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ORIGINAL

Examining burnout and stress among healthcare professionals during and post COVID-19 lockdown: A comparative analysis

Examinando el agotamiento y el estrés entre los profesionales de la salud durante y después del confinamiento por COVID-19: Un análisis comparativo

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ABSTRACT

Purpose: the purpose of this paper is to conduct a comprehensive comparative analysis focusing on burnout and stress experienced by healthcare professionals during and after the COVID-19 lockdown. The COVID-19 pandemic presented an unprecedented challenge for society, particularly for healthcare professionals who faced extended hours, direct exposure to the virus, and substantial stress and burnout. This analysis aims to shed light on the experiences of healthcare professionals during this challenging period and its aftermath, highlighting the need for proactive measures by policymakers and healthcare organizations to support mental health and well-being.

Method: the research employs a comparative analysis approach to assess the levels of burnout and stress among healthcare professionals during and post the COVID-19 lockdown. It likely involves surveying healthcare professionals, collecting data on their experiences, and analyzing trends and patterns over time. The methodology may also include qualitative interviews or focus groups to gain deeper insights into the factors contributing to stress and burnout among healthcare professionals.

Results and Discussion: the results of the study are expected to reveal the extent of burnout and stress experienced by healthcare professionals during and after the COVID-19 lockdown. This section will discuss the key findings, highlighting any significant differences in stress levels between the two periods and identifying factors contributing to burnout among healthcare professionals. Possible discussions may explore the impact of workload, lack of resources, and personal challenges on mental health and well-being, as well as the effectiveness of existing support systems and interventions.

Implications of the Research: the implications of this research are far-reaching, offering valuable insights for policymakers, healthcare organizations, and healthcare professionals themselves. By understanding the unique challenges faced by healthcare professionals during the COVID-19 pandemic and its aftermath, policymakers can develop proactive measures to support mental health and well-being in future public health crises. Healthcare organizations can use the findings to tailor strategies and interventions aimed at reducing burnout and stress among their workforce, ultimately improving patient care and overall organizational performance.

Originality/Value: this research contributes to the existing body of knowledge on the impact of the COVID-19 pandemic on healthcare professionals' mental health and well-being. By conducting a comparative analysis, this study offers unique insights into the dynamics of stress and burnout before, during, and after the COVID-19 lockdown. The findings have significant implications for practice, policy, and future research in the field of healthcare workforce management and public health emergency preparedness.

Keywords: Covid-19; Perceived Stress; Burnout; Health Care.

RESUMEN

Propósito: el propósito de este trabajo es realizar un análisis comparativo exhaustivo centrado en el agotamiento y el estrés experimentados por los profesionales sanitarios durante y después del bloqueo por COVID-19. La pandemia de COVID-19 supuso un reto sin precedentes para la sociedad, en particular para los profesionales sanitarios, que tuvieron que hacer frente a horarios prolongados, a la exposición directa al virus y a un estrés y un agotamiento considerables. Este análisis pretende arrojar luz sobre las experiencias de los profesionales sanitarios durante este difícil periodo y sus secuelas, destacando la necesidad de medidas proactivas por parte de los responsables políticos y las organizaciones sanitarias para apoyar la salud mental y el bienestar.
Métodos: la investigación emplea un enfoque de análisis comparativo para evaluar los niveles de agotamiento y estrés entre los profesionales de la salud durante y después del cierre de COVID-19. Es probable que implique encuestar a los profesionales sanitarios, recopilar datos sobre sus experiencias y analizar tendencias y patrones a lo largo del tiempo. La metodología también puede incluir entrevistas cualitativas o grupos focales para profundizar en los factores que contribuyen al estrés y al agotamiento entre los profesionales sanitarios.
Resultados y Discusión: se espera que los resultados del estudio revelen el grado de agotamiento y estrés experimentado por los profesionales sanitarios durante y después del cierre de COVID-19. En esta sección se analizarán los principales resultados, se destacarán las diferencias significativas en los niveles de estrés entre los dos periodos y se identificarán los factores que contribuyen al agotamiento entre los profesionales sanitarios. Los posibles debates pueden explorar el impacto de la carga de trabajo, la falta de recursos y los retos personales en la salud mental y el bienestar, así como la eficacia de los sistemas de apoyo y las intervenciones existentes.
Implicaciones de la Investigación: las implicaciones de esta investigación son de gran alcance y ofrecen valiosas perspectivas para los responsables políticos, las organizaciones sanitarias y los propios profesionales de la salud. Al comprender los retos específicos a los que se enfrentaron los profesionales sanitarios durante la pandemia de COVID-19 y sus secuelas, los responsables políticos pueden desarrollar medidas proactivas para apoyar la salud mental y el bienestar en futuras crisis de salud pública. Las organizaciones sanitarias pueden utilizar los resultados para diseñar estrategias e intervenciones destinadas a reducir el agotamiento y el estrés entre su personal, mejorando en última instancia la atención al paciente y el rendimiento general de la organización.
Originalidad/Valor: esta investigación contribuye al conjunto de conocimientos existentes sobre el impacto de la pandemia de COVID-19 en la salud mental y el bienestar de los profesionales sanitarios. Al llevar a cabo un análisis comparativo, este estudio ofrece una perspectiva única sobre la dinámica del estrés y el agotamiento antes, durante y después del bloqueo por COVID-19. Los resultados tienen implicaciones significativas para la práctica, la política y la investigación futura en el campo de la gestión del personal sanitario y la preparación para emergencias de salud pública.

