

# Social Disconnection and Psychological Distress in Canadian Men During the COVID-19 Pandemic

American Journal of Men's Health  
January-February 1-7  
© The Author(s) 2022  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/15579883221078145  
journals.sagepub.com/home/jmh  


Nick J. Simpson<sup>1</sup>, John L. Oliffe<sup>2,3</sup> , Simon M. Rice<sup>4,5</sup>,  
David Kealy<sup>6</sup>, Zac E. Seidler<sup>4,5</sup> , and John S. Ogrodniczuk<sup>6</sup> 

## Abstract

The COVID-19 pandemic has significantly challenged many men's mental health. Efforts to control the spread of the virus have led to increasing social disconnection, fueling concerns about its long-term effects on men's mental health, and more specifically their experience of psychological distress. Social disconnection, psychological distress, and the relationship between them have yet to be formally explored in a Canadian male sample during the COVID-19 pandemic. The present study examined whether reduced social connection among men was associated with increased anxiety and depressive symptoms (psychological distress) and whether this association was moderated by living alone. The sample consisted of 434 help-seeking Canadian men who completed standardized measures. Analyses controlled for the potentially confounding effects of age and fear of COVID-19. Findings revealed that less social connection was associated with increased psychological distress. This association was not moderated by living alone, nor was living alone directly associated with psychological distress. Younger age and fear of COVID-19 were each independently associated with psychological distress. Socially disconnected men were more likely to experience anxiety and depressive symptoms, suggesting the need for interventions focussed on men's social connectedness, social support, and belongingness to help reduce some COVID-19-induced mental health risks.

## Keywords

social connectedness, psychological distress, men, COVID-19, anxiety, depression

## Introduction

The emergence of the novel coronavirus (COVID-19) has resulted in staggering global health impacts. Extreme stress has been put on health systems, as more than 200 million individuals have been infected, and nearly 5 million have died as of September 2021 (World Health Organization [WHO], 2021). Along with the devastating physical health and mortality impacts, significant concerns have been raised regarding the mental health consequences of the COVID-19 pandemic (Pietrabissa & Simpson, 2020). For example, a longitudinal U.S.-based study reported mental well-being being markedly diminished after the implementation of lockdown measures in March 2020 (VanderWeele et al., 2021). Although studies of the mental health impacts of the pandemic have tended to focus on general populations, relatively few studies have differentiated these impacts for men or male sub-groups. High and rising male suicide rates worldwide continue to attract research attention toward better

understanding (and preventing) the diverse risks and pathways for that dire outcome (Richardson et al., 2021). Regarding men's mental health during the pandemic, a recent Canadian survey indicated that 79% of men reported that COVID-19 had negatively affected their

<sup>1</sup>School of Medicine, Queen's University, Kingston, Ontario, Canada

<sup>2</sup>School of Nursing, University of British Columbia, Vancouver, British Columbia, Canada

<sup>3</sup>Department of Nursing, The University of Melbourne, Victoria, Australia

<sup>4</sup>Orygen, Parkville, Melbourne, Victoria, Australia

<sup>5</sup>Centre for Youth Mental Health, The University of Melbourne, Victoria, Australia

<sup>6</sup>Department of Psychiatry, University of British Columbia, Vancouver, British Columbia, Canada

### Corresponding Author:

John S. Ogrodniczuk, Department of Psychiatry, University of British Columbia, #420-5950 University Boulevard, Vancouver, British Columbia, Canada V6T 1Z3.

Email: john.ogrodniczuk@ubc.ca



mental health (Ogrodniczuk, Rice, et al., 2021). With emerging reports supporting this finding elsewhere (Ellison et al., 2021), attention is being turned to identify contributing factors as a means to tailoring interventions to reduce the risk of mental illness and male suicide. One risk factor that has drawn attention is social disconnection, a known consequence of the pandemic (Luchetti et al., 2020).

