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Title: Stressors and perceived consequences of the COVID-19 pandemic among older adults: a cross-sectional study using data from the Canadian Longitudinal Study on Aging (CLSA)

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Reviewer 1: Dr. Stephanie K.Y. Choi

Institution: The Ontario HIV Treatment Network General comments (author response in bold)

Thank you so much for the wonderful opportunity to review this interesting paper.

This paper aimed to assess the stressors of COVID-19 in older population across Canada. I found that the issue at hand is current and pressing.

Overall, the paper was interesting, and the subject matter is important.

Suggest providing some description of whether there may be any difference between those included in the analysis and those removed from the sample?

Thank you for this suggestion, the only people removed from this study were participants with no data on all outcome measures, those who resided outside the Canadian provinces and those who did not participate in CLSA follow-up 1, we now explicitly state who was removed from the study in the participant flow diagram (Figure A1, Supplementary Information, page 8). We reference this in the results section, "A total of 24,114 participants completed the CLSA COVID-19 exit survey and 23,785 had available data for this study (see flow diagram in Supplementary Figure A1)." (Results, page 9).

We have also included a reference to a paper using the CLSA data that compared the CLSA COVID-19 study to the complete CLSA sample, "CLSA COVID-19 Questionnaire Study participants have previously been compared to the total CLSA study population, and were slightly more educated and had higher income, but few other differences were observed (27)." (Results, paragraph 1, page 9).

Was the dataset collected any pre-existing mental health conditions of the participants? If so, suggested doing a subgroup analysis for those without pre-existing mental health conditions, and with these conditions.

This is an interesting idea; however, this was not the focus of our paper and was not within the scope of our CLSA approved data request. There are several other CLSA papers that focus more mental health conditions of participants, specifically during the COVID-19 pandemic.

Reviewer 2: Miss Evgenia Gatov

Institution: Institute for Clinical Evaluative Sciences

General comments (author response in bold)

This cross-sectional study substantially adds to the body of knowledge around the prevalence and correlates of stressors during the COVID-19 pandemic. The study has several strengths, including a large sample size, a fairly comprehensive list of stressors,

and multiple relevant covariates that were accounted for in the descriptive and analytic stages. Reporting by province makes this paper of particular interest to policymakers, given the differences in the public health response across Canada.

Abstract: report on the age range of the sample

We have now included that information in the results section of the abstract, "Most older adults (aged 50-96 years) experienced at least one stressor (76%) during the pandemic, with 24% experiencing three or more. The consequences of the pandemic were perceived as negative or very negative by 63%." (Abstract, Results, page 3).

Introduction: While the introduction outlines well the need to examine pandemic-related stressors, and the importance of exploring relationships to various sociodemographic characteristics, additional rationale for focusing on the older adult population would strengthen this section, as the population of interest is only mentioned in the last sentence.

We have included additional information about why the older adult population was of interest for this paper, "It has also been noted that experiences of stress and coping vary among older adults, where adults in the oldest age groups have reported less mental health effects early in the pandemic although they are at risk for worse health outcomes associated with COVID-19 (17)." (Introduction, Page 5).

Methods/Results

a. While the results report both ORs and PRs, the methods only list the methods for examining PRs

Thank you for this comment, we have now corrected this in the results, "The adjusted PR for the associations between socioeconomic factors and each stressor are presented in Table 2." (Results, Stressors during COVID-19 pandemic, page 10).

b. While a covariate relating to essential work was included, one of the responses "not usually working outside the household" is potentially ambiguous and could be construed as "unemployed". Unemployment was/is a major stressor in and of itself and would be a valuable covariate to include (employment status). A note on why this was not examined would be a helpful addition.

The variable, "not usually working outside the household" was how the question was asked to participants, "Do you usually work at a job or business outside of your residence?", we further classified those who worked outside the home into essential worker or not.

Unfortunately, data were not collected on employment status as a potential stressor during the COVID-19 pandemic, we have included this in the limitations section, "However, limitations of our study are that a perceived stress scale was not included, and the stressor list was developed early in the pandemic and may not include all possible stressors (e.g., loss of job, inability to attend community centres or places of worship) that may have been experienced." (Interpretation, page 12).

c. Inclusion of the marital status covariate provides important context for the analysis. However, in the context of what is known about the pandemic with the long-term care/retirement home sectors being hard hit during the second wave, and with

public health restrictions involving closure of schools (online learning), an important covariate would be caregiver status (both for elderly relatives, and for children). Thank you for this suggestion, however, caregiver status would be highly correlated with two of our outcomes, "Unable to care for those who require assistance" and "Increased caregiving". Results for the associations between socioeconomic variable and these outcomes can be found in Tables 2-4.

