



EARLY DEVELOPMENT INSTRUMENT
a population-based measure for communities

EDI Over Time Report

Nova Scotia

*A snapshot of children's
developmental health at school entry*



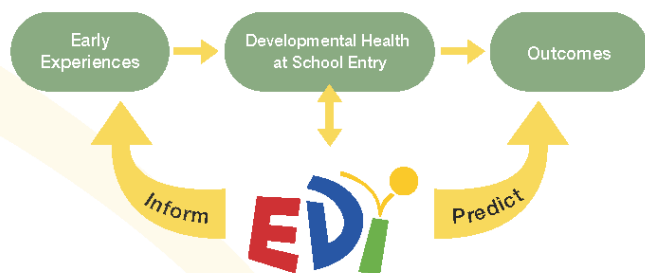


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About the EDI in Nova Scotia

The EDI began in Nova Scotia over ten years ago, with the Understanding the Early Years (UEY), a national initiative aimed at strengthening communities' ability to use research to make decisions to help children thrive. Between 2006 and 2012, five communities in Nova Scotia collected EDI data as part of this initiative. Along with the UEY initiative sites, several school boards also collected EDI data.

In 2013, the first province-wide implementation of the EDI was undertaken, which included all Primary students across the eight school boards. The 2013 data were used to create the Nova Scotia Baseline, which allowed all future collections to be compared to understand how children's development was changing. Since then, the EDI is implemented across the province every other year. The Department of Education and Early Childhood Development partners with the school boards to collect the data. In addition, one school board collects EDI data independently on offset years.



Thanks to all of our partners for their hard work and commitment to the EDI. A very special thanks to all of the teachers who have committed their time and energy to filling out EDI questionnaires over the years. Without you, none of this would have been possible.



All analyses in this report include children that are in Primary, have not been identified by teachers as having special needs, have been in class for more than one month and have a minimum number of items completed on the EDI questionnaire.

Why look at EDI data over time?

The information collected through the EDI helps us to understand the state of children's developmental health by connecting the conditions of early childhood experiences to learning outcomes and future successes.

Examining how children are doing over time is important for mobilizing stakeholders towards change. Focusing on strengthening the areas in which children are vulnerable allows schools, communities, and governments to make decisions on how to best support early development. Investigating how children's developmental health is changing over time can also allow for evaluation and strategic planning around what is currently being done to support children and their families.

We hope the Nova Scotia EDI Over Time Report will assist you in your invaluable work in the early years sector, aid in informing planning and resource allocation, but most of all, help to build, strengthen, and enhance your connections with community partners.

Nova Scotia

| | 2013 | 2015 | 2018 | 2020 | 2023 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Children included in this report | 7982 | 7985 | 5817 | 7892 | 7901 |
| | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) |
| Girls | 3915 49.0% | 3965 49.7% | 2922 50.2% | 3961 50.2% | 3906 49.4% |
| Boys | 4067 51.0% | 4019 50.3% | 2895 49.8% | 3931 49.8% | 3992 50.5% |
| Child considered ESL or FSL | 450 5.6% | 523 6.5% | 623 10.7% | 763 9.7% | 1354 17.1% |
| Children requiring further assessment | 938 11.8% | 878 11.0% | 678 11.7% | 833 10.6% | 1171 14.8% |
| Average age (in years) | 5.7 | 5.7 | 5.7 | 5.7 | 5.8 |
| Average days absent | 6.3 | 5.7 | 6.1 | 6.4 | 13.3 |