To slow the spread of COVID-19, Canadian governments have employed social and physical distancing strategies—which, by extension, limit men's social connectedness. Included among these strategies have been ever-changing closures of public spaces and stay-at-home and work-from-home orders, which together have led to the largest enforced social isolation period in human history. As a result, social gatherings have declined and concern for, as well as empirical evidence detailing, the risks and effects of social disconnection has grown (Luchetti et al., 2020; Tull et al., 2020). Social connectedness refers to “the degree to which a person experiences belongingness, attachment, relatedness, togetherness, or entrenchment in one's social relationships” (Santini et al., 2015, p. 54). In the context of the COVID-19 pandemic, low social connectedness (i.e., social disconnection) may be related to psychological distress, with reports showing higher levels of psychological distress after the implementation of physical distancing measures (Pierce et al., 2020), and that those who adhere to physical distancing measures are more likely to report loneliness and decreases in their mental well-being (Marroquín et al., 2020). Research has identified that those who feel socially disconnected during COVID-19 have an increased probability of experiencing anxiety and depressive symptoms (Pietrabissa & Simpson, 2020). Literature prior to the pandemic highlights how social disconnection and loneliness are linked to depression and anxiety (Cacioppo et al., 2006). Most of the studies exploring the relationship between psychological distress and reduced social connection during the pandemic have been performed in older populations, but none has been conducted on male-only samples. High male suicide rates have consistently been linked to men's anxiety and depression, underscoring the importance of further work to identify possible contributing factors (Olliffe et al., 2021). Also at play is men's reticence for seeking professional help, and the potentiating effects of being socially disconnected in this all-too-common male practice (Johnson et al., 2012). Considering reports suggesting that social connection is difficult for many men due to socialized masculine shame/stigma around male-male intimacy, efforts to better understand the commonality and toll of reduced social disconnection are greatly needed (Kealy et al., 2021).

The primary purpose of the present study was to investigate the association between social disconnection and

psychological distress in a sample of help-seeking Canadian men. Also investigated was whether this association differed for those men who lived alone, as living alone during the pandemic has been reported as a risk factor for social disconnection (Groarke et al., 2020; Okabe-Miyamoto et al., 2021). Age and fear of COVID-19 were included as covariates in the model being tested to account for their potentially confounding effects (Carstensen et al., 2020; Satıcı et al., 2020; Xiong et al., 2020).

## Method

### Study Design and Participant Recruitment

Data were provided by 434 Canadian men who participated in a cross-sectional survey at the beginning of the COVID-19 pandemic: April 1 through May 30, 2020. Participants were recruited online via the HeadsUpGuys website (<https://headsupguys.org>), a leading global resource providing tips, tools, information about professional services, and recovery stories to help men fight depression and prevent suicide (Ogrodniczuk, Beharry, et al., 2021). Men who expressed an interest in participating were taken to an independent survey site, which was hosted by Qualtrics, where they were presented with the informed consent page. A Can\$500 prize draw was offered to incentivize participation. Eligibility criteria included being at least 18 years old, having online access, being able to read and understand English, self-identifying as male, and residing in Canada. No exclusion criteria were specified. Those providing informed consent to participate completed the survey online. Participant IP addresses and study ID numbers were associated with the collected data, which was stored on a password-protected, secured Canadian server. Ethics approval for the study was granted by the Behavioural Research Ethics Board at the University of British Columbia (H20-01401).

### Measures

Measures used in the present study included the Patient Health Questionnaire-4 (PHQ-4), Social Connectedness Scale (SCS), Fear of COVID-19 Scale (FCS-19), and a demographics form from which age and living situation data were drawn.

The PHQ-4 is a four-item self-report questionnaire developed to measure psychological distress associated with symptoms of depression and anxiety (Kroenke et al., 2009). The items are rated on a 4-point Likert-type scale (0 = *not at all* to 3 = *almost every day*), with the total score representing severity of symptoms associated with depression and anxiety. In the present study, the scale showed good internal consistency ( $\alpha = .87$ ). The PHQ-4 total score was used as the dependent variable in the present study.

