

# ONLINE RISK-TAKING AND ITS ASSOCIATION WITH THE HEALTH OF CANADIAN ADOLESCENTS



**hbsc**

HEALTH BEHAVIOUR IN  
SCHOOL-AGED CHILDREN

WORLD HEALTH ORGANIZATION  
COLLABORATIVE CROSS-NATIONAL STUDY



## FINDINGS FROM THE 2022 HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN STUDY

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## INTRODUCTION

Adolescence is characterized by taking risks (Viner et al., 2012). Some engage in risk-taking to cope with adversity, for social reasons, to gain acceptance by peers, or in response to new-found freedoms as they transition towards adulthood (Crone & van Duijvenvoorde, 2021).

Most adolescent risk-taking is innocuous, but some is hazardous (Crone & van Duijvenvoorde, 2021), such as smoking, cannabis use, and alcohol misuse. Declines in these more “traditional” types of risk behaviour can be celebrated as public health triumphs and may lead to conclude that rates of risk-taking are declining in young people.

However, it is also possible that risk-taking may simply be evolving. Transitions in risk-taking might be happening because of the increased level of exposure that young people have to social media and online environments (Ulhs et al., 2017).

This report explores newer forms of risk-taking in grades 9 and 10 Canadian adolescents (ages 14 to 16 years old), using five illustrative behaviours associated with online environments.



## PREVALENCE OF RISK-TAKING BEHAVIOURS AMONG ADOLESCENTS

A panel of young Canadians (the HBSC Youth Engagement Panel) were asked the question, “what does risk-taking look like for you and your friends today?”. They identified many different types of behaviours. Five of the most common responses were then asked to grade 9 and 10 students in the 2022 survey.

The estimated prevalence of each type of risk-taking in the last year is:

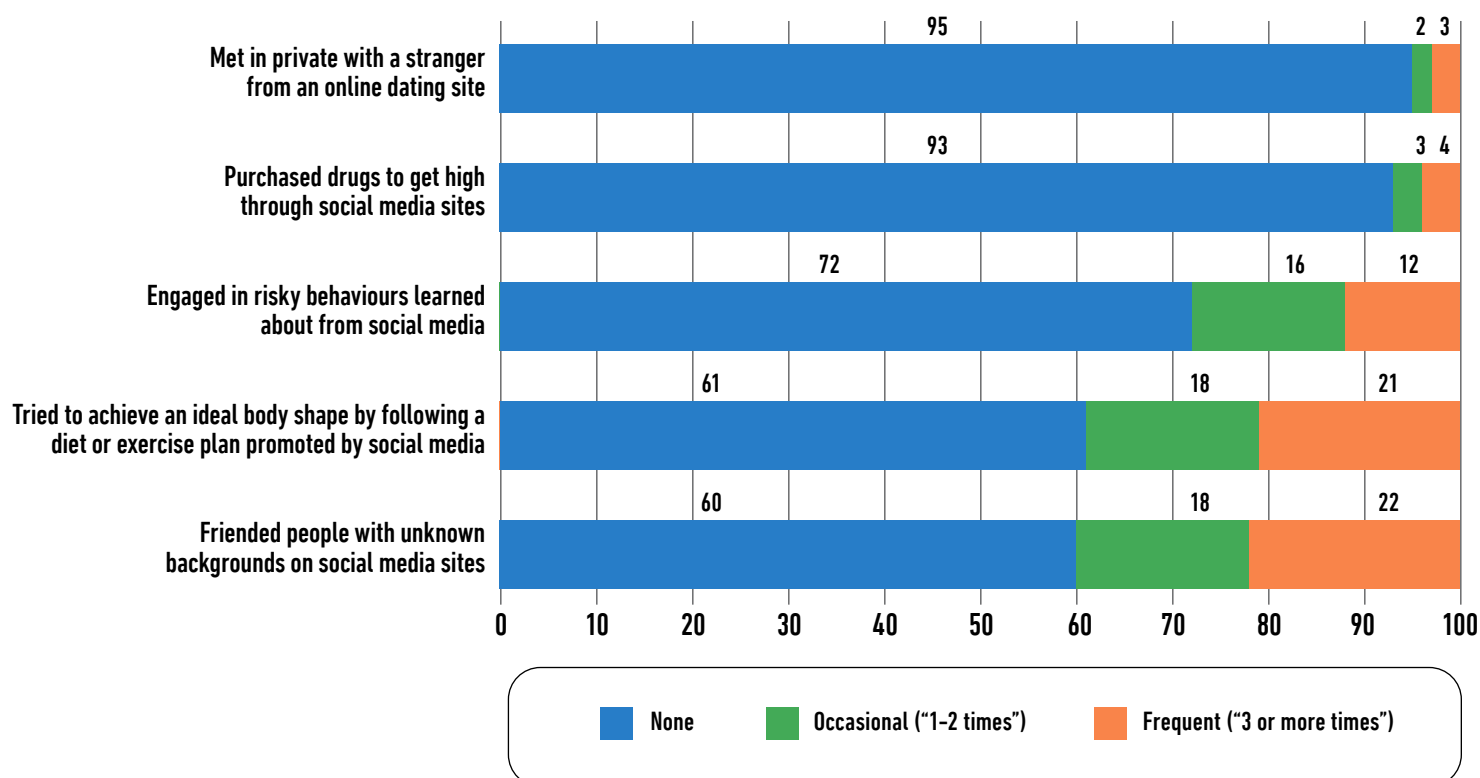
- Roughly 4 of 10 respondents “friended people with unknown backgrounds” on social media, with about 2 in 10 doing this frequently.
- Roughly 4 of 10 respondents reported “following a diet or exercise plan promoted by social media to achieve an ideal body shape”, with about 2 of 10 doing this frequently.
- Approximately 3 of 10 respondents engaged in behaviours learned from social media (e.g., “internet challenges”), with about 1 in 10 doing this frequently.

