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Research Questions
The aim of this study is to investigate the relationships between exposure to COVID-19 (including social distancing, self-isolation and risk communication) and mental health and wellbeing in the community. Our three primary research questions are:

1. What is the effect of COVID-19 and associated isolation/quarantine on the mental health and wellbeing trajectories in the community?
2. What are the factors that could be modified to support mental health and wellbeing in the community during a pandemic?
3. What is best practice for public communication to minimise negative effects on mental health?

Problem and Significance
The COVID-19 outbreak has already reached many parts of Australia, and the number of people infected is expected to rapidly increase over the next few weeks and possibly months, causing considerable societal impacts. Social distancing, self-isolation and increased personal hygiene are current recommended public health practices to limit the spread of COVID-19 throughout Australia. While these methods are important to reduce the spread of COVID-19, the mental health implications of these practices and how they are communicated have not yet been considered. The Department of Health has produced guidelines to encourage people in isolation to stay connected to reduce stress, however there is no research concerning the effects of enforced isolation and perceived COVID-19 risks on mental health and wellbeing in the population. The mainstream media and social networks are flooded with COVID-19 content and varying messages about levels of risk. In this context, it is unsurprising that many Australians are anecdotally reporting high levels of stress and anxiety.

Method
Design: Longitudinal study: 30 minute baseline survey with six follow-up surveys (15-20 minutes) administered fortnightly. Contingent on funding, additional follow-up surveys in the longer-term (at 6-9 months post-baseline) will also be conducted.

Sample: We recruited a nationally-representative sample of 1296 Australian adults aged 18-91, using quota sampling via Qualtrics Research Services. The study aims to retain a final sample of N=600 at Wave 7, given attrition is estimated at >50% over the course of this longitudinal study. This number of participants will allow us to examine small effects within subgroups (e.g., 80% power to find an effect of d=0.33 between uneven subgroups of ratio 1:4) and allow for identification of up to 6 distinct trajectories of mental health, accounting for attrition over time. Participants were recruited using quota sampling to ensure representativeness at baseline on the bases of age group, gender and location (States/Territories of Australia).

Survey content: Participants are asked to complete questions about their demographics, mental health physical and psychological factors (including mood and personality), affective functioning, media consumption, and attitudes towards risk, and behavioural changes they are making in response to COVID-19. Where possible, the survey uses established and validated questionnaire items, and/or experimental methods that are well-established in the labs of team members. Follow-up surveys will include core content around mental health, COVID-19 exposure and risk communication, along with some repeat measures and some novel measures to explore additional factors associated with COVID-19 and mental health outcomes. Parallel to the surveys,
information about major media stories, COVID-19 relevant events, the nation’s search trend, and implementations of new COVID-19 relevant governmental policies will be collected and collated. The impacts of these developments will be investigated by integrating this information with the survey data over time.

**Procedure:** Participants complete a 30 minute baseline survey and then a 15-20 minute follow-up survey every 2 weeks for up to 12 weeks in total, conducted fully online. Follow-up surveys will contain core scales and a subset of other relevant scales.

**Measures:** Measures that will be used are categorised below.

- Mental health (PHQ-9, GAD-7, DQ5) and wellbeing (WHO-5), based on standardised measures for depression, generalised anxiety, distress, wellbeing and daily functioning
- Demographic characteristics
- Questions concerning exposure to COVID-19 including isolation/quarantine (duration and perceived impacts)
- Work activity, including type of employment, ability to work from home
- Media and information consumption
- Financial status and financial burden of COVID-19
- Personality indicators and mastery
- Attitudes, knowledge and practices related to COVID-19
- Risk attitudes
- Social/physical activity and loneliness
- General health including diseases
- Impact from recent bushfires or smoke to investigate effect of cumulative trauma
- Qualitative (open-ended) items about perceived positive and negative impacts of COVID-19

**Ethical approval**
The ethical aspects of the study have been approved by the Australian National University (protocol 2020/152).

**Status**
The project completed baseline data collection between 28-31 March 2020, with a total baseline sample of N=1296. Six follow-up surveys administered fortnightly have also been completed in June 2020.

**Outcomes and outputs**
This study will contribute to the dearth of knowledge concerning the mental health effects arising from self-isolation and quarantine. Knowledge gained from this research will be used in practice to support the community in self-isolation during COVID-19 and future crisis situations. It will also guide the development of policy concerning social distancing and self-isolation to ensure mental wellbeing is also considered. The findings of this study are anticipated to be of use to policy makers, health professionals, and the community. As such, results will be communicated via policy briefs suitable for government and medical audiences, scientific articles, and community engagement pieces (e.g., in popular media), including via the ANU website.

Findings will contribute to a number of practical outputs, including:

1. Quantifying the prevalence of increased mental health problems related to the pandemic,
2. Identification of individuals most at risk of poor mental health and wellbeing outcomes during an infectious disease pandemic,
3. Guidance for the development and delivery of interventions (including online interventions) to support mental health in the community during a pandemic,
4. Guidance for optimal health communication practices for policymakers, journalists and clinicians, and,
5. Identification of community needs and preferences for support during a pandemic.

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