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Understanding the Early Years

Early Childhood Development in the Hampton/Sussex Community, New Brunswick

An Analysis of the Communities Survey

SP-897-03-10E

Canada

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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 Hampton/Sussex community 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 Hampton/Sussex 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 Hampton/Sussex 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.

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Executive Summary

This report presents survey findings from two cycles of data collection in the Hampton/Sussex area of New Brunswick. The study was conducted by Statistics Canada as part of the second pilot phase of the Understanding the Early Years (UEY-II) initiative, 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 Hampton/Sussex and interviews with parents.[2] The results from the survey paint a portrait of early childhood outcomes in Hampton/Sussex, 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 Hampton/Sussex 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 Hampton/Sussex 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.

Hampton/Sussex Children: Developmental Outcomes

Overall, results from the Communities Survey indicate that the majority of Hampton/Sussex kindergarten children continued to enjoy good health in 2005, although one in four had a long-term health condition.

Direct assessments of cognitive skills show that, compared with peers across the UEY-II communities, kindergarten children in Hampton/Sussex continued to perform significantly better with respect to vocabulary, early literacy and numeracy skills. In 2005, 13% of Hampton/Sussex children were considered delayed in vocabulary development (assessed using the Peabody Picture Vocabulary Test – Revised [PPVT-R]), and 8% were considered delayed in early literacy skills (assessed using the Who am I? instrument). The corresponding proportions across the UEY-II communities were 24% and 12% respectively.

Of the four domains of behaviour assessed during the survey – hyperactivity, aggressive behaviours, indirectly aggressive behaviours and emotional maturity – Hampton/Sussex children showed substantial improvement in the domain of hyperactivity: the percentage of children showing signs of attention problems declined from 15% in 2001 to 6% in 2005. The proportion of children showing signs of aggressive behaviours also fell noticeably, from 9% in 2001 to 5% in 2005. However, no statistically significant changes were observed between 2001 and 2005 in the prevalence of children showing signs of emotional problems or indirectly aggressive behaviours. In general, kindergarteners in Hampton/Sussex performed better on all four behavioural measures than the averages across the UEY-II communities.

Hampton/Sussex Children: Demographic Characteristics

Results from the 2001 and 2005 cycles of the Communities Survey indicate demographic changes in the Hampton/Sussex kindergartener population during this period. While there were still slightly more boys than girls in the population in 2005, the gender ratio had narrowed, to 51% boys and 49% girls.

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

This demographic shift may have contributed to some of the changes in behavioural outcomes observed over the study period. For example, the prevalence of aggressive behaviours declined, whereas the prevalence of indirectly aggressive behaviours increased among Hampton/Sussex children. This result might be expected, since the study findings also show that Hampton/Sussex boys were more likely than girls to be aggressive and less likely to be indirectly aggressive.

Hampton/Sussex Families: Characteristics

Information from the Communities Survey also indicates changes in children's families in Hampton/Sussex between 2001 and 2005. Over the period, the average household income of Hampton/Sussex children increased substantially, placing Hampton/Sussex among the affluent UEY-II communities. Yet 13% of Hampton/Sussex children still lived in low-income families. Analysis of the study data shows that family income was associated not only with the cognitive outcomes of Hampton/Sussex children but also with their participation in organized sports and lessons in art and other recreational activities. For example, about 71% of children in high-income families participated in coached sports, compared with fewer than 28% of children in low-income families.

Parents' level of education increased substantially in Hampton/Sussex over the study period. By 2005, close to 60% of those interviewed (mostly mothers) had either a college diploma or a university degree. However, the study found that the role of parental education in children's vocabulary development was not as clear-cut as suggested in the research literature: children of interviewees with low educational levels did not necessarily register the low PPVT-R scores that signify delayed vocabulary development. The data show that some of these children developed advanced vocabulary skills.

About 73% of the parents interviewed were engaged in paid employment in 2005, a similar level to that recorded in 2001. The data also indicate that about 10% of Hampton/Sussex children were living in no-earner families. Analysis of the data shows that parental employment was significantly related to children's cognitive, emotional and behavioural development: considerably higher percentages of children in no-earner families than in families with working parents displayed signs of hyperactivity and aggressive behaviours.

Family structure was also explored to assess its influence on early years development. Data from both 2001 and 2005 show that 84% of Hampton/Sussex children lived in two-parent families. As well, more than 85% were living with one or more siblings in the home. The study found that children in single-parent families were more likely than those in two-parent families to have delayed vocabulary development and show signs of hyperactivity.

Hampton/Sussex Families: Family Processes

Both the behaviours and vocabulary skills of Hampton/Sussex children were significantly associated with how their family members worked together to solve problems. The impact of family functioning on child development appeared to increase over the study period, as evidenced in the growing differences in outcomes between children in families functioning at a low level and those in families functioning at a higher level.

Compared with UEY-II norms, Hampton/Sussex parents performed better than average on all parenting measures in 2005. The vast majority of Hampton/Sussex parents were actively engaged in providing a stimulating home environment for children. More than 95% read to their children, taught them numbers and helped them learn new words at least a few times a week. The study also found that positive parenting was related to children's emotional and behavioural development, while consistent parenting was related to most of the outcomes assessed: vocabulary skills, anxiety levels, and aggressive and indirectly aggressive behaviours.

The percentage of Hampton/Sussex children in non-parental childcare increased from 47% in 2001 to 55% in 2005. The most common types of childcare were care provided by a non-relative outside the home and by a relative outside the home. Daycare centres, before/after-school programs and nurseries also registered a moderate increase in use between 2001 and 2005. Overall, Hampton/Sussex children were more likely to receive care from an individual than from an institution.

Hampton/Sussex Community: Neighbourhood Qualities

More Hampton/Sussex parents in 2005 than in 2001 thought well of their neighbourhoods as a place to bring up children, giving high marks in particular to schools and nursery schools and to neighbourhood safety and cleanliness. They also agreed that the community had many families with young children and that neighbours supported one another in various ways. However, in both 2001 and 2005, parents gave low scores to the accessibility of public transport in Hampton/Sussex. Over the study period, there was also a decline in the percentage of interviewees agreeing that residents worked together to resolve problems.

The study confirmed that neighbourhood qualities were related to children's vocabulary development, emotional maturity and social behaviours: children living in high-quality neighbourhoods were much less vulnerable than other children in these areas of development. As well, children living in neighbourhoods where neighbours tended to work together were much less likely to receive low PPVT-R scores or display signs of emotional problems and indirectly aggressive behaviours. The study also indicated a positive relationship between the level of community resource use and children's outcomes, including their vocabulary and behavioural development.

About 70% of Hampton/Sussex children had access to educational resources, comparable to the average level across the UEY-II communities. However, access to recreational resources and, in particular, to cultural resources was considerably below the UEY-II average. For example, only 34% of Hampton/Sussex children had access to cultural resources in 2005, compared with about 58% of children across the UEY-II communities.

Perceptions of resource availability did not necessarily translate into use of community programs or services. Only about 16% of Hampton/Sussex children used educational programs and services in the community on a weekly or monthly basis. Up to 80% did not use certain educational resources at all throughout the year. Although children in Hampton/Sussex were more likely to use or attend cultural resources and events – such as museums, theatres, musical performances, sports events and movies – most did so only a few times a year. Recreational facilities registered the highest use rates: more than 90% of Hampton/Sussex children played in parks or play spaces at least weekly. Pools were the next most popular venues for children, followed by recreational and community centres. With regard to participation in organized and unorganized group activities, the data indicate that more Hampton/Sussex children participated in unorganized sports than in coached sports (80% vs. 52%).

Between 2001 and 2005, there was an overall decrease in the proportions of non-users of educational, cultural and recreational facilities. In 2005, the top three reasons given by parents for not using community resources were lack of time, inconvenient program times and lack of program awareness. Clearly, time barriers – lack of time and inconvenient program scheduling – pose a serious challenge to the community in its effort to make community resources accessible to a broader range of families with young children.

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.[3] 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 Hampton/Sussex 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 Hampton/Sussex 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 Hampton/Sussex as a milieu for the development of young children, the local UEY project manager and project participants, and research activities implemented in the community as part of the overall UEY initiative.

1.1 Hampton/Sussex Community

The town of Hampton is situated on the lower Saint John River system in New Brunswick, 30 km northeast of the city of Saint John. The UEY community of Hampton/Sussex includes four towns, as well as villages and smaller outlying parishes and neighbourhoods. The exact population is hard to estimate. The population of the four towns from the 2001 Census is as follows: Hampton, 3,997; Rothesay, 11,505; Quispamsis, 13,757; and Sussex, 4,182. These numbers do not reflect the surrounding neighbourhoods and villages that also fall within the boundary of the single school district. The total population of children aged under 6 years would be about 4,500 to 5,000. Thirteen elementary schools participated in the UEY project.

The population of Hampton/Sussex is mainly English speaking; however, there is a French-speaking minority. The eastern section of the community includes a number of areas with high percentages of residents aged 20 or older who have not completed high school (2001 Census data). In some areas, the percentage is as high as 84.6%. Due to its largely rural nature, the community offers few resources to support parents and young children. Problems getting to and from community resources, as well as a shortage of affordable or accessible childcare, tend to prevent many parents from accessing resources.

[3] Reports on the UEY pilot projects are available from the Human Resources and Social Development Canada website: www.sdc.gc.ca/en/hip/sd/310_UEYReports.shtml.

1.2 Understanding the Early Years Pilot Project in Hampton/Sussex

As noted, the Hampton/Sussex community became a UEY pilot community in 2001. The local UEY project is managed by the Hampton Alliance for Lifelong Learning, a charitable, volunteer-based association that works to improve early childhood outcomes. The Alliance is guided in its work by the UEY Community Advisory Committee, which includes representatives from School District 6; the Family Resource Centre in Sussex; Early Intervention Saint John Inc.; Kennebecasis Valley Community, Capacity, Children Inc.; and Preventative Action for Community Kids.

Research related to the UEY project in Hampton/Sussex consisted of the following activities:

Teacher Assessment of Children's Readiness to Learn at School – Kindergarten teachers in Hampton/Sussex 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, communication skills and general knowledge. All the children in their second year of kindergarten in Hampton/Sussex elementary schools were assessed, and the results served as an indicator of how Hampton/Sussex 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 Hampton/Sussex 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 Hampton/Sussex 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 neighbourhoods of Hampton/Sussex. 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 that 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.

Through the UEY project, the Hampton Alliance for Lifelong Learning has been able to help the Hampton/Sussex community start work on community solutions aimed at addressing the educational needs of young children. Key community initiatives include the creation of family resource libraries in two rural neighbourhoods to support the development of literacy and cognitive skills, and the establishment of summer camps to help children learn skills that will ease the transition to school. The Alliance has also created a community-based working committee for the construction of a public library in Hampton, and participated in two provincial preschool pilot projects (one on the benefits of preschool learning and the other on the creation of a provincial curriculum framework for New Brunswick children aged 0 to 5 years). In addition to this community development work, the Alliance has hosted an Understanding the Early Years conference, which enabled service providers, teachers and others who work with children to network and gain knowledge on how to increase literacy and social skills in young children.

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 Hampton/Sussex. 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

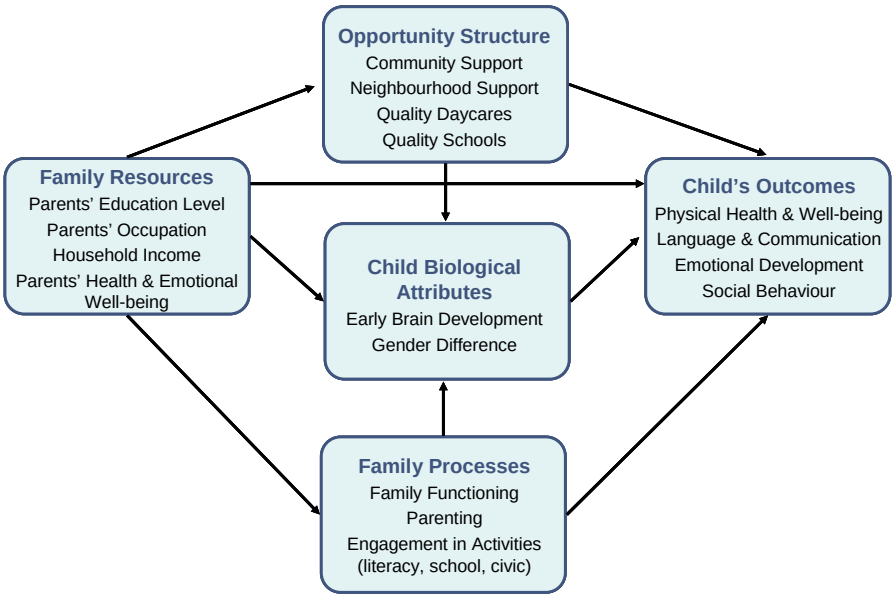
Research on early childhood development has been influenced primarily by three theoretical approaches (Willms 2002). The first approach is represented by "investment theory," an economic theory that presumes that children receive an endowment from their parents. This endowment includes biological attributes 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.