Smaller, but important, proportions reported:

- Purchasing drugs to get high through social media sites at least once (7%)
- Meeting up with a stranger from an online dating site at least once (5%)

Finally, a total of 33%, 95% CI (30 to 35) did not engage in any of these five risk-taking behaviours.

**Figure 1.** Engagement in risk-taking in the last 12 months (%)



**Note:** These prevalence rates are descriptive and represent students in grades 9 and 10. Columns are not additive since they can co-occur.

## PREVALENCE OF RISK-TAKING BEHAVIOURS BY GENDER

Distinct gender patterns can be observed with respect to engagement in these contemporary, online risks.

**For example, for the three most frequent online risk-taking behaviours:**

- Among those with “occasional engagement”, cisgender boys (16%) friended people less than cisgender girls (20%) and transgender and gender diverse (TGD) youth (24%).
- Cisgender girls (30%), followed by TGD youth (21%), frequently engaged in social media sites for advice about achieving an ideal body shape.
- Engaging in behaviours like “internet challenges” learned about from social media did not show any differences among the three groups.

**Table 1.** Prevalence of risk-taking behaviours by gender

	Cisgender Girls		Cisgender Boys		TGD Youth	
Type of risk-taking	%	95% CI	%	95% CI	%	95% CI
<b>Friended people with unknown backgrounds on social media sites</b>						
Occasional engagement (“1-2 times”)	20	(19 to 22)	16	(14 to 18)	24	(19 to 29)
Frequent engagement (“3 or more times”)	21	(17 to 25)	21	(18 to 24)	27	(23 to 32)
<b>Tried to achieve an ideal body shape by following a diet or exercise plan promoted by social media</b>						
Occasional engagement (“1-2 times”)	22	(20 to 24)	13	(11 to 15)	16	(10 to 21)
Frequent engagement (“3 or more times”)	30	(27 to 33)	13	(11 to 15)	21	(16 to 25)
<b>Engaged in risky behaviours learned about from social media</b>						
Occasional engagement (“1-2 times”)	16	(14 to 19)	16	(14 to 19)	19	(15 to 23)
Frequent engagement (“3 or more times”)	11	(9 to 13)	12	(10 to 13)	15	(11 to 19)

**Note:** These prevalence rates are descriptive and represent students in grades 9 and 10. Columns are not additive since they can co-occur.

## PREVALENCE OF RISK-TAKING BEHAVIOURS BY RELATIVE MATERIAL WEALTH

Many adolescent risk behaviours occur unequally in different socio-economic groups.

**For example, for the three most frequent risk-taking behaviours:**

- Frequent engagement in friending people with unknown backgrounds on social media sites was higher among students who felt that they were “less well off” (31%) than those “well off” (19%).
- Engagement (occasional or frequent) in trying to achieve an ideal body shape by following a diet or exercise plan promoted by social media did not show any differences by perceived economic status.
- Frequent engagement in risky behaviours learned about from social media was higher among students who felt that they were “less well off” (18%) than those “well off” (10%).

