



Hospital-Based Health Care Worker Perceptions Of Personal Risk Related To Covid-19: An Original Research

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ABSTRACT

Introduction: Caregiving for terminally ill patients, physically taxing care requiring new levels of personal protective equipment use, risk of contracting the disease, and putting loved ones at risk are just a few of the significant stressors that healthcare professionals treating patients with Coronavirus disease 2019 (COVID-19) must deal with. This study examines how COVID-19 exposure affects stress and how nurses and healthcare professionals (such as doctors, nurse practitioners, and physician assistants) react differently to these difficulties.

Methods: All hospital personnel were handed an electronic, self-administered questionnaire to gauge their exposure to COVID-19 patients and the stress that came with it. Analysis of comments from medical professionals and nurses included comparing their replies to those of nurses to identify essential stressors.

Results: During the COVID-19 pandemic, medical professionals had the highest stress levels because of the increased chance of contracting the disease while working, the anxiety over spreading it to family or friends, and the ensuing societal shame. Nurses were roughly four times as likely than medical professionals to consider leaving their jobs because of COVID-19. However, most healthcare professionals (77.4% of doctors and 52.9% of nurses) strongly agreed or agreed with the claims that they strongly wanted to help COVID-19 patients.

Conclusion: The heavy stress burden imposed on nurses is undoubtedly a factor in the rise in resignation-related thoughts. Despite the personal dangers associated with caring for COVID-19 patients, medical professionals have shown unprecedented levels of charity during this period of acute crisis.

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INTRODUCTION

The coronavirus-2 (SARS-CoV-2) that causes coronavirus disease 2019 (COVID-19), which was first identified as the cause of pneumonia in China on December 31, 2019, has since spread to numerous other countries, prompting the World Health Organization (WHO) to declare it a global pandemic on March 11, 2020.¹ Health care workers (HCWs) are under a great deal of physical and psychological stress as a result of this widespread contagious public health catastrophe. Healthcare professionals continue to be on the front lines of the Coronavirus Disease 2019 (COVID-19) pandemic with many residents at home. The possible

impact on these healthcare personnel's stress levels and mental health as they deal with COVID-19 and its associated difficulties is concerning.

HCWs will likely encounter highly contagious infections directly or through patient environments or biological samples when caring for patients. They can be concerned that they have an infection and could spread it to family members.² Such apprehension could be harmful. High levels of psychological stress were experienced by HCWs exposed to the SARS outbreak as a result of the quarantine, reporting, body temperature monitoring, and finally termination of a refusal to provide treatment for patients.^{3,4}

Additionally, they had to contend with the erratic nature of their job schedule, which required them to modify their personal and social lives. Depression or post-traumatic stress disorder may emerge from the effects of stress that may last for a long time after the outbreak.^{5,6}

In addition to caring for critically sick and dying patients, providing physically taxing treatment necessitating the need of new levels of personal protective equipment, the possibility of catching the disease, and placing loved ones in danger, healthcare personnel treating COVID-19 patients must deal with enormous pressures. This study investigates the stress impact from COVID-19 exposure and how nurses and medical providers (eg, physicians, nurse practitioners, and physician assistants) experience these challenges differently.

METHODOLOGY

Study Site and Duration: The study is conducted in a tertiary care teaching hospital that offer secondary and tertiary care. It was a cross-sectional survey for the study.

Study Tool: A pilot-validated self-reported questionnaire and a request for demographic information were used to gauge HCWs' anxieties, concerns, and awareness about COVID-19. The survey's knowledge portion included broad inquiries about COVID-19 mechanisms of transmission, symptoms, indications, and treatment options. On a scale of 1 to 5, the respondents were asked to assess their degree of "anxiety" over the potential for contracting the COVID-19 epidemic at this institution (higher reported scores indicated higher anxiety level). Questions to identify the causes and sources of this worry are asked, with topics focusing on virulence, lack of effective treatment, prognosis, or information source. The likelihood of passing it on to a family member was then discussed.

Study Participants: HCWs were requested to participate in the study from all hospital departments and clinical units, including critical care and emergencies. The choice of participants was made using a convenience sampling method. An email with a link to an electronic survey was delivered through e-mail. The study's goal was discussed before the survey's execution and at the start of the electronic survey. Through a special email account for the research, the responder had the chance to ask questions. Due to the research's low risk of damage to volunteers and the absence of any procedures for which written agreement is typically needed outside of the setting of the trial, a waiver of signed consent was asked. To maintain confidentiality, personal identification information was not gathered. The Institutional Ethics Committee of university authorised the research vide letter no.

Statistical Analysis: Using SPSS IBM V20 (SPSS, Inc., Chicago, IL, USA), the data was examined. The cutoff for statistical significance for each test was established at p 0.05. All variables' summary statistics were computed. The results of the continuous Likert scale-based questions' scores were compiled using the summative analysis.

RESULTS

Out of a total of 811 health care professionals, 582 (or 71.8%) returned the survey's questionnaire. Nurses made up 62.4% of those, or 437 (75%) females out of the total (n =

363). All hospital clinical units participated in the study, which received answers from 261 (44.8%) acute care units (ICUs and EDs), 163 (28%), personnel from outpatient clinics, and 133 (19.4%) general hospital wards. (Table 1.)

Table 1. Descriptive statistics of the healthcare workers' demographic and professional characteristics.