Palabras clave: Covid-19; Estrés Percibido; Burnout; Asistencia Sanitaria.

INTRODUCTION

In December 2019, the World Health Organization (WHO) China Country Office reported pneumonia cases in Wuhan, Hubei. This disease, now known as COVID-19, quickly spread throughout China and internationally, leading to the WHO declaring it a global pandemic on March 11, 2020.[5] COVID-19 is the sixth PHEIC, following H1N1 (2009), polio (2014), Ebola (2014 in West Africa), Zika (2016), and Ebola (2019 in the Democratic Republic of the Congo).[4] No nation, socioeconomic status, or race is immune to this new virus, which has caused significant psychological and mental responses due to its rapid and unpredictable nature;[24,2,13,15]. Governments, companies, and educational institutions have taken unprecedented measures to manage the spread of COVID-19, but additional problems are anticipated, such as a mental health crisis during and after the pandemic.[25,7]

Amidst the fight against COVID-19, healthcare professionals such as doctors are grappling with the daunting task of protecting people, families, and communities during a global health crisis. Unfortunately, they are finding themselves as unanticipated targets due to limited resources, personal protective equipment (PPE), and other equipment.[28] The condition has severe repercussions, requiring hospitalisation and specialized treatment for several patients.[14] As a result, healthcare professionals are suffering from mental health issues due to increased demand, work overload, the risk of infection, the likelihood of transferring it to their families, imprisonment, and, in many cases, voluntary isolation.[27,19] Both primary and specialty care practitioners have been affected, albeit with slightly different characteristics.[19,20] This can cause various psychological symptoms

in medical workers, including fear, insecurity, and anxiety.[1,17] However, it is unknown how this situation has affected the quality of professional life and the perceived stress in various healthcare environments across the nation, as well as considering a wider spectrum of health professionals, including doctors and nurses. The circumstances have subjected health professionals to high levels of emotional tension, stress, and suffering in both hospital and primary care settings.[13]

In India, close to 200 healthcare professionals, including doctors and nurses, have contracted COVID-19.[16] Even those who were not treating asymptomatic patients have been affected. This pandemic has caused significant anxiety, stress, and depression within the community.[26] However, healthcare professionals may be particularly vulnerable due to infection-related anxiety, workplace stress, social isolation, and bias.[29,30] Despite the impact of COVID-19 in India, no formal evaluation of the mental health of healthcare professionals has been conducted. Globally, there is limited literature on the mental health effects of an epidemic on healthcare professionals. This study assesses the frequency and severity of mental health symptoms among Indian healthcare professionals during and after the lockdown. This information will benefit healthcare administrators and policymakers to implement mental health interventions rapidly in the event of a COVID-19 surge and potential future lockdowns.[9,22] It will enable policymakers to act quickly and develop strategies to protect healthcare professionals.

The COVID-19 pandemic has caused significant stress and burnout among healthcare professionals. This research paper investigates the impact of the pandemic on the mental well-being of these professionals during and after the lockdown. We aim to identify variations in stress levels and burnout while considering factors like age, gender, and occupation. We will also explore whether the work environment affects stress and burnout prevalence, along with their interplay. This study will provide empirical evidence to help understand the mental health challenges faced by healthcare professionals during and after pandemics, aiding in the development of targeted support strategies and policies.

