

Healthcare worker job burnout, anxiety and depression: A one-year comparison during COVID-19 in Singapore

Dear Editor,

The mental health of our healthcare workforce has never been as scrutinised as it has the last three years since the COVID-19 pandemic. Worldwide, appreciation of healthcare workers (HCWs) as the first line of defence during the pandemic soared, even as studies of HCW mental wellness increased exponentially.^{1,2} Our prior study in March 2020 found that 33%, 13% and 24% of HCWs in Singapore experienced elevated symptoms of perceived stress, anxiety and job burnout, respectively, and in six months saw a 1.0% increase in stress and 1.2% increase in job burnout.³

But what of the longer-term effects? There are few long-term studies that have quantified the effects of the protracted pandemic on HCWs' mental well-being, which is what we sought to do. We measured changes in the proportion of HCWs reporting job burnout, anxiety and depression from mid-2020 to mid-2021 during the COVID-19 pandemic in Singapore. We also examined the extent to which job factors, HCW-perceived work conditions, demographic factors and vaccination status predicted the psychological outcomes of interest controlling for baseline functioning.

The study data consisted of a subset of HCWs who completed the one-year follow-up electronic survey ($n=634$), drawn from a convenience sample of doctors, nurses and allied health professionals in 4 Singapore tertiary hospitals. We used ultra-short screeners comprising the one-item job burnout question from the Physician Work Life Scale, the Generalized Anxiety Disorder-7 (GAD-7) scale and the Patient Health Questionnaire-2 (PHQ-2) to measure depression symptoms. We compared changes in outcomes and factors of interest from 2020 to 2021 of the same group of HCWs using conditional logistic regressions with time as the independent variable. In order to identify predictors of burnout, anxiety and depression in 2021, we utilised logistic regressions that simultaneously examined current job factors (occupation, contact with COVID-19 cases, work night shifts) and HCW-perceived work conditions (job risk, work longer than usual hours, clarity of work protocols, teamwork, feeling appreciated at work), controlling for burnout, anxiety and depression in 2020. We were particularly interested in whether job factors and perceived work condition that were recently changed versus a sustained condition had different effects on outcomes of interest. For example, we

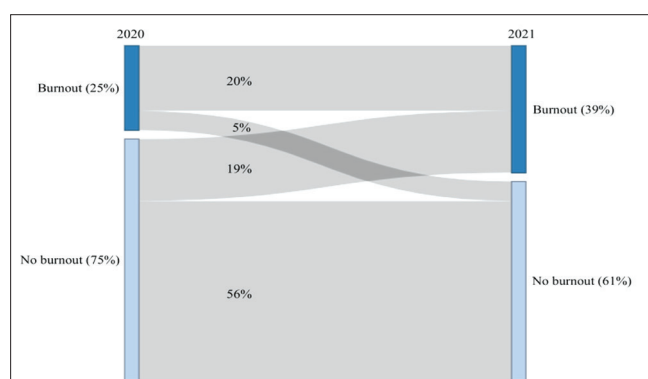
distinguished those who reported working longer hours in both 2020 and 2021 (sustained) from those who reported working longer hours in 2021 but not 2020 (recent increase).

We found that job burnout, anxiety and depression were reported by 39%, 18% and 16% in 2021, which increased from 25% ($P<0.01$), 14% ($P=0.02$) and 12% ($P=0.03$) in 2020. The rate of job burnout had a distinct increase (by 14 percentage points [pp]) compared to anxiety and depression (4pp each). These increases are likely due to the protracted pandemic. See Fig. 1A–C.

