

Barriers to Care for Mental Health Conditions in Canada

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Abstract

There has been ongoing national discourse about barriers to mental health care services in Canada, which has been arguably worsened by the Covid-19 pandemic. This study surveyed 1501 adults representative of the general population of Canada, collected by the Angus Reid Institute. Over half of respondents had sought out mental health care. The greatest number of respondents had difficulty finding help for posttraumatic stress disorder (PTSD, 34%) and depression (33%). When examining the data based only on those seeking care for specific conditions, attention deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD), substance use disorders, and generalized anxiety disorder (GAD) emerged as those for which it was most difficult to find treatment. Indigenous and Black Canadians had significantly more difficulty finding care across several conditions. We discuss the implications of these findings, including the critical need to increase the supply and diversity of mental health providers across Canada. This study is one of the first to provide quantitative data on the perceived barriers by Canadians in accessing mental health care, while exploring the role of race and ethnicity as variables that may influence access.

Keywords: mental health care, barriers to care, access, racism

Introduction

Mental Health Issues in Canada

Canada has for several decades had ongoing issues with deficits in the provision and availability of mental health services. As outpatient mental health is generally not covered by provincial health plans, coverage can substantially vary from one location to another, leaving geographic disparities. The lack of national standards for quality-of-care compromises health care across the entire country. Not only do Canadians lack adequate access to mental health care, the amount of mental health care that is needed is increasing. On a national level, each year one in five Canadians will require treatment for mental illness, and by the time the average Canadian reaches 40 years of age, a diagnosable mental illness will have been experienced by fully half of all Canadians (Smetanin et al., 2011). Already in 2017, Statistics Canada (2021) noted that the mental health needs of Canadians was on an upward trend with 5.3 million persons reporting needing mental health services. Two-fifths of these (3 million) had their needs fully met, and another fifth (1.2 million) had their needs partially met, however, 1.7 million people were left with their needs entirely unmet (Statistics Canada, 2019). The most commonly reported reasons for experiencing unmet or partially met mental health needs included three major deficits, lack of time, lack of financial means and a deficit in information or knowledge. If a Canadian did not have a general health care provider, this also decreased their ability to access a mental health provider as well (Statistics Canada, 2019). Of respondents who reported their mental health needs as unfulfilled (wholly or partially), close to twenty-five percent (22.6%) indicated a preference to attend to their health conditions independently of external support, underscoring the prevalence and deleteriousness of the stigma of mental illness.

Additionally, the pandemic has had a negative influence on the mental health of Canadians. The under-resourcing of the Canadian mental health system was laid bare in the aftermath of COVID-19 and the existing health and social policies gaps spanning the spectrum of mental health care became visible. These deficits ranged from intensive specialized services to prevention to mental health promotion (Mental Health Commission Canada, 2020). Self-rated mental health levels among youth and women were particularly negatively impacted according to comparisons of Canadian surveys from 2020 with those from 2018. (Yang et al., 2020). Out of 10 Canadians, almost 7 reported that COVID-19 had a detrimental effect and by the end of 2020 some level of mental distress in the previous month was being reported by 2 out of every 5 Canadians (Statistics Canada, 2021).

The most concerning mental health disorders can be broadly divided into four areas: mood disorders, anxiety disorders, schizophrenia spectrum disorders, and substance use disorders (SUD). The

prevalence of each of these categories in Canada often varies by generation and cultural background. However, the lack of data collection by ethnic and racial groupings in Canada has hindered our understanding of the extent of the issue and if there may be racial factors that exacerbate specific mental health concerns.

Anxiety Disorders

Over the course of a lifetime, 4.6% or 2.5 million Canadians will suffer from an anxiety disorder. According to an online survey carried out in July 2020 (the Canadian Perspective Survey Series – Information Sources Consulted During the Pandemic; CPSS4-COVID), representing 98% of the national population (excluding First Nations, rural and institutionalised persons), one in seven Canadians (13.6%) was at risk of experiencing clinically significant levels of generalized anxiety disorders (GAD) (Lin, 2022). The COVID pandemic has also exacerbated anxiety among Canadians and highlighted the need for personalized therapeutic mental health services. Although prevalence of anxiety disorders in women was significantly higher than men (17.2% vs. 9.9%), a dose-response relationship with COVID-19 misinformation exposure was only observed among men (Lin, 2022), also underscoring the need for improved public information.

A Canadian community health survey with a focus on mental health (CCHS-MH) conducted in 2012 found that 2.6%, or just under 1,000,000 Canadians over the age of 15 reported experiencing “symptoms consistent with generalized anxiety disorder” (GAD) (Statistics Canada, 2013). An analysis of the data provided by the CCHS-MH reported that the 12-month prevalence of GAD was 3.2% in women and 2.0% in men (Watterson et al., 2017).

Obsessive-Compulsive Disorder

A 2018 study was conducted in order to provide data on the prevalence of obsessive compulsive disorder (OCD) in Canada (N = 25,097), where they found the prevalence of an OCD diagnosis in 0.93% of the population (Osland, et al. 2018). Those with OCD were younger, with the mean age of 37.35 years old, than the control group, with the mean age of 45.73 years old. Additionally, those with an OCD diagnosis were less likely to hold a job and had lower income than those without OCD.

Posttraumatic Stress Disorder

A recent study conducted by Statistics Canada (2021) found that 8% of Canadians “met the criteria for probable PTSD”, whereas only 5% were diagnosed by a health professional, highlighting the mismatch between individuals with this condition and the availability of clinicians available to treat them. Women reported experiencing PTSD (10%) at rates twice as high as men (6%). Furthermore, the population between 18-24 years old reported having more PTSD symptoms, at 13% than those 65+ years

old (3%). Of the total group, seven percent identified as visible minorities (Statistics Canada, 2021). The study also found only half of Canadians (55%) who suffer from PTSD sought external support, and of that, four in five (82%) “had trouble accessing the health care services they needed” (Statistics Canada, 2021, 2022).

Depression

Depression is a significant cause for the need for mental health services. The average yearly prevalence of a major depressive episode in Canada for those with a job was 5.4%, with a significantly greater prevalence for both the unemployed, who experienced a rate of 11.7%, and those not participating in the labour force (9.8%; Dobson et al., 2020). Untreated, depression can progress to suicidal ideation. Every day 11 people in Canada take their own life resulting in about 4,000 deaths per year (Statistics Canada, 2022). In recent years, young people, in particular, have been significantly affected by suicide. In 2018, suicide was the leading cause of death for children aged 10 to 14, and after accidents, it remained as the second leading cause of death for people aged 15 to 24 (Statistics Canada, 2022). Suicide occurs in every people group and every age in Canada. However Indigenous people, particularly young Indigenous Canadians, have significantly increased rates of suicide. In aggregate, youth from the First Nations between 15 to 24 years of age are perishing through suicide at rates about six-fold higher than other Canadians. Among Inuit youth, suicide rates are about 24 times higher than the Canadian national average (Kumar & Tjepkema, 2019).

The pandemic has exacerbated the already existing mental health care shortage in Canada by increasing the percentages of those diagnosed with both anxiety and major depressive disorder (MDD) (Statistics Canada, 2021). According to the same 2020 survey, 15% of Canadians screened positive for MDD, with more women (18%) than men (13%) being diagnosed. Different age groups were affected differently, with the highest proportion of MDD diagnosed among those aged 18-34 years (23%) (Statistics Canada, 2021).