Review of literature

COVID-19 and India

The first cases of coronavirus in India were contracted through international travel, rather than community transmission. The initial three cases were reported in Kerala on January 30th and February 3rd, when the patients were returning from Wuhan, China.[23] In response, the Ministry of Health and Family Welfare (MoHFW) issued travel restrictions and advisories in order to prevent the disease from spreading. Foreign visitors entering the country were required to self-quarantine for 14 days, while travel visa restrictions for other countries remained until April 15th.[18] On March 16th, 2020, the MoHFW proposed a number of interventions, including maintaining a social distance of 1 meter, to prevent the disease from spreading within the community. These measures have ultimately resulted in a decrease in the spread, morbidity, and mortality caused the disease.[12]

COVID-19 and Health Care Professionals

During pandemics, the world experiences a halt or slowdown in daily activities, and individuals are encouraged to practice social distancing to reduce interactions between people, thereby reducing the possibility of new infections. However, health professionals typically take the opposite approach.[36] Due to the exponential increase in healthcare demand, they must work long shifts with limited resources and precarious infrastructure.[37] They also have to wear Personal Protective Equipment (PPE) that may cause physical discomfort and breathing difficulties.[38] Furthermore, many professionals may feel unprepared to intervene clinically with patients afflicted with a novel virus for which little is known, and no well-established clinical protocols or treatments exist.[38,21]

There is also a concern about autoinoculation among healthcare workers and the likelihood of spreading the infection to their relatives, acquaintances, or colleagues.[39,27] These variables can cause varying amounts of psychological stress, leading to feelings of loneliness, helplessness, tension, impatience, physical and mental tiredness, and despair.[38] Work overload and stress-related symptoms render health workers particularly sensitive to psychological distress.[37,39,27]

Burnout during COVID-19

Burnout is a state of physical, emotional and mental exhaustion that occurs after long-term involvement in emotionally taxing work environments. It is a complex syndrome that includes decreased self-worth, depersonalization and emotional exhaustion.[31] Burnout was first identified in the mid-1970s,[32] and is now recognized as a serious issue affecting the physical and mental health of healthcare workers. The current COVID-19 pandemic has had a significant negative psychological impact on healthcare workers and their families due to closed borders, lockdowns and other restrictions. Demographic factors also play a role in burnout levels during lockdown, with previous studies finding that women are more susceptible to burnout than men.[8] Therefore, our hypothesis focuses on exploring the impact of the pandemic on healthcare workers:

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H_1: there is a difference in level of burnout among gender of healthcare professionals during and after the lockdown of covid.

Investigate the disparities in burnout experienced by healthcare professionals at different career stages, comparing younger and senior individuals, some studies shows that there is no difference in burnout among healthcare professions with respect to age.[43,44] Thus, forming the next research hypothesis:

H_2: during and after the lockdown of COVID, healthcare professionals of different age groups experience varying levels of burnout.

Burnout has become a significant problem in the healthcare industry due to prolonged exposure to workplace stressors. It has major implications for both healthcare professionals and the organizations they work for. The World Health Organization's recent recognition of burnout as an occupational phenomenon, rather than a medical condition, highlights its importance.[45] Therefore, it is crucial to investigate burnout in different healthcare settings, such as specialized COVID-19 care and standard hospital environments, and frame a hypothesis accordingly:

H_3: healthcare professionals demonstrated varying levels of burnout during and after COVID lockdowns across different work environments.

Research studies conducted by Cheng et al.[46], Spector[47] and Lerner et al.[48] suggest that healthcare workers who experience high-stress job conditions, characterized by limited job control, elevated psychological demands, and insufficient social support, are at an increased risk of developing mental health issues. Additionally, medical doctors and nurses are increasingly experiencing burnout syndrome, as reported Escribà-Agüir et al.[49] Based on this information, it can be hypothesized that there is a strong association between high-stress job conditions and the development of mental health issues among healthcare workers:

H_4: during and after the Covid lockdown, different healthcare professionals' healthcare professionals experienced varying levels of burnout.

Several work-related factors have been found to be associated with burnout, according to studies conducted by De la Fuente et al.[50] and Stimpfel et al.[51]. Among these, the type of work shift has been identified as a crucial factor that affects burnout development, with morning, evening, or night shifts having a significant impact.[52] Therefore, based on this information, the next hypothesis can be framed as follows:

H_5: healthcare professionals in different shifts experience varying levels of burnout during and after the Covid lockdown.

Perceived Stress during COVID -19

Stress is an individual's mechanism for coping with internal or external challenges, as per. A person's assessment of a stressor as harmful or non-threatening, as well as their own coping abilities, determines their perceived stress level, according to Liu et al.[33] Healthcare personnel are at greater risk of psychological distress due to prolonged working hours and a higher risk of virus exposure. This could lead to stress, anxiety, depressive symptoms, and a need for sick or stress leave, potentially affecting the health system's ability to provide services during the crisis.[34] If left untreated, these psychological symptoms could have long-term negative effects on the health of healthcare professionals, leading to increased treatment costs.[35] Furthermore, the level of stress experienced by healthcare professionals during the COVID-19 pandemic is influenced by their demographic profile. Gender disparities in perceived stress were evident in the context of hospital care.[53] Based on this, it can be hypothesized that:

H_6: gender-based differences in perceived stress among healthcare professionals during and after COVID-19 lockdown.

