

# Child Developmental Health in Toronto 2005 to 2015:

Results from the Early Development Instrument



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## Copies:

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## 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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# Executive Summary

## 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 on 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 Senior 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.

## Trends in Child Developmental Health

In Toronto in 2015, 13.6% of children were vulnerable on two or more of the five EDI domains. Children struggling in two or more areas of development represent those in greatest need of additional supports.

The trend in overall vulnerability remained relatively constant over time until 2015 when there was a significant decrease. This improvement in developmental health outcomes for children in Toronto was driven primarily by a decrease in the percent of children who were vulnerable on the Language and Cognitive Development domain. There were also modest improvements to three other domains: Physical Health and Well-Being, Social Competence and Communication Skills and General Knowledge.

Children with special needs often experience greater challenges in developmental health. In Toronto in 2015, 68.8% of the 839 children with identified special needs were vulnerable on two or more domains. Children with special needs were most likely to be vulnerable in the Communication Skills and General Knowledge domain, with 60.8% vulnerable in this domain in 2015.

## Inequalities in Child Developmental Health

In Toronto, not all children are equally likely to have experiences that are conducive to healthy development. Individual-level factors (e.g. gender, age and English / French Language Learner (EFL) status) impact developmental health outcomes. Research has also shown that family-level predictors (e.g. socioeconomic status, family size, young maternal age at birth, etc.) are important determinants of developmental health.

However, even after accounting for individual and family-level characteristics, children are not equally as likely to be vulnerable. In 2015, overall vulnerability varied from 2.3% to 25.9% across Toronto neighbourhoods. Two children who are the same age, gender, and have the

same EFLL status but live in different neighbourhoods in Toronto, may not be equally as likely to be vulnerable, depending on characteristics of where these children live.

This report uses epidemiological methods to determine which neighbourhood-level predictors of overall vulnerability are important in Toronto. Socio-economic status was consistently the strongest neighbourhood-level predictor. Higher rates of low income families and of individuals with less than a high school education were significantly associated with increased overall vulnerability. Conversely, neighbourhoods where more children participate in public recreation programs had better outcomes for male and non-EFLL status children. For some other neighbourhood-level predictors, such as immigrant populations and percent of individuals with no knowledge of English or French, the relationship with overall vulnerability was less clear.

## Implications

The findings of this report suggest that not all children in Toronto are equally likely to experience healthy development. Individual factors including a child's gender and whether or not they have identified special needs, impact their likelihood of being vulnerable in early childhood development. Moreover, understanding individual-level predictors 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. The ongoing monitoring of healthy childhood development to identify trends over time and inequities is crucial to informing the continued work in public health and other sectors to align programs and services with the needs of children and families.

# Introduction

## Healthy Child Development

Early childhood is the most important developmental period throughout the lifespan.<sup>1</sup> Healthy development in early childhood provides the building blocks for positive emotional, social and physical health and well-being. Healthy development is strongly associated with positive outcomes in well-being, mental health, academic performance and economic participation later in life, as well as a reduced risk of heart disease, obesity, and criminality.<sup>2</sup>

Early childhood impacts health and well-being throughout the life course.<sup>3</sup> Early childhood experiences, such as being exposed to violence or having nurturing caregivers, can predispose children to positive or negative health outcomes, regardless of circumstances later in life. Positive or negative experiences in early childhood can also increase the likelihood of having similar experiences in the future. For instance, struggling with basic literacy skills in early childhood and receiving inadequate support to catch up with peers impacts school performance in later years. Alternatively, positive experiences such as strong connection to family and community supports can lead to positive outcomes in a child's life course trajectory. Experiences in early childhood can also have cumulative effects, where children are repeatedly exposed to experiences that influence their outcomes. In order to positively impact a child's development and ultimately, their life trajectory, it is important to understand the risk and protective factors that influence children's future health and well-being.

Not all children are equally likely to have experiences that are conducive to healthy development.<sup>4</sup> Neighborhood and household poverty, lower parental income and educational attainment, higher parental job strain, higher parental unemployment, and lack of safe and affordable housing are known to reduce the likelihood of healthy development in early childhood.<sup>5-8</sup>

As such, early childhood is an important social determinant of health because it is a major driver of inequalities in health and well-being later in life.<sup>4,9</sup> By addressing the needs of children early, an equal playing field where all children can reach their potential can be created. Better understanding developmental health helps to target interventions to those who are most vulnerable. Public health can play an important role in supporting these children, their families, and the communities in which they live to improve outcomes and reduce future inequalities in health and well-being.

The purpose of this report is to review trends in developmental health in Toronto from 2005 to 2015, using data from the Early Developmental Instrument (EDI). It provides a snapshot of how children in Toronto are faring and identifies inequities in healthy development, including a focus on children with special needs. This report also contains a discussion of the broader neighbourhood and community-level factors that predict vulnerability in early child development using population-based data from secondary sources.

## The Early Development Instrument

The Early Development Instrument (EDI) is a population-based tool that measures healthy development in early childhood. The EDI assesses "vulnerability" or the ability of children to meet age-appropriate developmental expectations using a 103-item questionnaire completed by a teacher for each Senior Kindergarten student in the second half of the school year. The EDI is used to monitor healthy childhood development over time and to assess areas where children and families may benefit from additional supports and services.

The EDI was created by the Offord Centre for Child Studies at McMaster University (Offord Centre). For more information about the validity and reliability of this tool, please visit the [Offord Centre's website](#). First introduced in Ontario during the 2005 school year, there have been four cycles of the EDI: 2005, 2008, 2011 and 2015. Provincial EDI results are reported by the Offord Centre. For information on how Toronto results compare to Ontario, please refer to Toronto Public Health's indicator report on [Vulnerability in Early Child Development](#).

The EDI measures child development at school entry based on five areas of development or "domains". Table 1 provides an overview of the domains. More information about each domain is provided in their respective sections of the report (see Table of Contents for page numbers).

**Table 1: Early Development Instrument Domains**

Domain	Description
Physical Health and Well-Being	Physical readiness for school day, physical independence, gross and fine motor skills
Social Competence	Responsibility and respect, approaches to learning, readiness to learn new things
Emotional Maturity	Prosocial and helping behaviour, anxious and fearful behaviour, aggressive behaviour, hyperactivity and inattention
Language and Cognitive Development	Basic literacy, interest in literacy, numeracy and memory, advanced literacy, basic numeracy
Communication and General Knowledge	Ability to communicate easily/effectively and participate in story-telling, adequate general knowledge

The EDI provides a score for each domain for each child. Children who score below the vulnerability cut-off are considered vulnerable in that domain. The vulnerability cut-off points are fixed by the Offord Centre based on the lowest 10% of scores from the first EDI cycle in Overall vulnerability describes children who are vulnerable (i.e. do not meet developmental expectations) in two or more of the aforementioned domains.

# Results

## Demographic Profile

The EDI captures all Senior Kindergarten students from publicly-funded schools. Children with missing information on two or more domains, children who were not able to be linked to provincial records from the Ministry of Education, and those in class for less than one month were excluded from this report.

In Toronto, there were 22,746 students included in the 2015 EDI cohort. If this cohort were reduced to 100 children...

- 49** would be girls and **51** would be boys.
- 9** would be enrolled in English Language Learner programs, and
- 2** would participate in French as a Second Language programs.
- 14** would be enrolled French immersion programs.
- 10** would be identified as having special challenges including:
  - 2** with speech impairment,
  - 2** with a learning disability,
  - 2** with emotional problems,
  - 3** with behavioural problems, and
  - 1** with problems at home.
- 3** would be receiving school-based supports.
- 3** would be currently receiving further assessment for school-based supports.
- 3** would be on the wait list to receive further assessment for school-based supports.
- 10** would be identified by teachers as needing further assessment for school-based supports.

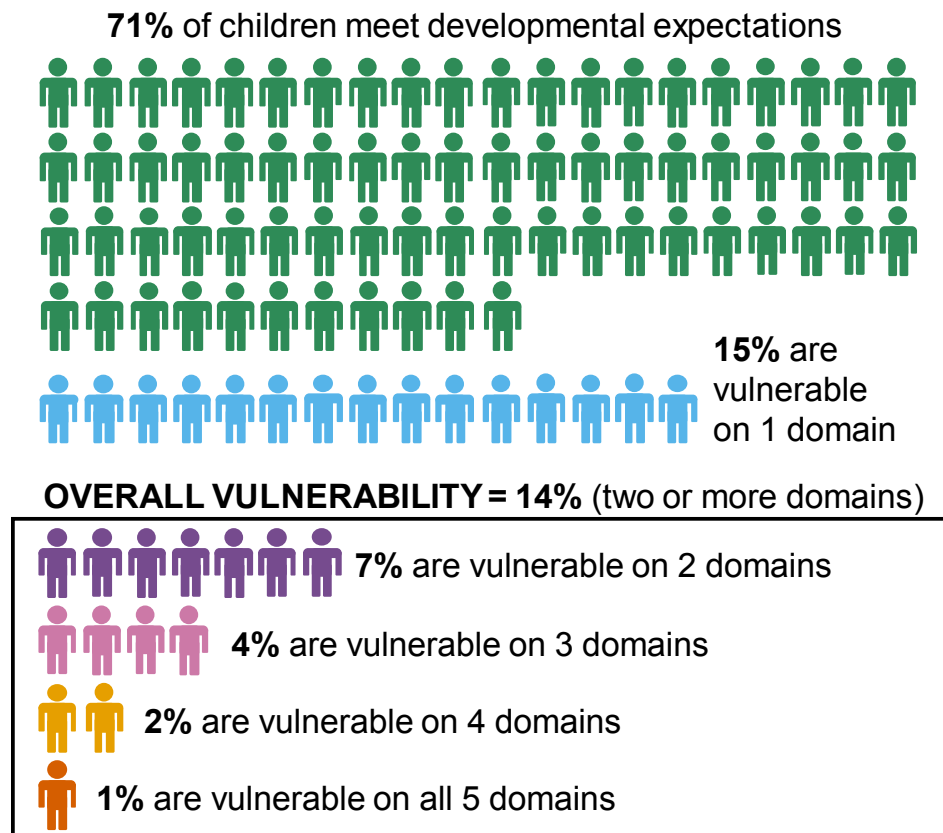
Children with special needs identified by the Ontario Ministry of Education were analyzed separately. For more information about this group of 839 children in the 2015 cohort, please see the section on [Special Needs](#).



## Overall Vulnerability in Toronto

Children who are not meeting developmental expectations are considered "vulnerable" in early development. Children can be vulnerable on as few as zero and as many as five domains. In Toronto in 2015, most children (71%) met the developmental expectations for all domains. Figure 1 provides a breakdown of vulnerability by number of domains. Overall vulnerability, an important measure of developmental health, refers to children who are vulnerable on two or more domains (14%). This group of children are struggling in multiple areas of development. They represent children and families in greatest need of support.

