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Mental health among women and girls of diverse backgrounds in Canada before and during the COVID-19 pandemic: An intersectional analysis

by Jungwee Park

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ABSTRACT

Background
Mental health disparity is associated with diverse characteristics, such as gender, socioeconomic status, Indigenous identity, immigrant status, race, disability, and sexual orientation. However, intersectional studies on women's mental health have been rare, particularly during the COVID-19 pandemic period.

Methods
Using data from two cycles of the Canadian Community Health Survey (2019 annual data and data from September to December 2020), self-reported mental health outcomes before the COVID-19 pandemic (sample size was 64,880) and during the second wave of the pandemic in the fall of 2020 (sample size of 27,246) were analyzed.

Results
After sociodemographic factors were controlled for, women and girls had higher odds of poorer self-perceived mental health and worsened mental health compared with before the COVID-19 pandemic than men and boys. Compared with 2019, the gender gap in negative self-perceived mental health increased during the pandemic. The number and type of intersections of specific socioeconomic characteristics also had an impact on mental health outcomes. During the pandemic, women and girls with the following characteristics were more likely to report low self-perceived mental health, compared with women and girls with no intersections: those with a disability (7.8 times); or who are lesbian, gay, or bisexual or have another sexual orientation than heterosexual (5.6); or who are Indigenous (3.6).

Interpretation
The intersections of gender and other sociodemographic characteristics increased the odds of negative self-perceived mental health.

Keywords
Mental health, intersectional analysis, women, COVID-19 pandemic

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What is already known on this subject?

- Previous research has extensively documented women's mental health and the presence of gender disparities in mental health.

- Existing knowledge highlights the varying impact of the COVID-19 pandemic on different groups across Canada.

- Recent research has examined the mental health of women and other populations during the pandemic.

What does this study add?

- This study investigates women's and girls' self-reported mental health before and during the COVID-19 pandemic, considering multiple characteristics such as Indigenous identity, immigrant status, racialized background, sexual orientation, disability status, and socioeconomic status.

- Taking an intersectional approach, the study seeks to understand the extent to which the intersections of various sociodemographic characteristics influenced women's and girls' mental health during the pandemic.

- Future intersectional analyses of mental health in the context of the pandemic could expand to encompass a wider range of mental health conditions, a more extensive array of sociodemographic characteristics, and different time periods (various waves of the pandemic and the duration of its impacts) and extend the examination to transgender and non-binary people.

Many studies have reported increased inequities between men and women in mental health since the COVID-19 pandemic,[1,2,3] including higher risks of post-traumatic stress symptoms[4] and psychiatric disorders and loneliness.[5] Moreover, extensive research has been undertaken to examine the unequal effects of the pandemic on self-perceived mental health among diverse groups such as Indigenous peoples and different gender groups.[1,3,6,7]

As a group, women experienced unique challenges during the pandemic. At work, they were more likely to have informal and precarious jobs that faced greater layoffs or furloughs and to be frontline service providers, such as cleaning staff, cashiers, social workers, teachers, nurses, and personal support workers, bearing a greater burden of mental and physical health risks.[8] At home, they carried on most of the unpaid caregiving work that increased during the pandemic, such as child care challenges, homeschooling, and other parental tasks.[9,10,11] As a result, since the pandemic, women have reported higher levels of economic distress (e.g., job loss and income decline), household stress, social isolation, shelter-in-place rates, parental stress, substance misuse, and psychological distress.[6,12,13] These factors also increased the risk of violence against women and girls during the pandemic.[12,14,15]

The pandemic also had a differential impact on diverse groups in Canada.[1,3,16] A Statistics Canada study found that respondents with the following characteristics reported higher rates of experiencing discrimination during the pandemic and experienced greater consequences to their economic well-being: racialized people; immigrants; Indigenous people; or people who were lesbian, gay, bisexual, or of another sexual orientation than heterosexual (LGB+).[17,18]

Women in these groups tended to be particularly affected by the pandemic. For instance, from March 2020 to August 2021, Indigenous women's employment recovery was slower than that of Indigenous men and non-Indigenous men and women.[19,20] The unemployment rate among Indigenous women remained above its pre-pandemic level in the first year following the beginning of the pandemic.[20] Also, recent immigrant women displayed the largest gap in employment recovery with their Canadian-born counterparts. Their recovery was lower by 5 percentage points in both May and June 2020, and 2 percentage points in July 2020.[18]

It has been also reported that the pandemic might have exacerbated the vulnerabilities of LGB+ people in terms of job loss, financial insecurity, and homelessness.[21] Stonewall[22] reported that lower educational attainment, poverty, housing, and food insecurity among lesbian and bisexual women and transgender people was related to stigma and discrimination worldwide—across 24 countries.

The pandemic had a significant impact on the livelihood of individuals with disabilities as well. According to Trudell and Whitmore,[23] the economic and housing precarity already experienced by women with disabilities was exacerbated during the pandemic. Despite the financial support introduced by the Government of Canada, the economic needs of women with disabilities tended to remain unmet.[24] In addition, many formal services and supports, including home and personal care support, were limited during the COVID-19 pandemic. A result of these socioeconomic impacts and limits on services was an increased vulnerability of women with disabilities as they relied on informal support networks potentially including abusers or gender-based violence.[24]

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Mental health disparities are not only observed between men and women but also associated with certain characteristics, including socioeconomic status, race, disability, and sexual orientation.[6,16,25,26,27] As discussed, the pandemic has brought about health, economic, and various social repercussions, which, in turn, are impacting the mental health of the population.[28] Existing mental health inequalities experienced by diverse groups might have been intensified during the pandemic. It has been recognized that gender inequity in mental health outcomes has widened since the pandemic.[1,2,3] During the pandemic period, certain groups face a higher risk of experiencing more severe challenges. If only one characteristic is studied, its impact may be overgeneralized, and the complex and interacting nature of the inequity cannot be fully understood. It is important to take an intersectional approach, examining multiple sources of inequalities together.[29,30,31] Rather than studying the mental health of women as one general group, it is crucial to explore the mental health of women at the intersections of certain sociodemographic characteristics that contribute to structural inequalities (e.g., women with severe disabilities, Indigenous women, and LGB+ women).

Intersectional studies on women's mental health have been rare, particularly during the pandemic period.[25,32] Moreover, among the previous intersectional studies on mental health, only a few studies involved multiple intersectional characteristics.[33,34] Most intersectional studies tend to focus on a couple of characteristics.[26,27,35,36,37,38,39,40,41] For example, many studies focused on the intersection between gender and ethnic identity, but rarely investigated the intersections between gender, ethnicity, sexual orientation, and disability. To fill this research gap, this study examines women's and girls' self-reported mental health before and during the COVID-19 pandemic using seven characteristics, including Indigenous identity, immigrant status, racialized background, LGB+ sexual orientation, disability, and socioeconomic status (low income and unemployment). Because of the small sample size, this study only provided estimates for LGB+ women, not specifically for lesbian women, bisexual women, or women with another sexual orientation that is not lesbian, bisexual, or heterosexual. It attempts to answer the following research questions:

- To what extent do the intersections of various characteristics affect women's and girls' self-perceived mental health during the COVID-19 pandemic?