**Table 2.** Prevalence of risk-taking behaviours by relative material wealth

Type of risk-taking	Self-rated Relative Material Wealth					
	Well off		Average		Less well off	
	%	95% CI	%	95% CI	%	95% CI
<b>Friended people with unknown backgrounds on social media sites</b>						
No engagement	64	(60 to 68)	57	(54 to 60)	54	(48 to 61)
Occasional engagement (“1-2 times”)	17	(16 to 19)	21	(19 to 23)	15	(10 to 20)
Frequent engagement (“3 or more times”)	19	(15 to 23)	22	(19 to 25)	31	(24 to 37)
<b>Tried to achieve an ideal body shape by following a diet or exercise plan promoted by social media</b>						
No engagement	64	(61 to 67)	57	(55 to 60)	59	(53 to 65)
Occasional engagement (“1-2 times”)	17	(15 to 19)	19	(17 to 21)	16	(12 to 20)
Frequent engagement (“3 or more times”)	20	(17 to 22)	24	(21 to 27)	25	(19 to 31)
<b>Engaged in risky behaviours learned about from social media</b>						
No engagement	74	(72 to 77)	71	(67 to 74)	64	(58 to 70)
Occasional engagement (“1-2 times”)	16	(14 to 18)	18	(15 to 20)	19	(14 to 23)
Frequent engagement (“3 or more times”)	10	(9 to 11)	12	(10 to 14)	18	(12 to 23)

**Note:** These prevalence rates are descriptive and represent students in grades 9 and 10. Columns are not additive since they can co-occur.



## ASSOCIATIONS BETWEEN RISK-TAKING BEHAVIOURS AND INDICATORS OF HEALTH

### Adolescent risk behaviour and health “go together”:

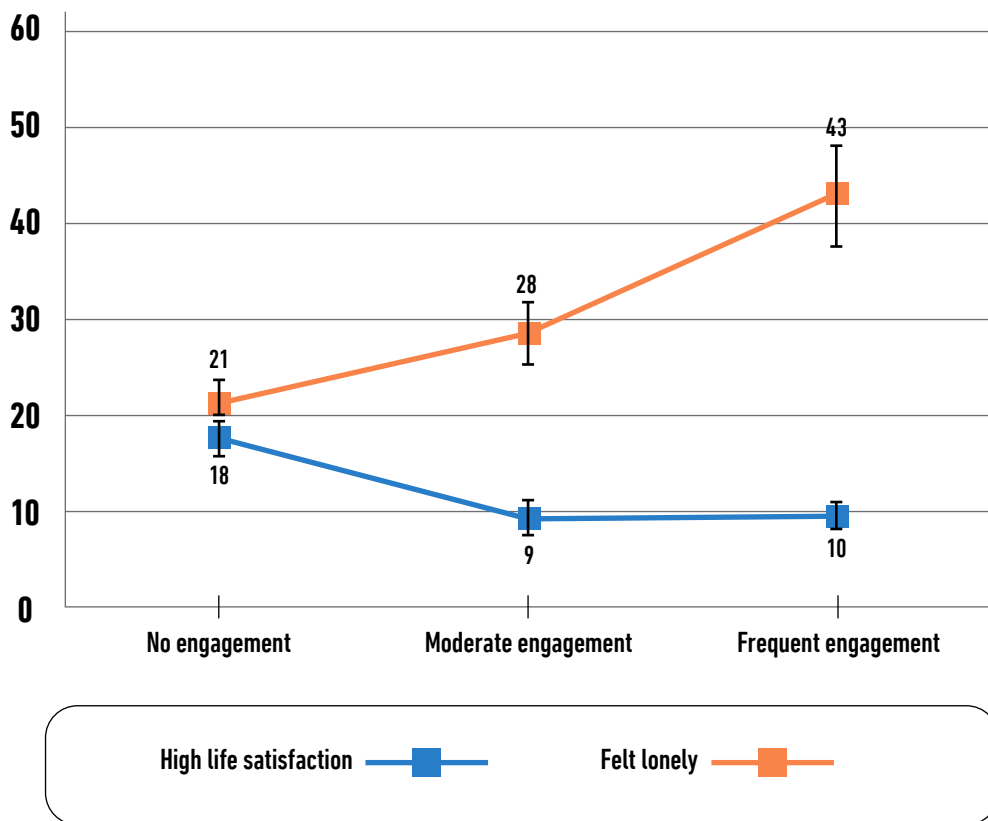
- In some cases, engagement in risk-taking leads to poorer health status.
- In other cases, poorer health status may lead to increased risk-taking.