Schizophrenia Spectrum Disorders

Canadians already living with serious mental illnesses, including psychotic disorders, were profoundly impacted by the COVID-19 pandemic. These vulnerable Canadians were not only at higher risk for contracting COVID-19, the very nature of the disease with required social distancing protocols, and disruptions in routine services created a higher risk for poor mental health outcomes (Mental Health Commission of Canada [MHCC], 2021). Psychotic disorders including schizophrenia have been determined to affect up to 4% of the population (Lecomte et al., 2022). This means that more than 1.5 million Canadians are directly affected. The onset of schizophrenia, which occurs in early adulthood or

late adolescence, is particularly tragic as it negatively affects the life experiences of young Canadians during a time when they are embarking on an independent life (Jones et al., 2021). Globally it is among the top 10 causes of disability-adjusted life-years (Lecomte et al., 2022), and the costs in Canada of schizophrenia per year has been estimated to reach up to \$10 billion Canadian dollars, demonstrating the urgent need for better care in this area (Lecomte et al., 2022).

Substance Use Disorders

According to a report by Palay, the prevalence of substance use disorders (SUD) in Canada is at 1.78% (2019) representing over 650,000 Canadians. Each day, on average, 20 Canadians perish from the use of illicit substances (Belzak & Halverson, 2018). Mortality caused by the use of alcohol, opiates and other substances can be grouped together as “deaths of despair” and are on the rise in Canada. Although opioid-related deaths have been highest in British Columbia, Alberta, Yukon, and the Northwest Territories, the crisis has touched all regions of Canada (Belzak & Halverson, 2018; Blair & Siddiqi, 2022). In all, the economic cost of substance use in Canada per year is a staggering \$40 billion, which includes criminal justice, lost productivity and healthcare costs (Belzak & Halverson, 2018; Canadian Substance Use Costs and Harms Scientific Working Group, 2020).

Eating Disorders

The most common eating disorders include anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder. The total lifetime prevalence of eating disorders is notably higher (8.4%) for women than men (2.2%), and this trend extends to the prevalence for anorexia nervosa at 1.4% for women and 0.2% for men as well as bulimia nervosa 1.9% for women and 0.6% for men, and finally, for binge eating disorder where women have a prevalence of 2.8% while men have only 1.0% prevalence (Galmiche et al., 2019; Pedram et al., 2021). Individuals with eating disorders may be undertreated as a group due to avoidance behaviors as the stigma and self-stigma around eating disorders has been reported to obstruct help-seeking behavior (Zipfel et al., 2022). Additionally, the COVID-19 pandemic has severed social connections exacerbating the negative impacts on those suffering from eating disorders (Zipfel et al., 2022).

Attention Deficit Hyperactivity Disorder

Attention Deficit Hyperactivity Disorder (ADHD) symptoms commonly arise in children between the ages of 3 and 5, remain throughout adolescence in 75% of cases, and persist in 50% throughout adulthood (Statistics Canada, 2015). Vasiliadis and colleagues' (2017) found that from 1999 to 2012, ADHD had risen in all provinces for both youths, aged between 1-17 and young adults aged between 18-24. The prevalence of ADHD in adults is 2.5%, and in youth, between 4%-7%, with a three-fold higher

likelihood in boys of ADHD development than in girls (Statistics Canada, 2015).

Caregivers of children with ADHD were adversely affected due to restrictions of the pandemic, as they were unable to access services they required (therapeutic, educational or medical). This resulted in an increase and worsening of symptoms. (Katzman et al., 2017; Swansburg et al., 2021; Vasiliadis et al., 2017).

Dementia

Dementia, characterized by memory loss, judgement and reasoning problems, behavioral alterations, and mood and communication disturbances, is one of the more expensive mental health disorders costing Canada about 8.3 billion in 2011 (Public Health Agency of Canada 2014). The prevalence of dementia increases with age, with an overall prevalence of 2.0% for the general population (Chang et al., 2015; Alzheimer Society of Canada, 2018), however the Government of Canada found a prevalence rate of 7.1% for dementia in individuals over 65 years old (Statistics Canada, 2014), with women (8.3%) experiencing higher levels of dementia than men (5.6%) (Government of Canada, 2017). Pandemic restrictions have had severely negative impacts on the population living with dementia (Bacsu et al., 2021). Additionally, researchers suggest that enforced social isolation is contributing to adverse outcomes for those living with dementia (Killen et al., 2020).

Systemic Racism

Systemic racism is prevalent in Canada and exacerbates all mental health conditions. When compared to White Canadians, Canadians of color and visible minorities receive substandard mental health care, and face more barriers when seeking support (MHCC, 2019). Societal discrimination also negatively affects the well-being and mental health of racialized Canadians and causes racial trauma which, although it has long existed was only recently formally recognized by psychologists (i.e., MHCC, 2019; Williams, Khanna Roy, et al., 2022). Systemic racism as the genesis of mental health disorders is an under researched topic which obscures the full extent of its impact. Despite the well-known discrimination against Indigenous peoples in Canada and visible minorities, systemic racism remains vastly understudied, and its full effects are widely unknown. Only recently has the ongoing burden of racism in Canada been elevated to become a central theme within the national conversation (MHCC, 2021).

Purpose of this Paper

Despite the recent increase in awareness, the hesitation of researchers and the statistical offices of the government to collect basic parameters of health by race has prevented a proper analysis of race-based health concerns in Canada. Therefore, this paper has the purpose in part to explore the data gaps

on Canada's racialized citizens by making public the data about access to care for specific mental health conditions. This paper extends prior work examining barriers to care (Author). We break down responses by not only standard subcategories such as gender, location and age for access by mental health need, but also critically, by ethnoracial group.

Materials and Methods

Participants

The 1501 individuals participating in this study represented the general population of Canadian adults. Participation was drawn from across the country: Atlantic (7%), Alberta (11%), British Columbia (13%), Ontario (38%), Quebec (24%) and Saskatchewan/Manitoba (7%),, Quebec (24%), and. Of the 1501 participants, 48% identified as male and 52% identified as female. The level of education was reported as follows: 37% of participants reported obtaining lower than or equal to high school education, 33% reported obtaining partial/some postsecondary/college education, and 30% reported obtaining a university degree or more. The reported household income of participants is listed as the following: 28% of participants reported earning less than \$50k, 35% reported earning between \$50k and \$100k, and 27% of participants reported earning more than \$100k.

The race and ethnicity of the 1501 participants are as follows: 18 identified as Middle Eastern/West Asian, 22 as Black, 1179 as White, 41 as East Asian (including Chinese, Taiwanese, Hongkonger, and other East Asian), 38 as South Asian, 24 as Latin American, 92 as Indigenous Canadian and 87 as "other" ethnicities (which included Filipino, multiethnic, and prefer not to answer).

Angus-Reid National Survey

The Angus Reid Institute is responsible for collecting the data for this report. The institute was founded in 2014 and acts as a national independent research organization. The data was collected during its national survey of Canadian adults between February 22-24, 2022. Those responding to the survey were members of Reid Institute's online forum. Informed consent, information on the purpose of the survey, compensation, steps on how to withdraw, and the protection of private information were outlined in the terms of service and privacy policy which participants were presented with upon registration. Participants were asked questions regarding which specific mental health issues are most challenging when it comes to accessing mental health care. Participants were able to receive and respond to the survey in both English and French.

