

Measuring Readiness to Learn in Niagara

The Importance of the Early Years

Research in early child development and neurobiology provides evidence that the first six years of life lay the foundation for much of the knowledge and skills required for successful school adjustment and later adult competence. In addition to this, studies have shown that readiness to learn at age six can predict a child's ability to benefit from academic instruction.

The Canadian Government acknowledged the importance of the early years when it launched *Understanding the Early Years* (UEY), a Human Resources Development Canada research project involving 13 communities across the country, including the city of Niagara Falls.

UEY involves 3 community study components. These are:

- **The Early Development Instrument (EDI);**
- **The Community Mapping Study (CMS); and**
- **The National Longitudinal Study of Children and Youth Community Study (NLSCY).**

Together, these components assess early development outcomes within communities, and any relationships that may exist between children's readiness to learn, the socio-economic status of their families, and the availability of community programs and services.



If Canada is to remain a world leader in economic growth and prosperity, it must continually invest in the skills of its labour force. According to a 1995 World Bank Report, ensuring that children enter school ready to learn is one of the best investments a nation can make. The evidence is so compelling that countries all over the world are now studying children's readiness to learn and how it can be optimized.

Each Community is Unique

While many Canadian communities share similar challenges, each of the communities examined by the UEY project has exhibited several unique features that set it apart from the other communities. This is one of the reasons why community-based research is so important. Such research allows a community to understand how well its youngest citizens are developing and allows investments in families, children and children's development to be monitored and evaluated over time. As communities document both their efforts and the results, effective practices will be identified and both resources and outcomes will be optimized. In short, the UEY project provides the data that communities need to find strategic solutions to ongoing social and labour market challenges.

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The Early Years Action Group-Niagara Region

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About the Early Development Instrument (EDI)

The EDI is a research tool that provides a snapshot of how ready the children in a given community are to take advantage of the many learning opportunities school presents. It is based on kindergarten teachers' observations of the children in their care. The EDI examines developmental outcomes, grouping them into five domains:

- Physical Health and Well-being,
- Emotional Maturity
- Social Competence
- Language and Cognitive Development and;
- Communications Skills and General Knowledge.

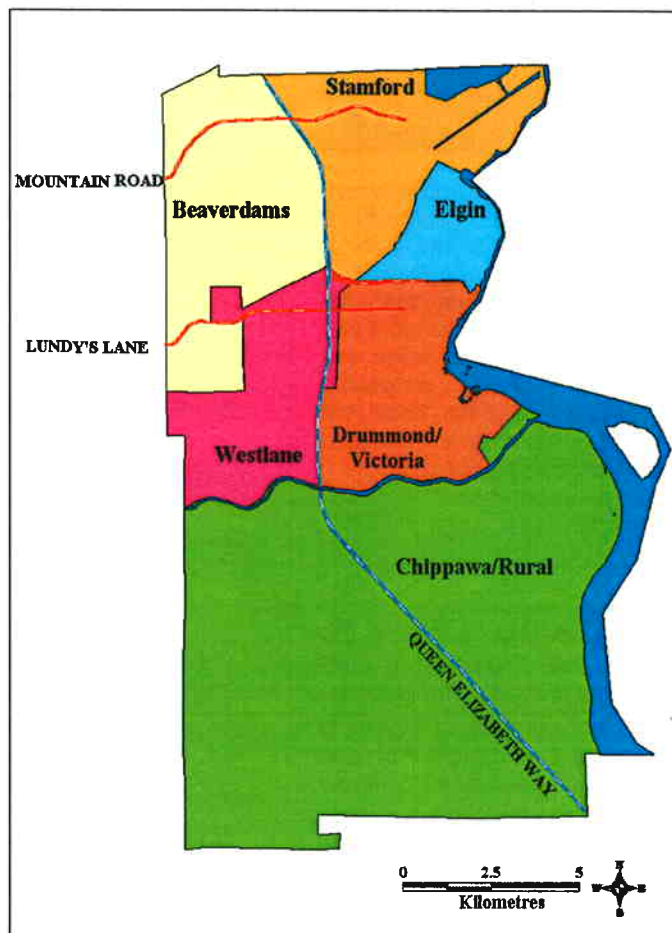
Children's scores are considered only as they relate to the scores of others in their peer group. Children with scores at or below the 10th percentile in one or more of the developmental domains are considered to be vulnerable in terms of readiness to learn skills. Thus, the percentage of children in a population who score at or below the 10th percentile in one or more domains can be interpreted as an indication of how many children are "not ready to learn at school" and have "increased needs" in comparison with the rest of the population.

