outcomes.

The results from the UEY pilot sites show that schools with the best average school population scores – assessed using the Early Development Instrument (EDI) – tend to be located in neighbourhoods with few socio-economic risk factors, while those with poorer average school population scores are often in the higher-risk areas. However, the spatial distribution of outcomes does not entirely match socio-economic status patterns. The average school population score in several low-risk neighbourhoods is unexpectedly low on all components of development assessed using the EDI, while the average school population score in some higher-risk neighbourhoods is high on many of the components of development. This observation indicates that many children in relatively poor areas are faring quite well compared with some children in affluent areas.

Analyses of the unique roles of the community in children's developmental outcomes identified a number of community characteristics as being more important than others. They include neighbourhood quality and safety, the length of time residents live in the community (i.e., neighbourhood stability), social support (from family members and friends), social capital (support available collectively to groups within a community) and access to and use of community resources.

A general finding is that different community characteristics have an impact on different aspects of child development. For example, children in families receiving a high level of social support are less likely to be at risk in the cognitive domain, and living in a neighbourhood with a high level of social capital is associated with an increase in positive behavioural outcomes. As well, children living in neighbourhoods that contain many families with children are more likely to be well behaved, possibly because of the opportunities for social interaction.

Better outcomes are also seen in children who are more involved in their communities through their use of libraries, book clubs and educational centres, as well as those whose parents are involved in voluntary organizations. For example, families that make use of recreational, educational and leisure facilities have children with better cognitive scores. Vocabulary development is influenced by children's use of community educational resources such as libraries, book clubs, literacy programs, educational centres or workshops. Other factors affecting vocabulary development are parental use of family and parent resource centres, as well as the mother's education and the child's knowledge of English. On the other hand, children of families who feel they encounter many barriers to participation in community programs and services achieve lower scores on learning assessments.

The UEY study data show that the average use of community resources is rather low, at 3.4 on a 10-point scale, even though about 70% of parents reported that most educational resources are within walking distance or are a short drive or bus ride away. About 50% said the same with respect to community cultural and recreational resources. The North York study, for one, found that participation rates in community educational resources, recreation centres and organized sports seem to be associated with family characteristics: mothers' educational level, household income, and parental employment, first language and immigrant status.

According to parents, the biggest barriers to using community resources are time, program costs and lack of knowledge about the availability of programs and services. However, barriers may also include physical and social obstacles. The effects of barriers are identifiable and cumulative, and pose a real problem for many families: the more barriers a family faces, the more likely their children are to experience problems.

The UEY findings suggest that the extent to which a community can promote developmental opportunities for young children is determined by both the nature of its offerings and its commitment to ensuring their availability. Just as important as the availability of the programs is the community's effort to ensure a sense of community and promote the message that opportunities are available to all children and families. The findings emphasize the need to promote social interaction and integration within a community, raise awareness about the importance and availability of community resources, ensure that resources are available and address access barriers.

In summary, the family has an extremely important role to play in a child's development. Research indicates that "during the pre-school years, the important [family] factors are parenting skills, the cohesiveness of the family unit, the mental health of the mother, and the extent to which parents engage with their children, especially in reading to the child" (Willms n.d.:30). Furthermore, although demographic characteristics of the family – such as household income and parental education and employment – play an important role in development, there are strong effects associated with approaches to parenting, engagement in the community, use of resources, neighbourhood social capital and social support that are independent of family demographics (Willms 2005:25).