UNMET MENTAL HEALTH NEEDS DURING THE COVID-19 PANDEMIC IN THE MARITIME PROVINCES

An MSSU Interprovincial Project

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Maritime SPOR SUPPORT Unit
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Strategy for Patient-Oriented Research
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PROJECT INFO

PROJECT TITLE

Unmet Mental Health Needs during the COVID-19 Pandemic in the Maritime Provinces

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HOW TO CITE THIS REPORT

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ABBREVIATIONS

COVID-19	COVID-19 pandemic
GAD-7	General Anxiety Disorder version 7
MHRC	Mental Health Research Canada
NB	New Brunswick
NS	Nova Scotia
PEI	Prince Edward Island
PHQ-9	Patient Health Questionnaire version 9

EXECUTIVE SUMMARY

The COVID-19 pandemic impacted the mental health of Canadians, leading to a growing need for mental health supports. At the same time, restrictions that were put in place to limit the spread of disease may have affected access to or comfort in seeking mental health supports and services. This may have led to more people having unmet mental health needs.

Previous research has studied the impact of COVID-19 on mental health and unmet mental health needs in Québec,[1,2] Ontario,[3-7] Manitoba,[8] Alberta,[3] British Columbia,[9,10] and nationally.[11-19] However, there is a lack of research on COVID-related mental health outcomes and unmet mental health needs in the Maritime provinces (New Brunswick, Nova Scotia and Prince Edward Island) – though, previous[20,21] and ongoing research produced by the MSSU is helping to fill this gap.

In this study, we used data collected from 1,195 people who participated in an online survey in 2021, commissioned by Mental Health Research Canada, to:

1. Determine how common unmet mental health needs were during COVID-19, and how this compared to before the pandemic.
2. Identify sociodemographic characteristics of those who are more or less likely to experience unmet mental health needs.
3. Understand the mental health characteristics of people with unmet mental health needs.
4. Describe the mental health impacts of the pandemic on people with unmet mental health needs.

HIGHLIGHTS

Objective 1: Prevalence of unmet mental health needs during COVID-19 and before the pandemic

One-quarter (25%) of participants had one of three unmet mental health needs:

- Unsupported (12%): People who reported a mental health need but did not access support.
- Unsatisfied (6%): People who accessed support for a mental health need but were not satisfied with the support they received.
- Unreported (7%): People who had symptoms associated with moderate to severe anxiety and/or depression but did not report the need for mental health support.

The pandemic impacted the prevalence of types of unmet needs differently:

Unsupported

- Among participants who reported a mental health need, the proportion of those that did not access support more than doubled (16% pre-pandemic vs. 35% during COVID-19).
- More than half of those who were Unsupported during the pandemic had accessed support for a mental health need prior to the pandemic.

Unsatisfied

- Amongst those who accessed mental health support, the overall proportion of participants who reported being Unsatisfied with that support was similar to before the pandemic (28% pre-pandemic vs. 26% during pandemic).
- Although the overall proportion of people who were satisfied with the mental health supports they received was similar before and during the pandemic, satisfaction among some individuals differed over time. For example, among those who were Unsatisfied during the pandemic and also accessed support prior to the pandemic, only 56% were Unsatisfied prior to the pandemic.

Unreported

- While they did not report a need for support during the pandemic, over half (52%) recognized a need for mental health supports prior to the pandemic.
- Of those who accessed support prior to the pandemic, just under two-thirds (64%) reported being satisfied with the support they received.

The most common reason people did not access support prior to the pandemic was a preference to manage themselves (42%), whereas during the pandemic the most common reason was that access to care was limited (34%).

Objective 2: Characteristics of those who are more or less likely to experience unmet mental health needs

The likelihood of experiencing an unmet mental health need differed by a person's gender, age, employment status, household composition, whether they had medical insurance, and where they lived (summarized below). For example, being Unsupported was more common among women and people who live alone, while it was less common among those who live with roommates.

	UNSUPPORTED	UNSATISFIED	UNREPORTED
More likely	• Being a woman • Living alone • Living in a rural area	• Being self-employed • Not having medical insurance for mental health supports	• Being aged 50-69 or 70+ • Living with a partner
Less likely	• Living with roommates	• Working full- or part-time	• Living with roommates • Being aged 40-49

Objective 3: Mental health characteristics of those with unmet mental health needs

Moderate to severe symptoms of anxiety and depression were more common in the Unsatisfied and Unreported groups than in the Unsupported group. This difference was statistically different for depression ($p < .001$), but not anxiety ($p > .05$). Moderate to severe symptoms of depression were reported by a large majority of the Unsatisfied (77%) and Unreported (92%) groups.

Objective 4: Mental health impacts of the pandemic on those with unmet mental health needs

Pandemic-related factors, such as fear of job loss and social isolation, negatively impacted more people with unmet mental health needs than those who did not report a need or whose needs were met. This was particularly true for the Unsatisfied group, which reported a greater proportion of people experiencing negative mental health impacts from the pandemic than the Unreported or Unsupported groups.

Conclusions

Overall, a quarter of people in the Maritimes had unmet mental health needs. While this study provides insight into who is impacted and how, there are still many questions to be answered. More research is needed to better understand these three groups. This includes whether and how certain sociodemographic characteristics affect whether someone recognizes a need for support, accesses support, and is satisfied with the support they receive. Both structural barriers to accessing support (e.g., affordability and availability of mental health care) alongside personal barriers (e.g., reluctance to access services or preference to self-manage their mental health needs) should be considered. This information could help direct mental health support towards those whose needs are not being met, with the overall goal of improving mental health outcomes.

BACKGROUND

Psychological distress, measured through self-report survey data, increased markedly in the first few months of the COVID-19 pandemic.[22] Globally, countries saw levels of depression and anxiety double, triple, and even quadruple in their populations, and Canada was no exception.[13,17,23-28] Fewer Canadians reported excellent or good mental health at the start of COVID-19 compared to 2018,[17] and further evidence suggests a significant increase in the prevalence of major depressive disorders (from 6.7% to 16.3%) and generalized anxiety disorder (from 2.5% to 13%) in early 2020.[13,27,28] However, over the course of the pandemic, most indicators of psychological distress declined, reaching pre-pandemic levels by mid-2020.[22]

Despite data documenting increased psychological distress, administrative health services use data suggest there was a decrease in mental health-related visits to primary care,[29] outpatient departments, and emergency departments[20] in the early phases of the pandemic.[7] In contrast, some visits, such as those through virtual care settings, increased throughout 2020.[7] This overall lower rate of in-person care seeking alongside increased rates of self-reported anxiety and depression may indicate that there were people with unmet mental health care needs.

Experiences of unmet mental health needs are not unique to COVID-19. Rather, the pandemic exacerbated existing gaps in the Canadian mental health care system. The combination of pre-pandemic weaknesses in mental health care systems alongside increased mental health needs due to the pandemic contributed to significant increases in unmet mental health needs, particularly among young adults.[30-32] This surge in unmet mental health needs is concerning, as there is evidence of associations between unmet needs and the risk of worsening depression and anxiety symptoms[6,13] and increased likelihood of chronic mental health conditions.[11]

Not all Canadians were equally impacted by the pandemic, as certain groups are more vulnerable to poor mental health outcomes. For instance, racialized groups, LGBTQ2S+, and young adults with disabilities and chronic health conditions are more likely to face increased pressures associated with mental health consequences.[9,33] Individuals with lower socioeconomic status or those experiencing socioeconomic uncertainty were at higher risk of poorer mental health outcomes prior to the pandemic, thus raising concern for increased risk due to COVID-19.[12,17,34] Individuals from visible minority groups were also more likely to report worse mental health outcomes during the pandemic than Caucasians and had a higher likelihood of reporting a negative impact on their ability to meet financial needs.[35] Similarly, for those who identify as LGBTQ2S+, there was a documented association between loss of income and mental health concerns during the pandemic,[8] with this community facing a greater rate of job loss or reduced employment.[36] However, there has been little Canadian research around the effects of the COVID-19 pandemic on the mental health of these groups.[5,37]

Understanding the mental health repercussions and prevalence of unmet needs among vulnerable groups is important to help determine if more targeted mental health supports are needed. The current research aims to better understand the consequences of COVID-19 on mental health by identifying characteristics of individuals with unmet mental health needs living in the Maritime provinces.

Unmet mental health needs, broadly defined, refers to situations when an individual experiences some form of mental health need that is not sufficiently met—either because they are not accessing care or because the care that is being accessed is not properly addressing their need.

