

Understanding the Early Years

An Update of Early Childhood Development Results in Four Canadian Communities

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Understanding the Early Years - An Update of Early Childhood Development Results in Four Canadian Communities

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Executive Summary

Understanding the Early Years (UEY) is a national research initiative. It provides communities with information to enable them to make informed decisions about the best policies and most appropriate programs for families with young children. It seeks to provide information about the influence of community factors on children's early development and to improve the community's capacity to use these data in monitoring child development and creating effective community-based responses.

Studies in one pilot community and twelve study communities were conducted between 2000 and 2002. This report is an update of the findings for four of the communities that began UEY in 2000-01.

Data for these reports were derived from teacher assessments, telephone interviews with parents, and direct assessments of the children at school. Each assessment is comprised of several measures:

- ◆ Family background, which includes information on the parents' income, level of education, and occupational status.
- ◆ Family processes, which include parenting practices, engagement in learning activities, family functioning, and maternal mental health.
- ◆ Community factors, which include social support, neighbourhood safety and social capital, and the use of recreational, cultural, and educational resources.
- ◆ Children's outcomes, which are assessed in three ways: kindergarten teachers' assessments of children's outcomes, direct assessments of children's receptive vocabulary and a more global assessment of their development, parents' assessments of children's behaviour.

Where possible, the outcomes of the children in these communities were compared with the Canadian averages. Also, the data collected from the UEY sites allow for comparisons of outcomes between 2000 and 2004 for the four UEY communities in this study. However, this is not the primary purpose of this report, as in many cases the sample sizes are too small for accurately measuring change at the community level. Also, many of the initiatives put in place by the communities are not likely to realize their benefits in a four-year period.

Valuable lessons have been learned from the UEY initiative about the needs and strengths of communities with different economic, social, and physical characteristics, and about how they are each working to improve their young children's outcomes. This community-based research is important because it allows a community to understand how well its youngest citizens are developing and lends insight into which factors contribute to success and warrant further consideration.

Overall, the *Understanding the Early Years* initiative has been remarkably successful in promoting the importance of early childhood development in the communities that pioneered this initiative. The findings of this follow-up study indicate that family income, parental education and employment are important determinants of early childhood outcomes. However, there are other important determinants of positive outcomes that can be more easily changed through the efforts of families and other community members. These include

approaches to parenting, engagement in learning activities, the family's use of available resources, neighbourhood social capital, and social support.

The findings also suggest that it is very difficult to measure changes at the community level, in both the family and community determinants of early childhood outcomes and in the outcomes themselves. One problem is that the accurate measurement of a construct often requires lengthy tests or interview schedules. UEY measures a broad range of constructs, and to measure all of these well would require very lengthy interviews and testing sessions. Another problem is that the sample size of children in many communities is too small to yield estimates that are accurate enough for assessing change. The reliable measurement of change at the community level will require frequent direct assessments of children, and stronger research designs. Given this limitation, the UEY measurement process should be viewed as an important infrastructure upon which other local measurement initiatives can be built. Used in this way, it can provide an opportunity for applied research within communities that examines the effects of specific interventions and policies.

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I. Introduction

A. The Understanding the Early Years Initiative

Understanding the Early Years (UEY) is a national initiative that provides information to help strengthen the capacity of communities to make informed decisions about the best policies and most appropriate programs to serve families with young children. It seeks to provide information about the influence of community factors on young children's development, and to enhance community capacity to use these data to monitor early childhood development and to create effective community-based supports.

Recent research from neuro-biology on brain development and from large-scale longitudinal studies has stressed the importance of investing in the early years of children's development. This research shows that these formative years are critical, and that the kind of nurturing and stimulation that children receive during their first few years can have a major impact on the rest of their lives.

The evidence also suggests that neighbourhoods and communities where children grow and learn directly influence their development. They affect parents' ability to provide the best possible family environment, and the ability of schools to offer the best possible education.

Neighbourhoods, communities, provinces and regions across Canada differ in important ways. Therefore, to deliver programs that are sensitive and responsive to local conditions, the policy sector concerned with children, which includes families, private and voluntary organizations, and local, provincial, and federal governments, requires community-specific information about children and the places where they are raised. *Understanding the Early Years* contributes to this process.

The UEY initiative was launched with a pilot study in York region (now the North Quadrant of Toronto, Ontario) in 1999. In 2000-2001 five communities implemented the UEY initiative, and in 2001-2002 another seven communities became study sites. This report provides an update for four of the 2000-2001 communities. These include: Prince Albert, Saskatchewan; Winnipeg (School District No. 1), Manitoba; Prince Edward Island, and Southwest Newfoundland. Data for these communities were collected in 2000-2001 (see reports from the UEY pilot projects at http://www.sdc.gc.ca/en/hip/sd/310_UYReports.shtml). A second cycle of data was collected in 2003-2004, using the same measures and data collection procedures. This study provides a portrait of early childhood outcomes, and family and community processes, for each of these four communities using both sets of data.

Although the data collected from the UEY sites allow for comparisons of outcomes between 2000 and 2004 for the four UEY communities in this study, this is not the primary purpose of this report, as in many cases the sample sizes are too small for accurately measuring change at the community level. Also, many of the initiatives put in place by the communities are not likely to realize their benefits in a four-year period.

Data describing the outcomes of kindergarten children at age 5, as well as the family and community environments in which they live, were collected from three sources: their parents, their teachers, and from the children themselves. The data for the earlier community research reports and this report were based on the Early Development Instrument (EDI) and the National Longitudinal Survey of Children and Youth (NLSCY). Samples were drawn in each of the communities from families with children who were in kindergarten and age 5. Children were

administered direct assessments of their language skills, and teachers assessed children's performance using the EDI. Parents were interviewed following the NLSCY protocol.

The results from the NLSCY assessments completed by the children are compared with the national means, developed from the national survey, which has a nationally representative sample.

The first aim of this report is to discern the relationship between certain family and community factors and children's developmental outcomes, and to provide some indication of what actions might further improve children's outcomes in these communities. The analyses are based on data collected in these communities in 2000 and 2004. This analysis estimates the effects associated with nine child and family demographic factors, and ten family and community processes.

The second aim of this report is to provide a profile of each community, including the demographic factors, the family and community processes, and the early childhood outcomes measured in UEY. The profile shows changes between 2000-02 and 2003-04 for each set of factors, and where possible, compares results for local conditions with provincial- and national-level norms.

B. How the Study was Conducted

The information contained in this document was collected and analyzed using a variety of methods.

Three major types of information regarding the children's development were collected.

The first type of developmental information was collected by directly assessing children using two instruments¹ that have been widely used for research. One is the Peabody Picture Vocabulary Test (Revised), which is a test of children's receptive vocabulary developed by Lloyd and Leota Dunn at the University of Hawaii. The second is the *Who Am I*, a more general developmental assessment tool developed by Drs. Molly de Lemos and Brian Doig at the Australian Council for Educational Research.

The second type of information was collected from kindergarten teachers about 6 months after the children entered school at ages 5 and 6. UEY used the Early Development Instrument, a checklist developed by Dr. Dan Offord and Dr. Magdalena Janus at the Offord Centre for Child Studies at McMaster University. It considers five aspects of children's development:

- ◆ Physical health and well-being;
- ◆ Social competence;
- ◆ Emotional maturity;
- ◆ Language and cognitive development; and
- ◆ Communication skills and general knowledge.

Teachers of all kindergarten children attending public schools in each community were asked to complete the questionnaire about the behaviours and development of each child in their class.

¹ A test of number knowledge was also administered, but it is not reported on in this report as it did not yield information that was sufficiently reliable for comparative purposes.

The third type of data was collected from the children’s parents and guardians, using a modified version of the questionnaire used in Canada’s National Longitudinal Survey of Children and Youth (NLSCY). The parents provided information about their social and economic backgrounds; their children’s activities and involvement in the community; their children’s health and their social, emotional, and behavioural development. These data were used to construct a measure of Positive Social Behaviour and indicators of four types of behaviour problems.

In each UEY site a random sample was selected to participate in the survey. Table 1-1 displays the sample sizes for each community for the 2000 and 2004 cycles.

Table 1-1		
Sample Sizes for UEY Community Research		
	2000	2004
Prince Albert, Saskatchewan	433	479
Winnipeg, Manitoba (District 1)	595	525
Prince Edward Island	508	519
SW Newfoundland	289	227
Total	1,825	1,750

Note: Sample sizes include all participating children who had data for at least one of the measures (EDI, NLSCY, PPVT-R).

C. Why the Study is of Interest

Understanding the Early Years combines information about children with information about their families and the communities in which they live. This, in turn, provides an understanding of the relationship between children’s outcomes and the environments in which they are raised. This information is important for Canada’s parents and communities who want to help their children develop well. It also helps the individuals, institutions, and communities who work with children to understand these processes at the levels where action is often most effective, the neighbourhood and community.

This report highlights some of the key findings from the information that was collected from teachers, parents, and the children. It examines the overall development of children in kindergarten and provides a more detailed look at the outcomes of these children. It suggests some of the unique strengths from which these communities can work, and some challenges to overcome in continuing to build a collective commitment to ensure the health, well-being, and positive development of its young children.

II. Factors affecting Early Childhood Outcomes in the four UEY communities

This chapter uses data from the 2000 and 2004 cycles, for all four communities, to describe the distributions of scores on the various instruments, and to examine the relationships between children's developmental outcomes and the family and community factors assessed in UEY. The analyses provide a context for understanding the community-specific results that follow in the next four chapters.

A. Early Childhood Outcomes upon School Entry

This section provides more information about the specific measures of children's outcomes. A child's cognitive skills, behaviour, and physical health and well-being outcomes were measured in three ways, using direct assessments by a Statistics Canada interviewer, through teacher's appraisals, and by a parent survey.

Direct Assessments of Children's Skills

Receptive Vocabulary Skills (Peabody Picture Vocabulary Test, Revised - PPVT-R): assesses a child's receptive or hearing vocabulary. The children hear a word said aloud and are asked to point to one of four pictures that they believe corresponds to the word.