The question read, "To the best of your knowledge, what types of mental health problems are most difficult finding help for? Please select all that apply." Participants had 14 response options to choose from. The options were: attention deficit hyperactivity disorder (ADHD), generalised anxiety

disorder (GAD), obsessive compulsive disorder (OCD), posttraumatic stress disorder (PTSD), depression, bipolar disorder, schizophrenia, Alzheimer's/dementia, eating disorders (e.g. anorexia, bulimia, binge eating, etc.), developmental disorders, alcohol/drug abuse, other/please specify, or none of the above.

Additionally, the survey collected demographic data, including gender identity (male, female, other), province of residence, language (English or French), , age (18+, 18-24, 25-34, 35-44, 45-54, 55-64, 65+), race/ethnicity, which included the categories of Black, White, Indigenous in Canada, South Asian, East Asian (Chinese, Taiwanese, Hongkonger, other East Asians), Middle Eastern/West Asian, Latin American, Filipino, specify other ethnicity, and prefer not to answer. Further, data on education level (less than or equal to high school, some postsecondary/college, university or more) and household income (less than \$50K, more than \$50K to less than \$100K, \$100K+, don't know/rather not say) was also collected.

Data Analyses

A string of tests were implemented to compare the responses across the three research questions and the demographic variables. The analysis concentrated on the covariation between the conditions associated most with difficulties in obtaining mental health care and demographic characteristics. The demographic variables analyzed include language, household income levels, provinces of residence, education levels, ethnic and racial identity, age groups and gender. Contingencies tables were used to investigate the frequencies of one variable at varying levels of another variable. Chi-square independence tests were used to study variation in the frequencies across levels of demographic variables. Post-hoc pairwise z-tests examined whether the observed frequencies were significantly different across demographic variables.

Independent samples t-tests and one-way Analysis of Variance (ANOVA) were used to investigate mean level differences across each value of the demographic variables. Independent samples t-tests were used to investigate mean differences for language and gender. ANOVAs were used to investigate differences across categories of ethnicity, age, income groups, province, and education. Posteriori tests in ANOVA were used to investigate each pair of means when an ANOVA test was significant.

The data was balanced and weighted to construct results that were representative of the population of Canadians across, age, education, gender, and the provinces. Unweighted tests were used to obtain ANOVA comparisons and weighted tests were used to obtain Chi-square and z-test comparisons. Comparisons across multiracial, ethnoracial groups, "prefer not to answer", and those groups with less than 10 respondents were not included.

Results

To the best of your knowledge, what types of mental health problems are most difficult to find help for?

From the sample of 1501 respondents, the majority felt posttraumatic stress disorder (PTSD; 33%) and depression (33%) were the most difficult conditions for which to obtain mental health care. An additional 30% reported that they don't know or are not sure. The remaining sample (n=66) noted other mental health conditions, including generalized anxiety disorder (GAD; 27%), bipolar disorder (27%), schizophrenia (25%), eating disorders (23%), ADHD (21%), Alzheimer's/dementia (21%), OCD (20%), developmental disorders (20%), alcohol/drug abuse (20%), and other/please specify (2%). From the few who selected *other*, participants mentioned personality disorders (Borderline, Antisocial, Narcissistic), fetal alcohol spectrum disorder, gender dysphoria, misophonia, trauma from sexual abuse, other addictions (e.g., gambling, online social media), complex conditions, conditions related to brain injury, perinatal mood disorders and postpartum depression.

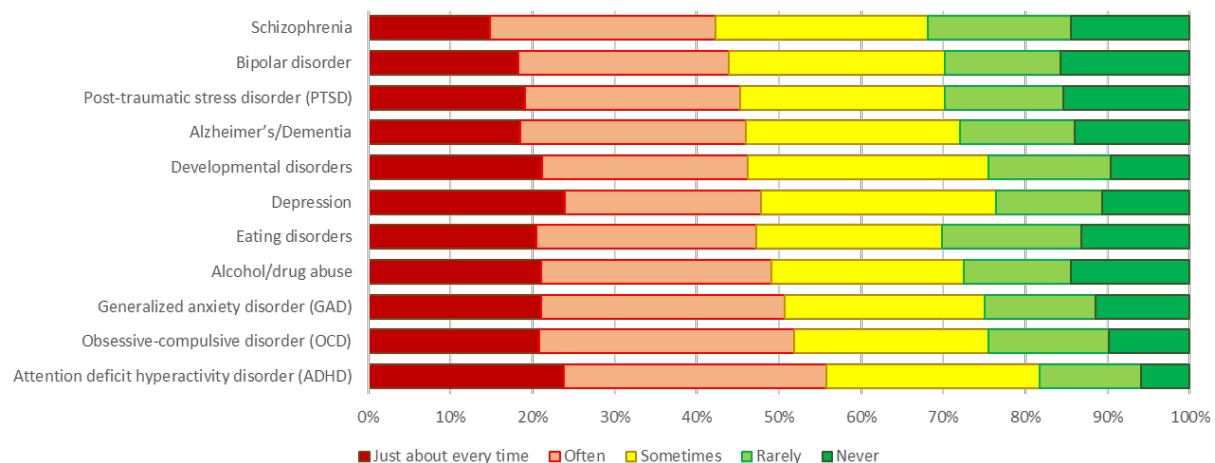
Table 1: Difficulty Finding help and Prevalence Rates

Disorder	Prevalence in Canada	Ever sought help for condition (regardless of barriers)	Had difficulty* finding help for the condition
Alzheimer's/Dementia	2.0%	13.3%	46.0%
Developmental disorders	1.1%	13.9%	46.2%
Substance (alcohol/drug) abuse	2.2%/1.78%	14.3%	49.1%
Obsessive-compulsive disorder (OCD)	2.5%	14.1%	51.9%
Attention deficit hyperactivity disorder (ADHD)	2.1%	14.6%	55.7%
Eating disorders	0.42%	15.7%	47.2%
Schizophrenia	0.42%	17.5%	42.2%
Generalized anxiety disorder (GAD)	2.57%	18.7%	50.7%
Bipolar disorder	1.51%	19.0%	43.9%
Post-traumatic stress disorder (PTSD)	5.0%	21.7%	45.2%
Depression	4.72%	22.6%	47.8%

*Out of those reporting that they ever experienced a barrier to finding mental health care for a specific condition; includes those who searched for help for the listed disorder, responding with having difficulty "often" or "just about every time."

Table 1 shows the national prevalence of each condition based on the literature (Ferrari et al., 2022; Galmiche et al., 2019; Palay et al., 2019; Pedram et al., 2021; Statistics Canada, 2019, 2022; Taube-Schiff et al., 2020), followed by the percentage of the sample who sought help for the condition, and finally the percentage of the sample who had difficulty finding help among those seeking help for the condition (also shown graphically in Figure 1). Among those who sought out care for specific disorders, ADHD was deemed most difficult to find care for, followed by OCD, SUD, and GAD. That rates for those seeking help for the conditions listed are much higher than national prevalence rates reflects the fact that people seek care not just for themselves, but family members and loved ones as well.

Figure 1: Levels of Difficulty by Indication and Barriers to Mental Health Care



Caption: Conditions listed include only those who reported seeing help for the condition listed on the y-axis.

