



Young Adults' Mental Health and Unmet Service Needs in the Context of the COVID-19 Pandemic Across Canada and France

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Abstract

While young adults experienced mental health challenges during the COVID-19 pandemic, little is known about how their mental health needs were subsequently met through access to mental health services (MHS). From October to December 2020, we conducted an online survey of young adults (18–29 years) living in Canada and France to investigate factors associated with unmet MHS needs. Of the 3222 participants expressing a need to access MHS (50.7% of the total sample), 58.2% in Canada and 74.8% in France reported unmet MHS needs. In both countries, those who identified as men and those who lost income due to COVID-19, were more likely to report unmet MHS needs. In Canada, participants from Quebec, those living in rural areas, and those who experienced ethno-racial discrimination had higher odds of reporting such unmet needs. Urgent investments are needed to improve access to MHS for young adults during and after the COVID-19 pandemic.

Keywords COVID-19 · Young adults · Mental health · Health care access

Introduction

A growing body of evidence indicates that young adults (i.e., 18–29 years of age) have been particularly affected by the negative mental health consequences of the COVID-19

pandemic (Czeisler et al., 2020; Jones et al., 2022; O'Connor et al., 2021; Pierce et al., 2020; Solomou & Constantinidou, 2020; Vahratian, Blumberg, Terlizzi, & Schiller, 2021). A number of empirical studies in European and North American countries reported increased levels of anxiety, depression, and suicidal thoughts among young adults, as a result of increasing social isolation and stress due to public health

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efforts to reduce onward COVID-19 transmission (e.g., episodes of quarantine, closure of schools and businesses, limits on social gathering) (Glowacz & Schmits, 2020; Lee et al., 2020; Wathélet et al., 2020; Zheng et al., 2021). Previous surveys reported greater difficulty in accessing mental health supports and services among individuals most directly affected by COVID-19 (e.g., COVID-19 patients and their families, and healthcare workers) and those with pre-existing mental health conditions (Moreno et al., 2020; Murphy, Markey, O’ Donnell, Moloney, & Doody, 2021). However, there is limited evidence to date identifying the factors associated with access and barriers to mental health services for young adults. There are also limited comparative analyses examining access to mental health services across different national settings—a knowledge gap that may be hindering our capacity to inform actions to address mental health service inequities among young adults (Holmes et al., 2020; OECD, 2021). Therefore, our objective was to investigate the factors associated with unmet mental health service needs in a large and diverse sample of young adults in two high-income countries: Canada and France.

Methods

Study Design and Participants

From 8 October to 23 December 2020, we conducted a cross-sectional online survey as part of the *France Canada Observatory on COVID-19, Youth health and Social well-being (FOCUS)* which aimed to assess the impact of the COVID-19 pandemic on social and health outcomes among young adults living in Canada and France.

At the time of the survey, several mitigation measures, including a curfew in metropolitan areas (October 17–30) and a nationwide lockdown (October 30–December 15) were in effect in France. In Canada, each province and territory gradually and independently implemented public health measures that ranged from orders to avoid non-essential travel and limit social gatherings, to the closure of schools and non-essential businesses.

Participants were recruited using convenience sampling through online advertisements on social media platforms (e.g., Facebook, Instagram). Eligibility criteria were: being of legal age (18 or 19 years old depending on the Canadian province or territory, and 18 years old in France) and less than 30 years old, and residing in Canada or France. Survey data were collected using *Qualtrics* and stored in a secure data storage environment at the British Columbia Centre on Substance Use. Informed consent was attained from participants prior to accessing the online questionnaire. Ethical approval was provided by the University of British Columbia Behavioural Research Ethics Board (H20-02053).

Access to Mental Health Services

To assess access to mental health services, participants were asked: “in the past 6 months, was there a time when you wanted to access mental health services (e.g., counselling, medication)?” (yes/no). For those who said “yes”, we asked if they were able to access mental health services. Participants who said “no” to this second question were classified as reporting unmet mental health service needs.

