Original Article

# A Psychometric Analysis of Somatic and Cognitive Factors of Anxiety in Healthcare Workers during COVID-19 Pandemic Based on State–Trait Inventory for Cognitive and Somatic Anxiety Scale: An Observational Study

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## Abstract

**Background:** The Pandemic of COVID-19 has put healthcare workers under significant psychological pressure. This aimed to analyze the cognitive and somatic components of anxiety among healthcare workers using the State-Trait Inventory for Cognitive and Somatic Assessment Scale (STICSA) before and during the pandemic. In this observational study, 300 healthcare workers were analyzed using the STICSA questionnaire. Various demographic data like age, gender, marital status, educational background, sleep duration was collected. The somatic and cognitive dysfunction score were compared using an independent sample T-test between gender, duration of sleep, etc. Somatic and cognitive dysfunction severity was compared with demographic and pandemic-related parameters using the Chi square test.
**Results:** Among 300 participants, the majority (83%, n=249) were below 29 years of age, 159(53%) were females. In respect to duration of sleep during the pandemic, the total score was 40.85 ± 13.3 in participants sleeping less than 7 hours and 35.83 ± 11.7 among participants sleeping more than7 hrs. This difference in total score and duration of sleep between the groups was statistically significant (P value 0.001). The mean total score of somatic and cognitive dysfunction before the pandemic was 34.88 ± 11.527, and it was 38.03 ± 12.655 during the pandemic. The difference in scores before the pandemic and during the pandemic was statistically significant (P value <0.001).
**Conclusion:** This study gives enough evidence that anxiety levels have increased and duration of sleep has decreased among health care workers during this pandemic, with cognitive dysfunction being more profound than somatic dysfunction..
**Keywords:** SARS-CoV2, Healthcare Workers, Trait Anxiety, Anxiety, Somatic Anxiety, Cognitive Anxiety, Psychometric Analysis

## INTRODUCTION

COVID-19, after its first emergence from China, has caused a pandemic of COVID-19 pneumonia. Due to this, World health organization declared COVID-19 as a disease of international concern and public health emergency [1]. With this pandemic, there is a high demand for healthcare workers [2]. Due to the novelty of this virus, there was a constant increase in the rate of infection, a rapid increase in newly infected cases, a significant increase in death rate, and this was worsened by lack of specific treatment. The mental health of the healthcare workers was affected due to the widespread coverage in the media, dearth of personal protective equipment, substantial workload, and sense of weak support [3]. In these circumstances, it is anticipated that Health care workers

(H.C.W.s) to work extended hours while feeling crushing pressure. There is an enormous risk of infections in H.C.W.s while treating the positive cases. They are also affected by the fake news and rumors that get spread regarding the disease, which increases their anxiety [4]. Previously published reports show that numerous H.C.W.s were tested positive after treating patients in close contact [5]. In the early phase of the COVID-19 outbreak, 29% of all hospitalized patients were H.C.W.s. [6]. Working in these special situations poses the risk of developing psychological, mental illnesses, emotional distress among H.C.W.s. [3,5]. A study was done on 1257 health workers who treated COVID-19 patients, which showed that due to the rapid spread of infection in the early stage, H.C.W.s developed a feeling of uncertainty, threat to life, and they had somatic and cognitive symptoms of anxiety [7]. However, symptoms such as anxiety, depression, avoidance, traumatic stress, and burnout were present even after the control of the outbreak [7,8]. This shows that Healthcare workers are vulnerable to mental health problems. Hence, in this pandemic situation, the mental health component also has to be given attention [6].

Based on the knowledge from previous pandemics and data available on mental health status, early assessment of H.C.W.s mental health and appropriate psychological interventions should be considered vital [9,10]. Hence, comprehensive and practical actions should be taken to protect health care workers' mental health [11]. So far, only a few studies have evaluated the mental health status of H.C.W.s. [4,7,12]. Hence, this study was done to assess the neuropsychological status of cognitive and somatic components of anxiety and effects of gender, age, marital status, educational background, and duration of sleep among healthcare workers before and during the COVID-19 pandemic.

## METHODOLOGY

This study is a cross-sectional study that was conducted tertiary care hospital. Participants of the study were 300 healthcare workers comprising of doctors, nurses, technicians, janitors, auxiliary nurse-midwifery (A.N.M). Staff who were working in the hospital during the pandemic between July 2020 – December 2020. A convenient sampling technique was followed. Approval was sought from I.R.B/Ethical committee clearance. All healthcare professionals were enrolled in the study after written and informed consent. First, the participant information sheet was filled out by each individual, which had demographic data such as sex, age, level of education, marital status, and also duration of sleep before and during the pandemic was recorded as well. Additionally, all the participants were asked whether they were affected by a coronavirus, and the answer was to be either yes or no.

