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OCCUPATIONAL HEALTH OF FRONTLINE WORKERS DURING THE COVID-19 PANDEMIC: IS HEALTH AND WELL-BEING AN ISSUE IN BANGLADESH?

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Occupational Health of Frontline Workers during the COVID-19 Pandemic: Is Health and Well-Being an Issue in Bangladesh?

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Abstract

The coronavirus outbreak has significantly affected the health and well-being of several people around the world. In a similar vein, Bangladeshi medical professionals have also been affected by several severe physical and mental health complications resulting from their frequent contact with COVID-19 patients. This exposes them to a greater risk of infection with the lethal virus, which can substantially impact their job performance. Therefore, this research aims to investigate the manner in which the COVID-19 pandemic affects the occupational health and safety of medical employees. The researchers deployed a descriptive qualitative technique to investigate the complexities of the COVID-19 crisis amongst medical practitioners. Employing purposeful sampling and in-depth interview techniques, the researchers collected data from a total of 32 healthcare professionals and investigated their state of occupational health, their exposure to stress and trauma, and the effects of stress and trauma on their livelihood, health and well-being. The data revealed the occupational health of healthcare workers as being fragile, resulting to stress and trauma, and eventually, a depressed state of mind. To address this issue, relevant government and non-governmental organizations should concentrate on reducing COVID-19-related risks and repercussions in hospital settings. In addition, policymakers, social

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workers, public health practitioners and psychologists must work together to ensure that healthcare workers are healthy and safe at work.

Keywords: COVID-19 outbreak; occupational health; medical professionals; health crisis; Bangladesh

Introduction

The outbreak of the lethal coronavirus (COVID-19) has fashioned such extreme panic among people all over the world, which has never been before seen in human history. The first case of the virus was recorded in China, after which it extended to other parts of the world, infecting various individuals traveling from one country to another. The coronavirus inflicts damage on major parts of the human body, such as lungs, heart, liver and kidney (Zhu *et al*., 2020; Yang *et al*., 2020). All human race, color, class and ethnicity are equally posed with the threat of infection by this virus. Likewise, the virus has affected different segments of the population including health workers, bankers, police, government officials and ordinary citizens. The contagious nature of the COVID-19 implies that positive patients could infect their family members and others who were not previously affected by the virus (Cao *et al*., 2020). Unawareness has proven to be the major challenge in controlling the spread of this virus in some parts of the world. The tendency to break the routine home-quarantine guidelines could also result in a disaster (UNB, 2020). Owing to the skyrocketing rate of infection, the COVID-19 outbreak became the most dangerous and deadly health problem in the world within a very short time, mounting severe pressure on health systems in all affected countries around the world (Chen *et al*., 2020). Social distancing (also referred to as physical distancing) has proven to be the most effective measure for controlling the rapid expansion of this virus. To this effect, the government imposed a general lockdown to restrict public movement, with healthcare personnel being exempt (Mirembe, 2020; Mowbray, 2020). Saddled with the responsibility of rendering health services to patients, the healthcare personnel were forced to accept traumatic situations during the pandemic. In addition, the crisis created a wide range of psychological difficulties (Horesh & Brown, 2020) including panic disorder, anxiety and depression (Qui *et al*., 2020). Fear and anxiety are associated with higher infection and lower recovery rates respectively. Increasing death rate has also been discovered to generate irresistible stress and trauma in large numbers of people (Cao *et al*., 2020). Furthermore, food insecurity, discrimination, infection phobias and poor experience in obtaining appropriate treatment for the sick frequently result in negative mental health outcomes (Zhang & Ma, 2020; Brooks *et al*., 2020; Lau *et al*., 2005). The WHO already warned about the emanation of mental health crisis resulting from feelings of loneliness during the

pandemic, which is strongly associated with anxiety, depression, self-harm and suicide (Rahman, 2020).

The COVID-19 virus, which was discovered on March 8, 2020, by an Italy returnee and two relatives, has wreaked havoc in Bangladesh (Paul, 2020). The unexpected increase in COVID-19 infections in Bangladesh could be traced to an ineffective action plan, lack of cooperation at the policymaking level, and a lack of responsibility from respected authorities. Furthermore, the unwillingness of citizens to obey lockdown and other health hygiene regulations also contributed to the spike in COVID-19, endangering their lives and the general public's (Noman, 2020). Due to the lack of government's control, returnees from overseas quickly dispersed throughout the country, contributing to the spread of COVID-19.

During the lockdown period from May 26th to April 30th, 2020, people enjoyed home isolation but professionals working in the essential service sectors (hospitals, banks, police stations and public administration) remained in the frontlines (Firewear, 2020) to either assist people or help enforce the lockdown order. In a bid to carry out their respective duties, they come in close contact with large numbers of people and become exposed to the COVID-19 infection (The Financial Express, 2020). However, of all front liners, medical workers are at more occupational health risks, owing to their ease of being infected with the COVID-19 virus. The coronavirus has notably affected the health system of Bangladesh, as thousands of doctors and nurses were infected with COVID-19 due to the shortage of personal protective equipment (Mahmud, 2020). The first death of a doctor was recorded on the 15th of April, 2020. Statistics also revealed that the number of affected cases and deaths is higher among these service delivery professionals, and that the number increases day by day. Therefore, the study focuses mostly on the health and safety of health service workers in Sylhet, Bangladesh.

