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DATA NOTE

COVID-19 risk perceptions and precautions among the elderly: A study of CALD adults in South Australia

[version 1; peer review: 1 approved, 2 approved with reservations]

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Abstract

Background: Coping with COVID-19 is a challenge for culturally and linguistically diverse (CALD) older adults. In Australia, little attention has been given to understanding associations between cultural contexts, health promotion, and socio-emotional and mental health challenges of older CALD adults during the COVID-19 pandemic. Therefore, we have collected data from older CALD adults to examine their COVID-19 risk perceptions and its association with their health precautions, behavioural dimensions and emergency preparation.
Methods: A cross-sectional survey was conducted in South Australia. The CALD population aged 60 years and above were approached through 11 South Australian multicultural NGOs.
Results: We provide the details of 155 older CALD South Australians' demographics, risk perceptions, health precautions (problem-and-emotion-focused), behavioural dimensions and emergency preparation. The explanatory variables included demographic characteristics (age, gender, education and ethnicity); and risk perception (cognitive [likelihood of being affected] and affective dimension [fear and general concerns], and psychometric paradigm [severity, controllability, and personal impact]. The outcome measure variables were health precautions (problem-focused and emotion-focused), behavioral adaptions and emergency preparation.
Conclusions: This dataset may help the researchers who investigate multicultural health or aged care in the pandemic and or who may have interest to link with other datasets and secondary use of this primary dataset in order to develop culturally tailored pandemic-related response plan. The data set is available from Harvard Dataverse.

Keywords
Culturally and linguistically diverse community, older adults, risk perceptions, health precautions, behavioural dimensions, emergency preparedness, South Australia

This article is included in the Sociology of Health gateway.

This article is included in the Emerging Diseases and Outbreaks gateway.

This article is included in the Dignity in Aging collection.

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Author roles: Hamiduzzaman M: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; **Siddiquee N**: Conceptualization, Formal Analysis, Funding Acquisition, Investigation, Methodology, Resources, Supervision, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; **McLaren H**: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Resources, Supervision, Validation, Writing – Original Draft Preparation, Writing – Review & Editing

Introduction

The COVID-19 pandemic is a global and national health emergency, affecting many Australians' everyday lives and livelihood, including older adults.[1] Older Australians aged 65 years and above account for 15% of the country's total population, of which three in 10 were born overseas.[2] The relationships between older Australian's cultural backgrounds, health and quarantine protocols, as well as psychosocial and emotional wellbeing during the pandemic are unclear across the country, including in South Australia.

The pandemic has strained hospitals, public health and social services organizations in South Australia, as in other Australian jurisdictions, which raises concerns among older CALD adults about their health and emotional wellbeing. Older adults are more likely to be infected and die (i.e., about 78% of all COVID-19 patients who died were aged 65 years and above) than other age groups.[3,4] The risks and fear are higher for older CALD adults because of common health concerns, such as a high rate of chronic conditions and comorbidities, avoiding medical appointments and acute care, chance of delaying care; risk of community transmission due to reluctance; and prevalence of depression and anxiety because of a separation from families and friends and a restriction of movement.[5,6] They have been anticipated to experience changes in their wellbeing and quality of life during the pandemic, which have not been investigated. In addition, COVID-19 risk perceptions, psychological and emotional health-related worries and coping behaviours may vary in older CALD adults based on their age, gender, education, and ethnicity. Therefore, we have collected data from older CALD adults to examine their COVID-19 risk perceptions and their association with health precautions, behavioural adaptations and emergency preparation based on socio-demographic characteristics.

Methods

This data note presents data from a cross-sectional study in South Australia from July 1 to December 31, 2020, involving basic demographic data collection and assessment of risk perceptions, health precautions, and emergency preparedness, to understand the relationships between risks perceptions of older CALD adults with their problem- and emotion-focused precautions, behavioural coping and emergency preparedness during the COVID-19 pandemic.

Source of data

Data were collected from older CALD adults (≥60 years) through South Australian multicultural NGOs. The multicultural NGO selection process involved a primary search in the list of Australian accredited NGOs. Fifteen NGOs in South Australia were deemed appropriate for three reasons: they were accredited and active in the community; represented the majority of CALD communities; and had members of older CALD adults. The online survey (SurveyGizmo) was administered by sending an email invitation to 11 South Australian multicultural NGOs, who agreed to voluntarily distribute the participation information sheet and survey link to their older community members, resulted in 155 surveys completion. According to the Australia Bureau of Statistics, approximately 95,000 older CALD adults lived in South Australia in 2018. In our study, we aimed to approach 300 respondents based on the number of multicultural NGOs having agreed to support this study and computer illiteracy rates among the older CALD adults, which allowed for a dropout rate of less than 50%. We continued to collect data over a period of six months until we reached the saturation.

