



Early Development Instrument Halton Community Profile

2003 to 2018 Results



Physical Health
and Well-Being



Social
Competence



Emotional
Maturity



Language
and Cognitive
Development



Communication
Skills and General
Knowledge

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Our Kids Network and the Early Development Instrument (EDI) Report

Our Kids Network (OKN) is a Halton-wide partnership of organizations and agencies serving children and youth. Partners from education, government, health, mental health and special needs, police services and the multicultural community guide our vision, strategy, planning and activities.

As a collective impact network, OKN builds capacity of community organizations that support children, youth and their families. We play an active role in encouraging everyone to invest in

children, youth and families because we believe the entire Halton community shares responsibility for helping children and youth thrive.

OKN mobilizes knowledge to strengthen communities and improve life for families and children. We established seven fundamental conditions of high quality of life (Halton 7), and we use these goals to work collectively and to measure progress. For more information about the Halton 7 Population Results, visit www.ourkidsnetwork.ca/Research.

Measuring Progress with the Early Development Instrument (EDI)

The developmental health (skills and behaviour) of children at school entry is associated with ongoing success in school and has long-term consequences for individuals and populations. Developmental health is a holistic concept and includes children's physical, social, emotional, language and cognitive skills. Monitoring developmental health using the EDI allows communities to develop strategies to foster healthy child development.



The EDI is a Population-Based Tool Used to Assess Children's Development in Five Key Domains

Five domains of the EDI and examples of some of the skills and behaviours associated with each domain¹.



Physical Health and Well-Being

A child doing well is physically ready for a new day at school, is generally independent, and has excellent motor skills.

A child doing poorly has inadequate fine and gross motor skills, is sometimes tired or hungry, is usually clumsy, and may have fading energy levels.

Sample EDI question: Would you say that this child is well coordinated (moves without running into things or tripping over things)?



Social Competence

A child doing well never or very rarely has a problem getting along, working, or playing with other children; is respectful to adults, is self-confident, and is able to follow class routines; and is capable of helping others.

A child doing poorly has poor overall social skills; does not get along with other children on a regular basis, does not accept responsibility for his or her own actions, has difficulties following rules and class routines, being respectful

of adults, children, and others' property; has low self-confidence and self-control, does not adjust well to change; and is usually unable to work independently.

Sample EDI question: Would you say that this child is able to follow one-step instructions?





Emotional Maturity

A child doing well almost never shows aggressive, anxious, or impulsive behavior; has good concentration; and often helps other children.

A child doing poorly has regular problems managing aggressive behavior; is prone to disobedience and/or is easily distracted, inattentive, and impulsive; usually does not help other children; and is sometimes upset when left by their caregiver.

Sample EDI question: Would you say that this child comforts a child who is crying or upset?



Language and Cognitive Development

A child doing well is interested in books, reading and writing, and basic math; is capable of reading and writing simple sentences and complex words; and is able to count and recognize numbers and shapes.

A child doing poorly has problems in reading/writing and with numbers; is unable to read and write simple words, is uninterested in trying, and is often unable to attach sounds to letters; has difficulty remembering things, counting to 20, and recognizing and comparing numbers; and is usually not interested in numbers.

Sample EDI question: Would you say that this child is able to read simple words?



Communication Skills and General Knowledge

A child doing well has excellent communication skills, can tell a story and communicate with both children and adults, and has no problems with articulation.

A child doing poorly has poor communication skills and articulation; has a limited command of English (or the language of instruction), has difficulties talking to others, understanding, and being understood; and has poor general knowledge.

Sample EDI question: How would you rate this child's ability to tell a story?

The EDI is a Population-Based Tool Used to Assess Children's Development in Five Key Domains

Examining the EDI by these domains helps identify developmental strengths and needs within a population of children. It can also assist in determining if and where additional resources or assistance may be required. Sharing these results with schools, communities and governments will help develop policies to support healthy child development.

The EDI is completed by kindergarten teachers in March of a child's last year of kindergarten just before entering grade 1. In all six cycles of implementation (2003 – 2018), all eligible teachers participated. All teachers participated in a half day training session prior to completing the EDI. The teachers completed an electronic version of the EDI for each child in their classroom. On average, one EDI takes about 20 minutes to complete. There is no direct assessment of children with the EDI, rather the teacher provides their observations of the child. The teacher must have at least one month of observation time before an EDI can be completed on a child.

The reliability and validity of the EDI has been heavily researched in the past 10 years. The Offord Centre has confirmed that the EDI is a valid measure of early child development². While the EDI does have strong psychometric properties, there are limitations to the use of the EDI data. The EDI relies on self-reports from teachers which can introduce some subjective bias in the assessments leading to inconsistent reporting. The Offord Centre has introduced a detailed guide to minimize subjective interpretation. The EDI is also a point prevalence of child vulnerability which means it is a snapshot of a period of time. This may or may not accurately reflect the on-going conditions in Halton. As with most social research like this, caution should be exercised when making conclusions or interpretations regarding the data. The EDI should not be used in isolation but rather used with a mix of other indicators to confirm results.

Understanding EDI Results

Each of the five domains is scored from 0 to 10; higher scores indicate stronger developmental skills. To understand how children are doing, the scores within each of the five domains are grouped into categories representing the highest and lowest scores (See Figure 1).

Figure 1. Example Distribution of Vulnerability

< 10 th percentile Vulnerable	10 th -24 th percentile At-Risk	> 25 th percentile On Track for Success
Children whose scores fall in the vulnerable category are those who score below the <i>Developmentally Vulnerable</i> cut-point. The Developmentally Vulnerable cut-point represents the children scoring below the tenth percentile in the distribution of all scores. Children who score below this cut-point are more likely to be limited in their development on the identified		EDI domain than children who score above the cut-point, in comparison to the Ontario baseline data ³ . Longitudinal research in British Columbia has shown that increasing numbers of vulnerabilities across the five EDI domains predicts an increasing probability of failure to achieve basic competencies by grade four. This report focuses on the vulnerable category.

Description of Children Assessed with the EDI

Table 1 shows the characteristics of the children that were assessed with the EDI in 2003, 2006, 2009, 2012, 2015 and 2018. These characteristics include birth date, English as a second language (ESL), and gender. Look at

the characteristics by year for any changes in the population of children from 2003 to 2018. If there are large differences in any of these characteristics, this could explain differences in the EDI scores between the years.