Literature Review

The coronavirus creates ambiguity in humans, resulting in emotional weariness and maladaptive behaviour (Reliefweb, 2020). The mental health and well-being of the people have become worsen due to the faulty approach in managing the pandemic during an infectious outbreak (Cullen *et al*., 2020). Stress and trauma, in general, can result from a fatalistic health situation, and are natural reactions to a worldwide health crisis that impacts daily life (Hong *et al*., 2009; Mak *et al*., 2010). As a result of the coronavirus pandemic, people experience worry, anxiety and stress. According to research, pandemics cause post-traumatic stress disorder (PTSD) and other serious mental problems (Hong *et al*., 2009; Sun *et al*., 2020; Azman *et al.,* 2021). This worldwide COVID-19 health disaster has influenced the lives and general health and well-being of health service workers. People, particularly professionals, have become burdened and stressed as a consequence of the abrupt change in lifestyle and jobs. This devastating pandemic has affected

people of all classes, genders, races and religions, with frontline professionals being mostly affected, as they are confronted with such horrible situations capable of triggering PTSD reactions. A survey conducted on Indian professionals revealed that the COVID-19 pandemic has altered the lifestyles of around 63%, while approximately 33% have postponed their vacation plans due to the pandemic (The Economic Times, 2020). Healthcare workers, police enforcement officers, bankers, administrative officials and other professionals are among those that are directly affected by the health crisis. Stress and traumatic experiences have now become their new 'normal', ever since the abrupt change in their working environment following the pandemic. Healthcare professionals have experienced extreme adverse situations during the pandemic owing to the shortage of required medical equipment, irregular work hours and duty. Furthermore, the lack of health and safety regulations has also resulted in a rise in the rate of infection and fatality amongst healthcare professionals from the onset. Healthcare personnel tend to be most vulnerable to the coronavirus infection owing to their direct interaction with the patients, and exposure to a variety of hectic situations in the course of their work. These stressful conditions have had a profound effect on their health, well-being and personal lives (Giannis *et al*., 2020; Chen & Huang 2020).

Khanal *et al*. (2020) discovered the prevalence of mental complications amongst people in the early stages of the coronavirus pandemic. The findings of the study also revealed that a significant number of healthcare professionals experienced anxiety, sadness and insomnia. The enormous stigma, adverse medical history and insufficient protective measures in the workplace have further exacerbated mental health and precipitated catastrophic circumstances. Citing an example from another service profession, it was observed that law enforcement agencies worked diligently with the government and public health specialists to reduce the rate of crime in the community. However, due to their contact with many people, they are at high risk of becoming infected. The pandemic altered service patterns, communication processes and resource management, amongst others (Jennings & Perez, 2020), thereby exposing the frontline workers to stressful and distressing circumstances.

According to WHO (2021), medical staff have been in the front lines of COVID-19 pandemic management, and are therefore, exposed to a series of threats. Proximity to virus-infected patients, violence, bullying, prejudice, discrimination, strenuous labor, and the continuous use of personal protective equipment (PPE) are some of the hazards experienced by the frontline workers. Meawhile, the ILO (2021) specifies obligations and privileges for the health and safety of healthcare employees, in line with stated requirements. According to Zhang and Kim (2021), medical personnel are in the front lines of the COVID-19 pandemic and are exposed to adverse health conditions. Consequently, they encounter professional

dangers ranging from lengthy shifts to stress reactions, noise, unpleasant working environments, discrimination, cognitive and emotional hostility, and intimidation, as opposed to viral infection. Occupational health and safety is one of the primary goals in response to the COVID-19 outbreak. Razu *et al*. (2021), observed that a shortage of medical staff and medical equipment was pervasive, resulting in a heavier burden. Aside from that, a lack of personal protective equipment (PPE), fear of infection, social marginalization, and mismanagement, all contributed to the dilemma of hospital workers. Health service personnel constantly strive to discharge their tasks amidst the crisis but their occupational health continues to deteriorate over time. The disparity in coronavirus infection and death rates has also created an unprecedented emotional state, putting people in difficult situations (Yasmin *et al*., 2020; Prothomalo, 2020).

Methodology

Objectives of the Study

The general objective of this study is to assess the occupational health of healthcare professionals working in medical hospitals in Sylhet. The specific objectives include:

1. To examine the nature and trend of occupational stress among healthcare professionals;
2. To identify the sources of stress and trauma during the pandemic;
3. To analyze the impact of stress and trauma on the health and daily functioning of healthcare workers.

The researcher employed the descriptive-qualitative approach in exploring the objectives of this study. The study was conducted in Sylhet, where numerous government and private hospitals are situated. Besides, as it is a divisional city, it is laden with several government medical hospitals where numerous health professionals such as doctors and nurses work tirelessly amid the pandemic. All health workers in Sylhet city have been considered as the population in this study, and using purposeful sampling, a total of 32 participants were selected, of whom 14 and 18 were doctors and nurses, respectively. A questionnaire was administered as a tool for data collection during in-depth interviews with doctors and nurses. The researchers gathered verbal quotes along with demographic information from the research participants.

During fieldwork, the researcher visited hospital departments and made contact with health service professionals. Two data collectors who have previously undergone training on the conduction of successful interviews were recruited to

obtain data from participants with a prior appointment. The data collection process was strictly monitored and supervised. Qualitative data was employed to obtain a greater understanding and justify data gathered through interviews. The collected data were transcribed, edited, coded and analyzed thematically using MAXQDA program. The researchers carefully reexamined the transcribed interviews and observation to minimize errors in the qualitative data.

Research ethics were strictly maintained throughout the study period and data was shared strictly for academic purposes only. Informed consent was given and the voluntary participation of the respondents was ensured before data collection. A non-judgmental attitude was maintained throughout the research and the anonymity of respondents was preserved during and after the study. The demographic information of the research participants is illustrated in Table 1 below.

Table 1. Demographic characteristics of the participants

Variables	Groups	Percentage (%)
Gender	Male	37.5
	Female	62.5
Age	26-30	25
	31-35	18.75
	36-40	18.75
	41-45	25
	46+	12.5
Marital Status	Married	78.13
	Unmarried	21.87
Type of job	Doctor	43.75
	Nurse	56.25
Type of institution	Government	68.75
	Private	31.25

Based on the data analysis, the researchers retrieved 12 sub-categories under three areas which include the status of occupational health and safety, the causes of stress and trauma, and the effects of stress and trauma on the livelihood, health and welfare of health workers.

Table 2. Categories and sub-categories derived from the data.