RESEARCH OBJECTIVES

1. To estimate the prevalence of unmet mental health needs in the Maritimes during the COVID-19 pandemic, and how prevalence compares to the pre-pandemic period.
2. To determine what sociodemographic characteristics are associated with unmet mental health needs in the Maritimes during the COVID-19 pandemic.
3. To describe the mental health characteristics of those with unmet mental health needs in the Maritimes during the COVID-19 pandemic.
4. To describe the mental health impacts (e.g., fear of job loss, social isolation) of the COVID-19 pandemic on people with unmet mental health needs in the Maritimes.

METHODS

Data Source

This is a secondary analysis of data provided by Mental Health Research Canada (MHRC) that were collected through a nationwide self-reported online survey administered by Pollara Strategic Insights. Oversampling of survey participants in the three Maritime provinces was conducted from October 22 to November 3, 2021 (Poll #9) in New Brunswick (NB)[38] and from December 13 to 22, 2021 (Poll #10) in Nova Scotia (NS) and Prince Edward Island (PEI).

Survey

The cross-sectional survey included questions related to mental health history, health care use, and the impact of COVID-19 on mental health (which included questions related to economic, social, and health impacts). The online surveys were conducted in both official languages with a randomly selected population sample. More details about the survey can be found here.

Measures and Key Variables

Sociodemographic characteristics including age, gender, household income, household composition, education, employment, identification with LGBTQ2S+ community, visible minority status, and geography (urban/rural) were analyzed. The geographical variable was derived using the first three digits of participants' postal codes. For NS and PEI participants, every postal code with the second digit "0" was designated as rural, while all others were designated as urban. This approach was not possible in NB. For NB data, ArcGIS was used to designate postal codes within 20km of the center of one of the seven largest cities in NB (Bathurst, Campbellton, Edmundston, Fredericton, Miramichi, Moncton, and Saint John) as urban, and postal codes outside these areas as rural. When postal codes were in both rural and urban areas, the largest surface area of the postal code was used.

Medical insurance coverage for mental health support was defined as participants having a benefits plan that covers mental health providers, either through their own coverage or that of a member of their household.

Anxiety was measured using the General Anxiety Disorder version 7 (GAD-7),[39] a self-report validated scale of anxiety symptoms. The GAD-7 has 7 items that assess the frequency of anxiety symptoms over a two-week period using a four-point scale ranging from 0 (not at all) to 3 (nearly every day). A total anxiety score is generated by taking the sum of item frequencies and can range from 0 to 21. There are four classifications depending on the total anxiety score: minimal anxiety (0-4), mild anxiety (5-9), moderate anxiety (10-14), and severe anxiety (>15). A total GAD-7 score of 10 or greater, representing those who experienced moderate to severe anxiety symptoms, was used as a clinical cut-point for identifying *probable* cases of anxiety.

Depression was measured using the Patient Health Questionnaire version 9 (PHQ-9),[40] a self-report validated scale of depressive symptoms. The PHQ-9 has 9 items that assess the frequency of depressive symptoms over a two-week period using a four-point scale ranging from 0 (not at all) to 3 (nearly every day). A total depression score is generated by taking the sum of item frequencies and can range from 0 to 24. There are five classifications depending on the total depression score: none-minimal depression (0-4), mild depression (5-9), moderate depression (10-14), moderate-severe depression (15-19), and severe depression (20-27). A total PHQ-9 score of 10 or greater, representing those who experienced moderate to severe depression symptoms, was used as a clinical cut-point for identifying *probable* cases of depression.

The GAD-7 and PHQ-9 are screening tools for assessing the severity of symptoms but are not designed to be used for diagnosis. Individuals who score above 10 on either questionnaire have symptoms that indicate they should be seen by a qualified mental health professional for further assessment and treatment. Thus, we have used the language 'probable cases' to describe these participants.

Mental health need was grouped into three types based on self-reported: (i) need for mental health support, (ii) access to mental health supports since the COVID-19 outbreak in Canada, and (iii) symptoms indicative of moderate to severe anxiety and/or depression.

Among those with a mental health need, there are those whose need is *'unmet'* and those whose need is *'met or partially met'* (Table 1). Importantly, despite these labels, it is not possible to evaluate whether mental health needs were truly 'unmet' or 'met.' However, the survey questions serve as a proxy for understanding the mental health of participants, whether they accessed support, and how they feel about that support. For technical details on how met and unmet mental health needs groups were defined, see Appendix 1.

Reasons for not accessing support were determined by asking participants who did not access the support they needed (both before or during the COVID-19 pandemic) whether it was because: access to care was limited; you could not afford to pay; you preferred to manage on your own; you didn't know how or where to access help; you didn't have confidence in the healthcare system or social services; you hadn't gotten around to it; you were concerned about exposure to COVID-19; insurance did not cover it; you were afraid of what others would think; your job interfered; language problems; don't know; or another reason. Participants were able to select all reasons that were applicable.

Table 1: Definitions for mental health needs groups

TYPE OF MENTAL HEALTH NEED	UNMET NEED	MET OR PARTIALLY MET NEED*
Needed mental health supports	**Unsupported:** Individuals reporting that they needed mental health support but did not access it.	**Supported:** Individuals reporting that they received mental health supports.
Accessed mental health supports	**Unsatisfied:** Individuals reporting that they received mental health support, but it was not satisfactory.	**Satisfied:** Individuals reporting that they received mental health supports and were satisfied with the support.
Experienced probable anxiety and/or depression	**Unreported:** Individuals who scored above the cut-point on validated scales indicating moderate to severe anxiety and/or depression but did not report needing mental health support.	**Reported:** Individuals who scored above the cut-point on validated scales indicating moderate to severe anxiety and/or depression and did report needing support, whether they accessed it or not.

**Note: 'Met or partially met need' groups are not mutually exclusive. For example, if participants reported a mental health need, experienced probable anxiety and/or depression, accessed mental health support, and were satisfied with the support they received, they would be in all three of the 'met or partially met need' groups.*

Pandemic-related mental health impacts were assessed using an 11-point Likert scale ranging from 0 (very negative impact) to 10 (very positive impact). Participants who responded 3 or below were considered to have a negative mental health impact for each factor. Pandemic-related factors examined in this report include health factors (possibility of oneself or possibility of family members catching COVID-19), social factors (social isolation, interactions inside and interactions outside the household), and economic factors (economic downturn, possibility of losing your job or pay/hours at your job).

Statistical Analysis

Data from each province were pooled for analysis. Descriptive statistics (frequencies, percentages) were used to report the sociodemographic characteristics of participants. Cross-tabulations and chi-square analyses were used to examine associations between unmet mental health needs and sociodemographic characteristics, pre-pandemic unmet mental health needs and access to support, levels of anxiety and depression, and mental health impacts of the pandemic. Chi-square test results with a p-value less than .05 were considered statistically significant. Although chi-square analyses were carried out, we did not conduct post-hoc tests to quantitatively compare results across subgroups due to limited sample size. Thus, any comparisons of subgroups in the text are descriptive to provide a qualitative assessment of responses using percentages. The association between sociodemographic characteristics and mental health needs was examined comparing paired 'unmet' and 'met' mental health needs groups (Table 1).

Results were weighted using the 2016 Canadian Census to adjust the estimates to be representative of the age, gender, and provincial distribution of the Maritime population. Unweighted results are only reported for the sociodemographic characteristics of the sample (Appendix 2).

Patient/Public Partner Engagement

An invitation to join the research team was sent to MSSU Patient/Public Partners. Four Patient/Public Partners agreed to become involved in this study. Patient/Public Partners shared their personal experiences, perspectives, and interpretation of the data through team meetings. Patient/Public Partners were engaged in the formulation of the research questions, study design, and analysis. Their perspectives were incorporated into the interpretation of results, conclusions, and knowledge products.