**Figure 1: Percent of Children who are Vulnerable in Toronto, 2015**

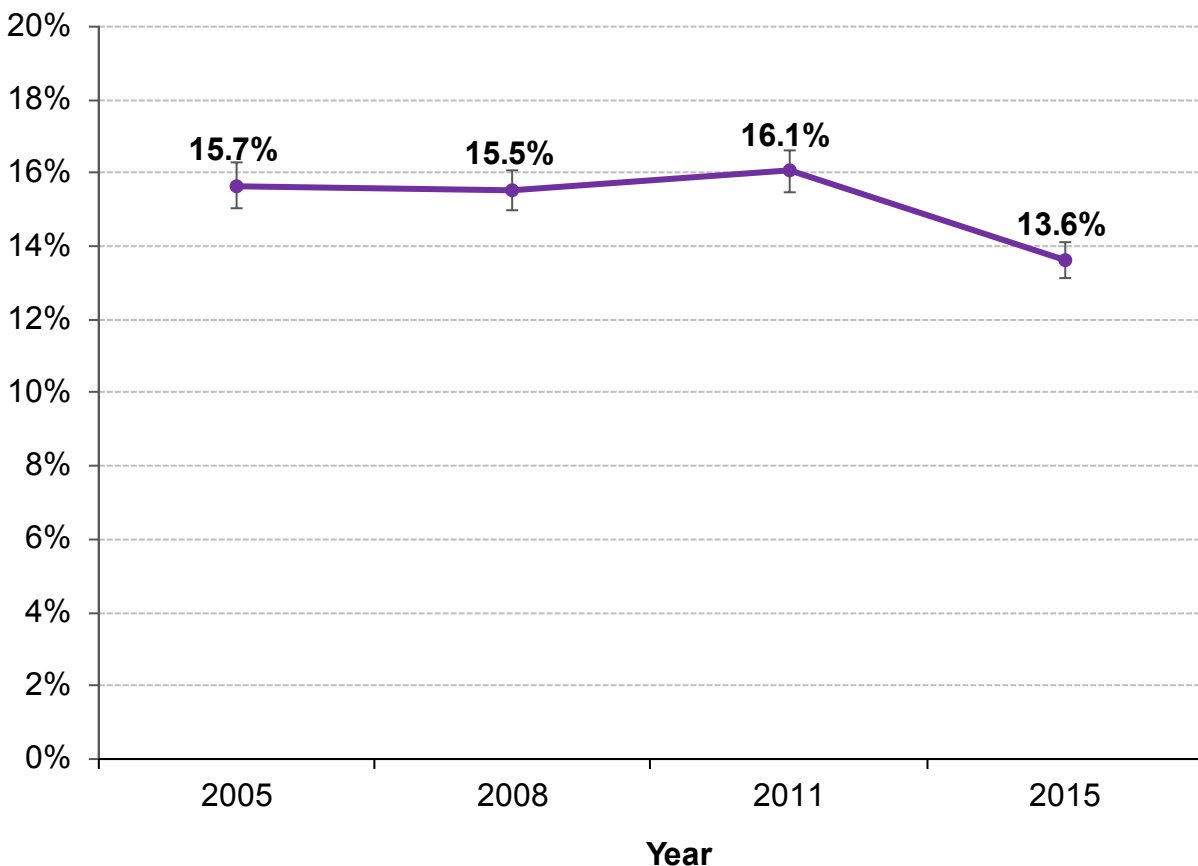


## Trend over Time

In the most recent cycle of the EDI (2015), there were significant reductions in overall vulnerability in Toronto. Figure 2 shows the percent of children who are vulnerable on two or more domains (overall vulnerability) from 2005 to 2015.

The percent of vulnerable children remained relatively consistent in 2005, 2008 and 2011 (15.7%, 15.5% and 16.1%, respectively). In 2015, there was a significant decrease in the percent of children who were vulnerable on two or more domains (13.6%). This was primarily driven by a decrease in the percent of children who were vulnerable on the Language and Cognitive Development domain (refer to the [Language and Cognitive Development section](#) for more information).

**Figure 2: Overall Vulnerability, Senior Kindergarten Students, Toronto, 2005-2015**

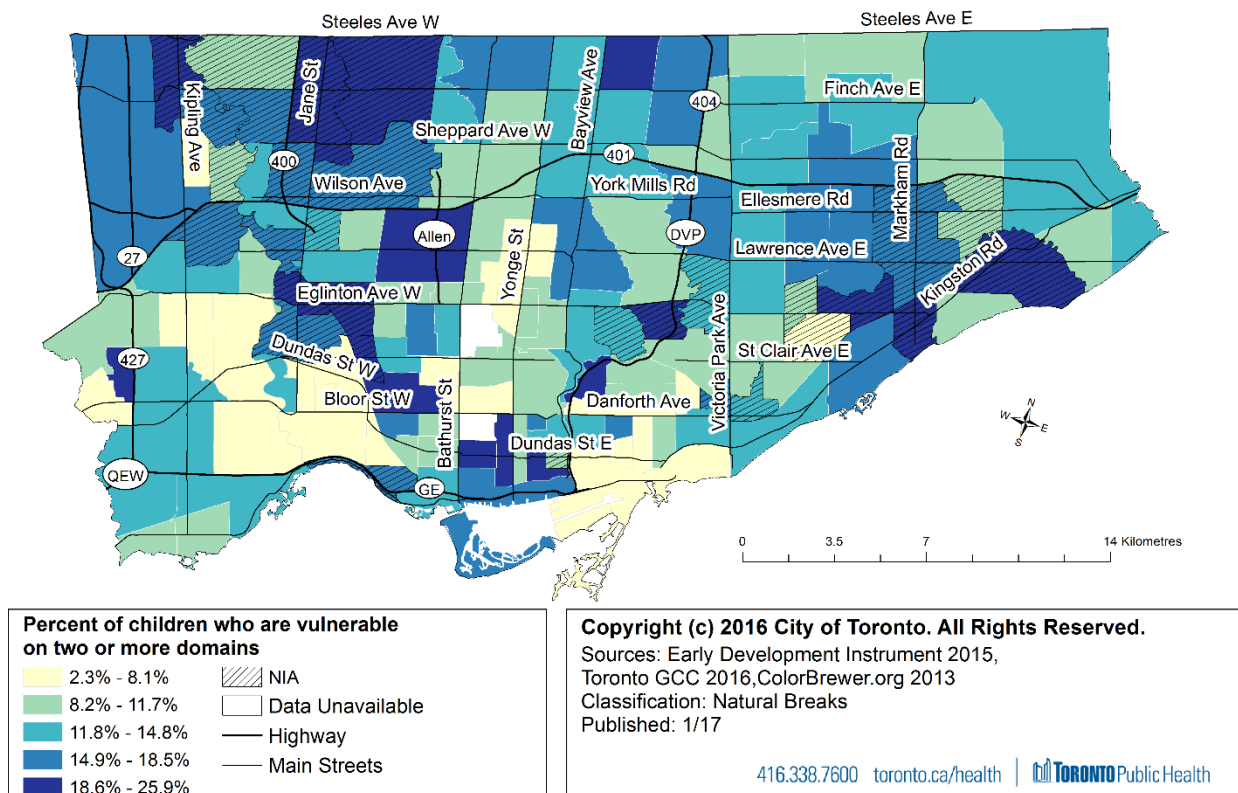


## Geographic Variation

There were geographic differences in early development across Toronto. Map 1 shows overall vulnerability by Toronto neighbourhoods. The percent of children who were vulnerable on two or more domains varied from 2.3% to 25.9% across neighbourhoods. Neighbourhoods with higher rates of overall vulnerability were scattered across Toronto, with some clusters of neighbourhoods in parts of the downtown core, Scarborough, North York and North Etobicoke.

For more information on vulnerability by neighbourhood, refer to [Appendix 1](#).

**Map 1: Overall Vulnerability, Senior Kindergarten Students, Toronto, 2015**



# Physical Health and Well-Being Domain

## Overview

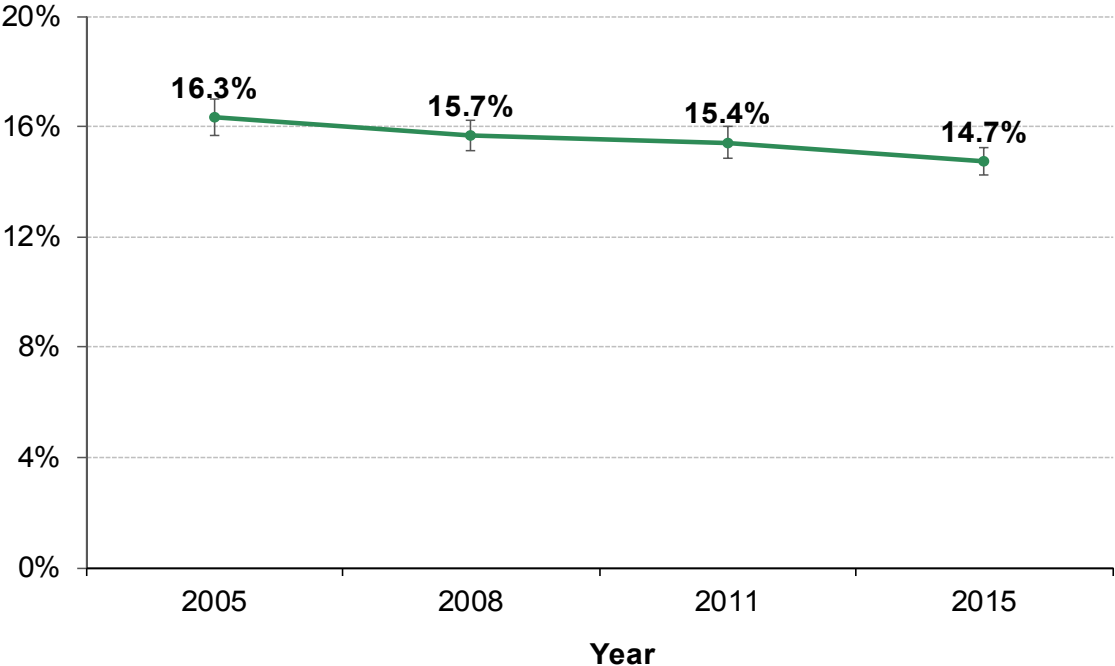
In Toronto in 2015, 14.7% of children were vulnerable in the Physical Health and Well-Being domain. Of the children who were vulnerable in this domain...

- **26%** had at least sometimes experienced coming unprepared for the school day by being dressed inappropriately or by coming to school late, hungry or tired
- **35%** had not developed one of three skills (i.e. independence, handedness or coordination) and/or suck a thumb
- **75%** had poor to average fine and gross motor skills and/or poor to average overall energy levels.

## Trend over Time

The percent of children in Toronto who were vulnerable in the Physical Health and Well-Being domain has significantly decreased over time. Figure 3 shows the percent of children who were vulnerable in this domain from 2005 to 2015. Compared to the first cycle of the EDI, the rate of vulnerability in this domain remained consistent from 2005 to 2011, after which there was a significant decrease in 2015 (14.7%).

**Figure 3: Percent Vulnerable in the Physical Health and Well-Being Domain, Senior Kindergarten Students, Toronto, 2005 to 2015**

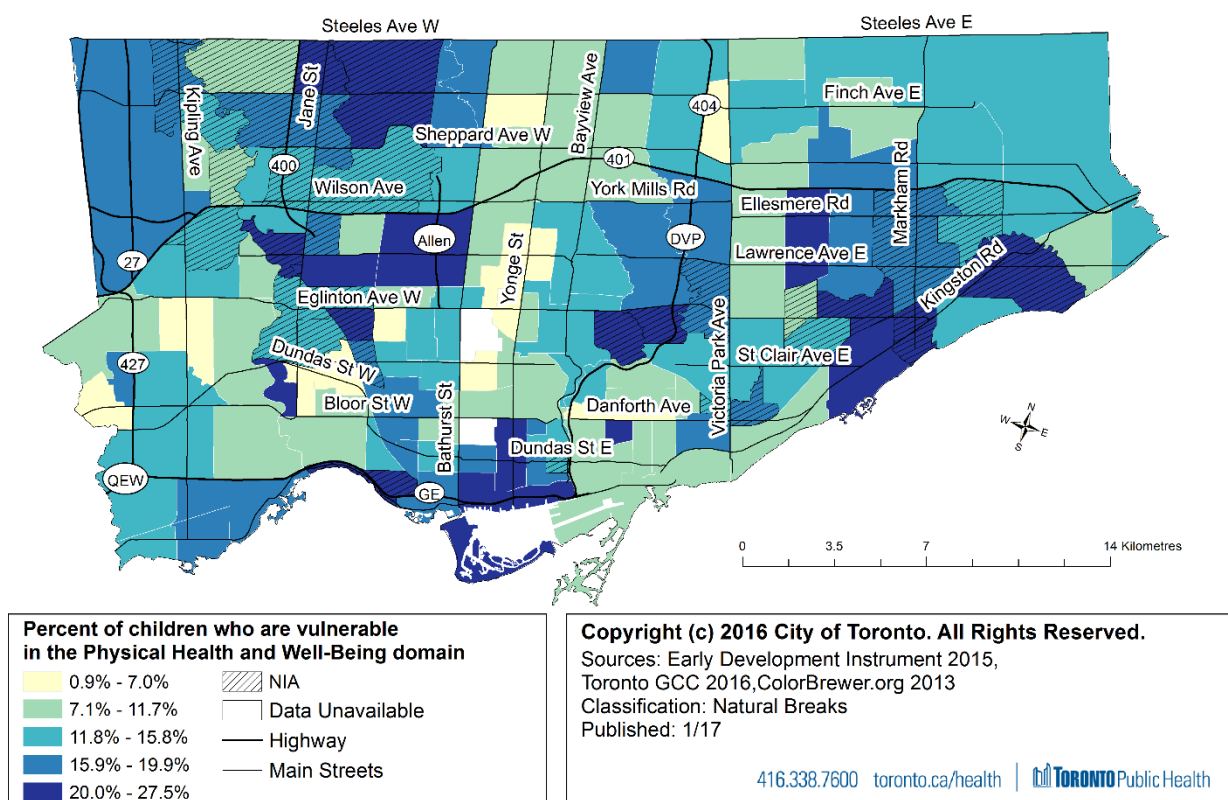


## Geographic Variation

There were geographic differences in vulnerability in the Physical Health and Well-Being domain when comparing across Toronto neighbourhoods. Map 2 shows the percent of children who were vulnerable in the Physical Health and Well-Being domain by neighbourhood in 2015. The percent of children who were vulnerable on this domain varied from 0.9% to 27.5% across neighbourhoods. Neighbourhoods with higher rates of vulnerability were scattered across Toronto, with some clusters of neighbourhoods in parts of the downtown core, Scarborough, North York and North Etobicoke.