- How does this effect of the intersections on women's and girls' self-perceived mental health during the COVID-19 pandemic compare with that before the pandemic?

- To what extent have the intersections of various characteristics affected the change in women's and girls' self-perceived mental health (worsened or not) since the COVID-19 pandemic compared with before the pandemic?

Methods

Data sources

This study used the annual cycles of the Canadian Community Health Survey (CCHS). The CCHS is a cross-sectional survey that collects information related to health status, health care utilization, and health determinants for the Canadian population. This analysis focused on the data on self-reported mental health outcomes before the COVID-19 pandemic (2019 CCHS annual data) and during the second wave of the pandemic in the fall of 2020 (2020 CCHS—September to December 2020) for people living in the 10 provinces. After a brief pause in collection in mid-March, near the end of the first collection period, because of lockdowns and public health guidelines, the 2020 CCHS resumed collection in September 2020.[3] The second, third, and fourth quarterly samples were collected during very short collection periods of about five weeks each from September to December. The impossibility of conducting in-person interviews, the shorter collection periods, and collection capacity issues resulted in a significant decrease in response rates.[42] The collection from September to December 2020 provided information reflecting respondents' experience with the COVID-19 pandemic. A detailed description[3] of the data validation and methodology change in the 2020 CCHS is available elsewhere.

Sample

The sample size of the 2020 CCHS (September to December) was 27,246 (12,078 men and 15,168 women), representing 32,342,696 people aged 12 years or older living in the 10 provinces in Canada. The sample size of the 2019 CCHS was 64,880, representing 31,837,719 people aged 12 years or older living in the 10 provinces in Canada. Table 1 shows the distribution of selected characteristics of Canadians aged 12 years or older.

Measures

Gender

In this analysis, gender is based on a question asking, "What is your gender?" Responses were reported under three categories: man, woman, and non-binary. Non-binary refers to people whose reported gender is not exclusively man or woman. Because of the small sample size, individuals who were categorized as non-binary were excluded from the analysis.

Place of residence

All population centres, including small (1,000 to 29,999 people), medium (30,000 to 99,999), and large (100,000 or greater), were classified as urban regions. Rural areas inside and outside a census metropolitan area or census agglomeration were classified as rural regions.

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Table 1

Distribution of selected sociodemographic characteristics of men and boys and women and girls aged 12 years or older, before and during the COVID-19 pandemic, 2019 and 2020 (September to December), Canada (excluding territories)

| | 2020 | | | | 2019 | | | |
| | Men and boys | | Women and girls | | Men and boys | | Women and girls | |
	N	%	N	%	N	%	N	%
Sample size	12,078	100.0	15,168	100.0	29,836	100.0	35,044	100.0
Weighted N	15,966,427	100.0	16,376,269	100.0	15,714,988	100.0	16,122,731	100.0
Age group								
12 to 24 years	2,849,779	17.9	2,416,924	14.8	2,836,476	18.1	2,563,443	15.9
25 to 44 years	5,041,348	31.6	5,354,359	32.7	5,027,175	32.0	5,117,875	31.7
45 to 64 years	4,964,824	31.1	5,040,809	30.8	4,898,329	31.2	5,037,241	31.2
65 years or older	3,110,476	19.5	3,564,177	21.8	2,953,008	18.8	3,404,172	21.1
Marital status								
Married	7,739,554	48.5	7,448,476	45.6	7,438,913	47.4	7,214,837	44.8
Common-law	1,840,094	11.5	1,876,354	11.5	1,923,521	12.3	1,912,351	11.9
Divorced, separated or widowed	1,096,575	6.9	2,422,259	14.8	1,208,188	7.7	2,476,638	15.4
Never married	5,269,468	33.1	4,590,713	28.1	5,127,144	32.7	4,498,087	27.9
Family, living arrangement								
Unattached individual	2,915,962	18.3	3,133,028	19.2	2,953,146	18.8	3,261,400	37.9
Living with spouse	4,538,545	28.5	4,378,835	26.8	4,389,798	28.0	4,096,789	17.2
Parent living with spouse and child(ren)	4,027,227	25.2	4,075,306	24.9	3,963,866	25.3	4,027,639	1.1
Single parent living with child(ren)	259,928	1.6	926,936	5.7	273,157	1.7	1,016,225	1.0
Child living with single parent	739,524	4.6	720,606	4.4	741,871	4.7	654,793	28.7
Child living with both parents	2,223,148	13.9	1,854,882	11.3	2,151,964	13.7	1,738,417	10.2
Others	1,249,705	7.8	1,269,535	7.8	1,222,532	7.8	1,315,232	3.9
Place of residence								
Urban	13,422,656	84.1	13,786,094	84.2	12,921,720	82.2	13,439,200	83.3
Rural	2,539,594	15.9	2,588,884	15.8	2,792,399	17.8	2,686,550	16.7
Low income (lowest quintile)								
No	12,769,556	80.2	12,504,406	76.4	12,849,923	82.0	12,561,574	78.0
Yes	3,168,901	19.9	3,869,047	23.6	2,822,626	18.0	3,543,008	22.0
Employment status								
Working	11,266,796	71.3	10,718,961	66.0	11,626,661	75.3	10,842,847	68.2
Not working	4,544,032	28.7	5,534,202	34.1	3,817,894	24.7	5,053,425	31.8
Indigenous identity								
Non-Indigenous	15,190,888	96.9	15,508,398	96.5	14,716,708	96.4	15,135,228	96.4
Indigenous	487,601	3.1	555,822	3.5	554,339	3.6	565,216	3.6
Immigrant status								
Non-immigrant	11,559,169	73.5	11,795,265	73.0	11,194,420	72.8	11,487,288	72.8
Immigrant	4,176,155	26.5	4,360,419	27.0	4,186,756	27.2	4,298,459	27.2
Racialized group								
No	12,005,091	76.9	12,469,825	77.6	11,790,448	77.4	12,135,779	77.3
Yes	3,604,181	23.1	3,593,327	22.4	3,440,721	22.6	3,569,901	22.7
Sexual orientation								
Heterosexual	14,405,132	96.4	14,921,146	95.7	14,247,742	96.7	14,594,594	95.9
LGB+	544,154	3.6	663,924	4.3	492,318	3.3	628,723	4.1
Disability								
No disability	4,111,011	26.3	3,222,124	20.1	3,835,350	25.1	3,264,758	20.8
Mild disability	6,684,381	42.8	6,753,495	42.1	6,426,010	42.1	6,817,028	43.4
Moderate disability	2,691,869	17.2	3,412,648	21.3	2,862,815	18.8	2,962,429	18.9
Severe disability	2,133,260	13.7	2,666,371	16.6	2,133,471	14.0	2,665,712	17.0

Note: "LGB+ sexual orientation" includes people who are lesbian, gay, bisexual, or of another sexual orientation that is not heterosexual.
Source: Canadian Community Health Survey annual cycles 2019 and 2020 (September to December).

Low income

In this analysis, individuals whose total household income was within the lowest quintile were categorized as individuals with low income.

Employment status

Employment status was measured based on the working status in the previous week. Those respondents of working age (aged 15 to 74 years) who reported that they did not have a job last week were classified as unemployed. Those aged younger than 15 and older than 74 were not considered as unemployed.