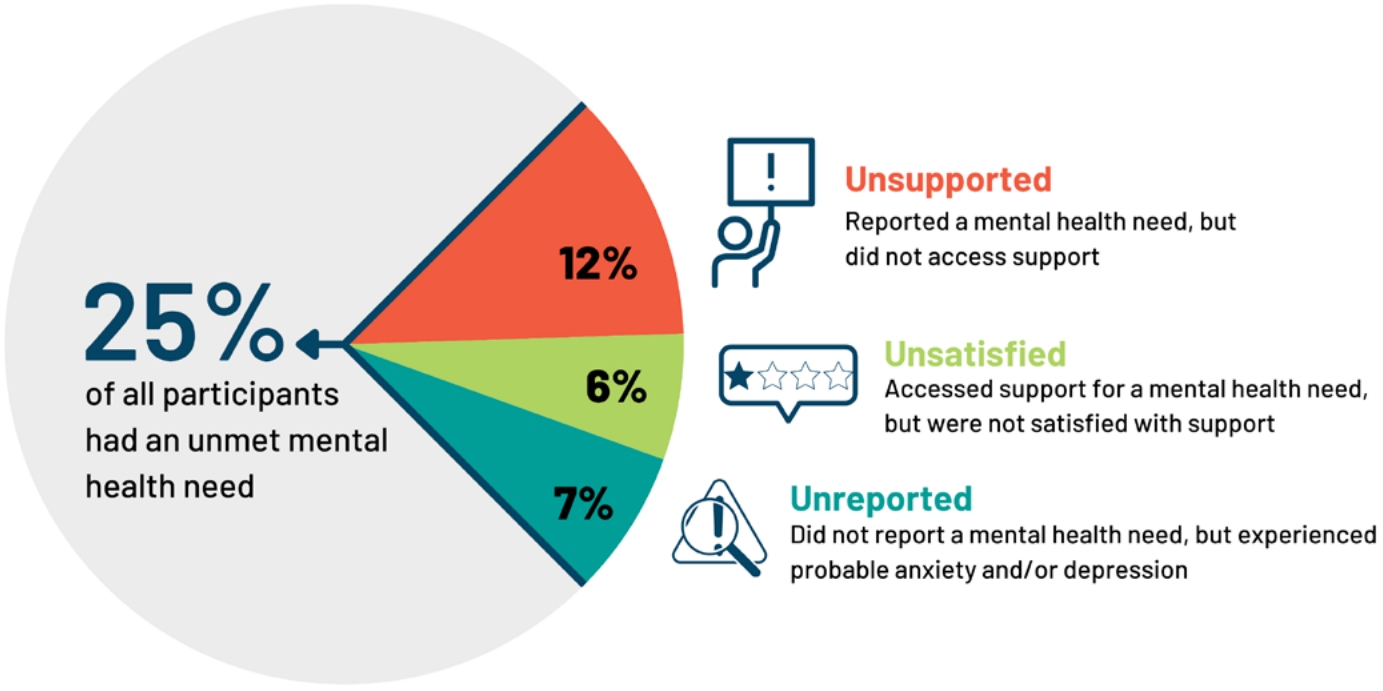
RESULTS

A total of 1,195 survey responses from Maritime residents over the age of 18 years (n=497 NB, n=500 NS, n=198 PEI) were included in the analyses (see Appendix 2). Given the low sample size for PEI in particular, data from all provinces were combined to increase precision of estimates and power of statistical analyses; disaggregated results are not presented.

Objective 1: Prevalence of unmet mental health needs

Overall, a quarter of all participants (25% [95% CI 22, 28]) had an unmet mental health need, which was comprised of those who were Unsupported (12% [95% CI 10, 14], Unsatisfied (6% [95% CI 4, 8]), and Unreported (7% [95% CI 6, 10])(Figure 1).

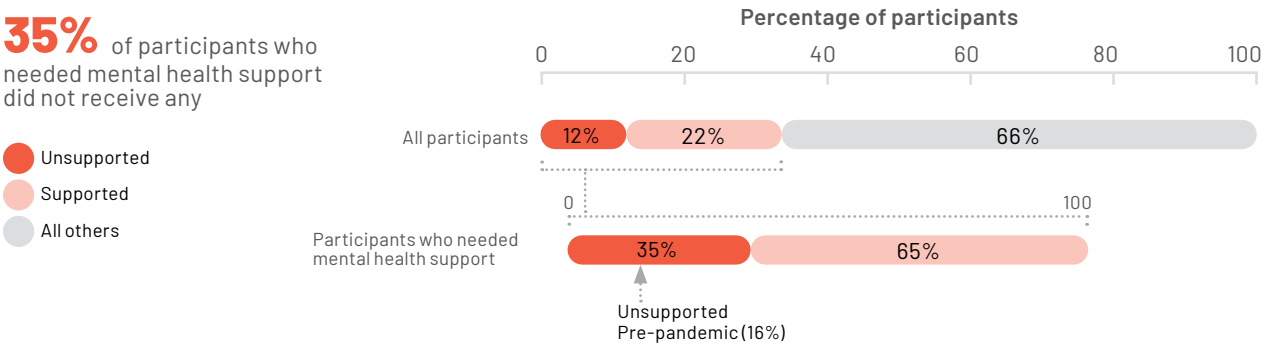
Figure 1: Prevalence of participants with unmet mental health needs



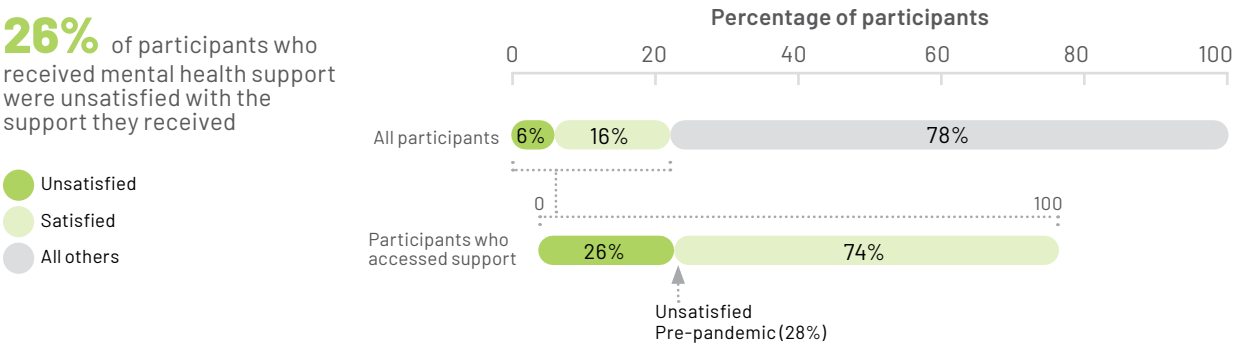
Based on the available self-reported survey data, each unmet mental health needs group was paired with a corresponding met or partially met needs group (Figure 2): Supported (22% [95% CI 19, 26]), Satisfied (16% [95% CI 14, 20]), and Reported (21% [95% CI 18, 24]).

Figure 2: Prevalence of different types of mental health needs

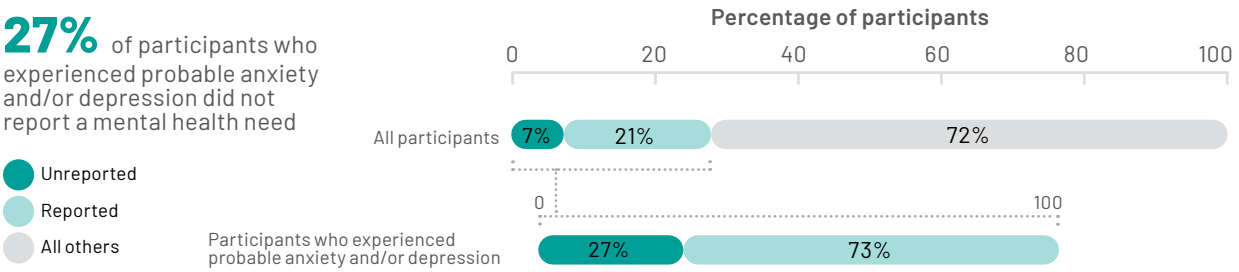
2a. Needed mental health support



2b. Accessed mental health support



2c. Experienced probable anxiety and/or depression



Among participants who *needed mental health support*, just over one-third were Unsupported (35% [95% CI 29, 41])(Figure 2a). This proportion more than doubled compared to the pre-pandemic period (16%, [95% CI 12, 20]). Of those who *accessed support*, just over one in four were Unsatisfied (26% [95% CI 19, 34]) with the support they received (Figure 2b). Amongst those who received support, the proportion who were Unsatisfied with the support they received (26%) was similar to the pre-pandemic period (28% [95% CI 23, 33]). For participants *with probable anxiety and/or depression* during the pandemic, more than one in four did not report a need for mental health support (Unreported, 27% [95% CI 21, 33])(Figure 2c).