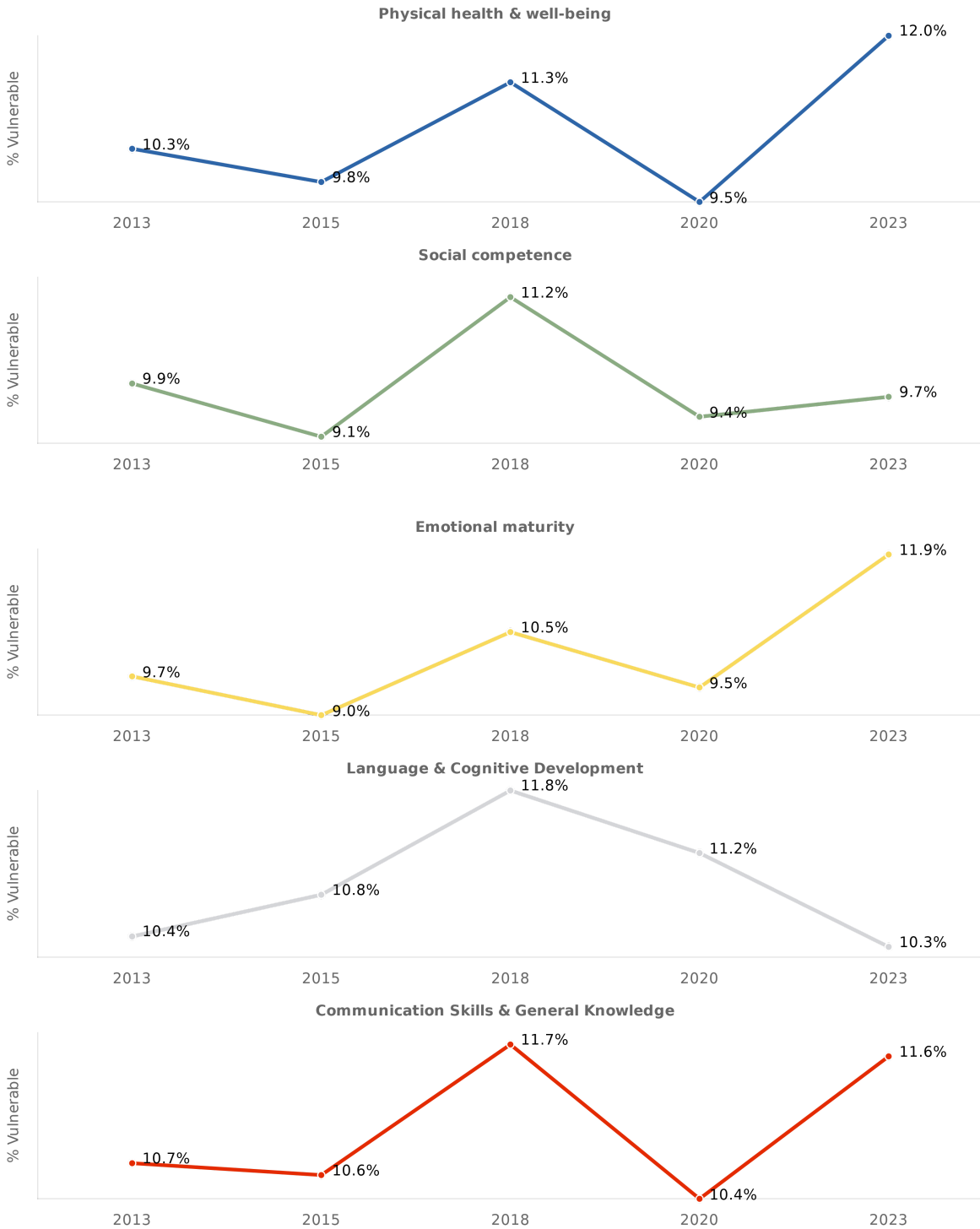
Vulnerable Children - Nova Scotia

The EDI uses the 10th percentile for vulnerability because it captures all the children who are struggling, even those whose struggles may not be apparent.

Research linking EDI findings to later educational data demonstrate that, on average, Primary vulnerability predicts ongoing vulnerability in the school system. Numerous studies have shown that early vulnerability predicts a child's lifelong health, learning, and behaviour.