Immigrant status

All non-Canadian-born individuals, including landed immigrants and non-permanent residents, were classified as immigrants.

Racialized group

The concept of "racialized group" is measured with the "visible minority group" variable in the CCHS as defined by the *Employment Equity Act*. The *Employment Equity Act* defines visible minorities as "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour." The visible minority population consists mainly of those who self-reported belonging to the following groups: South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, Korean, and Japanese.

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Indigenous identity

In this article, the term "Indigenous people" refers to those who self-identified as First Nations people, Métis, or Inuit. The CCHS does not collect data on reserves and other Indigenous settlements in the provinces. Consequently, the results discussed for First Nations people exclude those living on reserves; results also exclude Indigenous peoples in the territories or remote northern regions of the provinces, which include Inuit Nunangat.

Sexual orientation

Sexual orientation of respondents was determined based on a question asking about self-reported sexual orientation. Responses are reported using the following categories: heterosexual; lesbian or gay; bisexual; and people whose reported sexual orientation is not heterosexual, lesbian, gay, or bisexual. "LGB+ sexual orientation" includes people who are lesbian, gay, bisexual, or of another sexual orientation that is not heterosexual.

Disability

In this article, disability was measured based on Health Utilities Index (HUI) global scores, which provide a summary index of health-related quality of life on a 0.0 to 1.0 scale. HUI was based on utility scores of eight attributes: vision, hearing, speech, mobility (ability to get around), dexterity (use of hands and fingers), emotion (feelings), cognition (memory and thinking), and pain. The level of disability was determined by the score's cut-off points: none (1.00), mild (0.89 to 0.99), moderate (0.70 to 0.88), and severe (less than 0.70).[43,44] In this analysis, the mental health outcomes of individuals with severe disabilities were examined in comparison with those of other individuals.

Intersectionality of socioeconomic characteristics

In this analysis, the following socioeconomic characteristics of individuals were studied: low income, unemployment, immigrant status, Indigenous identity, racialized group, LGB+ sexual orientation, and disability. When individuals present two or more of these characteristics, these characteristics intersect and may be related to different experiences and outcomes.

Number of intersections of socioeconomic characteristics

To look at the intersectionality of characteristics, individuals were classified into four groups, reflecting how many of the seven socioeconomic characteristics mentioned above they presented: zero, one, two, and three or more.

Self-perceived mental health

Self-perceived mental health was measured by asking respondents, "In general, would you say your mental health is excellent? Very good? Good? Fair? Poor?" If the responses were fair or poor, the respondent was considered to have low self-perceived mental health. If the responses were excellent, very good, or good, the respondent was considered to have high self-perceived mental health.

Worsened mental health

Worsened mental health was based on a retrospectively reported measure of self-perceived mental health during the COVID-19 pandemic compared with before the pandemic started. Respondents were asked, "Compared to before the pandemic started, how would you say your mental health is now? Would you say much better now? Somewhat better now? About the same? Somewhat worse now? Much worse now?" Those who answered somewhat worse now or much worse now were classified as having worsened mental health. Those who answered much better now, somewhat better now, or about the same were classified as not having worsened mental health.

Analysis

Descriptive statistical analyses were conducted to provide prevalence rates of negative mental health outcomes—low self-perceived mental health reported in 2019 and 2020 and worsened mental health since the COVID-19 pandemic began reported retrospectively in 2020. Estimates for women and girls were compared with those for men and boys. In addition, an intersectional approach was taken to compare the mental health outcomes of diverse groups of women and girls.

Multivariate logistic regression analyses were conducted to examine the relationships of various types of sociodemographic characteristics with mental health, while controlling for several confounding factors. Adjusted odds ratios of low self perceived mental health and worsened mental health since the COVID-19 pandemic began for men and boys and women and girls were presented separately. Age, marital status, family arrangement, and place of residence were confounding factors that were controlled.

In this analysis, missing cases in main variables were very low, ranging from 0% (in income, age, and place of residence) to 5% (in sexual orientation). Descriptive statistics were based on available case analysis, and multivariate regression was based on complete case analysis following listwise deletion of the missing cases.

The symbol E next to an estimate indicates that the coefficient of variation (CV) for this estimate was from 15.1% to 35.0% and the data quality was marginal. Users should interpret these results with caution. Estimates were suppressed and indicated by the symbol F when the CV was greater than 35.0%. Statistical significance was indicated based on the tests with a p-value of less than 0.05. For estimates produced from the CCHS data to be representative of the Canadian population, individual sampling weights were used. Bootstrap weights were used for variance estimation and significance tests. The number of bootstrap replicates was 1,000. All analyses used SAS version 9.4 (SAS Institute, North Carolina, United States).

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Results

Differences in mental health outcomes between women and girls and men and boys before and during the COVID-19 pandemic

Both before and during the COVID-19 pandemic, women and girls were more likely than men and boys to report low self-perceived mental health. During the pandemic from September to December 2020, 11.5% of women and girls reported low self-perceived mental health compared with 9.0% of men and boys (Appendix Table 1). Similarly, women's and girls' overall prevalence rates of worsened mental health during the pandemic were higher than those of their male counterparts (Appendix Table 2). From September to December 2020, 37.1% of women and girls reported that their current mental health was somewhat or much worse compared with before the start of the pandemic. Men's and boys' rate of worsened mental health (28.5%) was about 9 percentage points lower than women's and girls'. Women's and girls' rate of low self-perceived mental health was higher in 2020 than in 2019, before the pandemic (11.5% in 2020 vs. 8.7% in 2019). Similarly, men's and boys' rates went up from 7.3% in 2019 to 9.0% in 2020.
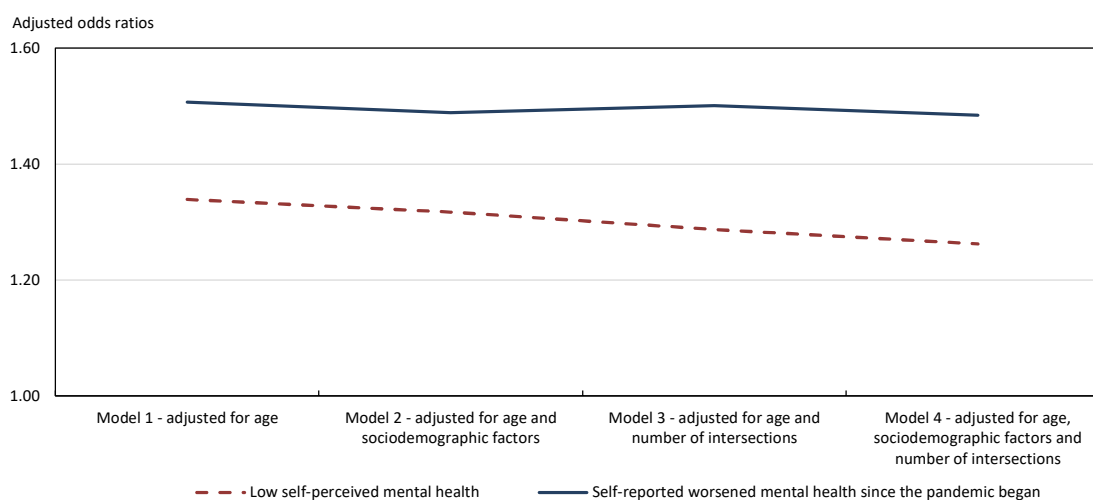
Chart 1 presents the odds ratios of a series of logistic regressions showing women's and girls' negative mental health outcomes compared with men's and boys' during the pandemic. Model 1 shows the effect of gender on mental health after controlling for age; model 2 controls for age, marital status, family arrangement, and place of residence (rural vs. urban); model 3 controls for the number of intersections of socioeconomic characteristics (low income, unemployment, immigrant status,

Indigenous identity, racialized group, LGB+ sexual orientation, and disability); and model 4 controls for all aforementioned factors together. Women and girls consistently showed higher odds of negative mental health outcomes compared with men and boys, including lower self-reported mental health and worsened mental health since the COVID-19 pandemic, in all models. A similar pattern was found for both mental health outcomes. For example, compared with men and boys, women and girls had 1.5 times higher odds of reporting worsened mental health during the pandemic after controlling for sociodemographic characteristics.