We were unable to determine the proportion of the population who may have had unreported mental health needs pre-pandemic, as validated scales of anxiety and/or depression symptoms capture recent experience (e.g., past two weeks). The prevalence of unmet needs for the overall population and for those with a mental health need is presented in Appendix 3.

Mental health needs and satisfaction with mental health supports prior to COVID-19 of those with unmet mental health needs were examined to better understand whether need for, and satisfaction with support changed over time (Table 2).

Many people in the Unsupported group also needed support prior to the pandemic (85%). However, the majority of those who needed support before the pandemic did access it (62%). Of those who accessed support pre-pandemic, the majority (63%) were satisfied with the support they received. Many in the Unsatisfied group also needed support prior to the pandemic (88%), most of whom received it (96%). However, nearly half (44%) of the Unsatisfied group who received support before the pandemic were satisfied with the support they received at that time. Although fewer people in the Unreported group indicated needing mental health support before the pandemic, more than half acknowledged this need (53%). Of those who recognized the need, most accessed support (84%). About two-thirds (64%) of those who accessed support before the pandemic were satisfied with the support they received.

Table 2: Mental health needs and satisfaction prior to COVID-19

	UNSUPPORTED % (95% CI)	UNSATISFIED % (95% CI)	UNREPORTED % (95% CI)
Needed support before COVID-19			
Yes	85 (77,90)	88 (74,95)	53 (40,65)
No	15 (10,23)	12 (5,26)	47 (35,60)
Accessed support before COVID-19 among those who needed support (71%)			
Yes	62 (51,72)	96 (88,99)	84 (65,94)
No	38 (28,49)	4 (1,12)	16 (6,35)
Satisfaction before COVID-19 among those who received support (54%)			
Satisfied before COVID-19	63 (50, 74)	44 (27, 61)	64 (42, 81)
Unsatisfied before COVID-19	37 (26, 50)	56 (39, 73)	36 (19, 59)

Reasons why people did not access the mental health support they needed both before and during COVID-19 are presented in Table 3. Prior to the pandemic, the most common reason for not accessing support was a preference to self-manage (42%). During the pandemic, fewer participants indicated that this was the case, though it was still a common reason for not accessing support (29%).

During the pandemic, the most common reason for not accessing support was that access to care was limited, which was reported by nearly five times more participants during the pandemic (34%) compared to before the pandemic (7%). The ability to pay was also a top reason for not accessing support during the pandemic and was consistent over time (32%). Other common reasons for not accessing support during the pandemic that increased relative to the pre-pandemic period include: not knowing how or where to access help (11% pre-pandemic vs. 16% during the pandemic), and not having confidence in the health care system or social services (7% pre-pandemic vs. 14% during the pandemic). Of note, 11% of participants who did not receive the support they needed during the pandemic reported that this was at least in part due to fear of exposure to COVID-19.

Table 3: Reasons for not accessing mental health support

REASONS FOR NOT ACCESSING SUPPORT	DURING PANDEMIC (%)	PRE-PANDEMIC (%)
Access to care was limited	34	7
Couldn't afford to pay	32	32
Preferred to manage oneself	29	42
Didn't know how/where to access help	16	11
Didn't have confidence in the system	14	7
Other	14	11
Haven't gotten around to it	13	9
Concerned about exposure to COVID-19	11	n/a
Insurance did not cover it	9	9
Afraid of what others would think	9	8
Job interfered	6	6
Don't know	5	5
Language problems	1	1

Objective 2: Sociodemographic characteristics associated with unmet mental health needs

Figures 3-5 display the prevalence of unmet mental health needs amongst different sociodemographic groups and highlight characteristics that were significantly related to having an unmet need ($p \leq .05$). Any subgroup comparisons (e.g., comparisons across the four age cohorts) were compared qualitatively, as described in the methods.

Visualizing unmet mental health needs across sociodemographic characteristics

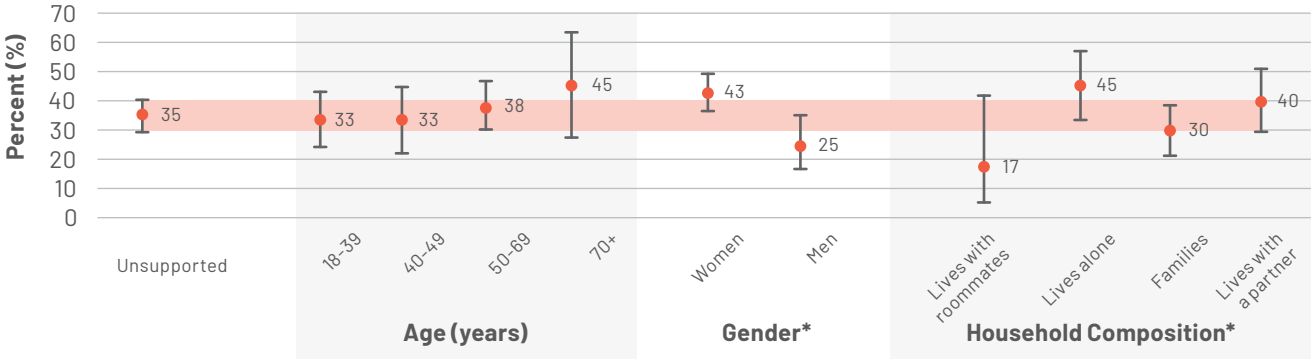
Figures 3-5 show the percentage of each type of unmet mental health need, for several sociodemographic groups, among participants who reported a mental health need. The overall percentage of people whose need was unmet is displayed at the far left (e.g., in Figure 3a, 35% of participants who needed mental health supports were Unsupported). The horizontal coloured bar across the graph represents the confidence interval for the overall percentage with that type of unmet need.

Moving across each graph, the percentage with that type of unmet need is displayed for participants who reported specific sociodemographic characteristics, alongside black bars which represent the confidence interval for the subgroup percentage. The size of the confidence intervals gives an indication of the precision of the percentage. Smaller bars mean that the percentage is more precise, whereas larger bars indicate less precision; this is often due to differences in sample size across subgroups. Subgroup estimates should be interpreted with caution. Highlights of the statistical results are provided below each set of graphs.

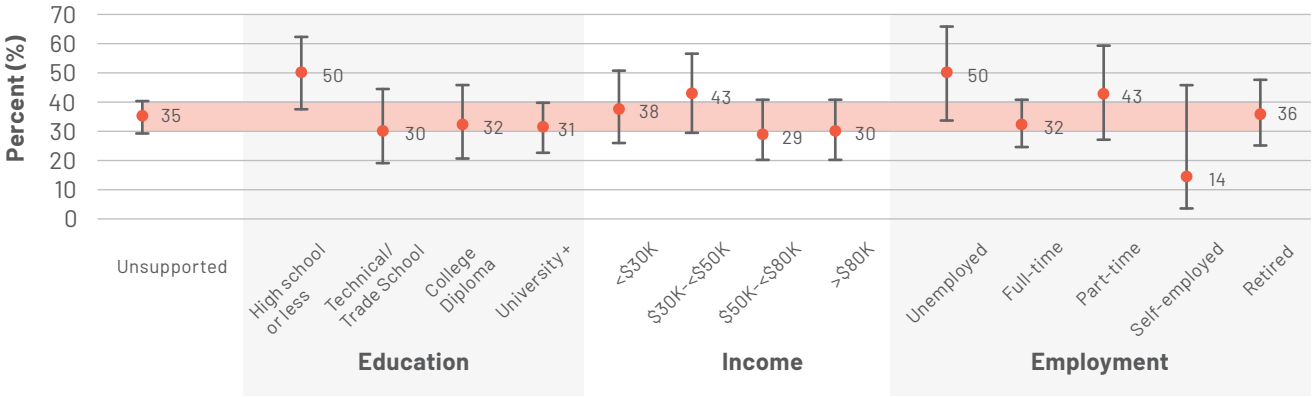
Example interpretation Figure 3a: Among those who needed mental health support, who were aged 18-39 years, 33% were Unsupported. However, the confidence interval suggests that this percentage could be as low as 25% or as high as 43%. There was no statistically significant difference in the percentage of Unsupported mental health needs across age groups ($p > .05$).