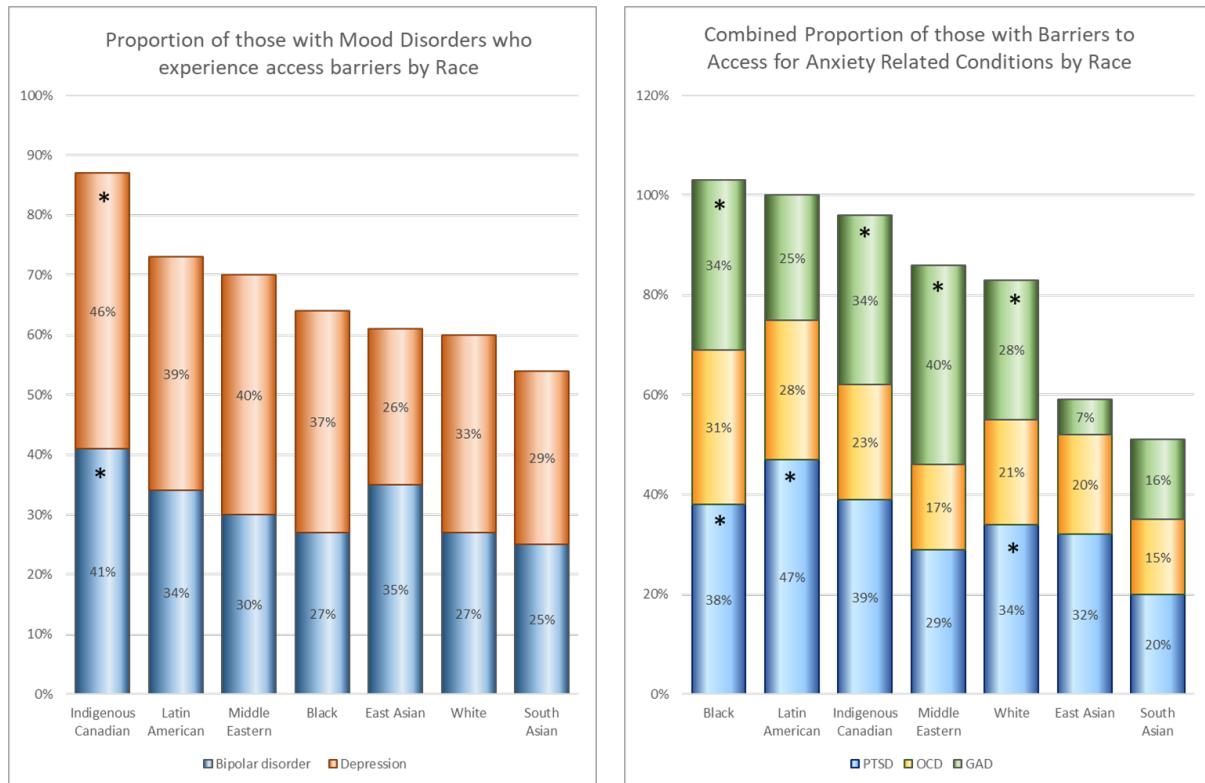
To further examine the types of mental health problems most difficult to find care for, we examined disaggregated differences across the demographic variables: race/ethnicity, province of residence, gender, age, education level, household income, and language.

Race/Ethnicity

Ethnicity was significantly related to mean differences in the mental health problems most associated with difficulties ($F(6,1407)=2.668, p=0.014$). Specifically, Indigenous people reported significantly more difficulties associated with general anxiety disorder (GAD) compared to other ethnic groups. In general, Indigenous Canadians, compared to other groups, reported more mental health conditions that were most difficult for accessing care, including ADHD, GAD, PTSD, Depression, and bipolar disorder. Specifically, Indigenous people reported ADHD (30%), Depression (46%), and bipolar disorder (38%) more than White respondents (20%, 32%, and 27%, respectively). Indigenous people, Black, and White respondents reported PTSD (38%, 28%, and 34%) more than South Asians (21%).

Similarly, Indigenous people, Black, and White respondents reported GAD (36%, 24%, 27%) more than East Asian Canadians (7%). Black Canadians reported Alzheimer’s/Dementia (33%) more than South Asian (16%) and Middle Eastern/West Asian (11%). Analyses suggested access difficulties due to schizophrenia were not different across the ethnoracial groups.

Figure 2: Difficulty Accessing Care for Mental Health Conditions by Ethnoracial Group



A) Difficulties accessing care by ethnoracial group for mood disorders

B) Difficulties accessing care by ethnoracial group for anxiety-related disorders

Province of Residence

The province of residence significantly related to mean differences in the mental health problems most associated with difficulties, specifically for developmental disorders ((F(5,1495)=4.513, p<0.001) and ADHD (F(5,1495)=2.506, p=0.029). Given the highest proportions of respondents (approximately 56%) who sought out care and reported difficulties were from Ontario and Atlantic Canada (Author), we find similar patterns in the conditions associated with more difficulties in accessing care. Ontario and Atlantic Canada report more conditions, including ADHD, PTSD, Depression, Schizophrenia, and developmental disorders. Ontario (23%) and Atlantic Canada (29%) reported ADHD as

being more related to difficulties in accessing care, compared to Alberta (16%) and Quebec (17%). Also, Ontario (35%) and Atlantic (41%) reported PTSD as more related to difficulties than in Quebec (28%). In Ontario, schizophrenia (28%) was associated with more difficulties than in Quebec (22%). Similarly, developmental disorders were more related to difficulties in accessing care in Ontario (23%) and Atlantic Canada (30%) compared to other provinces, including Quebec (15%). Depression was reported as more related to difficulties in Ontario (34%), Quebec (35%), and Atlantic Canada (40%), than British Columbia (25%).

Gender

Gender was associated with mean differences in the mental health problems associated with the most difficulties in accessing care. These include: ADHD ($t(1498)=-2.321$, $p=0.020$), GAD ($t(1498)=-4.126$, $p<0.001$), OCD ($t(1498)=-3.186$, $p<0.001$), Schizophrenia ($t(1498)=-4.207$, $p<0.001$), eating disorders ($t(1498)=-4.949$, $p<0.001$), developmental disorders ($t(1498)=-3.496$, $p<0.001$), and alcohol/drug abuse ($t(1498)=-5.763$, $p<0.001$). This pattern was also consistent with the types of mental health conditions were most difficult to find help for. Women reported significantly more mental health conditions than men, including ADHD (23% and 18%), GAD (32% and 22%), OCD (23% and 17%), Schizophrenia (29% and 20%), SUD (26% and 14%) as well as eating (28% and 17%) and developmental (23% and 16%) disorders.

Age

Age was related to differences in the mental health problems associated with the most difficulties in accessing care. These conditions included: ADHD ($F(2, 1498)=8.976$, $p<0.001$), depression ($F(2, 1498)=3.324$, $p=0.036$), eating disorders ($F(2, 1498)=8.891$, $p<0.001$), and developmental disorders ($F(2, 1498)=8.314$, $p<0.001$). When asked which conditions were most difficult to find care for, young adults (aged 18 to 34) and middle-aged (aged 35-54) were more likely than older adults (55 and older) to identify ADHD (24%, 24%, and 15% respectively). In general, several conditions were reported more by young adults compared to older adults, specifically, OCD (23% and 18%), Schizophrenia (29% and 22%), as well as eating (30% and 19%) and developmental (25% and 15%) disorders.

Education Level

Education was related to mean level differences in the conditions most associated with difficulties, specifically, GAD ($F(2, 1498)=1.604$, $p=0.017$) and Depression ($F(2, 1498)=12.171$, $p<0.001$). Canadians with less than or at least high school or some college education were more likely than those with university education to report most difficulties related to GAD (29%, 29%, and 22%) and depression (38%, 35%, and 24%). Patterns for the other conditions were similar across these education levels.