Category	Sub-category
State of occupational health and safety	Exposure to COVID-19 infection
	Minimal safety measures
	Absence of incentives
Reasons for occupational stress and trauma	High workload and changes in the rosters
	Limited training to combat the unprecedented pandemic
	Social stigma and discrimination
	High infection and death rate
	Lack of proper coordination in COVID-19 management
	Absence of counselling service
Consequences of stress and trauma on livelihood, health and wellbeing	Low-work efficiency
	Imbalance in family responsibilities
	Physical and emotional complexities

Understanding Occupational Health and Safety

Occupational Health and Safety (OHS) has been a popular topic in the last three decades. It began as a way to handle workplace hazards and safety concerns but has now extended into practically every field, from aircraft to laboratories (NRC, 2003). Various occupational dangers have an impact on the health of workers, e.g., working on ladders, usage of chemicals, and some mental health concerns, such as job insecurity, solitude, bullying (BSI, 2011). During a pandemic, the health and safety of workers are jeopardized, due to the high probability of becoming infected with the virus. Therefore, a lack in the continuity of health planning, inability to practice social distancing, refusal to use face masks and hand sanitizers, and reluctance to wash hands can all be catastrophic during the coronavirus pandemic (OSHA, 2020).

The COVID-19 pandemic poses a threat to various employees from different backgrounds, particularly health workers. OHS was defined by Luczak *et al*. (2000) as the elimination of hazards as well as the development and promotion of health in the workplace. Occupational hazards during the pandemic include the possibility of contracting the SARS-CoV-2 virus, as well as violence, stigma, discrimination, and shift changes (WHO, 2021). The current COVID-19 pandemic is a source of worry for individuals of all socioeconomic backgrounds, and is also affecting the

mental health of care workers. Furthermore, the attitudes and actions of workers have a life-changing effect on the crisis, which is detrimental to them. People have had horrific encounters with life-threatening incidents as a consequence of the pandemic. It has significantly influenced the well-being of people and has caused sadness, anxiety and tension (Bridgland, 2021). According to Amponsah-Tawiah and Dartey-Baah (2011: 110): "*Occupational health and safety encapsulate the mental, emotional, and physical well-being of a worker in relation to the conduct of his work and accordingly mark an essential subject of interest, impacting positively on the achievement of organizational goals*".

The SARS outbreak of 2002–2003 revealed that several psychological issues such as Post-Traumatic Stress Disorder (PTSD) and depression were common among employees and survivors during a pandemic (Brewin *et al*., 2020). Mak *et al*. (2010) discovered that SARS survivors suffer from PTSD, which is a long-term mental anguish for them. Professionals render their services amidst several health threats such as a pandemic, and are at a larger risk of contracting the virus than anybody else. They are obliged to continuously deliver even during a lockdown, and despite their need to keep a social distance, they must still render their regular services to individuals. Burnout, stigma, fear and the loss of colleagues all exacerbate mental health in many service professions. The COVID-19 pandemic also had a profound influence on humans in a variety of ways: the new fatal coronavirus outbreak, like the previous pandemic, has interfered in the regular lifestyles and job-nature of people. Excessive workloads, fear of illness and mortality, and a lack of basic health equipment have all contributed to a spike in mental health issues among service personnel. This pandemic is likely to hinder the health and well-being of many job holders and result in decreased work output.

Results

State of Occupational Health and safety

The COVID-19 pandemic presented service providers with unimaginable hurdles. Similarly, healthcare employees such as physicians and nurses, were also exposed to occupational health risks. Workers' occupational health and safety were in grave danger, as several medical workers were infected with COVID-19. Furthermore, they only had few safety measures in place, with no incentives throughout the crisis. The majority of participants admitted to feeling helpless, and also admitted that their occupational health and safety were at stake. Such dangerous working environment, including that seen in hospitals, puts their lives at risk.

Exposure to COVID-19 infection

The ease of transmission of the COVID-19 virus, particularly through the air, poses a great threat to the job safety and health of frontline workers. The COVID-19 virus infected a large number of healthcare workers including physicians and nurses, as they had to frequently deal with infected people. As a result of the infection, they became wary of transmitting the COVID-19 to their immediate family members.

> *"I was terrified of becoming infected with the COVID-19 virus since I had spent the entire day dealing with a COVID-19-infected patient. Furthermore, when I arrived home, I was unable to hug my children or stay near them because I was carrying the virus and could easily transmit it to them. I had to communicate with my family members through video call even while at home, from the next room. I refrained from communicating with my older parents, as I will not forgive myself if they ever become infected with the virus" (S18).*

Lack of Sufficient Safety Measures

The virus was uncommon and spread rapidly within a very short time. In Bangladesh, almost every single hospital and clinic was experiencing a shortage of safety equipment for healthcare personnel. At the onset of the pandemic, PPE, N-95 masks, face shields, disinfectants, etc., which were safety measures against the contraction and spread of the virus were limited in quantity, greatly exposing doctors and nurses to the risk of COVID-19 infection. Their occupational safety was not ensured and this caused them to become very helpless.

"The PPEs provided to us were insufficient and of poor quality. To make matters worse, I was unable to wear masks owing to my respiratory issues and this made me even more afraid. I knew working without adequate safety equipment was dangerous, but I had no alternative. These issues made me feel insecure about my profession" (S12)

Some of the interviewees stated that they purchased high-quality safety equipment like masks, using their own money. Furthermore, they were not comfortable wearing masks all the time throughout this unprecedented health crisis.

> *"I spent my own money on high-quality masks. To worsen the situation, we were instructed to wear double masks all the time. As I was not used to wearing multiple masks, it caused breathing difficulties for me. There were also concerns about the PPEs' heating up. I encountered quite a slew of issues when working on this lethal coronavirus pandemic" (S7).*

High Infection and Death Rate

In comparison to other viruses, COVID-19 has a significantly higher rate of infection and mortality, and doctors and nurses were taken aback by the rapid spread of the virus on a global scale. Bangladesh's reports of medical personnel's deaths and infections frightened, agitated and disturbed others.

> *"The high rate of infection and mortality makes us more vulnerable and fearful. Every day, we proclaim the deaths of a large number of individuals. I have had to endure the pitiful expressions of their family members, as they remind me of my family every time. It's heartbreaking to witness such a vast number of individuals in misery on their hospital beds. What am I supposed to do? I felt so helpless" (S4).*

They witnessed their coworkers contract the virus and even die as a result of it. Such situations have resulted in illness and even grinded their professional lives to a halt.