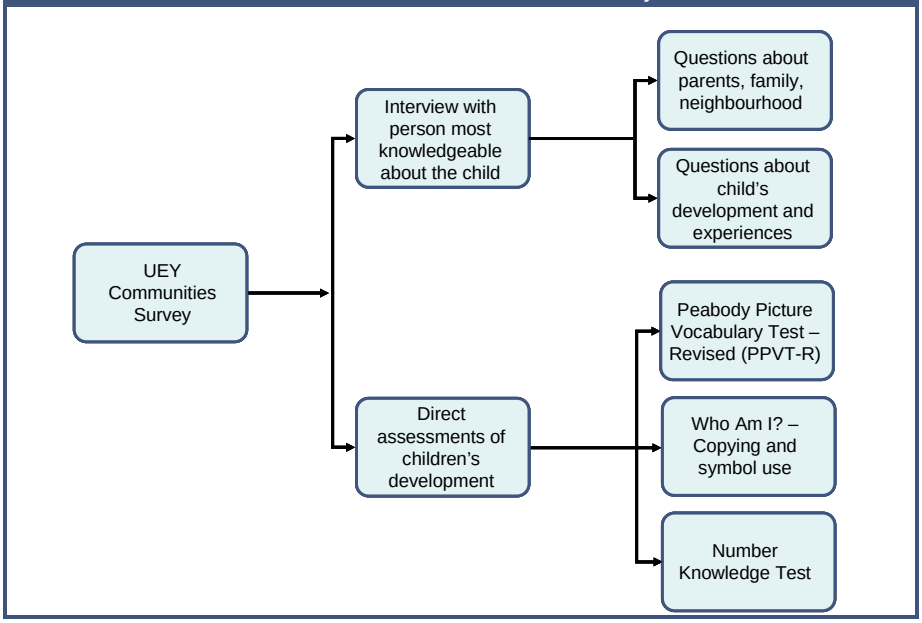
2.2 Development and Content of the Communities Survey

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 behaviours. 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: an interview 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 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 Hampton/Sussex

As in other UEY-II pilot communities, two cycles of Communities Survey data collection took place, 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 Hampton/Sussex 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 549 children, representing 642 kindergarteners in Hampton/Sussex. (The sample size in 2001 was 299, representing 344 kindergarteners.)

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 Hampton/Sussex Young Children – Findings from the Communities Survey

This chapter discusses the developmental outcomes of children in Hampton/Sussex, focusing on their physical health, cognitive skills, and emotional and behavioural development. The analyses 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 (mainly mothers) were interviewed regarding their children's health, emotional development and behaviours. Data collection was carried out by Statistics Canada. Where appropriate, results for Hampton/Sussex are compared with averages across the seven communities participating in the second phase of the Understanding the Early Years (UEY-II) initiative.

Taken together, the data provide valuable information about the abilities, attitudes and behaviours of these young children as they begin formal schooling. These attributes are important influences in early scholastic achievement. More significantly, by reflecting how children in Hampton/Sussex have been faring and how they are supported in their early years, the data provide important insights for the Hampton/Sussex 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.

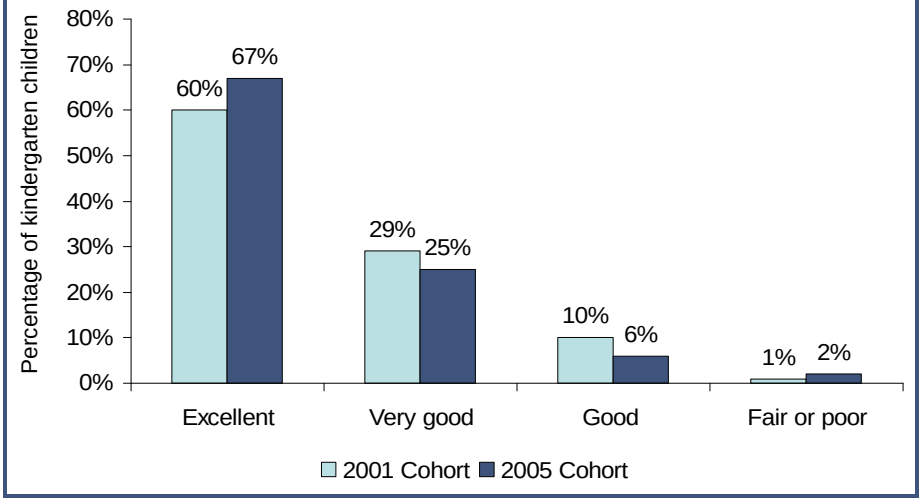
3.1 Physical Health

Table 3.1 displays the mean values of three common measures of physical development – height, weight and birth weight of children – as 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, Hampton/Sussex and UEY-II communities (2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Height (mean, cm)	111.0	112.0	110.6	110.0
Weight (mean, kg)	21.3	21.2	21.1	21.1
Birth weight (mean, kg)	3.5	3.5	3.8	3.4
Presence of chronic condition (%)	25.8	26.2	21.9	23.7

Figure 3.1
General health of kindergarten children, Hampton/Sussex
(percentages, 2001 and 2005)



During the interviews, PMK were also asked to rate the general physical health of their children as "excellent," "very good," "good," "fair" or "poor." The results, depicted in Figure 3.1, show that 89% of PMK rated their children's health as excellent or very good in 2001. This percentage rose to 92% in 2005. Only 2% of PMK rated their children's health as fair or poor in 2005, even though about one in four reported that their children suffered from at least one chronic health condition (see Table 3.1).

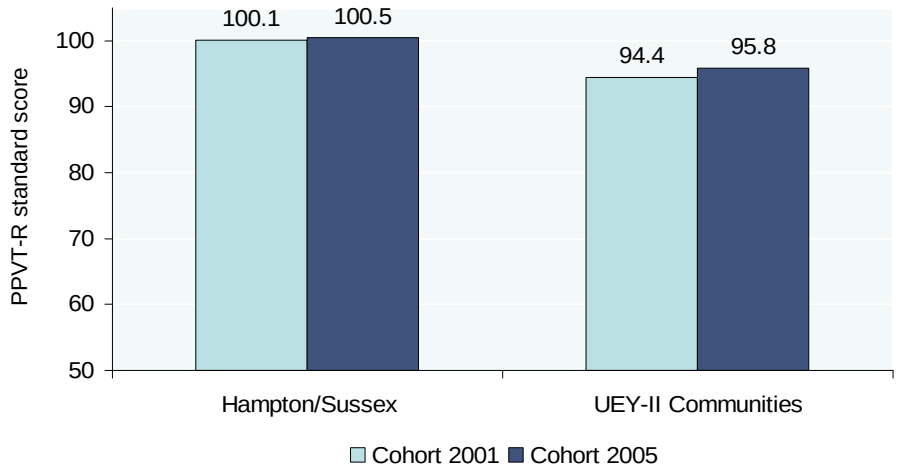
3.2 Cognitive Outcomes

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 based on results from the National Longitudinal Survey of Children and Youth (NLSCY). Figure 3.2 shows that the average score of Hampton/Sussex kindergarteners on receptive vocabulary was close to 100 in both 2001 and 2005, above the average of the UEY-II communities and almost identical to the national norm.

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



While means are useful, they may represent only how well an average child performs or most children perform on a test. Some children may perform much better than the average, while others 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 above 115 as being "advanced," and children scoring between 85 and 115 as being "average." This classification 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% score below 85 and the other 15% score higher than 115.[5] If a Hampton/Sussex child scored under 85 on the PPVT-R, that child was deemed to be weaker in 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, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

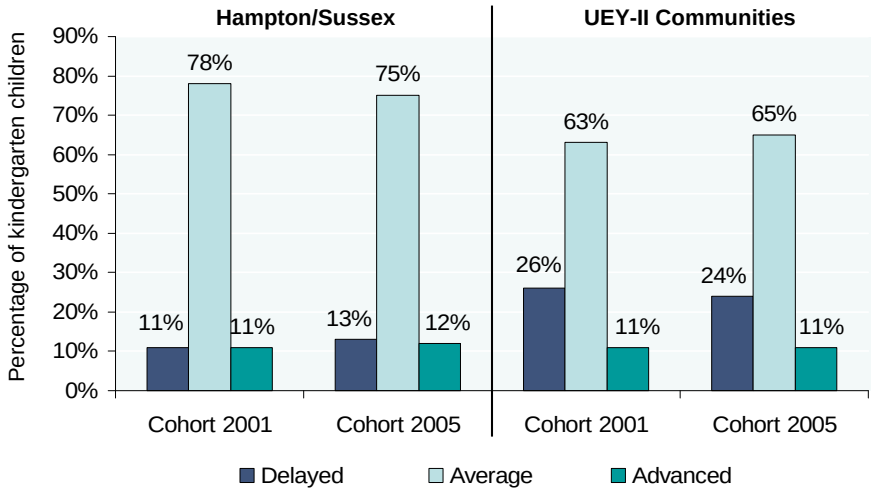


Figure 3.3 presents the results based on this classification of children's vocabulary development. It shows that in 2005, about 87% of Hampton/Sussex children were at the level of average or advanced, compared with 89% in 2001. In 2005, about 13% of Hampton/Sussex kindergarteners were classified as delayed in vocabulary development. Thus, the prevalence of Hampton/Sussex with vocabulary difficulties was slightly lower than the national level (15%) and much lower than the average among the UEY-II communities (about 24% in 2005).

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. Data from the 2005 Communities Survey[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 kindergarteners in the UEY-II communities 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 above 36.5 as being "advanced." If a Hampton/Sussex child scored below 28.7, that child was 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 Who Am I? results from 2001, only the results from 2005 are discussed in this report.

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

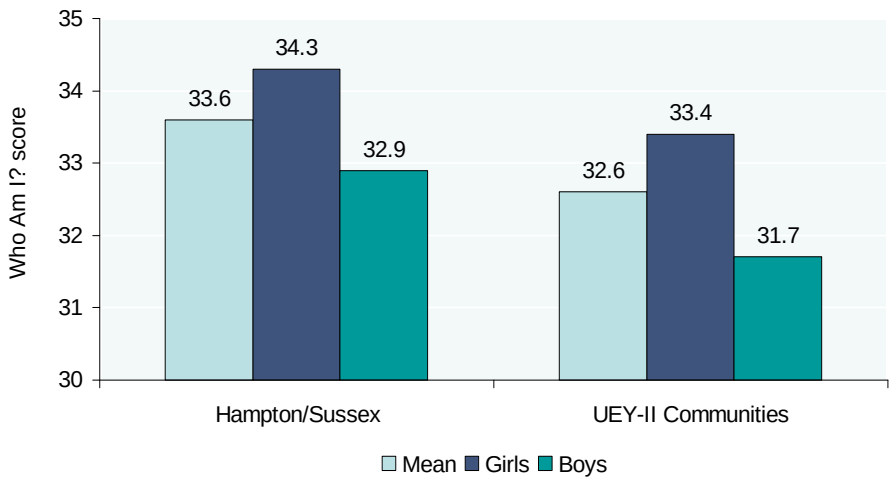


Figure 3.4 shows that the average score for Hampton/Sussex children in 2005 was 33.6 out of 40, slightly higher than the average of the UEY-II communities. It also shows that girls in Hampton/Sussex performed better than boys on the Who Am I? assessment; this tendency was apparent across the UEY-II communities.

As shown in Figure 3.5, 22% of Hampton/Sussex children were at the advanced level of copying skills and symbol use, substantially above the average recorded across the UEY-II communities (13%). Only 8% of Hampton/Sussex kindergarteners were recorded as delayed, a considerably smaller proportion than the average of the UEY-II sample (12%).

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

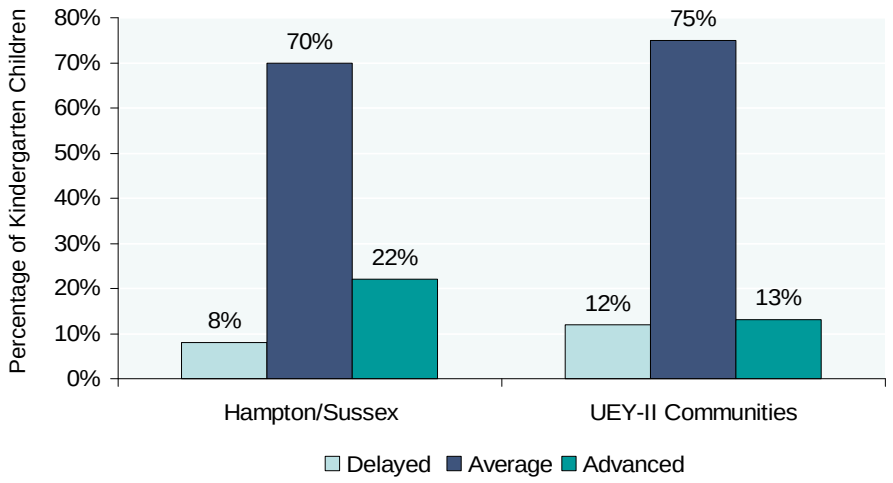


Figure 3.6
Kindergarten children classified as delayed, average or advanced in copying skills and symbol use, assessed using Who Am I?, Hampton/Sussex and UEY-II communities (percentages, 2005)

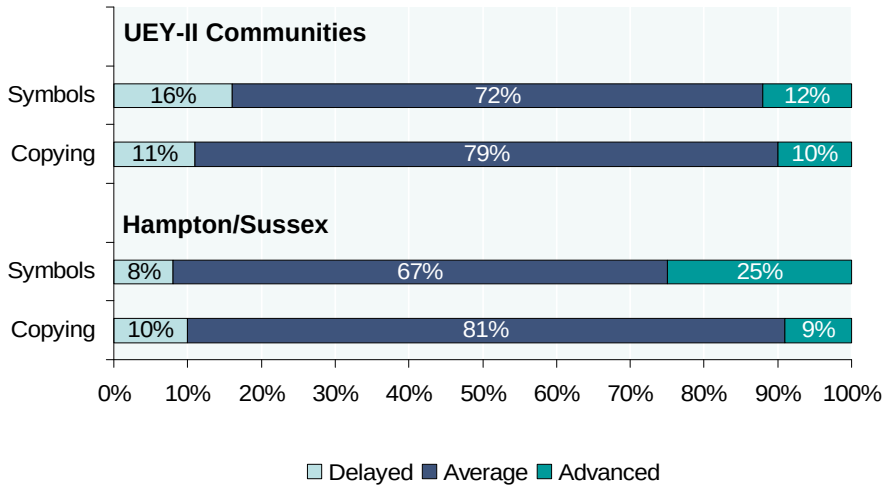


Figure 3.6 provides a further look at the two components of the Who Am I? assessment – copying skills and symbol use. The results indicate that Hampton/Sussex children were stronger in both components compared with the UEY-II sample; among themselves, they were slightly stronger in symbol use than in copying skills, with 25% being advanced in symbol use and 9% advanced in copying skills.