## Number of intersections of socioeconomic characteristics

The number of intersections has been of interest to previous research on intersectionality.[45,46] In this analysis, this was measured by looking at how many of the following selected sociodemographic characteristics individuals reported: low income, unemployment, immigrant status, Indigenous identity, racialized group, LGB+ orientation, and disability. In 2020 (since the start of the COVID-19 pandemic), about 15.6% of women and girls, and 12.5% of men and boys, reported three or more of the selected characteristics. For example, LGB+ racialized adult women with no job or low-income immigrant women with a disability belong to this "three or more" category. In 2020, about 30.3% of women and girls presented none of these characteristics, and 29.5% presented one of them (data not shown). Those percentages were lower than in 2019 (32.4% presenting none and 30.5% presenting one) primarily because of an increase in the number of women who were unemployed in 2020.

Chart 1

Women's and girls' odds ratios of low self-perceived mental health and a worsened mental health since the pandemic began compared with men and boys during the COVID-19 pandemic, Canada (excluding territories), 2020

Source: Canadian Community Health Survey annual cycle 2020 (September to December).

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Chart 2
Adjusted odds ratios of low self-perceived mental health and worsened mental health since the pandemic began by the number of intersections, for women and girls aged 12 years or older, Canada (excluding territories), 2020
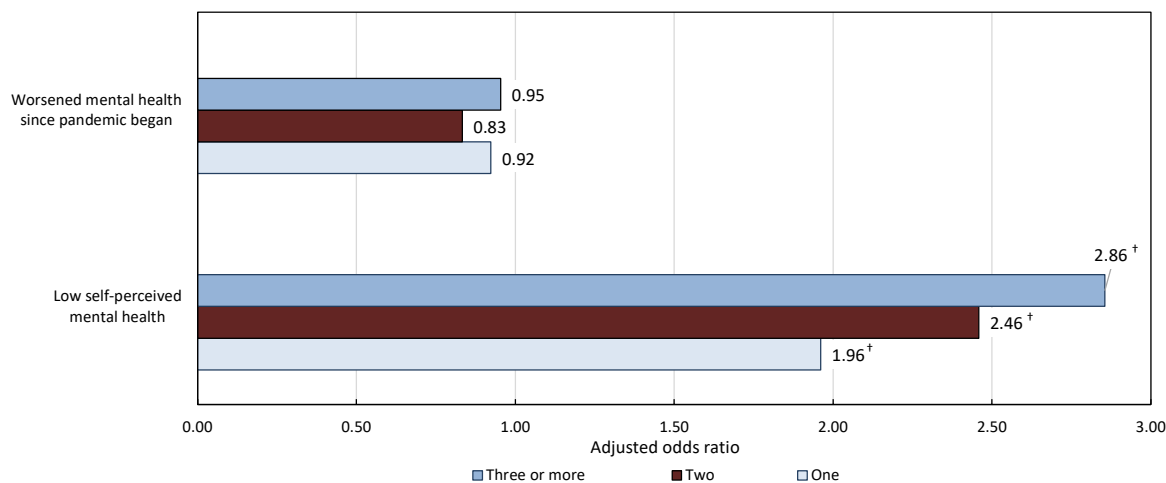
† significantly different from reference category (women and girls with no intersection)
Notes: Adjusted for age, marital status, family arrangement, and place of residence. Out of seven intersections: low income, unemployment, Indigenous identity, immigrant status, racialized group, non-heterosexual orientation, and severe disability.
Source: Canadian Community Health Survey annual cycle 2020 (September to December).

Not surprisingly, women and girls characterized by a higher number of intersections tended to show a higher prevalence rate of poor self-reported mental health in 2020. Compared with women and girls who did not report being part of any of the selected sociodemographic groups (i.e., Canadian-born, White, heterosexual women with no severe disability who had a job and whose household income belonged to the second or higher quintiles), women and girls who reported one of the seven sociodemographic characteristics were 2.0 times more likely to report low self-perceived mental health; women and girls with two intersections were 2.5 times more likely, and women and girls with three or more intersections were almost 3 times more likely to report low self-perceived mental health (Chart 2, Appendix Table 1). The number of intersections did not show a significant effect on worsened mental health since the pandemic began.

Examining specific intersections

Chart 3 shows variations in mental health outcomes during the pandemic between women and girls with specific intersecting sociodemographic characteristics in comparison with women and girls who did not report any of the selected characteristics. It shows adjusted odds ratios of two negative mental health outcomes. After the analysis controlled for age, marital status, family arrangement, and place of residence (rural or urban), all seven selected characteristics were associated with low self-perceived mental health during the pandemic. Overall, 11.5% of women and girls reported low self-perceived mental health during the pandemic. Further disaggregation revealed that 30.2% of women and girls with severe disabilities, 35.9% of LGB+ women and girls, and 24.4% of Indigenous women and

girls reported low self-perceived mental health during the pandemic. On the other hand, immigrant women and girls (6.7%) and racialized women and girls (8.5%) were less likely to report low self-perceived mental health (Table 2, Appendix Table 1). Notably, women and girls with severe disabilities were 6.3 times more likely to report poor mental health than other women and girls with no disabilities or less severe (mild or moderate) disabilities.

Compared with other women and girls, racialized women and girls and immigrant women and girls were less likely to report that their mental health became worse during the pandemic. However, women and girls with severe disabilities were 1.5 times more likely than other women and girls to report worsened mental health (Chart 3). Compared with 37.1% of women and girls overall, 47.1% of women and girls with a disability reported worsened mental health during the pandemic (Table 2, Appendix Table 2).

Women and girls with multiple intersecting characteristics

Table 2 presents mental health outcomes for women and girls with multiple intersecting characteristics. For example, this table provides statistics for LGB+ women and girls overall, as well as low-income LGB+ women and girls, unemployed LGB+ women and girls, and LGB+ women and girls with severe disabilities, while controlling for intersections with all other sociodemographic variables in the model. The reference group for these analyses was women and girls who had none of the seven selected sociodemographic characteristics (i.e., low income, unemployment, immigrant status, Indigenous identity, racialized group, LGB+ orientation, or disability).