Developmental Assessment (Who Am I?): is based on copying and writing tasks that are designed to test children's ability to conceptualise and to reconstruct a geometrical shape and to use symbolic representations, as illustrated by their understanding and use of conventional symbols such as numbers, letters, and words. Children are asked to copy five shapes (such as a circle or a diamond) and to write their names, numbers, letters, words, and a sentence. Because the tasks are not dependent on language, the *Who Am I?* can be used to assess children whose knowledge of English or French is limited.

Teachers' Appraisals of Children's Development

The Early Development Instrument contains 132 items that teachers answer with respect to each child in the class. For example, teachers are asked,

- ◆ Would you say that this child follows instructions, accepts responsibility, and works independently?
- ◆ How often is the child too tired to do school work?
- ◆ Is the child well coordinated?
- ◆ Would you say that this child is upset when left by a caregiver, has temper tantrums, appears worried, or cries a lot?

Teachers were also asked to comment on the child's use of language, his or her interest in books, and his or her abilities related to reading and writing. They were also asked about children's communication skills and general knowledge.

The data for the EDI are reported for five domains, as follows:

Physical health and well-being: children's motor skills, energy levels, fatigue, and clumsiness.

Social competence: self-confidence, tolerance, and children's ability to get along with other children, to accept responsibility for their own actions, to work independently.

Emotional health and maturity: children's general emotional health and maturity. It also identifies minor problems with aggression, restlessness, distractibility, or in-attentiveness, as well as excessive, regular sadness.

Language and cognitive development: mastery of the basics of reading and writing, interest in books, and numerical skills (e.g., recognising numbers and counting).

Communication skills and general knowledge: children's general knowledge, their ability to articulate clearly, and their ability to understand and communicate in English.

Parents' Assessments of Children's Behaviour

The measures of children's behaviour are based on scales administered to the *person most knowledgeable* (PMK) about the child, which is usually the mother. The data were collected by trained personnel of Statistics Canada. These interviews were conducted by telephone only in English or French. Parents without telephones or speaking other languages were not interviewed. The measurements comprise several questions, each with the same format. For example, the mother (or PMK) was asked how often her child "cannot sit still, is restless, or is hyperactive". She answered with one of three possible responses – "never or not true"; "sometimes or somewhat true"; and "often or very true." The scale included the following elements:

Positive social behaviour: children who exhibit higher levels of positive social behaviour are more likely to try to help and comfort others. They may offer to help pick up objects that another child has dropped or offer to help a child who is having trouble with a difficult task. They might also invite their peers to join in a game.

Hyperactivity/Inattention: this measure identifies children who: cannot sit still, are restless, and easily distracted; have trouble sticking to any activity; fidget; cannot concentrate, cannot pay attention for long; are impulsive; have difficulty waiting their turn in games or groups; and cannot settle to do anything for more than a few moments.

Anxiety/Emotional problems: this element identifies children who seem to be unhappy, sad, or depressed; are too fearful or anxious; are worried; cry a lot; tend to be rather solitary; appear miserable, unhappy, tearful, or distressed; are not as happy as other children; are nervous, high strung, or tense; or have trouble enjoying themselves.

Physical aggression/conduct disorder: these children get into many fights. When another child accidentally hurts them (by bumping into them, for example), they assume that the other child meant to do it, and then react with anger and fighting. Also included are children who kick, bite, or hit other children; who physically attack people; and who threaten people, are cruel, or bully others.

Indirect aggression: this element identifies children who, when mad at someone, try to get others to dislike that person; who become friends with another for revenge; who say bad things behind the other's back; who say to others, "Let's not be with him/her"; or who tell secrets to a third person.

Table 2-1 shows the mean scores, standard deviation, and skewness for each of the outcome measures. The results are based on data for the four communities, across both cycles. The standard deviation is a measure of the range or spread of scores in the sample, while the skewness pertains to the extent to which the distribution of scores is asymmetrical. Distributions that are negatively skewed have low scores that extend further below the mean than the high scores extend above it; the reverse is the case for positively skewed distributions.

The scores for the PPVT, the Who Am I developmental assessment, and the Positive Social Behaviour scales from the parent interview were standardized to have a mean of zero and a standard deviation of 1.0 for the national population. The results suggest that the distributions for these four communities, taken together, do not differ substantially from these norms. The PPVT scores are slightly negatively skewed (-0.27), while the Who Am I and Positive Behaviour measures are more strongly skewed (-0.84 and -0.77 respectively).

The scores for the EDI have relatively high means, ranging from 8.0 to 8.8 on the 10-point scales. Also, the distributions are heavily skewed, with skewness values ranging from -0.89 for Emotional Health and Maturity, to -1.61 for Language and Cognitive Development. In other words, most children in the sample scored at the top end of the range of the 10-point scales. For example, about two-thirds (66.3%) of the children had a score of 8.0 or higher in the measure of Language and Cognitive Development. This presents measurement problems when attempting to assess change over time, which is discussed in the final chapter.

The measures of children's behaviour problems are also skewed, with most children being rated with low scores, indicating an absence of behaviour problems. For these measures, it is useful to dichotomize them into indicators of whether the child does or does not have a behaviour problem. The cut-off score for deciding which children have a behaviour problem is ultimately arbitrary. For this study, cut-off scores were established which would result in a prevalence of 10 percent for each behaviour problem.

Table 2-1
Mean Scores, Standard Deviation and Skewness on the Childhood Outcomes Assessed in UEY (Four UEY Communities, 2000 and 2004)

	Mean	Standard Deviation	Skewness
Direct Assessments			
PPVT-R (standardized, 100, 15)	100.4	16.1	-0.27
Who Am I (standardized, 100, 15)	99.8	14.5	-0.84
Teacher Appraisals (EDI)			
Physical Health and Well-being (range: 0 to 10)	8.8	1.1	-1.12
Social Competence (range: 0 to 10)	8.4	1.7	-1.24
Emotional Health and Maturity (range: 0 to 10)	8.0	1.4	-0.89
Language and Cognitive Development (range: 0 to 10)	8.2	1.9	-1.61
Communication Skills and General Knowledge (range: 0 to 10)	8.0	1.9	-0.98
Parents' Assessments			
Positive Social Behaviour (standardized, 100, 15)	99.3	14.7	-0.77
Hyperactivity/Inattention (range: 0 to 10)	2.9	2.0	0.77
Anxiety/Emotional Problems (range: 0 to 10)	1.4	1.4	1.22
Aggression/Conduct Disorder (range: 0 to 10)	1.1	1.5	1.65
Indirect Aggression (range: 0 to 10)	0.7	1.4	2.50

B. Demographic Characteristics

In this section, information about the relationship between family background and children's outcomes is presented. In the chapters that follow, the family background characteristics of the children in each community are described.

The relationship between family background and children's outcomes is not straightforward. An important goal of *Understanding the Early Years* is to distinguish between the effects on children's outcomes of family background and those associated with family processes and community factors. However, the effects of family background tend to be correlated with family processes and community factors. The strategy used in this report is to first present the effects associated with family background, then the effects of family processes and community factors, and finally, the effects when all factors are in the same model.

In an earlier study of children's development, based on the national sample of children who participated in the first cycle of the NLSCY, these family background characteristics were significantly related to a range of children's developmental outcomes (Willms, 2002).

The values, calculated for eight family background characteristics, are:

- ◆ Family income (measured in \$10,000 units);
- ◆ Mother's level of education (measured in years of education);
- ◆ Father's level of education (measured in years of education);
- ◆ Mother's employment status: considered not working outside the home if the mother worked fewer than 25 weeks during the past year;
- ◆ Father's employment status: considered not working outside the home if the father worked fewer than 25 weeks during the past year;
- ◆ Single-parent family: only one parent or guardian living at home;
- ◆ Number of siblings: a count of the number of brothers and sisters living at home; and
- ◆ Aboriginal status.

Table 2-2 shows the relationship between three measures of children's outcomes and these family background factors. The analysis employed a technique called hierarchical linear modeling (HLM), which yields estimates of the average "within-community" relationship for each factor. HLM also takes account of the possible effects associated with the clustering of individuals within communities, which results in a more accurate determination of the uncertainty (or standard errors) associated with the estimates of the effects of family background. For these analyses, the scores on the Physical Health and Well-Being measure of the EDI were standardized to have a mean of 100 and a standard deviation of 15, such that the units are comparable to those used with the PPVT and the Positive Social Behaviour scale.

Table 2-2
The relationship between Children’s Receptive Vocabulary Scores (PPVT-R), Positive Social Behaviour (NLSCY measure), Physical Health and Well-Being (EDI) and Family Background Characteristics (NLSCY interview). (Regression coefficients and standard errors)

	Receptive Vocabulary	Positive Social Behaviour	Physical Health and Well-Being
Intercept (adjusted mean in 2000)	100.9 (1.5)	99.5 (0.6)	100.1 (1.3)
Cycle (0 = 2000, 1 = 2004)	-4.9 (0.9)	-2.6 (0.5)	1.4 (1.9)
Sex (0 = male, 1 = female)	1.4 (0.5)	3.3 (0.5)	3.8 (0.5)
Family Income (x \$10,000)	0.5 (0.1)	0.3 (0.1)	-0.1 (0.1)
Mother’s Education (years)	1.1 (0.1)	0.4 (0.1)	0.6 (0.1)
Father’s Education (years)	0.5 (0.1)	0.0 (0.1)	0.4 (0.1)
Mother Not Working Outside the Home (0 = no, 1 = yes)	-1.3 (0.6)	5.9 (1.9)	-1.9 (0.6)
Father Not Working Outside the Home (0 = no, 1 = yes)	-2.2 (0.8)	1.1 (0.8)	-1.4 (0.9)
Single Parent Family (0 = no, 1 = yes)	1.7 (1.5)	-0.8 (1.4)	-2.7 (1.6)
Number of Siblings (count)	-1.6 (0.2)	0.2 (0.2)	-0.8 (0.3)
Aboriginal Status (0 = non-Aboriginal, 1 = Aboriginal)	-4.3 (0.8)	-2.6 (1.9)	-4.9 (0.8)

Note: Bold text indicates coefficients that are statistically significant ($p < 0.10$).