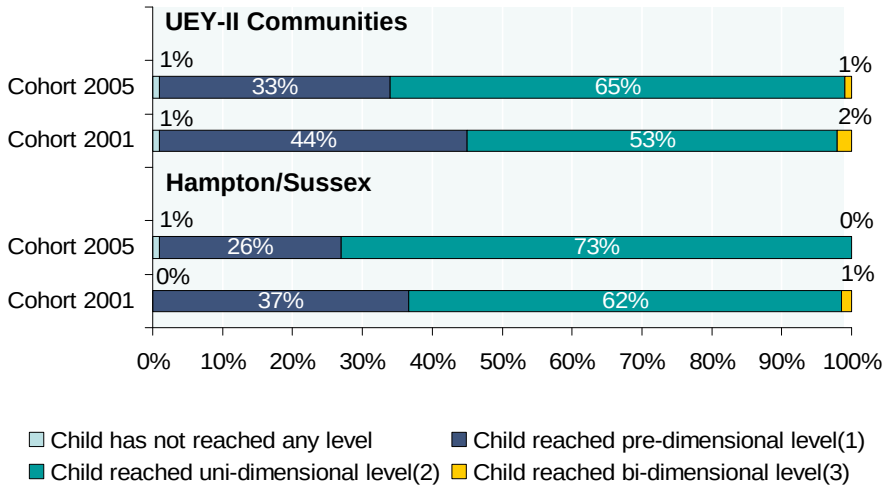
3.2.3 Number Knowledge Test

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.

Results from the 2005 Communities Survey, illustrated in Figure 3.7, show that only about 1% of Hampton/Sussex kindergarteners who participated in the Number Knowledge Test failed to reach level 1, the 4-year-old equivalent level. The majority of children (99%) reached either level 1 (26%) or level 2 (73%), the 6-year-old equivalent level. The 2005 results were significantly better than those of 2001, with considerably more children reaching level 2 (73% vs. 62%). The Number Knowledge results for Hampton/Sussex were also better than the averages across the UEY-II communities.

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



3.3 Emotional and Behavioural Outcomes

As part of the Communities Survey, PMK were asked to provide information on their 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.

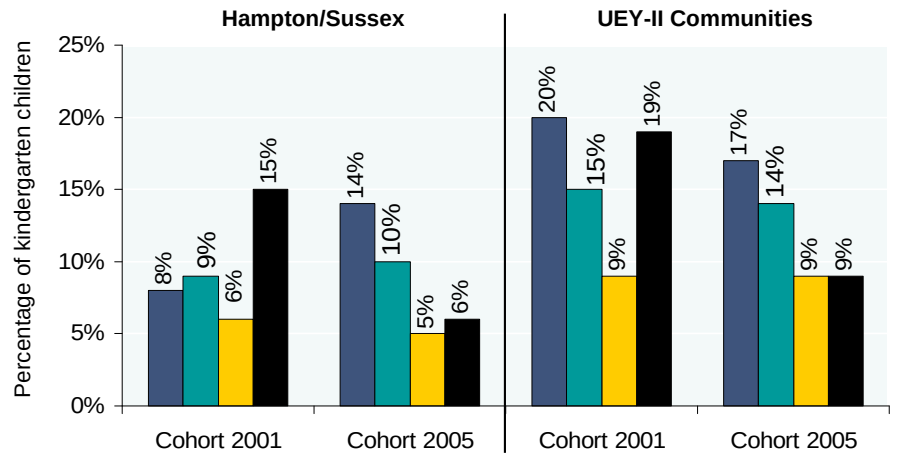
Physical aggression/conduct disorder: assesses the degree to which children are physically aggressive toward other people (including by kicking, biting or hitting). It also reflects behaviours related to threatening, bullying and cruelty to other children.

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 of the whole UEY-II sample as representing signs of behavioural problems. If a child's aggression score is equal to or greater than the 85th percentile, the child is deemed to have problems in that behavioural domain. The percentile score in this case suggests that the child is more aggressive than 85 out of 100 children who are assessed on this indicator of behaviour.

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



The results presented in Figure 3.8 indicate a significant decline in the prevalence of children with hyperactivity or attention problems in Hampton/Sussex, from 15% in 2001 to 6% in 2005. However, the percentage of children showing signs of emotional problems rose between 2001 and 2005, from 8% to 14% (a statistically significant increase). Nevertheless, in 2005 the proportions of Hampton/Sussex children with aggressive behaviours (10%) and emotional problems (14%) were well below the UEY-II norms (15% and 17% respectively).

3.4 Summary

Overall, results from the Communities Survey indicate that the majority of Hampton/Sussex kindergarten children continued to enjoy good health in 2005, although about one in four had a long-term health condition.

Compared with their counterparts across the UEY-II communities, kindergarten children in Hampton/Sussex continued to perform significantly better with respect to vocabulary development, copying skills and symbol use (literacy skills), and number knowledge. In 2005, 13% of Hampton/Sussex children were considered delayed in vocabulary development based on their PPVT-R score, while 8% were considered delayed in literacy skills based on their Who Am I? score. The corresponding proportions across the UEY-II communities were 24% and 12% respectively.

Regarding the four domains of behaviours discussed in this chapter, Hampton/Sussex children showed substantial improvement in the domain of hyperactivity: the proportion of hyperactive children declined from 15% in 2001 to 6% in 2005. The prevalence of children showing signs of aggression also registered a noticeable drop, from 9% in 2001 to 5% in 2005. However, no statistically significant changes were found between 2001 and 2005 in the prevalence of children showing signs of emotional problems and indirectly aggressive behaviours. In general, kindergarteners in Hampton/Sussex performed better than children across the UEY-II communities on all four behavioural measures.

As touched on in Chapter 2, the extensive literature on early childhood development points to a wide range of developmental influences: 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 and employment, and family structure. In addition, children's experiences in the home and community, such as 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 in Hampton/Sussex.

4. Hampton/Sussex 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 Hampton/Sussex 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 Hampton/Sussex 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 Hampton/Sussex schools.

4.1 Children: Demographic Characteristics and Developmental Outcomes

As part of the Communities Survey, information was collected on major demographic characteristics – gender, birthplace and first language(s) learned at home – of Hampton/Sussex children. These characteristics are often linked to children's developmental outcomes.

4.1.1 Gender

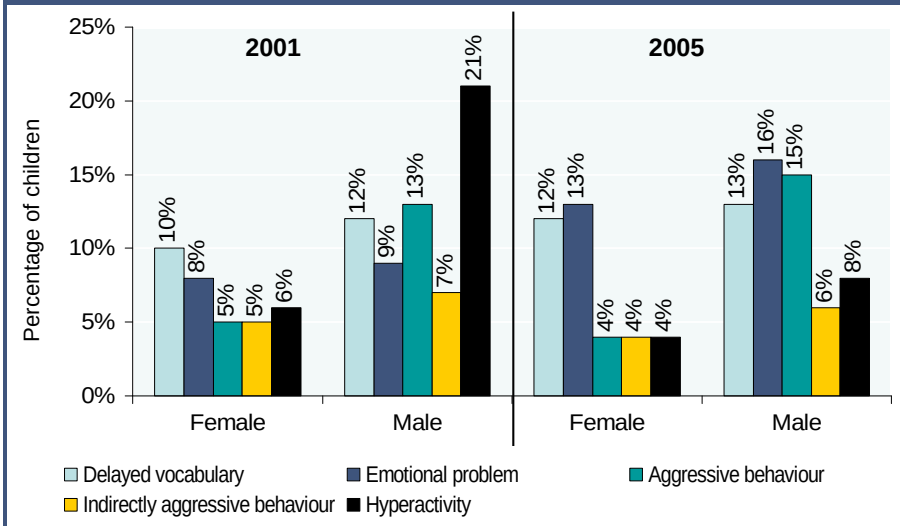
As shown in Table 4.1, more than half of Hampton/Sussex kindergarten children were boys. However, this gender gap narrowed considerably over the study period, with the proportion of girls rising from 45% in 2001 to 49% in 2005.

Table 4.1
Distribution of kindergarten children by gender, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Girls	44.8	49.0	48.7	49.1
Boys	55.2	51.0	51.3	50.9
Total	100.0	100.0	100.0	100.0

Generally, research shows that, compared with boys, girls are slightly better in reading and prosocial skills, about the same in math and general knowledge, and less likely to engage in problem behaviours at the beginning of kindergarten. These gender differences were noticeable among Hampton/Sussex children.

Figure 4.1
Gender and kindergarten children's developmental outcomes, Hampton/Sussex (percentages, 2001 and 2005)



As illustrated in Figure 4.1, boys in Hampton/Sussex were more likely than girls to show signs of problems in all the behavioural domains. In 2001, 13% of Hampton/Sussex boys, compared with 5% of girls, displayed signs of aggressive behaviours. In 2005, this gender gap widened, with 15% of boys, as opposed to 4% of girls, displaying signs of aggressive behaviours. Similar trends were evident with regard to emotional development and indirectly aggressive behaviours. For example, in 2005, boys in Hampton/Sussex were slightly more likely than girls to show signs of emotional problems (16% vs. 13%) and indirectly aggressive behaviours (6% vs. 4%). The data also show that, in 2001, boys were much more prone than girls to hyperactivity (21% vs. 6%); however, the gap closed slightly in 2005, with 8% of boys, compared with 4% of girls, showing signs of short attention spans.

In the area of vocabulary development, Hampton/Sussex boys were slightly more likely than girls to have low PPVT-R scores in 2001 (12% vs. 10%), but this gender difference was not significant in 2005.

4.1.2 Children's birthplace and first languages

The vast majority of Hampton/Sussex children who participated in the Communities Survey were born in Canada, with the proportions of Canadian- and foreign-born children remaining constant over the study period (2001 to 2005). The homogeneity of the Hampton/Sussex community is also reflected in the first language(s) that Hampton/Sussex children acquired at home. Results for both survey years show that almost all the children spoke English as their first language.

Table 4.2 Distribution of kindergarten children by birthplace and first language(s), Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)				
	Hampton/Sussex		UEY-II communities	
	2001	2005	2001	2005
Birthplace				
Canada	99.1	99.0	94.0	92.5
United States	0.5	0.6	0.6	0.9
Europe	0.2	0.3	0.6	0.8
Asia	-	-	0.8	1.0
Other	0.2	0.1	4.0	4.7
First language(s) learned at home				
English only	99.4	98.9	56.7	65.2
French only	-	0.2	23.7	14.8
English & French only	0.3	-	0.3	0.2
English & French & other	-	-	-	0.1
English & other (no French)	-	0.3	0.8	1.9
French & other (no English)	-	-	0.4	0.8
Neither English nor French	0.3	0.6	18.0	17.0
Total	100.0	100.0	100.0	100.0

Children's ethnicity, birthplace and first language(s) were important in explaining differences in developmental outcomes, especially in language skills, across the UEY-II communities. UEY-II data show that children whose first language was neither English nor French were more than three times as likely to experience difficulty learning vocabulary as children whose mother tongue was English or French (61% vs. 17% in 2005). The high proportion of Canadian-born, native English speakers among the Hampton/Sussex children may be important in explaining the relatively low proportion with delayed vocabulary development: 13% of Hampton/Sussex children registered low PPVT-R scores, compared with 26% on average across the UEY-II communities in 2005.

4.2 Families: Characteristics and Resources for Children's Development

This section describes the families of Hampton/Sussex children in terms of household income; parents' birthplace, health, level of education and labour market participation; and family structure. The descriptive data for Hampton/Sussex as well as for the whole UEY-II sample are presented in Tables 4.3 to 4.7. The section also presents results exploring the relationships between these family resource variables and developmental outcomes.