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Chart 3
Adjusted odds ratios of low self-perceived mental health and worsened mental health since the pandemic began of women and girls with a specific type of intersectional characteristic compared with women and girls with no intersection, for women and girls aged 12 years or older, Canada (excluding territories), 2020
Adjusted odds ratio
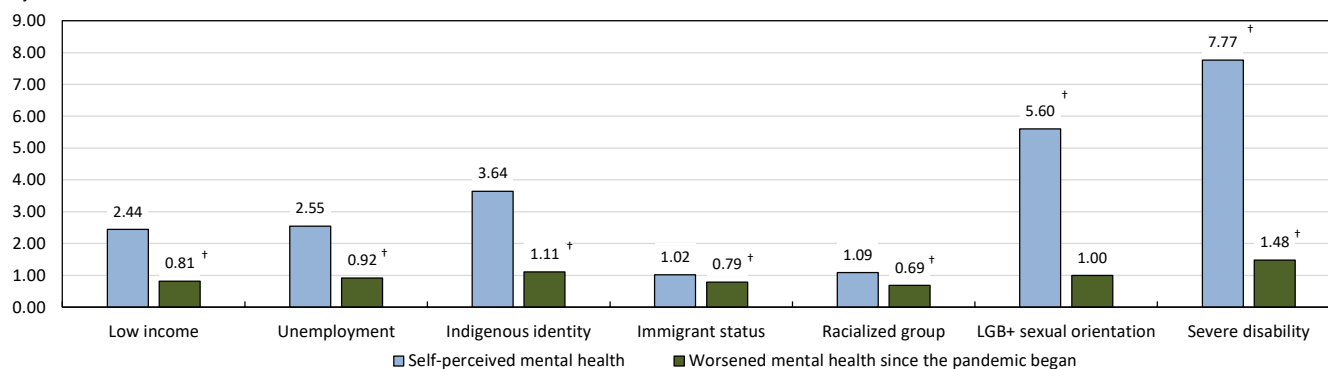
† significantly different from reference category (women and girls with no intersection)
Note: Adjusted for age, marital status, family arrangement, and place of residence. **"LGB+ sexual orientation"** includes people who are lesbian, gay, bisexual, or of another sexual orientation that is not heterosexual.
Source: Canadian Community Health Survey annual cycle 2020 (September to December).

Compared with the reference group, the odds of low self-perceived mental health were 5.6 for LGB+ women and girls overall, 5.4 for low-income LGB+ women and girls, 6.2 for unemployed LGB+ women and girls, and 18.7 for LGB+ women and girls with severe disabilities.

The odds of low self-reported mental health for immigrant women and girls and racialized women and girls were statistically lower than those of the reference group. For immigrant women and girls and racialized women and girls with disabilities, however, the odds of low mental health became much greater than those of the reference group (5.5 for immigrant women and girls with disabilities; 7.2 for racialized women and girls with disabilities).

When LGB+ women and girls or women and girls with severe disabilities had one of the other sociodemographic characteristics studied, their self-perceived mental health was impacted. For example, women and girls with severe disabilities who were unemployed were 9.2 times more likely than the reference group to report low mental health. The odds of reporting low self-perceived mental health for LGB+ women and girls with disabilities were 18.7 times greater than the reference group with none of seven intersecting characteristics (Table 2).

Almost 40% of women and girls reported that their current mental health was somewhat or much worse compared with before the pandemic (Table 2). In particular, unemployed Indigenous women and girls and unemployed women and girls with disabilities showed higher odds than the reference group of reporting worsened mental health. Overall, immigrant and racialized women and girls were less likely to report worsened mental health since the pandemic began. However, there was no statistically significant difference in reporting worsened mental health between the reference group and immigrant and racialized women and girls with another selected sociodemographic characteristic, such as low income, unemployment, LGB+ sexual orientation, or severe disability.

Discussion

This study highlighted certain mental health outcomes of diverse groups of women and girls before (2019) and during (September to December 2020) the COVID-19 pandemic. As expected, gender disparities in mental health outcomes between men and boys and women and girls were persistent. After controlling for selected sociodemographic factors, women's and girls' odds of certain mental health outcomes in this analysis (low self-perceived mental health and worsened mental health compared with before the pandemic) were higher than men's and boys'. Compared with 2019, the gap in negative self-perceived mental health between men and boys and women and girls increased during the pandemic. This finding was consistent with previous research suggesting the exacerbation of mental health challenges experienced by certain populations, specifically women.[1,2] It is widely recognized that the COVID-19 pandemic has exacerbated various pre-existing socioeconomic and health challenges faced by women, who have long endured systemic oppression, discrimination, and inequality.[6,7,15,17,18,21,22,23,24,47,48]

The findings of this study were consistent with previous research that has found lower self-perceived mental health among Indigenous people[3,15] and other vulnerable populations, such as LGB+ people and individuals with long-term conditions or disabilities.[3] More importantly, however, this analysis

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Table 2
Rates and age-adjusted odds ratios of low self-perceived mental health before and during the COVID-19 pandemic, and self-reported worsened mental health since the COVID-19 pandemic began by intersectional identity markers, men and boys and women and girls aged 12 years or older, 2019 and 2020 (September to December), Canada (excluding territories)