Highlights of the 2001 Niagara Falls EDI

In order to examine EDI scores in relation to the neighbourhoods in which children lived, the city was divided, and results tabulated, according to six neighbourhood study areas.

Just over 28% of children in Niagara Falls scored at/below the 10th percentile in one or more developmental domain indicating that they were vulnerable in terms of readiness to learn skills.

Niagara Falls Neighbourhood Study Areas

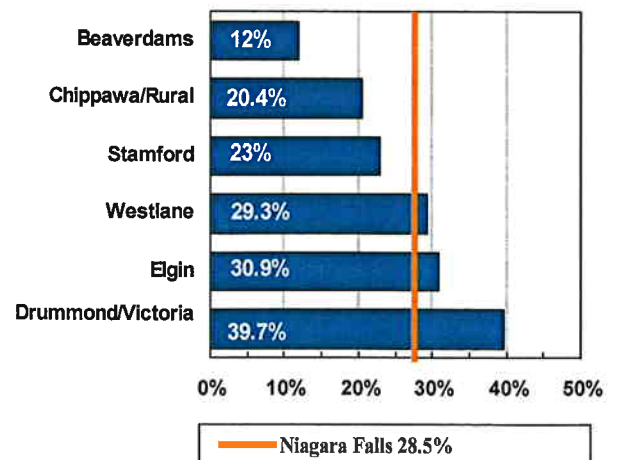


The proportion of children vulnerable in terms of readiness to learn skills varied across neighbourhoods from 12% in Beaverdams to 39.7% in Drummond/Victoria.

One half of Niagara Falls neighbourhood study areas had increased needs when compared to the city as a whole—these neighbourhood study areas were located in Westlane, Drummond/Victoria and Elgin.

The remaining neighbourhood study areas—Stamford, Chippawa/Rural and Beaverdams, had decreased needs when compared to the city as a whole.

Proportion of Children Vulnerable on One or More Readiness to Learn Domains, Niagara Falls, 2001



On average, children in Niagara Falls scored as well as, or slightly better, than their peers who took part in the EDI across Canada. However, children in Niagara Falls scored low in the area of Emotional Maturity.

EDI Domain	Average score 2002	
	Children across Canada	Niagara Falls
Physical Health & Well-being	8.77	8.78
Social Competence	8.32	8.14
Emotional Maturity	8.04	*7.72
Language & Cognitive Development	8.28	8.29
Communication Skills & General Knowledge	7.70	7.78

*Statistically significant; P<0.05

About the Community Mapping Study (CMS)

Community mapping is a relatively new means of communicating data that is fast gaining popularity. It involves identifying the geographic boundaries of a community, along with the neighbourhood borders within it. Next, information about the relevant features and assets of the community are collected—e.g., physical and socio-economic characteristics, and the availability of programs

and services for families and children. Finally, the resulting data is analyzed and presented in relation to health indicators, such as children's developmental outcomes on the EDI. These steps result in maps that local decision-makers can use to place community resources where they'll be most effective.

Highlights of the Niagara Falls CMS

The CMS examined each of the six neighbourhoods in Niagara Falls from three perspectives believed to play a significant role in children's developmental health:

- Socio-economic environment,
- Physical environment and;
- Community resources.