Social connectedness was assessed using the eight-item SCS (Lee & Robbins, 1995). Items are rated on a 5-point Likert-type scale, with 1 indicating *strongly disagree* and 5 indicating *strongly agree*. Lower scores indicate greater social disconnection. In the present study, the scale showed high internal consistency ( $\alpha = .94$ ). The SCS total score was included as the independent variable in the present study.

The FCS-19 is a seven-item measure of the extent to which a person fears COVID-19 (Ahorsu et al., 2020). The scale asks participants to rate each item (e.g., “I am afraid of losing my life because of coronavirus 19”) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores indicate higher levels of fear of COVID-19. In the present study, the scale showed high internal consistency ( $\alpha = .89$ ). The FCS-19 total score was used as a covariate in the analyses of the present study to control for the potentially confounding effect of fear/anxiety associated with COVID-19.

Information regarding age (treated as a continuous variable; included as a covariate in analyses) and living situation (living alone vs. living with others; included as a moderator in analyses) were derived from the demographics form that was used for the survey.

### Statistical Analysis

Analyses were conducted using SPSS version 25, including the PROCESS macro (Hayes, 2018). The sample was characterized using descriptive statistics, including means and standard deviations for continuous variables and frequency and percentages for categorical variables. Bivariate associations between social connectedness and the other study variables were examined with Pearson correlation (PHQ-4 total score, FCS-19 total score, age) and independent-samples *t* test (living situation). To address the study objective, regression with moderation (PROCESS Model 1) was employed using psychological distress (PHQ-4 total score) as the dependent variable, social connectedness as the independent variable, and living situation (living alone vs. living with others) as the moderator. Age and the FCS-19 total score were included in the model as control variables to account for their potentially confounding effects. Moderation was determined if the interaction term (Social Connectedness  $\times$  Living Situation) was statistically significant. Bootstrapped percentile 99% confidence intervals (CIs) were estimated, using 10,000 re-samples.

### Results

The mean age of the respondents was 39.76 ( $SD = 14.04$ ; range = 18–80) years. The majority were Caucasian (78.1%;  $n = 339$ ), educated beyond high school (85.5%;  $n = 418$ ), employed (60.9%;  $n = 264$ ),

and had a personal income of less than Can\$50,000 annually (55.3%;  $n = 240$ ). Most men self-identified as heterosexual (70.0%;  $n = 304$ ), were in a relationship (57.4%;  $n = 249$ ), and currently lived with their partner/children/extended family (58.1%;  $n = 252$ ). The mean PHQ-4 total score was 6.33 ( $SD = 3.50$ ), which corresponds to moderate psychological distress; 49.1% ( $n = 213$ ) met the case threshold for anxiety ( $\geq 3$  on the anxiety subscale) and 59.9% ( $n = 260$ ) met the case threshold for depression ( $\geq 3$  on the depression subscale; Kroenke et al., 2009). Social connectedness was significantly associated with the PHQ-4 total score ( $r = -.48$ ,  $p < .001$ ), but not with the FCS-19 total score ( $r = -.06$ ,  $p = .233$ ), age ( $r = .05$ ,  $p = .278$ ), or living situation ( $t = 1.31$ ,  $p = .190$ ).

Table 1 presents the findings of the regression analysis. Each of the covariates included in the model—age ( $B = -0.03$ ,  $t = -2.94$ ,  $p = .003$ ) and fear of COVID-19 ( $B = 0.13$ ,  $t = 5.48$ ,  $p < .001$ )—was significantly associated with psychological distress, indicating that younger age and greater fear of COVID-19 were related to increased psychological distress. After accounting for these effects, living situation was not significantly associated with psychological distress ( $B = -1.29$ ,  $t = -1.43$ ,  $p = .154$ ).

A significant main effect for social connectedness was revealed ( $B = -0.16$ ,  $t = -10.71$ ,  $p < .001$ ), accounting for an additional 21% of the variance in psychological distress scores. The finding indicated that lower levels of social connectedness were associated with higher levels of psychological distress. The interaction between living situation and social connectedness failed to reach statistical significance ( $F = 0.73$ ,  $p = .394$ ).