Household Income

Income was related to mean level differences in the conditions associated with the most difficulties, specifically, PTSD ($F(2, 1498)=3.882, p=0.021$), Depression ($F(2, 1498)=3.482, p=0.031$), bipolar disorder ($F(2, 1498)=5.174, p=0.006$), and developmental disorders ($F(2, 1498)=3.134, p=0.044$). Canadians who made less than \$50k or \$50K-100k reported more conditions associated with difficulties, than those making over 100k; conditions reported included PTSD (37%, 35%, and 29%), Bipolar disorder (32%, 28%, and 23%), and Schizophrenia (27%, 26%, and 21%) as being related to the most difficulties in accessing care. Depression was reported more by Canadians with less than 50K household income than those making over 100K (37% and 29%).

Language

Language was related to mean level differences in the conditions most associated with difficulties, specifically, PTSD ($t(1499)=2.822, p=0.002$) and alcohol/drug abuse ($t(1499)=2.739, p=0.006$). In line with the provincial findings on the types of conditions most difficult to access care for, more English-speaking Canadians than French-speaking Canadians reported PTSD (35% and 26%) and alcohol/drug abuse (21% and 14%).

Discussion

Mental Health Conditions and Access to Care

Help for different types of mental health conditions were not perceived as equally accessible by Canadians. Although, comparatively, respondents found it difficult to find help for every kind of mental health problem, some indications were perceived as having higher barriers. Participants indicated the difficulty level of “just about every time” and “often” for all eleven surveyed mental health disorders between 42% and 56% of the time. Consistent with prior studies, women sought out more care and experienced more difficulties in general than men (Author).

Although depression and PTSD had the highest overall numbers of Canadians looking for services, when adjusted by proportion, ADHD was perceived as the most difficult disorder to find help for, with over half unable to find help almost always or often. ADHD is an indication which is often identified during the school years, and school psychologists could be helpful (Ianni et al., 2021; Vidal-Estrada et al., 2012), but there is a specific shortage of these types of mental health professionals, and so children are usually simply medicated (Mikail & Nicholson, 2019) rather than getting comprehensive behavioral and cognitive therapy.

Closely behind ADHD, were OCD, SUD, and GAD. These anxiety-related conditions are best addressed with psychotherapy. With an effective therapist, research shows that psychotherapy is more effective and is, in the long-term, more enduring than treatment with medications alone (Tasca et al.,

2018). OCD is a condition that is notoriously difficult to find treatment for, as medication rarely provides full relief, and few therapists are trained to deliver gold-standard CBT treatments, such as exposure and ritual prevention (Taube-Schiff et al., 2020). Correspondingly, Moroz (2020) found that the most critical mental health need was for therapy services, however and the same data also found that the need for counselling at the same time was, distressingly, the most likely to remain unmet (34%) while the need for medication was most likely to be met (85%). Therapy is more cost-effective and leads to fewer relapses of anxiety and mild to moderate depression than medication use alone (Moroz et al., 2020; Myhr & Payne, 2006).

Racial Barriers to Mental Health

It is notable that Indigenous Canadians experienced the highest barriers to accessing care as compared to other racial groups, with between 30 to 40% reporting treatment barriers for ADHD, depression, and bipolar disorder at rates significantly higher than White respondents. Barriers to treatment for anxiety disorders and PTSD and GAD were also reported highest by Indigenous people, with well over a third reporting high treatment barriers; these indications, however, were flagged as nearly similar high barriers by Black and White Canadians. The lowest reported barriers for these indications occurred among Asian ethnicities (South and East Asian Canadians). As these categories are highly stigmatised disorders, it is notable that so many racialized Canadians are seeking care and finding higher barriers. The lower rates of barriers reported by South and East Asians may have more to do with social stigma within Asian communities than actual prevalence of disorders (Zhang et al., 2019).

Empirical data points to race-based differences in the prevalence of many mental disorders (Blair & Siddiqi, 2022; Cenat et al., 2021; Chiu et al., 2018). Younger cohorts of Indigenous people have higher suicide rates than other young Canadians, while the prevalence of mood disorders among immigrant persons or those racialized as Black, for example, differs from that of surrounding White populations (Kumar & Tjepkema, 2019; Louie & Wheaton, 2018; Nwoke et al., 2020). Some racialized cohorts have been shown to have higher rates and needs for anxiety treatment than Whites, while Black communities in both the US and Canada have lower rates of substance use than their neighboring White communities (Blair & Siddiqi, 2022; Jahn et al., 2021; Louie & Wheaton, 2018). In contrast, rates of depression among Black individuals in Canada rise to nearly six times the yearly prevalence reported for the general Canadian population (Cenat et al., 2021). These differences are likely factors in the rates of help seeking observed for various conditions.

Recommendations

This study demonstrates a clear need for more mental health resources for all Canadians across

all indications. Although more psychiatrists are needed, medication alone cannot solve this crisis; actual psychotherapists are needed. For example, there is a need for an increase in the number of licensed clinical psychologists (18,000 in Canada, whereas there are 102,000 in the US), with low numbers due to well-known bottlenecks in the Canadian system of education for clinical psychologists (Beaulieu & Schmelefske, 2017; Lin et al., 2020). Those who are responsible for increasing the capacity of programs that graduate clinical psychologists are furthermore hindered by a web of administrative rules and professional inertia (Williams, 2022). The US has solved this problem in part by licensing psychologists graduating from free-standing professional schools to provide mental health care, which now accounts for more than half of the US based clinical psychologist graduates, although geographic disparities and discrimination leads to race-based shortages in mental health care for racialized communities in both countries (Lin et al., 2020; Kohout & Wicherski, 2010). One solution that has been discussed would be to create more university-based PsyD programs and accredit free-standing professional degree programs in Canada, and despite resistance there is now some movement in this direction (Mikail & Nicholson, 2019; Williams, 2022).

Thomson and colleagues (2015) have noted that the limited availability of services in languages other than English was identified as hampering diverse immigrant subpopulations in accessing services including: Black African women, Latin American men, Iranian immigrants, and Chinese and South Asians. Although interpretation services can be helpful, these are rarely adequate due to being resource intensive and as such may result in substandard care (Bosson et al., 2017). A better solution is to increase the number of multilingual therapists. One way to accomplish this would be to bring in more mental health clinicians from other countries, which may have the added positive effect of providing more therapists to communities where English or French is not a first language, and where English / French-only speakers are not able and never will be able to provide adequate services. Unfortunately, due to a lack of imagination, many health professionals in Canada are not able to be tested for their licences in languages other than English and French (e.g., Quebec Office of the French Language, 2022).

In Canada, the only systematic governmentally mandated collection of data we have about its racialized peoples are for Indigenous Canadians. With regard to mental health provision, there is a shameful ongoing lack of educational opportunities to become clinicians (e.g., we counted only 3 Indigenous people as psychology faculty out of 800 in Ontario), and so special direct action may be warranted (Mikail & Nicholson, 2019). It is unrealistic to assume that non-Indigenous clinical psychologists will move out of cities to service these communities. Many programs have never graduated an Indigenous clinical psychologist, ever. In fact, discriminatory institutional policies, which are a vestige

of the Indian Act, are still forcing indigenous Canadians to leave the support of their communities if they want to be trained as professional psychologists (Beattie, 2019; Canadian Psychology Association, 2018). It cannot be a surprise that this data indicates that Indigenous citizens are having notable problems accessing mental health care. In the absence of government data, there is also ample evidence that other racialized peoples are likewise suffering.