The first row of the table (the intercepts) indicates the average scores in 2000 for each of the three measures for children in the four communities, after taking account of the family background factors in the analysis. These are essentially the baseline from which to assess the effects in the remainder of the table. These are close to 100, as the measures were scaled to have a mean of 100 and a standard deviation of 15.

The second row indicates the difference between the scores for the 2000 and 2004 cycles, after taking account of the family background variables in the analysis. For example, the estimate for PPVT-R is -4.9, which indicates that the adjusted mean for 2004 was about 5 points lower than that of 2000. The Positive Behaviour scores were slightly lower, 2.6 points, while the EDI Physical Health and Well-Being scores are slightly higher.

The remaining coefficients in the table indicate the effects associated with a one-point increase in the factor. For example, the effect on PPVT for years of education of the mother indicates that each additional year of education is associated with an additional 1.1 points. In the case of the variable for sex, with males coded 0 and females coded 1, the coefficient represents the difference between females and males, with positive scores indicating a female advantage. Similarly, the coefficient for Single Parent represents the difference between children in single parent families and two-parent families, with positive scores meaning better scores for children in single parent families. The coefficients for Aboriginal Status represent the difference between Aboriginals and non-Aboriginals, with positive scores representing an Aboriginal advantage.

Sex Differences. The third row indicates the differences between boys and girls on these measures. Girls scored higher on all three measures, by 1.4 points on Receptive Vocabulary, 3.3 points on the Positive Behaviour scale, and 3.8 points on the measure of Physical Health and Well-Being.

Income. The effects of family income are statistically significant for the measures of Receptive Vocabulary and behaviour, but are very small in substantive terms for all three outcomes. For example, a \$10,000 increase in family income is associated with only a one-half point gain in the Receptive Vocabulary scores. The effect is smaller for Positive Behaviour, and not significant for the measure of Physical Health and Well-being.

Mother's Education. The effects of the mother's level of education are somewhat larger than those associated with family income. An increase of one year in the mother's level of education is associated with a 1.1 point increase in Receptive Vocabulary, and about one-half point in the other two measures.

Father's Education. The effects of the father's level of education are considerably less than that of the mother. For Receptive Vocabulary, an increase of one year in the level of education of the father is associated with about a one-half point increase in Receptive Vocabulary and Physical Health and Well-Being. However, it was not related to the measure of Positive Behaviour.

Parents' Employment Outside the Home. The language and health outcomes of children whose parents were working outside the home were considerably better than those of children whose parents were not employed outside the home. For Receptive Vocabulary, the effects were about 1.3 points for mother's employment, and 2.2 points for father's employment, while for Physical Health and Well-Being, the effects were slightly stronger of mother's employment and weaker for father's employment. However, for the measure of Positive Behaviour, the effects are reversed. Children of parents who did not work outside the home had better scores on the measure of Positive Behaviour, by 5.9 points for employed mothers and 1.1 points for employed fathers.

Single Parent Families. The effects associated with single- versus two-parent families were not statistically significant for receptive vocabulary and Positive Behaviour, but were significant for Physical Health and Well-being: children living in single-parent families scored 2.7 points lower than their counterparts in two-parent families.

Number of Siblings. The number of brothers and sisters was negatively related to Receptive Vocabulary and Physical Health and Well-being. Children scored 1.6 points lower on Receptive Vocabulary for each additional sibling. The effects for Physical Health and Well-Being were about one-half that size. Number of siblings was not statistically related to parents' assessments of Positive Behaviour.

Aboriginal Status. Aboriginal children scored about 4 points lower on the measures of Receptive Vocabulary and Physical Health and Well-being than non-Aboriginal students. There was no statistically significant effect for Positive Behaviour.

Table 2-3
The relationship between Children’s Receptive Vocabulary Scores (PPVT-R), Positive Behaviour (NLSCY measure), Physical Health and Well-Being (EDI) and Family Processes and Community Factors. (Regression coefficients and standard errors)

	Receptive Vocabulary	Positive Social Behaviour	Physical Health and Well-Being
Intercept (adjusted mean in 2000)	100.9 (1.5)	99.5 (0.6)	100.1 (1.3)
Cycle (0 = 2000, 1 = 2004)	-4.4 (0.9)	-2.2 (0.5)	1.8 (1.7)
Responsive Parenting (10-point scale)	0.1 (0.2)	1.3 (0.2)	-0.8 (0.2)
Demanding Parenting (10-point scale)	0.4 (0.3)	3.9 (0.2)	0.4 (0.3)
Family Functioning (10-point scale)	0.6 (0.2)	0.2 (0.2)	-0.0 (0.2)
Mother’s Mental Health (10-point scale)	0.4 (0.2)	0.6 (0.2)	1.3 (0.2)
Parental Engagement (10-point scale)	0.3 (0.2)	0.7 (0.2)	0.6 (0.2)
Use of Resources (10-point scale)	0.6 (0.1)	0.1 (0.1)	0.3 (0.1)
Social Support (10-point scale)	1.2 (0.2)	-0.0 (0.2)	0.7 (0.2)
Neighbourhood Social Capital (10-point scale)	0.4 (0.2)	0.5 (0.2)	0.3 (0.2)
Safe neighbourhood (10-point scale)	0.2 (0.2)	-0.0 (0.2)	0.2 (0.2)
Quality Neighbourhood (10-point scale)	0.1 (0.1)	0.2 (0.1)	0.1 (0.2)

Note: Bold text indicates coefficients that are statistically significant ($p < 0.10$).

C. Family Processes and Community Factors

Table 2-3 displays the results for the family process and community factors. The first two rows display the adjusted means and the cycle effects, which are similar to those in Table 2-2. Altogether, there are ten measures of family processes and community factors, which are described below, and followed with a discussion of the results. The measures are scaled on a ten-point scale. The regression coefficients represent the effect associated with a one-point increase on each of these scales. For example, a one-point increase on the ten-point scale for Responsive Parenting is associated with a 1.3 point increase in children’s Positive Social Behaviour.

Responsive and Demanding Parenting. Recently, psychologists have devoted considerable energy towards studying parenting “styles”, especially with respect to adolescent outcomes. The idea underlying parenting “styles” is that parents can be classified into different groups based on particular dimensions of parenting, such as their warmth versus hostility, or the extent to which they grant autonomy to their child. More than 20 years ago Maccoby and Martin (1983) identified two important dimensions of parenting, responsiveness and demandingness. Responsiveness pertains to the degree that parents express their love for their child, are responsive to their child’s needs, and recognize the child’s individuality. Demandingness, or parental control, refers to parents’ efforts to socialize their child into the family and society by supervising the child, making demands for mature behaviour, and

demanding compliance. Baumrind (1967) used these constructs to identify parents who were authoritative, authoritarian, or permissive. Figure 2-1 shows the typology. Parents who are low on both dimensions can be considered neglectful or detached. There is a mounting literature showing that children and youth of parents who have an authoritative style tend to have better academic achievement and school grades, better school behaviour, and are more likely to complete secondary school (Lamborn, Dornbusch, & Steinberg, 1996; Beyer, 1995; Taylor, Hinton, & Wilson, 1995; Steinberg, Lamborn, Dornbusch, & Darling, 1992; McLaughlin & Vacha, 1992). However, there has been relatively little research on the effects of parenting style on pre-school children.

Figure 2-1
Baumrind's (1967) parenting styles as a function of responsiveness and demandingness

		Responsiveness	
		High	Low
Demandingness	High	Authoritative	Authoritarian
	Low	Permissive	Neglectful

The NLSCY instrument used in UEY asked several questions of parents about their parenting practices, although these were not designed to directly fit the Maccoby and Martin constructs. However, a factor analysis of the items identified two factors that roughly fit their schema.

The scale for responsiveness was based on 5 items:

- (1) How often do you praise your child by saying something like “Good for you!” or “What a nice thing that you did!” or “That’s good going!”?
- (2) How often do you and your child talk or play with each other, focusing attention on each other for five minutes or more, just for fun?
- (3) How often do you and your child laugh together?
- (4) How often do you do something special with your child that he/she enjoys?
- (5) Of the times that you talk to your child about his/her behaviour, what proportion of the time is praise?

The scale had a reliability² of 0.54 for the 2000 sample and 0.67 for the 2004 sample.

² The reliability coefficient is an indication of how accurately an instrument can distinguish sample members in their scores. It can be thought of as the correlation between two forms of the instrument that were constructed to be equivalent. In practice, though, the correlation is usually calculated using a formula that uses data at hand, essentially by constructing all possible pairs of items that could comprise two forms of the instrument. This is sometimes called the internal consistency of the instrument. The reliability coefficient ranges from 0 to 1, with coefficients close to one indicating high reliability. In surveys such as the NLSCY, scales with reliabilities of 0.75 to 0.90 are possible with a carefully developed set of 7 to 10 items.

The scale for demandingness included 17 items:

- (1) When you give your child a command or order to do something, what proportion of the time do you make sure that he/she does it?
- (2) If you tell your child that he/she will be punished if he/she doesn't stop doing something, and he/she keeps doing it, how often will you punish him/her?
- (3) How often does your child get away with things that you feel should have been punished?
- (4) How often is your child able to get out of a punishment when he/she really sets his/her mind to it?
- (5) When your child breaks the rules or does things that he/she is not supposed to, how often do you ignore it or do nothing?
- (6) When your child breaks the rules or does things that he/she is not supposed to, how often do you calmly discuss the problem?
- (7) How often do you get annoyed with your child for saying or doing something that he/she is not supposed to?
- (8) How often do you tell your child that he/she is not as good as others?
- (9) Of the times that you talk to your child about his/her behaviour, what proportion of the time is disapproval?
- (10) How often do you get angry when you punish your child?
- (11) How often do you think that the kind of punishment you give your child depends on your mood?
- (12) How often do you feel that you are having problems managing your child in general?
- (13) How often do you have to repeatedly discipline your child for the same thing?
- (14) When your child breaks the rules or does things that he/she is not supposed to, how often do you raise your voice, scold or yell at him/her?
- (15) When your child breaks the rules or does things that he/she is not supposed to, how often do you use physical punishment?
- (16) How often when you discipline ____, does ____ ignore the punishment?
- (17) When your child breaks the rules or does things that he/she is not supposed to, how often do you describe alternate ways of behaving that are acceptable?