Covariates

Sociodemographic characteristics included: age, gender identity, sexual and trans identity, province/territory (Canada) or region (France) of residence, area of residency (e.g., urban, rural), foreign-born status (born in Canada or in metropolitan France), living arrangement, relationship status, employment, education, and income. Ethno-racial identity was collected in Canada, while in France, where this information cannot be solicited due to the prohibition of collecting such data, we asked participants to provide the country of birth of their parents and grandparents from both sides. This variable was created as a proxy for ethno-racial identity and to estimate the ethno-cultural origin of French participants and identify racialized youth. To do so, descendants of immigrants from Europe were collapsed with those who reported that their parents/grandparents were born in France. Based on the definition of descendants of immigrants from the French National Institute of Statistics and Economic Studies (INSEE, 2020), French participants who reported that at least one of their parents (i.e., second generation of immigrants) or two of their grandparents from the same side were born outside France or Europe (i.e., third generation of immigrants), were considered as descendants of immigrants. Participants were also asked to report if they had ever experienced discrimination with regards to their ethno-racial identity (Canada) or their immigration background (in France) (hereafter referred to as “self-reported lifetime experiences of ethno-racial discrimination”). An interaction term between experienced ethno-racial discrimination and ethno-racial identity was constructed and tested in our initial models for each country to investigate possible effect modification. Lastly, we asked participants if they had lost any individual income since the onset of the pandemic (including salary, employment insurance, government assistance, etc.) and whether they had received any financial support (e.g., from friends, family or government) due to the COVID-19 pandemic.

Statistical Analysis

We calculated descriptive statistics and proportions of reporting unmet mental health service needs for all variables in each country. Associations between covariates and the outcome were tested using multivariable logistic regression. We entered all variables with $p < 0.20$ in bivariate analyses into an initial multivariable model. We then used a backward selection procedure in the final model to retain only those covariates significantly associated ($p < 0.05$) with the outcome. Age, gender and province/region of residence were forced in the models, as they have already been described as key factors influencing access to mental health services (Alegría et al., 2018). Although the interaction terms between self-reported experiences of ethno-racial discrimination and ethno-racial identity were statistically significant in our bivariate analyses, these terms do not remain in our final model. All analyses were performed using SAS OnDemand for Academics (SAS Institute Inc., Cary, NC, USA).

Results

Selection of the Study Population

Of the 8424 participants of the FOCUS survey, 6349 (75.4%) had complete sociodemographic data and completed the subsection on access to mental health services. Among them, 3222 (50.7%) participants reported the need to access mental services in the last six months, with a higher proportion in Canada compared to France ($n = 2199$; 64.7% versus $n = 1023$; 34.7%).

Study Population Characteristics

The majority of participants identified as women (69.2% in Canada and 64.5% in France), and reported living in large urban centre (55.8% in Canada and 52.7% in France) (see Table 1). Approximately half identified as straight/heterosexual (45.1% in Canada and 52.1% in France), and one-fifth identified as bisexual (26% in Canada and 19% in France). Respectively 12.3% in Canada and 10.6% in France self-identified as trans or were unsure of their trans identity. In Canada, two thirds were from the three provinces of British Columbia (22.2%), Ontario (21.5%), and Quebec (20.1%), and 87% identified as white. In France, most participants were from Ile-de-France (22.2%), South East (21.2%), and South West (17.9%), and 15% were classified as descendants of immigrants (among them, 75% were born in France, data not shown). Differences between countries were observed in terms of age (18–21 years, Canada vs France: 33.4% vs 46%), education level (53.9% with some university in Canada vs 33.1% in France), and employment status (38.9%

employed in Canada vs 22% in France). In both samples, almost one third had ever experienced ethno-racial discrimination (29.7% in Canada and 28.6% in France). Higher proportions of young adults had lost some or all of their income (some income: 40.5% vs 19.5% in France; all income: 12.2% vs 6.3% in France), and had received financial support due to COVID-19 in Canada (60.2% vs 29.8 in France). Further details on socio-demographic characteristics of the study population in each country are described in Table 1.

Descriptive Analysis of Unmet Mental Health Service Needs

Overall, 58.2% ($n = 1280$) of participants in Canada and 74.8% ($n = 766$) in France reported that they were not able to access the mental health services that they needed. In both countries (see Table 1), a higher proportion of participants who expressed unmet mental health service needs was found among those who identified as men (Canada: 64.4%; France: 78.2%), those living in rural areas (Canada: 65.5%; France: 77.5%), those who lost all of their income due to COVID-19 (Canada: 66.8%; France: 87.5%), and those who self-reported experiences of ethno-racial discrimination (Canada: 63.6%; France: 76.8%). In Canada, participants living in the territories (68.9%) and in Quebec (66.7%) reported higher unmet mental health service needs. In France, young adults residing in the southwest region (78.7%), those who identified as trans or were unsure of their trans identity (78.7%), and those who identified as bisexual (80.9%) reported unmet mental health service needs in greater proportion.