Table 1. Description of children assessed with the EDI

	2003	2006	2009	2012	2015	2018
Number of children with a valid EDI Score	4,169	4,330	5,096	5,726	6,210	5,845
% of English Language Learners (ELL)	3.3%	3.1%	3.9%	8.6%	5.3%	10.7%
% of girls	49.4%	48.8%	49.5%	50.3%	49.0%	49.7%

³Typically, EDI scores in Halton and across Ontario are compared against the "Ontario baseline population". The baseline population was collected on more than 120,000 children from 2003-2006 across Ontario, and is used to establish the cut-points for the EDI.

Early Development Instrument Findings

In 2018, 28.4% of Halton children aged five years were considered Developmentally Vulnerable on one or more EDI domains. See Table 2 for detailed results.

Developmental vulnerability rate in 2018 is similar to 2015 rates, yet remains at a historical high for Halton. The 2018 vulnerability rate has stabilized to 28.4% since increasing from 23.8% in 2012 to 28.1% in 2015.

In 2018, physical health and well-being was the developmental domain with the greatest proportion of vulnerable children. The domain with the lowest rate of vulnerability was language and cognitive development.

Vulnerability rates are higher for boys, children who do not speak English or French and for those children born in the last quarter of the year.

Table 2: Percent of children vulnerable on the EDI domains in Halton

	2003*	2006	2009	2012	2015	2018
		(cycle 1)	(cycle 2)	(cycle 3)	(cycle 4)	(cycle 5)
Percent vulnerable by EDI Domain						
Physical health and well-being	8.5%	12.6%	12.2%	12.9%	15.5%	15.8%
Social competence	8.3%	7.9%	7.4%	8.1%	10.1%	9.3%
Emotional maturity	9.5%	9.1%	8.8%	8.9%	11.8%	9.3%
Language and cognitive development	9.3%	6.9%	5.7%	4.9%	5.5%	6.4%
Communication and general knowledge	7.8%	9.6%	8.6%	8.1%	9.5%	8.8%
Percent vulnerable on 1 or more EDI domains	23.8%	25.5%	23.9%	23.8%	28.1%	28.4%
Percent vulnerable on 2 or more EDI domains	11.2%	11.4%	10.4%	10.4%	13.4%	12.6%

*There was no province-wide Ontario implementation in 2003. The provincial cycles of data collection began in 2006.

Figure 2: Percent of children vulnerable on EDI by Domain

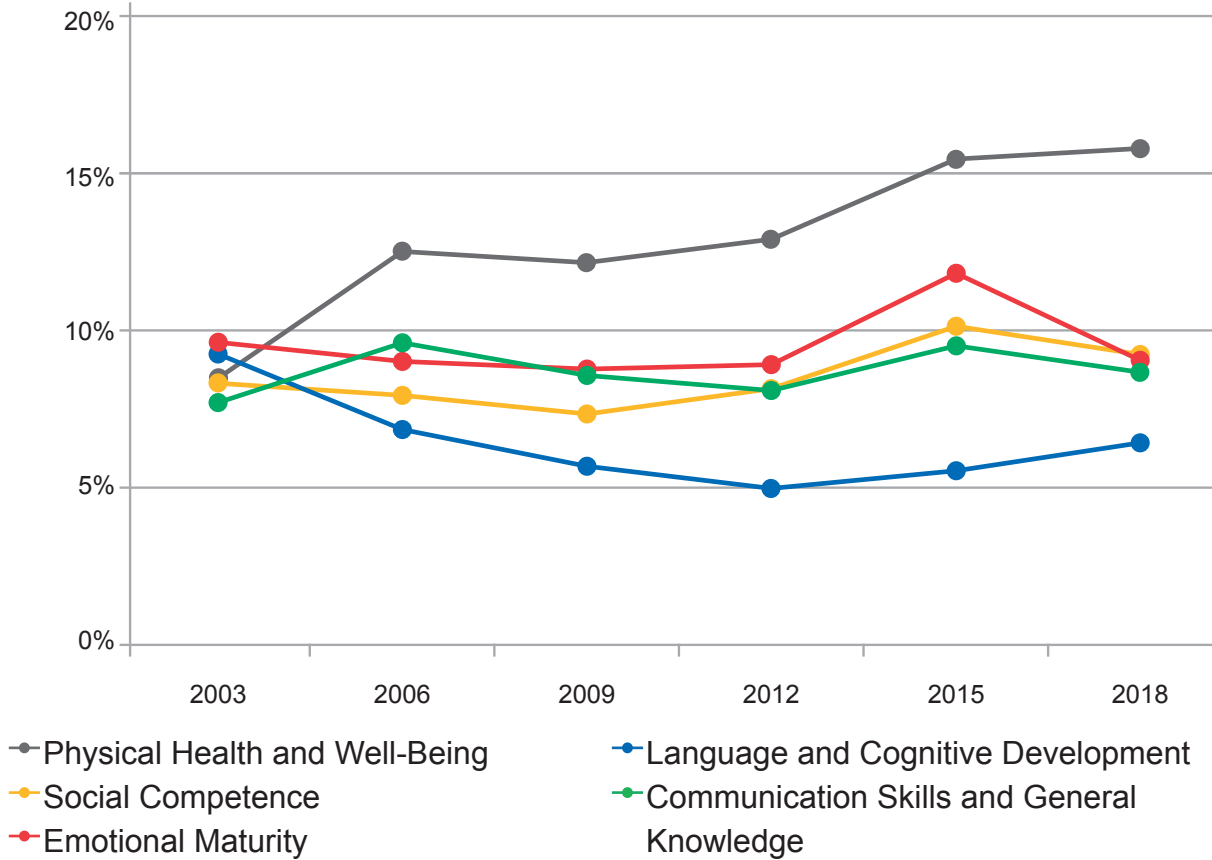
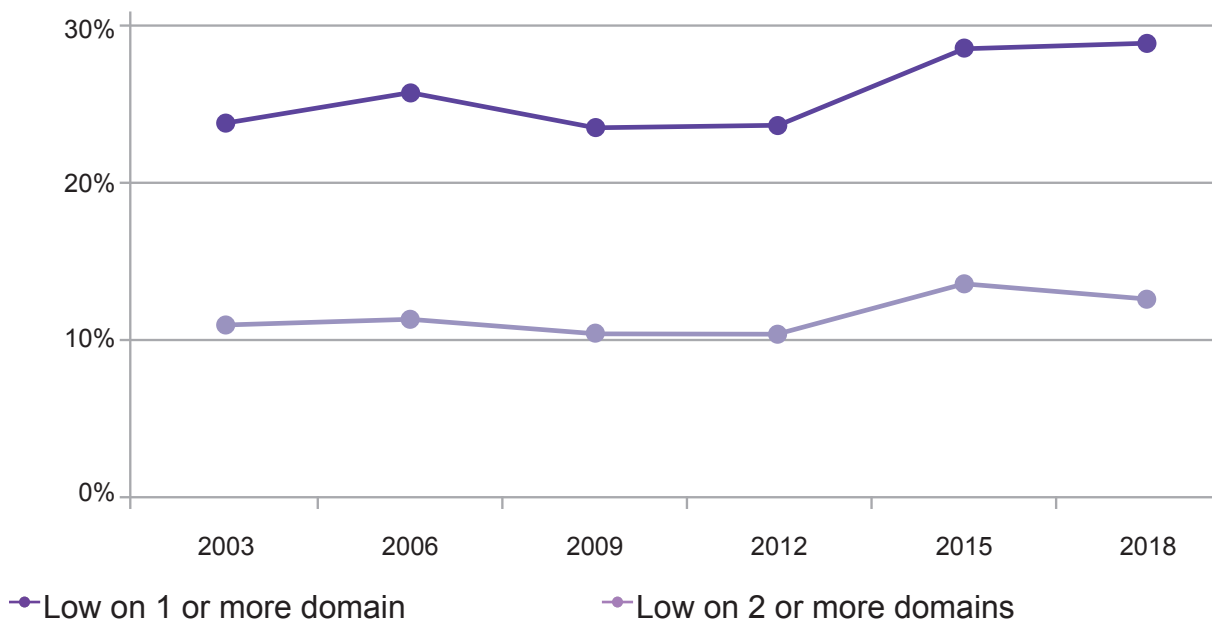