Below are graphs of the percentages of children vulnerable in each domain, and of children vulnerable in one or more, or two or more domains in all of Nova Scotia. "Vulnerable" describes the children who score below the 10th percentile cut-off of the Nova Scotia Baseline population on any of the five domains. Higher vulnerability indicates that a greater percentage of children are struggling in comparison to the Nova Scotia Baseline data.





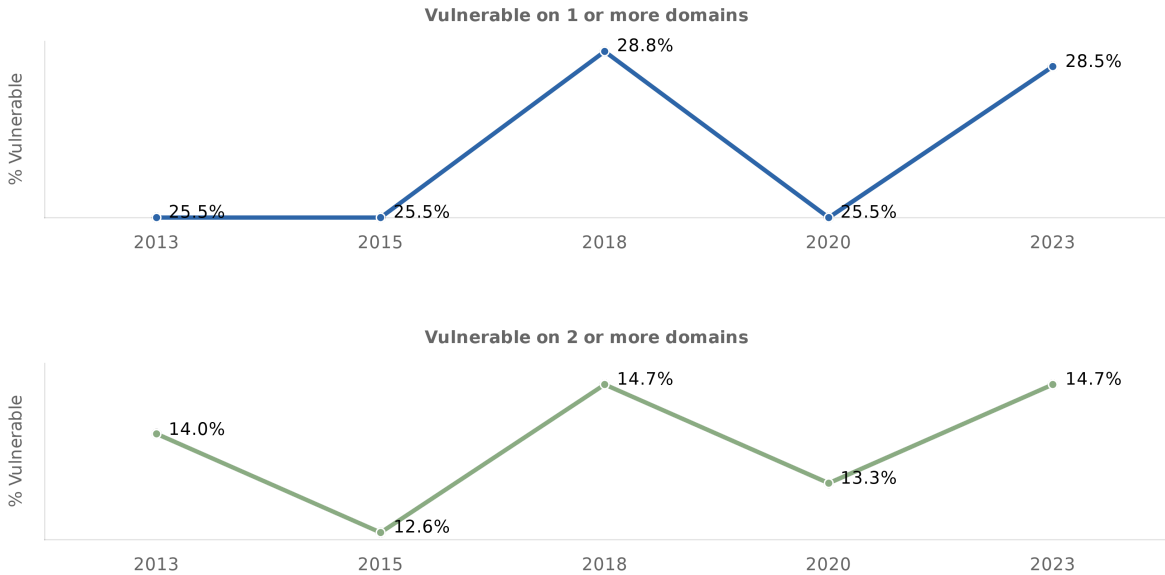
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Vulnerable Children - Nova Scotia

The graphs below illustrate the percentage of children vulnerable on at least one and at least two domains.





For more information on critical difference please view HELP's webinar for communities looking to better understand critical difference

youtu.be/pEG8YWmco



How do we know if children's developmental health is changing over time?

When exploring trends in children's development over time, what we want to know is whether children are doing better, worse, or about the same as in the past. Although the vulnerability rate in an area may have changed over time, we want to know whether or not that change is large enough to be meaningful. If we establish that a change in vulnerability rate is meaningful, that means that we are confident that it is real, rather than a result of uncertainty due to sampling or measurement issues.

Our colleagues from the Human Early Learning Partnership (HELP) at the University of British Columbia developed a method to help communities and stakeholders make informed judgements about meaningful change in EDI vulnerability over time. The method is called critical difference.