Factors Associated with Unmet Mental Health Service Needs

Our multivariable analysis showed that, in both countries, participants who identified as men (compared to woman, Canada: Odds Ratio (OR) [95% Confidence Intervals]: 1.35 [1.06–1.72]; France: OR 1.45 [1.02–2.07]) and those who lost some of their income (Canada: OR 1.71 [1.40–2.09]; France: OR 1.50 [1.01–2.25]) or all of their income due to COVID-19 (Canada: OR 1.95 [1.43–2.67]; France: OR 2.95 [1.32–6.58]) were more likely to report unmet mental health service needs. In Canada, young adults from Quebec (OR: 1.87 [1.41–2.48]), those living in rural areas (OR: 1.50 [1.17–1.93]), those who self-reported experiences of ethno-racial discrimination (OR: 1.3 [1.07–1.58]) had higher odds of reporting unmet mental health service needs. Conversely, those who were students and employed in Canada were less likely to report such unmet needs compared to employed (OR: 0.67 [0.53–0.85]).

Table 1 Descriptive statistics in Canada and France, overall and according to unmet mental health service needs

	Canada (n = 2199)	France (n = 1023)	Unmet mental health service needs	
	n (column %)	n (column %)	Canada (n = 1280)	France (n = 766)
			n (row %)	n (row %)
Age (years)				
18–21	735 (33.4)	471 (46)	436 (59.3)	353 (74.9)
22–25	828 (37.7)	336 (32.8)	467 (56.4)	253 (75.3)
26–29	636 (28.9)	216 (21.1)	377 (59.3)	160 (74.1)
Gender identity				
Man	393 (17.9)	266 (26)	253 (64.4)	208 (78.2)
Woman	1521 (69.2)	660 (64.5)	856 (56.3)	484 (73.3)
Non-binary/other gender identity ¹	255 (11.6)	82 (8)	147 (57.6)	62 (75.6)
Prefer not to say	30 (1.4)	15 (1.5)	24 (80)	12 (80)
Trans identity				
Yes or unsure	271 (12.3)	108 (10.6)	157 (57.9)	85 (78.7)
No	1928 (87.7)	915 (89.4)	1123 (58.2)	681 (74.4)
Sexual orientation				
Straight/heterosexual	992 (45.1)	533 (52.1)	589 (59.4)	394 (73.9)
Bisexual	571 (26)	194 (19)	331 (58)	157 (80.9)
Homosexual/gay, Lesbian	165 (7.5)	92 (9)	90 (54.5)	66 (71.7)
Other sexual minorities ²	411 (18.7)	157 (15.3)	232 (56.4)	118 (75.2)
Prefer not to say	60 (2.7)	47 (4.6)	38 (63.3)	31 (66)
Province of residence (Canada) ³				
Alberta	307 (14)	–	171 (55.7)	–
Atlantic	256 (11.6)	–	157 (61.3)	–
British Columbia	489 (22.2)	–	264 (54)	–
Manitoba	89 (4)	–	50 (56.2)	–
Ontario	472 (21.5)	–	254 (53.8)	–
Quebec	443 (20.1)	–	295 (66.6)	–
Saskatchewan	82 (3.7)	–	47 (57.3)	–
Territories	61 (2.8)	–	42 (68.9)	–
Region of residence (France) ⁴				
Ile-de-France	–	227 (22.2)	–	162 (71.4)
North East	–	172 (16.8)	–	127 (73.8)
West	–	176 (17.2)	–	131 (74.4)
Overseas	–	11 (1.1)	–	8 (72.7)
South East	–	217 (21.2)	–	164 (75.6)
South West	–	183 (17.9)	–	144 (78.7)
Missing data	–	37 (3.6)	–	30 (81.1)
Area of residency				
Large urban centre	1226 (55.8)	539 (52.7)	680 (55.5)	401 (74.4)
Medium city or town	509 (23.1)	213 (20.8)	296 (58.2)	155 (72.8)
Small city or rural area	464 (21.1)	271 (26.5)	304 (65.5)	210 (77.5)
Ethno-racial identity (Canada)				
White ⁵	1913 (87)	–	1099 (57.4)	–
Visible minorities, non-indigenous ⁶	159 (7.2)	–	101 (63.5)	–
Indigenous ⁷	127 (5.8)	–	80 (63)	–
Descendants of immigrants (France)				
No	–	870 (85)	–	649 (74.6)
Yes	–	145 (14.2)	–	111 (76.6)
Prefer not to say	–	8 (0.8)	–	6 (75)

