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David J. A. Dozois
Western University, ddozois@uwo.ca

Mental Health Research Canada

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Running Head: ANXIETY AND DEPRESSION DURING COVID-19

Anxiety and Depression in Canada During the COVID-19 Pandemic:

A National Survey

David J. A. Dozois

The University of Western Ontario

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Mental Health Research Canada

Address for Correspondence:

David J. A. Dozois, Ph.D., C.Psych.
Professor and Director
Clinical Psychology Graduate Program
Department of Psychology
University of Western Ontario
Westminster Hall, Rm. 313E
London, Ontario, Canada
N6A 3K7

e. ddozois@uwo.ca
p. 519.661.2111 (84678)

Abstract

Depression and anxiety are the most prevalent mental health problems in Canada. The COVID-19 pandemic will likely result in a large increase in the incidence and prevalence of anxiety and depression and experts are already warning of an “echo pandemic” of mental health problems. The objective of this research was to explore how Canadians are managing with the COVID-19 outbreak and determine the impact of the pandemic on levels of anxiety and depression. A nationally representative sample of 1,803 participants completed an online survey that was offered in both official languages. The percentage of respondents who indicated that their anxiety was high to extremely high quadrupled (from 5% to 20%) and the number of participants with high self-reported depression more than doubled (from 4% to 10%) since the onset of COVID-19. Although current anxiety levels are expected to remain the same, respondents predicted that depression will worsen if physical distancing and self-isolation continue for another 2 months. One-third of Canadians with anxiety and depression also report an increase in alcohol and cannabis use during the pandemic. Canadians with depression and anxiety also indicate that the quantity and quality of mental health support systems has decreased. Finally, a sizable proportion of Canadians believe that the federal and provincial governments should do more to support the mental health of Canadians. Recommendations for psychologists responding to mental health needs during and following the pandemic are provided.

Keywords: COVID-19; Depression; Anxiety; Substance Use; Mental Health Access

Public Significance:

Canadians are experiencing considerable anxiety and depression during the COVID-19 pandemic. A number of variables are identified that appear to contribute to the mental health and well-being of Canadians. Recommendations for psychologists responding to mental health needs during the pandemic are provided.

Anxiety and Depression in Canada During the COVID-19 Pandemic: A National Survey

Mood and anxiety disorders are the most prevalent mental health problems in Canada (McRae, O'Donnell, Loukine, Rancourt, & Pelletier, 2016) and throughout the world (Friedrich, 2017; Liua et al., 2019). In 2013, an estimated 3 million Canadian adults experienced a mood and/or anxiety disorder (Statistics Canada, 2013). In addition to the enormous impact on the individual with lived experience, family members and loved ones, is the immense cost of these disorders to society as a whole. According to the Conference Board of Canada, the annual economic costs of depression and anxiety in Canada are \$32 billion and \$17 billion, respectively (Benjamin & Boyer, 2019).

Studies investigating the longitudinal course of untreated anxiety disorders in adulthood uniformly reveal a trajectory marked by chronicity and relapse over many years (Moreno & Delgado, 2000). Depression is also characterized by multiple recurrences and relapse. Between 50% and 85% of depressed patients experience multiple subsequent episodes (Coyne, Pepper, & Flynn, 1999). The risk of future episodes also increases with each episode (Boland & Keller, 2009). Solomon et al. (2000), for example, followed individuals with clinical depression over a 10-year time frame and reported that 64% of the sample suffered from at least one recurrence. The number of lifetime episodes was significantly associated with the probability of recurrence, with a 16% increase in risk with each additional episode.

The 2019 novel coronavirus (COVID-19) pandemic will likely result in a large increase in the incidence and prevalence of mental health problems such as anxiety and depression. For instance, mental health advocates and experts are already warning of an “echo pandemic” of mental health problems (cf. Favaro, St. Philip, & MacLeod, 2020). The COVID-19 outbreak is taking an unprecedented toll on people not only physically, but also psychologically. Anxiety is

arguably at an all-time high as a result of the coronavirus. People are worried about the increasing numbers of confirmed diagnoses and deaths in Canada (and the rest of the world). According to Statistics Canada (2020), many Canadians are anxious about overloading the healthcare system, the health of family members, their own health, or stress and mental health from being socially isolated. There are also pressures related to personal finances (e.g., job loss, rent, bills, the economic downturn).

