Supplementary Material

Symptoms of anxiety, depression and fear in healthcare workers and non-healthcare workers undergoing outpatient COVID-19 testing in an urban Australian setting

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Methods S1

This cross-sectional study assessed psychological outcomes using validated self-administered web-based questionnaires in people attending for COVID-19 testing. The study was approved by Western Sydney Human Research Ethics committee (Ref: HREC 2020/ETH01071).

Participants were aged ≥18 years, triaged as meeting the criteria for testing at a COVID-19 testing clinic (symptomatic or close contact of a confirmed case of COVID-19) in a large public hospital and able to complete questionnaires in English on a mobile device. A participant information sheet was provided by nursing or administration staff on arrival. Interested participants scanned a QR code on the information sheet using their mobile phone to gain access to the on-line consent and study questionnaires.

Demographic data were collected including age, gender, occupation, level of education and previous testing. For this study, 'health care worker' was defined as a person performing any role within a health institution. Occupation was classified according to Australian Bureau of Statistics sub-categories (Australian Bureau of Statistics 2019).

Anxiety and depression were measured using the Hospital Anxiety and Depression Scale (HADS)(Zigmond and Snaith 1983). The scale has 7 anxiety questions and 7 depression questions and the scales are reported separately. Scores range from 0–21, with a higher score indicating higher psychological morbidity (0–7 normal, 8–10 mild case, 11–21 moderate/severe case). The HADS questionnaire asks for reporting of symptoms over the preceding 7 days. COVID-19 related anxiety was measured using the Fear of COVID-19 Scale, a measure developed and validated early in the pandemic (Ahorsu *et al.* 2020; Soraci *et al.* 2020). It has been validated in English and for on-line use in a New Zealand population (Winter *et al.* 2020) and it has now also been validated in an Australian multicultural population that included 42% health care workers (Rahman *et al.* 2020; Rahman *et al.* 2021). The scale has 7 questions with a 5-point Likert scale. Scores range from 7–35 with a higher score indicating a greater level of fear.

Data were collected on the survey website, downloaded at the completion of recruitment and exported to SAS and SPSS for analysis (SAS (Version 9.4); SPSS (Version 27)). Descriptive statistics were used to describe participant characteristics and a chi square test was used to test for differences between HCWs and non-HCWs. For Anxiety and Depression questionnaire data, logistic regression with a binomial distribution and log link

function was performed on dichotomised outcomes ('non-case' vs 'case-borderline/moderate-severe) to estimate relative risks (PROC GENMOD in SAS), and for Fear of COVID-19 linear regression on total scale score was performed using generalised linear models (PROC GLM). Variables that were statistically significant at p<0.10 in univariable analyses were included in multivariable model selection. Two-way interactions were explored for variables that were significant in multivariable models. A p-value of ≤0.05 was considered statistically significant.

References

Ahorsu, DK, Lin, CY, Imani, V, Saffari, M, Griffiths, MD, Pakpour, AH (2020) The fear of covid-19 scale: Development and initial validation. *International journal of mental health and addiction* 1-9.

Australian Bureau of Statistics, 2019. Australian and new zealand standard classification of occupations version 1.3.

Rahman, MA, Hoque, N, Alif, SM, Salehin, M, Islam, SMS, Banik, B, Sharif, A, Nazim, NB, Sultana, F, Cross, W (2020) Factors associated with psychological distress, fear and coping strategies during the covid-19 pandemic in australia. *Global Health* **16**, 95.

Rahman, MA, Salehin, M, Islam, SMS, Alif, SM, Sultana, F, Sharif, A, Hoque, N, Nazim, NB, Cross, WM (2021) Reliability of the tools used to examine psychological distress, fear of covid-19 and coping amongst migrants and non-migrants in australia. *Int J Ment Health Nurs* **30**, 747-758.

SAS (Version 9.4) (sas, cary, nc).

Soraci, P, Ferrari, A, Abbiati, FA, Del Fante, E, De Pace, R, Urso, A, Griffiths, MD (2020) Validation and psychometric evaluation of the italian version of the fear of covid-19 scale. *International journal of mental health and addiction* 1-10.

SPSS (Version 27) (IBM, new york, USA).

Winter, T, Riordan, BC, Pakpour, AH, Griffiths, MD, Mason, A, Poulgrain, JW, Scarf, D (2020) Evaluation of the english version of the fear of covid-19 scale and its relationship with behavior change and political beliefs. *International journal of mental health and addiction* 1-11

Zigmond, AS, Snaith, RP (1983) The hospital anxiety and depression scale. *Acta Psychiatr Scand* **67**, 361-370.