Table 1 (continued)

	Canada (n = 2199)	France (n = 1023)	Unmet mental health service needs	
	n (column %)	n (column %)	Canada (n = 1280) n (row %)	France (n = 766) n (row %)
Foreign-born status				
No	1972 (89.7)	946 (92.5)	1144 (58)	709 (74.9)
Yes	223 (10.1)	75 (7.3)	135 (60.5)	55 (73.3)
Prefer not to say	4 (0.2)	2 (0.2)	1 (25)	2 (100)
Self-reported lifetime experiences of ethno-racial discrimination				
No	1523 (69.3)	730 (71.4)	852 (55.9)	541 (74.1)
Yes	653 (29.7)	293 (28.6)	415 (63.6)	225 (76.8)
Prefer not to say	23 (1)	0 (0)	13 (56.5)	0 (0)
Ethno-racial identity (Canada)*Self-reported lifetime experiences of ethno-racial discrimination (Missing data, n = 23)				
White*yes	430 (19.5)	–	276 (64.2)	–
White*no	1469 (66.8)	–	816 (55.5)	–
Visible minorities, non-indigenous*yes	131 (6)	–	80 (61.1)	–
Visible minorities, non-indigenous*no	22 (1)	–	16 (72.7)	–
Indigenous*yes	92 (4.2)	–	59 (64.1)	–
Indigenous*no	32 (1.5)	–	20 (62.5)	–
Descendants of immigrants (France)*Self-reported lifetime experiences of ethno-racial discrimination (Missing data, n = 8)				
Not descendants of immigrants *yes	–	196 (19.2)	–	148 (75.5)
Not descendants of immigrants *no	–	674 (65.9)	–	501 (74.3)
Descendants of immigrants*yes	–	93 (9.1)	–	74 (79.6)
Descendants of immigrants*no	–	52 (5.1)	–	37 (71.1)
In a relationship				
Yes	1199 (54.5)	485 (47.4)	678 (56.5)	367 (75.7)
No	987 (44.9)	532 (52)	593 (60.1)	395 (74.2)
Missing data	13 (0.6)	6 (0.6)	9 (69.2)	4 (66.7)
Living arrangements				
Living alone	330 (15)	333 (32.6)	178 (53.9)	255 (76.6)
Living with parents/family members	779 (35.4)	326 (31.9)	461 (59.2)	252 (77.3)
Living with a partner	560 (25.5)	194 (19)	338 (60.4)	136 (70.1)
Living with roommate/friends/Other	530 (24.1)	170 (16.6)	303 (57.2)	123 (72.4)
Education				
High school or less	287 (13.1)	36 (3.5)	180 (62.7)	26 (72.2)
Some college	531 (24.1)	420 (41.1)	340 (64)	316 (75.2)
Some university	1185 (53.9)	339 (33.1)	656 (55.4)	258 (76.1)
University graduate	194 (8.8)	221 (21.6)	103 (53.1)	159 (71.9)
Missing data	2 (0.1)	7 (0.7)	1 (50)	7 (100)
Employment status				
Employed	855 (38.9)	226 (22.1)	518 (60.6)	161 (71.2)
Student and employed	597 (27.1)	201 (19.6)	324 (54.3)	154 (76.6)
Student	484 (22)	462 (45.2)	279 (57.6)	349 (75.5)
Unemployed	240 (10.9)	125 (12.2)	143 (59.6)	95 (76)
Missing data	23 (1)	9 (0.9)	16 (69.6)	7 (77.8)
Individual income (\$CAD)				
I don't have any income	102 (4.6)	253 (24.7)	57 (55.9)	195 (77.1)
< \$20,000	1083 (49.2)	535 (52.3)	634 (58.5)	401 (75)
\$20,000–\$39,999	511 (23.2)	166 (16.2)	298 (58.3)	124 (74.7)

Table 1 (continued)