	Low self-perceived mental health during pandemic - 2020						Low self-perceived mental health before pandemic - 2019						Worsened mental health since pandemic began					
	Rate (%)	95% confidence interval from	to	Adjusted odds ratio	95% confidence interval from	to	Rate (%)	95% confidence interval from	to	Adjusted odds ratio	95% confidence interval from	to	Rate (%)	95% confidence interval from	to	Adjusted odds ratio	95% confidence interval from	to
Overall men and boys	9.0	8.0	10.1	1.00	...	...	7.3	6.8	8.0	1.00	...	...	28.5	27.0	30.0	1.00	...	...
Overall women and girls	11.5†	10.5	12.5	1.32†	1.12	1.55	8.7†	8.2	9.3	1.20†	1.08	1.34	37.1†	35.7	38.6	1.49†	1.36	1.64
Women and girls with no intersections (ref.)	6.9	5.6	8.6	1.00	...	...	4.0	3.4	4.6	1.00	...	...	39.1	36.4	42.0	1.00	...	...
Indigenous women and girls	24.4‡	18.1	32.1	3.64‡	2.28	5.80	20.5‡	17.3	24.1	5.40‡	4.19	6.96	42.8	35.9	50.0	1.11	0.81	1.53
Indigenous low-income women and girls	27.7‡E	17.8	40.3	3.96‡	2.07	7.56	31.2‡	24.7	38.6	8.00‡	5.54	11.55	42.4	31.3	54.3	1.08	0.65	1.80
Indigenous unemployed women and girls	29.0‡E	19.8	40.4	5.01‡	2.86	8.81	27.0‡	21.6	33.1	7.80‡	5.59	10.88	54.8‡	44.3	65.0	1.86‡	1.21	2.87
Indigenous LGB+ women and girls	46.2‡E	20.2	74.4	7.08	0.88	56.88	46.0‡	31.7	61.0	15.27‡	7.61	30.61	44.4‡	20.7	70.9	1.10	0.31	3.83
Indigenous women and girls with disabilities	36.4‡E	25.0	49.5	7.68‡	4.04	14.59	45.2‡	37.1	53.6	19.24‡	13.42	27.60	46.8	34.7	59.3	1.35	0.78	2.34
Immigrant women and girls	6.7	5.3	8.4	1.02	0.72	1.44	6.3‡	5.4	7.4	1.72‡	1.36	2.18	34.7	31.5	38.0	0.79‡	0.65	0.96
Immigrant low-income women and girls	7.4E	4.8	11.4	1.15	0.64	2.06	9.7‡	7.5	12.3	2.59‡	1.89	3.56	34.3	27.9	41.3	0.79	0.56	1.10
Immigrant unemployed women and girls	7.2E	5.1	10.1	1.21	0.78	1.88	8.9‡	7.0	11.2	2.76‡	2.01	3.77	36.0	30.6	41.8	0.86	0.65	1.14
Immigrant LGB+ women and girls	F	...	...	2.08	0.60	7.22	F	...	...	2.94‡	1.25	6.90	F	...	...	0.59	0.13	2.76
Immigrant women and girls with disabilities	21.8‡E	15.3	30.1	5.47‡	3.25	9.19	22.8‡	18.3	28.0	9.47‡	6.79	13.21	45.6	37.1	54.4	1.34	0.92	1.94
Racialized immigrant women and girls	5.4	4.0	7.4	0.73	0.49	1.09	6.8‡	5.6	8.3	1.74‡	1.32	2.30	32.1	27.8	36.7	0.68‡	0.53	0.87
Racialized women and girls	8.5	6.5	10.9	1.09	0.75	1.58	8.1‡	6.8	9.5	1.82‡	1.41	2.35	32.3	28.5	36.4	0.69‡	0.55	0.87
Racialized low-income women and girls	8.1E	4.6	13.8	1.07	0.55	2.08	11.6‡	9.0	14.8	2.72‡	1.91	3.87	32.3	24.2	41.7	0.68	0.44	1.07
Racialized unemployed women and girls	8.5E	5.9	12.2	1.23	0.76	2.01	10.8‡	8.2	14.1	2.79‡	1.91	4.06	33.1	26.6	40.4	0.74	0.52	1.05
Racialized LGB+ women and girls	F	...	...	1.74	0.41	7.40	15.7‡E	8.8	26.3	3.11‡	1.63	5.93	F	...	...	0.45	0.14	1.42
Racialized women and girls with disabilities	33.7‡E	22.8	46.8	7.22‡	3.79	13.77	29.5‡	23.3	36.6	10.55‡	7.16	15.54	45.3	33.5	57.7	1.28	0.75	2.20
LGB+ women and girls	35.9‡	29.1	43.3	5.60‡	3.73	8.42	27.0‡	23.2	31.2	6.74‡	5.20	8.74	39.2	32.3	46.6	1.00	0.71	1.39
LGB+ low-income women and girls	35.3‡E	24.1	48.3	5.42‡	2.89	10.15	34.6‡	27.1	43.0	8.67‡	5.79	12.98	41.4	29.0	54.9	1.06	0.61	1.87
LGB+ unemployed women and girls	38.5‡	28.3	49.8	6.23‡	3.61	10.74	38.3‡	30.2	47.3	10.72‡	7.15	16.07	45.1	34.2	56.6	1.30	0.79	2.13
LGB+ women and girls with disabilities	64.7‡	50.5	76.7	18.70‡	9.66	36.19	59.6‡	51.5	67.3	28.01‡	19.10	41.05	47.4	33.8	61.4	1.46	0.80	2.68
Women and girls with disabilities	30.2‡	26.8	33.8	7.77‡	5.66	10.66	27.5‡	25.3	29.7	10.98‡	8.99	13.41	47.1‡	43.4	50.8	1.48‡	1.21	1.80
Low-income women and girls with disabilities	29.0‡	24.5	33.9	7.55‡	5.23	10.91	35.0‡	31.0	39.1	14.35‡	11.14	18.49	40.9	36.1	45.8	1.16	0.90	1.48
Unemployed women and girls with disabilities	32.1‡	27.8	36.7	9.18‡	6.49	12.97	33.3‡	29.8	36.9	14.66‡	11.55	18.61	45.3	40.5	50.2	1.37‡	1.07	1.74

... not applicable
‡ significantly different from reference category
† significantly different from estimates for men
E use with caution
F too unreliable to be published

Notes: Adjusted for age, marital status, family arrangement, and place of residence. "LGB+ sexual orientation" includes people who are lesbian, gay, bisexual, or of another sexual orientation that is not heterosexual.
Source: Canadian Community Health Survey annual cycles 2019 and 2020 (September to December).

illustrated that the exacerbation of these challenges became more pronounced when multiple vulnerable characteristics intersected. In particular, when two of these three characteristics—Indigenous identity, LGB+ sexual orientation, and severe disabilities or conditions—interacted with each other, the likelihood of experiencing low self-perceived mental health significantly increased.

As well, the intersection of those characteristics with certain economic conditions, such as low income or unemployment, was associated with high odds of poor self-perceived mental health. Indigenous women and girls who were unemployed were most likely to say that their mental health worsened since the pandemic started. About 55% of them reported this, compared with 37% of women and girls overall and 29% of men and boys.

Disability status consistently increased the odds of poor self-perceived mental health when it intersected with all other characteristics included in this analysis. Also, women and girls with severe disabilities showed higher odds of reporting worsened mental health since the pandemic began. However, it is important to note that the eight components of the HUI

measure of disability used in this analysis included emotion as well as cognition (see "Measures" section). This may be related to the high effect of disability on mental health outcomes.

Since this analysis did not further disaggregate data by specific subgroups, the results reflect the averages for only the overall populations of immigrant and racialized women and girls. Generally, however, racialized and immigrant status showed some "protective" effects on mental health outcomes. For example, the odds of reporting worsened mental health were lower than the reference group with none of the seven selected sociodemographic characteristics included in this study. For racialized women, this may be related in part to the Black–White mental health paradox, pointing out racialized people's subjective mental health advantage over White people.[49,50] Positive mental health outcomes found among immigrant women and girls suggest that the healthy immigrant effect extends to mental health.[51] Their relatively positive mental health outcomes may also be related to immigrants' and racialized people's tendency to underreport mental health issues and underuse mental health care.[52]

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Interestingly, the low odds of low self-perceived mental health among immigrant and racialized women and girls compared with the reference group were reversed for women and girls with disabilities. In other words, when racialized and immigrant women and girls had a severe disability or condition, the protective effects on self-reported mental health disappeared. Compared with the reference group, immigrant women and girls with severe disabilities were five times more likely to report poor mental health, and racialized women and girls with disabilities were seven times more likely. These results may indicate that the effects of the pandemic on the well-being of racialized or immigrant women and girls with disabilities[23,24] were so significant that any protective factors associated with their racialized or immigrant status against poor mental health were nullified.

While women and girls reported poorer mental health during the pandemic than in the year preceding it, the patterns found during the two periods studied were similar. That is, the characteristics associated with women's and girls' mental health outcomes during the pandemic, and the effect of their intersections, were also observed before the pandemic. There were more significant findings in the 2019 cycle since its sample size was more than twice as large as that of the 2020 cycle.