Illustrative examples of these co-occurring:

### Engaging with social media that promoted a diet or exercise regime:

- The percentage of young people who “felt lonely” increased as engagement increased
- The percentage of young people who had “high life satisfaction” (rated 9 and over in a 10-point scale) was higher among those who did not engage compared to those who did 1 or more times.

**Figure 2.** Engagement with social-media promoted diet or exercise regime (%)

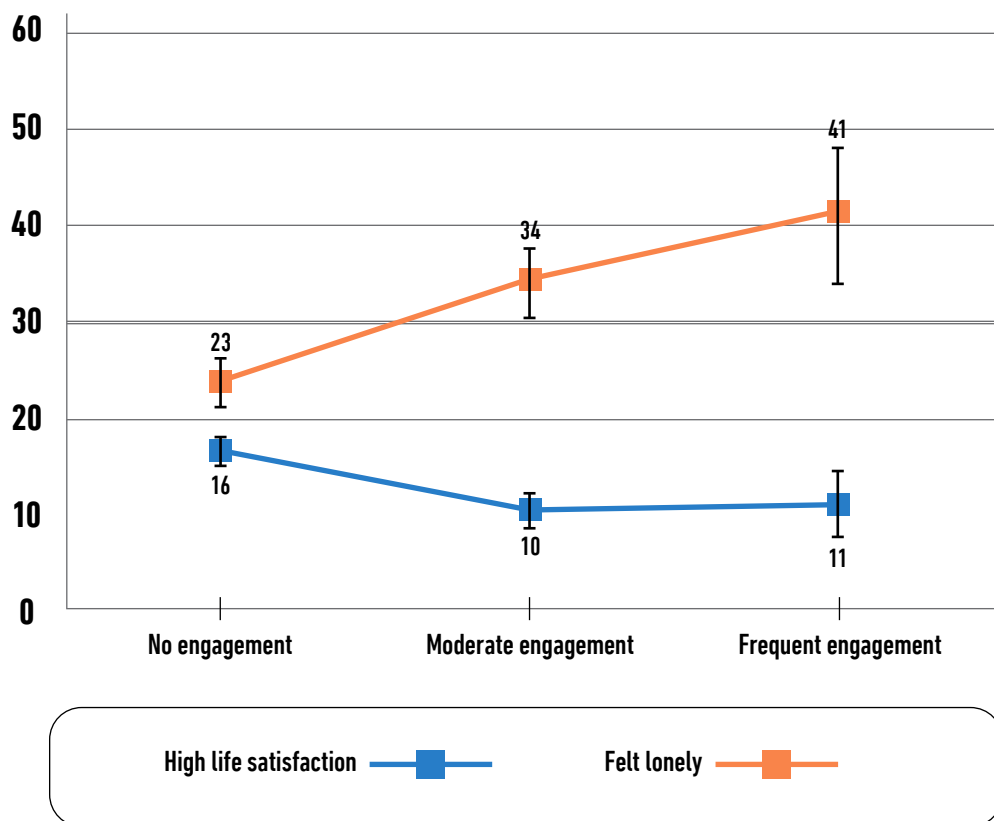


**Note:** These prevalence rates are descriptive and represent students in grades 9 and 10

### Engagement in risk behaviours learned about from social media:

- The percentage of young people who “felt lonely” was higher in those who engaged in risk behaviours learned about from social media (at least once) compared to those with no engagement.
- The percentage of young people who had “high life satisfaction” (rated 9 and over in a 10-point scale) was higher among those who did not engage compared to those who did 1-2 times.