For more information on vulnerability by neighbourhood, refer to [Appendix 1](#).

**Map 2: Percent Vulnerable in the Physical Health and Well-Being Domain, Senior Kindergarten Students, Toronto, 2015**



# Social Competence Domain

## Overview

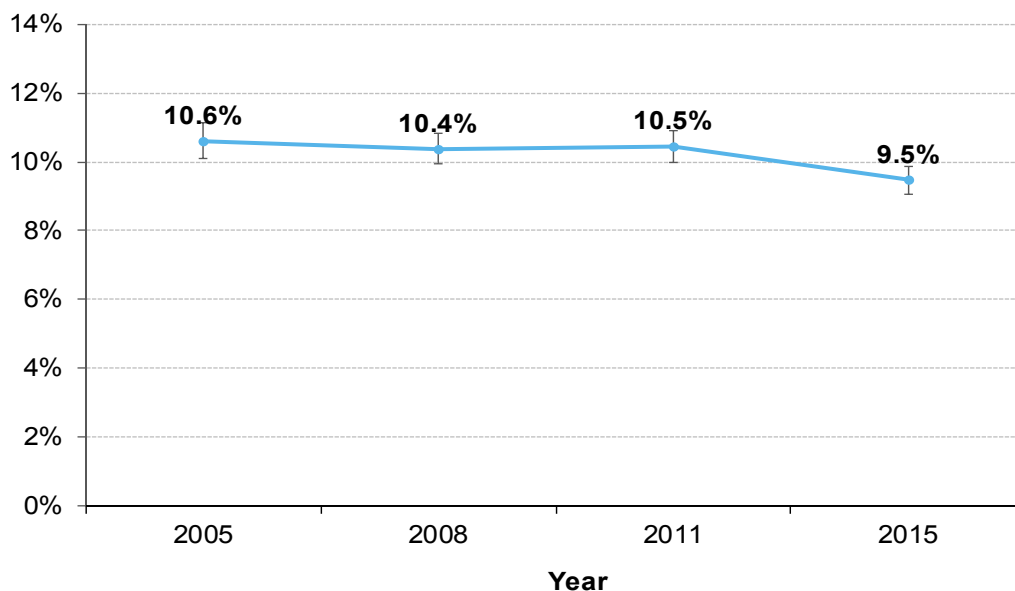
In Toronto in 2015, 9.5% of children were vulnerable in the Social Competence domain. Of the children who were vulnerable in this domain...

- **57%** had average to poor overall social skills, had low self-confidence, or were rarely able to play with various children or interact cooperatively
- **45%** only sometimes/never accepted responsibility for action, showed respect for others and for property, demonstrated self-control, followed the rules, or took care of materials
- **65%** only sometimes/never worked neatly, worked independently, solved problems, followed class routines, or adjusted to changes in routines
- **20%** only sometimes/never showed curiosity about the world or were rarely eager to explore new books, toys and games.

## Trend over Time

The percent of children in Toronto who were vulnerable in the Social Competence domain decreased over time. Figure 4 shows the percent of children who were vulnerable in the Social Competence domain from 2005 to 2015. Compared to the first cycle of the EDI, the rate of vulnerability in this domain remained consistent until 2011, after which there was a significant decrease to 9.5% in 2015.

**Figure 4: Percent Vulnerable in Social Competence Domain, Senior Kindergarten Students, Toronto, 2005 to 2015**

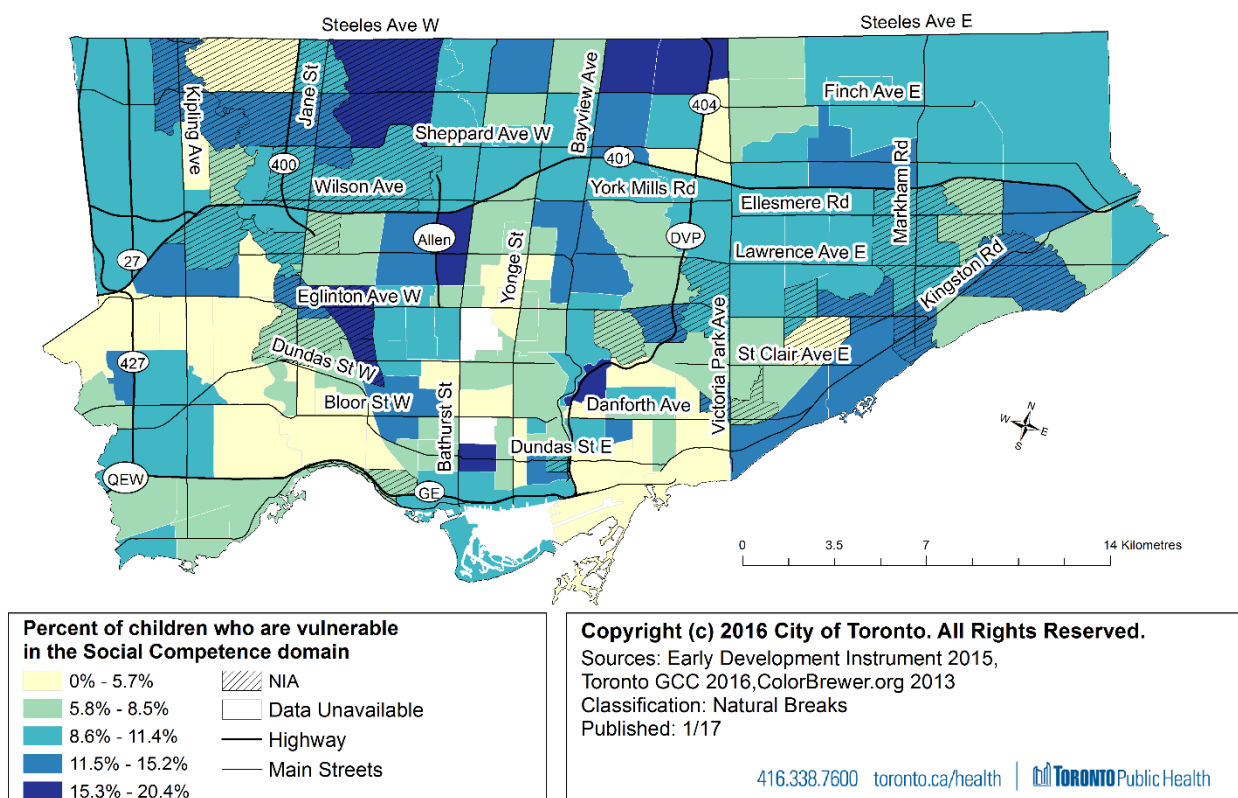


## Geographic Variation

There were geographic differences in vulnerability in the Social Competence domain when comparing across Toronto neighbourhoods. Map 3 shows the percent of children who were vulnerable in the Social Competence domain by neighbourhood in 2015. The percent of children who were vulnerable on this domain varied from 0% to 20.4% across neighbourhoods. Neighbourhoods with higher rates of vulnerability were scattered across Toronto, with some clusters of neighbourhoods in parts of North York and North Etobicoke.

For more information on vulnerability by neighbourhood, refer to [Appendix 1](#).

**Map 3: Percent Vulnerable in the Social Competence Domain, Senior Kindergarten Students, Toronto, 2015**



# Emotional Maturity Domain

## Overview

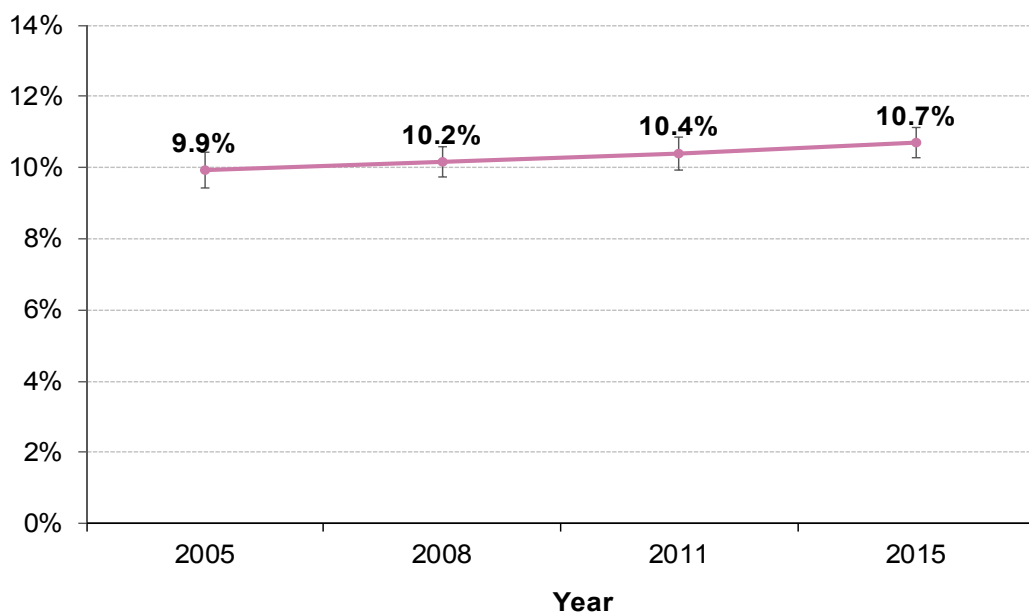
In Toronto in 2015, 10.7% of children were vulnerable in the Emotional Maturity domain. Of the children who were vulnerable in this domain

- **83%** never/almost never showed most of the 'helping behaviours' (e.g. helped someone who is hurt, sick or upset, spontaneously offered to help, invited bystanders to join in, etc.).
- **13%** often showed most anxious behaviours (e.g. worried, unhappy, nervous, sad, indecisive or excessively shy) or were upset when left at school.
- **59%** often showed most aggressive behaviours (e.g. got into physical fights, kicked or bit others, took other people's things, were disobedient, had temper tantrums, etc.).
- **70%** often showed most hyperactive behaviours (e.g. restless, distractible, impulsive, fidgeting, difficulty settling to activities, etc.).

## Trend over Time

The percent of children in Toronto who were vulnerable in the Emotional Maturity domain has remained consistent over time. Figure 5 shows the percent of children who were vulnerable in the Emotional Maturity domain from 2005 to 2015.