4.2.1 Household income

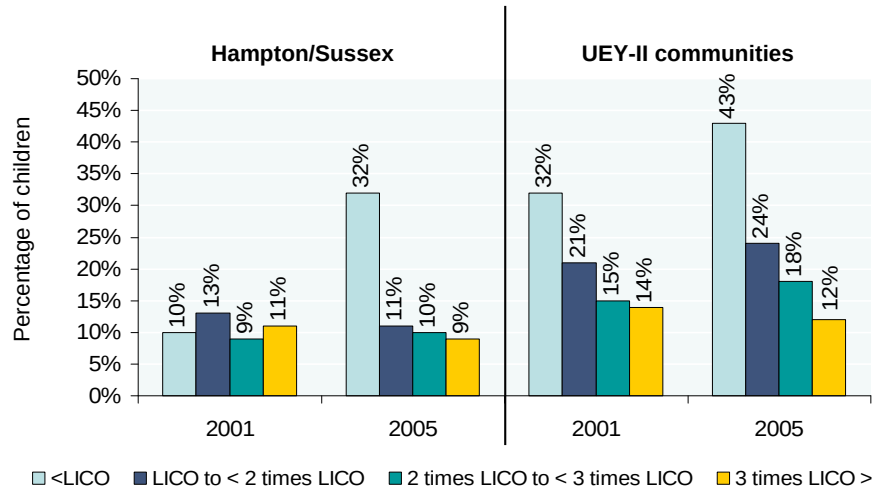
Table 4.3 Distribution of kindergarten children by household income, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)				
	Hampton/Sussex		UEY-II communities	
	2001	2005	2001	2005
Household income				
Mean (dollars, inflation-adjusted)	$54,154	$68,986	$51,898	$57,231
Below LICO	17.2	13.3	22.4	29.4
LICO to less than 2 times LICO	34.0	28.2	35.6	37.7
2 times LICO to less than 3 times LICO	29.6	27.9	24.3	20.6
3 times LICO or above	19.2	30.6	17.7	12.3
Total	100.0	100.0	100.0	100.0

Table 4.3 displays the average household income of children's families in Hampton/Sussex, adjusted for inflation.[7] It also presents the distribution of kindergarten children in Hampton/Sussex according to household income status. The income status was determined by dividing household income by the value of the low-income cut-off (LICO) reported by Statistics Canada. Statistics Canada establishes the low-income thresholds or values based on different urban and family sizes and updates them annually using the Consumer Price Index.

The average household income for Hampton/Sussex children, adjusted for inflation, increased substantially between 2001 and 2005, by almost $15,000. As well, there was a considerable decrease over the period in the percentage of children living below LICO, from 17.2% in 2001 to 13.3% in 2005. This picture contrasts with that of the UEY-II communities overall, where the proportion of children living below LICO rose by one third, from 22.4% in 2001 to 29.4% in 2005.

Figure 4.2 indicates a relationship between family income and the vocabulary development of Hampton/Sussex children, with the proportion of low PPVT-R scores declining as family income level increases. For example, in 2005, children living below LICO in Hampton/Sussex were 3.6 times as likely to be delayed in vocabulary development as children from families with the highest income level (three times LICO or above): 32.1 % vs. 8.8%. The corresponding figures for the UEY-II sample were 42.6% and 11.6% respectively. Nevertheless, children with vocabulary difficulties did come from all income groups. Thus, it is important to note that income is not the only factor influencing vocabulary development. Other factors, such as parental education and employment, parenting practices and family structure can also affect vocabulary scores and academic achievement.

Figure 4.2
Household income level and kindergarten children with low vocabulary scores, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

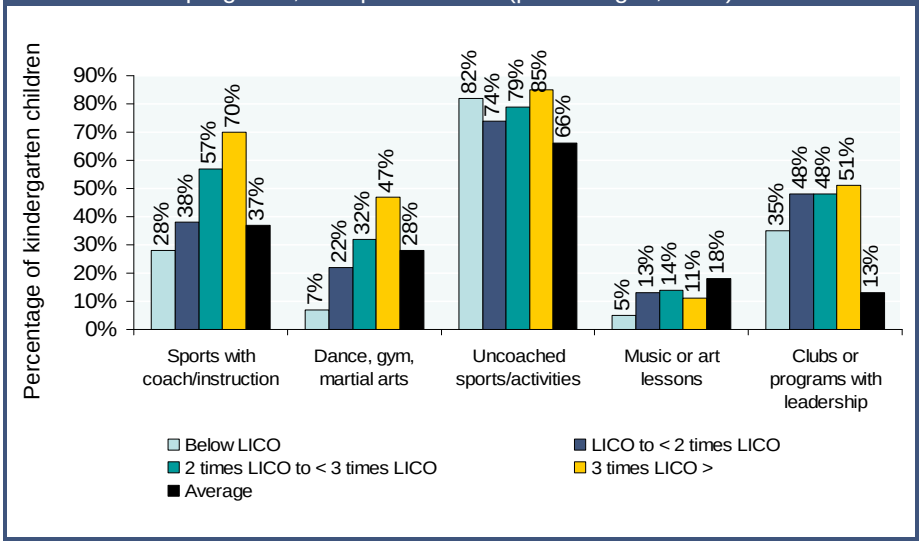


Research indicates that family income level is also strongly linked to children's participation in early childhood activities such as coached or supervised group activities. These activities are important to children because they build the foundation for core skills and success in school. In addition, 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 an indirect influence on children's outcomes.

[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 New Brunswick, this inflation rate was 11%. The adjusted household income in 2005 = estimated household income in 2005 / (1+inflation).

The results from the Communities Survey show that Hampton/Sussex 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 (see Figure 4.3). For example, children with the highest family income level (three times LICO or above) were almost 2.5 times as likely as children living below LICO to be enrolled in coached sports (70.4% vs. 27.9%). On the other hand, participation in activities such as uncoached sports and community clubs or community leadership programs did not appear to be associated with family income level.

Figure 4.3
Household income level and kindergarten children's participation in sports, other physical activities, music or art lessons, and clubs or leadership programs, Hampton/Sussex (percentages, 2005)



4.2.2 Parents' birthplace

Table 4.4
Distribution of kindergarten children by PMK birthplace, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
PMK birthplace				
Canada	97.1	94.1	70.7	69.5
United States	0.9	2.2	1.0	1.1
Europe	1.7	2.4	5.0	2.5
Asia	-	0.2	7.1	6.8
Other	0.3	1.1	16.2	15.2
Not stated	-	-	-	4.9
Total	100.0	100.0	100.0	100.0

Table 4.4 shows a slight increase in the proportions of PMK born in the United States and in European countries between 2001 and 2005. However, the 2005 data indicate that the vast majority of Hampton/Sussex PMK (94%) were born in Canada, compared with 70% in the UEY-II sample.

4.2.3 Parents' level of education and employment status

Since the 1980s, the percentage of young children's mothers who have a university degree or college diploma has been increasing steadily in Canada. This was also true in Hampton/Sussex between 2001 and 2005. Over this period, the percentage of PMK (mostly mothers) with a university degree or college diploma increased by about 44%, from 42.3% in 2001 to 60.9% in 2005. At the same time, the proportion of PMK who had not completed secondary education declined from 10.4% to 6.9%. This improvement in parental education levels may have contributed to the substantial increase in household income observed in Hampton/Sussex. Parents' employment status, which remained fairly steady over the study period, was probably not a factor.

Table 4.5
Distribution of kindergarten children by PMK education level and PMK and parents' employment status, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
PMK education level				
Less than secondary school	10.4	6.9	16.8	10.4
Secondary school	22.2	19.8	17.6	18.5
Beyond secondary school	25.1	12.4	26.4	20.3
College or university	42.3	60.9	39.1	50.7
PMK employment status				
Currently working	73.6	72.6	66.0	68.2
Not working/worked last year	4.7	7.5	6.1	7.1
Not working/did not work last year	21.7	19.9	27.9	24.7
Parents' employment status				
At least one parent working	89.9	89.3	80.5	82.1
No parent working	10.1	10.7	19.5	17.9
Total	100.0	100.0	100.0	100.0

The employment data show that, in 2005, about 73% of PMK were engaged in paid employment, similar to the percentage in 2001. The data also show that about 1 in 10 Hampton/Sussex children in both 2001 and 2005 lived in families with no parent working in a paid job.

Research indicates that maternal education level is positively associated with child outcomes such as academic achievement. This linkage was observed in Hampton/Sussex. Findings from the Communities Survey – particularly the 2005 data – confirm a positive relationship between PMK education level and PPVT-R scores (see Figure 4.4a). For example, in 2005, children of PMK with less than secondary education were more than three times as likely as children of PMK with a college diploma or university degree to receive low PPVT-R scores. Nevertheless, some children of PMK with less than secondary education did develop advanced vocabulary skills.

Figure 4.4a
PMK education level and vocabulary outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)

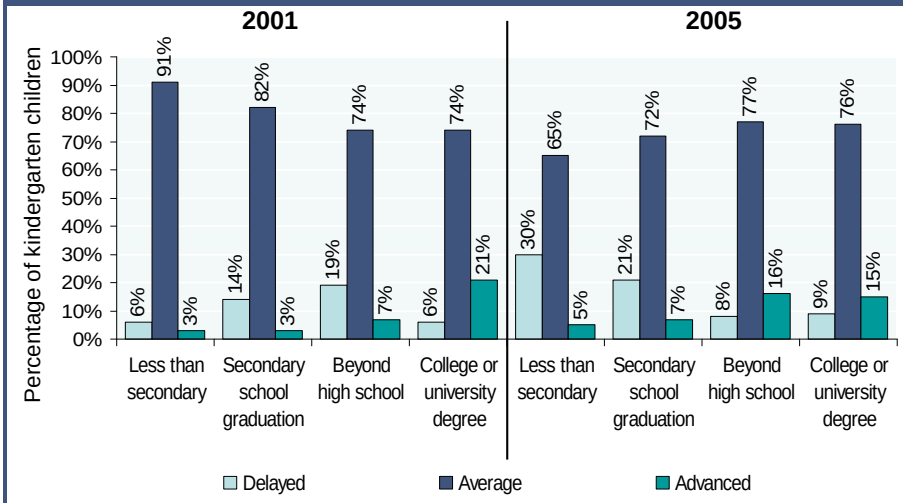


Figure 4.4b
PMK education level and emotional and behavioural outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)

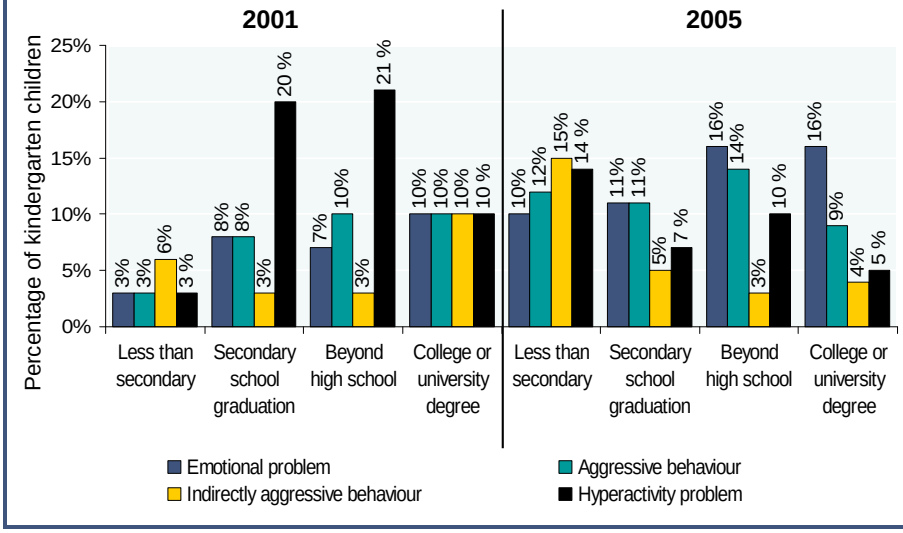
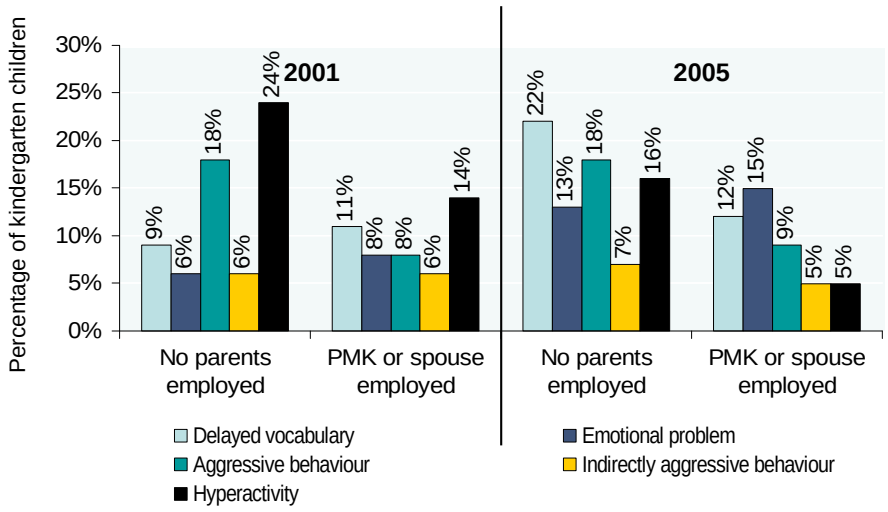


Figure 4.4b explores the relationship between PMK education level and children's emotional and behavioural outcomes (i.e., their tendency to show signs of hyperactivity and aggressive and indirectly aggressive behaviours). In this case, the results do not consistently indicate any strong or linear link: the percentages of children who were vulnerable in emotional and behavioural development did not necessarily rise or fall as PMK education level increased or decreased. As well, there is virtually no correspondence between the results from the two survey years.

