**Systematic review**

# Mental health conditions of pandemic healthcare workers: findings from a systematic review and meta-analysis

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**Commentary on:** Hill J-E, Harris C, Danielle L-C, Boland P, Doherty A-J, Benedetto V, Gita BE, Clegg A-J. The prevalence of mental health conditions in healthcare workers during and after a pandemic: Systematic review and meta-analysis. *J Adv Nurs*. 2022;78:1551–1573. doi: 10.1111/jan.15175. Epub 2022 Feb 12.

## Implications for practice and research

► Many healthcare workers experience serious mental health conditions during pandemics.
► Further research is needed to determine which staff are most vulnerable to poor mental health, and how staff may be supported during pandemics.

## Context

During pandemics, front-line staff face significant detriments to their well-being, such as rapidly changing work environments, high numbers of patient deaths and fears of contracting illness.[1] It is therefore essential to evaluate the impact that pandemics have on those working in the healthcare sector. This would allow interventions to be developed to support front-line staff. Previous reviews on this topic area focused on specific pandemics,[2] or on studies lacking consistency.[3]

## Methods

A systematic review and meta-analysis was carried out to explore the prevalence, incidence and moderating factors of mental health conditions of healthcare staff during and after pandemics.[4] Searches were done in MEDLINE, Embase, The Cochrane Library and PyscINFO on 31 March 2020 (from inception to 31 March 2020). Studies were only considered if they reported rates with validated diagnostic scales or clinical diagnoses. Considerable heterogeneity was expected so a random effects model was used, except for primary papers with only two studies, in which fixed effects models were used. Heterogeneity was explored using $I^2$ statistics, and descriptive analysis was carried out to identify significant moderators and confounders. Factors that may influence mental health were pre-identified in the study protocol. These included: time period in relation to the pandemic, age, country, income and clinical setting.

## Findings

In total, 43 studies across five pandemics were included, the majority of which were SARS (n=30) followed by COVID-19 (n=6). No studies reported incidence rates. PTSD was the most prevalent disorder, with a pooled estimate of 21.7% (95% CI: 13.3% to 30.0%). Next was anxiety disorders at 16.1% (95% CI: 10.9% to 21.2%) followed by major depressive disorders at 13.4% (95% CI: 9.8% to 16.9%). Level of exposure, which describes the likelihood that a staff member comes into contact with the disease,[4] was found to be a significant moderating factor for all the major disorders. Other factors included being female and job roles, geographical location and place of work.

## Commentary

The paper demonstrated that many healthcare workers experience mental health conditions during pandemics, and some groups appear to be particularly vulnerable. Studying a range of pandemics together may illuminate comparisons across time, disease and geographical location. This may provide guidance to organisations and allow staff to better prepare for future outbreaks.

The paper highlighted the need to support the metal health of staff during pandemics. Various interventions have been developed and described in the literature. A feasibility study involving a short, web-based course was carried out with 554 employees in a large healthcare system in Boston, USA.[5] Participants watched a series of videos on mindfulness, mentalisation and self-compassion, and this resulted in significantly lower levels of emotional distress and improvements in resilience. Other interventions have been more tailored to individual needs. For example, Solomonov et al[6] evaluated the effect of telehealth sessions with front-line healthcare workers in New York. Treatment and follow-up plans were carried out with participants, and appeared to significantly lower symptoms of anxiety and depression. Further research is needed to determine the cost-effectiveness of such programmes and explore interventions in mid-income to lower-income countries. However, there is also evidence to suggest that staff value factors such as social support and job security over psychological interventions.[1]

Stressful healthcare environments result in poor morale, frequent absences and low retention rates.[1] This impairs the delivery of effective, high-quality patient care. We must therefore provide healthcare workers with consistent, high-quality and accessible forms of psychological support. This is particularly important during a global pandemic, in which the increased need for healthcare places greater demands on staff.

**Competing interests** None declared.

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