Demography	Frequency	Percentage
Sex		
Female	437	75.1
Male	145	24.9
Age (years), mean (SD)		36.02 (8.50)
≤30 years	178	30.6
31–39 years	223	38.3
40–49 years	133	22.9
≥50 years	48	8.2
Clinical role		
Senior physician	56	9.6
Registrar physician	52	8.9
Resident physician	48	8.2
Interns	34	5.8
Nurse & midwife	363	62.4
Auxiliary services	29	5
Hospital working unit		
Acute Care Units (ER and ICU)	261	44.8
General hospital floors	113	19.4
Auxiliary services	26	4.5
Outpatient clinics	163	28
Academic	19	3.3

During the last hospital epidemic, about 40% dealt with patients who were COVID-19 infected. In order to prevent interaction with patients who have either coronavirus infection, the majority of HCWs (84.7%) said that they will not think about postponing or modifying their work hours. According to the staff's worry ratings on a scale of 1 to 5, they are more concerned about passing COVID-19 to a family member than they are about getting the illness themselves (2.71/5 (1.22) versus 2.57/5 (1.10)). Staff members report feeling anxious by COVID-19, and a similar number think that stress from both viral illnesses is similar. On a scale of 0 to 10, respondents reported feeling more anxious about COVID-19 than they did about seasonal influenza, scoring 5.94/10, 5.42/10, and 3.31/10, respectively (SD = 2.5, 2.82, and 2.60).

Table 2. Descriptive statistics of healthcare workers generalized anxiety classification based on GAD-7 scale.

Empty Cell	Frequency (percentage)
Mild anxiety <5 points	397 (68.2)
Moderate anxiety 5–9.99 points	121 (20.8)
High moderate anxiety 10–14.99 points	47 (8.1)
Very high anxiety 10–14.99 points	17 (2.9)

When questioned about the COVID-19-related public dread that was developing, most respondents (67.3%) thought that it was legitimate and acceptable given the circumstances. The majority (77.2%) also claimed that the disease may have been more well known as a

result of this concern. The majority of HCWs (73.2%) concur that the public's fear of COVID-19 is significantly greater than the panic engendered by any other epidemic. Statements in the Risk and Transmission categories were agreed with or strongly agreed with by a considerably larger percentage of nurses than medical practitioners.

DISCUSSION

An acute outbreak of a bio-disaster may be considered the sudden, fast spread of SARS in a hospital. Any assumption regarding the psychological impacts of SARS is dependent on extrapolations from the effects of natural disasters and other catastrophic traumatic events due to the scarcity of comparable experiences. Like any calamity, SARS had tremendous impact and generated trauma that might take the shape of complicated emotions, ideas, and actions.⁷

HCWs have a key and important role as front-line responders during a pandemic, which makes them more vulnerable to stress and anxiety owing to overburdened healthcare systems as well as fear of contracting the illness.^{2,8,9} SARS-CoV-1, H1N1 flu, and Ebola virus outbreaks and epidemics from the past have all been proven to have a major short- and long-term psychological impact on front-line HCWs.^{3,10,11}

Information is disseminated more quickly and widely today than it was during the SARS outbreak in 2003, the H1N1 influenza pandemic in 2009, or the MERS-CoV epidemic in 2013–2015, which undoubtedly heightened public anxiety, panic, and stress. In earlier research from the SARS-CoV1 epidemic, it was discovered that post-traumatic stress and healthcare professionals' views of the dangers they were accepting by providing treatment were significantly positively correlated.^{12,13} A recent cross-sectional study in China revealed that during the COVID-19 epidemic, almost 71% of healthcare professionals reported feeling stressed and 50% reported having clinical signs of depression.¹⁴

Generalized Anxiety Disorder (GAD-7) was used in this study as an anxiety severity screening tool to measure anxiety levels. We found moderately high and very high anxiety scores at 8% and 2%, respectively, to COVID-19, which is significantly less than a previous study from Greece that found nearly half of HCW experienced moderately high levels of worry during the H1N1 influenza pandemic.¹⁵

In surveys conducted prior to and after SARS-CoV epidemics, more than half of HCWs from Japan and Singapore displayed significant levels of dread and anxiety. In contrast to data from Japan during SARS, which revealed that 92% of HCWs desired to avoid patients with SARS, we only discovered that 15% of HCWs contemplated rescheduling or modifying their job in order to avoid patients with COVID-19.^{2,16}

We think that a number of variables, such as the study's design, the HCWs who participated in it, the scoring methodology, and the time of the study—before, during, or after an outbreak—influence the degree of anxiety and stress experienced by HCWs in relation to a developing infectious disease pandemic.¹⁷

STUDY LIMITATIONS

There were some intrinsic limitations to our investigation. This survey was conducted electronically, and while this approach is excellent for gathering data quickly and is probably going to provide results that are comparable to those of paper methods [43], ours had a small convenience sample and selectively recruited respondents. Because we did not select a random sample, we cannot interpret the data distribution in our sample as being representative of HCWs in other situations. We were only able to examine correlations between the study variables and levels of anxiety because our data were cross-sectional. Prospective studies were therefore required to investigate the relationship between the

COVID-19 pandemic and anxiety levels among various groups of HCWs at various risk levels.

CONCLUSION

Healthcare professionals who are caring for patients who have infectious illnesses like COVID-19 have a high degree of stress and worry, with their major fear being the possibility of spreading the sickness to their families or contracting it themselves. To ensure their safety, reduce the chance that they will become infected or spread the infection to others, and subsequently reduce their psychological stress and anxiety, it is crucial to maximize the compliance of healthcare workers with the necessary infection prevention and control measures during the infectious disease outbreak.

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