

Child Developmental Health in Toronto 2005 to 2015:

Technical Report



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Authors:

Kandace Ryckman, Paul Fleiszer

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Copies:

This report and the companion technical report can be downloaded at:

For further information:

Toronto Public Health
Surveillance and Epidemiology Unit
277 Victoria Street, 7th Floor
Toronto, Ontario, M5B 1W2
Telephone: 416-338-7600

Disclaimer:

The Early Development Instrument (EDI) measures children's vulnerability (i.e. inability to meet age-appropriate developmental expectations) in five general domains. Children can be vulnerable on as few as zero and as many as five domains. The Offord Centre for Child Studies, who developed the EDI, defines 'overall vulnerability' to be the proportion of children who are vulnerable on one or more domains (<https://edi.offordcentre.com/researchers/how-to-interpret-edi-results/>). In order to focus on children in greatest need of support, this report focuses exclusively on children who are vulnerable on two or more domains, which we have also termed overall vulnerability. Please use caution when comparing the results of this report to others using the EDI.

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Introduction

Healthy development in early childhood provides the building blocks for positive emotional, social and physical health and well-being. Overall vulnerability in early childhood, or the inability to meet developmental expectations in two or more areas of development, can have lasting effects of children as they develop and grow.

The Early Development Instrument (EDI) is a tool used to measure overall vulnerability at the population-level. This teacher-completed questionnaire captures all Kindergarten students attending publicly funded schools in Ontario. The EDI can be used to monitor healthy childhood development over time and to assess areas where children and families may benefit from additional supports and services. It measures development in five areas or domains: Physical Health and Well-Being, Social Competence, Emotional Maturity, Language and Cognitive Development, Communication Skills and General Knowledge.

In Toronto in 2015, 14% of children were considered 'vulnerable' in two or more domains of the EDI. This group of children were struggling in two or more of five areas of development. Overall vulnerability, as measured by the EDI, is known to predict future academic success, as well as a child's health and well-being later in life.^{1,2} As such, these children represent a particularly at-risk subgroup of individuals and families that are in greatest need of support. Service providers and policy makers need to understand what factors predict overall vulnerability in order to make meaningful improvements in developmental health.

Individual-level factors are known to be strong predictors of overall vulnerability in early childhood development. In Toronto, male children were twice as likely as female children to be vulnerable on two or more domains of the EDI. Younger Kindergarten children, born in the later part of the year, were also more likely than those born in the first part of the year to be vulnerable on two or more domains. Enrollment in English / French Language Learner (EFL) programs, as well as special needs programs, is also known to increase rates of overall vulnerability. These findings are well-supported by a large body of literature demonstrating that not all children are equally as likely to be vulnerable in early childhood development.³⁻⁸ There is also evidence to suggest that a child's race or ethnicity and even health outcomes at birth, such as a low birthweight can impact vulnerability in Kindergarten.^{4,5,8}

Similarly, research suggests that family-level factors play an important role in predicting vulnerability in children. This includes factors such as socio-economic status (e.g. parental employment, income and education), family structure (e.g. number of children, lone-parent families, etc.), maternal characteristics (e.g. age, health behaviours during pregnancy, prenatal care, etc.) and child care arrangements.^{4,5,7-9}

Finally, research in other settings has shown that characteristics of neighbourhoods and communities where children and families live can also affect outcomes in early childhood development. These factors include socioeconomic resources (e.g. average family income, employment rate, access to housing, percent of individuals with less than a high school education), family dynamics (e.g. household density, average number of children per family, percent of families with a lone parent), built environment features (e.g. walkability, transit, etc.) language and ethnicity.^{5,7,10-13} It is also possible other factors, such as access to public libraries, parenting programs and green spaces like parks may impact vulnerability, although the effect of these factors has not been explored in the scientific literature.

The purpose of this technical report is to outline the methodology used in the 'Inequities in Developmental Health' section of the Developmental Health in Toronto report. It will provide an overview of the data sources, analysis techniques and an in-depth discussion of the results in the context of the existing body of literature.

Methods

Population

Information about children in Toronto was obtained from the Early Development Instrument (EDI). Teachers complete an EDI questionnaire for each Kindergarten student. Data from Toronto includes all children from Toronto public school boards including the Toronto District School Board, the Toronto Catholic District School Board, Conseil scolaire Viamonde and Conseil scolaire de district catholique Centre-Sud. In 2015, the EDI captured approximately 92% of the Kindergarten-aged children living in Toronto.