Limitations

The data pertaining to the pandemic period were collected as part of the 2020 CCHS annual cycle. As a result, the portion of the cycle that covers the pandemic period was limited in its sample size. Because of the small sample size in 2020, it was not possible to further examine subgroups of the population groups included in this analysis. For example, because of the limited sample size, it was not possible to provide a distinctions-based analysis of the mental health outcomes of First Nations people living off reserve, Métis, and Inuit. Similarly, certain characteristics of immigrant women and girls, such as time since immigration (recent vs. long-term immigrants), age at immigration, and country of birth, which have impacts on mental health,[51] could not be examined. Again, because of small sample sizes, the analysis could not examine different groups of racialized women and girls. Each specific racialized group may possess unique cultural and ethnic characteristics and warrant further exploration on how characteristics impact associations with mental health outcomes. Sample size issues also limited the opportunities to examine the relationship between mental health outcomes and the intersectionality of selected sociodemographic characteristics included in this analysis. No more than three intersecting characteristics were analyzed.

The data collection for the period during the pandemic was conducted from September to December 2020. Thus, this analysis could not examine the entire impact of the pandemic.

Additionally, in the 2020 cycle of the CCHS, some bias was discovered, which is likely attributable to the limitations in survey collection during the pandemic, including the decreased response rate and the use of telephone interviews only.[3] This makes it difficult to compare the findings of this study with those from other cycles.

Since the CCHS is a cross-sectional survey, no causal relationships can be inferred based on the associations found in this analysis. Some of the mental health outcomes might precede or lead to given socioeconomic conditions. For example, economic disadvantages included in this analysis, such as low income or unemployment, may as well be a consequence of poor mental health. Also, the two mental health outcomes in this analysis were self-reported, which are different from clinical diagnoses and should not be interpreted as such.

Despite these limitations, this study, which uses the initial CCHS data encompassing both pre-pandemic and pandemic periods, provides a unique analysis of how different sociodemographic characteristics of women and girls in Canada can intersect and be associated with different mental health outcomes. This contributes to a more comprehensive understanding of the experiences of women and girls of diverse backgrounds.

Conclusion and future studies

The intersectional analysis in this current study highlights the compounding impact of existing social inequalities on the mental health of women and girls with diverse backgrounds before and during the COVID-19 pandemic. It is crucial to consider the intersections of certain characteristics of women and girls for a more comprehensive understanding of women's and girls' mental health outcomes, particularly during the COVID-19 pandemic. This approach is important not only for identifying groups of women at higher risk of experiencing poor mental health but, more importantly, for comprehending the specific interrelationships among diverse characteristics that are pertinent to mental health outcomes. The findings of this study may help clinicians in recognizing risk factors and provide decision makers with insights into the implications for policies aimed at directing services and resources to individuals who are more vulnerable to poor mental health outcomes.

Future intersectional analyses of mental health in the context of the pandemic could benefit from an examination of the impact across different time periods, including various waves of the pandemic, and the duration of its effects. Furthermore, data collection should be designed to make possible a more comprehensive examination of a wide range of sociodemographic characteristics and their intersections with sufficient sample sizes, allowing for disaggregation into more specific subgroups. These intersectional analyses can also be extended to include more mental health outcomes, such as stress

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and diagnosed mental disorders, as well as their long-term association with physical health.[28,53] Additionally, future intersectional analysis may delve into more detailed aspects of men's mental health. Combining data from several cycles of the CCHS can enhance sample sizes, enabling these analyses to be carried out effectively.

Appendix Table 1

Rates and age-adjusted odds ratios of low self-perceived mental health by diverse identity characteristics, people in Canada (excluding territories) aged 12 years or older, before and during the COVID-19 pandemic, 2019 and 2020 (September to December)

	During pandemic - 2020											
	Men and boys						Women and girls					
	Rate (%)	95% confidence interval		Adjusted odds ratio	95% confidence interval		Rate (%)	95% confidence interval		Adjusted odds ratio	95% confidence interval	
		from	to		from	to		from	to		from	to
Overall	9.0	8.0	10.1				11.5 †	10.5	12.5			
Low income (lowest quintile)												
No (ref.)	7.9	6.8	9.1	1.00	...	...	10.6 †	9.6	11.8	1.00	...	...
Yes	14.2 ‡	12.0	16.8	1.63 ‡	1.26	2.12	14.4 ‡	12.6	16.4	1.43 ‡	1.14	1.80
Employment status												
Working (ref.)	7.4	6.4	8.6	1.00	...	...	10.2 †	9.1	11.5	1.00	...	...
Not working	13.2 ‡	11.1	15.6	2.13 ‡	1.65	2.77	13.9 ‡	12.3	15.7	1.63 ‡	1.34	1.99
Indigenous identity												
Non-Indigenous (ref.)	8.9	7.9	10.0	1.00	...	...	10.9 †	10.0	11.9	1.00	...	...
Indigenous	12.3 E	7.7	19.3	1.26	0.74	2.16	24.4 ‡	18.1	32.1	2.11 ‡	1.39	3.20
Immigrant status												
Non-immigrant (ref.)	10.1	8.9	11.3	1.00	...	...	13.2 †	12.1	14.4	1.00	...	...
Immigrant	6.2 ‡	4.6	8.2	0.63 ‡	0.44	0.90	6.7 ‡	5.3	8.4	0.48 ‡	0.36	0.64
Racialized group												
No (ref.)	10.3	9.1	11.6	1.00	...	...	12.3	11.3	13.4	1.00	...	...
Yes	4.4 ‡E	3.0	6.5	0.38 ‡	0.24	0.59	8.5 ‡†	6.5	10.9	0.54 ‡	0.39	0.74
Sexual orientation												
Heterosexual (ref.)	8.4	7.5	9.5	1.00	...	...	10.3	9.4	11.4	1.00	...	...
LGB+	24.4 ‡E	16.2	34.9	3.03 ‡	1.62	5.66	35.9 ‡	29.1	43.3	3.47 ‡	2.43	4.96
Severe disability												
No (ref.)	6.2	5.3	7.2	1.00	...	...	7.8	6.9	8.9	1.00	...	...
Yes	29.6 ‡	25.4	34.1	7.10 ‡	5.29	9.52	30.2 ‡	26.8	33.8	6.29 ‡	4.89	8.09
Number of intersectional conditions												
Zero (ref.)	6.8	5.4	8.5	1.00	...	...	6.9	5.6	8.6	1.00	...	...
One	8.1	6.6	10.0	1.26	0.89	1.78	11.5 ‡	9.7	13.6	1.96 ‡	1.45	2.65
Two	9.2	7.2	11.7	1.47 ‡	1.00	2.16	14.1 ‡†	12.1	16.5	2.46 ‡	1.80	3.35
Three or more	18.2 ‡	14.3	22.8	3.05 ‡	2.06	4.52	16.7 ‡	14.2	19.5	2.86 ‡	2.10	3.89

... not applicable

‡ significantly different from reference category

† significantly different from estimates for men

E use with caution

Note: "LGB+ sexual orientation" includes people who are lesbian, gay, bisexual, or of another sexual orientation that is not heterosexual.

Source: Canadian Community Health Survey annual cycles 2019 and 2020 (September to December).