### Discussion

The present study explored the relationship between social connectedness and psychological distress in a help-seeking sample of Canadian men during the COVID-19 pandemic. The primary finding was that a lower level of social connectedness was associated with a higher level of psychological distress. Men’s living situation was not directly associated with psychological distress, nor did it interact with social connectedness in its relationship with psychological distress. Psychological distress was identified to be elevated in younger men and men who had a greater fear of COVID-19. Social connectedness was not significantly associated with fear of COVID-19.

Since the onset of the COVID-19 pandemic, evidence of diminishing social connection (Luchetti et al., 2020; Tull et al., 2020) and increasing psychological distress (Pietrabissa & Simpson, 2020) has grown. The relationship between these two factors had yet to be explored in a male-only sample. The present study revealed that, even after controlling for age and fear of COVID-19, men who

**Table 1.** Regression Analysis Examining the Impact of Living Situation, Social Connection, and Their Interaction on Psychological Distress.

DV: Psychological distress	B	SE	t	p	LLCI	ULCI
Age	-0.030	.010	-2.941	<b>.003</b>	<b>-0.056</b>	<b>-0.004</b>
Fear of COVID-19	0.134	.024	5.481	<b>&lt;.001</b>	<b>0.071</b>	<b>0.197</b>
Living situation	-1.288	.903	-1.427	.154	-3.625	1.048
Social connectedness	-0.155	.015	-10.710	<b>&lt;.001</b>	<b>-0.193</b>	<b>-0.118</b>
Living Situation × Social Connectedness	0.029	.033	0.853	.394	-0.058	0.115
$R^2 = .303, F(5, 428) = 37.184, p < .001$						

Note. Boldface indicates significant results. DV = dependent variable; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

experienced lower social connectedness reported greater psychological distress (i.e., more anxiety and depressive symptoms). Research on other discrete subpopulations during the pandemic has also established this association (Smith et al., 2020). Ashida and Heaney (2008) argue that lower levels of feeling socially connected offer less proximity to social networks and lower likelihood of feeling comfortable while relying on networks for support. The perception of having social supports is well known to buffer the effects of psychological stressors, and without these resources, a sense of disconnection from others can heighten vulnerabilities and challenges to increasing psychological distress (Cohen & Wills, 1985; Ross et al., 2020; Skomorovsky, 2014). That social connectedness was unrelated to fear of COVID-19 suggests that feeling distanced from others had minimal bearing on men's fear and worry about contracting COVID-19, or was influenced by such fear or worry.

The present study identified that men's living situation was not associated with psychological distress, nor did it moderate the association between social connectedness and psychological distress. This suggests that men can be at risk of psychological distress by way of feeling socially disconnected, regardless of whether they live with others or live alone. This might be explained by the complexities in social isolation wherein men can seem connected to others, but be profoundly disconnected by an array of circumstances, including relationship breakdown, childhood adversity, and/or being marginalized at work (Olliffe et al., 2019). COVID-19 can bring such preexisting injuries into sharper focus and/or directly invoke their isolating effects (Ogrodniczuk, Rice, et al., 2021). Our finding contrasts with recent reports that in mixed-sex and older samples, living alone moderates the association between low social connectedness and high psychological distress (Gyasi et al., 2019; Steinman et al., 2021). Although demographic differences likely explain this difference, the current findings suggest men's external work and recreational activities (i.e., outside of the domestic sphere) constitute primary social connectors and the COVID-19 restrictions imposed (along with desires to protect others)

have significant impacts on men's psychological distress regardless of the presence of others in their home environment. Future research might explore what factors shape men's experiences of social connectedness to further investigate (and address) the linkages to psychological distress.