Figure 4.5
Parents' employment status and developmental outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)



Parents' employment status could have mixed effects on children's outcomes. On the plus side, parents' employment contributes to household income, which increases the resources available for raising children. As well, parents' employment can directly affect children's health and educational outcomes. For example, working parents tend more than non-working parents to stress independence training for children, which can become an asset for children as they learn. On the down side, working parents may not be able to spend as much time with their children as non-working parents, which could negatively affect children's outcomes.

The data displayed in Figure 4.5 indicate that parents' employment situation is significantly related to some domains of child development. For example, in both 2001 and 2005, Hampton/Sussex children in no-earner families were more likely than children with working parents to show signs of aggressive behaviours and hyperactivity. The 2005 results also indicate that children from no-earner families were more likely than children with working parents to be delayed in vocabulary skills, as assessed using the PPVT-R.

4.2.4 Parents' health

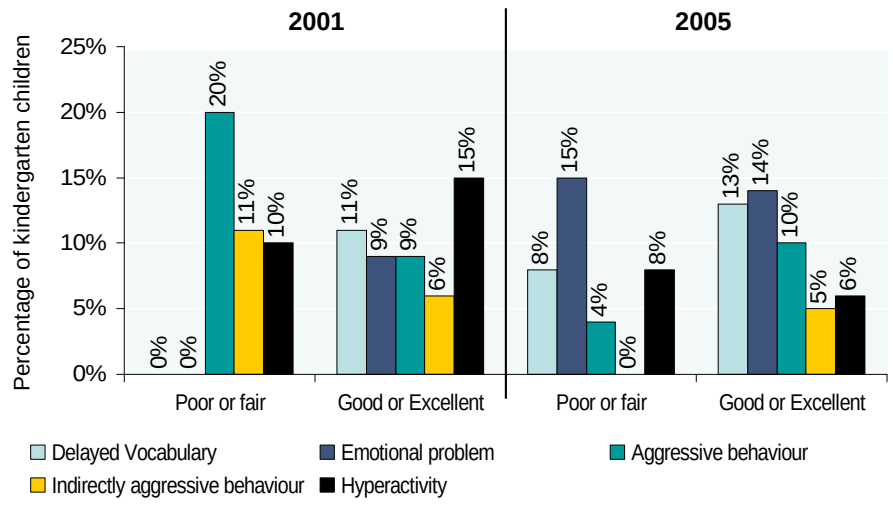
Parents' health, especially a mother's physical and emotional health, can affect the level as well as the quality of time and attention that parents devote to their children. Since parent–child interaction is instrumental to the healthy development of children, poor parental health could negatively influence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

Table 4.6 Distribution of kindergarten children by PMK health status, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)				
	Hampton/Sussex		UEY-II communities	
	2001	2005	2001	2005
PMK birthplace				
Excellent	60.0	67.0	33.4	33.1
Very good	29.0	25.0	37.0	38.1
Good	10.0	6.0	21.0	22.3
Fair	1.0	2.0	6.5	4.9
Poor	-	-	2.1	1.5
PMK with chronic condition				
Yes	47.9	48.6	35.7	40.5
No	52.1	51.4	64.3	59.3
Total	100.0	100.0	100.0	100.0

As shown in Table 4.6, in 2001, 47.9% of Hampton/Sussex PMK reported they had a chronic health condition. This figure remained almost the same in 2005, at 48.6%. Although almost half of PMK suffered from a long-term health problem, the vast majority (98%) rated themselves as having generally good to excellent health in 2005.

Figure 4.6 presents results exploring the extent to which maternal poor health is a risk factor in the development of Hampton/Sussex children. Surprisingly, PMK health did not appear to be associated with the children's developmental outcomes. This finding may have something to do with the very small percentage of Hampton/Sussex PMK reporting poor health. Results from across the UEY-II communities suggest that, on average, poor maternal health had a negative influence on children's outcomes.

Figure 4.6
PMK health status and developmental outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)



4.2.5 Family structure

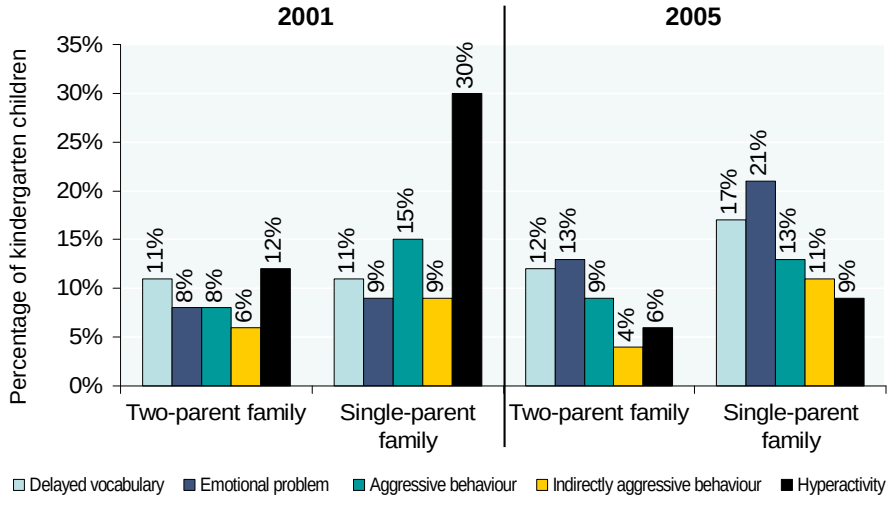
Family structure and size can affect the quantity, as well as the quality, of time and attention parents devote to their children. They also influence the financial resources available for each child. For example, single-parent families are more likely to have low family incomes, which means they face more financial challenges and stresses in raising their children. At the same time, children in single-parent families may receive less parental attention than those in two-parent families when that single parent is in paid employment. Finally, regardless of family structure, the greater the number of children in a family, the fewer the resources (financial and otherwise) available for each child, which may affect their developmental outcomes.

Table 4.7
Distribution of kindergarten children by family structure, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Number of parents in household				
Two parents	82.0	83.5	69.5	75.4
One parent	16.3	15.9	28.0	24.1
Child does not live with a parent	1.7	0.6	2.5	0.4
Number of children (0–17 years) in household				
One child	12.4	15.3	23.3	18.6
Two children	47.5	52.8	44.2	46.9
Three children	30.8	25.1	21.7	24.2
More than three children	9.4	6.7	10.8	10.3
Total	100.0	100.0	100.0	100.0

As shown in Table 4.7, the structure of young children's families in Hampton/Sussex remained fairly constant over the study period: more than 80% of kindergarten children lived in a two-parent family in both 2001 and 2005. However, there was a slight increase in the percentages of children who had no siblings (12% vs. 15%) or who had only one sibling under 17 years (48% vs. 53%) living in the home. At the same time, the percentage of families with three or more children under 17 years declined.

Figure 4.7
Family structure (one- or two-parent family) and kindergarten children's developmental outcomes, Hampton/Sussex (percentages, 2001 and 2005)



The results from both 2001 and 2005 indicate that Hampton/Sussex children living in single-parent families were more likely than those living in two-parent families to display signs of hyperactivity and aggressive and indirectly aggressive behaviours. The 2005 data also suggest that children in single-parent families were more likely to have low PPVT-R scores and emotional problems.

4.3 Families: Family Processes and Children's Outcomes

This section focuses on some major family processes related to 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 mainly 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. During the parental interviews for the Communities Survey, PMK were asked for their views on family members' ability to communicate and discuss feelings and concerns among themselves; make decisions and solve problems collectively; get along with one another; and feel accepted for who they are.

Table 4.8
Distribution of kindergarten children by level of family functioning, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

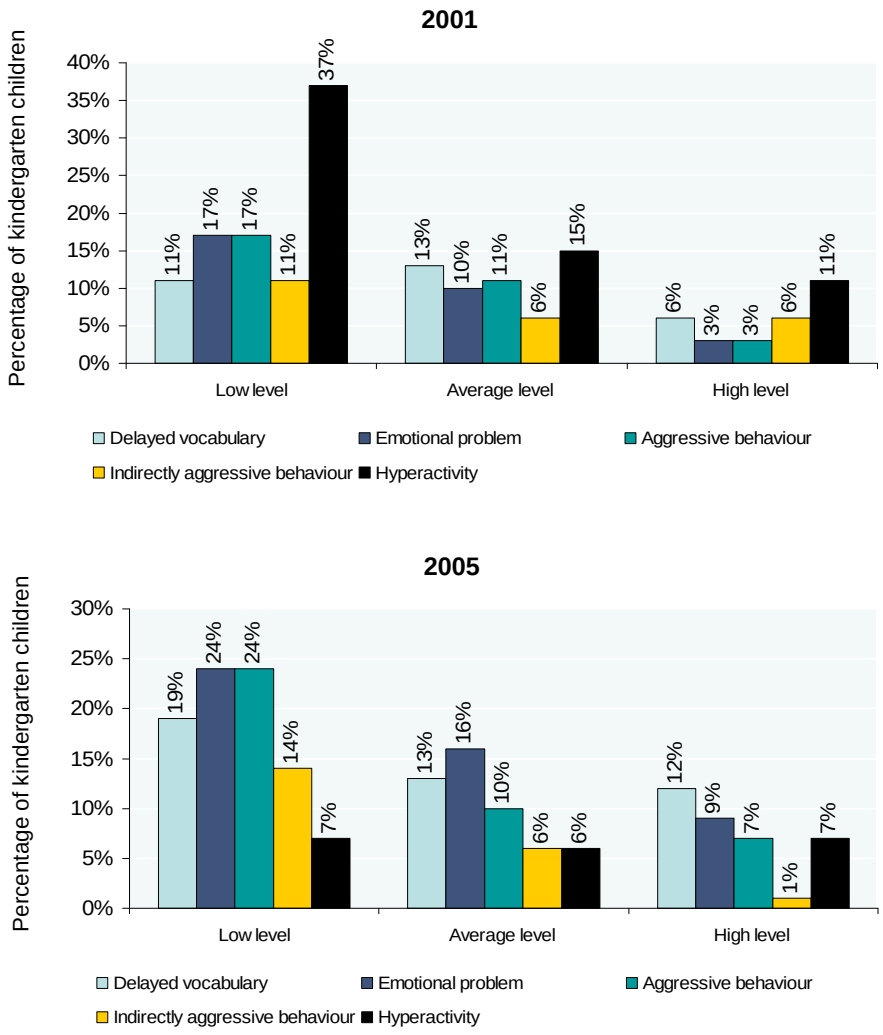
	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Family functioning				
Mean (rescaled to 100)	78.0	78.8	76.3	75.1
High level (mean + 1 standard deviation)	27.8	25.5	23.2	18.6
Average level (within 1 standard deviation)	65.9	67.4	64.4	69.5
Low level (mean – 1 standard deviation)	6.3	7.1	12.4	11.9
Total	100.0	100.0	100.0	100.0

As indicated in Table 4.8, the mean scores on family functioning for Hampton/Sussex families in both 2001 and 2005 were slightly higher than the UEY-II averages. 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. (Note: Other family process variables are classified in a similar fashion in the following sections.)

The results, based on this classification of family functioning, indicate that the majority of children's families in Hampton/Sussex (more than 92%) functioned well in both 2001 and 2005. Between 6% and 7% of Hampton/Sussex children lived in families that functioned less well than the majority of families in the UEY-II communities.

Research has shown that family functioning is related to children's developmental outcomes, especially behavioural outcomes. Figure 4.8 presents results from this study that explore the relationship between family functioning and children's development in the domains of vocabulary, emotion and behaviour.

Figure 4.8
Family functioning and developmental outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)



The results indicate that, for Hampton/Sussex children, lower levels of family functioning were associated with poorer developmental outcomes in almost every domain. Children in families functioning at a low level were more likely to receive delayed vocabulary scores and display signs of emotional, behavioural and attention span problems.

There was also evidence that the link between family functioning and children's outcomes changed between 2001 and 2005: the association with vocabulary development and indirectly aggressive behaviours strengthened, while the relationship with emotional development, aggressive behaviours and hyperactivity weakened. For example, children in families functioning at a low level were about 1.4 times as likely as those in families functioning at a high level to receive delayed PPVT-R scores in 2001 (11% vs. 8%); this difference expanded to 1.6 times in 2005 (17% vs. 12%). In contrast, the gap between the two groups of children in terms of emotional problems declined considerably, from 5.7 times in 2001 (17% vs. 3%) to 2.7 times in 2005 (24% vs. 9%).

4.3.2 Parent–child interactions

The nature of parent–child interactions and the degree of cognitive stimulation in the home are other factors influencing developmental outcomes. For example, children who experience positive interactions with a nurturing, involved parent have been found to have better academic 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 4.9 presents the mean scores of Hampton/Sussex PMK on the four measures of parent–child interactions, with original scores rescaled on a 100-point scale to facilitate comparisons.

Table 4.9
Mean scores on four measures of parent–child interactions, Hampton/Sussex and UEY-II communities (rescaled on a 100-point scale, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	2005	2001	2005
Parent–child interactions				
Positive parent–child interaction	72.8	74.6	72.1	74.1
Effective parent–child interaction	70.3	70.4	69.0	68.9
Consistent parent–child interaction	70.5	74.0	67.3	68.7
Rational parent–child interaction	57.4	59.6	58.2	59.1

The data indicate that Hampton/Sussex PMK scored above the UEY-II averages on effective and consistent parenting measures and close to the UEY-II averages on positive and rational parenting measures. To identify the proportion of children possibly at risk due to poor parenting practices, we classified the parenting scores into three levels ("high," "average" and "low") based on the mean values and standard deviations of the UEY-II sample (in much the same way as we classified family functioning levels).