***STICSA Scale***

The STICSA Scale [13], two separate questionnaires comprising of 21 items combining cognitive and somatic components each, was filled out by the participants to assess their general mood before the Covid-19 pandemic and during the global Covid-19 pandemic. Based on the mean STICSA scale scores, anxiety as a single phenomenon can be divided into four grades. Not affected <33, Mild 33-42, Moderate 43-62, Severe 63-84. The study population was divided into these grades based on their scores. The scale has good reliability and validity [14].

## SAMPLE SIZE CALCULATION

A study by Lancaster SL et al. [15], the mean and standard deviation of the STICSA cognitive subscale was 15.18 and 6.16. By considering the estimation error of 0.7 with a 95% confidence interval estimated sample size was 298 [16]. After lost to follow-up consideration total of 300 health workers were included in the study.

## STATISTICAL METHODS

The somatic and cognitive dysfunction score was compared using an independent sample T-test between gender, duration of sleep, etc. Somatic and cognitive dysfunction severity was compared with demographic and pandemic-related parameters using the Chi-square test. The somatic and cognitive dysfunction score before the pandemic and during the pandemic was checked for the statistical difference using paired T-test. Appropriate Descriptive statistics like count and percentages were reported for all study-related variables. A P-value of <0.05 was considered to be statistically significant. Data entry and analysis by using coGuide software [17].

## RESULTS

The number of subjects that were included in the final analysis was 300.

Out of 300 participants, 249 (83%) were below 29 years of age. 159(53%) were females, and 141(47%) were males, 231 (77%) were single, 291 (97%) had graduate-level education, 33 (11%) were infected by coronavirus, 207(69%) individuals reported sleeping >7 hours before the pandemic and 169 (56.3%) reported more than 7 hrs of sleep during the pandemic. Before the pandemic, 79(26.3%) had mild somatic and cognitive dysfunction, and the percentage of moderate and severe was 57(19%) and 7(2.3%), respectively. But during the pandemic, mild, moderate, and severe somatic and cognitive dysfunction was seen in 72 (24%), 93(31%), and 10(3.3%), respectively. (Table 1)

Before the pandemic, there was no statistically significant difference in the total score of somatic and cognitive between gender and duration of sleep (P> 0.05). In those affected with coronavirus, the total score was 39.48 ± 13.2 before the pandemic. The non-affected group had a 34.31 ± 11.2 total score, and the difference in total score between the groups was statistically significant (P value 0.015). During the pandemic, there was no statistically significant difference in total score between gender affected with coronavirus (P> 0.05). In respect to duration of sleep during the pandemic, the total score was 40.85 ± 13.3 in participants sleeping less than 7 hours and 35.83 ± 11.7 among participants sleeping more than7 hrs. This difference of total score somatic and cognitive between duration of sleep was statistically significant (P value 0.001). (Table 2)

In the age group 40-49 years, majority 5(27.78%) reported moderate somatic and cognitive dysfunction, whereas, in group above 50 years mild dysfunction was reported majorly 2 (33.33%). The difference in somatic and cognitive dysfunction across gender was found to be insignificant with a P-value of 0.072, with the majority of 46 (29.11%) female participants having mild dysfunction. Out of 231 single participants, 63 (27.27%) were mild, where married people also reported mild dysfunction as high 16 (24.24%). There was statistically no significant difference in the somatic and cognitive dysfunction as per coronavirus positivity (P value 0.057) and duration of sleep in (p value 0.557). (Table 3)

In H.C.W.s aged less than 29 years, moderate dysfunction was high (32.13%), while in the 30-39 years age group, mild dysfunction was high (29.63). The difference in somatic and cognitive dysfunction across gender is found to be insignificant with a P-value of 0.522, with a majority of 50 (31.45%) female participants with moderate dysfunction. Out of 231 single participants, 75 (32.47%) had moderate dysfunction. The difference in somatic and cognitive dysfunction based on those affected with coronavirus was found to be insignificant with a P-value of 0.830 where the majority10 (30.3%) participants had moderate dysfunction in corona virus-positive patients. There was a statistically significant difference in dysfunction as per the duration of sleep (p value 0.003). (Table 4)

The mean of the total score of somatic and cognitive dysfunction before the pandemic was 34.88 ± 11.527, and it was 38.03 ± 12.655 during the pandemic. There was statistical significance in the scores before the pandemic and during the pandemic (P value <0.001). (Table 5)

Out of the ten cognitive components assessed, the most commonly experienced dysfunctions during pandemic were questions on keeping busy to avoid uncomfortable thoughts, to picture some future misfortune, and to feel agonized over my problems. Out of the 11 somatic components, the most commonly experienced dysfunction during the pandemic was feeling dizzy, throat dryness, and fast heartbeat.