As physical distancing measures continue, people will feel increasingly isolated. As a result, the experience of anxiety will eventually turn into episodes of depression for a large number of people, unless effective supports are established, and coping strategies implemented. Hawryluk et al. (2004), for instance, examined the psychological effects of being quarantined in Toronto, Ontario, during the Severe Acute Respiratory Syndrome (SARS) outbreak. These researchers found a high rate of psychological distress among their sample. Another study found that self-isolation predicted high levels of depression up to three years after the SARS outbreak (Liu et al., 2012).

The objective of this research was to assess how Canadians are managing with the COVID-19 outbreak and to determine the impact of the pandemic on levels of anxiety and depression. This research was initiated by Mental Health Research Canada (MHRC), a national charity organization that funds research in mental health. MHRC is dedicated to improving the lives of Canadians living with mental illness, as well as their families, friends, caregivers and communities by advancing evidence-based mental health research that solves problems, is cost-effective and usable in the real world. One of the mandates of MHRC is to place people with lived experience at the heart of the research process.

MHRC's recent response to COVID-19 involved hiring Pollara Strategic Insights, a professional polling company with many decades of experience, to conduct a survey of Canadians from across the country in both official languages to get a sense of some of their mental health needs during this pandemic. Given that all Canadians are struggling in varying degrees with the pandemic (i.e., in this sense, we are all people with lived experience), we wanted to hear from Canadians about the impact of COVID-19 on their mental health; provide useful data for stakeholders; and support policy decisions that improve mental health in Canada (e.g., reliable data should underpin good policy and inform service delivery priorities).

This article describes the results of MHRC's national survey of Canadians. Specifically, we discuss the impact that the COVID-19 outbreak has had on Canadians' levels of anxiety and depression as well as their alcohol and cannabis consumption. The findings on what factors Canadians believe are impacting their mental health in positive and negative ways are also highlighted. The extent to which Canadians are accessing mental health supports during this time and Canadian's perception of federal and provincial government responses to mental health during COVID-19 are also described. Recommendations for Canadian psychologists are provided.

Method

Participants

The sample was comprised of 1,803 Canadian adults (ages 18+) who were randomly selected from across the country (a comprehensive report that includes data in different provinces is available at mhrc.ca). The sample was comprised of 927 females, 867 males, and 7 individuals who self-identified with another gender category. The average age of participants was 47.94 ($SD = 17.20$). Employment status was broken down as follows: full-time or self-

employed (44.4%), part-time or seasonal (9.2%), unemployed not due to COVID-19 or household manager (6%), unemployed secondary to COVID-19 (7.7%), retired (26.5%), student (5.9%).

Procedure

On behalf of the MHRC, Pollara Strategic Insights was hired to conduct an online survey among a randomly selected, reliable sample adult Canadians. Demographic and regional quotas were utilized to ensure that the data were weighted according to the most recent gender, age, and regional Census data to reflect the actual population of adult Canadians. A probability sample of this size carries a margin of error of $\pm 2.3\%$, 19 times out of 20.

After responding to a number of demographic questions, participants were asked a series of questions about their levels of anxiety and depression prior to the COVID-19 outbreak, their current levels of anxiety and depression, and what they predict these levels will be should self-isolation continue for another two months. Each of these questions were rated on a 0 (“None”) to 10 (“Extremely High”) Likert-scale.

Participants were also asked whether they have ever received a professional diagnosis of an anxiety disorder, depression, or another mood disorder. On a number of items (e.g., “The possibility of you catching COVID-19”; “The possibility of a family member catching COVID-19”; “The economic downturn;” “Social isolation;” “Communicating with friends or family members outside of the household”), participants were also asked to rate, on a 0-10 scale, the impact that the Coronavirus (COVID-19) outbreak is having on their current mental health, if any (0 = “Very Positive Impact”; 5 = “Neutral/No Impact”; 10 = “Very Negative Impact”). Respondents were also asked whether their own alcohol and cannabis use has increased, decreased, or remained the same during the pandemic.

Finally, the sample was split randomly, and half were asked (on a 0-5 scale; 0 = “Do much more”; 5 = Do much less”) whether they feel that the federal government should do more or less to support the mental health of Canadians during the COVID-19 outbreak. The other half were asked the same question about their provincial government.