Table 4.10
Distribution of kindergarten children by level of parenting, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	2005	2001	2005
Positive parenting				
High level	7.4	12.5	10.9	14.6
Average level	84.7	81.1	76.2	75.3
Low level	7.7	6.5	12.9	10.1
Effective parenting				
High level	17.7	16.8	18.9	16.9
Average level	72.4	74.3	67.0	69.7
Low level	9.9	9.0	14.1	13.4
Consistent parenting				
High level	17.4	26.0	13.1	16.9
Average level	66.9	64.1	69.4	68.0
Low level	12.7	8.0	17.4	15.1

The analyses presented in Table 4.10 indicate that, in 2005, the vast majority of Hampton/Sussex PMK (more than 90%) performed at the average or advanced level in positive, effective and consistent parenting practices, based on the UEY-II norms. Conversely, fewer than 10% of Hampton/Sussex children may have been at risk due to poorer parenting practices. Overall, Hampton/Sussex PMK performed better on all the parenting measures in 2005 than in 2001.

Figure 4.9
Positive parenting and developmental outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)

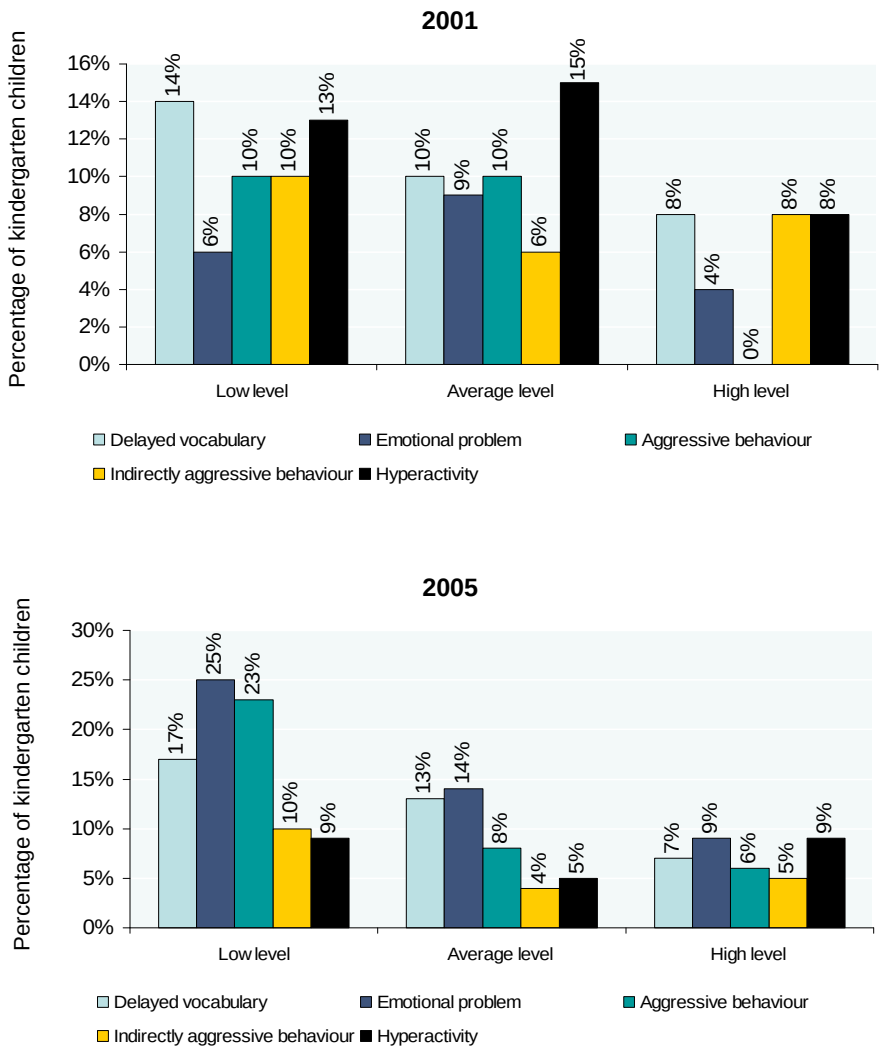


Figure 4.9 explores the effect of positive parenting on various child outcomes. The data show that, in both 2001 and 2005, positive parenting appeared to be related to children's cognitive, emotional and behavioural development, but not to attention span difficulties. Considerably higher percentages of children in families with low-level positive parenting received delayed PPVT-R scores and showed signs of emotional problems, as well as aggressive and indirectly aggressive behaviours.

Figure 4.10
Consistent parenting and developmental outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)

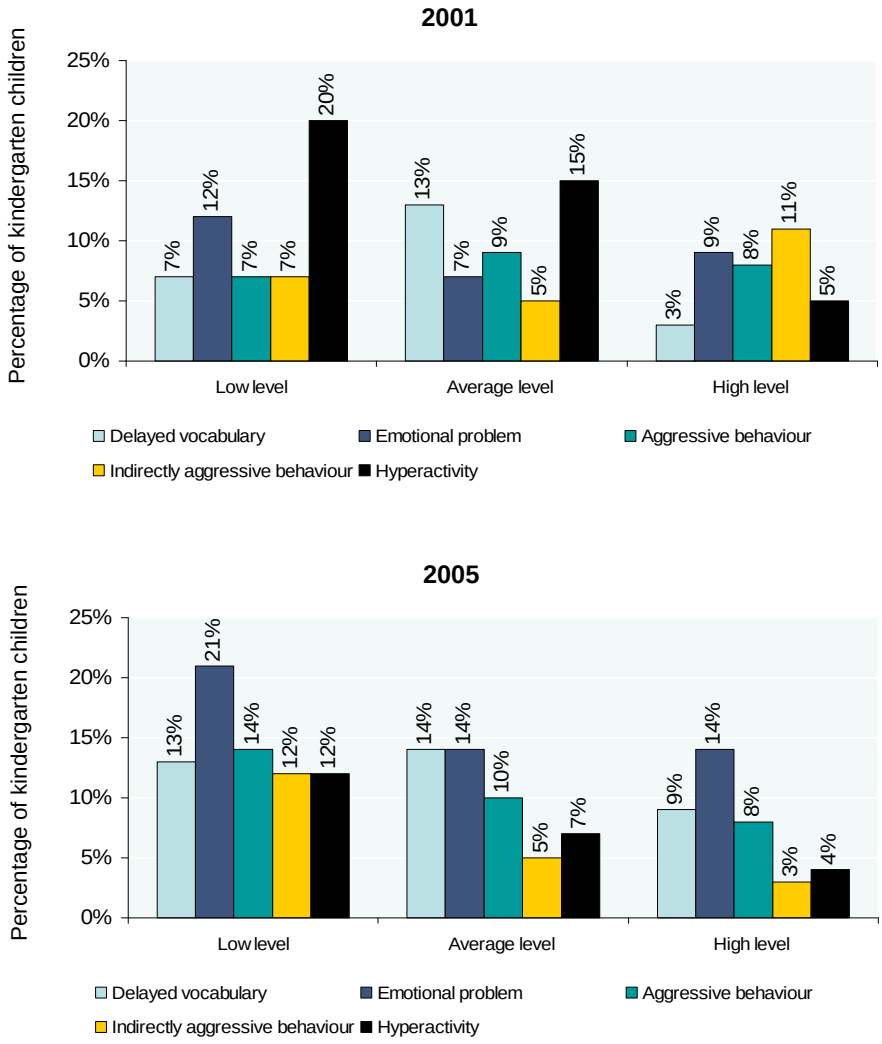


Figure 4.10 presents data on the role of consistent parenting practices in various child outcomes for Hampton/Sussex children. The data from both 2001 and 2005 indicate that consistent parenting was strongly related to better outcomes in all five developmental domains addressed in this section. In particular, they suggest that consistent parenting was more closely related to children's emotional development and problem behaviours (including direct and indirectly aggressive behaviours) than to other developmental domains. For example, in 2005, children of PMK with high-level parenting practices were up to four times less likely than children of PMK with low-level parenting practices to show signs of hyperactivity and indirectly aggressive behaviours.

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 the children's 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 4.11
Distribution of kindergarten children by literacy activities at home, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

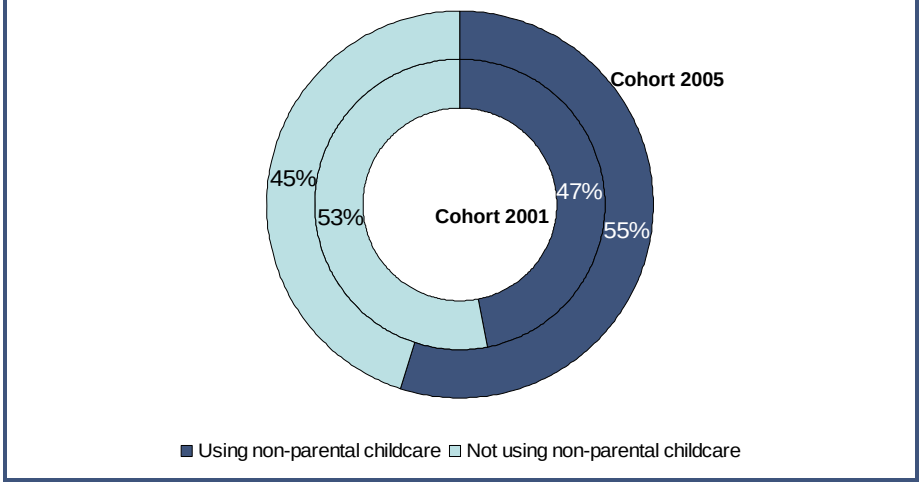
	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
How often is child read to?				
Daily	75.5	85.8	58.1	67.9
A few times a week	22.1	13.2	30.2	25.2
Once a week	0.9	0.6	5.5	3.1
A few times a month	1.5	0.2	2.4	1.8
Rarely	-	0.2	3.8	1.9
How often is child taught numbers?				
Daily	65.2	72.4	45.7	53.4
A few times a week	29.0	22.7	38.3	33.4
Once a week	4.1	1.9	7.7	6.3
A few times a month	0.3	0.9	3.7	2.3
Rarely	1.4	2.1	4.7	4.2
How often is child taught words?				
Daily	53.0	72.0	39.9	48.5
A few times a week	31.0	23.5	31.3	29.8
Once a week	5.8	2.5	8.3	7.2
A few times a month	1.7	0.3	4.6	3.0
Rarely	8.5	1.7	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 vast majority of Hampton/Sussex parents had been actively engaged in providing a stimulating home environment for their children. In 2005, more than 95% of Hampton/Sussex PMK read to their children, taught them numbers and helped them learn words, either daily or at least a few times a week. Overall, Hampton/Sussex PMK had a much higher level of engagement in 2005 than in 2001, with significant increases in the proportions of PMK engaged in these activities daily in 2005. Their level of engagement was also much higher than the UEY-II average, despite a significant increase in PMK engagement in learning activities across UEY-II communities since 2001.

4.3.4 Childcare arrangements

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

Figure 4.11
Kindergarten children in non-parental childcare, Hampton/Sussex
(percentages, 2001 and 2005)



According to Hampton/Sussex PMK, the proportion of kindergarten children receiving non-parental childcare has been increasing: roughly 47% of children in 2001 were in a variety of non-parental childcare arrangements, compared with 55% in 2005 (see Figure 4.11). A similar trend was observed across the UEY-II communities, with the 2005 cohort being 20% more likely to be in non-parental childcare (46% in 2001 vs. 55% in 2005).

Table 4.12
Distribution of kindergarten children by main type of childcare arrangement, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
Main type of childcare arrangement	**2001**	**2005**	**2001**	**2005**
Other's home – non-relative	46.0	40.8	23.9	27.4
Other's home – relative	22.7	17.2	12.5	15.8
Own home – non-relative	12.9	7.4	6.0	4.8
Own home – relative (non-sibling)	9.8	10.1	9.0	9.3
Own home – sibling	1.8	1.8	1.6	2.0
Daycare centre	0.6	7.6	11.4	11.5
Before/after-school programs	3.1	13.6	30.6	26.3
Nursery/preschool	-	-	3.1	1.2
Child in own care	-	0.3	0.5	0.6
Other	3.1	1.2	1.4	1.1
Total	100.0	100.0	100.0	100.0

As shown in Table 4.12, the most common type of non-parental childcare in both survey years was care by a non-relative outside the home, although the percentage dropped from 46% in 2001 to 41% in 2005. Next was care by a relative outside the home (23% in 2001 vs. 17% in 2005). Between 2001 and 2005, the use of daycare centres and before/after-school programs increased in Hampton/Sussex. For example, fewer than 1% of children used daycare centres in 2001, compared with more than 7% in 2005. At the same time, care by a non-relative at the child's home decreased. Overall, children in Hampton/Sussex were much more likely to receive care from an individual than from daycare centres or before/after-school programs. Although the use of these services increased in Hampton/Sussex, it was still substantially lower than the averages among the UEY-II communities. For example, 21% of Hampton/Sussex children who were in non-

parental childcare were enrolled in daycare centres and before/after-school programs in 2005; the corresponding figure for the UEY-II sample was about 38%.