**Figure 5: Percent Vulnerable in Emotional Maturity Domain, Senior Kindergarten Students, Toronto, 2005 to 2015**



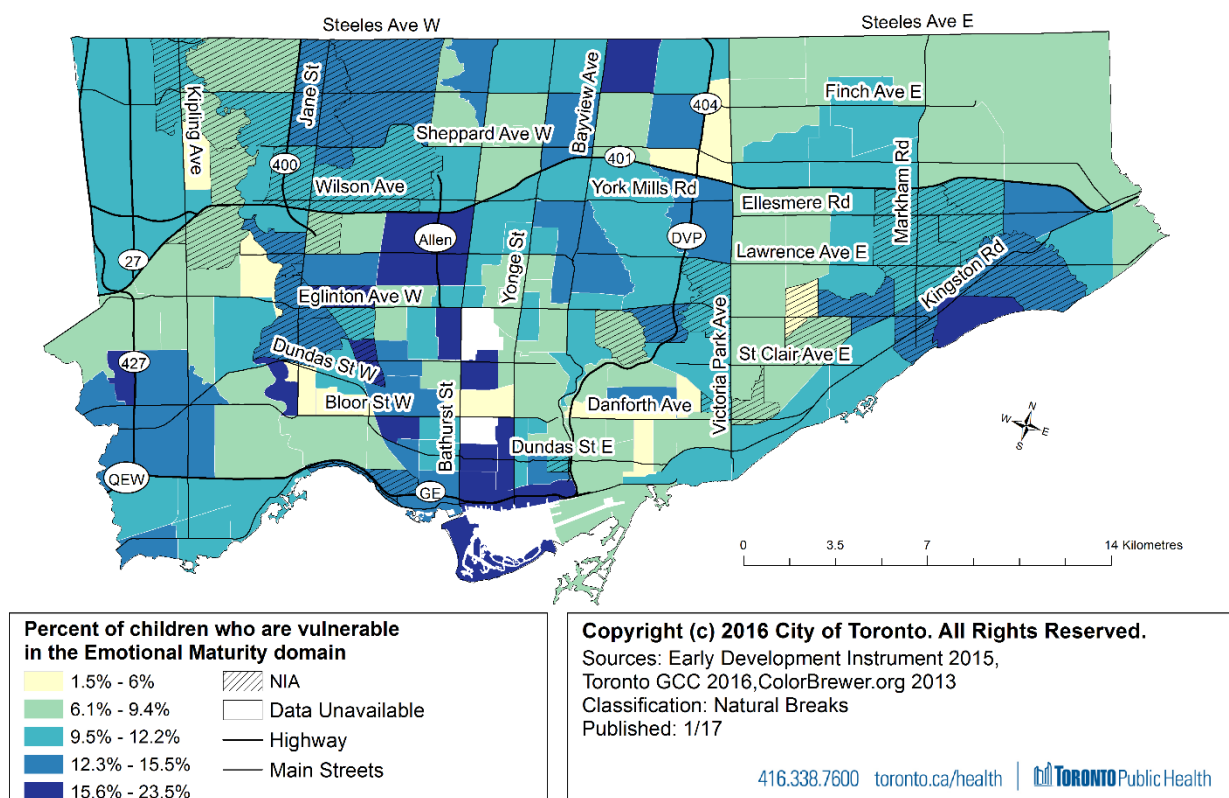


## Geographic Variation

There were geographic differences in vulnerability in the Emotional Maturity domain when comparing across Toronto neighbourhoods. Map 4 shows the percent of children who were vulnerable in the Emotional Maturity domain by neighbourhood in 2015. The percent of children who were vulnerable on this domain varies from 1.5% to 23.5% across neighbourhoods. Neighbourhoods with higher rates of vulnerability are scattered across Toronto, with some clusters of neighbourhoods in parts of the downtown core and North York.

For more information on vulnerability by neighbourhood, refer to [Appendix 1](#).

**Map 4: Percent Vulnerable in the Emotional Maturity Domain, Senior Kindergarten Students, Toronto, 2015**



# Language and Cognitive Development Domain

## Overview

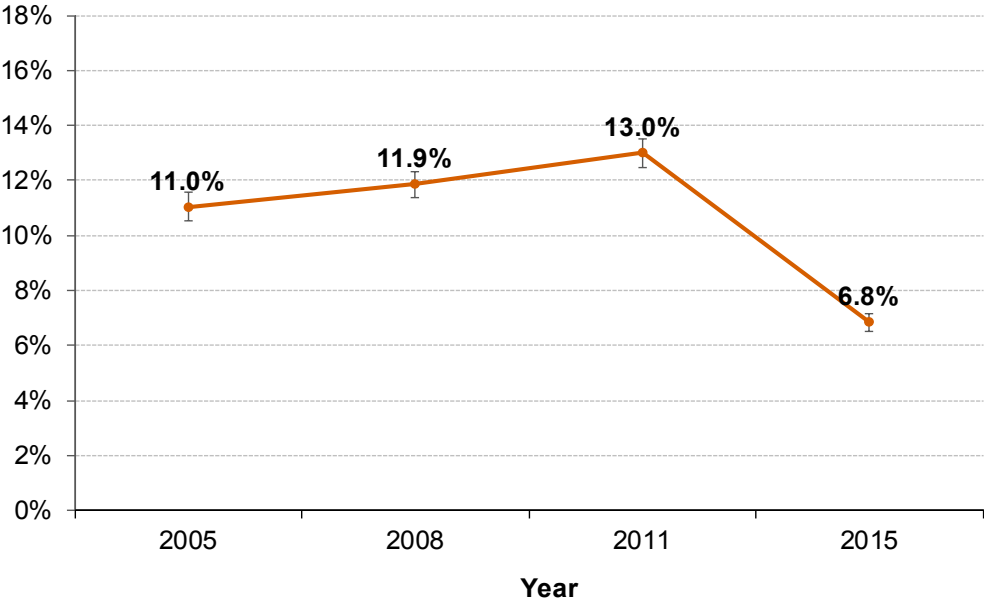
In Toronto in 2015, 6.8% of children were vulnerable in the Language and Cognitive Development domain. Of the children who were vulnerable in this domain...

- **74%** lacked most basic literacy skills (e.g. have problems identifying letters or attaching sounds to them, rhyming, writing their own name).
- **79%** showed no interest in books and reading, or math and number games, or both, and had difficulty remembering things.
- **85%** had one or none of the advanced literary skills (e.g. read or write simple word or sentence) and rarely wrote voluntarily.
- **68%** could not count, compare or recognize numbers or had marked difficulty with numbers, shapes or time concepts.

## Trend over Time

The percent of children in Toronto who were vulnerable in the Language and Cognitive Development domain has decreased over time. Figure 6 shows the percent of children who were vulnerable in the Language and Cognitive Development domain from 2005 to 2015. Compared to the first cycle of the EDI in 2005, the rate of vulnerability in this domain increased significantly in 2011 (13.0%), after which there was a significant decrease in 2015 (6.8%). This trend was also found [across Ontario](#). More research is needed to better understand what factors may be contributing to improvements in this domain.

**Figure 6: Percent Vulnerable in Language and Cognitive Development Domain, Senior Kindergarten Students, Toronto, 2005 to 2015**

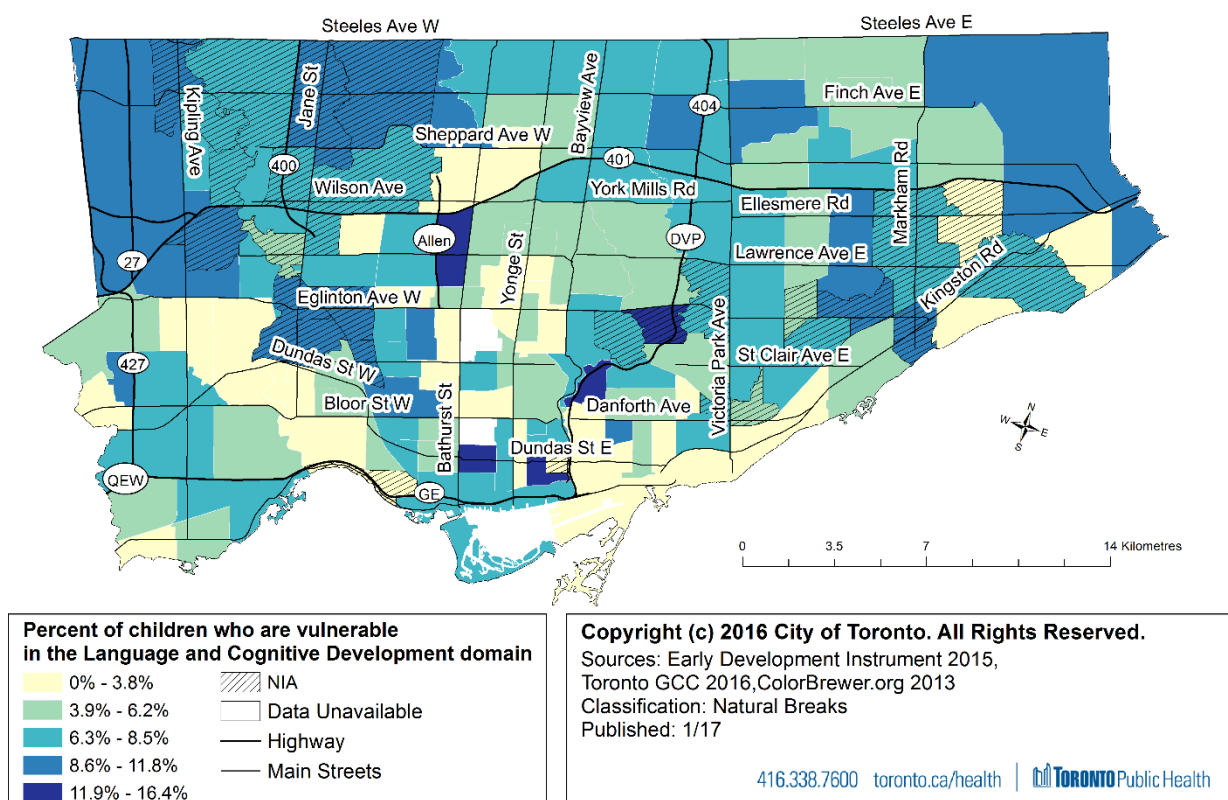


## Geographic Variation

There were geographic differences in vulnerability in the Language and Cognitive Development domain when comparing across Toronto neighbourhoods. Map 5 shows the percent of children who were vulnerable in the Language and Cognitive Development domain by neighbourhood in 2015. The percent of children who were vulnerable on this domain varies from 0% to 16.4% across neighbourhoods. Neighbourhoods with higher rates of vulnerability are scattered across Toronto, with some clusters of neighbourhoods in parts of the downtown core, North York and East York.

For more information on vulnerability by neighbourhood, refer to [Appendix 1](#).

**Map 5: Percent Vulnerable in the Language and Cognitive Development Domain, Senior Kindergarten Students, Toronto, 2015**



# Communication Skills and General Knowledge Domain

## Overview

In Toronto in 2015, 11.5% of children were vulnerable in the Communication Skills and General Knowledge domain. Children who are vulnerable in this domain may have poor or average...

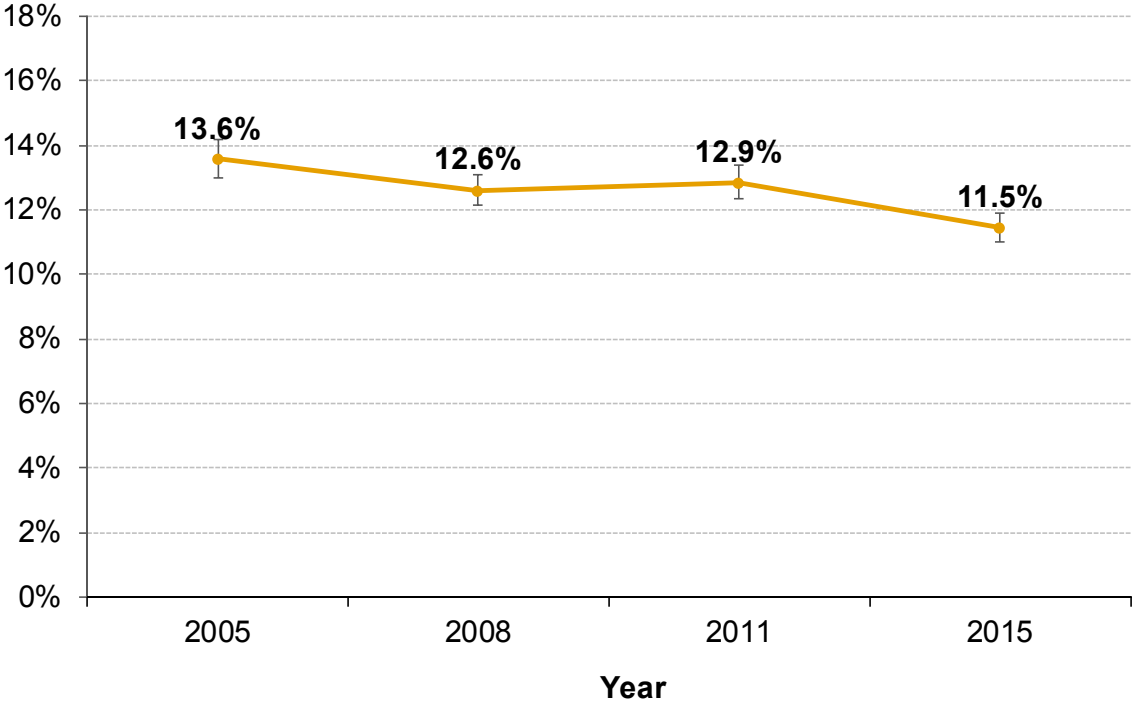
- Skills to communicate needs and wants in socially appropriate ways;
- Ability to tell stories;
- Age-appropriate knowledge about the life and world around.