Children who were unable to be linked to provincial records, those in class for less than one month or those with incomplete information for any variable were excluded. Children with special needs were also excluded from the analysis because they represent a variable group of children with known challenges that may affect their ability to meet developmental expectations. For more information on children with special needs, please refer to the [Special Needs](#) section of the main report.

Measures

The Early Development Instrument

The Early Development Instrument (EDI), created by the Offord Centre for Child Studies (Offord Centre), was first implemented in Ontario in the 2004/2005 school year. The EDI is a population-based tool that measures children's vulnerability (i.e., the inability to meet age-appropriate developmental expectations). It measures developmental health in five areas or domains: Physical Health and Well-Being, Emotional Maturity, Social Competence, Language and Cognitive Development, and Communication Skills and General Knowledge. This teacher-completed questionnaire is used to derive a score out of 10 for each domain for every child. That score is then measured against the vulnerability cut-off point, whereby scores above the cut-off indicate that children have met the expectations, and scores below indicate they have not. These vulnerability cut-off points are fixed by the Offord Centre based on the lowest 10% of scores from the first EDI cycle in Ontario.

This report focuses on overall vulnerability, defined as the inability to meet age-appropriate developmental expectations in two or more domains. Children who are vulnerable in two or more domains are struggling in multiple areas and may face significant challenges to keep up with their peers. The outcome of overall vulnerability was used as a binary variable.

The EDI was also used as a source of individual-level data about children including their gender (Male/Female), English/French Language Learner status (No/ELL/FLL), age using date of birth in years and months (continuous), and census tract of residence.

Neighbourhood-Level Predictors

In order to determine what neighbourhood-level predictors might be associated with vulnerability in a Toronto setting, a review of the literature was conducted. Consultations with internal Toronto Public Health and external partners was also used to identify potential Toronto-specific predictors. A number of data sources were used to capture neighbourhood-level predictors of overall vulnerability. Where possible, all efforts were made to use the most recent and highest

quality data available. Table 1 provides an overview of these variables grouped by type of predictor. All predictor variables were analyzed at the census tract level.

Statistical Analysis

Data was cleaned and analyzed using SAS v.9.3. Descriptive analysis, including assessing the statistical and geographical distribution of the outcome and predictors was conducted. Values for predictors variables were assigned to children based on their census tract of residence. A linear regression model with all variables was fit to assess the Variance Inflation Factor, using a cut-off point of 10 to iteratively remove collinear variables.

Logistics regression models adjusted for individual-level predictors only (i.e. gender, age, EFL status) were used to rule out variables with no association with the outcome, using a p-value cut-off of 0.25. A multivariate logistic regression model was used to assess the association between predictor variables and overall vulnerability. The model was adjusted for all individual-level predictors (i.e. age, gender, EFL status). A manual backwards selection model building approach was executed. A change in beta estimate cut-off point of 25% was used.

The intra-class correlation coefficient was calculated at the census tract level, indicating approximately 4% clustering of data at the census tract level. To address this, regression analyses were adjusted using clustered standard errors to account for the hierarchical nature of the data (i.e. that children live within census tracts). The odds ratio, 95% confidence interval ($\alpha=0.05$) and p-value for each predictor in the model was estimated. Effect estimates for continuous predictors were estimated for a 10 unit increase in the proportion. Interaction terms were fit between individual-level covariates. Stratification was used to estimate the effect of predictors on the outcome within sub-populations.

Results

Descriptive Statistics

In total, 22,846 children (93% of available questionnaires) were included in the analysis. There were slightly more male children (52%) than female children (48%). Approximately 9% of children were enrolled in an ELL program and 1% were enrolled in an FLL program. The average child was 5.7 years (± 0.3). Overall vulnerability, or the percent of children who were vulnerable on two or more domains of the EDI, was 16%.

Neighbourhood-Level Predictors

Neighbourhood-level predictors of vulnerability differed by gender and EFLL status. In order to understand the effect of these predictors on the outcome, the model results presented are stratified by gender and EFLL status. Table 1 and Table 2 provide the predictors of overall vulnerability for female children and male children, respectively.