**Figure 3.** Engagement in risk behaviours learned from social media (%)



**Note:** These prevalence rates are descriptive and represent students in grades 9 and 10



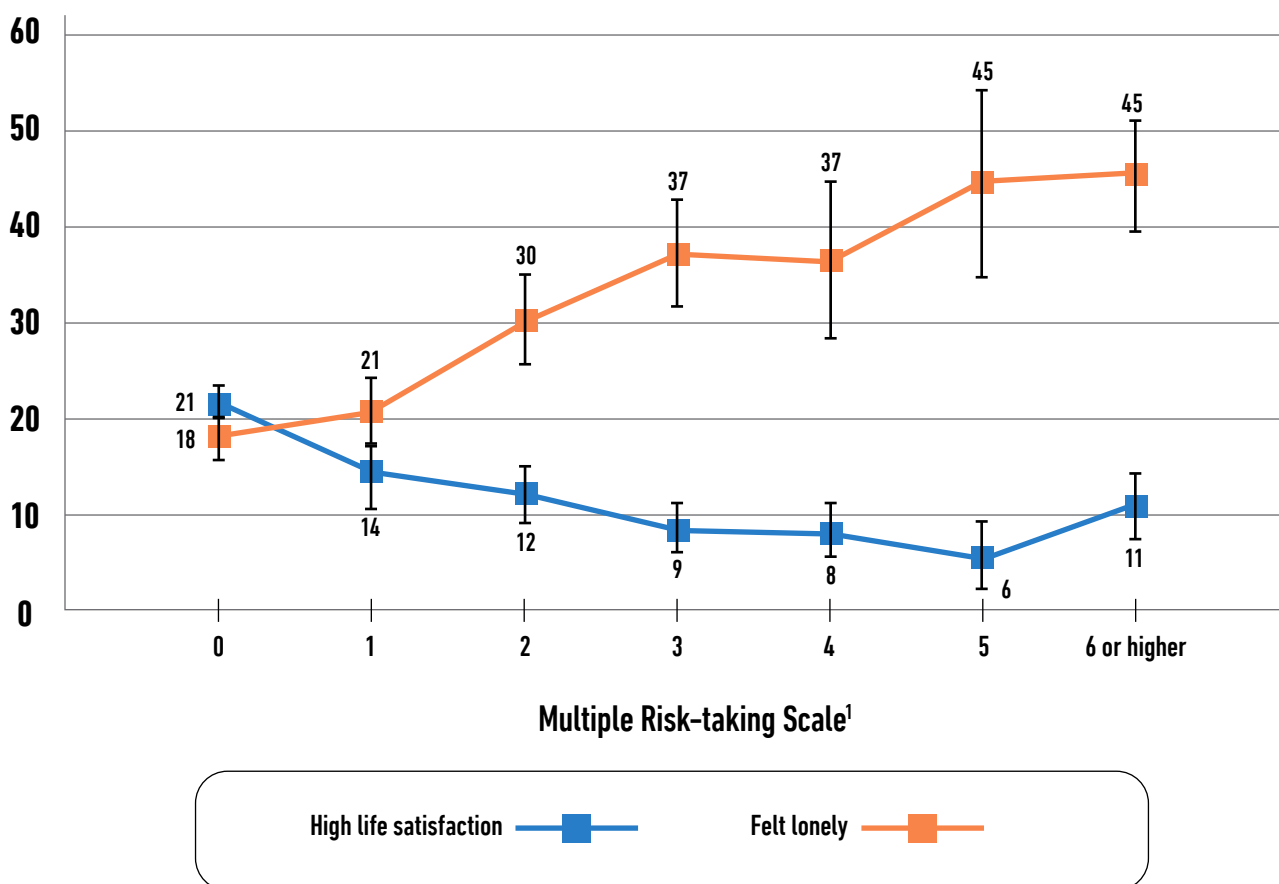
## MULTIPLE RISK-TAKING

Adolescent risk behaviours are also known to cluster together. Young people who engage in one risk behaviour are more likely to engage in another (Jackson et al., 2012). The figure below shows associations between engagement in multiple risk-taking, displayed using a scale that combines five risk-taking behaviours that cluster together.

### The potential effects of such multiple risk-taking multiply and accumulate:

- Negative indicators like “loneliness” tend to increase as the number of risk behaviours reported increases.
- Positive indicators of health status like “high life satisfaction” generally decrease in the face of reports of more and more risk-taking.

**Figure 4.** Engagement in multiple risk-taking and health outcomes (%)



**Note:** These prevalence rates are descriptive and represent students in grades 9 and 10.

<sup>1</sup> The multiple risk-taking scale includes five items (friending people online, engaging with social media that promoted a diet or exercise regime, engaging in risky behaviours learned online, meeting with a stranger in private, and cyberbullying perpetration). The scale ranges from 0 to 10, with higher values representing increased engagement in risk-taking behaviours. Due to low cell sizes with higher score values, scores of 6 or higher are combined in the graph.

## LIMITATIONS

All research studies have limitations, and it is important to acknowledge these when interpreting results.