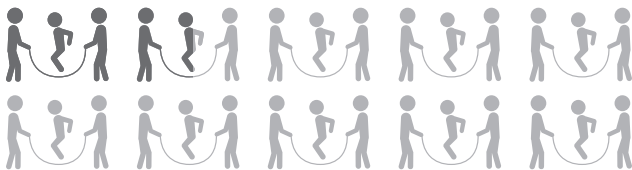
Figure 3: Percent of children vulnerable on EDI



Early Development Instrument Findings

In 2018, percent of Halton children vulnerable by domain

15.8%
Physical Health
and Well-Being



9.3%
Social Competence



9.3%
Emotional Maturity



6.4%
Language and Cognitive
Development



8.8%
Communication Skills
and General Knowledge

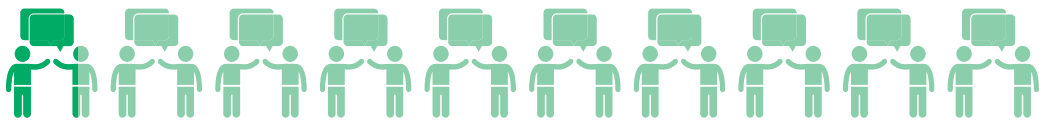


Figure 4: Number of children vulnerable on EDI by Domain

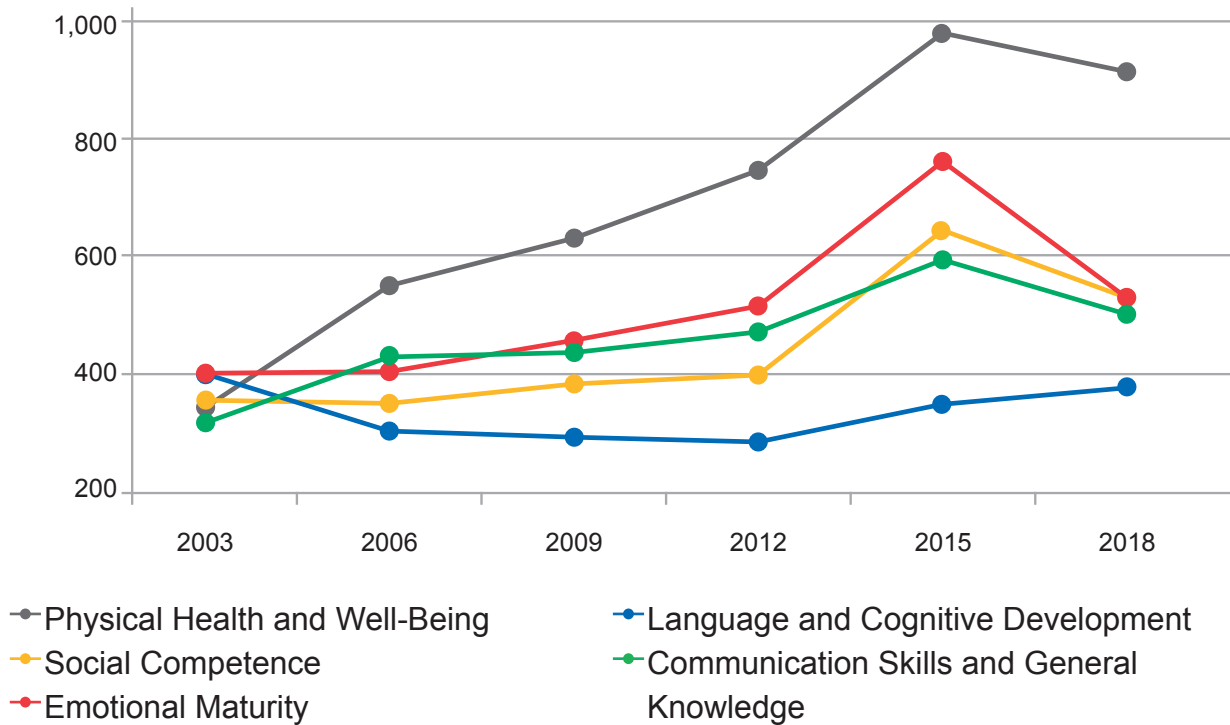
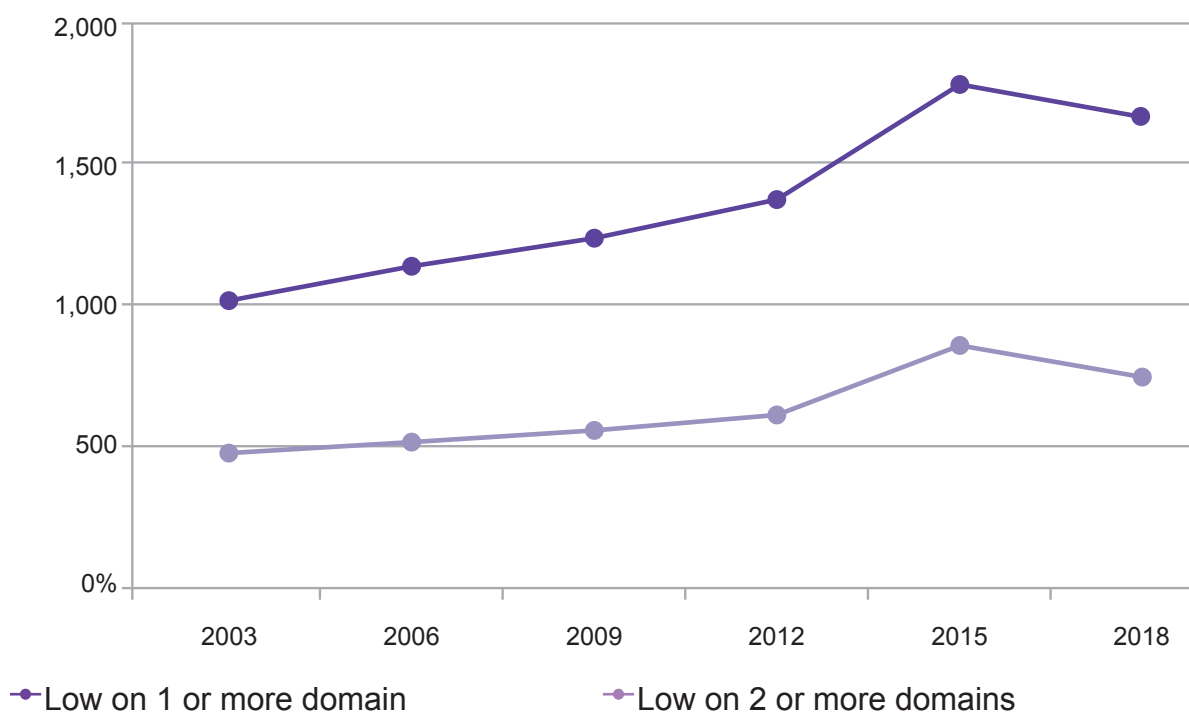


Figure 5: Number of children vulnerable on EDI by Domain



Early Development Instrument Findings

Table 3: Number of children vulnerable on one or more EDI domains in Halton

	2003*	2006	2009	2012	2015	2018
	(cycle 1)	(cycle 2)	(cycle 2)	(cycle 3)	(cycle 4)	(cycle 5)
Percent vulnerable by EDI Domain						
Physical health and well-being	357	558	628	738	974	922
Social competence	353	350	382	399	633	546
Emotional maturity	400	403	452	509	743	546
Language and cognitive development	394	304	292	282	344	372
Communication and general knowledge	331	424	440	466	594	516
Number vulnerable on 1 or more EDI domains	1,000	1,122	1,220	1,354	1,765	1,663
Number vulnerable on 2 or more EDI domains	469	503	547	596	843	737

*There was no province-wide Ontario implementation in 2003. The provincial cycles of data collection began in 2006.

Halton's rate of Developmental Vulnerability on one or more EDI domains is 28.4% which is comparable to 29.6% for Ontario. See Table 4 for detailed provincial results.



Table 4: Percent of children vulnerable on one or more EDI domains in Ontario

	2006 (cycle 1)	2009 (cycle 2)	2012 (cycle 3)	2015 (cycle 4)	2018 (cycle 5)
Percent vulnerable by EDI Domain					
Physical health and well-being	12.9%	14.0%	14.2%	16.1%	16.3%
Social competence	9.3%	9.2%	9.1%	10.7%	9.9%
Emotional maturity	10.3%	10.4%	10.1%	12.3%	11.3%
Language and cognitive development	9.6%	8.9%	7.6%	6.7%	7.5%
Communication and general knowledge	12.1%	12.3%	11.5%	10.2%	10.0%
Percent vulnerable on 1 or more EDI domains	28.0%	28.5%	27.6%	29.4%	29.6%

There are some differences in the rate of Developmental Vulnerability on one or more EDI domains between the four Halton municipalities (Table 3). The highest rate of vulnerability is found in Burlington (28.8%) and the lowest rate is found in Halton Hills (26.8%). Vulnerability rates differ across the 27 Halton neighbourhoods. The highest rate is found in South Central Oakville (41.1%) and the lowest rate is found in South Georgetown (21.0%). See page 14 for neighbourhood map.

Neighbourhoods with the highest number of vulnerable children include Escarpment (139 children), South Central Milton (103) and Upper East Milton (102).