Curriculum planners for graduate programs should consider providing improved training for the treatment of specific disorders which have been demonstrated to be particularly difficult to find specialists, notably ADHD, OCD, substance use disorders, and GAD. Clinicians in training should also be informed about deficits in this area to help even out supply and demand for subspecialties in mental health care provision.

Further, Canada should embrace breakthrough therapies such as psychedelics, which are novel approaches to treating mental health disorders (Rochester et al., 2022). Psychedelics show promise for the treatment of PTSD, depression and anxiety, and many other indications (Luoma et al., 2020). University programs such as the forthcoming Master of Arts in Psychedelics at the University of Ottawa are providing educational opportunities for these new approaches (Lalonde, 2022).

Finally, requiring continuing education in culturally-informed approaches is essential. Many White psychologists who are practicing today were trained in eras in which cultural competency was not required to graduate as a psychotherapist. This lack of skill contributes to the inability of racialized Canadians to find competent mental health services. Anti-racist proficiency should be required for license renewal.

Limitations & Future Directions

No territories were included in this study, where marked difficulties in accessing mental health care might be particularly important. Future surveys should ensure the full inclusion of Indigenous persons on reserves, rural populations, and institutionalised persons, as the mental health needs of these groups are critical as well.

Conclusion

This study is one of the first to provide quantitative data on the types of conditions where Canadians are experiencing barriers in their attempts to access mental health care, while including race and ethnicity as variables that may influence access. Our findings indicate that access to care for all mental health care conditions is unacceptably difficult, and even more so for Indigenous people. Barriers to access difficulties for people of color is of particular concern. Because there has previously been no data on which ethnic groups are being underserved and why, there has been no policy remedy. This is an

injustice which disproportionately affects Canada's racialized population – approximately 30% of the populace – and cannot be tolerated in an egalitarian society within one of the world's wealthiest nations.

Canada's racialized communities need to be better served in regard to provision of mental health services. There are differences in the prevalence and treatment of mental health disorders in Canada based on race. Race-based differences in mental disorder prevalence means that solutions should measure the extent and empathetically also consider the specific needs of Canada's ethnic communities.

References

- Alzheimer's Society of Canada. (2018). *Understanding Dementia. 2017-2018 Impact Report*. Alzheimer's Society of Canada.
https://archive.alzheimer.ca/sites/default/files/files/national/impact/asc_2017-2018_impact-report.pdf
- Bacsu, J. R., O'Connell, M. E., Webster, C., Poole, L., Wighton, M. B., & Sivananthan, S. (2021). A scoping review of COVID-19 experiences of people living with dementia. *Canadian Journal of Public Health, 112*(3), 400–411. <https://doi.org/10.17269/s41997-021-00500-z>
- Belzak, L., & Halverson, J. (2018). Evidence synthesis - The opioid crisis in Canada: A national perspective. *Health Promotion and Chronic Disease Prevention in Canada, 38*(6), 224–233.
<https://doi.org/10.24095/hpcdp.38.6.02>
- Beattie, S. (2019, March). Student Loses Indian Status, Tuition Halfway Through Degree. *HuffPost*.
https://www.huffpost.com/archive/ca/entry/student-loses-indian-status-tuition_a_23687017
- Bosson, R., Williams, M. T., Lippman, S., Carrico, R., Kanter, J., Peña, A., Mier-Chairez, J., & Ramirez, J. (2017). Addressing refugee mental health needs: From concept to implementation. *The Behavior Therapist, 40*(3), 110-112.
- Beaulieu, L., & Schmelefske, E. (2017). What are the opportunities and challenges for Canadian psychology? *Canadian Psychology/Psychologie Canadienne, 58*(1), 75-80.
<http://dx.doi.org/10.1037/cap0000072>
- Blair, A. & Siddiqi, A. (2022). Social determinants of ethno-racial inequalities in substance use: A decomposition of national survey data. *Social Psychiatry and Psychiatric Epidemiology*. Advance online publication. <https://doi.org/10.1007/s00127-022-02281-3>
- Bosson, R., Williams, M. T., Lippman, S., Carrico, R., Kanter, J., Peña, A., Mier-Chairez, J., & Ramirez, J. (2017). Addressing refugee mental health needs: From concept to implementation. *The Behavior Therapist, 40*(3), 110-112.
- Canadian Community Health Survey (CCHS). (2020). Statistics Canada, Government of Canada.
<https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00003-eng.htm>
- Canadian Psychological Association. (2018, May). *Psychology's response to the Truth and Reconciliation Commission of Canada's report*. Canadian Psychological Association and the Psychology Foundation of Canada.
https://cpa.ca/docs/File/Task_Forces/TRC%20Task%20Force%20Report_FINAL.pdf
- Canadian Substance Use Costs and Harms Scientific Working Group. (2020). *Canadian substance use*

- costs and harms 2015–2017*. Canadian Centre on Substance Use and Addiction.
<https://csuch.ca/publications/CSUCH-Canadian-Substance-Use-Costs-Harms-Report-2020-en.pdf>
- Cénat, J. M., Kogan, C., Noorishad, P. G., Hajizadeh, S., Dalexis, R. D., Ndengeyingoma, A., & Guerrier, M. (2021). Prevalence and correlates of depression among Black individuals in Canada: The major role of everyday racial discrimination. *Depression and Anxiety, 38*(9), 886–895.
<https://doi.org/10.1002/da.23158>
- Chang, F., Patel, T., & Schulz, M. E. (2015). The “Rising Tide” of dementia in Canada: What does it mean for pharmacists and the people they care for? *Canadian Pharmacists Journal, 148*(4), 193–199.
<https://doi.org/10.1177/1715163515588107>
- Chiu, M., Amartey, A., Wang, X., & Kurdyak, P. (2018). Ethnic differences in mental health status and service utilization: A population-based study in Ontario, Canada. *Canadian Journal of Psychiatry, 63*(7), 481–491. <https://doi.org/10.1177/0706743717741061>
- Clare, E. Y., Briones, E., Page, K., & Angers-Trottier, P. (2019). *White supremacy culture in organizations*. The Centre for Community Organizations. Montreal, Quebec. <https://coco-net.org/wp-content/uploads/2019/11/Coco-WhiteSupCulture-ENG4.pdf>
- De Los Reyes, A., & Uddin, L. Q. (2021). Revising evaluation metrics for graduate admissions and faculty advancement to dismantle privilege. *Nature Neuroscience, 24*(6), 755–758.
<https://doi.org/10.1038/s41593-021-00836-2>
- Dobson, K. G., Vigod, S., Mustard, C., & Smith, P. M. (2020, December 16). *Trends in the prevalence of depression and anxiety disorders among working-age Canadian adults between 2000 and 2016*. Government of Canada, Statistics Canada. <https://www150.statcan.gc.ca/n1/pub/82-003-x/2020012/article/00002-eng.htm>
- Dupree, C. H. & Kraus, M. W. (2022). Psychological science is not race neutral. *Perspectives on Psychological Science, 17*(1), 270–275. <https://doi.org/10.1177/1745691620979820>
- Ferrari, Santomauro, D., Herrera, A., Shadid, J., Ashbaugh, C., Erskine, H., Charlson, F., Degenhardt, L., Scott, J., McGrath, J., Allebeck, P., Benjet, C., Breitborde, N., Brugha, T., Dai, X., Dandona, L., Dandona, R., Fischer, F., Haagsma, J., ... Whiteford, H. (2022). Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet Psychiatry, 9*(2), 137–150.
[https://doi.org/10.1016/S2215-0366\(21\)00395-3](https://doi.org/10.1016/S2215-0366(21)00395-3)
- Government of Canada (2017) Dementia in Canada, Including Alzheimer’s Disease: Highlights from the Canadian Chronic Disease Surveillance System. *Government of Canada*.