Results

Canadians’ Anxiety and Depression During the COVID-19 Outbreak

Eighteen and 17% of Canadians indicated they have been previously diagnosed with an anxiety disorder or depression, respectively, whereas 6% reported being diagnosed with another type of mood disorder. Among this sub-sample, the percentage of individuals who reported high levels of anxiety or depression prior to COVID-19 more than doubled since the outbreak (16% to 38% and 12% to 28%, respectively).

In the full sample, the percentage of respondents who indicated that their anxiety was high to extremely high quadrupled (from 5% to 20%) from what they self-reported they were experiencing prior to the pandemic and what they reported experiencing currently. The percentage of individuals with high to extremely high levels of self-reported depression more than doubled (from 4% to 10%). Conversely, fewer than half of the respondents who reported low levels of anxiety before the outbreak (72%) were experiencing low anxiety currently (39%). The proportion of Canadians who described low levels of depression was also reported to decrease from 79% to 65% (see Table 1).

The number of respondents who predicted that they will experience a high level of depression if social distancing and self-isolation were to continue for another 2 months increased to 16%. The percentage of respondents who predicted high levels of anxiety (in 2 months) tended to remain the same as what they reported their current levels to be (from 20% to 22%).

Canadians' Alcohol and Cannabis Use During the COVID-19 Outbreak

Among individuals who reported using substances, 28% indicated that their consumption of alcohol has increased during the COVID-19 outbreak. A similar increase (29%) was reported for cannabis use. Interestingly, given social distancing restrictions, 56% of respondents indicated that their alcohol consumption has remained the same during the pandemic (48% for cannabis use).

One-third of respondents who reported having received a diagnosis of an anxiety disorder or depression stated that their consumption of alcohol has increased (34% and 33%, respectively). Approximately two-fifths of these individuals stated the same about cannabis use (47% and 41%).

Variables Reported to Impact Mental Health During the Pandemic

The survey also inquired about how the pandemic is affecting people in three main spheres: the personal/social circle, their daily activities, and the economy. With respect to the first category, the greatest impact of COVID-19 on mental health was fear of a loved one catching the virus, social isolation, the possibility that the respondent could acquire the virus, and difficulties and challenges with obtaining the basic necessities (e.g., groceries, prescriptions). Communicating with friends and family within and outside of the household had largely positive effects on mental health. These results are presented in Table 2.

Among those unemployed ($n = 255$), recent job loss had the greatest negative impact on respondents. The possibility of losing their jobs (or experiencing lower pay or fewer hours), or the prospect of a family member becoming unemployed, and the economic downturn were also factors negatively affecting self-reported mental health in the full sample (see Table 3).

In terms of everyday activities, daily news about the coronavirus had the largest negative

impact on mental health, whereas reading books, having pets, and entertainment (e.g., movies, podcasts, television) seemed to positively impact self-reported mental health (see Table 4).

Canadians Access to Mental Health Supports

Twenty-two percent of the sample reported accessing mental health support systems before the outbreak, and a similar proportion stated that they currently have mental health support (20%). Among individuals who are self-isolating and accessed mental health supports before the outbreak, 33% indicated that they have less frequent access to mental health support since the outbreak and 27% reported that the quality of mental health support has declined.

Of those individuals with an anxiety disorder or depression 57% had accessed mental health supports before the outbreak. Two-fifths of these individuals report that they have less access to mental health supports than before the outbreak (43% anxiety, 45% depression) and feel the quality of the supports has declined (36% anxiety, 38% depression).

Perception of Federal and Provincial Government Responses to Mental Health During COVID-19

As noted earlier in this article, the sample was split for the purposes of asking questions about the federal and provincial responses to mental health during the COVID-19 pandemic. Half of the sample was asked about the federal government's response and the other half was asked about their provincial government's response.

A large number of Canadians believe that the federal government (55%) as well as the provincial government (47%) should be doing more to support the mental health of Canadians. Of those individuals diagnosed with an anxiety disorder, 66% thought that the federal government should be doing more. A similar finding was obtained for individuals who reported being diagnosed with depression (69%). Seventy-one percent of individuals with an anxiety

disorder and 69% of individuals with depression indicated that the provincial government should be doing more to support mental health in Canadians.