Specific results for these characteristics is not available because this domain is derived from a single subdomain that all vulnerable children score poorly on.

## Trend over Time

The percent of children in Toronto who were vulnerable in the Communication Skills and General Knowledge domain has decreased over time. Figure 7 shows the percent of children who were vulnerable in the Communication Skills and General Knowledge domain from 2005 to 2015. Compared to the first cycle of the EDI, the rate of vulnerability in this domain remained consistent until 2011, after which there was a significant decrease to 11.5%.

**Figure 7: Percent Vulnerable in Communication Skills and General Knowledge Domain, Senior Kindergarten Students, Toronto, 2005 to 2015**

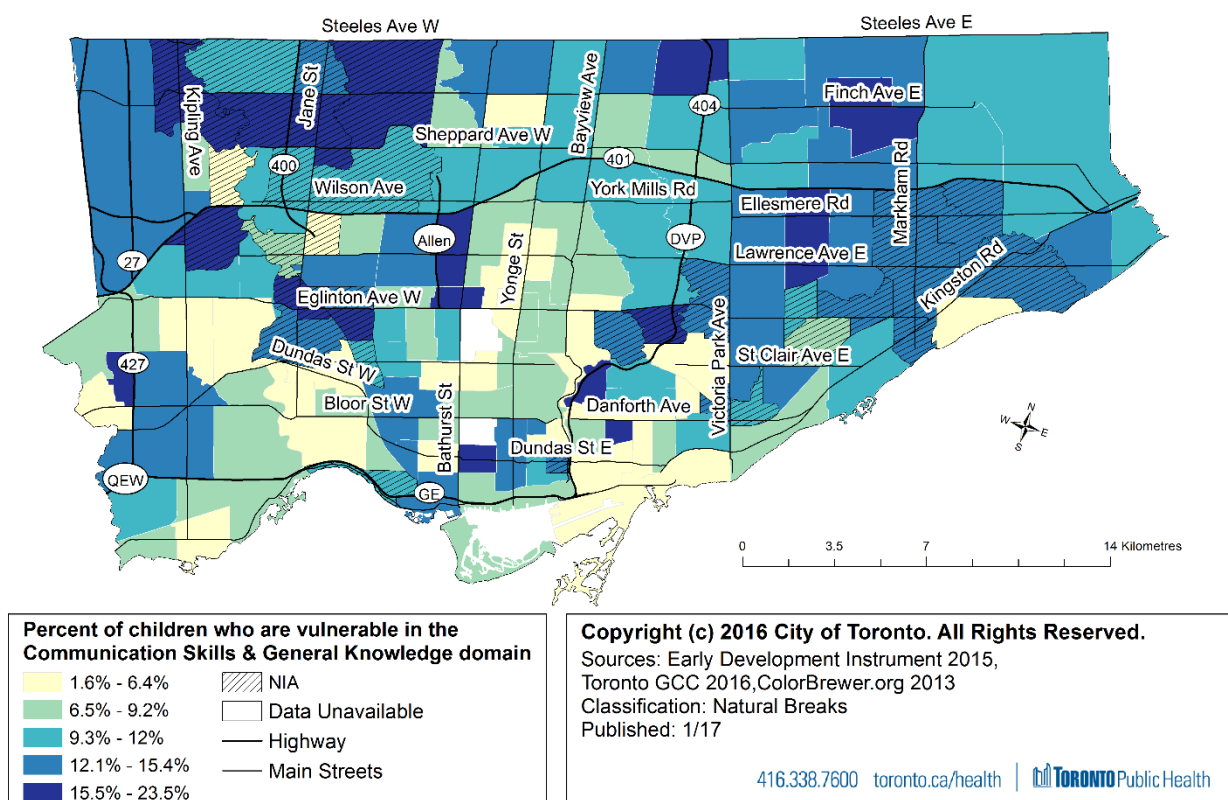


## Geographic Variation

There were geographic differences in vulnerability in the Language and Cognitive Development domain when comparing across Toronto neighbourhoods. Map 6 shows the percent of children who were vulnerable in the Communication and General Knowledge domain by neighbourhood in 2015. The percent of children who were vulnerable on this domain varies from 1.6% to 23.5% across neighbourhoods. Neighbourhoods with higher rates of vulnerability were scattered across Toronto, with some clusters of neighbourhoods in parts of Scarborough, North Etobicoke, North York and East York.

For more information on vulnerability by neighbourhood, refer to [Appendix 1](#).

**Map 6: Percent Vulnerable in the Communication and General Knowledge Domain, Senior Kindergarten Students, Toronto, 2015**



## Special Needs

The EDI also captures all Senior Kindergarten students with special needs, as identified by the Ontario Ministry of Education. Special needs refers to a broad range of disorders affecting behaviour, communication, and/or physical or intellectual development. Due to the unique challenges that these children face, this group of children were analyzed separately.

### Demographic Profile

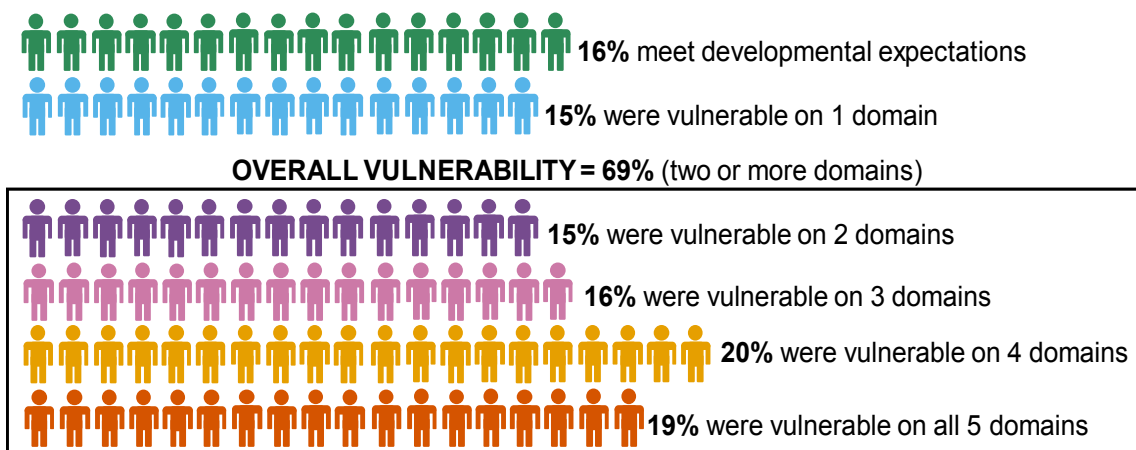
In Toronto, there were 839 special needs students included in the 2015 EDI cohort. If this cohort were reduced to 100 children...

- 26** would be girls and **74** would be boys.
- 11** would be enrolled in English Language Learner programs, and  
**1** would participate in a French as a Second Language program.
- 5** would be enrolled French immersion programs.
- 63** would be receiving school-based supports.
- 48** would be currently receiving further assessment for school-based supports.
- 28** would be on the wait list to receive further assessment for school-based supports.
- 44** would be identified by teachers as needing further assessment for school-based supports.

## Results

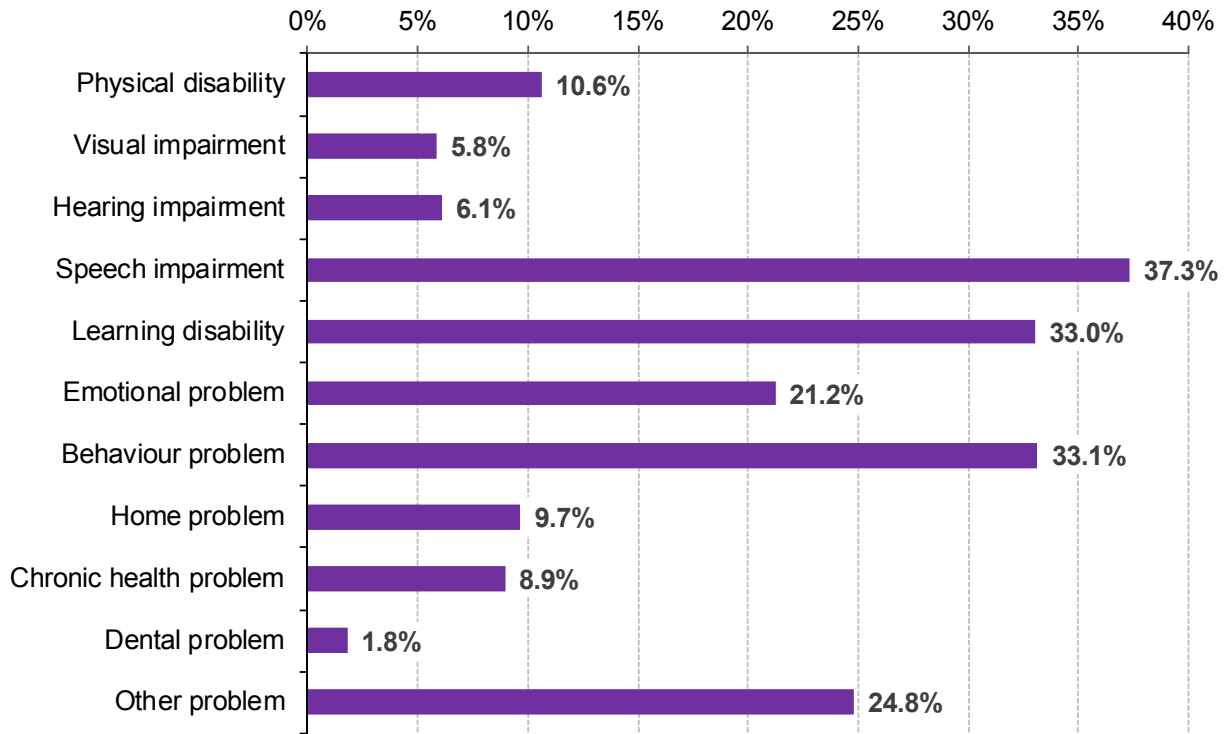
Overall vulnerability is much higher in the special needs cohort. In Toronto in 2015, 68.8% of special needs children were vulnerable on two or more domains compared to 13.6% for children without special needs. In addition, special needs children were more likely to be vulnerable on multiple domains. Figure 8 provides an overview of the percent of children who are vulnerable by number of domains.

**Figure 8: Percent Vulnerable in Toronto, 2015**



The EDI also provides information about the type of special needs that children face. Children in the special needs cohort often face a combination of challenges, which makes the needs for specialized services and supports important. Figure 9 provides an overview of the special needs faced by children in Toronto in 2015.

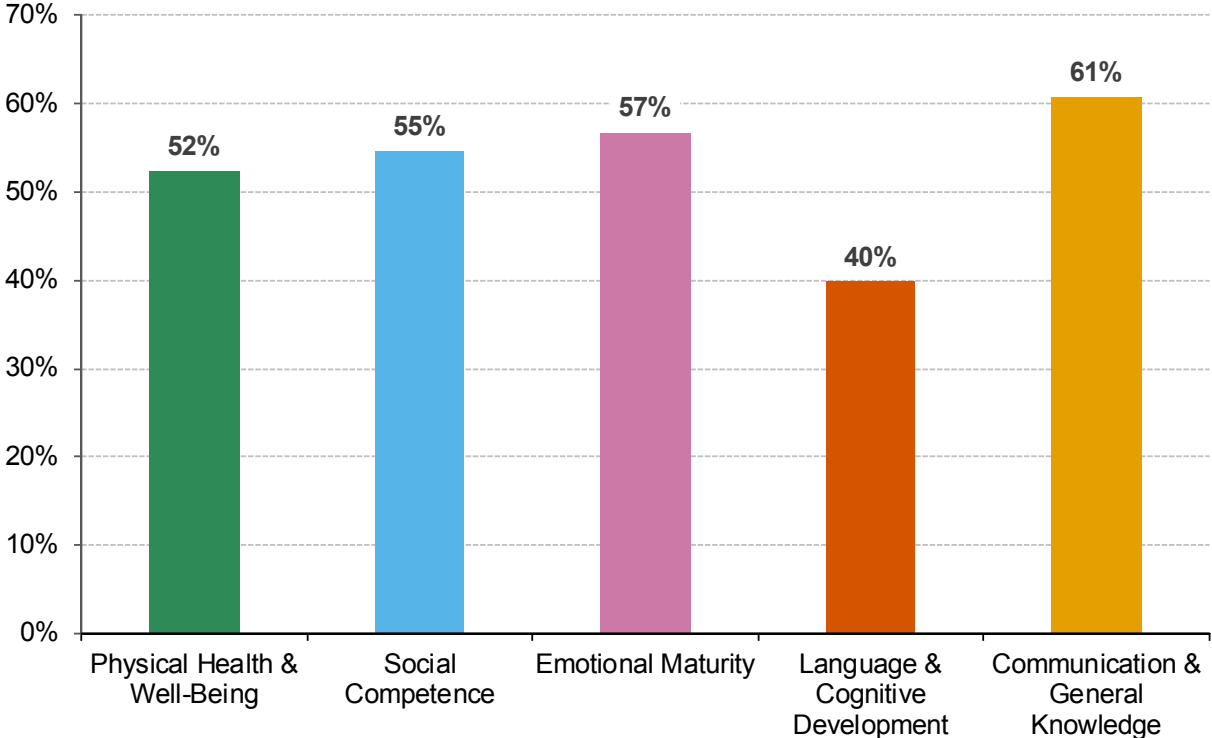
**Figure 9: Percent Children by Type of Special Needs, Senior Kindergarten Students with Identified Special Needs, Toronto, 2015**





Compared to children without special needs, children with special needs were more likely to be vulnerable in all 5 domains of the EDI. Figure 10 shows the percent vulnerability by domain for children with identified special need in Toronto in 2015. Children with special needs were most likely to be vulnerable in the Communication Skills and General Knowledge domain, at 60.8% in 2015. This differs from children without special needs, who were most likely to be vulnerable on the Physical Health and Development domain. Children with special needs were least likely to be vulnerable in Language and Cognitive Development compared to the other four domains. This trend was also observed for children without special needs.