The outcome measures were health precautions (problem-focused and emotion-focused), behavioural dimensions and emergency preparation for coping with the COVID-19 crisis. The scale included nine items relating to problem-focused precautions and 10 items assessing emotional precautions. Seven behavioural dimensions items and five related to emergency preparedness during the pandemic were considered as outcome measures. The demographic characteristics and risk perception data were collected as explanatory variables. Participant demographics were categorized into: age (60-69 years, 70-79 years, and 80 years and above); gender (male and female); education (no formal education, primary school, high school, Bachelors, and Masters and above); and ethnicity (country of birth; classified as Asian, African, and non-English speaking self-nominated CALD European). We used the modified version (i.e., a 15-indicator risk perception scale) of Gerhold's (2020) COVID-19 risk perception measure, which was developed based on Slovic's (1987) psychometric concepts— a) cognitive (i.e., likelihood of being affected) and affective dimension (i.e., fear and general concerns), and b) psychometric paradigm (i.e., severity, controllability, and personal impact).

Descriptive analysis was conducted for demographics, indicators of risk perceptions, as well as the problem- and emotion-focused precautions, behavioural dimensions and emergency preparation. To examine the associations between the explanatory variables and the outcome measures, several multiple linear regression models were fitted. Multicollinearity was checked in the regression analyses by examining the tolerance values. The entire analysis was performed with STATA/MP version 13.0 (StataCorp, LP, College Station, Texas, USA).

Dataset validation

This dataset has some limitations. It is a cross-sectional study, therefore, causal inferences about the relationship between socio-demographic characteristics and risk perceptions, health precautions, behavioural adaptations, and emergency preparation could not be measured. Our study sample was not representative of all CALD communities in South Australia and the findings may not be generalised to other CALD populations, either in Australia or overseas. Also, we relied on an English-language online questionnaire for data collection, which had an influence on participation rates.

However, we employed several strategies to ensure validity and reliability of the dataset. In measuring the risk perceptions, we used Gerhold's (2020) COVID-19 risk perception scale, developed based on Slovic's (1987) psychometric concepts: a) cognitive (i.e., likelihood of being affected) and affective dimension (i.e., fear and general concerns); and b) psychometric paradigm (i.e., severity, controllability, and personal impact). The 19 indicators of health precautions, seven items of behavioural adaptations, and five items of emergency preparation scales were drawn from Folkman and Lazarus's (1988) problem- and emotion-focused coping, which have been used by scholars to measure similar outcome variables in other countries. Reliability in data items was separately checked using Cronbach's α, a commonly cited test to check internal consistency of a scale.[7] Internal consistencies were: three items of becoming infected ($\alpha = 0.9073$); two-items of fear ($\alpha = 0.8863$); nine items of problem-focused health precautions ($\alpha = 0.7964$); 10 items of emotion-induced health precautions ($\alpha = 0.7050$); seven items of behavioural adaptations ($\alpha = 0.7927$); and five items emergency preparations was 0.83 (Cronbach's $\alpha = 0.8292$).

In order to control bias, the SurveyGizmo software was used for data collection. The participants were approached and recruited by the NGOs, and they were given the opportunity to share their email address to receive a copy of study results and review.

Ethical approval

The study received ethical approval from the Flinders University Human Research Ethics Committee, Australia (Approval number: HEL2215). A group of 11 South Australian multicultural NGOs provided written informed consent in supporting the researchers for participant approach and recruitment. Informed consent for the participation was implied, as the completion of online survey was considered written informed consent. The data collected from participants were only used for this research.

Data availability

Harvard Dataverse: *COVID-19 Risk Perceptions and Precautions among the Elderly: A Study of CALD Adults in South Australia,* https://doi.org/10.7910/DVN/OUGSUC.[8]

This project contains the following underlying data:

- COVID-19 Latest Dataset.SPSS. (Contains data in SPSS of the older CALD adults' socio-demographic variable, risk perceptions, problem and emotion-focused precautions, behavioral dimensions and emergency preparation).

Acknowledgements

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PubMed Abstract | **Publisher Full Text**

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Publisher Full Text

Open Peer Review

Current Peer Review Status: ❓ ❓ ✔

Version 1

Reviewer Report 18 March 2022

https://doi.org/10.5256/f1000research.78406.r125331

✔ **Sharif Rasel**

College of Business, Government and Law, Flinders University, Adelaide, SA, Australia

Thanks for the opportunity to review this article. The authors have followed a rigorous statistical method to conduct the data analysis. However, the authors may consider to report the test of common method variance and non-response bias. Further, they may also include factor loadings of the items. In my view, the article may be considered for publication.