Discussion

This study explored how Canadians are managing with the COVID-19 outbreak and investigated the impact of the pandemic on self-reported mental health. A number of respondents in this controlled pan-Canadian poll indicated that they have previously been diagnosed with depression or anxiety at some point in their lives (18% and 17%, respectively). Although these rates refer to self-reported rather than confirmed cases, they are generally consistent with the lifetime prevalence rates for these disorders (e.g., Alonso et al., 2007; Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012; McRae et al., 2016). Within this sub-sample, the percentage of individuals who indicated that their levels of anxiety and depression were high before the pandemic more than doubled since COVID-19.

Moreover, the percentage of individuals who rated their levels of anxiety and depression high to extremely high, rose dramatically from what they perceived these levels to be prior to the COVID-19 outbreak to what they reported experiencing currently. Specifically, the proportion of individuals who rated their anxiety as high quadrupled and the percentage of individuals who rated their depression as high more than doubled. Consistent with warnings from mental health experts about an “echo pandemic,” these findings suggest that mental health needs of Canadians with anxiety, depression, or other mood disorders is likely to be high.

Interestingly, although high levels of anxiety are expected to continue, respondents predicted that depression will continue to worsen should physical distancing and self-isolation continue for much longer. There are at least three reasons why we might expect depression levels to increase the longer physical distancing measures are in place. First, anxiety is a common

precursor to depression (e.g., Batterham, Christensen, & Callear, 2013; Rice, van den Bree, & Thapar, 2004). Cognitively, anxiety involves future-oriented thinking with thoughts of impending doom, harm to self or others, and fear of negative things happening. Although highly comorbid with anxiety, depression involves negative thinking about the past, world, and future (Beck & Dozois, 2011). COVID-19 introduced a tremendous amount of uncertainty in Canada and around the globe which no doubt contributed to the inflation of anxiety (cf. Robichaud, Koerner, & Dugas, 2018). It is conceivable that over time, as the population becomes used to social distancing, ensuring good hand hygiene, and sanitizing various objects, anxiety will begin to level off. However, the mounting job losses and the general economic downturn, coupled with continued self-isolation, may increase negative thinking and begin to confer an increased risk for depression.

Second, in addition to negative thinking, depression is often associated with behavioural withdrawal and avoidance (Martell, Dimidjian, Herman-Dunn, 2013). The downward spiral that individuals with depression often succumb to is intricately related to the lack of pleasure and mastery they experience in their lives (e.g., the less you do, the less you feel like doing). During the COVID-19 pandemic, it is more difficult for individuals to get out and engage in the activities that they usually do that provides pleasure (e.g., movie theatres, shows, restaurants) or mastery (e.g., gyms, going to the place of employment). In addition, it is difficult for many people to figure out a work-life balance during this time (e.g., many individuals have been catapulted into simultaneously duties associated with being a parent, a teacher, and an employee).

Third, the pandemic has resulted in considerable loneliness and isolation. We know from the research literature that being connected with others is important for our psychological health and

that social isolation can be harmful both physically and psychologically. Holt-Lunstad, Smith and Layton (2010), for example, found that social connection is a greater determinant to health than is smoking, high blood pressure and obesity. Conversely, experiencing strong social connections improves longevity. In a meta-analysis, Holt-Lunstad, Smith, Baker, Harris, and Stephenson (2015) found that subjective loneliness, social isolation, and living alone corresponded to an average of 26%, 29%, and 32% increased likelihood of mortality, respectively. Social connectedness is also essential for our mental health and well-being and for the prevention of depression (e.g., Diener et al., 2017; Perlman, in press).

During this pandemic, physical distancing has been mandated by federal and provincial governments. The effect of distancing on mental health is significant. In our poll, 41% of the sample indicated that social isolation is having a negative impact on mental health.

The findings also demonstrate that a number of Canadians report increased substance use during the pandemic (e.g., 28% report an increase in alcohol). These rates were somewhat higher in individuals who reported previous diagnoses of anxiety and depression, especially for cannabis use. The majority of respondents, however, indicated that their consumption of alcohol and cannabis has remained the same during the pandemic. This is an intriguing finding, given that Canadians are not going out to social events, pubs, or restaurants at this time; instead, drinking patterns have remained stable while socially isolating.