In order to present data concisely, neighbourhoods were further divided into geographic units used by Statistic Canada to collect census information. These units are called Enumeration Areas (EAs).

Putting it all together: The Social Index

Using data from the 1996 Census, the average for each factor was determined by EA and compared to the national average on the same factor. A point system was devised and an index was created by adding the points to arrive at an overall score for each EA out of a total possible score of nine.

Higher scores indicated a greater presence of characteristics or factors associated with risk and disadvantage, and thus potentially greater need for preventive or supportive services.

The Socio-Economic Environment

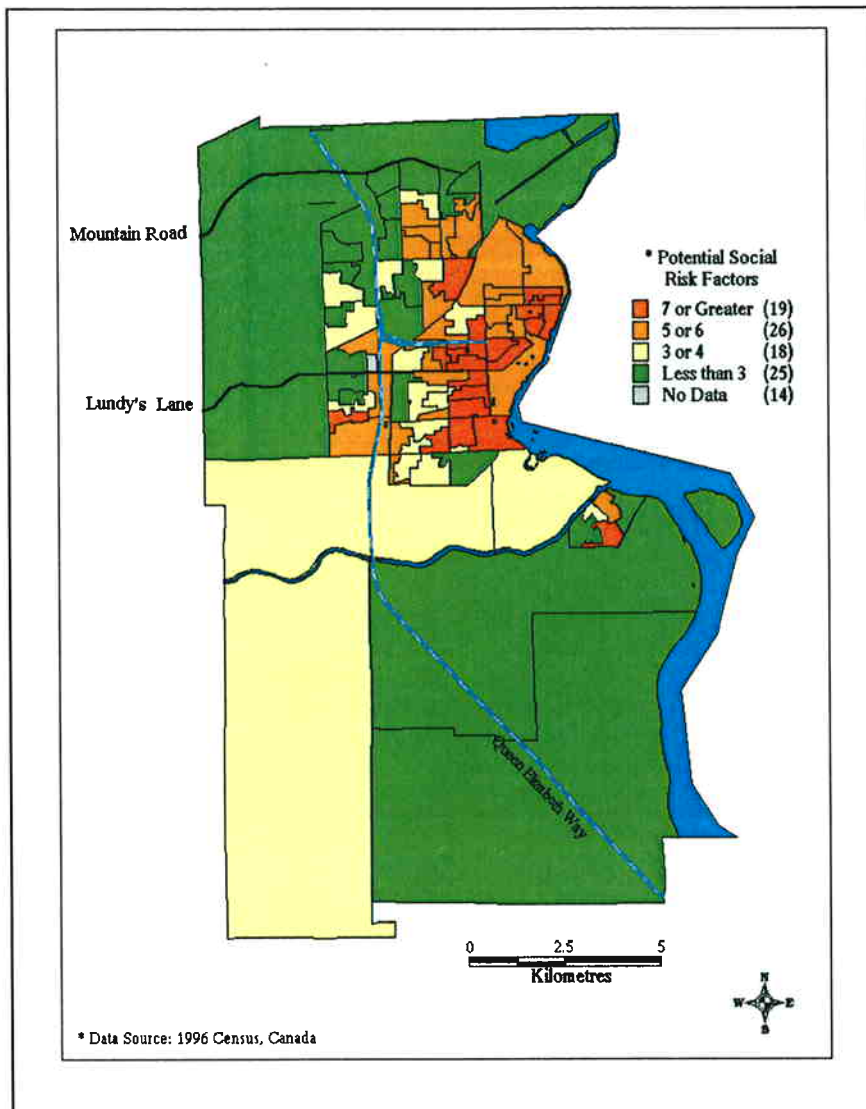
A composite measure, called the "Social Index", was developed to express the level of socio-economic risk present in each EA based on nine factors:

- Employment rate
- Education
- Language
- Average household income
- Reliance on government transfers
- Family status
- Mobility
- Home ownership
- Immigrant status

EA scores were categorized into four groups, ranging from low to high risk, according to the number of risk factors present as determined by the Social Index.

