

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	CCWORK Protocol: A Longitudinal Study of Canadian Correctional Workers' Well-being, Organizations, Roles and Knowledge
AUTHORS	Ricciardelli, Rosemary ; Andres, Elizabeth; Mitchell, Meghan; Quirion, Bastien; Groll, Diane; Adorjan, Michael; Siqueira Cassiano, Marcella; Shewmake, James; Herzog-Evans, Martine; Moran, Dominique; Spencer, Dale; Genest, Christine; Czarnuch, Stephen; Gacek, James; Heidi, Cramm; Maier, Katharina; Phoenix, Jo; Weinrath, Michael; MacDermid, Joy; McKinnon, Margaret; Haynes, Stacy; Arnold, Helen; Turner, Jennifer; Eriksson, Anna; Heber, Alexandra; Anderson, Gregory; MacPhee, Renee; Carleton, Nicholas

VERSION 1 – REVIEW

REVIEWER	El Ghaziri, Mazen University of Massachusetts System
REVIEW RETURNED	19-Aug-2021

GENERAL COMMENTS	<p>The authors are to be commended for designing, conducting, and publishing the protocol of a multiyear longitudinal study on Canadian correctional workers' well-being, organizations, roles and knowledge, including the impact of the COVID-19 pandemic.</p> <p>Research focusing on correctional officer health and well-being has lagged behind compared to other hazardous duty officers (police and firefighters). Despite the mounting epidemiological evidence on the risks and the stressors of correction work, there is paucity in longitudinal studies, along with intervention studies and systemic programmatic evaluation of best practices that address correction officer health and well-being.</p> <p>I would like to offer the following revision recommendations to strengthen the paper for the readers.</p> <ul style="list-style-type: none">-There is some recent literature on correction officer health and well-being including using Total Worker Health Framework that can further strengthen the background section (Please check the work of the follow researchers: Frost, N.A. and Monteiro, C.E.; Kuehl K.S. and Elliot D.L.; Jaegers, L.; Martin Cherniack; Namazi, S., John Violanti).- Please consider highlighting the stigma associated with mental health within the correction worker workforce.
-------------------------	---

	<p>-The paper can benefit from a theoretical or conceptual framework that guided the research question, study design, instrument selection, and data analysis.</p> <p>-The authors state on page 12 that-CCWORK to include approximately 500 interview participants and 2000 survey participants-can you please share the power analysis and sample size calculations.</p> <p>-In subproject 3 the authors identify clinical characterization, is there a justification MINI was selected as the only tool, without noting the recent contribution of physiologic measures and wearable devices to the body of knowledge and evidence regarding stress literature and mental health (while noting the feasibility of both given the longitudinal design of the study).</p> <p>-Please add the reliability (Cronbach's alpha) of the instruments listed in tables 2, 3, 4, and 5.</p> <p>- For sub-projects 1 and 2, it is interesting to highlight the availability and use of resources in case of exposure to traumatic events/critical incidents—along with facilitators and barriers of using such resources.</p> <p>-Can you please clarify if the survey is offered both online and in paper and pencil format.</p> <p>-Given the three sub-projects, and the burden on the participants, I was not clear if there was any incentive provided to the participants. If so, can you please describe the process.</p> <p>-Can you please add some examples about the data analysis plan for subproject 1-advanced statistical analyses-page 38 line 22; and how this is framed for each research questions.</p>
--	--

REVIEWER	Willemse, Rachel University of South Africa
REVIEW RETURNED	19-Aug-2021

GENERAL COMMENTS	<p>Thank you for the opportunity to review this manuscript. I found the manuscript "CCWORK Protocol: A longitudinal study of Canadian Correctional Workers' well-being, organizations, roles and knowledge" interesting and worth publishing. There is a definite need, as the authors pointed out, to understand how prison work shapes CO's well-being over time. I did, however, have a few comments and suggestions for consideration during a final revision of the manuscript.</p> <p>* The methods section is not described sufficiently. I recommend adding a Participants heading and a data collection heading after the Methods heading. The section discussing the longitudinal design starting at the bottom of Page 12 and continuing on Page 13. ending at Line 27 should move to directly after the Methods heading. The whole section on Page 11 until Page 12 Line 8 would fit better under the heading Participants. Consequently, I recommend that the heading "The Project: Study Population and Research Objectives" be changed to Study Objectives. I recommend adding the heading Data collection for the discussion on Page 14 because this whole section deals with data collection.</p> <p>*Although ethics was discussed, it was done at various sections in the manuscript which can be confusing. For example, how ethical approval was obtained was only mentioned in the Abstract while it should be mentioned in the Ethics section of the manuscript also.</p>
-------------------------	--