Low income families and low education increased the odds of overall vulnerability in both female and male children. The proportion of individuals in a census tract with no knowledge of official languages had significant protective effects in both female and male children, as well.

Table 1: Neighbourhood-Level Predictors of Overall Vulnerability for Females

Predictors	OR*	95% CI**		P-value	Effect
Low Income Families	1.24	1.09	1.41	0.0009	Risk
Low Education	1.18	1.07	1.29	0.0006	Risk
Immigrant Population	1.05	0.96	1.14	0.2712	None
Residential Mobility	1.00	0.85	1.18	0.9828	None
Child Participation in Public Recreation Programs	0.99	0.93	1.06	0.8158	None
Percent of Couple Families with Male Sole Income Earners	0.96	0.83	1.10	0.5146	None
No Knowledge of Official Languages	0.74	0.61	0.91	0.0035	Protective

Results are adjusted for child's age and EFLL status.

* Odds ratio; ** Confidence interval

Table 2: Neighbourhood-Level Predictors of Overall Vulnerability for Males

Predictors	OR*	95% CI**		P-value	Effect
Low Income Families	1.18	1.08	1.28	0.0003	Risk
Residential Mobility	1.17	1.04	1.32	0.0072	Risk
Low Education	1.14	1.07	1.22	0.0002	Risk
Immigrant Population	1.10	1.03	1.16	0.0027	Risk
Child Participation in Public Recreation Programs	0.93	0.88	0.97	0.0017	Protective
Percent of Couple Families with Male Sole Income Earners	0.83	0.75	0.91	<.0001	Protective
No Knowledge of Official Languages	0.82	0.70	0.95	0.0099	Protective

Results are adjusted for child's age and EFLL status.

* Odds ratio; ** Confidence interval

For male children, a number of significant predictors emerged that did not have significant effects among female children. The proportion of individuals in a census tract who moved residences in the past year was a significant predictor of increased overall vulnerability for male children. The proportion of immigrants was also significant a predictor of increased vulnerability for males. The percent of couple families with male sole income earners, or the proportion of couple families with the female partner's contribution to employment income is 0%, was the predictor with the strongest association with overall vulnerability for male children. A significant protective effect was also observed for male children who live in census tracts with higher child participation in public recreation programs.

Table 3 and Table 4 provide the predictors of overall vulnerability for EFLL Status children and non-EFLL Status children, respectively.

Low income families and low education increased the odds of overall vulnerability in both EFLL and non-EFLL status children. The Percent of Couple Families with Male Sole Income Earners was also a significant protective predictor in both groups.

Table 3: Neighbourhood-Level Predictors of Overall Vulnerability for EFLL Status Children

Predictors	OR*	95% CI**		P-value	Effect
Low Income Families	1.37	1.09	1.72	0.0065	Risk
Low Education	1.24	1.08	1.43	0.0028	Risk
Residential Mobility	1.20	0.95	1.50	0.1215	None
Immigrant Population	1.08	0.95	1.22	0.2559	None
Child Participation in Public Recreation Programs	0.99	0.89	1.10	0.818	None
No Knowledge of Official Languages	0.87	0.65	1.17	0.368	None
Percent of Couple Families with Male Sole Income Earners	0.82	0.65	1.03	0.083	None

Results are adjusted for child's gender, and age.

* Odds ratio; ** Confidence interval

Table 4: Neighbourhood-Level Predictors of Overall Vulnerability for Non-EFLL Status Children

Predictors	OR*	95% CI**		P-value	Effect
Low Income Families	1.18	1.08	1.28	0.0002	Risk
Low Education	1.14	1.07	1.22	<.0001	Risk
Residential Mobility	1.10	0.97	1.23	0.13	None
Immigrant Population	1.09	1.03	1.15	0.0043	Risk
Child Participation in Public Recreation Programs	0.94	0.90	0.98	0.0077	Protective
Percent of Couple Families with Male Sole Income Earners	0.88	0.81	0.97	0.0064	Protective
No Knowledge of Official Languages	0.76	0.66	0.88	0.0004	Protective

Results are adjusted for child's gender, and age.

* Odds ratio; ** Confidence interval

For children not enrolled in EFLL programs, the proportion of individuals born outside of Canada was a significant predictor of increased vulnerability. Two predictors, child participation in public recreation programs and the proportion of individuals with no knowledge of official languages were protective factors for children with non-EFLL status.