> *"The infection and fatality rates among medical personnel frightened me. My wife persuaded me to quit this job, but that was not an option, as it was my sole source of income to provide for my family. Each time my family members watch a large number of infection/mortality updates on TV, they call us and cry over the phone, which I find really disturbing. I was unable to cope with the pandemic scenario, which put me under tremendous mental strain" (S14).*

Absence of Incentives and Social Protection

The healthcare providers continued to discharge their responsibilities despite endangering their lives. They put more effort into patient care but failed to receive additional compensation. The government vowed to give incentives at the beginning of the crisis but none of their promises fell through. The authorities also offered financial compensation on the occasion that a medical worker became infected. However, such rewards were unsatisfactory for some of the medical workers.

> *"We took good care of the patients during the health catastrophe but the authorities failed to acknowledge us. Incentives would do us a lot of good, as we were prevented from using outdoor rooms throughout the pandemic. I became infected with the COVID-19 virus and did not receive any compensation at all" (S28)*

Some participants from private hospitals stated that they were denied additional benefits available to government employees. They claimed that the government also provided adequate security to all of its employees.

> *"From my perspective, government hospital employees receive additional benefits and security as compared to private hospital employees. The whole country was preoccupied with praises of government medical personnel, that they entirely forgot the efforts of private clinic employees" (S30)*

Reasons for Stress and Trauma

High Workload and Changes in the Rosters

The COVID-19 pandemic imposed a significant volume of work on medical staff in workplaces. Earlier, health professionals used to work at a certain hour for a specific month, but their work schedules became greatly altered during the pandemic as they were frequently summoned to the hospitals to attend to emergency cases.

> *"A large number of patients arrived at the hospital in critical condition. It was very agonizing to witness individuals battling for their lives. Normally, we would work half the day but during the pandemic, things changed. We would sometimes work nonstop for a whole day, and two to three days on other occasions. We couldn't even have our meals at the hospital because we had our PPE on" (S17).*

Consequently, they came under a lot of strain due to the long work schedules and responsibilities. Heavy workloads caused them stress and trauma, compromising their health and safety in the workplace.

> *"I was previously working a night shift but due to the pandemic, I had to work on alternated schedules—some days in the morning and other days in the evening. Due to this, I was unable to balance work with family responsibilities. Dropping my kid in school became increasingly difficult due to my fluctuating shifts at the hospital" (S3).*

Limited Training to Combat this Unprecedented Pandemic

Healthcare workers were accustomed to working without the use of personal protective equipment (PPE), masks, face shields, etc., and lacked expertise in dealing with pandemic crises. It became extremely difficult for them to work in a global health crisis like the COVID-19 pandemic due to insufficient training. The pandemic had unprecedented effects on health workers, making them unable to defend themselves and compromising their occupational health and safety.

> *"I work in the Cardiology Department as a nurse and we were entrusted with dealing with COVID-19 patients throughout the outbreak. I lacked sufficient information about the virus and was further confused with the regularly varying information about the virus's spread on television. Therefore, had the authorities adequately trained us for this situation, we would have performed better and also protected ourselves" (S24).*

Likewise, an interviewee stated that she lacked experience dealing with an emergent crisis like the pandemic, and recommended that more training should be organized to address this knowledge gap.

"I am a novice in this field. Therefore, I have no information or training regarding the COVID-19 infection. Also, I have never worked in such a tense environment where I was at risk of contracting a virus and losing my life. I believe that the government and non-governmental organizations should have fully trained doctors and nurses and also provide adequate healthcare equipment" (S32).

Social Stigma and Discrimination

Doctors and nurses became ostracized due to their direct interaction with the virus during the COVID-19 pandemic. Throughout the COVID-19 crisis, social stigma and discrimination towards health personnel became prevalent, costing them discrimination in areas of their basic rights, e.g., housing. They were issued ultimatums by their landlords to vacate their flats and families refused to approach them due to their close contact with the virus. Thus, social rejection made their lives difficult and had an influence on their work performance.

"I've been living in a flat for six years and my relationships with other flat residents have been excellent. However, during the COVID-19 outbreak, my landlord issued me an ultimatum to vacate my apartment. He informed us that our neighbors had accused us of spreading COVID-19 in our residential area and my neighbors refused stay in touch with us afterwards. This is a really painful incident for us" (S6).

It was also noted that relatives of health professionals refused to visit them during the pandemic. Their family relationship became fragile, causing them to be dissatisfied with their lives.

"My relatives stopped visiting us as the onset of the pandemic. Prior to the pandemic, they regularly contacted and visited us. To worsen the situation, they no longer wave us on the roads anymore. We feel too helpless because of our profession as we appear to be permanently cut off from society. I never expected to have such a life" (S13).

Lack of Proper Coordination in COVID-19 Management

The recommendations of the government and the WHO kept changing. The hospital administration also failed to organize an effective coordination committee at the appropriate time. Inadequate planning, lack of integration at the governance level, and lack of responsibility from the recognized authorities are all contributors to the COVID-19's devastation in Bangladesh.

"Doctors and nurses were not well represented by government authorities on the COVID-19 coordinating committee, rendering the committee ineffectual in comprehending the hospital environment. They should have enlisted the help of medical specialists such as physicians, nurses and virologists in the development of proper action plan and procedures for a successful hospital administration" (S19).

Also, relevant authorities failed to provide adequate statistics on the number of individuals who were anticipated to be affected by the pathogen, as well as the number of ICU units and other gears required.

> *"The respected authorities failed to implement lockdowns at the appropriate moment. There was also a paucity of awareness-building measures during the virus's early stages. At the start of the pandemic, patients with COVID-19 symptoms did present themselves to the hospital, but there were no specific unit to identify and treat them. This is only due to the lack of cooperation in COVID-19 management" (S5).*

Absence of Counselling Service

The healthcare professionals were exposed to a high level of COVID-19 infection and were susceptible to high infection and mortality rates, and isolation. They became helpless in the face of the pandemic and were separated from their family members and other forms of entertainment.