Younger men and men with a greater fear of COVID-19 reported higher levels of psychological distress. These findings are consistent with previous research of mixed-sex samples indicating that younger age (García-Portilla et al., 2021; Glowacz & Schmits, 2020) and fear of COVID-19 (Satici et al., 2020) are associated with anxiety and depressive symptoms. With regard to the association of fear of COVID-19 with symptoms of anxiety and depression, it is possible that fear and worry about contracting COVID-19 oneself or a loved one or friend being diagnosed with it contributes to a deterioration in mental health. Recent findings from Gallagher and colleagues (2020) support this contention. Individuals' mental health is likely to be negatively influenced by the relentless media coverage and constant exposure to information relating to the pandemic, including case and mortality rates (Holmes et al., 2020). Concerning the effect of age, undoubtedly, men of every age are experiencing psychological distress as a result of the pandemic; yet, the specificities for why younger men report relatively higher psychological distress levels are poorly understood. Glowacz and Schmits (2020) suggest that lockdown restrictions, reduced social contact, smaller living spaces, and occupational disruptions may be contributing to general age differences in psychological distress levels. There is also the strong possibility that the networking that is key to young men's academic work, careers, recreational, and romance endeavors have further delayed (or ended) their expectations for achieving milestones (graduation, career, mortgage, marriage) accrued by previous generations (Kimmel, 2008). Instead of face-to-face contact, many men turned to an online environment to find social connection during the pandemic (Ogrodniczuk, Rice, et al., 2021). Although this may be presumed to ameliorate feelings of loneliness, especially in young

men who are digital natives, Seidler and colleagues (2021) reported that often this fails to remedy a lack of social connectedness. Interventions focused on improving social connection and social support for men may be effective in reducing some of the psychological distress endured by men during the pandemic. As Oliffe and colleagues (2020) map, social interventions that bolster existing and/or foster new group memberships (through social clubs, organizations, and societies) may afford cost-effective community-based programs. That said, garnering social connectedness and belongingness amid growing divisions for and against mask wearing and vaccinations is especially complex.

The present study has limitations, including a cross-sectional design reporting participants' mental health and living situation at a single time point early on in the pandemic. Men included in the sample could have been suffering from lack of social connection even before the beginning of the pandemic. In addition, participants were not asked to elaborate on specific aspects of their social connectedness (or lack thereof). The SCS (Lee & Robbins, 1995) is not geared to assess the strains on social connections specific to the COVID-19 pandemic—no such much existed at the time of the study. Also, participants were recruited through Headsupguys.org, a mental health resource targeting help-seeking men. Therefore, the results of the study may not be generalizable to non-help-seeking populations. Future longitudinal research inclusive of open-ended response items and non-help-seeking men might advance understandings of the temporal relationships between low social connectedness and psychological distress.

The COVID-19 pandemic is taking a considerable toll on men's mental health. In an era of pandemic-fueled political unrest, economic uncertainty, profound divisiveness, and enforced physical distancing, men's psychological distress might be expected. Men are becoming more anxious and depressed, which increases their risk for suicide (Kilgore et al., 2020), already a leading cause of death among men (Statistics Canada, 2017). The present study highlights men's sense of social disconnection—regardless of their living situation—as a factor in their distress during the pandemic. Beyond social prescriptions and community-based programs, public mental health interventions targeting men are much needed to prevent and mitigate the negative impacts of the pandemic on men and their families. Initiatives aimed at supporting young men and men with an elevated fear of COVID-19 may be especially useful for reducing the risks in the most vulnerable of men.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### Ethics Approval

Ethics approval for the study was granted by the Behavioural Research Ethics Board at the University of British Columbia (H20-01401).