Non-Significant Predictors

A wide variety of predictors were considered as part of this report. Table 5 includes an overview of the predictors including their effect and reason for exclusion. Predictors with an exclusion marked as N/A indicates that the predictor was not excluded and is part of the final model.

Exclusion from the analysis occurred because of three reasons:

- 1) Collinearity – predictor had a VIF>10 and was less strongly associated with the outcome than another predictor in the same category.
- 2) No Association – predictor was not significantly associated with the outcome.
- 3) Model Building – predictor was significantly associated with the outcome in the bivariate analysis, but after accounting for other neighbourhood-level predictors, it was no longer significant.

Table 5: Overview of Effect and Exclusion of Predictors

Category	Predictors	Effect*	Exclusion
Income / Employment	Low Income Families	Risk	N/A
	Median Family Income	Protective	Collinearity
	Percent of Couple Families with Male Sole Income Earners	Protective	N/A
	Income Inequality (Index of Concentration at the Extremes)	Risk	Collinearity
	Female Labour Force Participation Rate	Protective	Collinearity
	Male Labour Force Participation Rate	Protective	Collinearity

	Social Assistance	Risk	Collinearity
Education	Low Education	Risk	N/A
	Female Low Postsecondary Education	Risk	Collinearity
	Male Low Postsecondary Education	Risk	Collinearity
	Low Postsecondary Education	Risk	Collinearity
	Education Inequality (Index of Concentration at the Extremes)	Risk	Collinearity
Ethnicity / Language	Aboriginal Population	None	No Association
	Immigrant Population	Risk	N/A
	Minority Population	Risk	Model Building
	Non-Official Mother Tongue Language	Risk	Collinearity
	No Knowledge of Official Languages	Protective	N/A
Family Structure	No Unpaid Childcare	Risk	Model Building
	Residential Mobility	Risk	N/A
	Family Size	Risk	Model Building
	Household Density	Risk	Model Building
	Lone Parent Families	Risk	Model Building
	Female Lone Parent Families	Risk	Collinearity
Built Environment	Concentration of Apartments	Protective	Model Building
	Concentration of Parks	Risk	Model Building
	Transit Score	None	No Association
	Walkability Index	None	No Association
Services / Programs	Proximity to Early Years Centre	Risk	Model Building
	Proximity to Library	Protective	Model Building
	Child Participation in Recreation Programs	Protective	N/A
	Participation in TPH Parenting Programs	None	No Association

*Effect of predictor, adjusted for child's age, gender and EFLL status only.

For more information on the implications of these results, please refer to the [Implications](#) section of the main report.

Discussion

Summary of Findings

The purpose of this report was to empirically examine the effect of neighbourhood-level predictors of overall vulnerability, in order to better contextualize the inequities in the outcome seen across Toronto. Overall vulnerability in Kindergarten students, or the inability to meet age-appropriate developmental expectations in two or more areas, was measured using the 2015 cycle of the Early Development Instrument (EDI). Several categories of predictors, including income/employment, education, ethnicity/language, family structure, built environment, and services/programs were obtained at the census tract level from a wide variety of sources.

Percent of low income families and percent of individuals with low education were significant neighbourhood-level predictors of vulnerability. The proportion of individuals born outside Canada was also a significant neighbourhood-level predictor for all groups, except female children. Moreover, residential mobility was a significant predictor of increased vulnerability among male children.

A higher proportion of individuals without knowledge of official languages and higher percent of couple families with male sole income earners were associated with protective effects for the majority, but not all groups, of children. Finally, higher rates of child participation in public recreation programs at the neighbourhood-level had positive effects in male and non-EFLL status children.

Strengths and Limitations

The methods used in this analysis have a number of strengths. The use of a large, population-based dataset that includes all Kindergarten-aged children attending in publicly funded schools reduces the impact of selection bias that can occur with opt-in studies or sample surveys. The rich availability of potential predictors from a wide variety of data sources allowed for exploration of the relationships between multiple influences on vulnerability. This included the use of geospatial data (such as the location of public libraries and Early Years Centres) and program registration data from two City of Toronto Divisions, Toronto Public Health and Parks, Forestry and Recreation. Finally, this analysis also accounts for the nested nature of data, where children live within census tracts, by adjusting the estimates to account for clustering.