> *"During the pandemic, I was separated from my family. I worked in the COVID-19 ward and my movements were controlled by the authorities. It made me feel powerless in bonding with my family. There was no counseling program for people who were quarantined or isolated" (S31).*

They were also mentally shattered as a result of the extraordinary experiences they encountered, and in Bangladesh, no counseling service were available for these emotionally susceptible individuals.

> *"We were terrified as a result of the lack of PPE and ICU beds, as we kept a watchful eye on various patients fighting for their lives. Our family members observed our anxiety and were greatly concerned, since their loved ones were at greater risk of being infected with the virus. They were unwilling to have me work, lest I became afflicted with the virus. They watch the news to reveal how many health professionals have died, and also how there is a scarcity of ICU beds and PPEs" (S25).*

Consequences of Stress and Trauma on Health, and Wellbeing

Low-Work Efficiency

Workflows, duties and responsibilities were transformed during the COVID-19 pandemic, causing workplace stress or burnout. A steep decrease was observed in the productivity of the workforce as a result of long working hours, absences or joblessness. In Bangladesh, the performance of healthcare personnel was negatively affected during the pandemic due to psychological weariness and strain, danger of infection, and sleep deprivation, which in turn resulted in slow work pace and low organizational effectiveness.

"Long periods of hard work left me fatigued and drained. I was horrified every day, as I saw people scream themselves to death. Seeing their family's desperation moved me to tears and made me fearful. I was unable to carry out regular routines involving contact with family members and food shopping, and frequently forgot to take my meals and prescriptions, which caused me to feel weak" (S31).

Imbalance in Family Responsibilities

Physicians and nurses experienced significant obstacles in fulfilling family responsibilities due to abrupt changes in work schedules caused by the coronavirus pandemic. On the one hand, they needed to keep working, but on the other hand, they were also concerned about their family responsibilities.

"In my family, I cook for everyone. However, due to the isolation, my family is in a state of crisis, as my elderly parents and spouse are unable to cook their meals. In addition, I used to take my family members to restaurants or tourist destinations on weekends but this is no longer possible as a result of my dues and COVID-19 protocols. I have greatly been unable to fulfill my family responsibilities in this recent period" (S27).

These challenges encountered during the coronavirus pandemic greatly impacted their work and personal lives to the extent that they were unable to care for their children.

"I used to feed and drive my son to school but could no longer do that during the pandemic. This saddens me a lot, as my son began to snub me and refused to have his meals since I left. Even when my children came visiting, they had to keep a safe distance from me, which was really unpleasant" (S9).

Physical and Emotional Complexities

Medical employees suffered from physical complications such as backaches, headaches, and muscular soreness as a result of their excessive workload. They also became emotionally susceptible as a consequence of the seclusion and quarantine regulations. A medical staff remarked during an interview:

"I was drafted to work on the COVID-19 duty standby and suffered prolonged back pain as a result. In addition to that, I also experienced constant headache and sleeplessness due to continuous night shifts. My family is quite concerned about my health and I can't even spend time with them. Emotionally, I am hurting" (S11).

They also became psychologically startled when they or their colleagues became afflicted with the virus. Following the loss of one of their colleagues, several coworkers became traumatized.

"I was really devastated with the death of my colleague resulting from COVID-19 complications. I was unable to describe my feelings and had never been in a scenario like that in my life. I was concerned about my life and that of my family and remained in a state of mental disorder due to my designation in the medical care unit" (S16).

Behavioral Abnormalities

The daily workload and countless death experienced by health workers make them afraid and often lead them to agitation, as health professionals became unable to optimally discharge their regular duties. Below is a remark by a staff participant during an interview:

"During the pandemic, we became so overburdened and immersed in our duties that anxious relatives would always scold us for spending ceaseless time at the hospital each passing day. We sometimes got irritated and reacted accordingly. Even we could not help but act irrationally at home, that our family members become hurt due to our misbehavior" (S10) .

Discussion

With the aid of a qualitative technique, this study was undertaken to understand the occupational health of healthcare providers during the COVID-19 pandemic, and according to the study findings, three major categories were extracted: state of occupational health, reasons for stress and trauma among health workers, and the repercussions of stress and trauma on their livelihood, health and wellbeing. Despite the exposure of health workers to the COVID-19 virus, their occupational health and safety measures are not ensured. As such, they were forced to continue working with available minimum safety precautions and with no rewards or incentives. Several studies revealed that healthcare personnel were anxious during the pandemic, and that their occupational health was threatened. The research conducted by Gold *et al*., (2021) and Stoichitoiu and Baicus (2021) revealed that the nature of transmission of the virus put medical professionals at high risk. The susceptibility of these employees was confirmed in this study from their low or lack of safety measures and absence of incentives, as they lacked proper PPE, facemasks and face shields at the start of the pandemic. Razu *et al*. (2021) discovered that healthcare professionals received no incentive or additional advantage from their workplaces, which is consistent with the outcomes of our current study. Despite their selfless delivery of unique services to people at high risk at the expense of their own wellbeing, they were, in turn, confronted with stress, trauma, worry and terror at work, as well as stigma and prejudice from neighbors and family. The breathing issues experienced by participants were further exacerbated by the use of double masks in conjunction with PPEs. In a research conducted in the Middle East, Kang *et al*. (2018) discovered that donning PPEs for a lengthy period of

time results in the suffocation of health professionals. Thus, healthcare workers in hospitals had a lot of trouble wearing PPEs, face masks, face shields, etc. Theorell (2020) demonstrated that such workplace flaws result in the lowest occupational health and safety among health employees. Their occupational health and safety were first at risk, coupled by the agitation and trauma resulting from the interaction with coronavirus patients. The current analysis revealed the poor health condition of health workers due to excessive workload and workplace stress and trauma. They have had to continue their jobs while changing rosters on a regular basis, which put them under considerable pressure and strain. The current study findings are consistent with earlier research that suggested that a heavy workload induces a variety of stressors and stressful conditions for workers (Xiao, 2020; Wang *et al*., 2020, Azman *et al.,* 2021).