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 of 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

Table 4.13
PMK responses to questions regarding neighbourhood quality for raising young children, Hampton/Sussex and UEY-II communities
(means, scale range: excellent [10] to poor [0], 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	2005	2001	2005
Lots of families with children	6.3	7.2	6.4	6.5
Good schools, nursery schools	7.7	8.3	6.8	6.9
Adequate facilities for children	5.0	6.0	6.1	6.1
Neighbourhood safe and clean	7.4	8.1	6.4	6.6
Presence of health facilities	5.0	5.7	5.8	5.8
Actively involved residents	6.2	6.6	5.3	5.7
Accessible public transport	1.8	1.2	6.3	5.6

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

As shown in Table 4.13, in 2001, Hampton/Sussex PMK generally gave their neighbourhoods ratings that were close to or better than the averages among the UEY-II communities. In particular, Hampton/Sussex PMK gave higher scores to schools and nursery schools, neighbourhood safety and cleanliness, and residents' level of involvement in the community. Where they differed substantially from the UEY-II averages was on access to public transport, which received low scores in both survey years. Hampton/Sussex PMK registered higher scores on most neighbourhood quality measures in 2005 than in 2001.

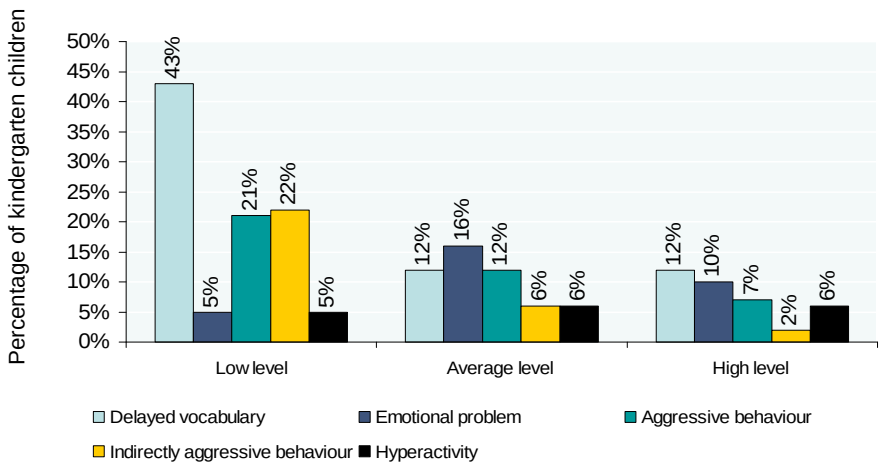
The PMK interview included more detailed questions on perceptions of neighbourhood safety and support from neighbours. For example, PMK were asked to indicate their level of concern for their children's safety while walking and playing in the neighbourhood. They were also asked to respond to a separate group of questions regarding whether neighbours worked together to solve problems, helped one another, watched out for one another's children, and provided children with role models. Table 4.14 presents the results, with responses broadly grouped into positive or negative categories.

Table 4.14
Distribution of kindergarten children by PMK responses on neighbourhood safety and neighbour support, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
It is safe to walk after dark				
Strongly agree/agree	95.0	93.3	73.4	77.8
Strongly disagree/disagree	5.0	6.7	26.5	22.2
It is safe to play outside				
Strongly agree/agree	99.4	98.2	86.1	88.2
Strongly disagree/disagree	0.6	1.8	13.9	12.7
There are safe parks and play spaces				
Strongly agree/agree	68.0	73.6	84.3	84.7
Strongly disagree/disagree	32.0	26.4	15.6	15.4
Neighbours deal with problems together				
Strongly agree/agree	89.6	81.7	86.1	88.2
Strongly disagree/disagree	10.4	18.3	13.9	12.7
There are adults for children to look up to				
Strongly agree/agree	97.6	96.9	82.4	86.2
Strongly disagree/disagree	2.4	3.1	27.6	13.8
Neighbours are willing to help one another				
Strongly agree/agree	97.6	95.6	87.0	89.6
Strongly disagree/disagree	2.4	4.4	12.9	10.4
Neighbours watch out for children's safety				
Strongly agree/agree	97.0	96.6	84.4	89.6
Strongly disagree/disagree	3.0	3.4	15.6	10.4
Neighbours watch out for trouble				
Strongly agree/agree	97.0	96.1	84.5	88.0
Strongly disagree/disagree	3.0	3.9	15.5	12.1
Total	100.0	100.0	100.0	100.0

As shown in Table 4.14, in 2001 and 2005, the vast majority of Hampton/Sussex PMK (90% or more in most cases) agreed or strongly agreed that their neighbourhoods were safe for children and that neighbours supported one another. Compared with the UEY-II averages, the percentages of PMK agreeing or strongly agreeing that their neighbourhoods were good places to raise children were substantially higher on most measures. The exceptions were the scores on the safety of parks and play spaces and on neighbour cooperation in dealing with problems, which were significantly lower than the UEY-II averages. The data also show that a higher proportion of PMK in 2005 than in 2001 had favourable opinions about the safety of parks and play spaces, while the percentage agreeing or strongly agreeing that neighbours cooperated in dealing with problems decreased.

Figure 4.12
Neighbourhood quality and developmental outcomes of kindergarten children, Hampton/Sussex (percentages, 2005)

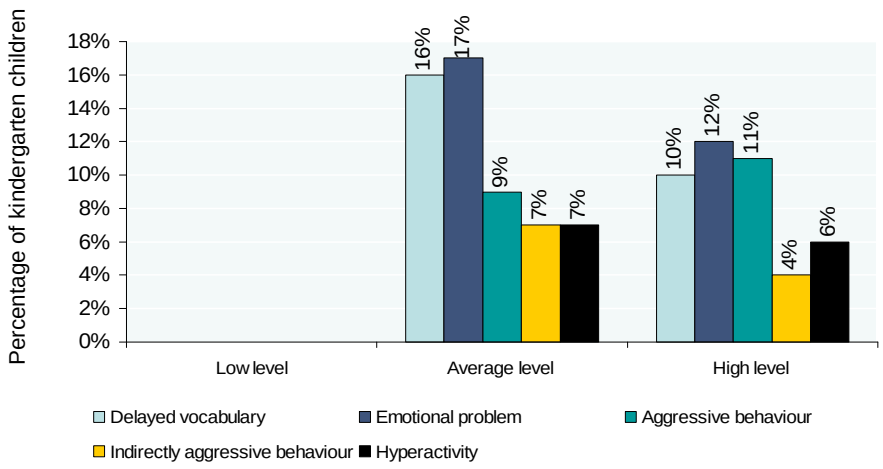


Figures 4.12 and 4.13 present results on the extent to which neighbourhood quality and social support were related to the developmental outcomes of Hampton/Sussex children.

In Figure 4.12, Hampton/Sussex neighbourhoods are classified into three levels of quality – "low," "average" or "high" – based on the average scores and standard deviations across the UEY-II communities. As can be seen, the 2005 data indicate that children living in low-quality neighbourhoods were much more likely than children in other neighbourhoods to have delayed vocabulary development and to show signs of behavioural problems, including aggressive and indirectly aggressive behaviours.

The 2005 data also provide some evidence of a link between neighbourhood social support and child outcomes (see Figure 4.13). It should be noted that, because Hampton/Sussex PMK gave their neighbourhoods relatively high scores on social support, their neighbourhoods have only two categories of social support – "average" and "high" – based on the mean scores and standard deviations across the UEY-II sample. Nevertheless, the level of neighbourhood social support still appeared to be important in explaining differences in child outcomes. For example, children living in neighbourhoods where neighbours had a high propensity to work together were much less likely to receive low PPVT-R scores or display signs of emotional problems and indirectly aggressive behaviours.

Figure 4.13
Neighbourhood social support and developmental outcomes of kindergarten children, Hampton/Sussex (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 Hampton/Sussex kindergarten children making use of such resources.

Table 4.15a
Distribution of kindergarten children by use of educational resources, Hampton/Sussex (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	11.3	*8.2*	7.3	*5.5*	15.4	*10.6*	66.0	*75.7*
	2005	9.7	*10.0*	5.8	*6.2*	12.9	*12.2*	71.6	*71.6*
Education or science centres									
	2001	0.9	*1.6*	2.6	*5.3*	29.7	*30.3*	66.8	*62.9*
	2005	0.8	*1.8*	3.6	*4.8*	23.6	*32.3*	72.1	*61.1*
Family resources centres									
	2001	4.7	*3.4*	1.7	*4.0*	13.1	*11.6*	80.5	*81.0*
	2005	4.2	*4.2*	5.6	*5.5*	10.6	*12.9*	79.5	*77.4*

Table 4.15a shows the rates of use of three types of educational resources: book clubs/reading programs, education or science centres, and family resources centres and drop-in programs. The data indicate that book clubs/reading programs were the most frequently used of these resources. Even so, fewer than one in five Hampton/Sussex children in both survey years used any of these three types of educational resources at least weekly or monthly. In addition, the rates of non-use were high: the majority of children did not use educational resources at all throughout the year.

Table 4.15b
Distribution of kindergarten children by use of cultural resources, Hampton/Sussex (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	-	*3.5*	10.5	*22.9*	64.5	*55.6*	25.0	*17.9*
	2005	0.9	*6.4*	15.9	*23.9*	66.8	*51.2*	16.4	*18.7*
Theatres or plays									
	2001	2.0	*0.9*	6.1	*6.2*	64.1	*52.1*	27.8	*40.8*
	2005	0.6	*1.5*	3.9	*5.3*	59.7	*51.2*	35.8	*41.9*
Museums									
	2001	0.3	*0.5*	2.9	*4.4*	50.3	*49.6*	46.5	*45.6*
	2005	-	*0.6*	2.3	*5.5*	55.6	*54.8*	42.1	*39.0*
Sports events									
	2001	15.4	*9.5*	14.0	*9.5*	38.1	*32.6*	32.6	*48.4*
	2005	17.7	*11.9*	11.7	*12.4*	39.9	*34.4*	31.0	*41.4*

Table 4.15b shows the percentages of Hampton/Sussex children who made use of cultural resources such as movies, theatres, museums and sports events. The data indicate that these usage rates were much higher than those for educational resources. For example, in 2001, about 75% of Hampton/Sussex children went to the movies, close to 70% attended theatres or plays, and 67% watched spectator sports events. However, of those children who used cultural resources, most did so only a few times a year. In 2005, non-participation rates in Hampton/Sussex tended to be considerably lower than the averages across the UEY-II communities.

Table 4.15c
Distribution of kindergarten children by use of recreational resources, Hampton/Sussex (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	47.8	*63.6*	24.1	*19.7*	19.4	*13.5*	8.7	*3.2*
	2005	48.4	*65.9*	28.8	*18.9*	17.9	*10.9*	5.0	*4.3*
Recreational/community centres									
	2001	6.4	*13.3*	15.1	*14.6*	34.5	*23.4*	44.1	*48.8*
	2005	9.7	*12.9*	16.2	*17.1*	45.3	*26.7*	28.8	*43.3*
Indoor, outdoor or wading pools									
	2001	49.1	*38.4*	26.5	*23.8*	20.1	*27.9*	4.4	*9.9*
	2005	44.5	*34.1*	22.0	*26.6*	28.9	*29.3*	4.7	*10.0*

As shown in Table 4.15c, recreational resources registered the highest use rates among the three types of community resources discussed in this report. Of the recreational resources listed in the table, pools were the most popular facilities in Hampton/Sussex, being used by almost half of young children at least weekly in 2001. The participation rate decreased somewhat in 2005, to 45%. However, in both survey years, fewer than 5% of children did not use pool facilities at all throughout the year.

Parks and play spaces were the next most popular recreational venues for children in Hampton/Sussex, attended at least weekly by about 48% of children in both survey years. The use rate increased in 2005, with the proportion of non-users falling from about 9% in 2001 to 5% in 2005. About one in five Hampton/Sussex children used recreational/community centres at least weekly or monthly in 2001, and there was a slight increase in the proportion of these frequent users in 2005 (21.5% vs. 25.9%). As well, the proportion of non-users dropped by 34%, down from 44% in 2001 to 29% in 2005.