Map: Percent of children vulnerable on one or more EDI domains: Halton 2018

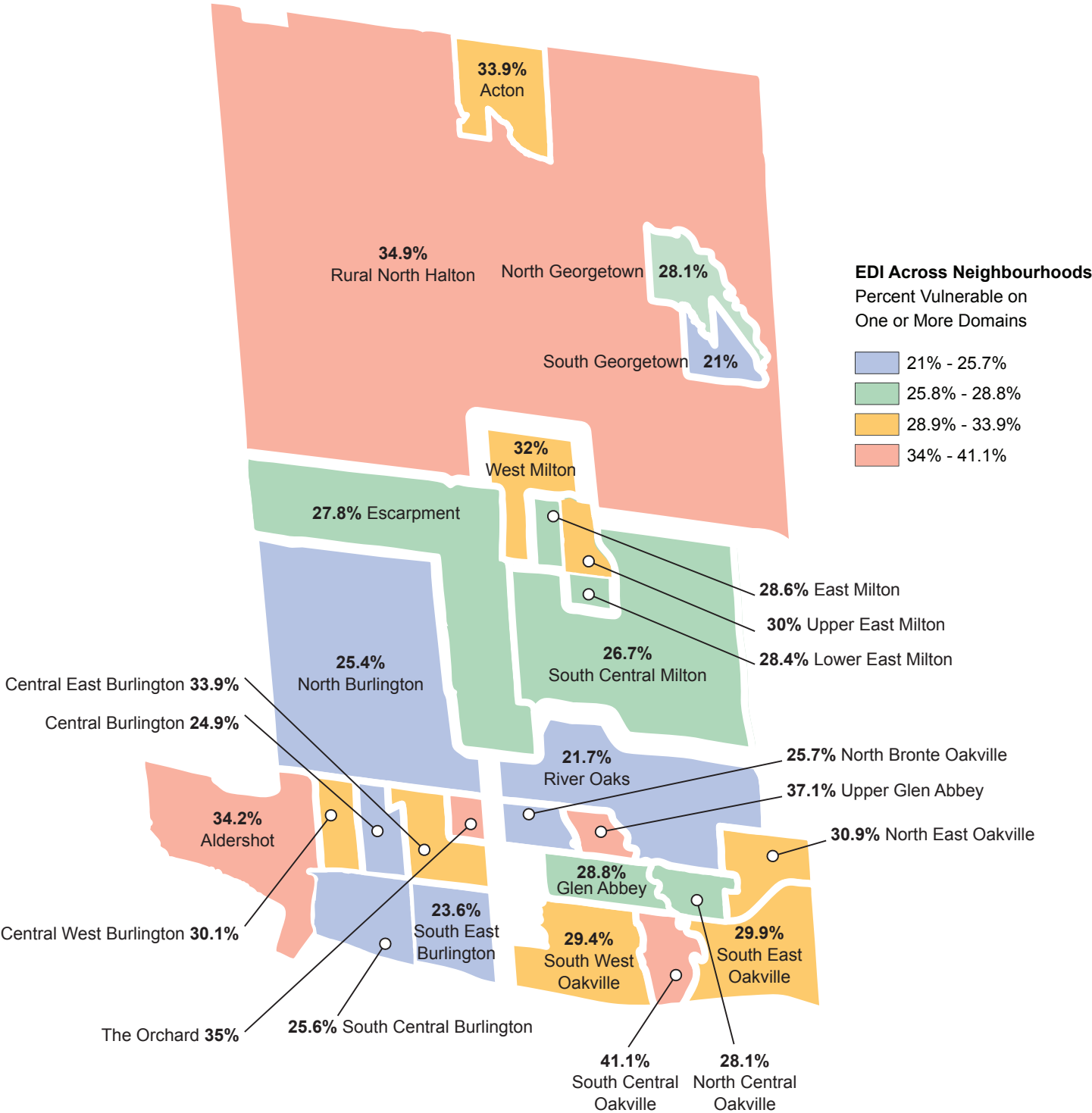


Table 5: Percent of children vulnerable on one or more domains by municipality and neighbourhood

Municipality	Percent Vulnerable	Number Vulnerable
Halton	28.4%	1,663
Halton Hills	26.8%	172
Burlington	28.8%	486
Milton	28.5%	496
Oakville	28.7%	509
Neighbourhood		
Acton	33.9%	37
Aldershot	34.2%	91
Central Burlington	24.9%	43
Central East Burlington	33.9%	63
Central West Burlington	30.1%	58
East Milton	28.6%	32
Escarpment	27.8%	139
Glen Abbey	28.8%	49
Lower East Milton	28.4%	82
North Bronte Oakville	25.7%	69
North Burlington	25.4%	61
North Central Oakville	28.1%	32
North East Oakville	30.9%	46
North Georgetown	28.1%	57
River Oaks	21.7%	85
Rural North Halton	34.9%	29
South Central Burlington	25.6%	54
South Central Milton	26.7%	103
South Central Oakville	41.1%	37
South East Burlington	23.6%	61
South East Oakville	29.9%	53
South Georgetown	21.0%	55
South West Oakville	29.4%	63
The Orchard	35.0%	56
Upper East Milton	30.0%	102
Upper Glen Abbey	37.1%	75
West Milton	32.0%	31

Early Development Instrument Sub-Domains

In addition to the five domains of child development, the EDI also contains more detailed information on 16 sub-domains of child development. Below is a description of the sub-domains along with a typical profile of a child who is not meeting developmental expectations in each sub-domain.



Physical Health and Well-Being

1. Physical readiness for school day

Unprepared for school day
Dressed inappropriately
Arriving late
Hungry
Tired

2. Physical independence

Lack of independence
Lack of handedness
Lack of coordination
Suck a thumb

3. Gross and fine motor skills

Poor gross and fine motor skills
Poor energy levels
Poor physical skills



Social Competence

1. Overall Social Competence

Poor overall social skills
Low self-confidence
Unable to play with various children
Unable to interact cooperatively

2. Responsibility & Respect

Unable to accept responsibility
Disrespect for others and property
Low self-control
Unable to follow rules
Unable to take care of materials

3. Approaches to Learning

Messy work
Unable to work independently
Unable to solve problems
Unable to follow class routines
Unable to adjust to changes in routines

4. Readiness to Explore New Things

Not showing curiosity about surrounding world
Rarely eager to explore new books, toys and games



Emotional Maturity

1. Prosocial and Helping Behaviour

No helping behaviours when others sick, hurt or upset
 No spontaneous offers of help
 Do not invite bystanders to join in

2. Anxious & Fearful Behaviour

Unhappy or nervous
 Sad or excessively shy
 Indecisive
 Upset when left at school

3. Aggressive Behaviour

Get into physical fights
 Kick or bite others
 Take other people's things
 Disobedient
 Temper tantrums