The COVID-19 pandemic is one of the most lethal health crises ever experienced, as doctors and nurses were completely caught off guard and were unprepared to deal with such a health disaster. Accordingly, the unskilled staff in the medical sector were equally overly exposed to the coronavirus outbreak. The current study also investigated the societal stigma and prejudice encountered by healthcare personnel in the course of the outbreak. They experienced mental breakdown resulting from social rejection from their neighbors and family, and according to a prior study, medical personnel encountered reduced social acceptability amongst their peers, which resulted in adverse emotional effects (Zungu *et al*., 2021; Razu *et al*., 2021; Mehedi *et al*., 2022). The high risk of infection of health workers by the Coronavirus instills fear in them and their families. To effectively tackle a health crisis, the establishment of an effective coordination committee is critical (Ahmed *et al*., 2011). The study also investigated the lack of coordination in the management of COVID-19. Respective authorities failed to enforce lockdown and create public awareness about the transmission in a timely manner. Therefore, patients, both symptomatic and asymptotic, sought medical attention in hospitals. Hossain *et al*. (2021) revealed that the lack of adequate effective coordination of the COVID-19 pandemic has contributed to the high rate of infection recorded in Bangladesh, adversely affecting people's mental health. Inadequate planning, lack of integration at the governance level, and lack of responsibility from concerned authorities were all contributing factors to the COVID-19 devastation witnessed in Bangladesh. The current study evidenced that medical employees were victims of acute stressful and painful situation during the pandemic, but no counseling services were being found to address them. Caring for the mental health of healthcare providers during the pandemic is critical for their own occupational health and well-being.

The coronavirus outbreak did, in fact, have a significant impact on the livelihood, health, and well-being of healthcare providers. It is well known that healthcare staff at hospitals work to improve the lives of patients, as doctors and nurses were assigned to certain wards on a daily basis during the pandemic. Hospitals recorded low work efficiency as a result of these frequent changes in rosters. Participants

remarked that they worked longer hours but were dissatisfied with the service they provided. In addition, the participants reported a significant challenge in maintaining family obligations. The findings indicated that nurses and physicians are unable to care for their children, parents and other family members. They would also visit tourist attractions, but are now unable to do so due to safety regulations. Medical professionals have no leisure time due to the nature of their work and the study revealed that the participants were subjected to tremendous physical and emotional strains including backaches, headaches and sleeplessness throughout the pandemic. This is consistent with findings of Greenberg *et al*., (2020), which highlighted that health workers were subjected to a variety of physical and emotional strains throughout the crisis. Being away from a family member, living alone in quarantine and isolation make people mentally weak and affect how well they perform at work.

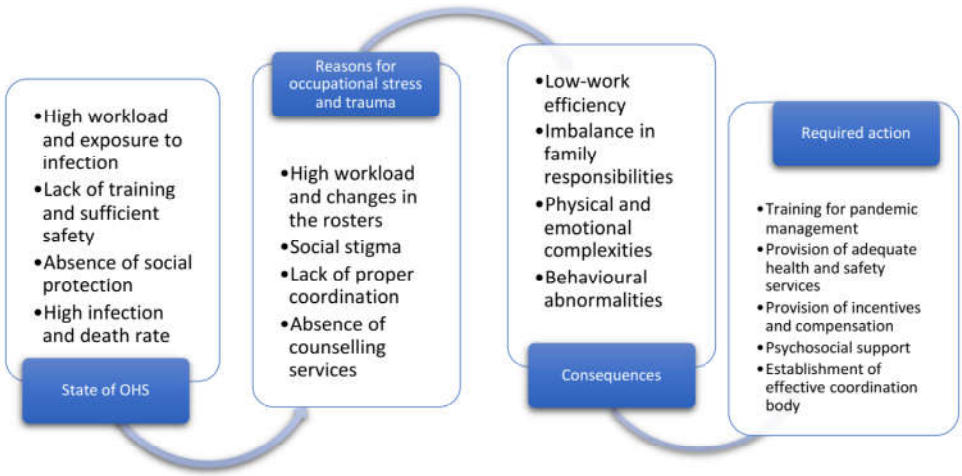

Figure 1. Ensuring OHS for the health professionals during the COVID-19 pandemic

Strengths and Limitations of the Study

The study's strength lies in its employment of a qualitative method to investigate the occupational health of medical professionals during the COVID-19 pandemic. It focuses on the occupational health and everyday pressures of Bangladeshi health service employees. The policymakers will now be able to implement appropriate policies to alleviate the suffering of medical care personnel. During the devastating pandemic, frontline workers were engaged in the heroic task of caring for the sick and non-infected people. Consequently, the study investigated and discovered the various pressures and traumatic experiences affecting the mental health of this occupational group. The study proceeds to further demonstrate the effects of stress

and trauma on their daily activities. However, this study had certain drawbacks due to being undertaken during the pandemic. Due to safety concerns, it was extremely difficult to contact the participants, and the data collection process was delayed owing to the frequent lockdowns and quarantine procedures. There was also a breakdown in the rate of data collection in this regard. Furthermore, due to the tremendous workload, the participants were unable to give data in a timely manner, thus truncating our chances of collecting rich data.

Conclusion

The COVID-19 pandemic and the resulting lockdowns and social distancing has disrupted the normal routine of people, also created a slew of socioeconomic and emotional issues such as increased workload, decreased work efficiency and high stress and trauma among individuals, particularly the healthcare workers. The safety and wellbeing of frontline workers was significantly threatened during the pandemic, thus requiring dire intervention to reduce work-related hazards among health workers. The GOs and other NGOs may play a strong role in maintaining the occupational health of frontline workers by enacting suitable policies and consulting with appropriate public health specialists, psychologists, social workers and policymakers. Civil society and the state are potential stakeholders that can help lower infection and death rates by creating awareness, lobbying for adequate medical treatment, and appropriately organizing COVID-19 management committees. However, psychological and grief therapy might be more beneficial to people who have suffered from stress and traumatic shocks as a result of the COVID-19. Therefore, the mental health of healthcare workers is critical in this fight against the pandemic.