As the results of this survey demonstrate, there are a number of variables that appear to be contributing to the mental health of Canadians, both positively and negatively. Some of the positive factors, include communicating with friends and family within and outside of the household, reading books, having pets, and entertainment. Factors that have negatively impacted self-reported mental health include COVID-related anxiety, social isolation, the economic impact

of the pandemic, and being inundated with news about the outbreak.

Canadians also reported more difficulties with accessing mental health support systems since the outbreak of COVID-19. In some respects, this is not surprising given the shutdown of businesses and the reduction of all but essential services across the country. On the other hand, reduced access of only 10% among those with previous diagnoses of anxiety and depression speaks volumes to the ways that Canadian psychologists and other mental health professionals have stepped up to the plate to transform their service delivery to digital platforms. In addition, a number of organizations, such as the Canadian Psychological Association (CPA) and Anxiety Canada, have produced excellent COVID-related resources for the public. As another example, the Canadian Association of Cognitive and Behavioural Therapies put on a series of webinars to help psychologists work with clients digitally during the pandemic. At CPA's initiative, a number of psychologists also offered pro bono services to frontline workers during the COVID-19 outbreak. Notwithstanding these important initiatives and adjustments, lack of access to care continues to be an important issue for the general public.

Related to the issue of the quantity and quality of access to care, roughly half of respondents believed that the federal and provincial governments should be doing more to support the mental health of Canadians. A higher proportion of individuals with anxiety and depression indicated that the government needs to bolster support. It is important to point out that the poll and was conducted between April 22nd and 28th, 2020, prior to Prime Minister Trudeau's announcement of investing over \$240 million to provide health care services virtually and expand existing online tools by creating new virtual platforms for mental health and primary care. The poll was also released shortly after the federal government announced the Wellness Together Canada campaign (which connects Canadians to psychologists and other mental health

professionals for confidential chat sessions or phone calls; see <https://ca.portal.gs>). As such, it is possible that the perceptions of Canadians have changed since the poll was released. We intend to conduct additional polls to explore the extent to which Canadians opinions have changed.

Recommendations for Psychologists

Canadian psychologists have had to dramatically modify the way they have provided assessment and psychotherapeutic services as a result of COVID-19. Except for services that needed to be conducted in person (e.g., inpatient assessments), most have been provided digitally. Regulatory bodies have done a good job of updating psychologists about the requirements (e.g., privacy issues) in their provincial and territorial jurisdictions. As mentioned earlier, a number of organizations have also risen to the occasion to facilitate this transition.

The findings from this poll provide a sense of how Canadians are coping amid COVID-19. They also provide important information on those individuals who report being previously diagnosed with mood and anxiety disorders. As such, a number of these findings are relevant to psychologists across the country.

Psychologists should expect to see a significant increase in the number of people seeking help for anxiety and depression. Based on these survey results, Canadians predict that high levels of anxiety will continue to be elevated and that depression will increase as the pandemic continues. Although initiatives such as Wellness Together Canada will increase access to mental health services for individuals with mild to moderate symptomatology, access to care remains a considerable problem in this country particularly for those individuals with more complex and severe mental disorders. The mental health system in Canada lacked the capacity to meet demand before this pandemic began, and access to care will become even most problematic unless federal and provincial governments act now to ensure we are prepared for a surge in

mental health problems secondary to COVID-19. Psychologists need to continue to advocate for better access to care.

Individual clinicians might also benefit from conducting a thorough review of how their clients are managing during the COVID-19 outbreak and beyond. In particular, it will be important for psychologists to clearly understand what their clients are doing behaviourally and to assess the extent to which clients are engaged in activities that are pleasurable and mastery-oriented. Respondents to this survey indicated that reading had a positive effect on their mental health whereas physical activity and exercise was fairly neutral for many, with similar numbers of people indicating that it had a positive impact on mental health as those who stated it had a negative impact. There may be a difference between what people report is effective and what is actually efficacious, and some psychoeducation may be important to inform clients and the public that behavioural activation is important for overall mental health and effective in treating and preventing depression (see Martell et al., 2013). Keeping active behaviourally is particularly difficult during the COVID-19 lockdown, but psychologists need to work with their clients to find innovative ways to do this. Incidentally, working with clients virtually has some unique advantages that psychologists may not have appreciated previously. For example, with the use of video conferencing, psychologists are now able to see into their clients' homes which can help to overcome obstacles with behavioural activation and enhance other aspects of treatment, such as exposure (e.g., helping a clients with obsessive-compulsive disorder by observing them carrying out exposure exercises in the natural environments).