	Canada (n = 2199)	France (n = 1023)	Unmet mental health service needs	
	n (column %)	n (column %)	Canada (n = 1280) n (row %)	France (n = 766) n (row %)
\$40,000 or more	387 (17.6)	14 (1.4)	213 (55)	9 (64.3)
Missing data	116 (5.3)	55 (5.4)	78 (67.2)	37 (67.3)
Loss of income due to COVID-19				
No	844 (38.4)	425 (41.5)	434 (51.4)	294 (69.2)
Yes, some of my income	890 (40.5)	199 (19.5)	556 (62.5)	154 (77.4)
Yes, all of my income	268 (12.2)	64 (6.3)	179 (66.8)	56 (87.5)
Not available	197 (9)	335 (32.7)	111 (56.3)	262 (78.2)
Financial support due to COVID-19				
No	874 (39.7)	717 (70.1)	492 (56.3)	539 (75.2)
Yes	1324 (60.2)	305 (29.8)	787 (59.4)	226 (74.1)
Missing data	0 (0)	1 (0.1)	0 (0)	0 (0)

¹Other gender identity included intersex, Two-spirit (only for Canada), and other gender identity with an open-text box

²Other sexual minority included asexual, pansexual, queer, Two-spirit (only for Canada) and other sexual identity with an open-text box

³Atlantic included the Canadian provinces of New Brunswick, Newfoundland and Labrador, Prince Edward Island, and Nova Scotia and Territories included Nunavut, Yukon, and the Northwest Territories

⁴North East (Grand-Est, Hauts-de-France, Bourgogne Franche-Comté), South East (Auvergne-Rhône-Alpes, Provence-Alpes-Côte-d'Azur, Corse), South West (Nouvelle Aquitaine, Occitanie), and West (Bretagne, Centre Val-de-Loire, Pays de la Loire, Normandie)

⁵Includes those who selected “white” only and those who reported “white and Latino” or “white and Middle-Eastern”

⁶Includes those who selected any ethno-racial category (one or more) other than white or Indigenous. The visible minority groups include: “Black”, “East Asian”, “Southeast Asian”, “Latino”, “Middle Eastern”, “South Asian”, and those who reported another race category that cannot be classified with a visible minority group

⁷Includes those who selected “Indigenous (e.g., First Nations, Métis, Inuk/Inuit descent)”

Discussion

Our study highlighted that a high proportion of young adults (51% of the total sample) expressed the need to access mental health services within the context of the pandemic. These levels of needs, however, greatly varied between the two countries with a higher level in the Canadian sample (65%) compared to the French sample (35%). Multiple contextual factors including negative attitudes toward and perception of mental health issues and services may help explain this difference. One of these contextual factors may be a higher prevalence of stigma related to mental health issues in France compared to Canada where multiple large-scale mental health promotion and prevention interventions have been implemented in the last two decades (Centre for Addiction & Mental Health, 2013). Before the pandemic, a French mixed-methods survey reported negative perceptions regarding mental health services by pointing out that half of the interviewees thought that their physician did not know have sufficient skills to address mental health challenges and others reported feelings of fear and shame to express their mental health needs and concerns to their general practitioner (Rondet et al., 2015). Another reason may be that French individuals seem less inclined to express

their personal mental health needs compared to Canadians. For example, data collected before the pandemic indicated that Canadian adults were more likely to self-report experiences of emotional distress than French adults (27% versus 12%) (Tikkanen, Fields, II, & Abrams, 2020). Another study conducted in December 2020 among French university students identified multiple perceived barriers to help-seeking for mental health problems, including a preference for self-reliance, poor emotional competence and mental health literacy (Theurel & Witt, 2022). These findings underscore the importance of developing and implementing tailored interventions to improve mental health literacy, reduce mental health-related stigma, and promote help-seeking attitudes among young adults (Xu et al., 2018).