References

Ahmed, S. M., Hossain, M. A., RajaChowdhury, A. M., & Bhuiya, A. U. (2011). The health workforce crisis in Bangladesh: shortage, inappropriate skill-mix and inequitable distribution. *Human Resources for Health*, *9*(1), 1-7, DOI: 10.1186/1478-4491-9-3.

Amponsah-Tawiah, K., & Dartey-Baah, K. (2011). Corporate Social Responsibility in Ghana. *International Journal of Business and Social Science, 2*(17), 107-112.

Azman, A.; Singh, P.S.J.; Isahaque, A. (2021). Implications for social work teaching and learning in Universiti Sains Malaysia, Penang, due to the COVID-19 pandemic: A reflection. *Qualitative Social Work,* 20 (1-2), 553–560. DOI: https://doi.org/10.1177/14733250209733.

Brewin, C. R., DePierro, J., Pirard, P., Vazquez, C., & Williams, R. (2020). Why we need to integrate mental health into pandemic planning. *Perspectives in Public Health*, *140*(6), 309-310. DOI: 10.1177/1757913920957365.

Bridgland, V. M., Moeck, E. K., Green, D. M., Swain, T. L., Nayda, D. M., Matson, L. A., ... & Takarangi, M. K. (2021). Why the COVID-19 pandemic is a traumatic stressor. *Plos one*, *16*(1), e0240146. DOI: 10.1371/journal.pone.0240146.

British Standard Institutions (BSI). (2011). Guidance on the management of psychosocial risks in the workplace. http://mtpinnacle.com/pdfs/Guidance-on-the-management-of-psychosocial-risks-in-the-workplace-1.pdf .

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, DOI: 10.1016/S0140-6736(20)30460-8.

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 112934, DOI: 10.1016/j.psychres.2020.112934.

Chen, S., Yang, J., Yang, W., Wang, C., & Bärnighausen, T. (2020). COVID-19 control in China during mass population movements at New Year. *The Lancet*, *395*(10226), 764-766, DOI: 10.1016/S0140-6736(20)30421-9.

Chen, W., & Huang, Y. (2020). To protect health care workers better, to save more lives with COVID-19. *Anesthesia and* analgesia, *131*(1):97-101, DOI: 10.1213/ANE.0000000000004834.

Cullen, W., Gulati, G., & Kelly, B. D. (2020). Mental health in the Covid-19 pandemic. *QJM: An International Journal of Medicine*, *113*(5), 311-312, DOI:10.1093/qjmed/hcaa110.

Fairwear. (2020). *Covid-19 impact and responses: Bangladesh*. https://www.fairwear.org/covid-19-dossier/covid-19-guidance-for-production-countries/covid-19-impact-and-responses-bangladesh/.

Giannis, D., Geropoulos, G., Matenoglou, E., & Moris, D. (2020). Impact of coronavirus disease 2019 on healthcare workers: beyond the risk of exposure. *Postgraduate Medical Journal,* DOI: 10.1136/postgradmedj-2020-137988.

Gold, D., Hughes, S., & Thomas, D. (2021). Perceptions, experiences and opportunities for occupational safety and health professionals arising out of the COVID-19 Pandemic. *Humanities and Social Sciences Communications*, *8*(1), 1-1, DOI: 10.1057/s41599-021-00955-y.

Greenberg, N., Docherty, M., Gnanapragasam, S., & Wessely, S. (2020). Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ*, *368*, DOI: 10.1136/bmj.m1211

Hong, X., Currier, G. W., Zhao, X., Jiang, Y., Zhou, W., & Wei, J. (2009). Posttraumatic stress disorder in convalescent severe acute respiratory syndrome patients: a 4-year follow-up study. *General Hospital Psychiatry*, *31*(6), 546-554, DOI: 10.1016%2Fj.genhosppsych.2009.06.008.

Horesh, D., & Brown, A. D. (2020). Traumatic stress in the age of COVID-19: A call to close critical gaps and adapt to new realities. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(4), 331, DOI: 10.1037/tra0000592.

Hossain, M. I., Mehedi, N., Ahmad, I., Ali, I., & Azman, A. (2021). Psychosocial stress and trauma during the COVID-19 pandemic: Evidence from Bangladesh. *Asian Social Work and Policy Review*, DOI: 10.1111/aswp.12227.

ILO. (2021). COVID-19: Occupational health and safety for health workers. https://www.ilo.org/global/industries-and-sectors/health-services/WCMS_769309/lang--en/index.htm.

Jennings, W. G., & Perez, N. M. (2020). The immediate impact of COVID-19 on law enforcement in the United States. *American journal of Criminal Justice*, *45*, 690-701, DOI: 10.1007/s12103-020-09536-2.

Kang, H. S., Son, Y. D., Chae, S. M., & Corte, C. (2018). Working experiences of nurses during the Middle East respiratory syndrome outbreak. *International Journal of Nursing Practice*, *24*(5), e12664, DOI: 10.1111/ijn.12664.

Khanal, P., Devkota, N., Dahal, M., Paudel, K., & Joshi, D. (2020). Mental health impacts among health workers during COVID-19 in a low resource setting: a cross-sectional survey from Nepal. *Globalization and Health*, *16*(1), 1-12. DOI: 10.1186/s12992-020-00621-z.

Lau, J. T., Yang, X., Pang, E., Tsui, H. Y., Wong, E., & Wing, Y. K. (2005). SARS-related perceptions in Hong Kong. *Emerging Infectious Diseases*, *11*(3), 417, DOI: 10.3201/eid1103.040675.

Luczak, H., Rötting, M., & Brüggmann, M. (2000, July). International comparison of OSH research. In: *Proceedings of the Human Factors and Ergonomics Society Annual Meeting,* 44(28), 652-655. Sage CA: Los Angeles, CA: SAGE Publications.

Mahmud, F. (2020). Hundreds of doctors in Bangladesh infected with coronavirus. https://www.aljazeera.com/news/2020/04/hundreds-doctors-bangladesh-infected-coronavirus-200423080515266.html.

Mak, I. W. C., Chu, C. M., Pan, P. C., Yiu, M. G. C., Ho, S. C., & Chan, V. L. (2010). Risk factors for chronic post-traumatic stress disorder (PTSD) in SARS survivors. *General hospital psychiatry*, *32*(6), 590-598, DOI: 10.1016/j.genhosppsych.2010.07.007.