## TABLES

***Table:1*** *Summary of baseline parameter(N=300)*

| Parameter | Summary |
|---|---|
| **Age group (in years)** | |
| <29 years | 249(83%) |
| 30 to 39 years | 27(9%) |
| 40 to 49 years | 18(6%) |
| >50 years and above | 6(2%) |
| **Gender** | |
| Male | 141(47%) |
| Female | 159(53%) |
| **Marital status** | |
| Single | 231(77%) |
| Married | 66(22%) |
| Divorced | 1(0.33%) |
| Widowed | 2(0.67%) |
| **Education level** | |
| uneducated | 3(1%) |
| School | 4(1.33%) |
| Student | 1(0.33%) |
| Undergraduate | 1(0.33%) |
| Graduate | 291(97%) |
| **Affected with Corona Virus** | 33(11%) |
| **Duration of sleep (before pandemic)** | |

| | |
|---|---|
| <7hrs | 93(31%) |
| >7hrs | 207(69%) |
| **Somatic and cognitive dysfunction (Before pandemic)** | |
| No | 157(52.3%) |
| Mild | 79(26.3%) |
| Moderate | 57(19%) |
| Severe | 7(2.3%) |
| **Duration of sleep (During pandemic)** | |
| <7hrs | 131(43.7%) |
| >7hrs | 169(56.3%) |
| **Somatic and cognitive dysfunction (During pandemic)** | |
| No | 125(41.7%) |
| Mild | 72(24%) |
| Moderate | 93(31%) |
| Severe | 10(3.3%) |

***Table 2:*** *Comparison of total score Somatic and cognitive between baseline parameter in before and during pandemic (N=300)*

| **Parameter** | **TOTAL SCORE –somatic and cognitive** | |
|---|---|---|
| | **Before pandemic** | **During pandemic** |
| **Gender** | | |
| Male | 34.18 ± 11.6 | 37.52 ± 13.1 |
| Female | 35.49 ± 11.5 | 38.47 ± 12.2 |
| **P value** | **0.328** | **0.519** |
| **Affected with corona** | | |
| Yes | 39.48 ± 13.2 | 39.24 ± 12.7 |
| No | 34.31 ± 11.2 | 37.88 ± 12.7 |
| **P value** | **0.015** | **0.559** |
| **Duration of sleep** | | |
| <7hrs | 35.13 ± 11.1 | 40.85 ± 13.3 |
| >7hrs | 34.76 ± 11.7 | 35.83 ± 11.7 |
| **P value** | **0.799** | **0.001** |

***Table 3:*** *Comparison of somatic and cognitive dysfunction before pandemic between baseline parameters (N=300)*

| **Parameter** | **Somatic and cognitive dysfunction (Before pandemic)** | | | | **P value** |
|---|---|---|---|---|---|
| | **No** | **Mild** | **Moderate** | **Severe** | |
| **Age group (in years)** | | | | | |
| <29 years(N=249) | 129 (51.81%) | 66 (26.51%) | 48 (19.28%) | 6 (2.41%) | * |
| 30 to 39 years(N=27) | 17 (62.96%) | 7 (25.93%) | 3 (11.11%) | 0 (0%) | |
| 40 to 49 years(N=18) | 8 (44.44%) | 4 (22.22%) | 5 (27.78%) | 1 (5.56%) | |
| >50 years and above(N=6) | 3 (50%) | 2 (33.33%) | 1 (16.67%) | 0 (0%) | |
| **Gender** | | | | | |
| Male(N=141) | 81 (57.45%) | 33 (23.4%) | 22 (15.6%) | 5 (3.55%) | 0.072 |
| Female(N=159) | 76 (48.1%) | 46 (29.11%) | 35 (22.15%) | 1 (0.63%) | |
| **Marital status** | | | | | |
| Single (N=231) | 118 (51.08%) | 63 (27.27%) | 44 (19.05%) | 6 (2.6%) | * |
| Married (N= 66) | 37 (56.06%) | 16 (24.24%) | 12 (18.18%) | 1 (1.52%) | |
| Divorced(N=1) | 1 (100%) | 0 (0%) | 0 (0%) | 0 (0%) | |
| Widowed(N=2) | 1 (50%) | 0 (0%) | 1 (50%) | 0 (0%) | |
| **Education level** | | | | | |
| Uneducated (N=3) | 1 (33.33%) | 0 (0%) | 1 (33.33%) | 1 (33.33%) | * |
| School (N=4) | 1 (25%) | 2 (50%) | 1 (25%) | 0 (0%) | |
| Student (N=1) | 0 (0%) | 0 (0%) | 1 (100%) | 0 (0%) | |