### ORCID iD

John L. Oliffe  <https://orcid.org/0000-0001-9029-4003>

Zac E. Seidler  <https://orcid.org/0000-0002-6854-1554>

John S. Ogrodniczuk  <https://orcid.org/0000-0002-3531-9033>

### References

- Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 Scale: Development and initial validation. *International Journal of Mental Health and Addiction*, 1–9. <https://doi.org/10.1007/s11469-020-00270-8>
- Ashida, S., & Heaney, C. A. (2008). Differential associations of social support and social connectedness with structural features of social networks and the health status of older adults. *Journal of Aging and Health*, 20(7), 872–893. <https://doi.org/10.1177/0898264308324626>
- Cacioppo, J. T., Hughes, M. E., Waite, L. J., Hawkley, L. C., & Thisted, R. A. (2006). Loneliness as a specific risk factor for depressive symptoms: Cross-sectional and longitudinal analyses. *Psychology and Aging*, 21(1), 140–151. <https://doi.org/10.1037/0882-7974.21.1.140>
- Carstensen, L. L., Shavit, Y. Z., & Barnes, J. T. (2020). Age advantages in emotional experience persist even under threat from the COVID-19 pandemic. *Psychological Science*, 31(11), 1374–1385. <https://doi.org/10.1177/0956797620967261>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357. <https://doi.org/10.1037/0033-2909.98.2.310>
- Ellison, J. M., Semlow, A. R., Jaeger, E. C., & Griffith, D. M. (2021). COVID-19 and mental health: Addressing men's mental health needs in the digital world. *American Journal of Men's Health*, 15(4), Article 15579883211030021. <https://doi.org/10.1177/15579883211030021>
- Gallagher, M. W., Zvolensky, M. J., Long, L. J., Rogers, A. H., & Garey, L. (2020). The impact of Covid-19 experiences and associated stress on anxiety, depression, and functional impairment in American adults. *Cognitive Therapy and Research*, 44, 1043–1051. <https://doi.org/10.1007/s10608-020-10143-y>
- García-Portilla, P., de la Fuente Tomás, L., Bobes-Bascarán, T., Jiménez Treviño, L., Zurrón Madera, P., Suárez Álvarez, M., Menéndez Miranda, I., García Álvarez, L., Sáiz Martínez, P. A., & Bobes, J. (2021). Are older adults also at higher psychological risk from COVID-19? *Aging & Mental Health*, 25(7), 1297–1304. <https://doi.org/10.1080/13607863.2020.1805723>
- Glowacz, F., & Schmits, E. (2020). Psychological distress during the COVID-19 lockdown: The young adults most at