It is important to note the limitations of this report. First and foremost, the cross-sectional nature of this analysis does not allow for implications of causation. The results simply indicate that there is an association between predictors and outcomes, not that predictors *cause* outcomes. This report is also limited by the availability and quality of data. The EDI does not contain individual-level information about children, such as their socio-economic status or ethno-racial identity, which may be helpful in explaining the relationship between predictors and vulnerability. Finally, for some predictors (e.g. language, ethnicity, and education), the most recent available source of reliable information was from the 2006 Census, collected 9 years prior to the EDI data. Despite the lack of current data, these predictors were included in the analysis because of their spatial diversity in Toronto and their association with vulnerability, which is evident in the scientific literature.

Conclusion

The findings of this report suggest that not all children in Toronto are equally likely to experience healthy development. Understanding individual-level predictors (e.g. gender, age, EFL status, etc.) is not enough to reduce inequities in developmental health. Information about contextual or neighbourhood-level factors can help inform programs and policies that aim to reduce vulnerability.

This report has implications for those who plan and provide programs and services for children, particularly for at-risk subpopulations. Neighbourhood-level socioeconomic status was the strongest consistent predictor of overall vulnerability. While the Neighbourhood Improvement Areas are often used to target vulnerable areas of Toronto, further work may be needed to better understand if / how the socioeconomic context for children and families differ from the rest of the City. The recent creation of the Child & Families Inequities Score, which uses socioeconomic indicators relevant to families with children under the age of 12 is an important step in this direction.¹⁴ Further work is needed to better understand how other neighbourhood-level predictors identified in this report, such as child participation in public recreation programs and percent of couple families with male sole income earners, may fit into the planning landscape. The findings of this report will be used to inform the continued work in public health and other sectors to align programs and services with the needs of children and families in Toronto.

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Appendix 1

Overview of Variables

Category	Predictors	Description	Data Source
Income / Employment	Low Income Families	Proportion of families with children living below the Low Income Measure – After Tax	Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-18. 2014.
	Median Family Income	Median income of couple families with at least one child	Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-4. 2014.
	Percent of Couple Families with Male Sole Income Earners	Proportion of couple families with employment income where female partner's contribution to employment income is 0%	Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-14A. 2014.
	Income Inequality (Index of Concentration at the Extremes)	Difference in the number of high income (+\$100,000) and low income (below LIM-AT) census families divided by the total number of families with known income	Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-5A and F-5B. 2014.
	Female Labour Force Participation Rate	Proportion of females participating in the labour force	Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-11. 2014.
	Male Labour Force Participation Rate	Proportion of males participating in the labour force	Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-11. 2014.
	Social Assistance	Proportion of families (couple and lone parent, combined) receiving social assistance as primary form of income	Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-6. 2014.

Category	Predictors	Description	Data Source
Education	Low Education	Proportion of individuals with less than high school education	Statistics Canada. Canada Census. 2006.
	Female Low Post-secondary Education	Proportion of females with less than a post-secondary education	Statistics Canada. Canada Census. 2006.
	Male Low Post-secondary Education	Proportion of males with less than a post-secondary education	Statistics Canada. Canada Census. 2006.
	Low Post-secondary Education	Proportion of individuals with less than a post-secondary education	Statistics Canada. Canada Census. 2006.
	Education Inequality (Index of Concentration at the Extremes)	Difference in the population with post-secondary degree and those with no certificate divided by the total population with known education status	Statistics Canada. Canada Census. 2006.
Ethnicity / Language	Aboriginal Population	Proportion of population that self-identify as Aboriginal	Statistics Canada. Canada Census. 2006.
	Immigrant Population	Proportion of individuals who were born outside of Canada	Statistics Canada. Canada Census. 2006.
	Minority Population	Proportion of population who are categorized as a visible minority by Statistics Canada	Statistics Canada. Canada Census. 2006.
	Non-Official Mother Tongue Language	Proportion of individuals with a mother tongue language other than English or French	Statistics Canada. Canada Census. 2006.
	No Knowledge of Official Languages	Proportion of individuals who do not speak English or French	Statistics Canada. Canada Census. 2006.
Family Structure	No Unpaid Childcare	Proportion of families with children less than 12 years of age who perform zero hours of unpaid child care work	Statistics Canada. Canada Census. 2006.
	Residential Mobility	Proportion of individuals who moved residences in the 1-year prior to the Census	Statistics Canada. Canada Census. 2006.
	Family Size	Average number of children per family in families with children under the age of 24	Statistics Canada. Canada Census – Short Form. 2011.
	Household Density	Proportion of households with 6 or more persons	Statistics Canada. Canada Census – Short Form. 2011.
	Lone Parent Families	Proportion of families with a lone-parent	Statistics Canada. Canada Census – Short Form. 2011.
	Female Lone Parent Families	Proportion of families with a female lone-parent	Statistics Canada. Canada Census – Short Form. 2011.