Is the rationale for creating the dataset(s) clearly described?
Yes

Are the protocols appropriate and is the work technically sound?
Yes

Are sufficient details of methods and materials provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: business research involving quantitative analysis

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Reviewer Report 07 March 2022

https://doi.org/10.5256/f1000research.78406.r123067

Binahayati Rusyidi iD

Padjadjaran University, Sumedang, Indonesia

The title of this study is interesting. The research is also important because the issues are understudied.

However, in my opinion, there is an inconsistency between the purpose of the study and the results. Based on the research questions, I expected to get comprehensive descriptions and analysis about factors associated with Covid-19 risk perceptions among CALD adults. The manuscript, unfortunately, provides little information about the results and discussion of the findings.

If the study is to report the results from a study, I suggest the authors do some revisions that follow the standard for publishing an empirical study.

In addition, some additional revision or clarification could be incorporated including:

a. Strengthening the position of the study within the existing knowledge about the issue. While the authors have stated that the topic covered by their research is rarely studied in Australia, it is important to see what is available globally.

b. It will be better if the authors can provide a socio-demographic description of 95,000 CALD adults in South Australia in 2018. This information can be helpful when doing the analysis of the study, for example to check whether the participants of the study proportionately or disproportionately represent the CALD adults general population.

c. It might be more helpful for the readers if the authors can provide examples of items assessed by the instruments used to measure dependent and independent variables.

d. The information for validity and reliability checking of Covid-19 risk perception measure can be moved to source of data sub-section. There is limited information about instruments used to measure outcome variables, so I assume they are self-developed instruments? Information about internal consistency tests for these instruments can be provided as well.

e. I am wondering why the length of stay in Australia and the nature of living arrangement of participants are not assessed as demographic variables in the study because I think they are possibly associated with the outcome variables. Some explanation about this?

f. The term "saturation" stated in the data collection process is usually used in qualitative research, not in quantitative study.

g. I am not clear with the term computer illiteracy rates stated in the manuscript. Did the researchers try to explain that they anticipated high rates of CALD adults who are computer

illiterate?

h. The researchers mentioned multicollinearity checking but there was no information whether multicollinearity was an issue or not.

Is the rationale for creating the dataset(s) clearly described?
Partly

Are the protocols appropriate and is the work technically sound?
Partly

Are sufficient details of methods and materials provided to allow replication by others?
Partly

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: qualitative research; social welfare

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 19 January 2022

https://doi.org/10.5256/f1000research.78406.r119644

? **Dr. Yang Wang** (iD)
Zilber School of Public Health, University of Wisconsin Milwaukee, Milwaukee, WI, USA

Thanks for inviting me to peer review this paper.

This paper reported a survey to older CALD adults about risk perceptions and precautions in South Australia. However, I still cannot understand its aim very well, because there is a contradiction between its title, research question and results: is the aim of this paper to report the finding of a cross-sectional survey or just provide a dataset?
If its aim is to provide a dataset, it is proper to be published after revision, because it can help more people to understand the situation of older CALD adults under the threat of covid-19. If its aim is to report the finding of a cross-sectional study, the authors may need to provide more information in the manuscript according to STROBE checklist.

Specifically, I suggest the authors should provide more information to readers more clearly:

(1) How many jurisdictions are there in Australia? Is the situation of older CALD adults between South Australia and other jurisdictions similar?

(2) What are the inclusion and exclusion criteria for select the participants (older CALD adults)?

(3) References 5 and 6 do not provide supportive information about the higher risk of older CALD adults. Please check it.

(4) For a cross-sectional survey, saturation is not an applicable concept (it is often used in qualitative research). What we need to know is the instrument, survey approach, sample size and sampling method, because they can decide if we can obtain reliable information representing the real situation of the target population.

(5) What are "computer illiteracy rates"? I can't understand its relationship with older CALD adults.

(6) The information about the verification of Gerhold's COVID-19 risk perception scale, Folkman and Lazarus's problem and emotion-focused coping may need to be moved to the 'Source of data' section, because it is the verification of the instrument. The validation of the dataset may be different to the validation of the instrument. Please read: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6395976/

(7) If the aim of this paper is only to provide a dataset, it seems unnecessary to use multiple linear regression to calculate the causal relationship between factors.

Best wishes

Is the rationale for creating the dataset(s) clearly described?
Yes

Are the protocols appropriate and is the work technically sound?
Partly

Are sufficient details of methods and materials provided to allow replication by others?
Partly

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Science of science and research method for primary care research

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have

significant reservations, as outlined above.

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