1. The data collected in the HBSC are self-reported by adolescents and are therefore subject to reporting biases, such as recall error or social desirability bias. This could lead to potential underreporting or underestimation of the true prevalence of contemporary risk-taking behaviours.
2. The HBSC data are collected in schools. Students who were absent from school during the time of data collection would have not participated in the survey, which could further contribute to an underestimation of the prevalence of risk-taking behaviours among youth.
3. The cross-sectional design of HBSC does not allow for causal inferences to be drawn. Longitudinal studies, in which the temporal sequence of events may be identified, are warranted to identify whether engagement in risk-taking behaviours lead to poor health outcomes among adolescents.

## CONCLUSIONS

- Risk-taking is commonplace in young Canadians; and this report describes newer risks engaged in by youth.
- Newer forms of risk-taking are often associated with online environments.
- Types of online risks taken are inequitably distributed in adolescent populations by gender and socio-economic status.
- Online risk behaviours are correlated with health status – as their frequency increases, adolescent health status declines.
- The effect of participating in multiple risk behaviours is also associated with declining health indicators.



### Key Definitions

Traditional risk-taking refers to engagement in different types of risks, such as substance use (smoking, cannabis use, drunkenness) that have been reported historically in populations of young people.

Contemporary risk-taking refers to engagement in new types of risks, many of which occur in online environments (e.g., friending people with unknown backgrounds, trying to achieve an ideal body shape by following a diet or exercise regime promoted by social media), and did not exist historically.

### Data Source

This report presents data from the 9th cycle of the Canadian Health Behaviour in School-aged Children (HBSC) study, a World Health Organization cross-national study of the health of students ages 11 to 15 years old across 50+ countries and is conducted every four years.

The main purpose of the HBSC study is to understand adolescent health and well-being. The findings of this research study can help to inform education, health policy, and health promotion programs in Canada and abroad.

The HBSC study employs a multi-stage cluster sampling approach. Eligible school classrooms across Canada were selected at random and invited to participate in the study. In 2022, nine provinces and two territories participated. A total of 26,360 Canadian adolescents from 317 schools completed the study. In this report, our focus is on the 8,794 students in grades 9 and 10 who completed the survey instrument with contained items on contemporary risk-taking behaviours.\*

### Statistical Analysis

Standard descriptive statistics (proportions and 95% confidence intervals) were used to describe the sample. Nationally representative estimates were calculated using survey weights, which reflected student enrolment in grades 6 to 10 by province and territory. Given the complex survey design of HBSC, all prevalence estimates and 95% confidence intervals account for school-level clustering. This report included data for those in grades 9 and 10. The prevalence of individual risk-taking behaviours was compared by gender, relative material wealth, as well as by two health outcomes, felt lonely (“most of the time” or “always” out of a 5-level scale (never, rarely, sometimes, most of the time, always) and high life satisfaction (9 or higher on a scale from 1 to 10, where 1 is the “worst possible life today” and 10 was “the best possible life today”). The five online risk-taking behaviours (friending people online, engaging with social media that promoted a diet or exercise regime, engaging in risky behaviours learned online, meeting with a stranger in private, and cyberbullying perpetration) were combined to form a composite scale for one focused analysis on clustered risk-taking. The responses to each risk-taking item were coded as follows: no engagement=0, occasional engagement (“1-2 times”)=1, and “frequent engagement (“3 or more times”)=2. The scale ranges from scores of 0 to 10, with higher values representing increased engagement in risk-taking behaviours.

### Sex and Gender Considerations

In the 2022 HBSC study, students were asked to identify what sex they were assigned at birth according to the following categories: “Female” or “Male.” Additionally, students were asked to self-identify their gender identity according to the following categories: “Girl”, “Boy”, “I identify myself

neither boy nor girl” or “Other/s (please specify).” Students whose gender identity aligned with the sex they were assigned at birth were categorized as cisgender boys (sex assigned at birth reported as “male” and gender identity reported as “boy”) or cisgender girls (sex assigned at birth reported as “female” and gender identity reported as “girl”). Students whose sex assigned at birth did not align with their gender identity, and those who selected “I identify myself neither boy nor girl” or “Other/s (please specify)” as their gender identity, were categorized as transgender and gender diverse (TGD) youth. All TGD youth were grouped together in a separate category of students, to ensure sufficient sample sizes for analyses that stratified by gender identity.

**\*Refer to Chapter 1 of the HBSC national report for more information on the HBSC survey methods.**



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