Mehedi, N., & Hossain, M. I. (2022). Patients with stigmatized illnesses during the COVID-19 health hazard: An underappreciated issue. *Asian Journal of Psychiatry*, *67*, 102951-102951, DOI: 10.1016/j.ajp.2021.102951.

Mirembe, J (2020). COVID-19: Fighting depression during quarantine. https://www.newvision.co.ug/new_vision/news/1517214/covid-19-fighting-depression-quarantine .

Mowbray, H. (2020). In Beijing, Coronavirus 2019-nCoV has created a siege mentality. *BMJ*, *368,* DOI: 10.1136/bmj.m516.

National Research Council. (2003). Occupational health and safety in the care and use of nonhuman primates.

Noman, M. (2020). Disregard for health guidelines spreads Covid-19. https://tbsnews.net/coronavirus-chronicle/covid-19-bangladesh/disregard-health-guidelines-spreads-covid-19-81112.

Occupational Safety and Health Administration. (2020). Guidance on preparing workplaces for COVID-19. *Available from: OSHA3990-03*.

Paul, R. (2020). Bangladesh confirms its first three cases of coronavirus. Retrieved from https://www.reuters.com/article/us-health-coronavirus-bangladesh-idUSKBN20V0FS

Prothomalo. (2020). Coronavirus infections of administration officials are on the rise. https://www.prothomalo.com/bangladesh/article/1664949/

Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations, DOI: 10.1136/gpsych-2020-100213.

Rahman, S. (2020). This is suffocating: Disrupted mental health during the pandemic. https://tbsnews.net/coronavirus-chronicle/covid-19-bangladesh/suffocating-disrupted-mental-health-during-pandemic-75064 .

Razu, S. R., Yasmin, T., Arif, T. B., Islam, M., Islam, S. M. S., Gesesew, H. A., & Ward, P. (2021). Challenges faced by healthcare professionals during the COVID-19 pandemic: a qualitative inquiry from Bangladesh. *Frontiers in Public Health*, 1024, DOI: 10.3389/fpubh.2021.647315.

Reliefweb. (2020). Protecting Mental Health During the COVID-19 Outbreak. https://reliefweb.int/report/bangladesh/protecting-mental-health-during-covid-19-outbreak.

Stoichitoiu, L. E., & Baicus, C. (2021). COVID-19 pandemic preparedness period through healthcare workers' eyes: A qualitative study from a Romanian healthcare facility. *PloS one*, *16*(10), e0257381, DOI: 10.1371/journal.pone.0257381.

Sun, L., Sun, Z., Wu, L., Zhu, Z., Zhang, F., Shang, Z., ... & Liu, N. (2020). Prevalence and risk factors of acute posttraumatic stress symptoms during the COVID-19 outbreak in Wuhan, China. *MedRxiv*, DOI: 10.1016/j.jad.2021.01.050.

The Economic Times. (2020). 66% of Indian employees want to work completely from home: Survey. https://economictimes.indiatimes.com/news/company/corporate-trends/66-of-the-indian-employees-want-to-work-completely-from-home-survey/articleshow/79444498.cms.

The Financial Express. (2020). COVID-19 outbreak in BD: Recovery rate continues to be very low. https://thefinancialexpress.com.bd/national/covid-19-outbreak-in-bd-recovery-rate-continues-to-be-very-low-1587869972 .

Theorell, T. (2020). COVID-19 and working conditions in health care. *Psychotherapy and Psychosomatics*, *1*. DOI: 10.1159/000507765.

UNB. (2020). *Coronavirus: Lack of awareness may spell a disaster*. https://unb.com.bd/category/Bangladesh/coronavirus-lack-of-awareness-may-spell-a-disaster/47318

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and public health*, *17*(5), 1729, DOI: 10.3390/ijerph17051729.

WHO. (2021). COVID-19: Occupational health and safety for health workers: interim guidance, 2 February 2021. https://www.who.int/publications/i/item/WHO-2019-nCoV-HCW_advice-20211.

World Health Organization (WHO). (2021). COVID-19: Occupational health and safety for health workers. https://www.who.int/publications/i/item/WHO-2019-nCoV-HCW_advice-2021.1.

Xiao, C. (2020). A novel approach of consultation on 2019 novel coronavirus (COVID-19)-related psychological and mental problems: structured letter therapy. *Psychiatry investigation*, *17*(2), 175, DOI: 10.30773/pi.2020.0047.

Yang, Y., Shang, W., & Rao, X. (2020). Facing the COVID-19 outbreak: What should we know and what could we do? *Journal of Medical Virology*, *92*(6), 536-537, DOI: 10.1002/jmv.25720.

Yasmin, S., Alam, M. K., Ali, F. B., Banik, R., & Salma, N. (2021). Psychological Impact of COVID-19 Among People from the Banking Sector in Bangladesh: a Cross-Sectional Study. *International Journal of Mental Health and Addiction*, 1-15, DOI: 10.1007/s11469-020-00456-0.

Zhang, M., & Kim, R. (2021). Occupational health protection for health workers during the coronavirus disease 2019 (COVID-19) pandemic: 6P-approach in China. *Global Health Journal*.

Zhang, Y., & Ma, Z. F. (2020). Impact of the COVID-19 pandemic on mental health and quality of life among local residents in Liaoning Province, China: A cross-sectional study. *International Journal of Environmental Research and Public Health*, *17*(7), 2381, DOI: 10.1016/j.glohj.2021.11.007.

Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., & Niu, P. (2020). A novel coronavirus from patients with pneumonia in China, *New England Journal of Medicine*, 727-733, DOI: 10.1056/NEJMoa2001017.

Zungu, M., Voyi, K., Mlangeni, N., Moodley, S. V., Ramodike, J., Claassen, N., ... & Malotle, M. (2021). Organizational factors associated with health worker protection during the COVID-19 pandemic in four provinces of South Africa. *BMC Health Services Research*, *21*(1), 1-15, DOI: 10.1186/s12913-021-07077-w.