Figure 3: Prevalence of Unsupported unmet mental health needs across sociodemographic characteristics

3a. Age, Gender, Household Composition



3b. Education, Income, Employment



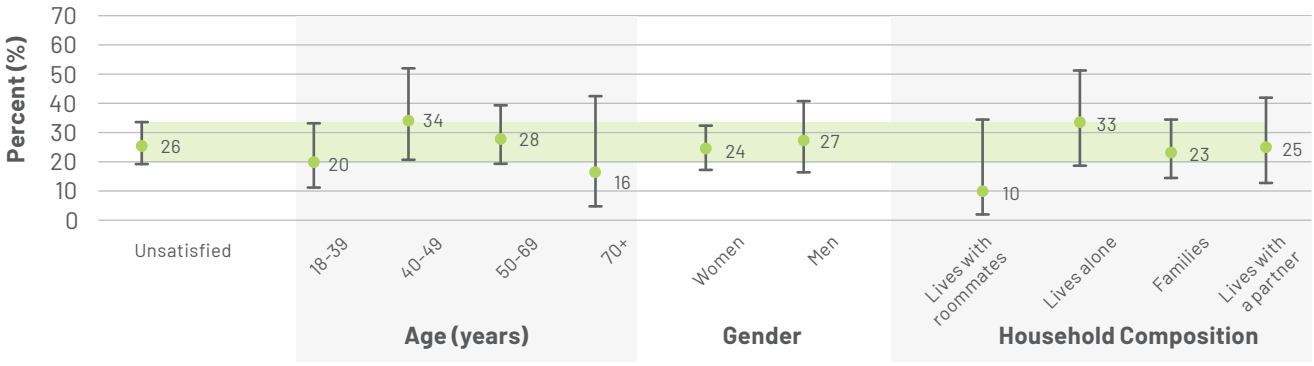
3c. Location, Visible Minority, LGBTQ2S+, Medical Insurance

Highlights for Unsupported Group*

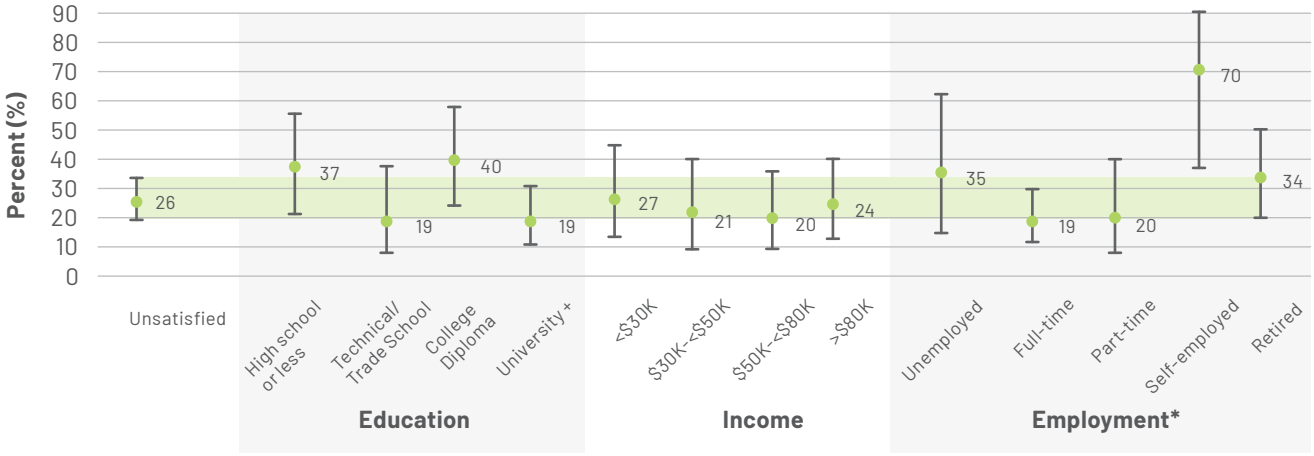
- **Gender:** Women were more likely to be Unsupported (43% vs 25% in men, $p < .01$).
- **Household composition:** More people who lived alone (45%) were Unsupported, which was more than double the percentage of those who lived with roommates (17%, $p = .05$).
- **Geography:** More people living in rural areas were Unsupported compared to those living in urban areas (48% vs. 31%, $p = .02$).

Figure 4: Prevalence of Unsatisfied unmet mental health needs across sociodemographic characteristics

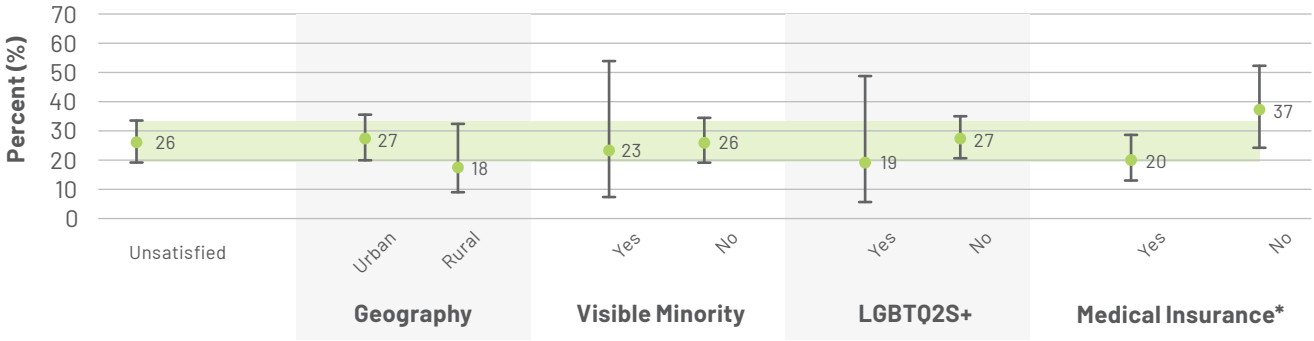
4a. Age, Gender, Household Composition



4b. Education, Income, Employment



4c. Location, Visible Minority, LGBTQ2S+, Medical Insurance

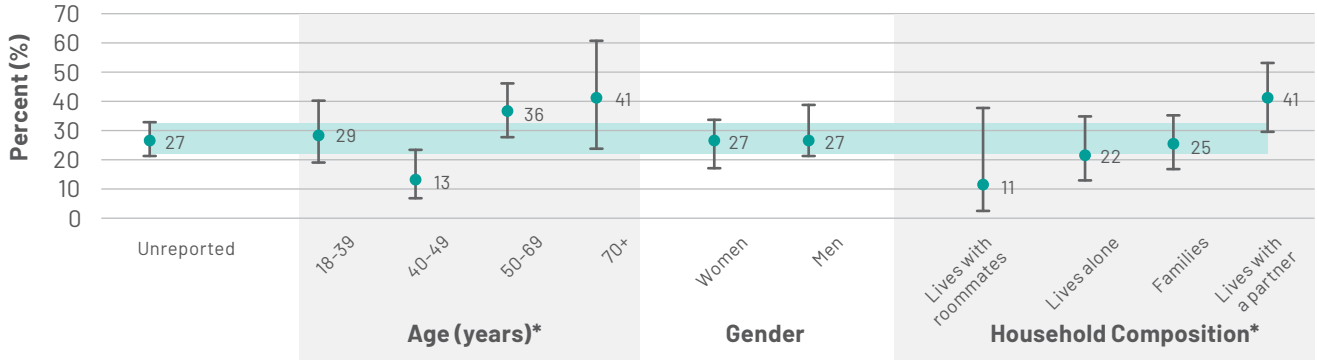


Highlights for Unsatisfied Group*

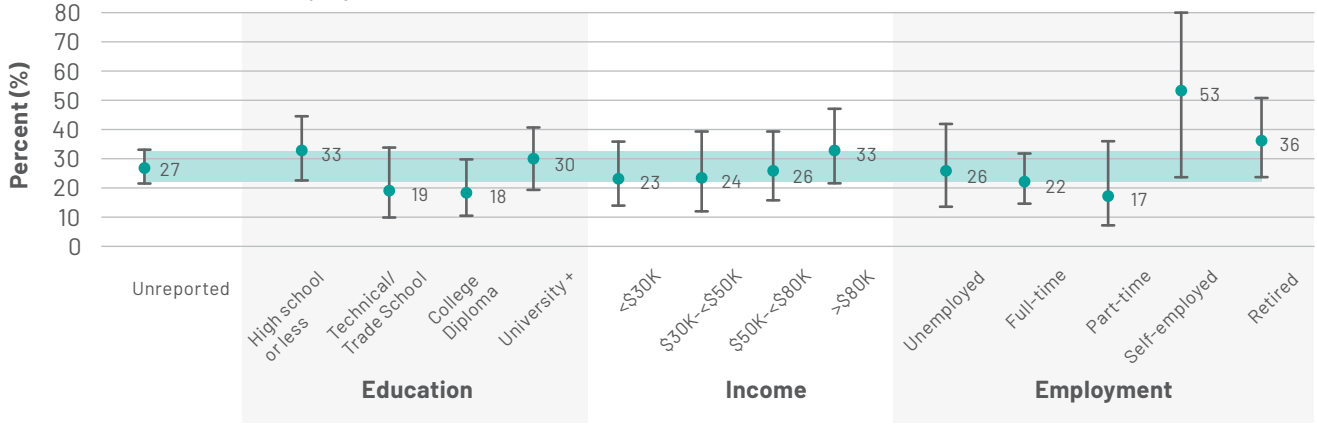
- **Employment:** The percentage of self-employed individuals (70%) who were Unsatisfied was more than three times greater than in those who worked part- (20%) or full-time (19%, $p < .01$).
- **Medical Insurance:** Nearly twice the proportion of people without medical insurance for mental health support were Unsatisfied compared to those with coverage (37% vs. 20%, $p = .03$).