**Figure 10: Percent Vulnerable by EDI domain, Senior Kindergarten Students with Special Needs, Toronto, 2015**



# Inequities in Developmental Health

In Toronto, the rate of overall vulnerability by neighbourhood ranges from 2% to 26%. In order to better understand the contextual factors that drive inequities in developmental health, this section of the report discusses the influence of individual, family, neighbourhood and community level predictors of vulnerability.

## Individual-Level Predictors

Not all children are equally as likely to be vulnerable in childhood development. In Toronto in 2015, gender, age and English or French Language Learner (EFLL) status were significant individual-level predictors.

- Male children were **twice** as likely as female children to be vulnerable on two or more domains.
- Children born later in the year (who were therefore younger at the time of EDI assessment) were significantly **more likely** to be vulnerable on two or more domains, compared to children born earlier in the year.
- Children enrolled in English or French Language Learner (EFLL) programs **were more than twice as likely** to be vulnerable on two or more domains, compared to children not enrolled in EFLL programs.

For more information about individual-level predictors, please refer to Toronto Public Health's Indicator Page on [Vulnerability in Early Childhood Development](#).

## Family-Level Predictors

Research suggests that family-level factors play an important role in predicting vulnerability in children. Children from low-income families and/or families receiving social assistance were more likely to be vulnerable in early development.<sup>5,6,8</sup> Similarly, children from families with more than four children were more likely to be vulnerable in early development.<sup>6</sup> Parental leave in the child's first year of life has also been linked to decreased vulnerability, particularly for male children.<sup>10</sup> There is also considerable evidence of the effect of maternal characteristics, such as young maternal age at birth, prenatal care, and prenatal health behaviours on developmental health outcomes in young children.<sup>6,11</sup>

## Neighbourhood-Level Predictors

Even after accounting for individual and family-level characteristics, children are not equally as likely to be vulnerable. Two children who are the same age, gender, and have the same EFLL status but live in different neighbourhoods in Toronto may not be equally as likely to be vulnerable, depending on characteristics of where these children live.

Table 2 provides an overview of the significant neighbourhood-level predictors of overall vulnerability for female, male, EFLL and non-EFLL children in Toronto. Predictors that increase overall vulnerability are denoted as 'Risk' predictors. Predictors that decrease overall vulnerability are indicated as 'Protective' factors. Predictors marked with \* had no significant association with overall vulnerability.

**Table 2: Neighbourhood-Level Predictors of Overall Vulnerability, Senior Kindergarten Students, Toronto, 2015**

Predictors	Female*	Male*	EFL**	Non-EFL**
Low Income Families <sup>i</sup>	Risk	Risk	Risk	Risk
Low Education <sup>ii</sup>	Risk	Risk	Risk	Risk
Immigrant Population <sup>iii</sup>	*	Risk	Risk	Risk
Residential Mobility <sup>iv</sup>	*	Risk	*	*
Child Participation in Public Recreation Programs <sup>v</sup>	*	Protective	*	Protective
Couple Families with Male Sole Income Earners <sup>vi</sup>	*	Protective	*	Protective
No Knowledge of Official Languages <sup>vii</sup>	Protective	Protective	*	Protective

\*Results are adjusted for child's age, and EFL status.

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

The percent of low income families and percent of individuals with low education were the most significant neighbourhood-level predictors of vulnerability. The percent 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 percent of individuals without knowledge of official languages was associated with protective effects for the majority, but not all groups, of children. For male and non-EFL status children, a higher percent of couple families with male sole income earners and higher rates of child participation in public recreation programs at the neighbourhood-level had protective effects.

For more information on how the neighbourhood-level predictors were assessed, please refer to the [Technical Report](#).

For more information on how the neighbourhood-level predictors differed by Toronto Public Health service delivery areas, please refer to [Appendix 2](#).

<sup>i</sup>.Proportion of families with children living below the Low Income Measure – After Tax (Taxfiler 2014a).

<sup>ii</sup>.Proportion of individuals with less than high school education (Census 2006).

<sup>iii</sup>.Proportion of individuals who were born outside of Canada (Census 2006).

<sup>iv</sup>.Proportion of individuals who moved residences in the 1-year prior (Census 2006)

<sup>v</sup>.Proportion of children aged 0 to 12 who participate in a public recreation program in 2015 (City of Toronto 2015).

<sup>vi</sup>.Proportion of couple families with employment income where female partner's contribution to employment income is 0% (Taxfiler 2014b).

<sup>vii</sup>.Proportion of individuals who do not speak English or French (Census 2006).

## Implications

The results of the data analysis for inequities in child developmental health have several implications for improvement at a population level.

There is a strong relationship between individual-level predictors and vulnerability outcomes. Research has also shown that family-level predictors also play an important role in developmental health outcomes. However, data about the families children live in is not available in the EDI. While there are some instances of rich data collection about families and caregivers, there are currently no population-based sources for all of Toronto.<sup>12,13</sup> In the absence of more individual or family-level data, neighbourhood-level predictors can help to explain the inequities in developmental health seen across Toronto.

Socio-economic status of neighbourhoods was consistently the strongest predictor of overall vulnerability. Higher rates of low income families and higher proportions of individuals with less than a high school education were significantly associated with increases in vulnerability. The effects of poverty on child health and high rates of child poverty in Toronto have been well documented.<sup>14,15</sup> Income-based data is used routinely in surveillance, planning and policy at the City of Toronto. In order to improve developmental health outcomes, data on neighbourhood-level education, which was a significant independent predictor of vulnerability, should be further incorporated.

Residential mobility, or the proportion of individuals who had moved in the previous year, was a significant predictor of overall vulnerability in male children. Residential instability in large urban cities is often linked to educational and family instability, as well as a lack of affordable housing and social cohesion.<sup>16</sup> Identifying neighbourhoods in Toronto with higher rates of residential mobility and providing targeted services to these communities may help to improve vulnerability in male children.

The relationship between language, ethnicity and vulnerability at the neighborhood level is complicated. The proportion of individuals born outside Canada was a significant predictor of increased overall vulnerability for all groups except female children. However, the proportion of individuals with no knowledge of English or French was a largely protective factor for all groups except EFLL status children. This may suggest while EFLL status is a strong predictor of vulnerability at the individual-level, the effect of these neighbourhood-level predictors on vulnerability in Toronto is inconclusive. It may be most appropriate to target outreach to individual children and families with newcomer needs, rather than towards neighbourhoods with historically more immigrant or minority populations.

Neighbourhoods where more children participated in public recreation programs had better outcomes for male and non-EFLL status children. For male children who are more likely to be vulnerable, public recreation programs, including the free and low-cost programs offered by the City of Toronto, are especially important community-level predictors. Further analysis to understand why the same effect was not observed for female and EFLL status children may be warranted.

Finally, neighbourhoods with a higher percent of couple families with male sole income earners had better outcomes for male and non-EFLL status children. This finding was similar to results to a study using EDI results from British Columbia.<sup>17</sup> The researchers suggest this result could be attributed to a larger share of families where female partners remain at home performing unpaid work such as child care and other unpaid activities that can increase social capital and community well-being like volunteering. Thus, living in these neighbourhoods has protective effects for all children, even if all families do not have a similar child care arrangement. While high quality individual-level data on child care arrangements is not available in Toronto, this finding highlights the importance of child care arrangements in influencing developmental health. It should also be noted that this predictor is not able to separate out families where female partners are unemployed not by choice. It also does not capture same-sex couple families.

This report builds on the work that the Toronto Child and Family Network has done to contextualize factors that impact outcomes for children and families. One example of this is the [The Child and Families Inequities Score](#), a useful planning tool designed to help explain the variation in socio-economic barriers across the City of Toronto neighbourhoods. For more information on outcomes and indicators for children, visit the [Raising the Village website](#).

## Relevance

Previous reports by Toronto Public Health, such as [The Unequal City 2015: Income and Health Inequities in Toronto](#) and [The Global City: Newcomer Health in Toronto](#) have demonstrated that not all residents have equal opportunities to be healthy. The findings of this report further suggest that not all children in Toronto are equally likely to experience healthy development. Moreover, understanding individual-level predictors is not enough to reduce inequities in developmental health. Information about contextual factors, such as the neighbourhood-level predictors identified in this report, can help inform programs and policies that aim to reduce vulnerability.

Toronto Public Health is committed to reducing health inequities and improving the health of the whole population. Providing young children and their parents the best opportunities for healthy development is a key "upstream" strategy to achieve this goal. Incorporating evidence such as that provided in this report, is a foundational principle upon which to design programs and healthy public policies that seek to enhance those opportunities.

# Data Sources

## Primary Data Source

- **Early Development Instrument:** Offord Centre for Child Studies, McMaster University. 2005, 2008, 2011, 2015.

## Secondary Data Sources

- **City of Toronto 2015:** Parks, Forestry & Recreation, City of Toronto. Geocoded Registration Data. 2015.
- **Census 2006:** Statistics Canada. Canada Census. 2006.
- **Taxfiler 2014a:** Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-18. 2014.
- **Taxfiler 2014b:** Statistics Canada. Income Estimates for Census Families and Individuals (T1 Family File), Table F-14A. 2014.

## Data Notes

- The Early Development Instrument (EDI) is a population-based tool that measures vulnerability in early childhood development. The EDI is a 103-item questionnaire completed by Senior Kindergarten teachers that measures a child's ability to meet age-appropriate developmental expectations. The EDI is used to monitor healthy childhood development over time and to assess areas where children and families may benefit from additional supports and services.
- The EDI is a valid and reliable measure of early development created by the Offord Centre for Child Studies at McMaster University. For more information about the validity and reliability of this tool, please visit the [Offord Centre's website](#).
- The EDI includes all children in Ontario publicly funded schools. It does not include children who attend privately funded schools. Rates of vulnerability provided in Appendix 1 may be impacted in neighbourhoods where a larger proportion of children attend private educational institutions. Children who were unable to be linked to provincial records, were in class for less than one month or were missing information for more than one domain (approximately 3.6% in 2015) were excluded from this analysis.
- Children with special needs included those identified by the Ministry of Education as having identified special needs. Children with special needs (approximately 3.4% in 2015) were analyzed separately because the developmental expectations for this group of children are not the same as for the general population.
- Significant differences were estimated using overlapping confidence intervals. Confidence intervals were calculated using a Poisson approximation of the binomial distribution. Although this method is conservative ( $\alpha \sim < 0.01$ ) and most appropriate when comparing mutually exclusive groups, it was chosen as an objective means of making

conclusions on population-based data. Multiple comparisons performed in the analysis were not taken into consideration when choosing the level of significance to test.

- For analysis of smaller geographic areas, any child who could not be linked to a valid Toronto postal code was excluded.
- Neighbourhoods with less than 35 children with completed EDI questionnaires were suppressed for privacy concerns. These neighbourhoods are denoted as 'Data Unavailable' on the maps.
- Neighbourhood Improvement Areas (NIAs) are denoted on all maps. For more information on NIAs, please see the [City of Toronto NIA Profiles](#).