Low risk	0-2 factors
Somewhat low risk	3-4 factors
Somewhat high risk	5-6 factors
High risk	7-9 factors

2001 Social Index Results for Niagara Falls



Overall Risk Assessment

51% of EAs in Niagara Falls scored in the "somewhat high" or "high" risk category on the Social Index. While areas of potential socio-economic risk were distributed across the city, the majority of "somewhat high" and "high" risk EAs were located in Drummond/Victoria, Elgin and Stamford. These neighbourhoods were home to 67% of the city's population aged 0-6.

Family Status

28% of families in Niagara Falls were headed by a lone parent. This was higher than the national average of 22%. Approximately 60% of children aged 0-6 in Niagara Falls lived in EAs that exceeded the national average proportion of families with children headed by a lone parent.

Recent Immigrants

The percentage of recent immigrants residing in Niagara Falls was below the national average, as was the percentage of people whose first language is neither English nor French.

Residential Stability

Niagara Falls neighbourhoods were relatively stable; 14% of residents had made a residential move in the previous year. The national average was 15%.

Education

In 63% of EAs, the percentage of people aged 15 and over without a high school diploma exceeded the national average of 34.8%. A little over half of the city's children aged 0-6 lived in these EAs.

Employment

The unemployment rate in Niagara Falls was relatively low (7.6%) compared to the national average (10%).

Income

In 1996, the average household income in Niagara Falls was \$5,700 lower than the national average. 65% of Niagara Falls EAs had average household incomes below national average. These EAs were home to 61% of the city's children aged 0-6.

The Low Income Cut-Off (LICO)

This Statistics Canada measure, marks the threshold at which a family has to spend a greater portion of income on the basics (food, clothing and shelter) than the average family of similar size.

In Niagara Falls approximately 55% of children lived in EAs where the average household income was below the LICO.

The Physical Environment

Assessing the physical characteristics of neighbourhoods involved observing factors such as the condition of the buildings; the percentage of dwellings in need of major repairs; the volume of traffic on streets and roads; the presence of garbage, litter and broken glass; noise levels; the number of stop lights; and the width of the streets. These factors were assessed using a standardized tool called the "Neighbourhood Observation Index".

For the most part, Niagara Falls appeared to have favourable physical environments in which to raise children.

In 74% of EAs, the general condition of buildings was rated as "good" or "excellent".

In 84% of areas observed, the roads, while not new, were considered to be in "good/fair" condition, requiring only minor repair, while 14% were rated as excellent; either new or well maintained.

In over 72% of areas observed, researchers reported that they would feel safe walking both during the daytime and at night.

The presence of litter in the city was low and, for the most part, children's parks and playground equipment was reported to be in "good to excellent" condition. It should be noted, however, that 53% of the city's EAs did not have public parks/playgrounds to observe.



Community Resources

Community programs and services are often major contributors to healthy child development. They enrich the lives of many families, providing them with access to vital social support networks. UEY researchers conducted an inventory of the resources available in Niagara Falls and examined it from the perspective of families with children under the age of six.

Community resources in Niagara Falls were located within reasonable proximity to the households that were, potentially, in most in need of them, i.e. areas with higher potential socio-economic risk and a high proportion of children with families.

87% of programs/resources studied were located in Drummond/Victoria, Elgin and Stamford. These neighbourhoods had the highest socio-economic risk potential in the city and were home to 67% of the population aged 0-6.

33% of the city's children aged 0-6 lived in Beaverdams, Chippawa/Rural and Westlane. However these neighbourhoods housed only 12.5% of the programs/resources found in Niagara Falls.

About the NLSCY Community Study

HRDC has released the findings of the Niagara Falls component of its National Longitudinal Study of Children and Youth, providing detailed information about community resource use and its impact on child development. These findings complete the first cycle of UEY research in Niagara Falls. The report is one of

thirteen community papers describing children's outcomes across Canada and explaining them in terms of three factors: family background, family processes, and community factors. Children's outcomes were assessed in three major categories: physical health and well-being, cognitive skills, and behavioural measures.