- risk. *Psychiatry Research*, 293, Article 113486. <https://doi.org/10.1016/j.psychres.2020.113486>
- Groarke, J. M., Berry, E., Graham-Wisener, L., McKenna-Plumley, P. E., McGlinchey, E., & Armour, C. (2020). Loneliness in the UK during the COVID-19 pandemic: Cross-sectional results from the COVID-19 psychological wellbeing study. *PLOS ONE*, 15(9), Article e0239698. <https://doi.org/10.1371/journal.pone.0239698>
- Gyasi, R. M., Yeboah, A. A., Mensah, C. M., Ouedraogo, R., & Addae, E. A. (2019). Neighborhood, social isolation and mental health outcome among older people in Ghana. *Journal of Affective Disorders*, 259, 154–163. <https://doi.org/10.1016/j.jad.2019.08.024>
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). Guilford Press.
- Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., Ballard, C., Christensen, H., Cohen Silver, R., Everall, I., Ford, T., John, A., Kabir, T., King, K., Madan, I., Michie, S., Przybylski, A. K., Shafraan, R., Sweeney, A., Worthman, C., . . . Bullmore, E. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *The Lancet Psychiatry*, 7(6), 547–560. [https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1)
- Johnson, J. L., Oliffe, J. L., Kelly, M. T., Galdas, P. M., & Ogrodniczuk, J. S. (2012). Men's discourses of help-seeking in the context of depression. *Sociology of Health and Illness*, 34(3), 345–361. <https://doi.org/10.1111/j.1467-9566.2011.01372.x>
- Kealy, D., Seidler, Z. E., Rice, S. M., Cox, D. W., Oliffe, J. L., Ogrodniczuk, J. S., & Kim, D. (2021). Reduced emotional awareness and distress concealment: A pathway to loneliness for young men seeking mental health care. *Frontiers of Psychology*, 12, Article 679639. <https://doi.org/10.3389/fpsyg.2021.679639>
- Kilgore, W., Cloonan, S. A., Taylor, E. C., Miller, M. A., & Dailey, N. S. (2020). Three months of loneliness during the COVID-19 lockdown. *Psychiatry Research*, 293, Article 113392. <https://doi.org/10.1016/j.psychres.2020.113392>
- Kimmel, M. (2008). *Guyland: The perilous world where boys become men*. Harper Collins.
- Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: The PHQ-4. *Psychosomatics*, 50(6), 613–621. <https://doi.org/10.1176/appi.psy.50.6.613>
- Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The social connectedness and the social assurance scales. *Journal of Counseling Psychology*, 42(2), 232–241. <https://doi.org/10.1037/0022-0167.42.2.232>
- Luchetti, M., Lee, J. H., Aschwanden, D., Sesker, A., Strickhouser, J. E., Terracciano, A., & Sutin, A. R. (2020). The trajectory of loneliness in response to COVID-19. *The American Psychologist*, 75(7), 897–908. <https://doi.org/10.1037/amp0000690>
- Marroquín, B., Vine, V., & Morgan, R. (2020). Mental health during the COVID-19 pandemic: Effects of stay-at-home policies, social distancing behavior, and social resources. *Psychiatry Research*, 293, Article 113419. <https://doi.org/10.1016/j.psychres.2020.113419>
- Ogrodniczuk, J. S., Beharry, J., & Oliffe, J. L. (2021). An evaluation of 5-year web analytics for HeadsUpGuys: A men's depression E-mental health resource. *American Journal of Men's Health*. 1–17. <https://doi.org/10.1177/15579883211063322>
- Ogrodniczuk, J. S., Rice, S. M., Kealy, D., Seidler, Z. E., Delara, M., & Oliffe, J. L. (2021). Psychosocial impact of the COVID-19 pandemic: A cross-sectional study of online help-seeking Canadian men. *Postgraduate Medicine*, 33(7), 750–759. <https://doi.org/10.1080/00325481.2021.1873027>
- Okabe-Miyamoto, K., Folk, D., Lyubomirsky, S., & Dunn, E. W. (2021). Changes in social connection during COVID-19 social distancing: It's not (household) size that matters, it's who you're with. *PLOS ONE*, 16(1), Article e0245009. <https://doi.org/10.1371/journal.pone.0245009>
- Oliffe, J. L., Broom, A., Popa, M., Jenkins, E. K., Rice, S. M., Ferlatte, O., & Rossnagel, E. (2019). Unpacking social isolation in men's suicidality. *Qualitative Health Research*, 29(3), 315–327. <https://doi.org/10.1177/1049732318800003>
- Oliffe, J. L., Kelly, M. T., Gonzalez Montaner, G., Links, P. S., Kealy, D., & Ogrodniczuk, J. S. (2021). Segmenting or summing the parts? A scoping review of male suicide research in Canada. *Canadian Journal of Psychiatry*, 66(5), 433–445. <https://doi.org/10.1177/07067437211000631>
- Oliffe, J. L., Rossnagel, E., Bottorff, J. L., Chambers, S. K., Caperchione, C., & Rice, S. M. (2020). Community-based men's health promotion programs: Eight lessons learnt and their caveats. *Health Promotion International*, 35(5), 1230–1240. <https://doi.org/10.1093/heapro/daz101>
- Pierce, M., Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., Kontopantelis, E., Webb, R., Wessely, S., McManus, S., & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: A longitudinal probability sample survey of the UK population. *The Lancet Psychiatry*, 7(10), 883–892. [https://doi.org/10.1016/S2215-0366\(20\)30308-4](https://doi.org/10.1016/S2215-0366(20)30308-4)
- Pietrabissa, G., & Simpson, S. G. (2020). Psychological consequences of social isolation during COVID-19 outbreak. *Frontiers in Psychology*, 11, Article 2201. <https://doi.org/10.3389/fpsyg.2020.02201>
- Richardson, C., Robb, K. A., & O'Connor, R. C. (2021). A systematic review of suicidal behaviour in men: A narrative synthesis of risk factors. *Social Science & Medicine*, 276, Article 113831. <https://doi.org/10.1016/j.socscimed.2021.113831>
- Ross, A. M., Steketee, G., Emmert-Aronson, B. O., Brown, T. A., Muroff, J., & DeVoe, E. R. (2020). Stress-buffering versus support erosion: Comparison of causal models of the relationship between social support and psychological distress in military spouses. *The American Journal of Orthopsychiatry*, 90(3), 361–373. <https://doi-org.proxy.queensu.ca/10.1037/ort0000438>
- Santini, Z. I., Koyanagi, A., Tyrovolas, S., Mason, C., & Haro, J. M. (2015). The association between social relationships and depression: A systematic review. *Journal of Affective Disorders*, 175, 53–65. <https://doi.org/10.1016/j.jad.2014.12.049>
- Satici, B., Gocet-Tekin, E., Deniz, M. E., & Satici, S. A. (2020). Adaptation of the Fear of COVID-19 Scale: Its association with psychological distress and life satisfaction in Turkey.

