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REVIEW ARTICLE

IMPACT OF COVID-19 ON THE MENTAL HEALTH OF HEALTHCARE WORKERS: PREDISPOSING FACTORS, PREVALENCE AND SUPPORTIVE STRATEGIES

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ABSTRACT

The massive upsurge of hospitalizations and deaths in the wake of COVID-19 pandemic has placed an unprecedented strain on the psychological well-being of the healthcare workers (HCW) worldwide. The concern about being viewed as unfit for duty by employers or "mentally weak" was the primary reason given. In addition, a majority of HCWs insisted that improvements on the administrative front would have a better impact. An extensive literature review for this paper has been done through databases like Pubmed (Medline) and Google scholar to compile information from various sources. A study of the causative and exacerbating factors, corrective and preventative measures applied, and direct feedback from HCW reveals that much work is yet to be done to develop a satisfactory approach towards ensuring the mental wellbeing of one of the greatest assets in the fight against the pandemic.

KEYWORDS

Healthcare workers, Mental health, COVID - 19, Anxiety, Depression, Burnout, Insomnia

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INTRODUCTION

Since early 2020, when the COVID-19 pandemic propagated by the SARS-COV-2 virus spread across the world, it has claimed millions of lives and injured the quality of life for millions more. Perhaps one of the more disproportionately affected professions has been that of healthcare workers (HCW), who have tirelessly worked to save lives and control the devastating effect of the virus. In the process, they work for hours on end without food or water due to restrictions associated with personal protective equipment (PPE). Many are unable to spend adequate time with their friends and family due to exhaustion and fear of infecting them. This can be exacerbated by institutional inefficiencies such as insufficient resources and manpower. Additionally, they witness death and bereavement on a large scale, perhaps more than any other profession has during these past 2

years. This is compounded by abuse and harassment from agitated relatives of the infected or deceased.

This paper explores the incidence of mental health issues in HCW worldwide because of the COVID-19 pandemic. It also discusses the predisposing factors in this regard, which is crucial for the development of initiatives that are preventive rather than corrective. Finally, it discusses the various interventions and HCW response to them.

PREDISPOSING FACTORS INFLUENCING DEVELOPMENT OF MENTAL HEALTH ISSUES

Numerous efforts have been made to better define the risk factors that make HCW more susceptible to developing adverse mental health and related effects in this scenario. There is also evidence to suggest that there may be a specific demographic that may be at a higher risk as well. While many have postulated that certain factors which translate to having greater personal responsibilities and a poorer support system make an individual more likely to fall prey to anxiety, depression, etc., there remains scope for further research in this area which would allow hospital administration and human resource personnel to better identify employees who are at risk and hence introduce more effective policies to combat it. In addition, it is worthwhile to take into consideration that employees who fall into more than one category simultaneously, for example, a sole breadwinner who also has an infected family member, can be in a position that exacerbates the degree of mental distress experienced. Studies have been done on the gender aspect of mental health issues faced by HCWs. Most of the studies indicated that women in the healthcare sector, especially those engaged in direct care of patients who have contracted COVID-19, are more likely to experience psychological distress than their male counterparts.

In a study involving both doctors and nurses, greater incidence of Post-Traumatic Stress Symptoms (PTSS) and symptoms indicative of depression were observed in HCW engaged in COVID-19 wards as compared to those working in other units. In addition, being female and not being in a relationship were seen to be predictive indicators for depressive symptoms, whereas being of female sex and of advanced age were predictors for PTSS. [15] This may indicate that women suffer more from the lack of a support system, especially as age increases. Further highlighting the role of gender as a risk factor, a survey of 350 respondents observed that symptoms of anxiety and depression requiring further evaluation, as well as probability of experiencing moderate or severe stress, were roughly two times higher in women. The risk was doubled in those women who were not staying in a permanent accommodation. [18] This, too, can be tied into the lack of a support system and increased exhaustion, both mental as well as physical.