Participant consent and the ethical protocols followed was discussed under Sub-project 1, 2 & 3. I recommend that information dealing with research ethics such as participant consent, procedure of ethics approval also be discussed in the section Ethics and dissemination. The paragraph on Page 17 discussing the voluntary nature of participation should move to and be incorporated in the Ethics and dissemination section.

*The statistical data analysis used for sub-project 1 & 3 was only vaguely mentioned in two sentences on page 37. I recommend that the authors provide a more detailed discussion on the the statistical analysis that will be utilized.

*The Reference section doesn't adhere to APA format guidelines. For example, the year of publication should be in brackets directly after all the authors are named. Please remove et al. and write all the authors at the following Reference's: Reference nr's, 7; 8; 9; 10; 12; 15; 16; 17; 19; 29; 32; 33; 34; 35; 36; 37; 42; 46; 47; 57; 58; 60; 61; 62. It's only in the text that et al. is used according to APA format guidelines.

I also recommend that & is used before the last author. For example: Reference 3: Lambert, EG., Alzheimer, I., & Hogan, NL. (2010).

* The study limitations are only discussed at the Summary section of the manuscript while it should be discussed after the research objectives and research questions. I recommend that the internal and external limitations discussed on Page 41 moved to Page 12, Line 54 with the heading, Limitations of this study. I also recommend that the Strengths and limitations of the study section be completely removed from the Abstract.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

1. There is some recent literature on correction officer health and well-being including using Total Worker Health Framework that can further strengthen the background section (Please check the work of the follow researchers: Frost, N.A. and Monteiro, C.E.; Kuehl K.S. and Elliot D.L.; Jaegers, L.; Martin Cherniack; Namazi, S., John Violanti).

We greatly appreciate this comment. We have reviewed the suggested literature and included it. Although we did not know/cite this literature, it is relevant to our project. In a nutshell, we draw on the same assumption (i.e., occupational health and safety also includes mental health and overall well-being).

2. Please consider highlighting the stigma associated with mental health within the correction worker workforce.

Stigma appears as a finding/outcome in our work, as opposed to an element structuring our project (e.g., research questions, justification, or methods). Thus, we opted to leave it out from the protocol paper, which focuses primarily on our research methods and protocols. As an outcome from our project, we highlight stigma in the articles discussing our results. In fact, we have a full article (forthcoming in the journal *Advancing Corrections*) on stigma.

3. The paper can benefit from a theoretical or conceptual framework that guided the research question, study design, instrument selection, and data analysis.

We revised the introduction to clarify that we draw on the appreciative inquiry framework.

4. The authors state on page 12 that-CCWORK to include approximately 500 interview participants and 2000 survey participants-can you please share the power analysis and sample size calculations.

We revised the text to include the sample size calculations; however, we opted to not include the power analysis for each topic covered in the surveys (subproject 2) because we are working with numerous hypothesis (see tables 2 and 3). Regardless, calculations on sample size reveal that we are operating with a sample size that allow for generalization.

5. In subproject 3 the authors identify clinical characterization, is there a justification MINI was selected as the only tool, without noting the recent contribution of physiologic measures and wearable devices to the body of knowledge and evidence regarding stress literature and mental health (while noting the feasibility of both given the longitudinal design of the study).

We, at present, do MINIs. We are considering a future expansion to include physiological measures and wearable devices but do not have the necessary funding at present. We note this as a study limitation.

6. Please add the reliability (Cronbach's alpha) of the instruments listed in tables 2, 3, 4, and 5.

Cronbach's alpha provided for all scales that have undergone validation. For those instruments who have not been validated yet (house instruments), we have no Cronbach's alpha. As we start to analyse and publish our survey results, we might validate some of the scales (depending on their performance) or recommend against their use.

7. For sub-projects 1 and 2, it is interesting to highlight the availability and use of resources in case of exposure to traumatic events/critical incidents—along with facilitators and barriers of using such resources.