About one in three young adults in Canada (58% of 65% who needed mental health services) and almost one on four young adults in France (75% of 35%) reported not being able to access the mental health services they needed between the first and the second wave of the COVID-19 pandemic (May–December 2020). Similar high rates of unmet mental health service needs were found in previous COVID-19 studies among youth with pre-existing mental health challenges in Canada (49%) (Hawke et al., 2020) and among young adults in France (67%) (Alleaume et al., 2021). While these results

suggest a serious deficit in access to mental health services among young adults at the time of the COVID-19 pandemic, this trend was already occurring before the pandemic in both countries. For example, the Canadian Community Health Survey conducted in 2018 found that one quarter of young adults (18–34 years) who had a need for mental health care reported that their needs were fully unmet (Statistics Canada, 2019). Another survey among Canadian graduate students documented that only 37% among those who needed mental health services were satisfied with their access to mental health support before the pandemic, which decreased to 27% in April–May 2020 (Toronto Science Policy Network, 2020). In France, data from national cohort studies in 2009–2010 highlighted that less than 20% of young adults who reported mental health challenge had consulted a health service (Beck & Richard, 2013; de Monteynard et al., 2013). This limited access to mental health services has also been observed by youth organizations in UK (Takino, Hewlett, Nishina, & Prinz, 2021). A recent policy brief indicated that pre-pandemic weaknesses in mental health care systems, combined with a significant increase in mental health needs due to the pandemic, may have contributed to significant increases in unmet mental health needs among young adults (OECD, 2021).

Unfortunately, the capacity of existing mental health services was also impacted by the COVID-19 public health measures (e.g., lockdown). A WHO survey conducted in June–August 2020 indicated that more than two-thirds of mental health services globally were disrupted, especially school—and workplace-based mental health programs (World Health Organization, 2020). Although several digital adaptations and interventions have been implemented to support the mental health needs of young adults during the COVID-19 pandemic (Davenport et al., 2020; Zenone et al., 2021), several challenges remain for health services to provide virtual mental health support activities (e.g., telemedicine, online therapy) such as difficulty to reach people in need, develop quality services, and support to scale up those interventions (Bergin et al., 2020). For instance, technological and accessibility issues (e.g., poor internet connection, security concerns, safe private space) as well as lack of human connection (i.e., facilitating engagement and communication in a remote therapeutic relationship) were described as key barriers for accessing virtual mental health services by both clinicians and young adults (Hawke, Sheikhan, MacCon, & Henderson, 2021; Nicholas et al., 2021). Further research is needed to improve our understanding of the barriers and facilitators to access mental health services for young adults during the COVID-19 pandemic and beyond.

Multiple contextual factors may help explain the high rate of unmet mental health service needs in France (74.8%) compared to Canada (58.2%). The lack of available mental health resources and services for young adults in France may

reflect a limited health system capacity to meet their needs. Data collected before the pandemic reported that France had a lower supply of mental health workers (168 versus 277 professionals per 100,000 people in Canada), and a lower level of integration of mental health providers into the primary care service delivery system compared to Canada (31% versus 41%) (Tikkanen et al., 2020). During the pandemic, the first mental health initiative of the French Government was implemented in February 2021 (i.e., three free consultations with a mental health specialist for university students), while the Government of Canada has launched a series of initiatives to offer online no-cost mental health support resources, and counselling at an early stage of the pandemic (April 2020), both at the federal (i.e., “Wellness Together Canada” online portal) and provincial levels (e.g., Here2talk in British Columbia, Good2talk in Ontario and Nova Scotia). While our results suggest that mental health services access for young adults was slightly better in Canada, this varied between Canadian provinces. This may be explained by the decentralized healthcare system in Canada where public health services, including community and mental health services, are regulated and delivered at the provincial and territorial level (The Commonwealth Fund, 2020). Specifically, proportions of participants who experienced difficulty in accessing mental health services were higher in the territories (68.9%) and Quebec (66.6%) compared to those living in Alberta (55.7%), British Columbia (54%), and Ontario (53.8%). These higher rates of met mental health needs in these provinces may, in part, reflect the availability of integrated services of care for young adults (such as Alberta Integrated Youth Services Initiative in Alberta, Foundry in British Columbia and Youth Wellness Hubs in Ontario) that includes a variety of services (e.g., mental health and substance use services, primary care, education, peer and family supports). Furthermore, Quebec has been one of the most severely affected provinces of the pandemic (accounting for more than half of the total number of COVID-19 cases and death in Canada as of September 2020), leading health authorities to massively reallocate resources and professionals to acute care needs within hospitals and long-term care centres (Breton & Hudon, 2020). As such, this reprioritization of resources may have negatively affected the delivery and availability of mental health care during this period.