Figure 5: Prevalence of Unreported unmet mental health needs across sociodemographic characteristics

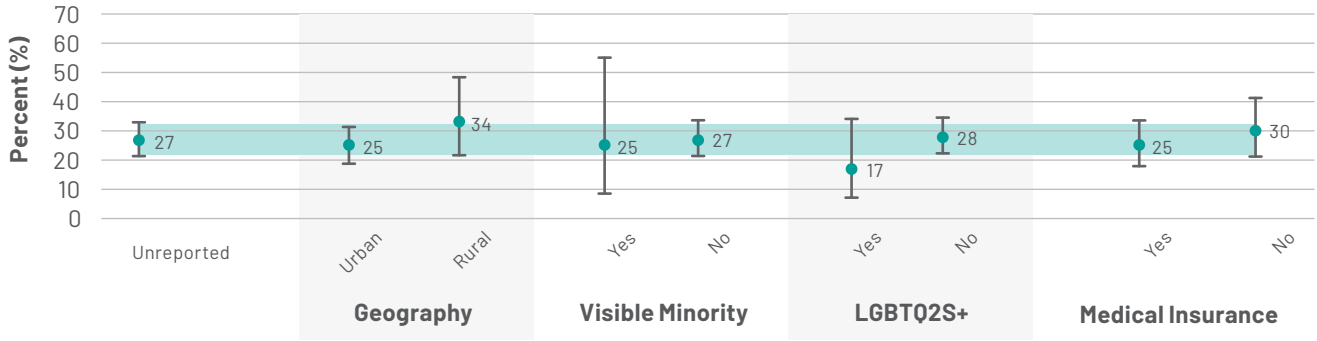
5a. Age, Gender, Household Composition



5b. Education, Income, Employment



5c. Location, Visible Minority, LGBTQ2S+, Medical Insurance



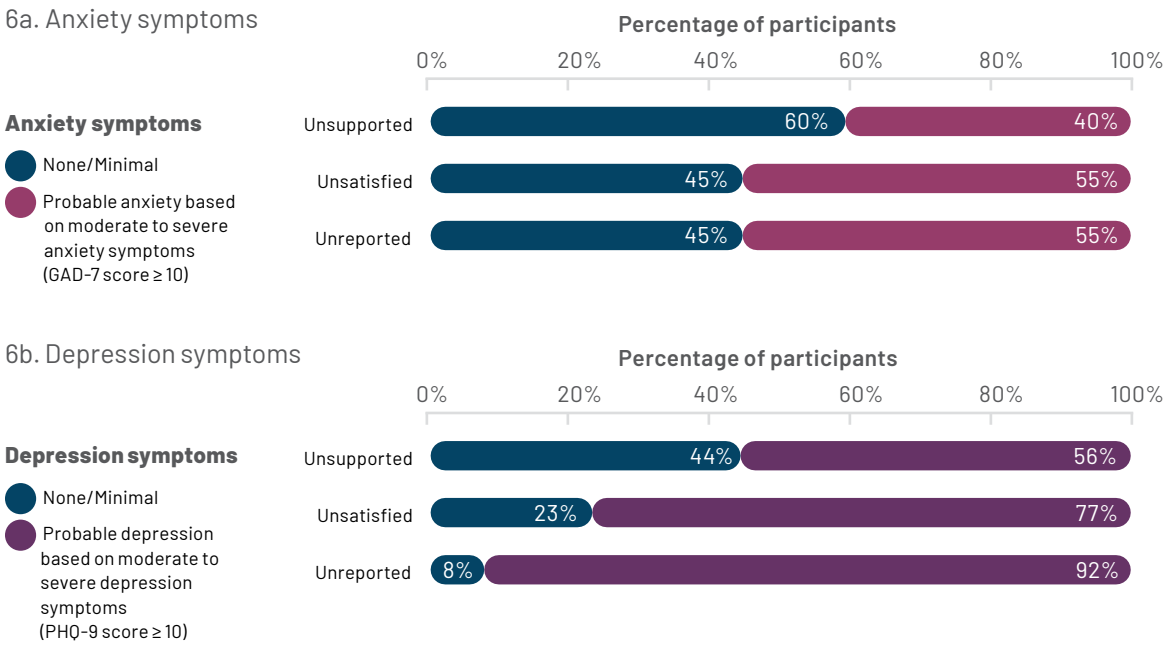
Highlights for Unreported Group*

- **Age**: More participants in older age groups (50-69, 36% and 70+, 41%) had Unreported mental health needs, whereas those aged 40-49 (13%) were least likely ($p < .01$).
- **Household composition**: The highest percentage of Unreported individuals was among those who live with a partner or spouse only (41%), while the lowest was among those who live with roommates (11%, $p = .04$).

Objective 3: Mental health characteristics of those with unmet mental health needs

The distribution of anxiety and depression symptoms was compared across the three unmet mental health needs groups (Figure 6). Overall, more participants with unmet mental health needs reported symptoms indicating probable depression than probable anxiety. Fewer people in the Unsupported group experienced moderate to severe symptoms of depression ($p < .001$) compared with the Unsatisfied and Unreported groups. A large proportion of individuals in the Unsatisfied (77%) and Unsupported (92%) groups reported moderate to severe levels of depression. Of note, a large proportion in the Unreported group is expected given this group was selected based on the presence of moderate to severe anxiety and/or depression symptoms. Still, it is noteworthy that depression was far more common in this group than anxiety (92% vs. 55%).