4. Hyperactivity & Inattention

Restless or distractible
 Impulsive or fidgets
 Difficulty settling to activities



Language and Cognitive Development

1. Basic Literacy

Problems identifying letters or attaching sounds
 Problems rhyming
 May not know writing direction
 May be unable to write own name

2. Interest in Literacy Numeracy & Memory

Little interest in books or reading, math or number games
 Difficulty remembering things

3. Advanced Literacy

Unable to read or write simple words or sentences
 Rarely writes voluntarily

4. Basic Numeracy

Unable to count
 Unable to compare or recognize numbers
 Unable to name all shapes
 Difficulty with time concepts



Communication Skills and General Knowledge

1. Communication Skills and General Knowledge

Poor effective communication
 Difficulty in participating in games involving the use of language
 Difficult to understand
 Difficulty understanding others
 Shows little general knowledge
 Difficulty with native language

Early Development Instrument Sub-Domains

Table 6 shows the number and percent of children who are meeting few or none of the developmental expectations in each of the 16 sub-domains. The sub-domains with the greatest proportion of children who are not meeting expectations are Prosocial and Helping Behaviour (28.4%), Communication Skills (26.5%), and Gross & Fine Motor Skills (22.6%).

Table 6: EDI Vulnerability by Domain and Sub-Domain

EDI Domain and Sub-Domain	Percent of Children	Number of Children
Physical Health & Well Being		
Physical readiness for school day	3.4%	196
Physical independence	8.9%	522
Gross & fine motor skills	22.6%	1,321
Social Competence		
Overall social competence	8.0%	469
Responsibility and respect	5.4%	313
Approaches to learning	6.0%	348
Readiness to explore new things	3.6%	208
Emotional Maturity		
Prosocial and helping behaviour	28.4%	1,653
Anxious and fearful behaviour	2.1%	122
Aggressive behaviour	8.5%	499
Hyperactive and inattentive behaviour	10.5%	614
Language & Cognitive Development		
Basic literacy	6.2%	364
Interest in literacy/numeracy and memory	14.0%	817
Advanced literacy	12.4%	722
Basic numeracy	6.6%	386
Communication & General Knowledge		
Communication skills	26.5%	1,550

Key Sub-Domain Vulnerabilities

Physical Health
and Well-Being



22.6%

Gross & Fine
Motor Skills

A child doing well
is physically ready
for a new day at school
and has excellent
motor skills.



Emotional Maturity



28.4%

Prosocial and
Helping Behaviour

A child doing well
almost never shows
aggression and
will often comfort
another child.



Communication Skills
and General Knowledge



26.5%

Communication Skills

A child doing well
can tell a story and
communicate with
both children and
adults.



Distribution of Scores: EDI Domains and Percentiles

It is important to look at the distribution of EDI scores to understand how many children are at the low, middle or high end of the developmental continuum. The example below is a representation of the distribution of vulnerability in children across Ontario. We can use the Ontario distribution as a reference to see how Halton is doing in comparison to the province. Figures 28-33 show the distribution of scores in Halton and the four municipalities by category: Vulnerable (children who score below the 10th percentile), At-Risk (children who score between the 10th and 25th percentile), and On Track for Success (children who score above the 25th percentile).

Figure 6. Example Distribution of Vulnerability



Figures 7 to 12: What to Look For and Why

Observe the percent of children in each category. Ideally, a community is expected to have 10 per cent of children scoring below the 10th percentile of baseline scores, 15 per cent scoring in the 10th to 25th percentile of baseline scores, and 75 per cent of children scoring above the 25th percentile of baseline scores.

The distribution of scores for your municipality is unlikely to fall as expected. When examining the distribution, look for over and under representations of scores along the continuum. For example, the number in the red area represents the per cent of children in the most

vulnerable category. If this value is greater than 10 percent, then you have more ‘vulnerability’ than expected. The number in the yellow area represents the percent of children at risk. If this value is less or greater than 15 per cent, then you have fewer or more children ‘at-risk’ than expected.

The number in the green area represents the per cent of children who are developmentally strong. If this value is lesser or greater than 75 per cent, then you have fewer or more children who are ‘on track for success’ than expected.

