

## Original Research Article

# Mental Health of Health Workers during the COVID-19 Pandemic: A Cross-Sectional Study

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**Abstract:** The Covid-19 pandemic has caused panic and a global mental health burden as well as provides potential negative impacts on the health workers who are at risk of experiencing psychological disorders as well as other mental health symptoms. This study aims to determine the mental health of health workers who worked during the Covid-19 pandemic in hospitals. **Methods:** This cross-sectional study was conducted online in December 2021 on 213 health workers serving at a Regional General Hospital. **Results:** The results showed a significant relationship between age, income, the number of children, history of illness, employment status, and other occupations with the incidence of depression in health workers. Moreover, there was a significant relationship between gender, history of illness, and years of service with the incidence of anxiety. A significant relationship was also found between a history of illness and other occupations with the incidence of stress in health workers. **Conclusion:** All variables had no significant relationship with the mental health of health workers; therefore, it is necessary to carry out an initial screening on the major cause of mental health problems in health workers.

**Keywords:** Mental Health, Health Workers, Covid-19.

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## STUDY BACKGROUND

The increasing cases of Covid-19 have caused a crisis in health problems in the world, and this pandemic has greatly impacted the mental health of health workers who are on the front line of action (Bai *et al.*, 2017; Satgas, 2021). The high number of needs for medical workers who are directly involved with the care of Covid-19 patients causes health problems such as fatigue and mental problems including depression, anxiety, and stress with mild to severe levels (Pappa *et al.*, 2021). This fatigue can arise when there is physical and psychological work, poor social relations, prolonged work duration, and a high level of contact with stressors at work (Chung, Sum, Sc, Chan, & Soc, 2019; Roslan, Saiful, Yusoff, Asrenee, & Morgan, 2021; Zerbini, G., Ebigbo, Reicherts, Kunz, & Messman H., 2020). Fatigue affects workers' quality of life which leads to problems with mental disorders, lethargy, pressure, turnover, and occupation dissatisfaction, which mostly influences individual work performance (Amin, 2014). Jalili *et al.*, (2021) found that the prevalence of fatigue in health workers who handled Covid-19 patients was more frequent due to factors such as age, gender, marital status, number of

children, type of work, workload, experience, and place of work. A similar study also found that burnout and fatigue affect individual nurses who tend to experience psychosomatic, behavioral, emotional, and attitude problems (Adriaenssens, Gucht, & Maes, 2012; El Haj *et al.*, 2020). Therefore, it is necessary to investigate fatigue caused by a large number of nurses' needs during the pandemic.

## METHODS

### Study Design and Sample

This cross-sectional study was conducted online from 16 to 21 December 2021 on 213 health workers serving at the Bireuen Regional General Hospital.

### Measurement

Google form was used to measure each study variable including socio-demographic information such as age, gender, education level, number of children, employment status, while mental health was measured using the Depression, Anxiety and Stress 21 (DASS21) questionnaire consisting of 21 items with a score of 0-3

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ranging from 0= Not at all, 1 = sometimes, 2= often, 3= always.

## STATISTICAL ANALYSIS

Descriptive statistics were used for socio-demographic variables including age, gender, education level, number of children, employment status, as well as the DASS 21 questionnaire. The relationship between socio-demographic variables and DASS 21 was assessed using the chi-square test, then data were analyzed using SPSS software.

## RESULTS

### Socio-Demography Relationship with Depression Problem in Health Workers

Among 213 respondents, the characteristics including gender, income, number of children, history of illness, work status, and other occupations had a significant relationship with depression. A total of 112 respondents (52.6%) aged  $\geq 41$  years, 126 (59.2%) earn  $> IDR 3,000,000$ , 57 (26.8%) do not have children, 184 (68.4%) have no history of illness, 133 (62.4%) are civil servants, and 172 (80.0%) do not have other occupations as shown in Table 1. The results also showed that gender, history of illness, and years of service had a significant relationship with anxiety. A total of 140 respondents (65.7%) were women, 184 (86.4%) had a history of illness, and 171 (80.3%) had a long tenure as shown in Table 2. Based on the analysis results, the history of illness and additional occupations had a relationship with stress. A total of 184 respondents (86.4%) had no history of illness and 172 (80.8%) had no other occupations as shown in Table 3.