Parents responded to each of these items on a scale with the following options: never, rarely, sometimes, often, and always. These were scored as 0, 2.5, 5, 7.5, and 10 respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.76 for the 2000 sample and 0.75 for the 2004 sample.

The findings for these two constructs indicate a small positive effect for Receptive Vocabulary, which is not statistically significant. The effects for children's Positive Social Behaviour are quite strong, indicating that a one-point increase on the ten-point response parenting scale is associated with a 1.3 point increase in Positive Social Behaviour, while a one-point increase in demanding parenting is associated with an increase in Positive Social Behaviour of 3.9 points. For Positive Social Behaviour, these parenting measures are the strongest determinants. The effects associated with the parenting constructs for physical health are small, and in the case of responsive parenting, slightly negative. This is likely a case of reverse causation, whereby parents of children who are experiencing physical problems are more likely to offer praise and encouragement more frequently.

Family Functioning. The concept of family functioning refers to the cohesiveness and adaptability of the family. It is concerned mainly with how well the family functions as a unit, rather than the relationships between spouses or between parents and their children. A number of studies have shown that family functioning is related to children's developmental outcomes, especially children's behaviour. It was measured in this study with 12 items:

- (1) Planning family activities is difficult because we misunderstand each other.
- (2) In times of crisis, we can turn to each other for support.
- (3) We cannot talk to each other about sadness we feel.
- (4) Individuals (in the family) are accepted for what they are.
- (5) We avoid discussing our fears or concerns.
- (6) We express feelings to each other.
- (7) There are lots of bad feelings in our family.
- (8) We feel accepted for what we are.
- (9) Making decisions is a problem for our family.
- (10) We are able to make decisions about how to solve problems.
- (11) We don't get along well together.
- (12) We confide in each other.

Parents responded to each of these items on a Likert scale, with the following options: strongly agree, agree, disagree, strongly disagree. These were scored as 10, 6.66, 3.33 and 0, respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.91 for both the 2000 and 2004 samples.

The measure of family functioning is significantly related to children's Receptive Vocabulary, with a one-point increase associated with an increase in Receptive Vocabulary scores of 0.6 points. Family functioning was not significantly related to Positive Behaviour or Physical Health and Well-Being.

Maternal Mental Health. The well-being of parents affects their parenting style and ability to respond to and engage their children in various learning activities. Mothers' well-being tends to have a stronger effect on children's outcomes than fathers' well-being. This indicator was based on twelve items in the NLSCY that are commonly used to measure depression. The mother (or PMK) was asked, *"How often have you felt or behaved this way during the past week?"*

- (1) I did not feel like eating; my appetite was poor.
- (2) I felt like I could not shake off the blues, even with help from my family and friends.
- (3) I had trouble keeping my mind on what I was doing.
- (4) I felt depressed.
- (5) I felt that everything I did was an effort.
- (6) I felt hopeful about the future.
- (7) My sleep was restless.
- (8) I was happy.
- (9) I felt lonely.
- (10) I enjoyed life.
- (11) I had crying spells.
- (12) I felt that people disliked me.

The responses included the following options: Rarely or none of the time (Less than 1 day), Some or a little of the time (1-2 days), Occasionally or a moderate amount of time (3-4 days), and Most or all of the time (5-7 days). These were coded as 10, 6.67, 3.33, and 0 respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.83 for the 2000 sample and 0.81 for the 2004 sample.

The measure of maternal mental health was significantly related to all three outcome measures. A one-point increase on this scale was associated with an increase in Receptive Vocabulary of 0.4 points, an increase in Positive Behaviour of 0.6 points, and an increase in Physical Health and Well-being of 1.3 points.

Engagement. This indicator measures the extent to which parents are engaged with their child in learning activities. It included 7 items. Parents were asked: "how often do you or your spouse get a chance to do the following with _____ ?"

- (1) Read aloud to him/her or listen to him/her read or try to read?
- (2) Tell stories to him/her?
- (3) Sing songs (including action songs) with him/her?
- (4) Teach him/her to name printed letters and/or numbers?
- (5) Teach him/her to read words?

- (6) Take him/her outside for a walk or play in the yard, park or playground?
- (7) Encourage him/her to use numbers in day to day activities (for example, counting the cookies on a plate)?

Parents responded to each of these items on a Likert scale, with the following options: rarely or never, a few times a month, once a week, a few times a week, daily. These were scored as 0, 2.5, 5, 7.5, and 10 respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.70 for the 2000 sample and 0.68 for the 2004 sample.

The measure of parental engagement was also positively related to all three outcomes, with effects of 0.3 points for Receptive Vocabulary, 0.7 points for Positive Behaviour, and 0.6 points for Physical Health and Well-being.

Use of Resources. This indicator measures the use of facilities in the community. Parents were asked how often their child:

- (1) Used book clubs/reading programs?
- (2) Attended educational or science centers?
- (3) Used family resource centers?
- (4) Attended movies?
- (5) Attended plays?
- (6) Attended museums?
- (7) Attended spectator sports?
- (8) Attended aquariums?
- (9) Used parks/playspaces?
- (10) Used recreation or community centres?
- (11) Used pools?
- (12) Went skating?
- (13) Used national parks?

The response categories included “at least once per week”, “at least once per month”, “a few times per year”, and “not at all”, which were coded as 2.0, 0.5, 0.0625, and 0.0 respectively, and then summed. About 4% of children had a score above 10 on this index. These were coded as 10, such that the resulting index ranged from 0 to 10. The reliability of this type of scale cannot be assessed with statistical methods that measure internal consistency described in the footnote above.

This measure was positively related to children’s Receptive Vocabulary scores, with an effect of 0.6 points on the Receptive Vocabulary, and to Physical Health and Well-being, with an effect of 0.3 points. However, use of resources was not significantly related to Positive Behaviour.

Social Support. The level of social support available to parents affects their well-being, and indirectly affects their ability to function as parents and as role models within their family and community. This measure indicates the level of support parents feel they receive from their friends and family members. Parents were asked six questions:

- (1) If something went wrong, no one would help me (reverse coded).
- (2) I have family and friends who help me feel safe, secure and happy.
- (3) There is someone I trust whom I would turn to for advice if I were having problems.
- (4) There is no one I feel comfortable talking about problems with (reverse coded).
- (5) I lack a feeling of closeness with another person.
- (6) There are people I can count on in an emergency.

Parents responded to each of these items on a Likert scale, with the following options: strongly disagree, disagree, agree, strongly agree. These were scored as 0, 3.33, 6.66, and 10, respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.83 for the 2000 sample and 0.85 for the 2004 sample.

Social support was significantly related to children's Receptive Vocabulary scores, with a one-point increase on the social support scale associated with a 1.2 point increase in Receptive Vocabulary scores. Social support was also related to Physical Health and Well-being, with an effect of 0.7 points. It was not related to parents' reports of Positive Behaviour.

Neighbourhood Social Capital. This measure is similar to social support, but it pertains more to the collective support available in the neighbourhood. Parents were asked five questions:

- (1) If there is a problem around here, the neighbours get together to deal with it.
- (2) There are adults in the neighbourhood that children can look up to.
- (3) People around here are willing to help their neighbours.
- (4) You can count on adults in this neighbourhood to watch out that children are safe and don't get in trouble.
- (5) When I'm away from home, I know my neighbours will keep their eyes open for possible trouble.

Parents responded to each of these items on a Likert scale, with the following options: strongly disagree, disagree, agree, strongly agree. These were scored as 0, 3.33, 6.66, and 10, respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.89 for the 2000 sample and 0.90 for the 2004 sample.

Neighbourhood social capital was significantly related to all three outcomes, with effects of 0.4, 0.5 and 0.3 points for Receptive Vocabulary, Positive Social Behaviour, and Physical Health and Well-Being respectively.

Safe Neighbourhood. This measure indicates the level of the parents' concern for their child's safety in their neighbourhood. It is based on parents' responses to three questions:

- (1) It is safe to walk alone in the neighbourhood after dark.
- (2) It is safe for children to play outside during the day.
- (3) There are safe parks and playspaces.

Parents responded to each of these items on a Likert scale, with the following options: strongly disagree, disagree, agree, strongly agree. These were scored as 0, 3.33, 6.66, and 10, respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.65 for the 2000 sample and 0.69 for the 2004 sample.

Neighbourhood Safety was not significantly related to any of the three outcomes examined in this analysis.

Neighbourhood Quality. This measure gauges parents' perceptions of the quality of their neighbourhood as a place to raise children. Parents were asked how they felt about their neighbourhood in terms of the following:

- (1) Lots of families with children?
- (2) Good schools, nursery schools?
- (3) Adequate facilities for children?
- (4) Safe and clean community?
- (5) Presence of health facilities?
- (6) Actively involved residents?
- (7) Accessible public transportation?

They were also asked to rate their present neighbourhood in comparison with the one they had lived in previously. The responses – excellent, very good, good, fair, and poor – were coded 10, 7.5, 5, 2.5, and 0 respectively, and averaged across items, yielding a score that ranged from 0 to 10. The scale had a reliability of 0.83 for both the 2000 and 2004 samples.

Neighbourhood Quality was not significantly related to any of the three outcomes examined in this analysis.

