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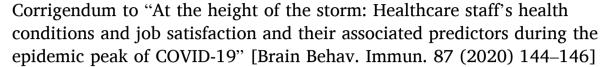
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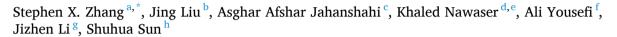
## Brain Behavior and Immunity

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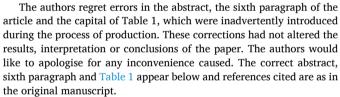


## Corrigendum





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## Abstract

This study reports the physical health, mental health, anxiety, depression, distress, and job satisfaction of healthcare staff in Iran when the country faced its highest number of total active COVID-19 cases. In a sample of 304 healthcare staff (doctors, nurses, radiologists, technicians, etc.), we found a sizable portion reached the cutoff levels of disorders in anxiety (30.6%), depression (28.0%), and distress (20.1%). Age, gender, education, access to PPE (personal protective equipment), healthcare institutions (public vs. private), and individual status of COVID-19 infection each predicted some but not all the outcome variables of SF-12, PHQ-4, K6, and job satisfaction. The healthcare workers varied

greatly in their access to PPE and in their status of COVID-19 infection: negative (69.7%), unsure (28.0%), and positive (2.3%). The predictors were also different from those identified in previous studies of health-care staff during the COVID-19 crisis in China. This study helps to identify the healthcare staff in need to enable more targeted help as healthcare staff in many countries are facing peaks in their COVID-19 cases.

The mental health composite of SF-12 was 26.3 (7.5), significantly lower (p < 0.001) than those reported in three previous studies of 46.3 (10.4), 44.2 (10.8), and 44.6 (11.9) respectively (Montazeri et al., 2009; Rohani et al., 2010; Montazeri et al., 2011). The physical health composite of SF-12 was 40.7 (7.0), also significantly lower (p < 0.001; p < 0.001; p < 0.05) than reported in the above studies of 50.1 (8.5), 48.2 (8.2), and 42.3 (11.4). A sizable percentage of healthcare staff reached the cutoff values for mental disorder concerns on distress (20.1% by K6), depression (28.0% by PHQ-4), and anxiety (30.6% by PHQ-4).

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 Table 1

 Descriptive statistics and risk factors of the health conditions (SF-12, PHQ-4 and K6) and job satisfaction among healthcare staff (\*p < 0.05).</td>

| Variables (N = 304)                              |  | Mean + s.d. or<br>No. (%)  | Physical health (SF-12)<br>β(95%CI)        | Mental health (SF-12)<br>β(95%CI)      | Anxiety (PHQ-4)<br>β(95%CI)              | Depression (PHQ-4)<br>β(95%CI)           | Distress (K6)<br>β(95%CI)                 | Job satisfaction<br>β(95%CI)           |
|--|--|--|--|--|--|--|---|--|
| Mean + s.d.<br>Age                               |  | $35.1 \pm 9.1$   | $40.7 \pm 7.0$ $-0.061$ $(-0.174; -0.052)$ | 26.3 ± 7.5<br>0.230*<br>(0.106; 0.355) | $2.0 \pm 1.5$ $-0.021$ $(-0.044; 0.001)$ | $2.1 \pm 1.4$ $-0.020$ $(-0.040; 0.000)$ | $14.8 \pm 5.3$ $-0.038$ $(-0.115; 0.040)$ | 3.3 ± 0.7<br>-0.004<br>(-0.015; 0.007) |
| Gender   | Male   | 126 (41.4%)  |  |  |  |  |   | reference                              |
|  | Female   | 178 (58.6%)  | 1.040<br>(-0.865; 2.944)                   | 0.110<br>(-1.995; 2.214)               | 0.354<br>(-0.016; 0.723)                 | 0.457*<br>(0.117; 0.796)                 | 2.140*<br>(0.851; 3.429)                  | -0.052<br>(-0.235; 0.130)              |
| Marital status                                   | Single Married without child Married with one child Married with more than one child Others (i.e. divorced)                    | 114 (37.5%)<br>57 (18.7%)<br>61 (20.0%)<br>69 (22.7%)<br>3 (1.0%)            | 0.030<br>(0.865; 0.925)                    | -0.225<br>(-1.214; 0.764)              | -0.004<br>(-0.170; 0.163)                | 0.030<br>(-0.124; 0.183)                 | -0.124<br>(-0.706; 0.458)                 | 0.031<br>(-0.051; 0.113)               |
| Education level                                  | Under diploma Diploma (12 years) 2-years college Graduated or studying a bachelor degree Graduated or studying a master degree | 7 (2.3%)<br>7 (2.3%)<br>21 (6.9%)<br>37 (12.2%)<br>143 (47.0%)<br>43 (14.1%) | 0.977*(0.204; 1.750)                       | -0.902*<br>(-1.757; -0.047)            | 0.058<br>(-0.091; 0.207)                 | 0.115<br>(-0.022; 0.252)                 | 0.084<br>(-0.436; 0.604)                  | 0.026<br>(-0.047; 0.100)               |
|  | Graduated or studying a doctoral degree  | 53 (17.4%)   |  |  |  |  |   |  |
| Access to PPE (Personal<br>Protective Equipment) | Never<br>Rarely<br>Sometimes<br>Very often<br>Always   | 14 (4.8%)<br>45 (15.4%)<br>89 (30.5%)<br>78 (26.7%)<br>66 (22.6%)            | 1.875*<br>(1.027; 2.724)                   | -0.404<br>(-1.342; 0.534)              | -0.069<br>(-0.223; 0.085)                | -0.084<br>(-0.226; 0.057)                | -0.570*<br>(-1.107; -0.033)               | 0.150*<br>(0.074; 0.226)               |
| Public or private institution                    | Public   | 223 (73.4%)  |  |  |  |  |   | reference                              |
|  | Private  | 81 (26.6%)   | 0.193<br>(-1.895; 2.281)                   | 2.349*<br>(0.041; 4.657)               | -0.128<br>(-0.521; 0.264)                | -0.006<br>(-0.367; 0.355)                | 0.603<br>(-0.768; 1.973)                  | -0.079<br>(-0.273; 0.116)              |
| COVID-19 infection                               | Negative   | 212 (69.7%)  |  |  |  |  |   | reference                              |
|  | Unsure   | 85 (28.0%)   | -1.081<br>(-3.074; 0.912)                  | -0.727<br>(-2.923; 1.476)              | 0.688*<br>(0.303; 1.073)                 | 0.449*<br>(0.094; 0.803)                 | 1.649*<br>(0.304; 2.995)                  | 0.260*<br>(-0.451; -0.070)             |
|  | Positive   | 7 (2.3%)   | -3.482<br>(-9.992; 3.027)                  | 1.807<br>(-5.388; 9.002)               | 0.157<br>(-0.956;1.271)                  | -0.193<br>(-1.217; 0.830)                | 1.481<br>(-2.406; 5.367)                  | 0.191<br>(-0.360; 0.741)               |