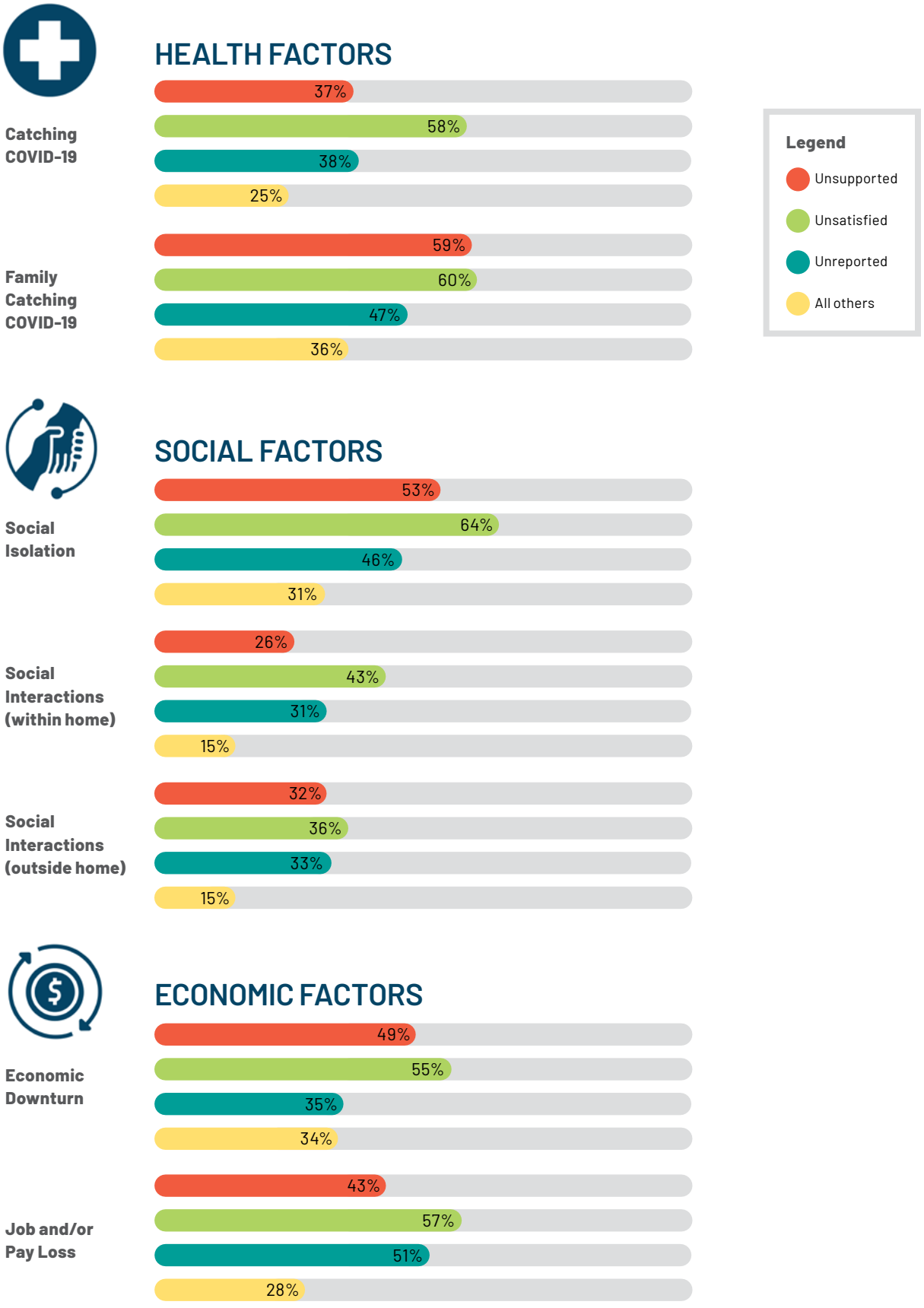
Figure 6: Distribution of anxiety and depression symptoms across unmet mental health needs groups



Objective 4: Mental health impacts of COVID-19 on those with unmet mental health needs

The percentage of participants reporting negative impacts (selecting between 0-3 on a 11-point Likert scale) were reported and compared descriptively across each unmet needs group (Figure 7). A larger proportion of participants with unmet mental health needs reported negative mental health impacts from the pandemic compared to all other participants. In particular, more participants who were Unsatisfied reported negative impacts in all categories. Across all groups, some of the most commonly reported factors that had a negative impact on mental health were social isolation and fear of a family member catching COVID-19. Economic factors such as the economic downturn and the possibility of job or pay loss negatively impacted many.

Figure 7: Negative impacts of COVID-19 on mental health across unmet mental health need groups



DISCUSSION

Prevalence of unmet mental health needs

Overall, one in four participants were found to have an unmet mental health need during the COVID-19 pandemic, which were categorized into one of three groups:

- **Unsupported:** 12% reported having a mental health need but not accessing support.
- **Unsatisfied:** 6% received mental health support but were unsatisfied.
- **Unreported:** 7% had probable anxiety and/or depression, but did not report the need for mental health support.

The high prevalence of unmet needs in the Maritimes during the pandemic is concerning, as this represents a significant proportion of the population who needed mental health care but were not accessing it or were unsatisfied with the care they received. These results are in line with research earlier in the pandemic, where participants in Nova Scotia had a similar prevalence of unsupported mental health needs (12% and 15% respectively, in 2020 and 2021).[21] Canada-wide data from MHRC's Poll 9 shows similar results, with approximately 12-13% of the Canadian population reporting they had needed mental health support but did not access any.[38,41] However, national results from 2023 suggest this trend may be decreasing, with an average of 5%, or over 1.5 million people, indicating they have unsupported mental health needs.[42]

Mental health needs prior to COVID-19 amongst unmet needs groups

Considering mental health needs and the prevalence of unmet mental health needs before the COVID-19 pandemic allows us to better understand how the pandemic may have had an impact on whether people who need care access it, and are satisfied with the care they receive. There appeared to be some shift in need and access to care for participants when they reported their needs during and prior to the pandemic. Most of those who were Unsupported also needed support prior to COVID-19, but more than half of those who needed care did access it. Similarly, for those who were Unreported during the pandemic, about half identified a need for mental health support prior to COVID-19. This may demonstrate a shift in access to care during the pandemic, which may have been related to concerns over catching COVID (which was a negative impact across all groups), differences in the accessibility of care, and differences in actual or perceived need. For those who reported reasons for not accessing care during the pandemic, limited access, affordability, and a preference to self-manage were the most common reasons identified by participants.

A large body of literature indicates that there are many reasons why individuals with mental health concerns may face barriers to receiving support, including not knowing where to get help,[42] culture and language barriers, concerns about stigma, and excessive wait times.[16,47] For individuals struggling with mental health conditions, navigating the health care system itself can be difficult.[13,42] While personal reasons such as self-reliance,[6,47] time restraints,[6,16] or not wanting to see a professional[14] may lead some to avoid seeking support, a frequently cited service barrier is cost.[14,16,48] Mental health services provided by general practitioners and psychiatrists can be billed to public health insurance programs in Canada, but services provided by psychologists, social workers, and other non-physician providers typically cannot.[48] When Canadians do seek care, they tend to be most likely to seek mental health support from medical professionals, with 75% indicating they would turn to their family doctor.[49] These findings alongside our results suggest that a multi-pronged approach to providing access to mental health care is needed.

Sociodemographic characteristics associated with unmet mental health needs

The relationship between sociodemographic characteristics and the likelihood of having unmet mental health needs was examined to provide insight into who may be in greater (or lesser) need of mental health support. The sociodemographic characteristics related to unmet mental health needs were different for each unmet needs group. Individuals who identified a need for mental health services were more likely to be Unsupported if they identified as a woman, lived alone, or lived in a rural area. For those who did receive mental health support, those who were self-employed or lacked access to medical insurance that covered mental health supports were more likely to be Unsatisfied. Among individuals whose survey responses indicated they were experiencing moderate to severe symptoms of anxiety and/or depression, those living with a partner and those in older age groups (e.g., 50+) were more likely to be in the Unreported group.

In our research, the sociodemographic characteristics associated with having unmet needs differed across groups, though many align with previous research and may help to further understand differences across types of unmet needs. For example, we found that individuals who identified as women were more likely than men to be Unsupported. This finding is consistent with previous research which shows that females are at a higher risk of unmet needs for mental health services, including a need for mental health counselling.[43,44] Other research has demonstrated higher unmet needs amongst those with higher levels of education,[43,44] lower income, including income below the federal poverty line,[30,44] and unemployment (which may also be a proxy for not having access to medical insurance coverage).[44] Similarly, we found that those who were self-employed, as well as those who lacked medical insurance, were more likely to be Unsatisfied.

Another factor related to having unmet mental health needs was age. Those in older age cohorts (50+) were more likely to have Unreported mental health needs compared to those with reported mental health needs. There was a high rate of depression amongst those with unreported mental health needs, which echoes findings from other research.[45] The lack of help seeking in this population may represent a generational approach to dealing with mental health issues, or it could reflect a different perception of need.[46]

Compared to the literature and our previous research, we were surprised that our results did not show a strong relationship between younger age and likelihood of having unmet mental health needs. Youth and young adults have been shown to be especially vulnerable to the risk of unmet mental health needs.[30,43] Previous research by the MSSU identified growth in unsupported needs, in participants aged 18-29 from 2020 to 2021 in Nova Scotia.[21] These more recent findings show a decrease in the overall percentage of youth and young adults with Unsupported needs. This may demonstrate a shift away from more negative impacts of COVID-19 on younger cohorts given the period in which the data were collected when fewer public health restrictions (e.g., school closures, increased gathering limits) were in place that would have affected social isolation and the resultant impacts on mental health.

Mental health characteristics and impacts of COVID-19

The distribution of participants with probable anxiety was similar across the unmet needs groups. However, there were significantly more participants with probable depression in the Unsatisfied and Unreported groups than in the Unsupported group. Additionally, more of those with unmet mental health needs reported negative mental health impacts of the pandemic compared to other survey participants. In particular, those who were Unsatisfied with the

mental health support received more commonly reported negative impacts of the pandemic. The largest differences in impacts observed across unmet needs groups was in relation to social isolation and economic impacts, which again impacted more of the Unsatisfied group. These findings may indicate a greater impact of COVID-19 restrictions on individuals with unmet mental health needs in general. They may also show that those who were Unsatisfied with the care they were receiving may have had more severe symptoms and/or were more impacted by the effects of the pandemic itself.