Table 2-4
The relationship between Children’s Receptive Vocabulary Scores (PPVT-R), Positive Social Behaviour (NLSCY measure), Physical Health and Well-Being (EDI) and Family Background Characteristics (NLSCY interview). (Regression coefficients and standard errors)

	Receptive Vocabulary	Positive Social Behaviour	Physical Health and Well-Being
Intercept (PPVT mean in 2000)	100.9 (1.5)	99.5 (0.6)	100.1 (1.3)
Cycle (0 = 2000, 1 = 2004)	-5.5 (1.0)	-2.5 (0.5)	1.4 (1.9)
Sex (0 = male, 1 = female)	1.3 (0.5)	2.7 (0.4)	3.7 (0.5)
Family Income (x \$10,000)	0.4 (0.1)	0.1 (0.1)	-0.1 (0.1)
Mother’s Education (years)	1.0 (0.1)	0.1 (0.1)	0.4 (0.1)
Father’s Education (years)	0.3 (0.1)	-0.1 (0.1)	0.3 (0.1)
Mother Not Working Outside the Home (0 = no, 1 = yes)	-1.1 (0.5)	0.8 (0.5)	-1.5 (0.6)
Father Not Working Outside the Home (0 = no, 1 = yes)	-1.9 (0.8)	1.5 (0.7)	-1.1 (0.9)
Single Parent Family (0 = no, 1 = yes)	1.6 (1.5)	-0.1 (1.3)	-2.3 (1.5)
Number of Siblings (count)	-1.5 (0.2)	0.5 (0.2)	-0.8 (0.3)
Aboriginal Status (0 = non-Aboriginal, 1 = Aboriginal)	-4.0 (0.8)	0.6 (0.7)	-4.5 (0.8)
Responsive Parenting (10-point scale)	0.1 (0.2)	1.3 (0.2)	-0.7 (0.2)
Demanding Parenting (10-point scale)	0.1 (0.3)	3.8 (0.2)	0.2 (0.3)
Family Functioning (10-point scale)	0.3 (0.2)	0.2 (0.2)	-0.2 (0.2)
Mother’s Mental Health (10-point scale)	-0.1 (0.2)	0.6 (0.2)	0.9 (0.2)
Parental Engagement (10-point scale)	0.2 (0.2)	0.7 (0.2)	0.4 (0.2)
Use of Resources (10-point scale)	0.4 (0.1)	0.1 (0.1)	0.2 (0.1)
Social Support (10-point scale)	0.8 (0.2)	0.0 (0.2)	0.4 (0.2)
Neighbourhood Social Capital (10-point scale)	0.2 (0.2)	0.5 (0.2)	0.1 (0.2)
Safe neighbourhood (10-point scale)	0.1 (0.2)	0.0 (0.2)	0.2 (0.2)
Quality Neighbourhood (10-point scale)	-0.0 (0.1)	0.2 (0.1)	0.1 (0.1)

Note: Bold text indicates coefficients that are statistically significant ($p < 0.10$).

The final model for this set of analyses includes the demographic variables and the family process and community factors. The effects associated with the demographic factors are smaller than those reported in Table 2-2, indicating that the effects of family background are somewhat mediated by the family process and community factors. For example, the effects of family income on Receptive Vocabulary are reduced from 0.5 to 0.4, while the effects of mother’s education are reduced from 1.1 to 1.0. Similarly, the effects associated with the family processes and community

factors are smaller than those reported in Table 2-3, and many of the observed effects are no longer statistically significant. For example, the effect on Receptive Vocabulary associated with Family Functioning is reduced from 0.6 to 0.3, which is not statistically significant, and the effect associated with social support is reduced from 1.2 to 0.8. Nevertheless, with the exception of the relationship of Positive parenting on Physical Health and Well-Being, and two other insignificant anomalies, the effects are positive and in the expected direction.

We can draw a number of conclusions from these results:

- (1) Although family demographic characteristics such as family income and parental education and employment play an important role, there are strong effects associated with approaches to parenting, engagement, use of resources, neighbourhood social capital and social support that are *independent* of family background demographic characteristics. For example, the effect on children's Receptive Vocabulary associated with a one-point increase in Social Support (0.8) are almost as strong as those associated with a one-year increase in mother's level of education (1.0), and outweigh the effects of a \$10,000 increase in family income (0.4).
- (2) The effects associated with family processes and community factors vary, depending on the early childhood outcome considered. For example, these analyses suggest that family processes may play a bigger role in children's physical health and well-being, while community factors may be more important with respect to cognitive development, and both sets of factors are important for children's behaviour.
- (3) There is no single family process or community factor that is the "magic bullet"; that is, one that outweighs all other factors in its effect. Children with superior early childhood outcomes tend to live in families that are functioning well with parents who exercise positive approaches to parenting, are engaged in learning activities, make use of available resources, and are in good mental health. These families tend to be situated in communities where neighbours support each other, and there is generally a high level of social support. Taken together, the results suggest that if a community raised its scores by one-point on all ten of the family process and community factors, with all other factors held constant, it would score 2.1 points higher in Receptive Vocabulary, 7.4 points higher in Positive Behaviour, and 1.6 points higher in Physical Health and Well-being.

The next four chapters in this report examine the changes for each community between 2000 and 2004 for the family demographic characteristics, the family processes, and the community factors examined in this chapter. They also report changes in early childhood outcomes derived from the various measures used in this study.

III. Early Childhood Development in Prince Albert, Saskatchewan

This chapter describes the results for Prince Albert, Saskatchewan for five sets of measures. The first two sets describe the demographic characteristics, family processes, and community factors, based on data collected in 2000 and 2004 using the measures described in Chapter II. These findings are followed with a presentation of results pertaining to early childhood outcomes, based on the direct assessments and the indirect assessments by parents and teachers. For each analysis, the results for 2000 and 2004 are compared, and changes that are statistically significant are indicated with an arrow pointing upward for positive changes, and a downward-pointing arrow for negative changes. For the three sets of outcome measures, the results are also compared to national norms. Results that differ significantly from national norms are indicated with bold text.

A. Demographic characteristics

Table 3-1
Demographic Characteristics of the Prince Albert Community

	Prince Albert UEY 2000		Prince Albert UEY 2004
Family Income (x \$1,000) (Ns = 433, 479)	48.4	↑	52.8
Mother's Education (years) (Ns = 420, 465)	12.1	↑	12.6
Father's Education (years) (Ns = 305, 317)	12.1	↑	12.4
Mother Not Working Outside the Home (%) (Ns = 427, 461)	41.7		39.3
Father Not Working Outside the Home (%) (Ns = 308, 308)	12.7		13.0
Single Parent Family (%) (Ns = 433, 479)	27.9		31.3
Number of Siblings (Ns = 433, 479)	1.6		1.6
Aboriginal Status (%) (Ns = 430, 459)	34.0		38.8

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

Table 3-1 displays the demographic characteristics for Prince Albert for 2000 and 2004. Average family income increased substantially during that period, with the average income of the 2004 sample at \$52,800, compared with \$48,400 for the 2000 sample. Levels of parental education also rose significantly, increasing from 12.1 to 12.6 years for mother's education, and from 12.1 to 12.4 years for father's education. Prince Albert also has relatively high proportions of parents who are not working outside the home, and a high prevalence of single-parent families. Over one-third of the children in both the 2000 and 2004 samples were Aboriginal.

B. Family and community factors

Table 3-2
Family and Community Characteristics for the Prince Albert Community

	Prince Albert		Prince Albert	
	UEY 2000		UEY 2004	
	Score on 10-Point Scale		Score on 10-Point Scale	
Responsive Parenting (Ns = 412, 451)	7.3	↑	7.5	
Demanding Parenting (Ns = 412, 451)	7.3		7.2	
Family Functioning (Ns = 425, 452)	7.7	↓	7.5	
Mother's Mental Health (Ns = 415, 447)	8.8		8.7	
Parental Engagement (Ns = 430, 479)	7.5	↑	7.9	
Use of Resources (Ns = 410, 478)	4.1	↑	4.6	
Social Support (Ns = 424, 456)	8.0		7.9	
Neighbourhood Social Capital (Ns = 416, 439)	7.0		6.8	
Safe neighbourhood (Ns = 424, 455)	7.1	↓	6.7	
Quality neighbourhood (Ns = 424, 461)	6.4	↓	6.1	

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The 2004 results for Prince Albert showed significant improvements in three areas. The scores on Responsive Parenting increased from 7.3 to 7.5. Also, parents were more engaged with their children, with scores rising from 7.5 to 7.9, and made better use of resources, with scores rising from 4.1 to 4.6. However, scores in three areas declined: family functioning decreased from 7.7 to 7.5, while scores for neighbourhood safety decreased from 7.1 to 6.7, and the quality neighbourhood score fell from 6.4 to 6.1.

C. Direct assessments of children's outcomes

Table 3-3
Mean Scores on the PPVT and Who Am I for the Prince Albert Community

	Prince Albert		Prince Albert	
	UEY 2000		UEY 2004	
	Mean	SD	Mean	SD
PPVT (Receptive Vocabulary) (Ns = 421, 443)	97.5	15.4	95.8	15.6
Who Am I Developmental Assessment (Ns = 415, 428)	95.8	15.2	95.7	12.2

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100. Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The average scores on the test of Receptive Vocabulary fell from 97.5 in 2000 to 95.8 in 2004. This difference was not statistically significant. The average scores on the Who Am I Developmental Assessment was 95.8 in 2000 and 95.7 in 2004, a change that was also not statistically significant. The average scores for both measures in 2000 and 2004 were significantly below the national norms of 100.