| | | | | | |
|---|---|---|---|---|---|
| Undergraduate (N=1) | 0 (0%) | 0 (0%) | 1 (100%) | 0 (0%) | |
| Graduate (N=291) | 155 (53.26%) | 77 (26.46%) | 53 (18.21%) | 6 (2.06%) | |
| **Affected with Corona Virus** | | | | | |
| Yes(N=33) | 13 (39.39%) | 7 (21.21%) | 12 (36.36%) | 1 (3.03%) | 0.057 |
| No (N=267) | 144 (53.93%) | 72 (26.97%) | 45 (16.85%) | 6 (2.25%) | |
| **Duration of sleep** | | | | | |
| <7hrs(N=94) | 45 (47.87%) | 29 (30.85%) | 17 (18.09%) | 3 (3.19%) | 0.557 |
| >7hrs (N=206) | 112 (54.37%) | 50 (24.27%) | 40 (19.42%) | 4 (1.94%) | |

*No statistical test was applied- due to 0 subjects in the cells

***Table 4**: Comparison of somatic and cognitive dysfunction during pandemic between baseline parameter (N=300)*

| **Parameter** | **Somatic and cognitive dysfunction (During pandemic)** | | | | **P value** |
|---|---|---|---|---|---|
| | **No** | **Mild** | **Moderate** | **Severe** | |
| **Age group (in years)** | | | | | |
| <29 years(N=249) | 105 (42.17%) | 55 (22.09%) | 80 (32.13%) | 9 (3.61%) | * |
| 30 to 39 years(N=27) | 12 (44.44%) | 8 (29.63%) | 6 (22.22%) | 1 (3.7%) | |
| 40 to 49 years(N=18) | 5 (27.78%) | 7 (38.89%) | 6 (33.33%) | 0 (0%) | |
| >50 years and above(N=6) | 3 (50%) | 2 (33.33%) | 1 (16.67%) | 0 (0%) | |
| **Gender** | | | | | |
| Male(N=141) | 64 (45.39%) | 29 (20.57%) | 43 (30.5%) | 5 (3.55%) | 0.522 |
| Female(N=159) | 61 (38.36%) | 43 (27.04%) | 50 (31.45%) | 5 (3.14%) | |
| **Marital status** | | | | | |
| Single (N=231) | 99 (42.86%) | 49 (21.21%) | 75 (32.47%) | 8 (3.46%) | * |
| Married (N= 66) | 25 (37.88%) | 22 (33.33%) | 17 (25.76%) | 2 (3.03%) | |
| Divorced(N=1) | 1 (100%) | 0 (0%) | 0 (0%) | 0 (0%) | |
| Widowed(N=2) | 0 (0%) | 1 (50%) | 1 (50%) | 0 (0%) | |
| **Education level** | | | | | |
| Graduate (N=291) | 122 (41.92%) | 71 (24.4%) | 88 (30.24%) | 10 (3.44%) | * |
| School (N=4) | 2 (100%) | 0 (0%) | 2 (100%) | 0 (0%) | |
| Student (N=1) | 0 (0%) | 0 (0%) | 1 (100%) | 0 (0%) | |
| Uneducated (N=3) | 1 (33.33%) | 1 (33.33%) | 1 (33.33%) | 0 (0%) | |
| Under graduate (N=1) | 0 (0%) | 0 (0%) | 1 (100%) | 0 (0%) | |
| **Affected with Corona Virus** | | | | | |
| Yes(N=33) | 13 (39.39%) | 8 (24.24%) | 10 (30.3%) | 2 (6.06%) | 0.830 |
| No (N=267) | 112 (41.95%) | 64 (23.97%) | 83 (31.09%) | 8 (3%) | |
| **Duration of sleep** | | | | | |
| <7hrs(N=131) | 42 (32.06%) | 32 (24.43%) | 49 (37.4%) | 8 (6.11%) | 0.003 |
| >7hrs(N=169) | 83 (49.11%) | 40 (23.67%) | 44 (26.04%) | 2 (1.18%) | |