Our findings also provide important equity implications with regards to how certain population sub-groups have had greater difficulty in accessing mental health services. In both countries, those who lost income due to COVID-19 were over two times more likely to report unmet mental health service needs. While previous surveys in Canada and the U.S. reported associations between COVID-19-related financial loss and low household income and negative mental health outcomes (e.g., emotional distress, depression, suicide thoughts) (Hertz-Palmor et al., 2021; Jenkins et al., 2021),

our findings reinforce the need to support young adults who experienced financial challenges due to COVID-19. Gender differences with regards to access to mental health services are consistent with previous survey reporting that young men are less likely than women to attend and engage in mental health services (Seidler et al., 2020). Several structural barriers to mental health services have been identified before the pandemic including lack of knowledge regarding available services, difficulty navigating the mental health system, and intake processes that may explain gender differences (Rice et al., 2018). Participants living in rural Canadian areas were also more likely to experience unmet mental health service needs, likely reflecting that less services are available in these jurisdictions. Previous COVID-19 studies in Canada reported that rural communities experienced high levels of anxiety (Zajacova et al., 2020), and difficulty in accessing online mental health services (Rush et al., 2021). Our study also suggests that young adults who self-reported experiences of ethno-racial discrimination were less likely to access mental health services. This finding is particularly concerning given that young adults who experienced ethno-racial discrimination during the pandemic have higher risks of reporting negative mental health outcomes, including poor mental health, psychological distress and depression (Hahm et al., 2021; Mpofu et al., 2022; Oh et al., 2021). A systematic review also indicated that the COVID-19 pandemic contributed to increased ethno-racial discrimination in high-income countries, including in social spaces, school/work or within clinical settings (Yashadhana et al., 2021). Such findings underscore the need to develop anti-racist and equity-oriented mental health policy and services that address social and health inequities persisting in young adults' populations.

This study has some limitations. First, participants were recruited through advertisements on social media platforms, and as such, may not be fully representative of the young adult population in the two study countries. Our sample likely does not include those who did not have internet access and do not use social media. In addition, it is possible that those who were more interested in the issues investigated by our survey were also more likely to respond. To limit this selection bias, we developed and designed a series of thematic-oriented ads to cover a wide range of topics related to our survey (including ads with a focus on: COVID-19 measures, vaccinations, mental health, sexual health, substance use, socio-economic impacts) in order to target diverse groups of young adults on different social media platforms (e.g., Facebook, Instagram, Reddit). Second, we did not collect information regarding the type (e.g., counselling, medication) and format (e.g., virtual or in-person) of mental health services preferred, and the type of barriers participants experienced in accessing mental health services. Third, our single item measure to assess

experiences of ethno-racial discrimination does not account for the diversity and complexity of all forms of racial and ethnic experiences of racism that some young adults have encountered in their lifetime. In addition, our data set did not allow us to determine the settings in which these experiences happened and whether or not they occurred within the context of the pandemic. Because of the limited sample size of participants who self-identified as ethno-racial minorities, it was not possible to examine how experiences of ethno-racial discrimination differed across different racialized groups of youth. Further investigation is required to continue to identify the impact of ethno-racial discrimination on access to mental health services among youth ethno-racial minorities. Lastly, we did not collect history of mental health issues that may influence participants' ability to access mental health services.

Despite these limitations, our study suggests that the COVID-19 pandemic may have critically influenced the relationship between mental health services and young adult's population needs. For example, the COVID-19 public health measures have increased structural challenges for the health system to rapidly adapt service delivery (e.g., virtual connection) to provide mental health care (Moreno et al., 2020). These challenges may have made it more difficult to address the disparities that existed prior to the pandemic (i.e., gender inequity, geographic disparities). The pandemic context also exacerbated the expression of mental health needs among young adults, but most of these needs were not met through access to mental health services. This was especially the case for sub-groups of youth who have been particularly affected by the social impacts of the pandemic context (e.g., youth who lost income due to the pandemic). It is also more than likely that some of these sub-groups were not familiar with how to seek for help or access mental health services, which may contribute to the increase in prevalence of unmet mental health service needs. Finally, the COVID-19 pandemic may have intensified health inequities in terms of access to mental health services among young adults.

Conclusion

Urgent investment is needed to improve access to mental health services for young adults, especially among young men, those who have been financially impacted by COVID-19, those who experienced ethno-racial discrimination, and those living in rural areas. Promotion and support of mental health services should be prioritized among young adults populations to address their mental health needs and concerns during and after the COVID-19 pandemic.

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Data Availability The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest All authors report no competing interests.

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