D. Parents' assessments of children's behavioural outcomes

Table 3-4
Mean Scores on Positive Behaviour for the Prince Albert Community

	Prince Albert UEY 2000			Prince Albert UEY 2004	
	Mean	SD		Mean	SD
Positive Behaviour (Ns = 432, 476)	100.4	14.0	↓	98.1	13.7

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100. Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The average score on parents' assessment of Positive Behaviour, shown in Table 3-4, fell from 100.4 in 2000 to 98.1 in 2004, a decline that was statistically significant. The prevalence of children classified as having a significant behaviour problem were inconsistent with the decline in Positive Behaviour. These results shown in Table 3-5, indicate a pronounced decline in the prevalence of children with hyperactivity/inattention, from 12.8% in 2000 to 5.2% in 2004. A prevalence of 5.2% is significantly below the national norm, set at 10% for these measures. The proportion of children considered to have anxiety or emotional problems also declined from 2000 to 2004. The proportion of children with aggression or conduct disorders was well above national norms in 2000, and remained at that level in 2004. There is some evidence of a decline in the prevalence of children with indirect aggression, from 15.8% to 12.9%, although the change was not statistically significant.

Table 3-5
Prevalence of Children with Behaviour Problems in the Prince Albert Community

	Prince Albert UEY 2000		Prince Albert UEY 2004
	Percent		Percent
Hyperactivity/Inattention (Ns = 429, 459)	12.8	↓	5.2
Anxiety/Emotional Problems (Ns = 424, 466)	17.5	↓	12.2
Aggression/Conduct Disorder (Ns = 431, 470)	18.1		18.1
Indirect Aggression (Ns = 424, 448)	15.8		12.9

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 10 percent. Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

E. Teachers' assessments of children's early development

The findings from the teachers' assessments generally provide a more positive profile. The results improved in all five domains from 2000 to 2004, with statistically significant gains in Physical Health and Well-being, Social Knowledge and Competence, Emotional Health and Maturity, Language and Cognitive Development. In 2004, the children in Prince Albert scored above national norms in all domains except Language and Cognitive Development. In this domain, its scores were at the national average.

Table 3-6
Mean Scores on the Early Development Instrument for the Prince Albert Community and the Comparison Sample

	Canada (N = 28,250)		Prince Albert UEY 2000 (N = 339)			Prince Albert UEY 2004 (N = 414)	
	Mean	SD	Mean	SD		Mean	SD
Physical Health and Well-being	8.6	1.1	8.5	1.3	↑	8.8	1.1
Social Knowledge and Competence	7.5	1.5	8.1	1.9	↑	8.5	1.6
Emotional Health and Maturity	7.9	1.5	7.7	1.6	↑	8.2	1.5
Language and Cognitive Development	8.1	1.9	7.5	2.3	↑	8.1	2.0
Communication Skills and General Knowledge	7.2	2.1	7.8	2.0		8.0	2.1

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean.
Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

F. Summary of Findings for Prince Albert

The results for Prince Albert are mixed. On one hand, the parents of five-year old children in 2004, compared with those in 2000, had higher levels of education and income, were more responsive in their parenting skills, were more engaged in learning activities with their children and made better use of resources. Also, parents' reports of their children's behaviour indicated a lower prevalence of hyperactivity/inattention and anxiety/emotional problems. These results were reflected in higher teacher ratings for all domains of the Early Development Instrument. On the other hand, though, parents were less positive about the quality and safety of their neighbourhoods, and their assessments of their children exhibiting positive behaviours were lower. Moreover, the assessments on the two direct assessments were more than four points below national norms.

The inconsistency between the very high scores on the teachers' assessments using the Early Development Instrument and the relatively low scores on the test of Receptive Vocabulary and Who Am I developmental assessment is discussed in the concluding chapter.

IV. Early Childhood Development in Winnipeg (District 1), Manitoba

This chapter describes the results for Winnipeg (District 1), Manitoba for five sets of measures. As in the previous chapter, the first two sets of results describe the demographic characteristics, family processes, and community factors, based on data collected in 2000 and 2004, and using the measures described in Chapter II. These findings are followed with a presentation of results pertaining to early childhood outcomes, based on the direct assessments and the indirect assessments by parents and teachers. For each analysis, the results for 2000 and 2004 are compared, and changes that are statistically significant are indicated with an arrow pointing upward for positive changes, and a downward-pointing arrow for negative changes. For the three sets of outcome measures, the results are also compared to national norms. Results that differ significantly from national norms are indicated with bold text.

A. Demographic characteristics

Table 4-1
Demographic Characteristics of the Winnipeg (District 1) Community

	Winnipeg UEY 2000		Winnipeg UEY 2004
Family Income (x \$1,000) (Ns = 595, 525)	38.5	↑	46.2
Mother's Education (years) (Ns = 557, 491)	11.4	↑	12.7
Father's Education (years) (Ns = 367, 322)	11.8	↑	13.1
Mother Not Working Outside the Home (%) (Ns = 581, 482)	40.6		40.7
Father Not Working Outside the Home (%) (Ns = 389, 317)	15.2		14.5
Single Parent Family (%) (Ns = 595, 525)	34.5		36.4
Number of Siblings (Ns = 595, 525)	1.3		1.4
Aboriginal Status (%) (Ns = 508, 584)	28.4		26.0

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

Table 4-1 displays the demographic characteristics for Winnipeg (District I) for 2000 and 2004. Average family income increased substantially during that period, with the average income of the 2004 sample at \$46,200, compared with \$38,500 for the 2000 sample. Levels of parental education also rose significantly, increasing from 11.4 to 12.7 years for mother's education, and from 11.8 to 13.1 years for father's education. Winnipeg (District I) also has relatively high proportions of parents who are not working outside the home, and a high prevalence of single-parent families. Over one-quarter of the children in both the 2000 and 2004 samples were Aboriginal.

B. Family and community factors

Table 4-2
Family and Community Characteristics for the Winnipeg (District 1) Community

	Winnipeg UEY 2000		Winnipeg UEY 2004
	Score on 10-Point Scale		Score on 10-Point Scale
Responsive Parenting (Ns = 556, 487)	7.1	↑	7.4
Demanding Parenting (Ns = 555, 482)	7.4	↓	7.3
Family Functioning (Ns = 554, 480)	7.4	↓	7.2
Mother's Mental Health (Ns = 532, 461)	8.6		8.5
Parental Engagement (Ns = 591, 524)	7.7	↑	7.9
Use of Resources (Ns = 552, 520)	4.3		4.5
Social Support (Ns = 550, 467)	7.4	↑	7.5
Neighbourhood Social Capital (Ns = 536, 461)	6.2		6.3
Safe neighbourhood (Ns = 557, 484)	5.7	↑	5.9
Quality neighbourhood (Ns = 557, 492)	6.2	↓	6.0

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The 2004 results for Winnipeg (District I) showed a significant improvement in four areas. The scores on Responsive Parenting increased from 7.1 to 7.4. Also, parents were more engaged with their children, with scores rising from 7.7 to 7.9. Levels of Social Support increased from 7.4 to 7.5, and neighbourhoods were considered safer, with scores increasing from 5.7 to 5.9. However, scores in three areas declined: Demanding Parenting decreased from 7.4 to 7.3, Family Functioning decreased from 7.4 to 7.2, and Quality Neighbourhood decreased from 6.2 to 6.0. Although these changes were statistically significant, they are all quite small – increases or decreases of 0.1 to 0.2 points on the ten-point scales. This suggests that Winnipeg (District I) is quite stable with respect to the family processes and community factors examined in this study.

C. Direct assessments of children's outcomes

Table 4-3
Mean Scores on the PPVT and Who Am I for the Winnipeg (District 1) Community

	Winnipeg UEY 2000			Winnipeg UEY 2004	
	Mean	SD		Mean	SD
PPVT (Receptive Vocabulary) (Ns = 582, 460)	98.5	16.5	↓	95.0	15.5
Who Am I Developmental Assessment (Ns = 579, 454)	96.9	15.4		97.7	14.2

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100.
Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The average scores on the test of Receptive Vocabulary fell from 98.5 in 2000 to 95.0 in 2004. This difference is large, and statistically significant. The average scores on the Who Am I Developmental Assessment were 96.9 in 2000 and 97.7 in 2004, a change that was not statistically significant. The average scores for both measures in 2000 and 2004 were significantly below the national norms of 100.

D. Parents' assessments of children's behavioural outcomes

The average score on parents' assessment of Positive Behaviour, shown in Table 4-4, fell from 98.9 in 2000 to 97.2 in 2004, a decline that was statistically significant. Changes in the prevalence of children classified as having a significant behaviour problem were varied. These results are shown in Table 4-5. They show a pronounced decline in the prevalence of children with hyperactivity/inattention, from 12.8% in 2000 to 5.1% in 2004. A prevalence of 5.1% is significantly below the national norm, set at 10% for these measures. The proportion of children with aggression or conduct disorders was very close to national norms in 2000, but increased to 14.6% in 2004, which is well above national norms. The prevalence of children considered having anxiety or emotional problems, and the proportion displaying indirect aggression, was above national norms in 2000, and did not change significantly from 2000 to 2004.

Table 4-4
Mean Scores on Positive Behaviour for the Winnipeg (District 1) Community

	Winnipeg UEY 2000			Winnipeg UEY 2004	
	Mean	SD		Mean	SD
Positive Behaviour (Ns = 589, 518)	98.9	16.8	↓	97.2	16.4

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100.
Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

Table 4-5
Prevalence of Children with Behaviour Problems in the
Winnipeg District 1 Community

	Winnipeg UEY 2000		Winnipeg UEY 2004
	Percent		Percent
Hyperactivity/Inattention (Ns = 571, 494)	12.8	↓	5.1
Anxiety/Emotional Problems (Ns = 573, 503)	12.6		14.7
Aggression/Conduct Disorder (Ns = 581, 507)	9.6	↑	14.6
Indirect Aggression (Ns = 557, 469)	13.1		13.4

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 10 percent.
 Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

E. Teachers' assessments of children's early development

The results derived from teachers' assessments using the Early Development Instrument did not change significantly from 2000 to 2004. Children in the district were rated above national norms in Social Knowledge and Competence and Communication Skills and General Knowledge. Their scores for Language and Cognitive Development were slightly below national norms.