d. Discussion: The discussion highlights the major takeaways from this study and is careful about not drawing inferences beyond the scope of the analysis. During wave 2 of the pandemic in Canada, the long-term care and retirement home sectors were particularly hard hit by the pandemic. The sample does not include institutionalized individuals and so would miss this important segment of the population. By contrast, wave 3 saw the vaccine rollout since Dec 2020, with LTC and the elderly being prioritized, and the emergence of variants of concern. The discussion would be strengthened if the authors addressed this important historical context, in particular in light of the sample age likely including many caregivers. The authors briefly touch on the study timeframe overlapping with COVID-19 waves 2 and 3 in Canada. Additional description about the waves would enrich the discussion.

We have now included additional information about vaccinations as this is an important consideration, "It is also important to note that the data from this study were collected in the first two waves of the pandemic in Canada with the stress measures collected from September 2020 to December 2020 which also was before the general population was eligible for vaccination. Following December 2020, Canada has experienced subsequent waves of the pandemic (31). The results from this study may vary from the experiences of stressors or the overall perception of the pandemic during subsequent waves or when people were eligible to be vaccinated, as this may have impacted the stress Canadians may have experienced." (Interpretation, page 12).

Reviewer 3: Ms. Miyosha Tso Deh

Institution: University of Manitoba Manitoba Centre for Health Policy

General comments (author response in bold)

Overall: I really enjoyed reading this paper. The organization was done well. It was good to read about previous studies done on stress due to the pandemic from different parts of the world with limitations such as different socioeconomic statuses appreciated. I believe that this added value to this paper. I was glad that this study focussed on participants from different provinces which provides a broader view. The strengths and limitations of the study are well written and clear.

Some percentage calculations may need to be rechecked. Minor errors may be present. **We have checked all calculations to ensure they are correct.**

Please include study type in your title.

We have now included the study type in the title of the manuscript, "Stressors and perceived consequences of the COVID-19 pandemic among older adults: A cross-sectional study using data from in the Canadian Longitudinal Study on Aging (CLSA)".

Abstract: CMAJ Open requires a structured abstract of no more than 250 words that contains the following sections:

Background: Includes a clear statement of the study aim and research question. (2 sentences)

Methods: Includes the research design, setting of the study, and participants, including number participating and criteria for selection, entry and exclusion. The interventions, if applicable, should be clearly outlined, as well as primary and secondary outcome measures.

Results: The main findings should be quantified with 95% confidence intervals and the number needed to treat or harm, if applicable. Absolute, rather than relative, risks are preferable.

Interpretation: This should include the main conclusions and implications. (2 sentences) Trial registration: Registry and number should be included for clinical trials and, if available, for other study types.

We have conformed to all requirements CMAJ Open has for the unstructured abstract (Abstract, page 3).

Introduction: Please ensure this is no longer than 2 paragraphs. A statement of the study aim and research question should be included at the end of the introduction

The introduction to the manuscript is not longer than 2 paragraphs and outlines the rationale for research including the study aim and objectives. (Pages 4-5).

Methods: Subheadings (e.g., setting, design, sources of data, statistical analysis) are helpful for readers; these will vary depending on the study type.

We have included the following subheadings in the methods section to guide readers: (1) Study design, data source and setting; (2) Participants; (3) Primary outcomes of interest; (4) Measurement of other variables; (5) Statistical methods.

Interpretation: Include the following 5 main categories: main findings (discuss implications; do not repeat results); comparison with other studies; future directions; limitations; and conclusions (include implications for practice).

The interpretation includes main findings, comparison to other studies, strengths and limitations and conclusions (Pages 10-13).

Please ensure your final word count is below 2500 words.

Data-sharing statement: Please supply a statement that indicates (1) whether any, all or portions of the data are available to others; (2) where, through whom, when and on what terms data will be available; and (3) how data may be accessed.

We have included the data sharing statement: "Data are available from the Canadian Longitudinal Study on Aging (www.clsa-elcv.ca) for researchers who meet the criteria for access to de-identified CLSA data." (Page 1).

Abbreviations: For only the most standard abbreviations (i.e., 95% CI, SD, OR, RR, HR), please spell out at first mention and include the abbreviation in parentheses. The abbreviations may be used throughout the remainder of the manuscript. Please remove all other abbreviations.

We have defined all abbreviations when they are first used throughout the manuscript.

Please include up to 1 academic and 1 professional degree after each author's name. All authors now only have up to 1 academic and 1 professional degree listed after their name (Page 1).