A study that considered the effects of COVID-19 in tandem with similar virus outbreaks on the psychological state of mind revealed many similarities. It was found that being more junior both in age and in designation, being primary caretakers of dependents, and occurrence of an infection in the family predisposed to mental distress. The stigma in society against HCW who came in close contact with infected persons, lack of support, and an increased duration of quarantine also contributed in this regard. [13] This draws attention to the many parallels that can be drawn between various viral outbreaks, specifically, fear of getting infected or transmitting the infection to family, severe exhaustion and burnout, etc. In addition, it can also be argued that this stress can be exacerbated by inefficiencies on the administrative front. In the context of COVID-19, this can manifest as inadequate provision of personal protective equipment (PPE) or inadequate manpower. HCW may also feed the need to buy additional PPE if they feel that the PPE provided by the hospital is insufficient. During government-imposed lockdowns, they may also have been forced to arrange for their own transportation. This can add a financial strain on many HCW who are already undercompensated, especially in developing countries.

Nishimura et al [8] surveyed doctors and nurses in Japan to estimate the prevalence of burnout in HCW. They observed that in HCW involved in direct care of infected patients, the rate of burnout was 50%. In addition, those posted in the Intensive Care Unit (ICU) were more likely to experience burnout in contrast to those from General Medicine

A review of the existing literature further highlighted the role of demographic variables such as profession/specialization within healthcare, department in which the HCW was employed, as well as self-efficacy and reduced support outside of work, in giving rise to stress, disturbed sleeping patterns and anxiety. In addition, it was suggested that COVID-19 in itself may be considered as an individual stress factor in HCW, a proposition increasingly supported by statistical evidence. [13] Constantly varying shift durations,

24-hour shifts, changing from day shift to night shift, long commutes can all cause insomnia and poor quality of sleep when compounded with other stress-inducing factors. Many HCW also report exhaustion and skin discomfort, as well as more serious manifestations such as urinary tract infections, due to continuous wearing of PPE over many hours.

PREVALENCE OF MENTAL HEALTH ISSUES

FIGURE 1- SUMMARY OF FINDINGS (PREVALENCE OF MENTAL HEALTH ISSUES)

Study	Total Number of HCW surveyed	%Age reporting anxiety	%Age reporting depressive symptoms	%Age reporting insomnia/disturbed sleeping pattern	%Age reporting PTSS/PTSD	%Age reporting stress
[4]	97,333	22.1	21.7	-	21.5	-
[10]	33,062	23.2	22.8	38.9	-	-
[7]	NA	24	21	37	-	37
[11]	3083	26.6	23.8	-	-	-
[9]	194	32.5	37.6	50	-	-
[6]	8267	38.1	32.1	-	-	81.7
[12]	939	60.2	77.6	50.4	-	76.4
[20]	1685	33	29	-	14	-
[16]	NA	24.1	12.1	-	-	29.8
[18]	350	17.7	11.4	-	-	-

FIGURE 1- REVIEW OF EXISTING LITERATURE

AUTHOR (S)	FINDINGS
[16]	Discussed prevalence of mental health issues including anxiety, depression, stress, sleep disorders etc that were experienced by HCW. It was found that being employed in a geographical area with high infection rates, being a female worker, being younger in age, and being a nurse resulted in more severe psychological stress.
[12]	Observed that HCW are indeed at higher risk of acquiring mental health issues as compared to those individuals not working in the industry. They may also experience moral injury during their course of work. Reinforcement teams and regular contact to ensure wellbeing are initiatives that can promote a better outcome. Where possible, employees should be monitored and provided with well researched treatments once the risk of the pandemic starts to decrease in intensity. It is important for healthcare managers to address the psychological wellbeing of the employees. Clear instructions should be provided on what to expect in the line of COVID-19 duty.
[15]	Focused on the incidence of PTSS among HCW and discussed the possible predisposing factors. Found gender and age to correlate with probability of developing PTSS and gender and marital status to correlate with probability of developing depressive symptoms.