We currently ask questions in the pre-test and even year survey about accessing resources to help manage mental health and stress. We don't ask questions about facilitator or barriers, so those items would be helpful to include in the follow-ups. Thank you for this recommendation.

8. Can you please clarify if the survey is offered both online and in paper and pencil format.

We have clarified in stating that the surveys are only available online.

9. Given the three sub-projects, and the burden on the participants, I was not clear if there was any incentive provided to the participants. If so, can you please describe the process.

There is no incentive. Thus, we do not describe the process.

10. Can you please add some examples about the data analysis plan for subproject 1-advanced statistical analyses-page 38 line 22; and how this is framed for each research questions.

We have outlined our analyses for our research questions for subproject 1 and 3 under the section heading RESEARCH DATA: MANAGEMENT AND ANALYSIS. Additional analyses will be conducted as part of the project and based on researchers' interest.

Reviewer: 2

1. The methods section is not described sufficiently. I recommend adding a Participants heading and a data collection heading after the Methods heading. The section discussing the longitudinal design starting at the bottom of Page 12 and continuing on Page 13. ending at Line 27 should move to directly after the Methods heading. The whole section on Page 11 until Page 12 Line 8 would fit better under the heading Participants. Consequently, I recommend that the heading "The Project: Study Population and Research Objectives" be changed to Study Objectives. I recommend adding the heading Data collection for the discussion on Page 14 because this whole section deals with data collection.

We have revised but not necessarily as described in each case above. As we made other revisions and reorganized, we found that we included different headings, but we thank the reviewer for helping us get our reorganization started. We hope we have more sufficiently described the methods.

2. Although ethics was discussed, it was done at various sections in the manuscript which can be confusing. For example, how ethical approval was obtained was only mentioned in the Abstract while it should be mentioned in the Ethics section of the manuscript also. Participant consent and the ethical protocols followed was discussed under Sub-project 1, 2 & 3. I recommend that information dealing with research ethics such as participant consent, procedure of ethics approval also be discussed in the section Ethics and dissemination. The paragraph on Page 17 discussing the voluntary nature of participation should move to and be incorporated in the Ethics and dissemination section.

We have revised accordingly by grouping together most discussion of ethics. We leave discussion of consent within each subproject as we found that clearer for the reader.

3. The statistical data analysis used for sub-project 1 & 3 was only vaguely mentioned in two sentences on page 37. I recommend that the authors provide a more detailed discussion on the the statistical analysis that will be utilized.

Reviewer 1 also suggested this revision. We have revised and expanded (with respect of length limitations) the discussion of analyses. In doing so, we outlined our analyses for our research questions for subproject 1 and 3 under the section heading RESEARCH DATA: MANAGEMENT AND ANALYSIS. Additional analyses will be conducted as part of the project and based on researchers' interest.

4. The Reference section doesn't adhere to APA format guidelines. For example, the year of publication should be in brackets directly after all the authors are named. Please remove et al. and write all the authors at the following Reference's: Reference nr's, 7; 8; 9; 10; 12; 15; 16; 17; 19; 29; 32; 33; 34; 35; 36; 37; 42; 46; 47; 57; 58; 60; 61; 62. It's only in the text that et al. is used according to APA format guidelines. I also recommend that & is used before the last author. For example: Reference 3: Lambert, EG., Alzheimer, I., & Hogan, NL. (2010).

We have ensured the manuscript is formatted according to the journal guidelines. Although we added "&" before the last author, but we did NOT incorporate the reviewers request to place year of publication in brackets directly after the authors are named. After double-checking BMJ's website and published articles, we confirmed the following: (1) the publication year must come right after the journal's name; (2) in case the source has four or more authors, et al. does apply. See below (from BMJ's website).

Journal article: 13 Koziol-Mclain J, Brand D, Morgan D, et al. Measuring injury risk factors: question reliability in a statewide sample. *Inj Prev* 2000;6:148–50.

VERSION 2 – REVIEW

REVIEWER	Willemse, Rachel
REVIEW RETURNED	University of South Africa 24-Oct-2021
GENERAL COMMENTS	There is much improvement to the manuscript. The recommended changes were adequately addressed by the authors leading to a logical flow of the manuscript.