*No statistical test was applied- due to 0 subjects in the cells

*Table 5: Comparison of the mean total score of somatic and cognitive in before and during pandemic (N= 300)*

| **Time period** | **Total score –somatic &cognitive dysfunction** | | **P-value** |
|---|---|---|---|
| | **Mean** | **SD** | |
| Before Pandemic | 34.88 | 11.527 | <0.001 |
| During pandemic | 38.03 | 12.655 | |

## DISCUSSION

In March 2020, COVID-19 infection was announced a pandemic by the WHO, and currently, numerous countries are fighting this pandemic [18]. This pandemic has caused tremendous pressure on the H.C.W.s [19]. During such pandemics, the mental health of H.C.W.s is affected[6]. On day-to-day basis, H.C.W.s see the mortality of their colleagues and perceive a feeling of threat to their own lives. Their mental health is affected by the high workload, lack of support system, and fear of getting infected [20].

In this study using the STICSA questionnaire, the somatic and cognitive factors of anxiety among the health care workers were assessed. Among 300 HCWs studied, 93(31%) had moderate somatic and cognitive dysfunction during the pandemic. During the pandemic, 131(43.7%) slept lesser than 7 hours per day. Among those who slept less than 7 hours a day during the pandemic, there was a statistically significant occurrence of somatic and cognitive dysfunction compared to those who had slept for more than 7 hours per day during the pandemic (p=0.003). The findings of this study were similar to previous conducted studies on the psychological effects of COVID pandemic on H.C.W.s. [8,10,12,18]. Previous studies have reported fear, anxiety, and stigma among H.C.W.s. [21]. These factors, along with the loneliness faced during the quarantine period, can be attributed as causes of anxiety among H.C.W.s. These might have impacted the hours of sleep and quality of sleep, which in turn affects mental health, thereby causing a vicious cycle.

In the current study, the mean total score of somatic and cognitive dysfunction before the pandemic was 34.88 ± 11.527, and it was 38.03 ± 12.655 during the pandemic. There was statistical significance in the difference of scores before the pandemic and during the pandemic (P-value <0.001). This proves that there was significant anxiety (with somatic and cognitive dysfunction) present among the H.C.W.s during the pandemic of COVID-19.

Various intervention modalities can be utilized, such as supportive intervention by family, colleagues, and peer groups to develop a supportive network for the H.C.W.s. [22,23]. Educational and special training should be conducted among H.C.W.s regarding ways to cope with the pandemic and ways to maintain positive mental health. With the increasing number of outbreaks in the recent past, these interventions can help in maintaining the psychological health of the H.C.W.s.

The limitation of our study is its relatively reduced sample size and the majority of the H.C.W.s were doctors. As this is a cross-sectional study, the psychological assessments were done at a single point in time, and no follow-up was possible. Hence, in the future long term, follow-up studies are recommended to understand the time trend in psychological Impact caused by the pandemic.

## CONCLUSION

In the present situation, where there are more outbreaks with epidemic and pandemic potential, they cause immense pressure on the health care system. This affects the mental health of the H.C.W who are the frontline warriors. This study's findings showed that cognitive dysfunction was more profound than somatic dysfunction. Out of the 10 cognitive dysfunction components, the most common experience dysfunction was keeping busy to avoid uncomfortable thoughts, to picture some future misfortune, and to feel agonized over my problems. Among the 11 somatic components, dysfunctions faced commonly were feeling dizzy, throat dryness, and fast heartbeat. This study has thrown light on the cognitive and somatic factors of anxiety present among the H.C.W.s. Hence, addressing the mental health wellbeing of the H.C.W.s is the need of the hour amidst the pandemic.

