Peer Review Report

# Review Report on Risk Perceptions, Knowledge and Behaviors of General and High-Risk Adult Populations towards COVID-19: A Systematic Scoping Review

Systematic Review, Public Health Rev

Reviewer: Andrew Kim
Submitted on: 06 Apr 2021

## EVALUATION

### Q 1    Please summarize the main theme of the review.

This scoping review aimed to examine the risk perceptions, knowledge, and behaviors of general and high-risk adult populations towards COVID-19 globally. The authors used PRISMA informed criteria for conducting scoping reviews and searched multiple databases for potential studies using specific search terms, and the search also included both preprints and published articles. Appropriate methods for screening, selection, and resolution of discrepancies between reviewers were applied, and the authors evaluated papers based on quality. Ultimately, 20 articles were selected for review, all of which were conducted between February and April 2020, a rather limited timeframe despite the original search strategy including publications between January to June 2020. Papers came from 14 countries and 4 continents excluding Latin America and Oceania as well as deeply affected countries such as Italy, Mexico, China, etc. Levels of risk perceptions, knowledge, and behaviors towards COVID-19 were moderate to high in both general and high-risk adult populations. Adults were generally knowledgeable about preventative behaviors, and discrepancies in certain preventative practices were found between general population and high risk groups. Being female, older age, and greater education were associated with better knowledge of COVID-19 and preventative behaviors.

### Q 2    Please highlight the limitations and strengths.

The authors appropriately explain important caveats to their analyses, but based on the points described below and even considering the preliminary nature of scoping reviews, I believe that the current analysis is insufficient in its design and that the quality and representativeness of reviewed studies are too limited for a paper that may have important public health contributions.

### Q 3    Please provide your detailed review report to the authors, structured in major and minor comments.

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design and that the quality and representativeness of reviewed studies are too limited for a paper that may have important public health contributions.

Abstract

– The abstracts on page 2 of the PDF constructed by the system and page 1 of the manuscript do not match – namely, the first abstract located under the author contribution statement and list of keywords does not include the conclusion statement listed in pages 1 and 2. This may be a discrepancy between the abstract added into the system vs. the one listed in the actual manuscript.

Background

– The full name for COVID-19 should be listed in the first sentence per official nomenclature of the WHO – 'Coronavirus Disease 2019'
– Please be a bit more explicit about the utility of the KAP model rather than – "identifies gaps in KAP in relation to health"
– The introduction is quite sparse and largely focuses on the contributions of two models of understanding disease perceptions and knowledge. I suggest that the authors flesh out this section to further describe the predictors of COVID-19 disease perceptions, knowledge, and behaviors; the effects of disease perceptions, knowledge, and behaviors on the primary and secondary effects of COVID-19; and further discuss the unequal distribution of COVID-19 outcomes.

Methods

– Please describe the Centers for Disease Control and Prevention's definition of high-risk groups in the Inclusion/Exclusion criteria section
– "We decided to exclude studies that did not simultaneously assess RPKB related to COVID-19, because all of the factors in combination play a role in the transmission of the virus." Could you please elaborate on this exclusion criteria as it is not clear. Were these studies that assessed RPKB but did not link such factors to COVID-19?
– Though this paper is intentional in its design as a scoping review, I believe the timeframe is too short given the number of publications, amount of information released on COVID-19 disease perceptions and knowledge worldwide, and course of the disease globally. Given the fact that COVID-19 only affected major portions of the world during and shortly after the brief window for study consideration and inclusion in the review (February–April 2020), and that research on disease perceptions and experiences may only be published 2–3 months afterwards, the approach is limited in its attempt to capture a comprehensive snapshot of the literature, even if preliminary. There are no countries in Latin America represented in the review and key sites of COVID, including Italy, Spain, China, the UK, Mexico, Iran, etc. are not included. This is not to say all listed countries need to be included, but the larger concern about selection bias affects this analysis.
– Additionally, while being cognizant about the known (and acceptable) limitations of a scoping review, I am still concerned about the quality and representativeness of the studies. A majority of studies gathered data from online surveys using convenience-based sampling strategies, which we know is a major barrier for capturing quality data in resource-limited settings and may overrepresent educated, high SES, and relatively healthy individuals. Important high-risk communities will be left of out of this review, which is a focal population of this paper.
– Finally, as the authors point out, we know that the quality of research coming out in the early days of pandemic was less than desired, understandably. But limiting the timeframe to the early months of the pandemic may select for lower quality studies. I would suggest that the authors extend their scoping review another two months or until considerable representation is achieved.

Results

– The authors do a nice job of summarizing the information across the multiple studies, but when possible, a deeper level of analysis on how and why such trends existed is needed. For instance, what were the reasons for high adherence to preventative measures and low adherence elsewhere? This is particularly relevant for the

section on 'Factors associated with RPKB towards COVID-19' – what were the purported reasons for why these factors differentially affected COVID-19 attitudes and perceptions?

– The authors should consider organizing the results based on the course of the pandemic within each country, as the severity of pandemic fluctuated considerably even over two months. This could be a short analysis described in the Results or Discussion section, and also include a reflection on how these temporal dimensions relative to the results shape their interpretation.

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**PLEASE COMMENT**

**Q 4**  **Is the title appropriate, concise, attractive?**

Yes

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**Q 5**  **Are the keywords appropriate?**

Yes

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**Q 6**  **Is the English language of sufficient quality?**

Yes

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**Q 7**  **Is the quality of the figures and tables satisfactory?**

Yes.

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**Q 8**  **Does the reference list cover the relevant literature adequately and in an unbiased manner?**

While the approach is systematic, the selection criteria has produced an unforgivable and concerning selection bias which results in the inclusion of low quality and unrepresentative studies from across the world.

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**Q 9**  **Does this manuscript refer only to published data? (unpublished data is not allowed for Reviews)**

No.

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**Q 10**  **Does the manuscript cover the issue in an objective and analytical manner**

Yes.

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**Q 11**  **Was a review on the issue published in the past 12 months?**

Yes.

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**Q 12**  **Does the review have international or global implications?**

Yes – the potential coverage and impacts of this paper are high, so I my comments are more critical than usual given the importance of this topic and the scope of the question.

## QUALITY ASSESSMENT

**Q 13**    **Quality of generalization and summary**

**Q 14**    **Significance to the field**

**Q 15**    **Interest to a general audience**

**Q 16**    **Quality of the writing**

## REVISION LEVEL

**Q 17**    **Please take a decision based on your comments:**

Major revisions.