**Table-1: Demographic data and Depression problem in health workers**

| No | Characteristics          | Depression  |               |             |               | X2     | P-value |
|----|--------------------------|-------------|---------------|-------------|---------------|--------|---------|
|    |                          | Total n (%) | Normal, n (%) | Mild, n (%) | Medium, n (%) |        |         |
| 1. | Age $\geq 41$ Years      | 112 (52.6%) | 93 (83.0%)    | 18 (16.1%)  | 1 (0.9%)      | 7.799  | 0.020   |
|    | < 41 Years               | 101 (47.4%) | 79 (78.2%)    | 13 (12.9%)  | 9 (8.9%)      |        |         |
| 2. | Income $> IDR 3.000.000$ | 126 (59.2%) | 101 (80.2%)   | 23 (18.3%)  | 2 (1.6%)      | 9.260  | 0.010   |
|    | $\leq IDR3.000.000$      | 87 (40.8%)  | 71 (81.6%)    | 8 (9.2%)    | 8 (9.2%)      |        |         |
| 3. | Number of children       | 57 (26.8%)  | 41 (71.9%)    | 8 (14.0%)   | 8 (14.0%)     | 16.532 | 0.011   |
|    | No children yet          | 39 (18.3%)  | 34 (87.2%)    | 4 (10.3%)   | 1 (2.6%)      |        |         |
|    | 1 child                  | 42 (19.7%)  | 36 (85.7%)    | 6 (14.3%)   | 0 (0.0%)      |        |         |
|    | 2 children               | 75 (35.2%)  | 61 (81.3%)    | 13 (17.3%)  | 1 (1.3%)      |        |         |
| 4  | Disease history          | 29 (13.6%)  | 14 (48.3%)    | 9 (31.0%)   | 6 (20.7%)     | 28.943 | 0.000   |
|    | Yes                      | 184 (86.4%) | 158 (85.9%)   | 22 (12.0%)  | 4 (2.2%)      |        |         |
| 5  | Occupation status        | 133 (62.4%) | 109 (82.0%)   | 22 (11.2%)  | 2 (1.5%)      | 8.705  | 0.013   |
|    | Civil servant            | 80 (37.6%)  | 63 (78.8%)    | 9 (11.2%)   | 8 (10%)       |        |         |
| 6  | Other Occupations        | 41 (19.2%)  | 28 (68.3%)    | 7 (17.1%)   | 6 (14.6%)     | 11.881 | 0.003   |
|    | Yes                      | 172 (80.8%) | 144 (83.7%)   | 24 (14.0%)  | 4 (2.3%)      |        |         |

**Table-2: Demographic data and Anxiety problem in health workers**

| No | Characteristics  | Anxiety     |               |             |               | X2     | P-value |
|----|------------------|-------------|---------------|-------------|---------------|--------|---------|
|    |                  | Total n (%) | Normal, n (%) | Mild, n (%) | Medium, n (%) |        |         |
| 1. | Gender           | 73 (34.3%)  | 53 (72.6%)    | 3 (4.1%)    | 17(23.3%)     | 10.331 | 0.016   |
|    | Man              | 140 (65.7%) | 95 (67.9%)    | 19 (13.6%)  | 26 (18.6%)    |        |         |
| 2. | Disease history  | 29 (13.6%)  | 13 (44.8%)    | 4 (13.8%)   | 12 (4.1%)     | 11.564 | 0.009   |
|    | Yes              | 184 (86.4%) | 135 (73.4%)   | 18 (9.8%)   | 31 (16.8%)    |        |         |
| 3. | Years of service | 42 (19.7%)  | 27 (64.3%)    | 2 (4.8%)    | 13 (31.0%)    | 10.451 | 0.015   |
|    | New              | 171 (80.3%) | 121 (70.8%)   | 20 (11.7%)  | 30 (17.5%)    |        |         |

**Table-3: Demographic data and mental health problems Stress on health workers**

| No | Characteristics   | Stress      |               |             |               | X2     | P-value |
|----|-------------------|-------------|---------------|-------------|---------------|--------|---------|
|    |                   | Total n (%) | Normal, n (%) | Mild, n (%) | Medium, n (%) |        |         |
| 1. | Disease history   |             |               |             |               | 30.217 | 0.000   |
|    | Yes               | 29 (13.6%)  | 12 (41.4%)    | 0 (0.0%)    | 17 (58.6%)    |        |         |
|    | No                | 184 (86.4%) | 135 (73.4%)   | 14 (7.6%)   | 35 (19.0%)    |        |         |
| 2. | Other Occupations |             |               |             |               | 16.870 | 0.002   |
|    | Yes               | 41 (19.2%)  | 23 (56.1%)    | 3 (7.3%)    | 15 (36.5%)    |        |         |
|    | No                | 172 (80.8%) | 124 (72.1%)   | 11 (6.4%)   | 37 (21.5%)    |        |         |

## DISCUSSION

The results showed that the depression variable has a relationship with age, income, number of children, history of illness, employment status, and other occupations. Jalili *et al.*, (2021) reported that there is no relationship between the variables of age and marital status on the fatigue of health workers during the Covid-19 pandemic, while gender, number of children, and work categories has a significant relationship. Marthoenis *et al.*, (2021) also found a relationship between gender, length of service, and work status on mental fatigue in health workers while age, education, marital status, were not related to problems such as depression, anxiety, and stress. Furthermore, (Hassannia *et al.*, 2021) found that there is no relationship between marital status with anxiety and depression in health workers, while the variables of gender, education, age, and occupation have a significant relationship. The gender of the respondents confirms that women worked more at the hospital. However, there was no relationship on this variable because women have additional work at home and tend to be higher in a government agency. This role prevents women from being optimal in carrying out their duties as health workers. It will also worsen performance in the absence of rewards or awards for health workers who carry out their duties properly. In the anxiety section, there was a significant relationship between gender, history of illness, and years of work. Meanwhile, in the stress section, there was a relationship between a history of illness and other occupations.

## LIMITATIONS

This study was limited to health workers namely nurses and midwives and conducted in only one location of health services, hence, the mental health problems experienced by other health workers who served in the same location were not determined. In addition, the results cannot be compared with health problems occurring at other health service locations.

## CONCLUSION

Based on the results, variables such as age, gender, education, number of children, and employment status have no significant relationship with mental health problems in health workers.

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