Assessing the extent to which clients are connecting with others in beneficial and meaningful ways is also important. Social isolation was reported to have a significant impact on mental health according to our survey results. Social isolation and loneliness have been found

empirically to significantly impact both physical and psychological health. Psychologists should assess their clients' social networks and the extent to which they are able to access them in active (e.g., going for a walk with a friend while maintaining physical distance; FaceTime or Zoom calls) versus more passive (e.g., Instagram, texts) ways. Psychologists need to help their clients to find innovative ways to connect with others. It is interesting that the media quickly recognized this need: When the pandemic first broke, news anchors were referring to the requirement of social distancing; however, within a couple of weeks, the terminology changed from social distancing to physical distancing, recognizing the importance of social connection.

Psychologists should also carefully assess substance use and be particularly vigilant about the consumption of alcohol, cannabis, and other substances during COVID-19. Although Canadians are self-isolating, their consumption of substances has remained the same for most and has increased in about 30%.

Finally, these data suggest that access to care is a problem in this country; one that will likely get worse in the aftermath of the pandemic. The public perceives a need for the federal and provincial governments to do more to support mental health in Canada. There has probably never been a time when mental health needs have been expressed so openly both among the public and within government. Psychologists have specialized training in diagnosis, assessment, and treatment that the public needs access to. This is an opportune time for psychologists to add to this voice and advocate for our profession and for evidence-based practice.

References

- Alonso J., Lepine J. P., & Committee ESMS. (2007). Overview of key data from the European Study of the Epidemiology of Mental Disorders (ESEMeD). *Journal of Clinical Psychiatry*, 68 (suppl 2), 3–9.
- Batterham, P. J., Christensen, H., & CEAR, A. L. (2013). Anxiety symptoms as precursors of major depression and suicidal ideation. *Depression and Anxiety*, 30, 908-916.
- Beck, A. T., & Dozois, D. J. A. (2011). Cognitive therapy: Current status and future directions. *Annual Review of Medicine*, 62, 397-409.
- Benjamin, B., & Boyer, C. (2019). *Canada's mental health agenda should address mental health in the workplace*. Conference Board of Canada.
<https://www.conferenceboard.ca/insights/blogs/canada-s-mental-health-agenda-should-address-mental-health-in-the-workplace>
- Boland, R. J., & Keller, M. B. (2009). Course and outcome of depression. In I. H. Gotlib & C. L. Hammen (Eds.), *Handbook of depression* (p. 23–43). New York: Guilford.
- Coyne, J. C., Pepper, C. M., & Flynn, H. (1999). Significance of prior episodes of depression in two patient populations. *Journal of Consulting and Clinical Psychology*, 67, 76-81.
- Diener, E., Heintzelman, S. J., Kushlev, K., Tay, L., Wirtz, D., Lutes, L. D., et al. (2017). Findings all psychologists should know from the new science on subjective well-being. *Canadian Psychology*, 58, 87-104.
- Favaro, A., St. Philip, E., & MacLeod, M. (2020). *Is an 'echo pandemic' of mental illness coming after COVID-19?* CTV News. <https://www.ctvnews.ca/health/coronavirus/is-an-echo-pandemic-of-mental-illness-coming-after-covid-19-1.4878433>
- Friedrich M. (2017). Depression is the leading cause of disability around the world. *Journal of*

- the American Medical Association*, 317(15):1517. doi:10.1001/jama.2017.3826
- Hawryluck, L., Gold, W. L., Robinson, S., Pogorski, S., Galea, S., & Styra, R. (2004). SARS Control and psychological effects of quarantine, Toronto, Canada. *Emerging Infectious Diseases*, 10, 1206–1212.
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, 10, 227-237.
- Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, 7, e1000316. doi:10.1371/journal.pmed.1000316.
- Kessler, R. C., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Wittchen, H. (2012). Twelve-month and lifetime prevalence and lifetime morbid risk of anxiety and mood disorders in the United States. *International Journal of Methods in Psychiatry Research*, 21, 169–184.
- Liu, X., Kakade, M., Fuller, C. J., Fan, B., Fang, Y., et al. (2012) Depression after exposure to stressful events: lessons learned from the severe acute respiratory syndrome epidemic. *Comprehensive Psychiatry*, 53, 15-23.
- Liua, Q., Hea, H., Yanga, J., Fenga, X, Zhaoa, F., Lyua, J. (2019) Changes in the global burden of depression from 1990 to 2017: Findings from the Global Burden of Disease study. *Journal of Psychiatric Research*. <https://doi.org/10.1016/j.jpsychires.2019.08.002>
- Martell, C. R., Dimidjian, S., Herman-Dunn, R. (2013). *Behavioral activation for depression: A clinician's guide*. New York: Guilford Press.
- McRae, L., O'Donnell, S., Loukine, L., Rancourt, N., Pelletier, C. (2016). Report summary - Mood and Anxiety Disorders in Canada, 2016. *Health Promotion and Chronic Disease*