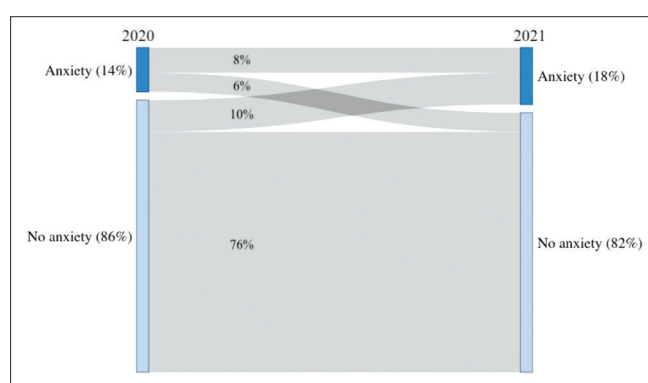
Furthermore, burnout was predicted by recently increased and sustained levels of longer working hours (OR= 2.52, 95% CI [1.40–4.52] and 2.60 [1.55–4.40], respectively). Anxiety was predicted by sustained longer working hours (2.60 [1.47–4.60]) and depression was predicted by sustained night shift work (2.15 [1.06–4.39]). Perceiving good teamwork (0.38 [0.17–0.84], 0.30 [0.18–0.51]) and feeling appreciated at work (0.37 [0.17–0.81], 0.26 [0.15–0.44]) that is recent or sustained decreased the odds of job burnout. Sustained feeling of appreciation decreased the odds of anxiety (0.46 [0.24–0.87]) and depression (0.30 [0.15–0.57]). Put together, recent and sustained change in work conditions were associated with job burnout, while only sustained changes (i.e. HCWs reported them in both 2020 and 2021) were associated with anxiety and depression; our findings suggest a lower threshold for effects on job burnout compared to anxiety and depression. This may explain the greater increase in job burnout as compared to anxiety and depression within a year.

It is worth highlighting that working longer-than-usual hours (a more practical, logistical aspect of work) and feeling appreciated at work and perceiving teamwork (work culture aspects) were associated with HCW outcomes. Feeling appreciated at work emerged as an important protective factor; it decreased the odds of job burnout, anxiety and depression by 2–4 folds. Despite the majority of HCWs reporting that they felt appreciated at work, we saw a decrease in the proportion over time, perhaps reflecting the challenge of sustaining these feelings in a protracted pandemic. Interestingly, feeling appreciated only had a significant effect on anxiety or depression when sustained (so, no “quick fixes”). Our findings highlight the need to inculcate and maintain a work culture of appreciation for HCW

(A) Burnout



(B) Anxiety



(C) Depression

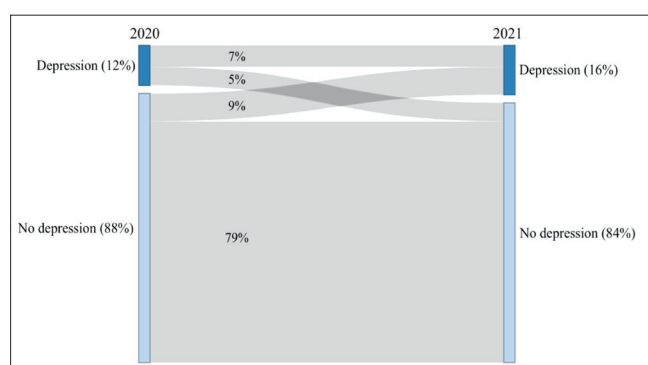


Fig. 1 (A to C). Changes in burnout, anxiety and depression rates from 2020 to 2021, in our study sample of doctors, nurses and allied health professionals.

well-being.

Another protective factor that decreased the odds of job burnout was the perception of good teamwork. Being able to trust one's team, having aligned goals and engaging in open and constructive communication undoubtedly makes a HCW's job easier during a pandemic where there are higher volumes of patients

to attend to and additional safety protocols.⁴ However, we also saw that HCWs reported a significant decrease in teamwork in the last year, potentially reflecting the policies in place to minimise social interactions among HCWs for safety purposes.

Neglecting HCW well-being can lead to workforce attrition, with trickle-down effects that impact patient outcomes and quality of patient care.⁵ Our previous qualitative examination of HCW unmet needs indicate multifaceted suggestions that begin at addressing manpower, workload and rest.⁶ Additionally, giving HCWs more control over their working hours and flexibility in taking leave, could provide a sense of self-agency and mitigate the perception of working longer hours than usual.

The pandemic has challenged how we can provide support to HCWs. Nonetheless, there are various ways to harness technology to enable meaningful interpersonal connections. A supportive work environment may be cultivated through online platforms where HCWs can seek support and social connectivity (e.g. training peer supporters, team-based debriefing, self-help resources) or encouragement of self-care (e.g. through mindfulness practice or use of apps to reduce mental exhaustion and improve emotional regulation).⁹⁻¹⁰

Our one-year comparison offers a unique perspective of psychological well-being of HCWs during an unprecedented pandemic. We hope that our findings continue to spur the monitoring and care of HCW mental health even as we exit the pandemic.

Funding

The authors acknowledge the support of the Pandemic Impact and Resilience Fund by the Musim Mas Group, through the Singapore General Health Hospital Development Fund (grant no. FRGR01PNDM20) to Dr. Tan Hiang Khoo.

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