- International Journal of Mental Health and Addiction*. 1–9. <https://doi-org.proxy.queensu.ca/10.1007/s11469-020-00294-0>
- Seidler, Z. E., Wilson, M. J., Rice, S. M., Kealy, D., Oliffe, J. L., & Ogradniczuk, J. S. (2021). Virtual connection, real support? A study of loneliness, time on social media and psychological distress among men. *International Journal of Social Psychiatry*. Advance online publication. <https://doi.org/10.1177/0020764020983836>
- Skomorovsky, A. (2014). Deployment stress and well-being among military spouses: The role of social support. *Military Psychology*, 26(1), 44–54. <https://doi.org/10.1037/mil0000029>
- Smith, B. M., Twohy, A. J., & Smith, G. S. (2020). Psychological inflexibility and intolerance of uncertainty moderate the relationship between social isolation and mental health outcomes during COVID-19. *Journal of Contextual Behavioral Science*, 18, 162–174. <https://doi.org/10.1016/j.jcbs.2020.09.005>
- Statistics Canada. (2017). *Leading causes of death, total population, by age group. Table 13-10-0394-01, 2018–2021*. <https://doi.org/10.25318/1310039401-eng>
- Steinman, L., Parrish, A., Mayotte, C., Bravo Acevedo, P., Torres, E., Markova, M., Boddie, M., Lachenmayr, S., Montoya, C. N., Parker, L., Conton-Pelaez, E., Silsby, J., & Snowden, M. (2021). Increasing social connectedness for underserved older adults living with depression: A pre-post evaluation of PEARLS. *The American Journal of Geriatric Psychiatry*, 29(8), 828–842. <https://doi.org/10.1016/j.jagp.2020.10.005>
- Tull, M. T., Edmonds, K. A., Scamaldo, K. M., Richmond, J. R., Rose, J. P., & Gratz, K. L. (2020). Psychological outcomes associated with stay-at-home orders and the perceived impact of COVID-19 on daily life. *Psychiatry Research*, 289, Article 113098. <https://doi.org/10.1016/j.psychres.2020.113098>
- VanderWeele, T. J., Fulks, J., Plake, J. F., & Lee, M. T. (2021). National well-being measures before and during the COVID-19 pandemic in online samples. *Journal of General Internal Medicine*, 36, 248–250. <https://doi.org/10.1007/s11606-020-06274-3>
- World Health Organization. (2021). *WHO coronavirus disease (COVID-19) dashboard*. [https://covid19.who.int/?gclid=Cj0KCCQiAqdP9BRDVARIsAGSZ8AnuxMM18-C1KEg-CTK3ojmH8n0hvFph5t9IaIUC6ROfyVaXXXPIHe9YaA-j4zEALw\\_wcB](https://covid19.who.int/?gclid=Cj0KCCQiAqdP9BRDVARIsAGSZ8AnuxMM18-C1KEg-CTK3ojmH8n0hvFph5t9IaIUC6ROfyVaXXXPIHe9YaA-j4zEALw_wcB)
- Xiong, J., Lipsitz, O., Nasri, F., Lui, L., Gill, H., Phan, L., Chen-Li, D., Iacobucci, M., Ho, R., Majeed, A., & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders*, 277, 55–64. <https://doi.org/10.1016/j.jad.2020.08.001>