Figure 7. Distribution of Vulnerability by Domain, Ontario 2018

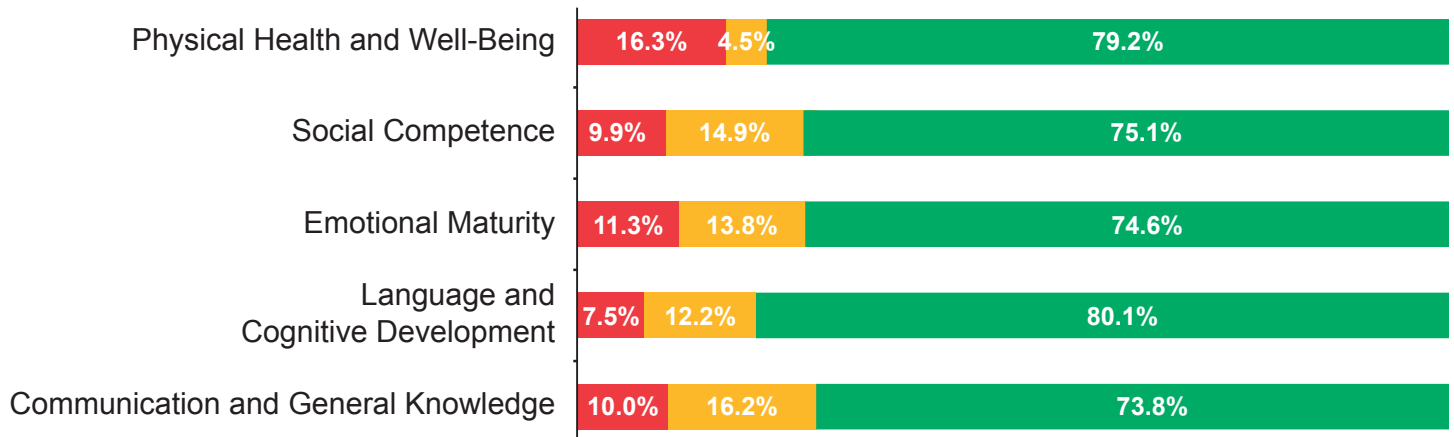
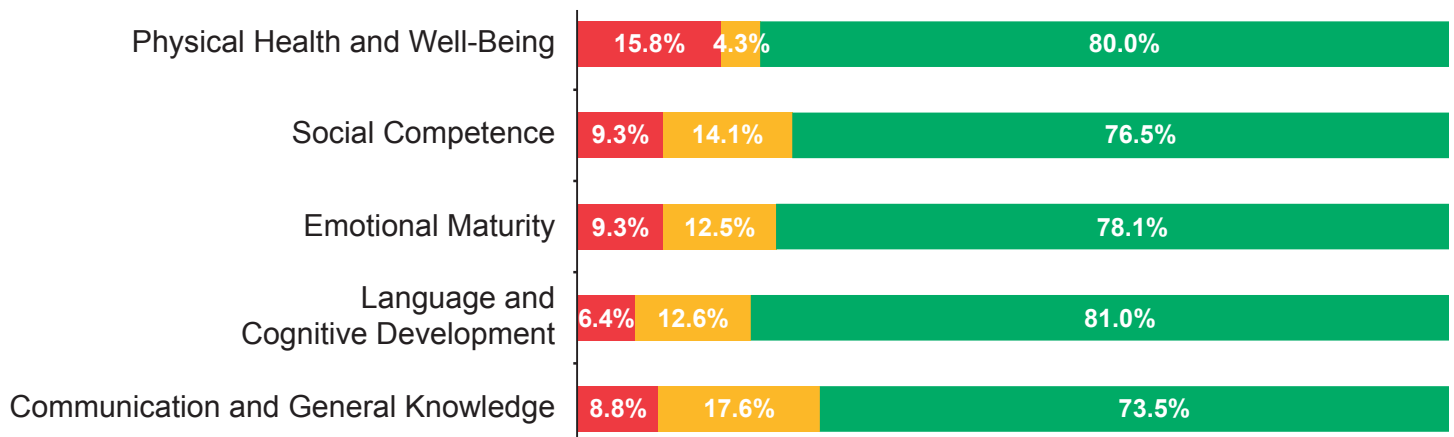