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## APPENDIX 1 – Vulnerability by Neighbourhood

**Table 3: Percent of overall Vulnerability and Percent Vulnerable on each Domain by Neighbourhood, Senior Kindergarten Students, Toronto, 2015**

	Neighbourhood	Overall Vulnerability*	Physical Health and Well-Being	Social Competence	Emotional Maturity	Language and Cognitive Development	Communication Skills and General Knowledge
1	West Humber-Clairville	15.3%	15.9%	11.2%	9.7%	9.7%	13.6%
2	Mount Olive-Silverstone-Jamestown	19.5%	16.0%	14.4%	10.7%	10.2%	17.4%
3	Thistletown-Beaumont Heights	16.0%	12.3%	13.2%	6.6%	7.5%	16.0%
4	Rexdale-Kipling	7.9%	7.9%	5.3%	5.3%	7.9%	6.6%
5	Elms-Old Rexdale	9.8%	7.6%	7.6%	8.7%	6.5%	5.4%
6	Kingsview Village-The Westway	15.6%	14.0%	9.9%	9.1%	11.5%	18.5%
7	Willowridge-Martingrove-Richview	14.7%	13.6%	11.9%	8.5%	9.0%	9.6%
8	Humber Heights-Westmount	9.7%	11.1%	4.2%	4.2%	8.3%	11.1%
9	Edenbridge-Humber Valley	7.0%	9.6%	5.3%	9.6%	2.6%	5.3%
10	Princess-Rosethorn	4.7%	4.7%	3.5%	7.0%	1.2%	3.5%
11	Eringate-Centennial-West Deane	11.0%	9.6%	5.5%	8.9%	6.2%	7.5%
12	Markland Wood	8.1%	5.4%	6.8%	13.5%	2.7%	4.1%
13	Etobicoke West Mall	19.0%	16.2%	12.4%	16.2%	9.5%	16.2%
14	Islington-City Centre West	14.2%	13.6%	9.1%	12.7%	6.4%	12.7%
15	Kingsway South	4.8%	9.6%	2.4%	7.2%	3.6%	7.2%
16	Stonegate-Queensway	7.5%	7.9%	4.5%	9.4%	6.0%	9.1%
17	Mimico (includes Humber Bay Shores)	13.8%	15.9%	7.2%	11.3%	6.7%	9.2%
18	New Toronto	10.4%	16.7%	7.3%	10.4%	4.2%	5.2%
19	Long Branch	9.2%	13.2%	10.5%	13.2%	2.6%	7.9%
20	Alderwood	12.6%	13.5%	6.3%	11.7%	5.4%	11.7%
21	Humber Summit	9.8%	11.3%	3.8%	8.3%	8.3%	10.5%
22	Humbermede	15.1%	17.1%	13.1%	11.1%	7.0%	17.6%
23	Pelmo Park-Humberlea	14.0%	13.0%	11.0%	12.0%	8.0%	12.0%

	<b>Neighbourhood</b>	<b>Overall Vulnerability*</b>	<b>Physical Health and Well-Being</b>	<b>Social Competence</b>	<b>Emotional Maturity</b>	<b>Language and Cognitive Development</b>	<b>Communication Skills and General Knowledge</b>
24	Black Creek	19.3%	21.6%	9.8%	12.5%	10.8%	15.2%
25	Glenfield-Jane Heights	20.8%	19.0%	14.5%	14.0%	10.3%	17.0%
26	Downsview-Roding-CFB	15.5%	15.3%	9.9%	11.9%	7.6%	11.9%
27	York University Heights	24.1%	27.3%	20.2%	14.2%	10.7%	18.2%
28	Rustic	13.1%	16.8%	7.5%	9.3%	8.4%	5.6%
29	Maple Leaf	9.0%	9.0%	7.0%	8.0%	3.0%	9.0%
30	Brookhaven-Amesbury	13.6%	21.1%	7.5%	14.1%	7.5%	12.7%
31	Yorkdale-Glen Park	19.3%	27.5%	11.9%	16.5%	8.3%	13.8%
32	Englemount-Lawrence	24.6%	22.5%	20.4%	16.9%	14.1%	17.6%
33	Clanton Park	9.7%	13.3%	9.7%	10.6%	0.0%	9.7%
34	Bathurst Manor	14.0%	16.7%	10.5%	7.9%	8.8%	8.8%
35	Westminster-Branson	16.5%	18.8%	11.4%	14.2%	6.3%	13.6%
36	Newtonbrook West	15.2%	8.3%	12.9%	9.8%	7.6%	12.9%
37	Willowdale West	9.3%	7.0%	5.8%	8.1%	5.8%	4.7%
38	Lansing-Westgate	11.2%	9.6%	8.8%	6.4%	3.2%	11.2%
39	Bedford Park-Nortown	9.8%	8.1%	7.3%	10.6%	4.9%	6.5%
40	St.Andrew-Windfields	13.1%	11.5%	10.7%	9.8%	7.4%	11.5%
41	Bridle Path-Sunnybrook-York Mills	17.4%	13.0%	15.2%	15.2%	4.3%	8.7%
42	Banbury-Don Mills	9.0%	19.2%	5.8%	11.5%	3.8%	11.5%
43	Victoria Village	14.1%	16.2%	10.6%	11.3%	7.7%	14.8%
44	Flemingdon Park	22.8%	24.8%	13.4%	14.2%	13.0%	23.2%
45	Parkwoods-Donalda	15.8%	16.1%	11.0%	15.5%	8.1%	10.6%
46	Pleasant View	9.9%	5.3%	5.3%	5.3%	7.6%	10.7%
47	Don Valley Village	15.0%	12.4%	9.0%	14.5%	9.8%	11.5%
48	Hillcrest Village	18.0%	15.0%	18.0%	12.0%	8.3%	16.5%
49	Bayview Woods-Steeles	24.4%	19.8%	18.6%	17.4%	8.1%	14.0%
50	Newtonbrook East	12.9%	9.9%	7.9%	10.9%	6.9%	11.9%
51	Willowdale East	12.0%	8.0%	10.0%	12.8%	5.6%	10.8%
52	Bayview Village	13.4%	10.9%	11.8%	9.2%	7.6%	9.2%
53	Henry Farm	8.7%	14.5%	3.6%	5.1%	8.0%	7.2%
54	O'Connor-Parkview	9.8%	14.0%	6.7%	11.6%	4.9%	6.1%
55	Thornccliffe Park	14.2%	21.1%	6.5%	7.4%	6.5%	13.4%

	<b>Neighbourhood</b>	<b>Overall Vulnerability*</b>	<b>Physical Health and Well-Being</b>	<b>Social Competence</b>	<b>Emotional Maturity</b>	<b>Language and Cognitive Development</b>	<b>Communication Skills and General Knowledge</b>
56	Leaside-Bennington	13.3%	13.8%	9.0%	11.7%	6.9%	6.4%
57	Broadview North	22.2%	12.3%	17.3%	8.6%	12.3%	23.5%
58	Old East York	9.5%	11.6%	5.3%	7.4%	7.4%	9.5%
59	Danforth Village - East York	11.6%	10.1%	8.7%	12.6%	4.8%	9.7%
60	Woodbine-Lumsden	4.9%	9.8%	4.9%	3.3%	3.3%	1.6%
61	Taylor-Massey	16.9%	15.4%	11.9%	11.9%	8.0%	13.9%
62	East End Danforth	13.6%	17.2%	5.0%	7.2%	6.3%	11.8%
63	The Beaches	7.9%	10.7%	4.1%	11.6%	3.7%	6.2%
64	Woodbine Corridor	10.3%	10.9%	8.3%	6.4%	1.9%	8.3%
65	Greenwood-Coxwell	5.9%	7.8%	4.6%	3.9%	5.2%	5.9%
66	Danforth	7.1%	5.4%	7.1%	5.4%	5.4%	6.3%
67	Playter Estates-Danforth	3.1%	4.6%	0.0%	1.5%	1.5%	6.2%
68	North Riverdale	12.9%	8.1%	9.7%	7.3%	3.2%	7.3%
69	Blake-Jones	18.0%	21.3%	12.4%	6.7%	9.0%	16.9%
70	South Riverdale	7.6%	8.8%	2.5%	8.4%	3.4%	6.3%
71	Cabbagetown-South St. James Town	13.3%	15.0%	8.3%	8.3%	6.7%	3.3%
72	Regent Park	10.8%	14.5%	9.6%	10.8%	3.6%	14.5%
73	Moss Park	19.2%	19.2%	13.7%	15.1%	16.4%	11.0%
74	North St. James Town	16.2%	19.2%	10.0%	10.0%	6.9%	15.4%
75	Church-Yonge Corridor	11.3%	22.6%	5.7%	11.3%	0.0%	15.1%
76	Bay Street Corridor	19.4%	26.4%	8.3%	16.7%	6.9%	12.5%
77	Waterfront Communities-The Island	17.8%	26.4%	10.9%	16.1%	6.3%	7.5%
78	Kensington-Chinatown	25.9%	19.8%	16.0%	23.5%	16.0%	21.0%
79	University	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable
80	Palmerston-Little Italy	11.0%	7.7%	6.6%	12.1%	5.5%	7.7%
81	Trinity-Bellwoods	10.0%	13.0%	8.0%	10.0%	6.0%	6.0%
82	Niagara	13.6%	17.3%	9.9%	13.6%	7.4%	12.3%
83	Dufferin Grove	18.5%	17.3%	14.8%	16.0%	7.4%	12.3%
84	Little Portugal	10.9%	18.5%	6.5%	13.0%	6.5%	14.1%
85	South Parkdale	17.5%	20.6%	7.2%	13.4%	3.1%	11.3%
86	Roncesvalles	6.0%	14.8%	5.4%	7.4%	4.7%	7.4%
87	High Park-Swansea	5.9%	8.9%	4.9%	6.9%	3.0%	5.4%

	<b>Neighbourhood</b>	<b>Overall Vulnerability*</b>	<b>Physical Health and Well-Being</b>	<b>Social Competence</b>	<b>Emotional Maturity</b>	<b>Language and Cognitive Development</b>	<b>Communication Skills and General Knowledge</b>
88	High Park North	7.1%	11.5%	4.4%	6.0%	6.0%	7.1%
89	Runnymede-Bloor West Village	4.4%	0.9%	5.3%	5.3%	1.8%	3.5%
90	Junction	7.6%	6.8%	5.9%	11.0%	5.1%	5.1%
91	Weston-Pellam Park	20.5%	18.9%	16.4%	16.4%	9.0%	10.7%
92	Corso Italia-Davenport	14.8%	14.8%	11.3%	14.8%	7.8%	9.6%
93	Dovercourt-Wallace Emerson-Junction	19.3%	16.8%	14.0%	15.4%	9.8%	14.4%
94	Wychwood	7.0%	12.0%	5.0%	9.0%	3.0%	6.0%
95	Annex	5.1%	11.1%	2.0%	3.0%	3.0%	7.1%
96	Casa Loma	8.7%	2.2%	6.5%	19.6%	6.5%	2.2%
97	Yonge-St.Clair	8.3%	11.7%	8.3%	8.3%	5.0%	6.7%
98	Rosedale-Moore Park	9.8%	10.7%	6.6%	9.0%	4.9%	6.6%
99	Mount Pleasant East	10.2%	12.5%	8.0%	9.1%	3.4%	8.0%
100	Yonge-Eglinton	2.3%	2.3%	3.5%	7.0%	0.0%	4.7%
101	Forest Hill South	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable
102	Forest Hill North	11.1%	13.3%	6.7%	12.2%	5.6%	18.9%
103	Lawrence Park South	6.2%	5.4%	3.8%	8.5%	1.5%	6.2%
104	Mount Pleasant West	10.2%	11.7%	6.3%	10.9%	3.9%	8.6%
105	Lawrence Park North	7.6%	4.3%	7.0%	9.7%	4.9%	4.9%
106	Humewood-Cedarvale	12.2%	13.3%	9.2%	18.4%	2.0%	10.2%
107	Oakwood Village	15.1%	14.5%	10.2%	10.8%	9.1%	9.1%
108	Briar Hill-Belgravia	11.3%	9.6%	10.4%	8.7%	3.5%	7.0%
109	Caledonia - Fairbank	11.7%	6.3%	9.9%	7.2%	7.2%	11.7%
110	Keelestone-Eglinton West	19.6%	22.4%	15.9%	10.3%	9.3%	15.9%
111	Rockcliffe-Smythe	15.9%	15.4%	8.5%	13.8%	9.8%	13.0%
112	Beechborough-Greenbrook	19.1%	14.7%	17.6%	16.2%	11.8%	13.2%
113	Weston	15.1%	21.7%	11.3%	14.2%	4.7%	9.0%
114	Lambton-Baby Point	14.2%	22.6%	8.5%	16.0%	1.9%	3.8%
115	Mount Dennis	21.2%	15.4%	12.2%	14.7%	9.6%	16.7%
116	Steeles	10.6%	8.4%	7.0%	8.4%	4.4%	11.5%
117	L'Amoureux	12.1%	15.8%	5.7%	6.6%	9.2%	14.9%
118	Tam O'Shanter-Sullivan	12.9%	11.2%	10.3%	12.1%	4.3%	11.2%
119	Wexford/Maryvale	12.0%	11.2%	9.6%	7.6%	8.0%	12.9%