Table 4-6
Mean Scores on the Early Development Instrument for the
Winnipeg (District 1) Community and the Comparison Sample

	Canada (N = 28,250)		Winnipeg UEY 2000 (N = 511)		Winnipeg UEY 2004 (N = 449)	
	Mean	SD	Mean	SD	Mean	SD
Physical Health and Well-being	8.6	1.1	8.6	1.2	8.6	1.3
Social Knowledge and Competence	7.5	1.5	8.3	1.8	8.2	1.9
Emotional Health and Maturity	7.9	1.5	7.9	1.5	7.9	1.5
Language and Cognitive Development	8.1	1.9	7.7	2.2	7.8	2.2
Communication Skills and General Knowledge	7.2	2.1	7.5	2.1	7.6	2.1

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean.
 Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

F. Summary of Findings for Winnipeg (District I)

The results for Winnipeg (District I) suggest that early childhood development outcomes are quite stable. Teachers' assessments on the Early Childhood Development did not change substantially from 2000 to 2004. Teachers' ratings for Social Knowledge and Competence and Communication Skills and General Knowledge were above national norms in 2004, while scores for Language and Cognitive Development were below norms. The area of greatest concern is the decline in Receptive Vocabulary scores from 98.5 to 95.0. This is markedly below the national average of 100, and suggests that many children in this community will struggle in learning to read as they proceed through school. The community also has a relatively high prevalence of children with anxiety and emotional problems, physical aggression and conduct disorders, and indirect aggression. The analysis of family processes and community factors showed improvement in some areas, but small declines in others. Taken together, these findings suggest that there is a great need for effective early interventions, focusing particularly on children's language development.

V. Early Childhood Development in Prince Edward Island

This chapter describes the results for Prince Edward Island for five sets of measures. As in the previous two chapters, the first two sets of results describe the demographic characteristics, family processes, and community factors, based on data collected in 2000 and 2004, and using the measures described in Chapter II. These findings are followed with a presentation of results pertaining to early childhood outcomes, based on the direct assessments and the indirect assessments by parents and teachers. For each analysis, the results for 2000 and 2004 are compared, and changes that are statistically significant are indicated with an arrow pointing upward for positive changes, and a downward-pointing arrow for negative changes. For the three sets of outcome measures, the results are also compared to national norms. Results that differ significantly from national norms are indicated with bold text.

A. Demographic characteristics

Table 5-1
Demographic Characteristics for Prince Edward Island

	Prince Edward Island UEY 2000		Prince Edward Island UEY 2004
Family Income (x \$1,000) (Ns = 508, 519)	50.4	↑	58.4
Mother's Education (years) (Ns = 500, 503)	12.7	↑	13.4
Father's Education (years) (Ns = 407, 427)	12.2	↑	12.8
Mother Not Working Outside the Home (%) (Ns = 500, 499)	30.6		29.3
Father Not Working Outside the Home (%) (Ns = 403, 418)	16.1		12.2
Single Parent Family (%) (Ns = 508, 519)	20.4		18.1
Number of Siblings (Ns = 508, 519)	1.4		1.3
Aboriginal Status (%) (Ns = 504, 503)	1.2		1.4

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

Table 5-1 displays the demographic characteristics for Prince Edward Island for 2000 and 2004. Average family income increased substantially during that period, with the average income of the 2004 sample at \$58,400, compared with \$50,400 for the 2000 sample. Levels of parental education also rose significantly, increasing from 12.7 to 13.4 years for mother's education, and from 12.2 to 12.8 years for father's education. The percentage of mothers who were not working outside the home remained steady at about 30%, while the percentage of fathers not working outside the home declined from 16.1% to 12.2%, although this change was not statistically significant. About one in five children in Prince Edward Island were living in single parent families. Only about 1% of the children in the sample were Aboriginal.

B. Family and community factors

The 2004 results for Prince Edward Island showed significant improvement in five areas. The scores on Responsive Parenting increased from 7.2 to 7.5. Also, parents were more engaged with their children, with scores rising from 7.6 to 8.3, while their use of resources also increased, from 3.9 to 5.5. Levels of Social Support increased from 7.9 to 8.1. The results for neighbourhood quality and safety were mixed, with safety increasing from 7.2 to 7.4, while the ratings of overall quality declined from 6.8 to 6.5.

Table 5-2
Family and Community Characteristics for Prince Edward Island

	Prince Edward Island UEY 2000		Prince Edward Island UEY 2004
	Score on 10-Point Scale		Score on 10-Point Scale
Responsive Parenting (Ns = 505, 512)	7.2	↑	7.5
Demanding Parenting (Ns = 505, 512)	7.5		7.5
Family Functioning (Ns = 505, 505)	7.4		7.5
Mother's Mental Health (Ns = 503, 493)	9.0		9.1
Parental Engagement (Ns = 507, 519)	7.6	↑	8.3
Use of Resources (Ns = 491, 518)	3.9	↑	5.5
Social Support (Ns = 507, 499)	7.9	↑	8.1
Neighbourhood Social Capital (Ns = 506, 502)	7.3		7.3
Safe neighbourhood (Ns = 507, 511)	7.2	↑	7.4
Quality neighbourhood (Ns = 507, 511)	6.8	↓	6.5

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

C. Direct assessments of children's outcomes

Table 5-3
Mean Scores on the PPVT and Who Am I for Prince Edward Island

	Prince Edward Island UEY 2000			Prince Edward Island UEY 2004	
	Mean	SD		Mean	SD
PPVT (Receptive Vocabulary) (Ns = 493, 484)	105.5	15.7	↓	101.1	14.5
Who Am I Developmental Assessment (Ns = 460, 474)	101.4	13.3		101.6	13.6

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100.
 Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The average scores on the test of Receptive Vocabulary fell from 105.5 in 2000 to 101.1 in 2004. Although a decline of 4 points is large and statistically significant, it may be attributable to sampling error (i.e., random fluctuations associated with the particular sample that happens to be selected), given that the results are based on a sample size of only about 500 students. The same change is not evident in the scores for the Who Am I developmental assessment, which remained steady at about one-and-a-half points above the national average.

D. Parents' assessments of children's behavioural outcomes

The average score on parents' assessment of Positive Behaviour, shown in Table 5-4, fell from 100.1 in 2000 to 97.9 in 2004, a decline that was statistically significant. Consistent with this finding, there was a significant increase, from 6.0% to 10.1%, in the prevalence of children considered to have an emotional problem or anxiety. The prevalence of children with aggression or conduct disorders was also comparable to the national average, while the prevalence of children with hyperactivity or indirect aggression remained below national norms at about 5 to 6%.

Table 5-4
Mean Scores on Positive Behaviour for Prince Edward Island

	Prince Edward Island UEY 2000			Prince Edward Island UEY 2004	
	Mean	SD		Mean	SD
Positive Behaviour (Ns = 506, 519)	100.1	14.2	↓	97.9	14.5

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100.
 Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

Table 5-5
Prevalence of Children with Behaviour Problems in Prince Edward Island

	Prince Edward Island UEY 2000		Prince Edward Island UEY 2004
	Percent		Percent
Hyperactivity/Inattention (Ns = 504, 516)	6.3		4.8
Anxiety/Emotional Problems (Ns = 502, 516)	6.0	↑	10.1
Aggression/Conduct Disorder (Ns = 505, 517)	8.7		11.0
Indirect Aggression (Ns = 496, 502)	5.0		6.0

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 10 percent.
Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

E. Teachers' assessments of children's early development

Table 5-6
Mean Scores on the Early Development Instrument for Prince Edward Island and the Comparison Sample

	Canada (N = 28,250)		Prince Edward Island UEY 2000 (N = 459)			Prince Edward Island UEY 2004 (N = 454)	
	Mean	SD	Mean	SD		Mean	SD
Physical Health and Well-being	8.6	1.1	9.0	0.9	↓	8.9	1.0
Social Knowledge and Competence	7.5	1.5	8.5	1.5		8.6	1.5
Emotional Health and Maturity	7.9	1.5	8.1	1.3		8.1	1.3
Language and Cognitive Development	8.1	1.9	8.3	1.6	↑	9.0	1.3
Communication Skills and General Knowledge	7.2	2.1	8.4	1.5		8.2	1.7

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean.
Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The results derived from teachers' assessments using the Early Development Instrument did not change substantially from 2000 to 2004, with the exception of Language and Cognitive Development. On this measure, children had higher average scores, rising from 8.3 in 2000 to 9.0 in 2004. This is inconsistent with the results based on the test of Receptive Vocabulary, which fell by 4 points. This discrepancy is discussed in the final chapter of this report. On all five measures of the Early Development Instrument, teachers' ratings were significantly above national norms.

F. Summary of Findings for Prince Edward Island

The findings suggest that early childhood development outcomes in Prince Edward Island are relatively stable and generally above national norms. The community has made significant strides in parenting processes related to children's development, particularly in the areas of responsive parenting, engagement with children, and the use of community resources. Prince Edward Island also tends to have a relatively low prevalence of children with significant behaviour problems. Given this profile, Prince Edward Island is in a position to focus its efforts on universal interventions aimed at improving all children's outcomes, as well as performance-targeted interventions aimed at ensuring children who arrive at school with significant challenges have the support they need to acquire reading skills during the first few years of schooling.

VI. Early Childhood Development in Southwestern Newfoundland

This chapter describes the results for Southwestern Newfoundland for five sets of measures. As in the previous three chapters, the first two sets of results describe the demographic characteristics, family processes, and community factors, based on data collected in 2000 and 2004, and using the measures described in Chapter II. These findings are followed with a presentation of results pertaining to early childhood outcomes, based on the direct assessments and the indirect assessments by parents and teachers. For each analysis, the results for 2000 and 2004 are compared, and changes that are statistically significant are indicated with an arrow pointing upward for positive changes, and a downward-pointing arrow for negative changes. For the three sets of outcome measures, the results are also compared to national norms. Results that differ significantly from national norms are indicated with bold text.