Prevention in Canada, 36(12), 314–315.

Moreno, F. A. & Delgado, P. L. (2000). Living with anxiety disorders: As good as it gets?

Journal of Anxiety Disorders, 64, A4-A21.

Perlman, D. (in press). Attachment loneliness: From academic pariah to the U.K.'s appointment of a Minister of Loneliness. In P. Graf & D. J. A. Dozois (Eds.), *Handbook on the state of the art in applied psychology*. New York: Wiley.

Rice, F., van den Bree, M. B. M., & Thapar, A. (2004). A population-based study of anxiety as a precursor for depression in childhood and adolescence. *BMC Psychiatry*, 4: 43. doi: 10.1186/1471-244X-4-43.

Robichaud, M., Koerner, N., & Dugas, M. J. (2018). Cognitive-behavioral treatment for generalized anxiety disorder: From science to practice (2nd Ed.). New York: Routledge.

Solomon, D. A., Keller, M. B., Leon, A. C., Mueller, T. I., Lavori, P. W., Shea, M. T., et al. (2000). Multiple recurrences of major depressive disorder. *American Journal of Psychiatry*, 157, 229-233.

Statistics Canada (2020). How are Canadians coping with the COVID-19 situation?

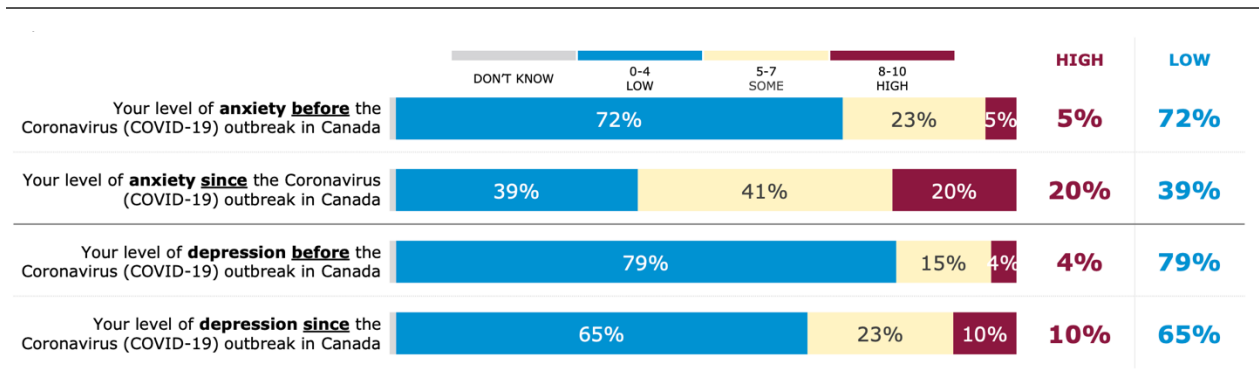
<https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2020029-eng.htm>

Statistics Canada (2013) *Canadian Community Health Survey: Annual Component*. Ottawa:

Author.

Table 1.

Self-Reported Anxiety and Depression Levels Rated in Reference to Before and After COVID-19



Note. N = 1,803

Table 2.