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Appendix Table 1

Rates and age-adjusted odds ratios of low self-perceived mental health by diverse identity characteristics, people in Canada (excluding territories) aged 12 years or older, before and during the COVID-19 pandemic, 2019 and 2020 (September to December) (continue)

| | Men and boys | | | | | | Women and girls | | | | | |
	Rate (%)	95% confidence interval from	to	Adjusted odds ratio	95% confidence interval from	to	Rate (%)	95% confidence interval from	to	Adjusted odds ratio	95% confidence interval from	to
Overall	7.3	6.8	8.0				8.7 [†]	8.2	9.3			
Low income (lowest quintile)												
No (ref.)	6.5	5.9	7.1	1.00	...	...	7.2	6.7	7.7	1.00	...	...
Yes	11.6 [‡]	10.1	13.3	1.58 [‡]	1.30	1.91	14.1 [‡]	12.8	15.7	1.89 [‡]	1.63	2.20
Employment status												
Working (ref.)	6.0	5.4	6.6	1.00	...	...	7.2	6.6	7.8	1.00	...	...
Not working	11.3 [‡]	10.0	12.6	1.99 [‡]	1.66	2.38	12.2 [‡]	11.1	13.4	2.01 [‡]	1.75	2.31
Indigenous identity												
Non-Indigenous (ref.)	7.0	6.5	7.6	1.00	...	...	8.3 [†]	7.8	8.9	1.00	...	...
Indigenous	11.8 [‡]	9.4	14.8	1.66 [‡]	1.27	2.18	20.5 [†‡]	17.3	24.1	2.45 [‡]	1.97	3.05
Immigrant status												
Non-immigrant (ref.)	8.1	7.4	8.9	1.00	...	...	9.6	9.0	10.2	1.00	...	...
Immigrant	4.9 [‡]	4.1	5.8	0.61 [‡]	0.49	0.76	6.3 [‡]	5.4	7.4	0.68 [‡]	0.56	0.82
Racialized group												
No (ref.)	7.4	6.9	8.0	1.00	...	...	8.9 [†]	8.4	9.5	1.00	...	...
Yes	6.1	4.6	8.0	0.76	0.55	1.04	8.1	6.8	9.5	0.74 [‡]	0.60	0.92
Sexual orientation												
Heterosexual (ref.)	6.8	6.2	7.4	1.00	...	...	8.0 [†]	7.5	8.5	1.00	...	...
LGB+	19.4 [‡]	14.9	24.8	2.73 [‡]	1.96	3.81	27.0 [‡]	23.2	31.2	3.17 [‡]	2.53	3.98
Severe disability												
No (ref.)	4.6	4.1	5.2	1.00	...	...	4.8	4.4	5.3	1.00	...	...
Yes	25.1 [‡]	22.8	27.6	7.89 [‡]	6.59	9.45	27.5 [‡]	25.3	29.7	8.67 [‡]	7.42	10.12
Number of intersectional conditions												
Zero (ref.)	3.6	3.1	4.2	1.00	...	...	4.0	3.4	4.6	1.00	...	...
One	8.6 [‡]	7.5	9.9	2.52 [‡]	2.02	3.15	7.8 [‡]	7.0	8.7	2.13 [‡]	1.75	2.59
Two	8.9 [‡]	7.6	10.5	2.64 [‡]	2.07	3.38	11.2 [‡]	9.9	12.6	3.20 [‡]	2.59	3.94
Three or more	13.6 [‡]	11.6	15.9	3.93 [‡]	3.05	5.06	17.4 [‡]	15.4	19.5	5.17 [‡]	4.16	6.42

... not applicable

[‡] significantly different from reference category

[†] significantly different from estimates for men

[E] use with caution

Note: "LGB+ sexual orientation" includes people who are lesbian, gay, bisexual, or of another sexual orientation that is not heterosexual.

Source: Canadian Community Health Survey annual cycles 2019 and 2020 (September to December).

Appendix Table 2

Rates and age-adjusted odds ratios of self-reported worsened mental health since the COVID-19 pandemic began by diverse identity characteristics, people in Canada (excluding territories) aged 12 years or older, 2020 (September to December)

| | Men and boys | | | | | | Women and girls | | | | | |
	Rate (%)	95% confidence interval from	to	Adjusted odds ratio	95% confidence interval from	to	Rate (%)	95% confidence interval from	to	Adjusted odds ratio	95% confidence interval from	to
Overall	28.5	27.0	30.0	...	...	...	37.1 [†]	35.7	38.6	...	...	...
Low income (lowest quintile)												
No (ref.)	28.6	26.9	30.4	1.00	...	...	38.0 [†]	36.2	39.8	1.00	...	...
Yes	27.7	24.5	31.0	0.93	0.76	1.15	34.2 [†]	31.5	37.0	0.85	0.72	1.00
Employment status												
Working (ref.)	27.6	25.8	29.5	1.00	...	...	37.7 [†]	35.7	39.7	1.00	...	...
Not working	30.7	27.9	33.8	1.31 [‡]	1.08	1.58	36.2 [†]	33.8	38.6	0.99	0.85	1.14
Indigenous identity												
Non-Indigenous (ref.)	28.6	27.1	30.1	1.00	...	...	36.9 [†]	35.4	38.5	1.00	...	...
Indigenous	28.9	22.0	37.1	1.00	0.68	1.46	42.8	35.9	50.0	1.21	0.90	1.64
Immigrant status												
Non-immigrant (ref.)	28.8	27.1	30.6	1.00	...	...	38.0 [†]	36.3	39.7	1.00	...	...
Immigrant	27.6	24.3	31.1	0.90	0.74	1.10	34.7 [†]	31.5	38.0	0.81 [‡]	0.68	0.96
Racialized group												
No (ref.)	29.9	28.2	31.8	1.00	...	...	38.5 [†]	36.9	40.1	1.00	...	...
Yes	24.6	21.1	28.4	0.70 [‡]	0.55	0.89	32.3 [†‡]	28.5	36.4	0.69 [‡]	0.56	0.85
Sexual orientation												
Heterosexual (ref.)	28.0	26.5	29.5	1.00	...	...	37.0 [†]	35.4	38.5	1.00	...	...
LGB+	46.7 [‡]	36.4	57.3	2.16 [‡]	1.36	3.43	39.2	32.3	46.6	1.08	0.78	1.49
Severe disability												
No (ref.)	26.6	25.1	28.3	1.00	...	...	35.2 [†]	33.6	36.8	1.00	...	...
Yes	42.9 [‡]	38.1	47.7	2.19 [‡]	1.75	2.74	47.1 [‡]	43.4	50.8	1.74 [‡]	1.47	2.05
Number of intersections												
Zero (ref.)	26.8	24.3	29.4	1.00	...	...	39.1 [†]	36.4	42.0	1.00	...	...
One	30.0	27.2	33.0	1.24 [‡]	1.02	1.50	36.4 [†]	33.8	39.0	0.92	0.78	1.09
Two	26.5	23.3	30.0	1.02	0.81	1.29	34.6 [†]	31.6	37.6	0.83	0.69	1.00
Three or more	33.5	28.7	38.7	1.40 [‡]	1.06	1.84	38.4	34.1	43.0	0.95	0.76	1.20

... not applicable

[‡] significantly different from reference category

[†] significantly different from estimates for men

Note: "LGB+ sexual orientation" includes people who are lesbian, gay, bisexual, or of another sexual orientation that is not heterosexual.

Source: Canadian Community Health Survey annual cycle 2020 (September to December).

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