

Children with special health needs are more likely to come from poorer neighborhoods, researchers say

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Children's health depends a great deal on [where they live](#). Those who spend their early years in deprived neighborhoods—measured using a combination of variables, including the percentage of residents with low income or education—are much more likely to [have special health needs](#).

This can set them up for a lifetime of issues, such as being less likely to meet educational expectations in later grades and long-term mental and [physical health](#) problems.

Having a health disorder in childhood often influences one's entire trajectory of development, [through adolescence and adulthood](#). This makes it all the more important that policymakers make sure robust resources are in place where they are needed most.

A growing body of research from the United States has been finding significant associations between neighborhood resources and various aspects of child health, including [physical health](#), [early puberty](#), [asthma hospitalizations](#) and [need for pediatric care](#).

Until now, there had been little evidence on the relationship between neighborhood-level socio-economic conditions and the health of young children starting school in Canada. Specifically, researchers haven't had a lot of data about neighborhood conditions and [children's health](#) disorders. Health disorders are often associated with increased special educational needs as children progress through school.

Canada's free universal health care contributes to a [different social and medical care landscape](#) than in the United States. As researchers, we'd assumed this context should minimize the place-based variation. Our research, however, points to jaw-dropping differences in the levels of

serious health issues of children from wealthier and poorer neighborhoods.

Study of kindergarteners

We conducted a [population-wide study](#) of kindergarten children attending publicly funded schools between 2004 and 2020 across Canada.

We looked at the association between neighborhood-level socio-economic status and teacher-reported health disorders. The majority of students in Canada (almost 92%) [attend publicly funded schools](#).

We assessed health disorders using the [Early Development Instrument](#) (EDI), a 103-item, teacher-completed questionnaire. The questionnaire measures children's ability to meet age-appropriate developmental expectations in kindergarten, and includes information about children's demographics and their health status.

The EDI provides a source that is unparalleled by any other dataset. It features population-level information on children's school readiness, including insights into child development and health status.

Defining 'health disorder'

For the purposes of the study, children were considered as having a health disorder if:

- Their teacher reported they had a diagnosed health condition (based on information from a parent or health professional);
- They had a limitation that interfered with their ability to function in the classroom (such as physical, learning, emotional,

- behavioral, speech or language impairment);
- They received a special needs designation.

We compared that information with data about neighborhood-level [socioeconomic status](#) retrieved from the Canada Revenue Agency's 2005 Taxfiler database and the 2006 [Canadian Census](#), collected through Statistics Canada.

With colleagues, we created [a neighborhood-level index](#) to examine 2,058 neighborhoods spanning the whole country. To determine geographic boundaries of areas, we relied on [Statistics Canada data pertaining to the smallest geographic areas for which the agency publicizes population and dwelling counts](#). To assess the socioeconomic status of neighborhoods, our index considered variables such as such as: the percentage of lone-parent families who have low income and also children under six years of age; the percentage of adults with no high school diploma.

Kindergarteners and health disorders

More than 1.4 million children across Canada participated in the EDI data collections in their kindergarten classrooms between 2004 and 2020. Of those children, 230,021 (16%) had some form of a health disorder. Across all Canadian neighborhoods, the prevalence of childhood health disorders ranged from about 2% to 47%, with an average of 17%.

We found a significant association between neighborhood-level socioeconomic status and the prevalence of health disorders, with the occurrence of health disorders increasing as the socio-economic status of a neighborhood decreased.

Differences in provinces, territories

We also studied this association separately in nine provinces and territories. We learned the association between neighborhood socioeconomic status and the prevalence of health disorders was strongest in Newfoundland and Labrador, and weakest in Québec.

Such variation points to how income inequality—the extent to which income is unevenly distributed in a given area—[differs by jurisdiction](#).

Differences in the association between neighborhood socioeconomic status and the prevalence of health disorders seen among provinces and territories could be due to several factors, including variations in their early identification of developmental disorders.

Implications for policy and practice

Our findings suggest important implications for policy and practice.

Knowing that the association between the prevalence of health disorders in kindergarten and neighborhood-level socio-[economic status](#) is stronger in some areas of the country than in others can help us identify opportunities to support children in these areas who have health disorders.

It could also even out disparities across provinces. Identifying opportunities to offer support, and mobilizing this support, could improve the outcomes for children with health disorders.

Equitable health supports needed

Our results also suggest that, to reduce or eliminate the health

disadvantages associated with poorer neighborhoods, it's important to provide equitable public health supports.

These include initiatives for nutrition, housing, access to quality health services and preventive care, especially in lower socioeconomic communities.

Policymakers and researchers alike may need to focus more on children with broadly defined health disorders to ensure they are sufficiently supported. Supports provided—especially in schools—offer a critical opportunity to improve their long-term outcomes.

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