[19]	Postulated that self-help may be pursued as a viable option because it can be made available to HCW through a variety of platforms. In addition, it has also been observed that self-help is an effective intervention for a wide variety of psychological issues.
[13]	Correlated increased mental distress, including disturbed sleeping patterns, with department of employment, gender of the employee, age and line of work. Predisposing factors were found to include an unstable support system and self-efficacy.
[3]	Being caretakers responsible for the safety of dependent children, being more junior in designation, and having an infected family member were seen to increase the incidence of mental health issues. Longer quarantines and increased stigma in society also contributed in this regard. Availability of adequate PPE and sufficient rest alleviated these issues.
[17]	Discusses the negative impact on staff members and takes into consideration interventions at the individual level, at the team level and at the organizational level that can help provide support to the affected employees.
[1]	Analyzes the interventions implemented by a large-scale tertiary hospital in China to improve mental health of employees. Along with interventions such as guidance and counselling, the hospital responded to feedback after slow uptake and modified its approach to include adequate rest for HCW and training to handle uncooperative patients.
[10]	A systematic review aimed at estimating the prevalence of mental health issues in HCW insomnia, anxiety, and depression. By compiling the available data, it was found that nursing staff and female HCW were more susceptible.
[7]	Conducted a rapid systematic review and discussed the various support programs offered by institutes to HCW and HCW response to them. Found that many HCW are more interested in adequate resources such as PPE and enough time to rest and contact their family instead of professional psychological support.
[18]	A cross-sectional online survey in the country of India. It was found that female HCW were approximately twice as likely to develop moderate or high-level stress, anxiety and depressive symptoms that warranted further psychological evaluation. In addition, women who were housed at a temporary accommodation or a hostel had more chances of developing depressive symptoms or anxiety.

TREATMENT AND PREVENTION

Kisely et al [3] observed that multiple studies converged on provision of sufficient PPE, ensuring that staff is well rested, clear forms of communication, and external interventions as being correlated with reduced morbidity amongst HCW. In a survey encompassing physicians from multiple continents, reliance on family was shown to be the most preferred method for stress reduction by the respondents. [5] A majority of the HCWs surveyed by [14] viewed social support to be critical. These informal forms of help were seen to be more favored by HCW across multiple studies, supporting the argument that the presence of a robust support system and allocation of adequate time to communicate with friends and family is important. While it may be easier for HCW to communicate their feelings with those whom they trust, it may also be postulated that these interventions may discourage them from accessing professional help even if they are in need of it. Thus, in the long run, they may end up doing more damage than expected.

However, it has been observed that merely the provision of psychological interventions is inadequate to alleviate mental health issues faced by HCW. An in-depth study by Chen et al [1] in a large tertiary hospital in China found that

many HCW were hesitant to make use of the available resources such as hotlines and group activities intended to reduce stress.

Some of the reasons cited by them included not wanting their families to worry about them, and risk of getting infected not being an immediate worry. They instead reiterated their need for adequate rest and PPE provision. They faced a greater concern when dealing with uncooperative and critically ill patients, and instead requested training on how to handle emotional disturbances in these patients, since they do not feel adequately equipped to handle such situations.

Muller et al [7] found in a systematic review that hospitals and other care organizations such as psychiatric facilities introduced steps to combat mental health effects in HCW that relied heavily on symptoms experienced on a person-to-person basis. They included interventions on the level of the individual like mental health hotlines and other supportive strategies aimed at improving the situation at a personal level. Thus, a majority of them had one factor in common they all targeted the individual psychopathology. The researchers are of the opinion that this downplays the role of the institution in framing policies and regulations that may harm the mental health of the HCW. This can prevent the unearthing of major insufficiencies at the administrative level which, if addressed and rectified, would produce better outcomes.

CONCLUSION

This paper explores the possible causative factors for mental health issues in HCW, the prevalence according to multiple studies, and remedial steps that are being taken or that may be taken in order to alleviate the situation. HCW are one of our most crucial weapons in the fight against COVID-19 and it is imperative that this taskforce is not crippled in any way by the effects of psychological distress arising from the pandemic.

The first step in any clinical setting with a large number of employees can be a survey to estimate the extent of deleterious mental effects and the preferred way for reduction of stress. Keeping the possible risk factors in mind, special attention may be given to providing support to those employees who are showing signs of mental distress or who are at a greater risk of doing so. Professional consultation with psychological experts should be sought and their suggestions implemented. Adequate time should be given for rest and relaxation between shifts. If necessary, alternative accommodation may be provided by the hospital to reduce risk of transmission of infection from HCW to their families. While initiatives such as support groups and mental health hotlines are important, exploration into the possible shortcomings at the institutional level should also be explored and corrected to the extent possible.

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