Category	Predictors	Description	Data Source
Built Environment	Concentration of High-Rise Apartments	Proportion of dwellings that are apartments with 5 or more stories	Statistics Canada. Canada Census – Short Form. 2011.
	Parks	Proportion of total census tract area that is a designated public park	City of Toronto. Open Data. 2016.
	Transit Score	Score whereby number of stops, frequency of service and type of stop are considered	Martin Prosperity Institute. 2002.
	Walkability Index	Composite score that quantifies accessibility of amenities within walking distance	Toronto Public Health. Walk Score. 2012.
Services / Programs	Proximity to Early Years Centre	Number of Early Years Centres within 1.6km of census tract	City of Toronto. Open Data. 2016.
	Proximity to Library	Number of public libraries within 1.6km of census tract	City of Toronto. Open Data. 2016.
	Child Participation in Recreation Programs	Proportion of children aged 0 to 12 who participated in a PFR program in 2015	Numerator: Parks, Forestry & Recreation, City of Toronto. Geocoded Registration Data. 2015. Denominator: Statistics Canada. Population Estimates. 2011.
	Participation in TPH Parenting Programs	Proportion of the child population aged 0 to 4 years with a parent or parents participating in a parenting program in 2015	Numerator: Toronto Public Health. Early Years Parenting Program Registration Services. February to December 2015. Denominator: Statistics Canada. Population Estimates. 2011.

Appendix 2

Interpreting Neighbourhood-Level Predictors

The results of the analysis are provided in the following section. A table with the predictor, odds ratio, 95% confidence interval, p-value and description of the effect are provided. The sample table below provides an example of how the analysis results are displayed.

For each predictor with a risk effect, the odds ratio indicates the increase in the odds of overall vulnerability for a 10% increase in the predictor. For instance, after accounting for individual-level factors, a 10% increase in the proportion of low-income families in a census tract increased the odds of overall vulnerability by 20%. We are 95% confident the true estimate falls between 11 and 31% increased odds (p-value <0.001). In other words, consider two children with who are the same gender, age and have the same EFLL status, but Child A lives in a neighbourhood with 40% low income families and Child B lives in a neighbourhood with 30% low income families. Child A would have 20% greater odds of being vulnerable compared to child B.

For each predictor with a protective effect, the odds ratio indicates the decrease in the odds of overall vulnerability for a 10% increase in the predictor. For instance, after accounting for individual-level factors, a 10% increase in the proportion of individuals who do not speak English or French decreased the odds of overall vulnerability by 18% (or between 7 and 28%). In other words, consider two children with who are the same gender, age and have the same EFLL status, but Child C lives in a neighbourhood where 0% of individuals have no knowledge of official languages and Child D lives in a neighbourhood where 10% of individuals have no knowledge of official languages. Child D would have 18% decreased odds of being vulnerable compared to child C.

For quick reference, the 'Effect' column provides a description of the effect of each predictor. Predictors towards the top of the table have the strongest risk effect, while predictors at the bottom of the table have the strongest protective effects. Predictors denoted 'None' do not have a significant effect on the outcome.

SAMPLE TABLE: Neighbourhood-Level Predictors of Overall Vulnerability

Predictors	OR*	95% CI**		P-value	Effect
Low Income Families	1.20	1.11	1.31	<.0001	Risk
Low Education	1.00	0.95	1.11	0.999	None
Residential Mobility					
Immigrant Population					
Child Participation in Public Recreation Programs					
Percent of Couple Families with Male Sole Income Earners					
No Knowledge of Official Languages	0.82	0.72	0.93	0.0023	Protective

Results are adjusted for child's gender, age and EFLL status.

* Odds ratio; ** Confidence interval