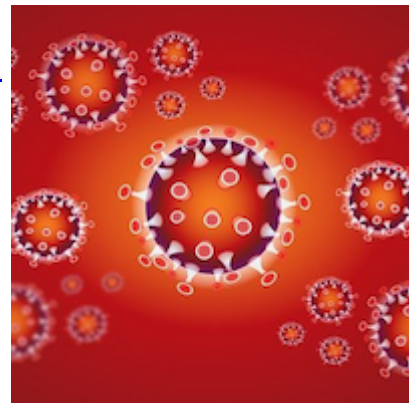


# COVID-19 Affects Mental Health of Nurses, Frontline Workers More Than Others

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Frontline healthcare workers, women, and nurses exposed to [coronavirus disease 2019 \(COVID-19\)](#) are at a greater risk of developing unfavorable [mental health outcomes](#), according to new research.

Due to the toll COVID-19 is taking on both patients and providers alike, Jianbo Lai, MSc, and a team of China-based investigators used data from >1200 healthcare workers to assess the magnitude of mental health outcomes and associated factors among those treating patients who were exposed to the virus in China.



The team found that among the Chinese workers exposed to COVID-19, women, nurses, those in Wuhan, and frontline healthcare workers had a greater risk of worsening mental health outcomes than average.

The findings suggested that such individuals may need psychological support or interventions.

Lai, from the Department of Psychiatry at Zhejiang University School of Medicine in Hangzhou, China, and colleagues collected demographic data and mental health measurements from 1257 healthcare workers in 34 hospitals in China from January 29, 2020 to February 3, 2020. The investigators included healthcare workers in hospitals equipped with fever clinics or wards for patients with COVID-19.

Participants self-reported demographic data, including occupation (physician or nurse); sex; age (18-25, 26-30, 31-40, or >40 years old); marital status; educational level ( $\leq$ undergraduate or  $\geq$ postgraduate); technical title (junior, intermediate, or senior); geographic location (Wuhan, Hubei province outside Wuhan, or outside Hubei province); place of residence (urban or rural); and type of hospital (secondary or tertiary).

Each participant also noted whether they were directly engaged in clinical activities or diagnosing, treating, or providing nursing care to patients who had elevated temperature or patients with confirmed COVID-19.

The team focused on symptoms of [depression](#), anxiety, [insomnia](#), and distress by using measurement tools including: the nine-item Patient Health Questionnaire (range, 0-27); the seven-item Generalized Anxiety Disorder scale (range, 0-21); the seven-item Insomnia Severity Index (range, 0-28); and the 22-item Impact of Event Scale-Revised (range, 0-88).

Among the 1257 participants, 39.2% were physicians and 60.8% were nurses, and 60.5% worked in Wuhan. A majority of the respondents were women (76.7%); were aged 26-40 years old (64.7%); were married, widowed,

or divorced (66.7%); had an educational level of undergraduate or less (75.8%); had a junior technical title (55.6%); and worked in tertiary hospitals (74.2%).

What's more, 41.5% were frontline workers directly engaged in diagnosing, treating, and caring for patients with or suspected of having COVID-19.

Half of participants (50.4%) had symptoms of depression, while 44.6% had anxiety symptoms, 34% had symptoms of insomnia, and 71.5% showed signs of distress.

Nurses, women, frontline workers, and those in Wuhan self-reported experiencing more severe symptoms levels (severe depression among physicians vs nurses: 24 [4.9%] vs 54 [7.1%];  $P = .01$ ; severe anxiety among men vs women: 10 [3.4%] vs 56 [5.8%];  $P = .001$ ; severe insomnia among frontline workers vs second-line workers: 9 [1.7%] vs 3 [.4%];  $P < .001$ ; severe distress among workers in Wuhan vs Hubei outside Wuhan and outside Hubei: 96 [12.6%] vs 19 [7.2%] among participants in Hubei outside Wuhan and 17 [7.2%] among those outside Hubei;  $P < .001$ ).

A multivariable logistic regression analysis showed frontline workers engaged in diagnosis, treatment, and care of patients with COVID-19 had higher risk of depression symptoms (OR, 1.52; 95% CI, 1.11-2.09;  $P = .01$ ); anxiety (OR, 1.57; 95% CI, 1.22-2.02;  $P < .001$ ); insomnia (OR, 2.97; 95% CI, 1.92-4.6;  $P < .001$ ); and distress (OR, 1.6; 95% CI, 1.25-2.04;  $P < .001$ ).

During this time of a global pandemic, it is essential to protect healthcare workers, the investigators wrote. Interventions to promote mental well-being for workers exposed to COVID-19 need to be implemented, with particular attention to women, nurses, and frontline workers, they suggested.

The study, "[Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019](#)," was published online in *JAMA Network Open*.