LIMITATIONS

The cross-sectional study design and online self-report survey may limit generalizability of study results and do not fully capture the experience of respondents (e.g., perceived limited access to care could reflect lack of awareness of available options). The NB survey data were collected prior to the Omicron variant circulating, whereas the NS and PEI survey data were collected when Omicron was actively present and circulating in Canada, which may have resulted in mandating of gathering restrictions during sampling, and may not reflect current needs. In addition, important agricultural-related political issues in PEI were occurring at the time survey data were being collected in PEI. Although each province was oversampled to allow for provincial-level analyses, the sample may not be representative of the overall population due to response bias resulting from differences in those who are more likely to agree to participate in a survey. Additionally, small sample sizes in our unmet mental health needs groups may have limited our ability to detect statistically significant differences across sociodemographic characteristics. Statistically significant associations were highlighted, but this lack of power should be considered when interpreting the data, as there is an increased likelihood that the tests may have failed to detect an effect that actually exists. These potential limitations were considered while interpreting the results of this study.

CONCLUSIONS

There was a high prevalence (25%) of unmet mental health needs among those living in the Maritimes during the pandemic. We identified three types of unmet needs—Unsupported, Unsatisfied, and Unreported—each of which were associated with different sociodemographic characteristics. The prevalence of those who were Unsupported was similar to national data at the same time; however, more people reported being Unsupported during the pandemic than before the pandemic began. While overall, the proportion of Maritimers who were Unsatisfied with the care they received was similar before and during the pandemic, for some individuals this differed over time. The reasons for not accessing care changed over the course of the pandemic, with more participants identifying limited access to care during the pandemic compared to prior, fewer reporting a preference to self-manage, and affordability remaining a consistent barrier over time. These findings may help to inform planning to support mental health needs during future public health emergencies (e.g. pandemics, climate-related events). For example, perceived access to care, need for care, and satisfaction with care may change as a result of both the emergency itself and potentially the policies that are needed to keep the public safe.

The high prevalence of unmet mental health needs in the Maritimes remains concerning and identifies a significant portion of the population who need effective mental health supports. More research is needed to better understand why people do not access support or to identify better ways to support self-management of mental health needs for those who are more reluctant to seek care. Addressing these barriers and supporting knowledge needs may help to enable more equitable and more universal mental health care for all.

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APPENDIX 1: PARTICIPANT GROUP ASSIGNMENT

TYPE OF MENTAL HEALTH NEED	UNMET NEED GROUP	MET OR PARTIALLY MET NEED GROUP
Needed mental health supports	**Unsupported** b13r9 == 1	**Supported** (b13r1 == 1 | b13r2 == 1 | b13r3 == 1 | b13r4 == 1 | b13r5 == 1 | b13r6 == 1 | b13r7 == 1 | b13r8 == 1)
Accessed mental health supports	**Unsatisfied** (b13r1 == 1 | b13r2 == 1 | b13r3 == 1 | b13r4 == 1 | b13r5 == 1 | b13r6 == 1 | b13r7 == 1 | b13r8 == 1) and (b14a == 4 | b14a == 3 | b14a == 66)	**Satisfied** (b13r1 == 1 | b13r2 == 1 | b13r3 == 1 | b13r4 == 1 | b13r5 == 1 | b13r6 == 1 | b13r7 == 1 | b13r8 == 1) and (b14a == 1 | b14a == 2)
Experienced probable anxiety and/or depression	**Unreported** b13r10 == 1 and Scored 10 and above for PHQ[40] and/or GAD[39] PHQ (A10r8 A10r9 A10r10 A10r11 A10r12 A10r13 A10r14 A10r15 A10r16) GAD (A10r1 A10r2 A10r3 A10r4 A10r5 A10r6 A10r7)	**Reported** (b13r1 == 1 | b13r2 == 1 | b13r3 == 1 | b13r4 == 1 | b13r5 == 1 | b13r6 == 1 | b13r7 == 1 | b13r8 == 1 | b13r9 == 1 |) and Scored 10 and above for PHQ[40] and/or GAD[39] PHQ (A10r8 A10r9 A10r10 A10r11 A10r12 A10r13 A10r14 A10r15 A10r16) GAD (A10r1 A10r2 A10r3 A10r4 A10r5 A10r6 A10r7)

APPENDIX 2: DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS (UNWEIGHTED)

	NB N=497 N (%)	NS N=500 N (%)	PEI N=198 N (%)	ALL N=1195 N (%)
Age				
18-39 years	118 (24)	83 (17)	23 (12)	224 (19)
40-49 years	78 (16)	82 (16)	25 (13)	185 (15)
50-69 years	221 (44)	237 (47)	103 (52)	561 (47)
70+ years	80 (16)	98 (20)	47 (24)	225 (19)
Geography				
Rural	107 (22)	123 (25)	82 (41)	312 (26)
Urban	390 (78)	377 (75)	116 (59)	883 (74)
Gender				
Women	309 (62)	301 (60)	94 (47)	704 (59)
Men	188 (38)	199 (40)	104 (53)	491 (41)
Household composition				
Single Person	99 (20)	106 (21)	43 (22)	248 (21)
Lives with a partner only	192 (39)	228 (46)	92 (46)	512 (43)
Lives with roommates	18 (44)	10 (2)	5 (3)	33 (3)
Families	177 (36)	145 (29)	50 (25)	372 (31)
Other/Missing	11 (2)	11 (2)	8 (4)	30 (33)
Education				
High School or less	150 (30)	112 (23)	36 (18)	298 (25)
College	92 (19)	75 (15)	32 (16)	430 (36)
Trade/Technical	79 (16)	110 (22)	42 (21)	231 (19)
University+	173 (35)	200 (40)	88 (44)	461 (39)
Other/Missing	3 (11)	3 (1)	0 (0)	6 (1)
Income				
Less than $30000	107 (22)	71 (14)	24 (12)	202 (17)
$30 to <$50000	95 (19)	86 (17)	35 (18)	216 (18)
$50 to <$80000	115 (23)	115 (23)	42 (21)	272 (23)
$80000 or more	150 (30)	179 (36)	74 (37)	403 (34)
Other/Missing	30 (6)	49 (10)	23 (12)	102 (99)

APPENDIX 2: DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS (UNWEIGHTED) - *CONTINUED*

	NB N=497 N (%)	NS N=500 N (%)	PEI N=198 N (%)	ALL N=1195 N (%)
Employment				
Unemployed	55 (11)	40 (8)	9 (5)	104 (9)
Full-time	186 (37)	171 (34)	68 (34)	425 (36)
Part-time	55 (11)	40 (8)	13 (77)	108 (9)
Self-employed	19 (4)	26 (5)	9 (5)	54 (55)
Retired	174 (35)	210 (42)	97 (49)	481 (40)
Other/Missing	8 (2)	13 (3)	2 (1)	23 (2)
Visible Minority				
No	469 (94)	469 (94)	185 (93)	1123 (94)
Yes	28 (6)	31 (6)	13 (7)	72 (6)
LGBTQ2S+				
No	469 (94)	476 (95)	191 (96)	1136 (95)
Yes	28 (6)	24 (5)	7 (4)	59 (5)
Medical Insurance Coverage				
No	168 (34)	174 (35)	63 (32)	405 (34)
Yes	270 (54)	282 (56)	116 (59)	668 (56)
Other/Missing	59 (12)	44 (9)	19 (10)	122 (10)

Note: Percentages do not always add to 100 due to rounding error.

APPENDIX 3: PREVALENCE OF MENTAL HEALTH NEEDS

	OVERALL PREVALENCE % (95% CI)	UNMET NEED PREVALENCE % (95% CI)	MET NEED PREVALENCE % (95% CI)
Needed MH supports	34 (31, 38)	**Unsupported** 35 (29, 41)	**Supported** 65 (59, 71)
Accessed MH supports	22 (19, 26)	**Unsatisfied** 26 (19, 34)	**Satisfied** 74 (66, 81)
Probable anxiety and/or depression	28 (25, 32)	**Unreported** 27 (21, 33)	**Reported** 73 (67, 79)

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