Social/Personal Variables Contributing to Mental Health

							IMPACT ON MENTAL HEALTH	
	DON'T KNOW	9-10 VERY POSITIVE	7-8 SOMEWHAT POSITIVE	4-6 NEUTRAL	2-3 SOMEWHAT NEGATIVE	0-1 VERY NEGATIVE	NEGATIVE IMPACT	POSITIVE IMPACT
The possibility of you catching COVID-19	4%	7%	52%		23%	12%	35%	11%
The possibility of a family member catching COVID-19	6%	9%	35%		27%	20%	47%	15%
Social isolation / Being apart from others	3%	7%	47%		29%	12%	41%	10%
The difficulties and challenges of getting necessities <small>(groceries, prescriptions, other household items)</small>	3%	5%	56%		27%	9%	36%	8%
Communicating with family/friends outside of your household <small>via phone, email, video chats</small>	16%	24%		48%		8%	12%	40%
Interacting with members of your household in-person	14%	19%		55%		7%	11%	33%
Domestic violence in the household	4%	4%	72%		4%	15%	19%	8%

Note. N = 1,803

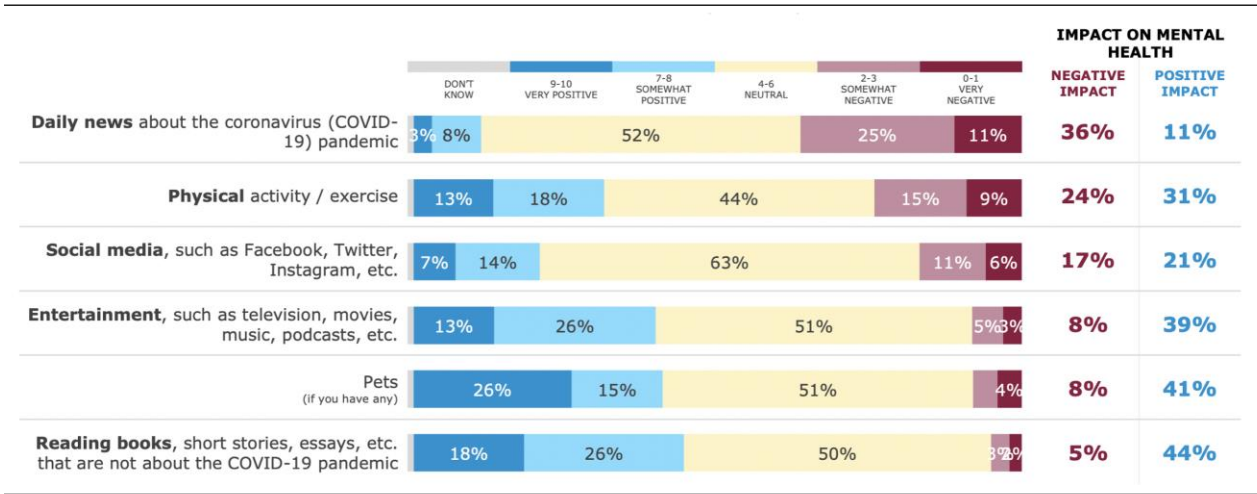
Table 3. *Economic Impact of COVID-19 on Self-Reported Mental Health*

	IMPACT ON MENTAL HEALTH						NEGATIVE IMPACT	POSITIVE IMPACT
	DON'T KNOW	9-10 VERY POSITIVE	7-8 SOMEWHAT POSITIVE	4-6 NEUTRAL	2-3 SOMEWHAT NEGATIVE	0-1 VERY NEGATIVE		
The economic downturn	4%	8%	38%	27%	21%	21%	48%	12%
Your recent job loss <i>(Among those unemployed n=255)</i>	3%	3%	37%	27%	30%	30%	57%	6%
The possibility of you losing pay and/or hours at your job <i>(Among those employed n=983)</i>	4%	8%	45%	21%	21%	21%	42%	12%
The possibility of a family member losing their job	4%	6%	45%	23%	20%	20%	43%	10%
The possibility of you losing your job <i>(Among those employed n=983)</i>	3%	8%	49%	17%	21%	21%	38%	11%
The possibility of not being able to fully pay household bills owed in 2020 <i>(ex. mortgage, rent, property tax, and utilities)</i>	3%	6%	60%	16%	13%	13%	29%	9%
The challenges of working from home <i>(Among those employed n=983)</i>	7%	11%	57%	14%	10%	10%	24%	18%

Note. N = 1,803, unless otherwise noted

Table 4.

The Impact of Daily Activities on Self-Reported Mental Health During COVID-19



Note. N = 1,803 (except for the category of pets which was n = 1065).