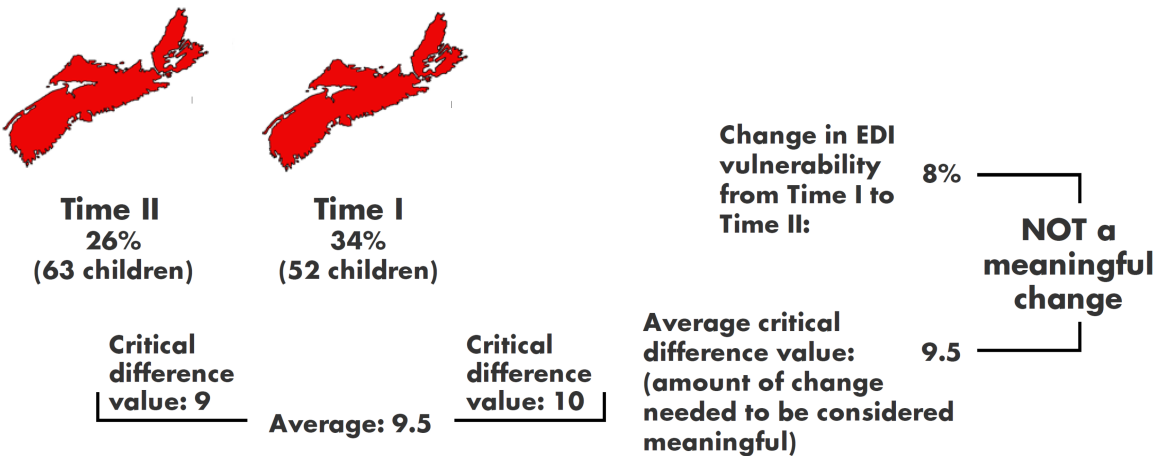
Critical difference is the amount of change over two time points in an area's EDI vulnerability rate that is large enough to be statistically meaningful.

How to use critical difference: An example

Neighbourhood 'A' has a vulnerability rate on 'one or more domains' of 26% in Time II, based on scores for 63 children. In Time I, the vulnerability rate was 34%, based on scores for 52 children. This means vulnerability has dropped 8 percentage points.

To find out whether this is big enough to be meaningful we must calculate the critical difference percentage for our population size (see next page for your site's calculations). The critical difference for 63 children is 9 percentage points in Time II; the critical difference for 52 children is 10 percentage points in Time I. The average critical difference between both cycles is 9.5 percentage points.

Since the average critical difference is larger than the observed drop in vulnerability of 8 percentage points (34% to 26%), the vulnerability rate has not changed enough to be considered a meaningful difference.



A comparison of 2020 vs. 2023 data is provided for your site.

Note: Research on critical difference values has not been produced for Vulnerable on 2 or more domains, which is why it is not included in the tables.

*denotes a meaningful difference in vulnerability between cycles.



Nova Scotia - Vulnerability

| | 2020 | | 2023 | |
|--|--------------------|--------------|--------------------|--------------|
| | Number of Children | % Vulnerable | Number of Children | % Vulnerable |
| Physical Health & Well-Being | 749 | 9.5% | 949 | 12.0% |
| Social Competence | 740 | 9.4% | 765 | 9.7% |
| Emotional Maturity | 748 | 9.5% | 942 | 11.9% |
| Language & Cognitive Development | 885 | 11.2% | 812 | 10.3% |
| Communication Skills & General Knowledge | 823 | 10.4% | 918 | 11.6% |
| Vulnerable on at least ONE EDI domain | 2016 | 25.5% | 2255 | 28.5% |

Critical Difference

This table provides the change in vulnerability from 2020 to 2023. An increase in vulnerability is represented by an upwards arrow, indicating there were more vulnerable children in 2023 than 2020. A decrease in vulnerability is represented by a downward arrow, indicating there were less vulnerable children in 2023 than 2020. Please note that less vulnerability is the more favourable outcome. The required critical difference value for meaningful change is provided as a reference

| | 2020 vs 2023 | | |
|--|-------------------------|---------------------|---------------------------|
| | Change in Vulnerability | Increase / Decrease | Critical Difference Value |
| Physical Health & Well-Being | 2.5* | ↑ | 0.8 |
| Social Competence | 0.3 | ↑ | 0.6 |
| Emotional Maturity | 2.4* | ↑ | 0.6 |
| Language & Cognitive Development | 0.9* | ↓ | 0.5 |
| Communication Skills & General Knowledge | 1.2* | ↑ | 0.7 |
| Vulnerable on at least ONE EDI domain | 3.0* | ↑ | 0.8 |