	Neighbourhood	Overall Vulnerability*	Physical Health and Well-Being	Social Competence	Emotional Maturity	Language and Cognitive Development	Communication Skills and General Knowledge
120	Clairlea-Birchmount	10.9%	13.5%	8.3%	6.8%	6.8%	12.4%
121	Oakridge	12.0%	16.2%	7.2%	9.0%	5.4%	12.0%
122	Birchcliffe-Cliffside	13.6%	9.0%	13.1%	11.1%	3.5%	8.0%
123	Cliffcrest	18.2%	21.9%	13.9%	10.9%	5.8%	10.9%
124	Kennedy Park	7.8%	15.0%	4.6%	7.8%	8.5%	7.2%
125	Ionview	8.7%	10.7%	10.7%	5.4%	4.7%	10.7%
126	Dorset Park	16.8%	25.4%	8.6%	7.3%	4.7%	16.4%
127	Bendale	16.6%	19.4%	11.1%	11.5%	10.1%	15.2%
128	Agincourt South-Malvern West	17.8%	18.3%	13.4%	11.9%	7.9%	13.4%
129	Agincourt North	12.3%	11.0%	9.7%	10.1%	4.8%	16.7%
130	Milliken	11.4%	12.2%	8.7%	9.4%	5.1%	14.6%
131	Rouge	13.4%	15.6%	10.9%	7.1%	9.1%	10.9%
132	Malvern	11.1%	12.4%	9.3%	8.5%	6.1%	10.0%
133	Centennial Scarborough	10.4%	8.5%	6.6%	10.4%	3.8%	14.2%
134	Highland Creek	14.8%	14.8%	12.3%	13.6%	8.6%	9.9%
135	Morningside	11.4%	14.1%	7.6%	9.7%	3.2%	12.4%
136	West Hill	19.4%	23.6%	13.7%	13.7%	7.7%	13.7%
137	Woburn	15.2%	19.9%	10.0%	11.7%	7.0%	13.9%
138	Eglinton East	20.3%	23.0%	13.8%	14.9%	10.7%	12.6%
139	Scarborough Village	19.5%	21.5%	14.5%	13.0%	9.0%	12.5%
140	Guildwood	10.7%	15.5%	6.0%	17.9%	2.4%	6.0%
	Toronto Overall	13.6%	14.7%	9.5%	10.7%	6.8%	11.5%

#### Data Notes:

- Overall vulnerability refers to the percent of children who were vulnerable on two or more domains of the Early Development Instrument.
- Neighbourhoods with less than 35 children were suppressed for privacy concerns. The results for these neighbourhoods are denoted as 'Unavailable'.
- Children with identified special needs were excluded from this table.

## APPENDIX 2 – Service Delivery Areas

The following section contains data relevant to the six Toronto Public Health Child Health & Development service delivery areas (SDAs). Information on these pages excludes children with identified special needs. Table A shows the percent of overall vulnerability (vulnerable on two or more domains) for Toronto as a whole and the specific SDA. Table B shows the percent of children who were vulnerable on each domain of the EDI.

Table C provides the significant predictors of overall vulnerability. Predictors that increase overall vulnerability are denoted as 'Risk' predictors. Predictors that decrease overall vulnerability are indicated as 'Protective' factors. Predictors marked with \* had no significant association with overall vulnerability. For more information, please refer to the [Technical Report](#).

### West Service Delivery Area

**Table A1: Percent of Overall Vulnerability, Kindergarten Students, Toronto and West SDA, 2015**

	Toronto Overall	West SDA
Overall Vulnerability	13.6%	13.0%

**Table B1: Percent Vulnerable by Domain, Kindergarten Students, Toronto and West SDA, 2015**

Domain	Toronto Overall	West SDA
Physical Health & Development	14.7%	13.4%
Social Competence	9.5%	8.9%
Emotional Maturity	10.7%	10.3%
Language and Cognitive Development	6.8%	7.1%
Communication Skills and General Knowledge	11.5%	11.4%

**Table C1: Neighbourhood-Level Predictors of Overall Vulnerability, Kindergarten Students, West SDA, 2015**

Predictors	Female*	Male*	EFLL**	Non-EFLL**
Percent Low Income Families	*	<b>Risk</b>	*	<b>Risk</b>
Percent Low Education	*	*	*	*
Immigrant Population	*	*	*	<b>Risk</b>
Residential Mobility	*	*	*	*
Child Participation in Public Recreation Programs	*	<b>Protective</b>	*	*
Percent of Couple Families with Male Sole Income Earners	*	<b>Protective</b>	*	<b>Protective</b>
Percent No Knowledge of Official Languages	*	*	*	*

\* Results are adjusted for child's age, and English/French Language Learner (EFLL) status.

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

## Northwest Service Delivery Area (SDA)

**Table A2: Percent of Overall Vulnerability, Kindergarten Students, Toronto and Northwest SDA, 2015**

	Toronto Overall	Northwest SDA
Overall Vulnerability	13.6%	16.8%

**Table B2: Percent of Overall Vulnerability, Kindergarten Students, Toronto and Northwest SDA, 2015**

Domain	Toronto Overall	Northwest SDA
Physical Health & Development	14.7%	17.0%
Social Competence	9.5%	11.9%
Emotional Maturity	10.7%	12.5%
Language and Cognitive Development	6.8%	8.1%
Communication Skills and General Knowledge	11.5%	12.9%

**Table C2: Neighbourhood-Level Predictors of Overall Vulnerability, Kindergarten Students, Northwest SDA, 2015**

Predictors	Female*	Male*	EFLL**	Non-EFLL**
Percent Low Income Families	✖	✖	✖	✖
Percent Low Education	✖	✖	✖	✖
Immigrant Population	✖	✖	✖	✖
Residential Mobility	✖	<b>Risk</b>	✖	✖
Child Participation in Public Recreation Programs	✖	✖	✖	✖
Percent Couple Families with Male Sole Income Earners	✖	✖	✖	✖
Percent with No Knowledge of Official Languages	✖	✖	✖	✖

\*Results are adjusted for child's age, and English/French Language Learner (EFLL) status.

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



## Southwest Service Delivery Area (SDA)

**Table A3: Percent of Overall Vulnerability, Kindergarten Students, Toronto and Southwest SDA, 2015**

	Toronto Overall	Southwest SDA
Overall Vulnerability	13.6%	12.6%

**Table B3: Percent Vulnerability by Domain, Kindergarten Students, Toronto and Southwest SDA 2015**

Domain	Toronto Overall	Northwest SDA
Physical Health & Development	14.7%	15.0%
Social Competence	9.5%	8.4%
Emotional Maturity	10.7%	11.8%
Language and Cognitive Development	6.8%	6.3%
Communication Skills and General Knowledge	11.5%	9.5%

**Table C3: Neighbourhood-Level Predictors of Overall Vulnerability, Kindergarten Students, Southwest SDA, 2015**

Predictors	Female*	Male*	EFLL**	Non-EFLL**
Percent Low Income Families	*	*	Risk	*
Percent Low Education	*	*	*	*
Immigrant Population	*	*	*	*
Residential Mobility	*	Risk	*	Risk
Child Participation in Public Recreation Programs	*	*	*	*
Percent Couple Families with Male Sole Income Earners	*	*	*	*
Percent with No Knowledge of Official Languages	*	*	*	*

\*Results are adjusted for child's age, and English/French Language Learner (EFLL) status.

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

## Northeast Service Delivery Area (SDA)

**Table A4: Percent of Overall Vulnerability, Kindergarten Students, Toronto and Northeast SDA, 2015**

	Toronto Overall	Northeast SDA
Overall Vulnerability	13.6%	12.3%

**Table B4: Percent Vulnerability by Domain, Kindergarten Students, Toronto and Northwest SDA, 2015**

Domain	Toronto Overall	Northeast SDA
Physical Health & Development	14.7%	12.4%
Social Competence	9.5%	8.7%
Emotional Maturity	10.7%	10.5%
Language and Cognitive Development	6.8%	6.4%
Communication Skills and General Knowledge	11.5%	10.9%

**Table C4: Neighbourhood-Level Predictors of Overall Vulnerability, Kindergarten Students, Northeast SDA, 2015**

Predictors	Female*	Male*	EFLL**	Non-EFLL**
Percent Low Income Families	*	*	*	<b>Risk</b>
Percent Low Education	<b>Risk</b>	*	<b>Risk</b>	*
Immigrant Population	*	*	*	*
Residential Mobility	*	*	*	*
Child Participation in Public Recreation Programs	*	*	*	*
Percent Couple Families with Male Sole Income Earners	*	*	*	*
Percent with No Knowledge of Official Languages	<b>Protective</b>	*	*	*

\*Results are adjusted for child's age, and English/French Language Learner (EFLL) status.

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

## Southeast Service Delivery Area (SDA)

**Table A5: Percent of Overall Vulnerability, Kindergarten Students, Toronto and Southeast SDA, 2015**

	Toronto Overall	Southeast SDA
Overall Vulnerability	13.6%	11.8%

**Table B5: Percent Vulnerability by Domain, Kindergarten Students, Toronto and Southeast SDA, 2015**

Domain	Toronto Overall	Southeast SDA
Physical Health & Development	14.7%	13.5%
Social Competence	9.5%	7.3%
Emotional Maturity	10.7%	8.5%
Language and Cognitive Development	6.8%	5.7%
Communication Skills and General Knowledge	11.5%	10.7%

**Table C5: Neighbourhood-Level Predictors of Overall Vulnerability, Kindergarten Students, Southeast SDA, 2015**

Predictors	Female*	Male*	EFLL**	Non-EFLL**
Percent Low Income Families	<b>Risk</b>	<b>Risk</b>	<b>Risk</b>	<b>Risk</b>
Percent Low Education	*	*	<b>Risk</b>	*
Immigrant Population	*	<b>Risk</b>	*	*
Residential Mobility	*	*	*	*
Child Participation in Public Recreation Programs	*	*	*	*
Percent Couple Families with Male Sole Income Earners	*	<b>Protective</b>	<b>Protective</b>	*
Percent with No Knowledge of Official Languages	*	*	*	*

\*Results are adjusted for child's age, and English/French Language Learner (EFLL) status.

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

## East Service Delivery Area (SDA)

**Table A6: Percent of Overall Vulnerability, Kindergarten Students, Toronto and East SDA, 2015**

	Toronto Overall	East SDA
Overall Vulnerability	13.6%	14.4%

**Table B6: Percent Vulnerable by Domain, Kindergarten Students, Toronto and East SDA, 2015**

Domain	Toronto Overall	East SDA
Physical Health & Development	14.7%	16.7%
Social Competence	9.5%	10.8%
Emotional Maturity	10.7%	10.6%
Language and Cognitive Development	6.8%	7.0%
Communication Skills and General Knowledge	11.5%	12.3%

**Table C6: Neighbourhood-Level Predictors of Overall Vulnerability, Kindergarten Students, East SDA, 2015**

Predictors	Female*	Male*	EFLL**	Non-EFLL**
Percent Low Income Families	<b>Risk</b>	*	*	*
Percent Low Education	*	*	*	*
Immigrant Population	*	*	*	*
Residential Mobility	*	*	*	*
Child Participation in Public Recreation Programs	*	*	*	*
Percent Couple Families with Male Sole Income Earners	*	*	*	*
Percent with No Knowledge of Official Languages	<b>Protective</b>	*	*	*

\*Results are adjusted for child's age, and English/French Language Learner (EFLL) status.

\*\*Results are adjusted for child's age, and gender