Figure 8. Distribution of Vulnerability by Domain, Halton 2018



Distribution of Scores: EDI Domains and Percentiles

Figure 9. Distribution of Vulnerability by Domain, Burlington 2018

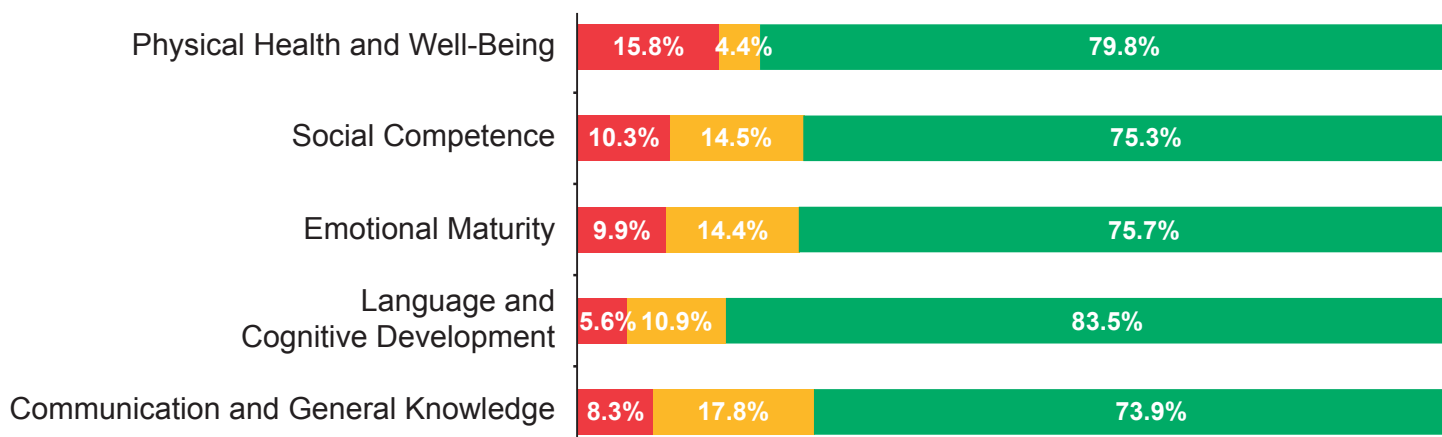


Figure 10. Distribution of Vulnerability by Domain, Halton Hills 2018

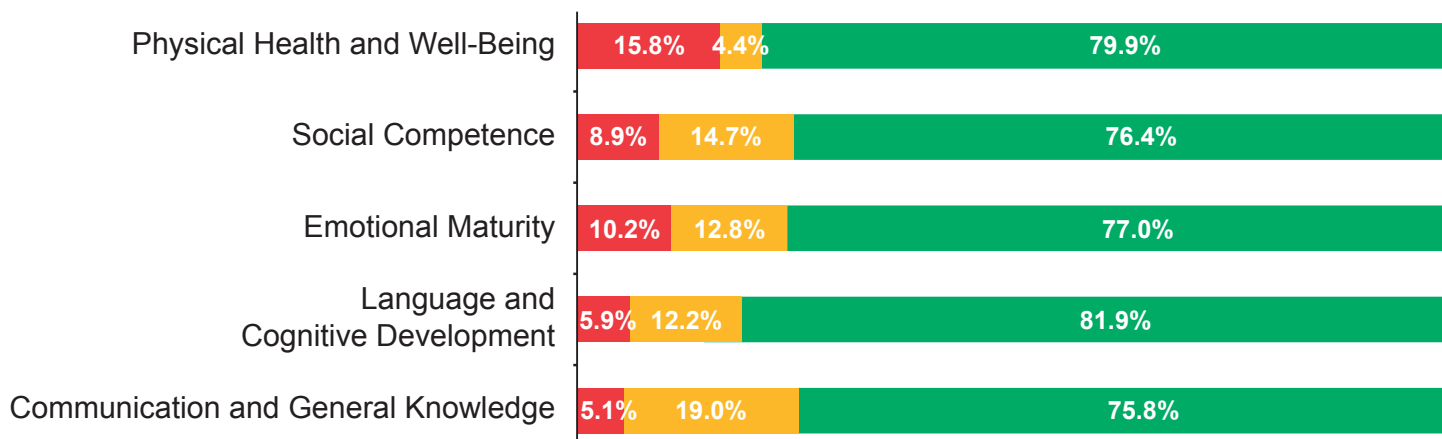


Figure 11. Distribution of Vulnerability by Domain, Milton 2018

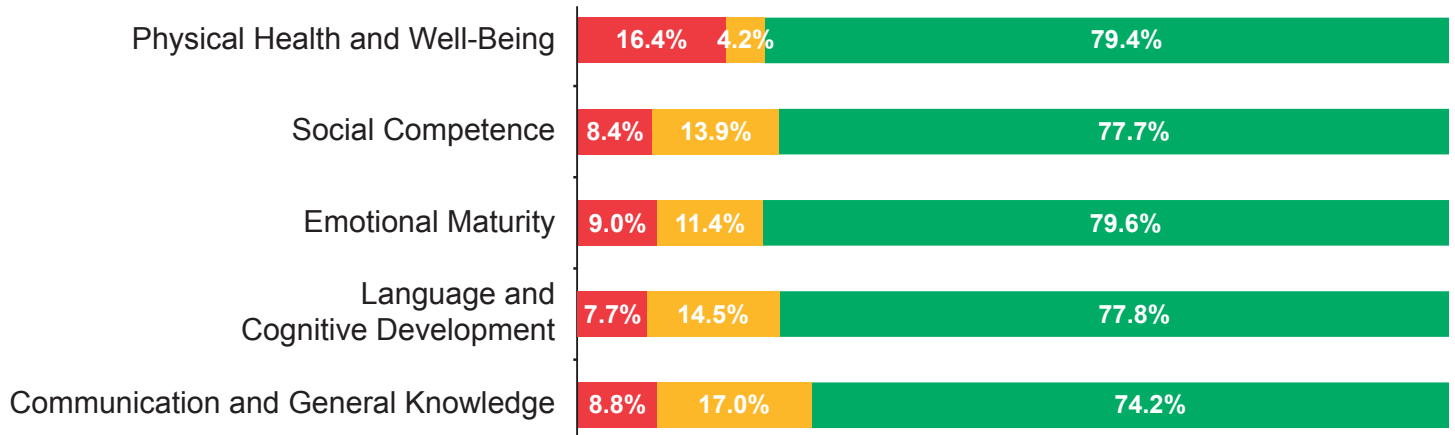
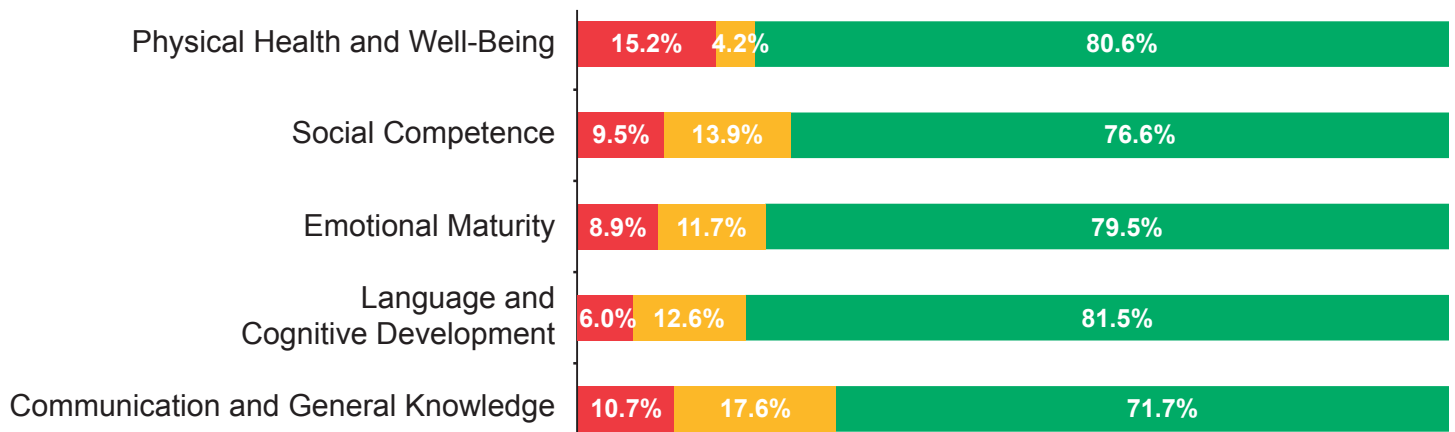


Figure 12. Distribution of Vulnerability by Domain, Oakville 2018



About Our Kids Network

Our Research

Our Kids Network collects, analyzes and shares data across the community. The network also helps people interpret and use knowledge and data effectively so individuals, organizations and communities can make well informed decisions about programs and services for children, youth and families.

OKN Data Portal 2.0

Our Kids Network is making important data and information open, accessible and usable so everyone can work towards the Halton 7 so all children thrive. The OKN Data Portal 2.0 is an interactive database containing a large inventory of community-level data. Users will find community and neighbourhood-level information, demographics, OKN research data on health, safety, education, census data and more.

Recently upgraded, the new version of the Data Portal has more options and control, resulting in complete customization of your maps, charts and graphs in the way you visualize them. The streamlined and simplified look makes it easy to find the data you're looking for and work with it. okndataportal.ca

Research Reports, Tables and Archives

Our Kids network has been collecting and sharing data on a diverse and robust set of indicators related to the status of children, youth and families since 2003. Starting with the Community Report Card 2004, the network has produced a wide variety of reports, analyses and visualizations of data and knowledge.

Foundational Frameworks

Working towards creating the best conditions for children thrive in Halton requires evidence-based strategic planning. Our Kids network relies on these foundational frameworks to structure, guide and monitor our work: Results Based Accountability, the Halton 7 population results, Knowledge Mobilization and Collective Impact.

Visit the Research section of our website to find detailed information and explore these useful resources. www.ourkidsnetwork.ca/Research



**Our Kids Network
Protocol Partners**