## REFERENCES


1. Wilder-Smith A, Chiew CJ, Lee VJ. Can we contain the COVID-19 outbreak with the same measures as for SARS? Lancet Infect Dis. 2020 May;20(5):e102–7.
2. Chen Q, Liang M, Li Y, Guo J, Fei D, Wang L, et al. Mental health care for medical staff in China during the COVID-19 outbreak. Lancet Psychiatry. 2020;7(4):e15–6.
3. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. JAMA Netw Open. 2020;3(3):e203976.
4. Schwartz J, King CC, Yen MY. Protecting healthcare workers during the coronavirus disease 2019 (covid-19) outbreak: Lessons from Taiwan's severe acute respiratory syndrome response. Clin Infect Dis. 2020;71(15):858–60.
5. Xiao H, Zhang Y, Kong D, Li S, Yang N. The effects of social support on sleep quality of medical staff treating patients with coronavirus disease 2019(COVID-19) in January and February 2020 in China. Med Sci Monit. 2020;26:e923549.
6. Zhu, Zhou, Xu S, Wang H, Liu Z, Wu J, et al. COVID-19 in Wuhan: Sociodemographic characteristics and hospital support measures associated with the immediate psychological impact on healthcare workers. EClinicalMedicine. 2020;24:100443.
7. Chong MY, Wang WC, Hsieh WC, Lee CY, Chiu NM, Yeh WC, et al. Psychological impact of severe acute respiratory syndrome on health workers in a tertiary hospital. Br J Psychiatry. 2004;185:127–33.
8. Lee SM, Kang WS, Cho AR, Kim T, Park JK. Psychological impact of the 2015 MERS outbreak on hospital workers and quarantined hemodialysis patients. Compr Psychiatry. 2018;87:123–7.
9. Li Z, Ge J, Yang M, Feng J, Qiao M, Jiang R, et al. Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control. Brain Behav Immun. 2020;88:916–9.
10. Xiao X, Zhu X, Fu S, Hu Y, Li X, Xiao J. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. Lancet Psychiatry. 2020;0366(20):1–2.
11. Kang L, Ma S, Chen M, Yang J, Wang Y, Li R, et al. Impact on mental health and perceptions of

psychological care among medical and nursing staff in Wuhan during the 2019 novel coronavirus disease outbreak: A cross-sectional study. Brain Behav Immun. 2020;87:11–7.
12. Greenberg N, Docherty M, Gnanapragasam S, Wessely S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. BMJ. 2020;368:m1211.
13. Ree MJ, French D, MacLeod C, Locke V. Distinguishing cognitive and somatic dimensions of state and trait anxiety: Development and validation of the State-Trait Inventory for Cognitive and Somatic Anxiety (STICSA). Behav Cogn Psychother. 2008;36(3):313–32.
14. Carlucci L, Watkins MW, Sergi MR, Cataldi F, Saggino A, Balsamo M. Dimensions of anxiety, age, and gender: Assessing dimensionality and measurement invariance of the State-Trait for Cognitive and Somatic Anxiety (STICSA) in an Italian sample. Front Psychol. 2018;9:2345.
15. Lancaster SL, Melka SE, Klein KP, Rodriguez BF. Ethnicity and Anxiety: A Psychometric Evaluation of the STICSA. Meas Eval Couns Dev. 2015;48(3):163–76.
16. Kirkwood B. Essentials of medical statistics. 2 ed. London: Blackwell Scientific Publications; 1988. 1–513 p.
17. BDSS Corp. Released 2020. coGuide Statistics software, Version 1.0, India: BDSS corp. Available from: https://www.coguide.in. [Last accessed on 2021 Feb 18].
18. Montemurro N. The emotional impact of COVID-19: From medical staff to common people. Brain Behav Immun. 2020;87:23–4.
19. Adams JG, Walls RM. Supporting the Health Care Workforce during the COVID-19 Global Epidemic. J Am Med Assoc. 2020;323(15):1439–40.
20. Ji D, Ji YJ, Duan XZ, Li WG, Sun ZQ, Song XA, et al. Prevalence of psychological symptoms among Ebola survivors and healthcare workers during the 2014-2015 Ebola outbreak in Sierra Leone: A cross-sectional study. Oncotarget. 2017;8(8):12784–91.
21. Robertson E, Hershenfield K, Grace SL, Stewart DE. The psychosocial effects of being quarantined following exposure to SARS: A qualitative study of Toronto health care workers. Can J Psychiatry. 2004;49(6):403–7.
22. Zhang J, Wu W, Zhao X, Zhang W. Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: a model of West China Hospital. Precis Clin Med. 2020;3(1):3–8.
23. Chan AO, Huak C. Psychological impact of the 2003 severe acute respiratory syndrome outbreak on health care workers in a medium size regional general hospital in Singapore. Occup Med (Chic Ill). 2004;54(3):190–6.

**List of Abbreviations:**

**1.** STICSA: State-Trait Inventory for Cognitive and Somatic Assessment Scale.
2. H.C.W.s: Health care workers
**3.** A.N.M: Auxiliary nurse-midwifery
4. I.R.B: Institutional Review Board.