Highlights of the NLSCY Community Study in Niagara Falls

Generally, the NLSCY findings show that the children of Niagara Falls are fortunate: they live in safe, stable neighbourhoods with a high level of social support. Parents are engaged with their children and make use of community resources.

These factors have undoubtedly contributed to Niagara Falls' success in the development of its young children, even though the majority of its neighbourhoods are of low to medium socio-economic status.

There is also room for improvement. Niagara Falls has a high prevalence of child hyperactivity (approximately one and a half times the national norm according to parental report on the NLSCY). This is of particular concern, as behaviour problems upon entry to school tend to persist and are a risk factor for low school achievement and disaffection from school.

Other notable findings for Niagara Falls include:

- the high proportion of families headed by single parents (28% of families in Niagara Falls compared to 16.7% Provincially and 16.6% Nationally; and
- the fact that while children in Niagara Falls were slightly more likely to receive daycare, compared to children living elsewhere in Canada – they were much more likely to receive care by a relative than a non-relative.
- 10% of children in Niagara Falls received care outside the home by a non relative – compared to 16% of children across Canada
- 13.9% of children in Niagara Falls received care outside the home from a relative – compared to 6.5% across Canada.

Next Steps

The purpose of UEY is to help determine the extent and nature of community influences on child development and to enhance community capacity to use this data to create effective community-based responses.

Niagara Falls was one of just 13 Canadian communities selected by HRDC to participate in UEY. The first cycle of research has provided us with a valuable starting point—a baseline measure. The process by which this information was gathered, analyzed and communicated should be seen as a framework for further research in this area.

In the second cycle of the Niagara Falls UEY Project, we will repeat these measures in an effort to track changes in our community and to see what, if any, patterns emerge in terms of community impacts on child development.

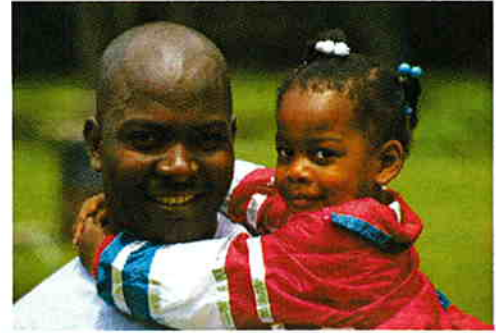
Now that we have established a process for the efficient and timely collection of data, it may be some time before this information can be put into context relative to other communities across the country, or even earlier UEY findings in our own community. Clearly, however, we have made measurable progress toward the goal of giving local children the community-based supports they need to get the most out of their school experiences.

We will gladly share our findings in more detail. To book a presentation for your organization or group, to obtain copies of the various UEY reports or to find out what's happening in other UEY study areas across the country, please contact:

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Project Partners

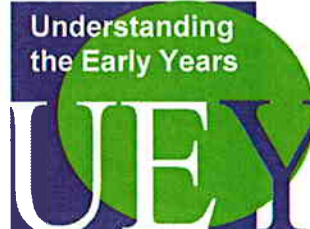
The UEY Project in Niagara Falls is grateful for the hard work and dedication of its many partners including:

- Early Years Action Group—Niagara Region
- District School Board of Niagara
- Niagara Catholic District School Board
- Conseil Scolaire de District Catholique Centre-Sud
- Conseil scolaire de district du Centre-Sud-Ouest
- Regional Municipality of Niagara Community Services and Public Health Departments
- Early Childhood Community Development Centre
- Human Resources Development Canada
- Statistics Canada

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COMMUNITY RESEARCH IN CHILD DEVELOPMENT

UEY Niagara Falls is sponsored by the Early Years Action Group – Niagara Region and the Early Childhood Community Development Centre