- <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/dementia-highlights-canadian-chronic-disease-surveillance.html>
- Galmiche, M., Déchelotte, P., Lambert, G., & Tavolacci, M. P. (2019). Prevalence of eating disorders over the 2000-2018 period: a systematic literature review. *The American Journal of Clinical Nutrition*, *109*(5), 1402–1413. <https://doi.org/10.1093/ajcn/nqy342>
- Ianni, L., Mazer, B., Thomas, A., & Snider, L. (2021). The role of occupational therapy with children with attention deficit hyperactivity disorder (ADHD): A Canadian national survey. *Journal of Occupational Therapy, Schools, & Early Intervention*, *14*(2), 162-183. <https://doi.org/10.1080/19411243.2020.1822259>
- Jahn, Z. W., Lopez, J., de la Salle, S., Faber, S., & Williams, M. T. (2021). Racial/Ethnic differences in prevalence for hallucinogen use by age cohort: Findings from the 2018 national survey on drug use and health. *Journal of Psychedelic Studies*, *5*(2), 69-82. <https://doi.org/10.1556/2054.2021.00166>
- Jones, N., Kamens, S., Oluwoye, O., Mascayano, F., Perry, C., Manseau, M., & Compton, M. T. (2021). Structural disadvantage and culture, race, and ethnicity in early psychosis services: International provider survey. *Psychiatric Services*, *72*(3), 254–263. <https://doi.org/10.1176/appi.ps.202000211>
- Katzman, M. A., Bilkey, T. S., Chokka, P. R., Fallu, A., & Klassen, L. J. (2017). Adult ADHD and comorbid disorders: clinical implications of a dimensional approach. *BMC Psychiatry*, *17*(1), 302–302. <https://doi.org/10.1186/s12888-017-1463-3>
- Killen, A., Olsen, K., McKeith, I. G., Thomas, A. J., O'Brien, J. T., Donaghy, P., & Taylor, J. (2020). The challenges of COVID-19 for people with dementia with Lewy bodies and family caregivers. *International Journal of Geriatric Psychiatry*, *35*(12), 1431–1436. <https://doi.org/10.1002/gps.5393>
- Kohout, J. & Wicherski, M. (2010). *Data Brief: Psychology PhD and PsyD Degrees in Health Service Provider (HSP) Fields: 1987-2008*. APA Center for Workforce Studies. <https://www.apa.org/workforce/publications/08-hsp/psychology-degrees>
- Kumar, M. B., & Tjepkema, M. (2019). *Suicide among First Nations people, Métis and Inuit (2011-2016)*. Statistics Canada Catalogue no. 99-011-X2019001.
- Lalonde, C. (2022, February 25). Étudier les champignons magiques et l'ayahuasca sur les bancs universitaires. Le Devoir.
- Lecomte, T., Addington, J., Bowie, C., Lepage, M., Potvin, S., Shah, J., Summerville, C., & Tibbo, P. (2022).

- The Canadian Network for Research in Schizophrenia and Psychoses: A Nationally Focused Approach to Psychosis and Schizophrenia Research. *Canadian Journal of Psychiatry*, 67(3), 172–175. <https://doi.org/10.1177/07067437211009122>
- Liddy, C., Moroz, I., Affleck, E., Boulay, E., Cook, S., Crowe, L., Drimer, N., Ireland, L., Jarrett, P., MacDonald, S., McLellan, D., Mihan, A., Miraftab, N., Nabelsi, V., Russell, C., Singer, A., & Keely, E. (2020). How long are Canadians waiting to access specialty care? Retrospective study from a primary care perspective. *Canadian Family Physician*, 66(6), 434–444.
- Lin, S. L. (2022). Generalized anxiety disorder during COVID-19 in Canada: Gender-specific association of COVID-19 misinformation exposure, precarious employment, and health behavior change. *Journal of Affective Disorders*, 302, 280–292. <https://doi.org/10.1016/j.jad.2022.01.100>
- Lin, L., Conroy, J., & Christidis, P. (2020, January 1). Datapoint: Which states have the most licensed psychologists? *Monitor on Psychology*, 51(1), 19. <https://www.apa.org/monitor/2020/01/datapoint-states>
- Louie, P. & Wheaton, P. (2018) Prevalence and patterning of mental disorders through adolescence in 3 cohorts of Black and White Americans. *American Journal of Epidemiology*, 187(11) 2332–2338.
- Luoma, J. B., Chwyl, C., Bathje, G. J., Davis, A. K., & Lancelotta, R. (2020). A meta-analysis of placebo-controlled trials of psychedelic-assisted therapy. *Journal of Psychoactive Drugs*, 52 (4), 289-299. <https://doi.org/10.1080/02791072.2020.1769878>
- Mental Health Commission of Canada (MHCC). (2019). *Immigrant, refugee, ethnocultural, and racialized populations and the social determinants of health: A review of 2016 census data*. https://www.mentalhealthcommission.ca/wp-content/uploads/drupal/2019-03/irer_report_mar_2019_eng.pdf
- Mental Health Commission of Canada (MHCC). (2021). *COVID-19 and people living with serious mental illness*. [Policy brief]. <https://mentalhealthcommission.ca/wp-content/uploads/2021/09/COVID-19-and-People-Living-with-Serious-Mental-Illness-EN.pdf>
- Mikhail, S. F., & Nicholson, I. R. (2019). The national summit on the future of professional psychology training: Overview and recommendations. *Canadian Psychology*, 60(4), 228–241. <https://doi.org/10.1037/cap0000192>
- Moroz, N., Moroz, I., & D'Angelo, M. S. (2020). Mental health services in Canada: Barriers and cost-effective solutions to increase access. *Healthcare Management Forum*, 33(6), 282–287. <https://doi.org/10.1177/0840470420933911>
- Myhr, G., & Payne, K. (2006). Cost-effectiveness of cognitive-behavioural therapy for mental disorders:

- Implications for public health care funding policy in Canada. *The Canadian Journal of Psychiatry*, 51(10), 662–670. <https://doi.org/10.1177/070674370605101006>
- Nwoke, C. N., Okpalauwaekwe, U., & Bwala, H. (2020). Mental health professional consultations and the prevalence of mood and anxiety disorders among immigrants: Multilevel analysis of the Canadian community health survey. *JMIR Mental Health*, 7(9), e19168. <https://doi.org/10.2196/19168>
- Osland, S., Arnold, P. D., & Pringsheim, T. (2018). The prevalence of diagnosed obsessive compulsive disorder and associated comorbidities: A population-based Canadian study. *Psychiatry Research*, 268, 137–142. <https://doi.org/10.1016/j.psychres.2018.07.018>
- Palay, J., Taillieu, T. L., Afifi, T. O., Turner, S., Bolton, J. M., Enns, M. W., Smith, M., Lesage, A., Bakal, J. A., Rush, B., Adair, C. E., Vigod, S. N., Clelland, S., Rittenbach, K., Kurdyak, P., & Sareen, J. (2019). Prevalence of Mental Disorders and Suicidality in Canadian Provinces. *Canadian Journal of Psychiatry*, 64(11), 761–769. <https://doi.org/10.1177/0706743719878987>
- Pedram, P., Patten, S. B., Bulloch, A. G., Williams, J. V., & Dimitropoulos, G. (2021). Self-reported lifetime history of eating disorders and mortality in the general population: a Canadian population survey with record linkage. *Nutrients*, 13(10), 3333.
- Public Health Agency of Canada, Neurological Health Charities Canada. (2014). *Mapping connections: An understanding of neurological conditions in Canada*. Ottawa (ON): Public Health Agency of Canada. Report no.: HP35-45/2014E-PDF. <http://publications.gc.ca/site/eng/9.699466/publication.html>
- Quebec Office of the French Language. (2022, February 23). *Ordres professionnels. Vivre en français – Membres des ordres professionnels – Table des matières*. Gouvernement du Québec. https://www.oqlf.gouv.qc.ca/francisation/ordres_prof/ordres.html
- Rochester, J., Vallely, A., Grof, P., Williams, M., Chang, H., & Caldwell, K. (2022). Entheogens and psychedelics in Canada: Proposal for a new paradigm. *Canadian Psychology*, 63(3), 413–430. <https://doi.org/10.1037/cap0000285>
- Smetanin, P., Stiff, D., Briante, C., Adair, C.E., Ahmad, S., & Khan, M. (2011). *The life and economic impact of major mental illnesses in Canada: 2011 to 2041*. RiskAnalytica and the Mental Health Commission of Canada. https://www.mentalhealthcommission.ca/wp-content/uploads/drupal/MHCC_Report_Base_Case_FINAL_ENG_0_0.pdf
- Swansburg, R., Hai, T., MacMaster, F. P., & Lemay, J.-F. (2021). Impact of COVID-19 on lifestyle habits and mental health symptoms in children with attention-deficit/hyperactivity disorder in Canada.

- Paediatrics & Child Health*, 26(5), e199–e207. <https://doi.org/10.1093/pch/pxab030>
- Statistics Canada. (2013). Canadian community health survey: mental health, 2012. *The Daily*. Government of Canada. <https://www150.statcan.gc.ca/n1/daily-quotidien/130918/dq130918a-eng.htm>
- Statistics Canada. (2014). Survey on Living with Neurological Conditions in Canada. Government of Canada. <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5182>
- Statistics Canada. (2015, November) Section C - Childhood Conditions. Government of Canada. <https://www150.statcan.gc.ca/n1/pub/82-619-m/2012004/sections/sectionc-eng.htm>
- Statistics Canada. (2015, November). Section D - Eating disorders. Government of Canada. <https://www150.statcan.gc.ca/n1/pub/82-619-m/2012004/sections/sectiond-eng.htm>
- Statistics Canada. (2019, October 7). *Mental health care needs, 2018*. Government of Canada. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00011-eng.htm>
- Statistics Canada. (2019) *Mental health care needs, 2018*. Government of Canada. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00011-eng.htm>
- Statistics Canada. (2021) One in five Canadians with Mental health-related disabilities lives in core housing need. *The Daily*. Government of Canada. <https://www150.statcan.gc.ca/n1/daily-quotidien/210128/dq210128d-eng.htm>
- Statistics Canada. (2021, March 18). *Survey on COVID-19 and Mental Health (SCMH)*. Statistics Canada, Government of Canada. <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=1283036>.
- Statistics Canada. (2022, January 24). *Deaths and age-specific mortality rates, by selected grouped causes*. Government of Canada. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310039201>
- Statistics Canada. (2022). Survey on Mental Health and Stressful Events, August to December 2021. *The Daily*. Component of Statistics Canada catalogue no. 11-001-X. <https://www150.statcan.gc.ca/n1/daily-quotidien/220520/dq220520b-eng.htm>
- Tasca, G., Town, J. M., Abbass, A., & Clarke, J. (2018). Will publicly funded psychotherapy in Canada be evidence based? A review of what makes psychotherapy work and a proposal. *Canadian Psychology*, 59(4), 293–300. <https://doi.org/10.1037/cap0000151>
- Taube-Schiff, Rector, N. A., Young, R., Larkin, P., & Richter, M. A. (2020). Filling the Gap for Obsessive-Compulsive Disorder Services in Canada: Implementing an Intensive Care Program. *The Journal of Nervous and Mental Disease*, 208(1), 38–47.

<https://doi.org/10.1097/NMD.0000000000001075>

- Thomson, M. S., Chaze, F., George, U., & Guruge, S. (2015). Improving immigrant populations' access to mental health services in Canada: A review of barriers and recommendations. *Journal of Immigrant and Minority Health, 17*(6), 1895–1905. <https://doi.org/10.1007/s10903-015-0175-3>
- Vasiliadis, H.M., Diallo, F. B., Rochette, L., Smith, M., Langille, D., Lin, E., Kisely, S., Fombonne, E., Thompson, A. H., Renaud, J., & Lesage, A. (2017). Temporal trends in the prevalence and incidence of diagnosed ADHD in children and young adults between 1999 and 2012 in Canada: A data linkage study. *Canadian Journal of Psychiatry, 62*(12), 818–826. <https://doi.org/10.1177/0706743717714468>
- Vidal-Estrada, R., Bosch-Munso, R., Nogueira-Morais, M., Casas-Brugue, M., & Ramos-Quiroga, J. A. (2012). Psychological treatment of attention deficit hyperactivity disorder in adults: A systematic review. *Actas Espanolas de Psiquiatria, 40*(3), 147–154.
- Watterson, R. A., Williams, J. V. A., Lavorato, D. H., & Patten, S. B. (2017). Descriptive Epidemiology of Generalized Anxiety Disorder in Canada. *Canadian Journal of Psychiatry, 62*(1), 24–29. <https://doi.org/10.1177/0706743716645304>
- Williams, M. T. (2019). Adverse racial climates in academia: Conceptualization, interventions, and call to action. *New Ideas in Psychology, 55*, 58-67. <https://doi.org/10.1016/j.newideapsych.2019.05.002>
- Williams, M. T. (2022, June 20). *Who gets to be a psychologist? And why can't I find one?* Presented to the Black Psychology Section. Canadian Psychological Association.
- Williams, M. T., Khanna Roy, A., MacIntyre, M., & Faber, S. (2022). The traumatizing impact of racism in Canadians of colour. *Current Trauma Reports, 8*(2), 17–34. <https://doi.org/10.1007/s40719-022-00225-5>
- Yang, F., Dorrance, K. & Aitken, N. (2020) The changes in health and well-being of Canadians with long-term conditions or disabilities since the start of the COVID-19 pandemic. Statistics Canada. <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00082-eng.htm>
- Zhang, Z., Sun, K., Jatchavala, C., Koh, J., Chia, Y., Bose, J., Li, Z., Tan, W., Wang, S., Chu, W., Wang, J., Tran, B., & Ho, R. (2019). Overview of stigma against psychiatric illnesses and advancements of anti-stigma activities in six Asian societies. *International Journal of Environmental Research and Public Health, 17*(1), 280. <https://doi.org/10.3390/ijerph17010280>
- Zipfel, S., Schmidt, U., & Giel, K. E. (2022). The hidden burden of eating disorders during the COVID-19 pandemic. *The Lancet Psychiatry, 9*(1), 9–11. [https://doi.org/10.1016/S2215-0366\(21\)00435-1](https://doi.org/10.1016/S2215-0366(21)00435-1)