Table 4.16
Distribution of kindergarten children participating at least weekly in sports and recreational activities, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Organized sports with coaching/instruction	41.3	51.7	40.2	45.0
Other organized activity with coaching/instruction (e.g., dance, gymnastics or martial arts)	19.7	30.4	25.0	31.0
Unorganized sports or physical activity	81.9	79.7	62.9	69.0
Lessons in music, art, non-sport activity	14.0	12.7	14.0	14.9
Community clubs, groups or leadership programs (e.g., Beavers, Sparks)	56.2	47.3	21.6	23.9

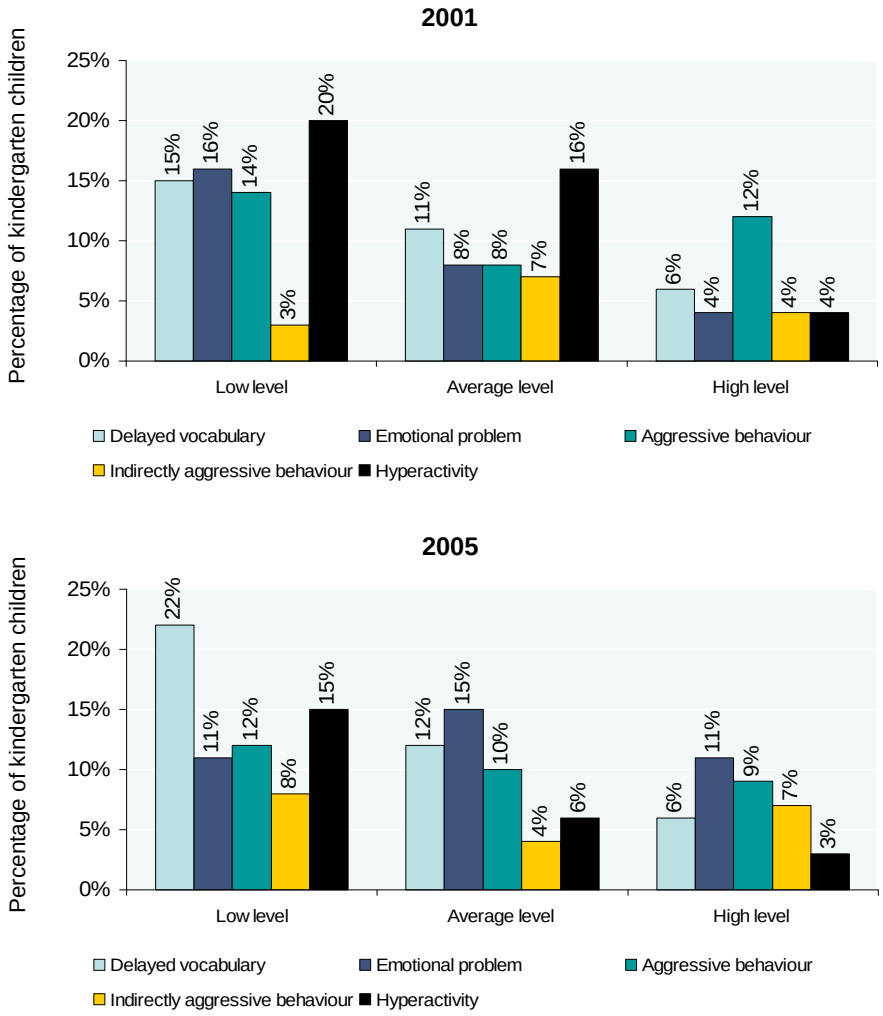
Table 4.16 shows children's weekly participation rates in organized and unorganized sports, organized physical activities with instruction, art or music lessons, and community clubs or leadership programs, such as Beavers and Sparks. The results indicate that an increasing proportion of Hampton/Sussex children participated in organized sports at least weekly, up from 41% in 2001 to 52% in 2005. During the same period, weekly participation in unorganized sports remained close to 80%. The results also show that participation in dance, gym or martial arts classes increased by about 50% (from 20% in 2001 to 30% in 2005), while participation in music, art and other non-sport lessons remained fairly constant (about 13% in 2005). On the other hand, participation in community clubs or leadership programs declined by 16%, falling from 56% in 2001 to 47% in 2005.

Based on the 2005 data, children in Hampton/Sussex were considerably more active in community group activities than the average among the UEY-II communities. In particular, Hampton/Sussex children were much more likely to engage in organized and unorganized sporting activities as well as community clubs and leadership programs.

Figure 4.14 illustrates the relationship between use of community resources and children's developmental outcomes in Hampton/Sussex. In these preliminary analyses, children were classified into three resource user categories: "low," "average" and "high," based on an index created to indicate the overall extent to which children used educational, cultural and recreational programs and services.

Data from both 2001 and 2005 confirm a positive relationship between the level of resource use and the development of vocabulary skills. Hampton/Sussex children in the high-level user group were considerably less likely than those in the low-level user group to receive low PPVT-R scores. In addition, the data indicate a positive relationship between the level of resource use and behavioural development: high-level users of community resources were about five times less likely than low-level users to exhibit signs of hyperactivity (4% vs. 20% in 2001 and 3% vs. 15% in 2005). As well, high-level users of community resources were slightly less likely than low-level users to display aggressive behaviours.

Figure 4.14
Use of community resources and developmental outcomes of kindergarten children, Hampton/Sussex (percentages, 2001 and 2005)



4.4.3 Accessibility of community resources and reasons for not using them

Table 4.17
Distribution of PMK confirming that community resources are within short distances (by walking, bus or car), Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	2005	2001	2005
Educational resources	71.4	74.1	75.2	75.8
Cultural resources	43.1	34.0	58.7	57.9
Recreational resources	53.5	47.9	57.9	56.3

Given the relatively low level of community resource use, PMK were also asked whether educational, cultural and recreational resources were located within walking distance or within a short drive or bus ride. The results, presented in Table 4.17, indicate a slight increase in access to Hampton/Sussex educational resources between 2001 and 2005. As a result, Hampton/Sussex children had close to average access to educational resources among the UEY-II communities.

In contrast, access to recreational resources and, in particular, to cultural resources by the children of this community was considerably below the UEY-II averages. For example, only 43% of Hampton/Sussex children had easy access to cultural resources in 2001, compared with about 59% across the UEY-II communities. The situation worsened in 2005, with the percentage of Hampton/Sussex PMK confirming easy access to cultural resources falling to 34% – a drop of 21% over the 4-year period. The proportion of PMK reporting easy access to recreational facilities also declined by about 10% over the period.

Perceptions of resource availability, however, did not necessarily translate into family use of resources. For example, although over 70% of Hampton/Sussex PMK agreed that educational programs and services were nearby, fewer than one in three children used them in 2005 (see Table 4.15a).

Many PMK reported that they had difficulties accessing community programs or services. In 2004, the three most common reasons given for not using community resources were "not enough time," "program times not convenient" and "unaware of programs." In 2001, the top three difficulties were "program times not convenient," "programs of interest unavailable" and "not enough time" (see Table 4.18).

Close to 30% of PMK mentioned "programs [available only] for older children," "program costs" and "commute difficulty" as other major reasons for not using community programs. A considerable number of PMK also reported that programs of interest to their children were not available.

Table 4.18
Reasons given by PMK for not using community programs or services, Hampton/Sussex and UEY-II communities (percentages, 2001 and 2005)

	Hampton/Sussex		UEY-II communities	
	2001	**2005**	**2001**	**2005**
Situational				
Not enough time	37.5	45.3	41.0	41.6
Unaware of programs	32.5	34.4	23.8	29.7
Health reasons	0.9	2.2	3.1	3.2
Institutional				
Too costly	29.4	28.2	31.7	31.3
Program times not convenient	47.4	42.7	29.9	33.1
Programs [only] for older children	35.2	29.5	27.6	28.4
Programs of interest unavailable	40.1	22.0	13.4	17.6
Not enough spaces	5.8	6.7	7.5	9.0
Programs not in preferred language	1.7	0.8	2.8	2.4
Commute difficulty	36.8	26.5	15.9	18.2
Dispositional				
Concerned about safety	8.7	7.2	8.3	8.9
Concerned about quality	5.8	6.2	5.1	6.1
Cultural or religious reasons	1.4	1.7	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.

Between 2001 and 2005, the percentages of Hampton/Sussex PMK mentioning situational factors (e.g., “not enough time”) increased, while the proportions mentioning institutional factors (e.g., “programs of interest unavailable”) decreased. In particular, compared with 2001, a much smaller percentage of PMK in 2005 reported factors related to program offerings as major barriers to using community resources. This finding may indicate significant progress on the part of community service providers in improving access to services by creating new programs, expanding popular programs and adjusting business hours.

As well, it should be noted that situational and institutional access barriers often combine to affect the use of community resources. For example, PMK who mentioned lack of time (a situational barrier) also tended to say programs were offered at inconvenient times (an institutional barrier). Addressing issues such as this will require a concerted effort on the part of all community members, both service providers and service users.

Overall, Hampton/Sussex had a higher proportion of PMK reporting a variety of access barriers than the average level across the UEY-II communities.

4.5 Summary

4.5.1 Young children in Hampton/Sussex

Results from the 2001 and 2005 data collection cycles of the Communities Survey indicate some demographic changes in the Hampton/Sussex kindergartener population. While there were still slightly more boys than girls in 2005, the gender ratio reached 51 to 49 because of growth in the proportion of girls.

This demographic shift may account for some of the changes in behavioural outcomes observed in Hampton/Sussex children. For example, there was evidence of a decrease in the prevalence of aggressive behaviours but a slight increase in the prevalence of indirectly aggressive behaviours. This finding might have been expected given the changed gender ratio, since boys in Hampton/Sussex were more likely than girls to show aggressive behaviours, while girls were more likely to show indirectly aggressive behaviours.

4.5.2 Characteristics of Hampton/Sussex families

Information from the Communities Survey also indicates changes in the families of Hampton/Sussex kindergarteners between 2001 and 2005. Average household income increased substantially, placing Hampton/Sussex among the affluent UEY-II communities. Yet 13% of Hampton/Sussex children still lived in low-income families. The research showed that family income was associated not only with the cognitive outcomes of Hampton/Sussex children but also with their participation in organized sports and lessons in art and other recreational activities. For example, about 71% of children in high-income families participated in coached sports, compared with fewer than 28% of children in low-income families.

Maternal level of education also increased substantially in Hampton/Sussex over the study period. By 2005, close to 60% of PMK had either a college diploma or a university degree. However, the role of PMK education in children’s vocabulary development was not as clear-cut as suggested in the research literature: children of PMK with less than secondary education did not necessarily receive PPVT-R scores signifying delayed vocabulary development. Rather, some of these children developed advanced vocabulary skills.

About 73% of PMK in Hampton/Sussex were engaged in paid employment in 2005, similar to the percentage in 2001. The data also indicate that about 10% of Hampton/Sussex children lived in no-earner families. Analysis of the study results shows that parental employment was significantly related to the cognitive, emotional and behavioural outcomes of Hampton/Sussex children: considerably higher percentages of children from no-earner families displayed signs of hyperactivity and aggression problems compared with children from families with working parents.

Family structure was also explored to assess its influence on early childhood development. Both the 2001 and 2005 data show that 84% of Hampton/Sussex children lived in two-parent families, and more than 85% had one or more siblings living in the home. The data indicate that children in single-parent families were more prone to delayed vocabulary development and signs of hyperactivity.

4.5.3 Hampton/Sussex families: family processes

Both the behaviours and vocabulary skills of Hampton/Sussex children were significantly associated with how their family members worked together to solve problems. The impact of family functioning on child development appeared to have increased over the study period, as evidenced by the growing differences between the outcomes of children in families functioning at a low level and those in families functioning at higher levels.

By UEY-II standards, Hampton/Sussex parents performed better than average on all parenting measures in 2005. The vast majority of Hampton/Sussex PMK were actively engaged in providing a stimulating home environment for children. More than 95% read to their children, taught them numbers and helped them learn new words at least a few times a week – a higher level of engagement than the average among the UEY-II communities. The study also found that positive parenting was related to children's emotional and behavioural development, while consistent parenting was related to most of the outcomes discussed in this report: vocabulary skills, emotional problems, and aggressive and indirectly aggressive behaviours.

The percentage of Hampton/Sussex children in non-parental childcare increased from 47% in 2001 to 55% in 2005. The most common types of childcare arrangement were care provided by a non-relative outside the home and by a relative outside the home. The use of daycare centres, before/after-school programs and nurseries also experienced a moderate increase.

4.5.4 Hampton/Sussex community: neighbourhoods and resources for young children

More Hampton/Sussex PMK in 2005 than in 2001 thought well of their neighbourhoods as a place to bring up children, according particularly high marks to schools and nursery schools and to neighbourhood safety and cleanliness. PMK also agreed that their neighbourhoods had many families with young children and that neighbours supported one another in a number of ways. However, in both 2001 and 2005, PMK gave low scores to the accessibility of public transport. The percentage agreeing that residents worked together to solve problems declined over the study period.

The study results confirm that neighbourhood quality was related to children's vocabulary development, emotional maturity and behaviours: children living in high-quality neighbourhoods were much less vulnerable than other children in these areas of development. The data also show that children living in neighbourhoods where neighbours tended to cooperate were much less likely than others to receive low PPVT-R scores or display signs of emotional problems and indirectly aggressive behaviours.

The data also confirm a positive relationship between the level of community resource use in Hampton/Sussex and children's outcomes, including vocabulary and behavioural outcomes**.**

About 70% of children had easy access to educational resources, with a slight increase in 2005 over 2001. This level is comparable to the average among the UEY-II communities. However, access to recreational resources and, in particular, to cultural resources was considerably below the UEY-II average. For example, only 34% of Hampton/Sussex children had easy access to cultural resources in 2005, compared with about 58% across the UEY-II sample.

Perceptions of resource availability did not necessarily translate into use of community programs or services. Only about 16% of Hampton/Sussex children used educational programs and services in the community on a weekly or monthly basis. Up to 80% of children did not use certain educational resources at all throughout the year. Although children made more use of cultural resources (museums, theatres, musical performances, sports events and movies), most did so only a few times a year. Recreational facilities registered the highest use rates: Pools, both indoor and outdoor facilities, were the most popular venues for children, followed by parks or play spaces, and recreational and community centres.

With regard to organized and unorganized group activities, the data indicate that a higher proportion of Hampton/Sussex children participated in unorganized sports than in coached sports (80% vs. 52%).

Between 2001 and 2005, there was an overall decline in the proportions of children who did not access educational, cultural or recreational facilities at all throughout the year. In 2005, the top three reasons given for not using community resources were lack of time, inconvenient program times and lack of program awareness. Given that lack of time (a situational barrier) is compounded by inconvenient scheduling (an institutional barrier), this is one area where the community could focus its efforts in making community resources more accessible to a broader range of families with young children.

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).

[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).

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).

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.

[9] See Haveman and Wolfe (1995) for a review of these studies.

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.

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

[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).

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).