A. Demographic characteristics

Table 6-1
Demographic Characteristics for the Southwest Newfoundland community

	SW Newfoundland UEY 2000		SW Newfoundland UEY 2004
Family Income (x \$1,000) (Ns = 289, 227)	34.9	↑	44.8
Mother's Education (years) (Ns = 282, 224)	11.5	↑	12.4
Father's Education (years) (Ns = 208, 153)	11.0	↑	12.1
Mother Not Working Outside the Home (%) (Ns = 280, 223)	60.4		55.6
Father Not Working Outside the Home (%) (Ns = 212, 149)	39.6		35.6
Single Parent Family (%) (Ns = 289, 227)	27.7		31.3
Number of Siblings (Ns = 289, 227)	0.9	↑	1.0
Aboriginal Status (%) (Ns = 287, 205)	2.4	↑	14.6

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

Table 6-1 displays the demographic characteristics for Southwestern Newfoundland for 2000 and 2004. Average family income increased substantially during that period, with the average income of the 2004 sample at \$44,800, compared with \$34,900 for the 2000 sample. Levels of parental education also rose significantly, increasing from 11.5 to 12.4 years for mother's education, and from 11.0 to 12.1 years for father's education. The percentage of mothers who were not working outside the home decreased from 60.4% to 55.6%, while the percentage of fathers not working outside the home declined from 39.6% to 35.6%, although these changes were not statistically significant. The percentage of children living in single parent families increased from 27.7% to 31.3%. The 2004 sample included a considerably higher percentage of Aboriginal children – 14.6% compared with 2.4% in 2000.

B. Family and community factors

The 2004 results for Southwest Newfoundland showed significant improvement in five areas. Parents were more engaged with their children, with scores rising from 8.9 to 9.2, while their use of resources also increased, from 2.7 to 4.1. Levels of Social Support increased from 7.3 to 7.8. The score for neighbourhood social capital and neighbourhood safety also increased, from 6.8 to 7.1, and from 7.0 to 7.4 respectively. Scores declined in only one area, demanding parenting, which declined from 7.5 to 7.3.

Table 6-2
Family and Community Characteristics for the Southwest Newfoundland community

	SW Newfoundland UEY 2000		SW Newfoundland UEY 2004	
	Score on 10-Point Scale		Score on 10-Point Scale	
Responsive Parenting (Ns = 279, 223)	7.8		7.7	
Demanding Parenting (Ns = 279, 223)	7.7	↓	7.5	
Family Functioning (Ns = 288, 224)	7.2		7.3	
Mother's Mental Health (Ns = 287, 222)	8.9		8.8	
Parental Engagement (Ns = 287, 227)	8.9	↑	9.2	
Use of Resources (Ns = 278, 227)	2.7	↑	4.1	
Social Support (Ns = 288, 222)	7.3	↑	7.8	
Neighbourhood Social Capital (Ns = 288, 225)	6.8	↑	7.1	
Safe neighbourhood (Ns = 288, 225)	7.0	↑	7.4	
Quality neighbourhood (Ns = 288, 225)	6.4		6.4	

Note: Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

C. Direct assessments of children's outcomes

Table 6-3
Mean Scores on the PPVT and Who Am I for the SW Newfoundland Community

	SW Newfoundland UEY 2000		SW Newfoundland UEY 2004	
	Mean	SD	Mean	SD
PPVT (Receptive Vocabulary) (Ns = 284, 209)	103.0	16.3	100.8	14.6
Who Am I Developmental Assessment (Ns = 243, 180)	104.4	15.1	105.0	14.5

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100. Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The average scores in Receptive Vocabulary and the Who Am I developmental assessment did not change significantly between 2000 and 2004. The scores on Receptive Vocabulary are consistent with national norms, while scores on the Who Am I Developmental Assessment are 5 points above the national norm.

D. Parents' assessments of children's behavioural outcomes

The average score on Positive Behaviour also did not change significantly from 2000 to 2004. The average was 101.1 in 2004, which is consistent with national norms.

Table 6-4
Mean Scores on Positive Behaviour for the SW Newfoundland Community

	SW Newfoundland UEY 2000		SW Newfoundland UEY 2004	
	Mean	SD	Mean	SD
Positive Behaviour (Ns = 287, 227)	102.3	13.5	101.1	13.9

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 100. Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

The prevalence of children classified as hyperactive is below national norms, as is the prevalence of children displaying significant indirect aggression. The prevalence of children with anxiety/emotional problems increased from 3.8% in 2000 to 7.9% in 2004. Similar results are evident for aggression and conduct disorders.

Table 6-5
Prevalence of Children with Behaviour Problems in SW Newfoundland

	SW Newfoundland UEY 2000		SW Newfoundland UEY 2004
	Percent		Percent
Hyperactivity/Inattention (Ns = 286, 224)	7.7		5.8
Anxiety/Emotional Problems (Ns = 287, 227)	3.8	↑	7.9
Aggression/Conduct Disorder (Ns = 286, 224)	4.9	↑	9.4
Indirect Aggression (Ns = 287, 220)	6.3		7.7

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean of 10 percent. Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

E. Teachers' assessments of children's early development

Scores on the Early Development Instrument increased significantly in three of the five domains: Physical Health and Well-being, Emotional Health and Maturity, and Language and Cognitive Development. The children in this community were rated above national norms in all categories except social knowledge and competence.

Table 6-6
Mean Scores on the Early Development Instrument for the
SW Newfoundland Community and the Comparison Sample

	Canada (N = 28,250)		SW Newfoundland UEY 2000 (N = 258)			SW Newfoundland UEY 2004 (N = 186)	
	Mean	SD	Mean	SD		Mean	SD
Physical Health and Well-being	8.6	1.1	8.9	1.2	↑	9.2	0.9
Social Knowledge and Competence	7.5	1.5	8.2	1.9		8.3	1.8
Emotional Health and Maturity	7.9	1.5	7.6	1.5	↑	7.9	1.5
Language and Cognitive Development	8.1	1.9	8.4	2.0	↑	8.8	1.8
Communication Skills and General Knowledge	7.2	2.1	8.2	1.9		8.2	1.9

Note: Figures in bold text differ significantly ($p < .10$) from the Canadian mean.
 Arrows indicate a statistically significant increase or decrease from 2000 to 2004.

F. Summary of Findings for Southwest Newfoundland

The findings suggest that early childhood development outcomes in Southwestern Newfoundland are average to above average compared with national norms. The prevalence of children with Anxiety and Emotional Problems, and Aggression and Conduct Disorders increased from 2000 to 2004. However, these findings are inconsistent with teachers' ratings of children's Emotional Health and Maturity, which improved over that period. The community also showed significant improvements in family processes and community factors. The average levels of income and parents' education also increased during the study period, and generally, given the relatively low levels of income and education compared with national norms, the children in this community are doing exceptionally well.

VII. Looking Forward

The four communities examined in this report were among the first communities to implement the Understanding the Early Years research and community development pilot project. Generally, the results suggest that early childhood outcomes were relatively stable over the period. This is to be suspected for several reasons. One is that the results are based on relatively small samples for assessing change. Also, the sample of children assessed in 2000 may differ from the 2004 sample in many respects due to several factors that affect the demographic characteristics of the sample. While some of these factors, such as family income, can be taken into account, it is impossible to control for all of the many factors that affect children's outcomes. Another problem is that UEY was designed to include a broad range of measures, such that communities could get a general profile of their community. A more accurate measurement of early childhood outcomes and parent and community factors would require more direct assessments of children's outcomes, and longer tests and interview protocols, which may not be feasible in a study such as UEY.

During the four-year period covered by this study, average levels of family income rose quite substantially in every community, on average by nearly \$8,000 per year. Levels of parental education also rose considerably, on average by nearly one full year for both mothers and fathers. The findings of the regression analyses reported in the second chapter, which consider the relationships of these factors to early childhood outcomes within communities, indicate that changes of this magnitude are associated with increases of about 2 points in Receptive Language, and about one-half of one point in Positive Behaviour.

The findings also indicate that the scores on the measures of family processes and community factors were stable in two communities, and increased significantly in two others: in Prince Albert the total score for the ten 10-point scales was 71.0 in 2000 and 70.5 in 2004; in Winnipeg the total scores were 67.5 and 67.9 for 2000 and 2004 respectively; the total scores increased in Prince Edward Island from 72.0 to 74.6, and in Southwest Newfoundland from 70.7 to 73.4. Overall, these increases are small, on average the increase was from 70.1 to 71.3, or about one-tenth of one point on each of the ten point scales. The findings of the regression analyses reported in the second chapter suggest that increases in family and community factors of this magnitude are associated with an increase of only about one quarter of one point in Receptive Language, and about 0.7 points in Positive Behaviour.

Despite these rather significant increases in family income and parental education, and the modest increases in family processes and community factors, the Receptive Vocabulary scores declined, on average, by about 3 points, while the average scores on the parents' assessments of Positive Behaviour fell by 2 points. Teachers' ratings were generally more positive, increasing on average by 0.4 points across the five scales.

The popular wisdom regarding school effects is that it takes five to ten years before changes in school policies and teacher practices have their intended effect on student outcomes. The same argument probably applies to communities; UEY has had strong effects on increasing people's awareness of the importance of the early years, and many communities developed specific initiatives to improve outcomes. Some of these changes would not have begun to have their effect until the latter part of the four-year period covered by this study. Thus, it is unrealistic to expect the effect to be realized in such a short period.

Overall, the *Understanding the Early Years* initiative has been remarkably successful in promoting the importance of early childhood development in the communities that pioneered this initiative. The findings of this follow-up study indicate that family income, parental education, and employment are important determinants of early childhood outcomes. However, there are other important determinants of positive outcomes that can be more easily changed through the efforts of families and other community members. These include approaches to parenting, engagement in learning activities, the family's use of available resources, neighbourhood social capital, and social support. The work of these pioneer UEY communities has provided a strong base for other communities striving to improve children's outcomes.