According to a study carried out by Chekole et al.[54] there seems to be a correlation between the age of healthcare professionals and their perceived stress levels. Researchers found that older professionals tend to experience higher levels of stress compared to those in the younger age group. Based on these findings, the following hypothesis can be formulated:

H_7: healthcare professionals of different ages experienced varied levels of stress during and after COVID lockdown.

Healthcare workplaces are a major source of excessive workload and stress for healthcare workers. During the COVID-19 pandemic, regardless of their specific work settings, healthcare workers across the board experienced similar levels of stress. This has been highlighted.[55] Therefore, the hypothesis is that:

H_8: healthcare professionals in different work settings experienced varying levels of stress during and after COVID-19 lockdown.

Amid the ongoing health crisis, healthcare professionals continue to experience high levels of stress, as per a study.[52] Interestingly, the study found that the perceived stress levels were similar across different healthcare occupations, including doctors and nurses. Based on these findings, the hypothesis can be formulated as follows:

H_9: during and after the COVID lockdown, Various healthcare professionals experienced varying levels of stress.

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There was a significant change in sleep and wake patterns during and after the lockdown period. Healthcare workers reported an increase in daytime napping, likely due to increased stress levels. The shift in sleep schedules and work-life balance among healthcare workers after the lockdown was also driven by changes in work shifts, which contributed to higher stress levels.[56] Therefore, the hypothesis can be formulated as follows:

H_{10}: during and after COVID lockdown, healthcare professionals in different shifts experience varying levels of stress.

Devebakan[6] explored the relationship between perceived stress and burnout among healthcare professionals. The findings showed a positive correlation, indicating that perceived stress is a significant contributing factor to burnout in this group. Therefore, the final hypothesis was formulated as such:

H_{11}: there is a relationship between Burnout and Perceived stress among healthcare professionals.

METHOD

Study Design and Participants

The study followed a descriptive research design and employed the cross-sectional method to gather information about the characteristics of the participants, who were doctors and nurses. The sample size was set at 300 healthcare professionals above the age of 21 who were working during the COVID pandemic. The researchers used a purposive sampling technique to select the respondents. A structured questionnaire was distributed to the targeted participants through social media platforms such as Facebook and Instagram, at two different times: during and after the lockdown. The response rate was 83 %.

Instrument

A questionnaire survey is used to gather information. The questionnaire has three parts. The first part includes demographic variables such as gender, age, occupation, living situation, work setting, and work shift. The second part consists of 10 questions related to burnout during the Covid-19 pandemic, while the third part consists of 10 questions related to stress during the pandemic. Both the stress and burnout questionnaires use a 5-point Likert scale for measurement. The table 1 shown in Construct and items.

Table 1. Construct and items

Items	Source
Burnout during COVID-19: during the COVID-19 pandemic, how much burnout have you experienced?	Khasne[11]
• Do you find it challenging to work in the current situation?	
• Is it more tiring for you to work in the current situation?	
• Do you feel that you are putting in more effort than what you are getting back from your work?	
• Are you hesitating to work during the current situation?	
• Are you feeling depressed due to the current situation?	
• Do you feel as though your patience is being tested while working in the current situation?	
• Are you afraid of death while working in the current situation?	
• Do you feel that the lockdowns due to the current pandemic have added more stress to your life?	
• Do you feel adequately protected by the hospital during the current situation?	
• Do you feel like your colleagues are providing you with support during the current situation?	
Perceived Stress during COVID-19: during the COVID-19 pandemic, how much stress have you experienced due to the following factors?	Burke[3]
• Due to the current situation, it is difficult to have gatherings with your extended family and friends.	
• Concerned about COVID-19's impact on you or loved ones?	
• Loss of daily routines, such as sleep and mealtimes, work and recreation schedules, for you or your family	
• It is concerning to think that you could contract COVID-19 and subsequently spread it to others.	
• It is concerning if you or any member of your family has been hospitalized due to COVID-19 illness.	
• COVID results in the death of a family member or very close friend.	
• There is a lot of conflicting and misleading information about COVID-19 in the media and online.	

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- Financial hardship due to COVID-19 related job loss or decreased earnings for you or your family.
- It can be challenging to obtain essential supplies such as face masks, hand sanitizers, medications, food, and drinks when needed.
- Due to the COVID-19 crisis, families are experiencing increased conflict from spending more time together at home and arguing more frequently.

Ethical and Moral Concern

The participants were informed about the study's purpose and process and asked to grant informed consent before completing anonymous questionnaires. Participation was voluntary and uncompensated.

Statistical Analyses

In the research article, several statistical tests were used, including paired sample t-test, independent sample t-test, ANOVA, and correlation analysis.

Paired sample t-test was used to compare the levels of burnout and stress among healthcare professionals during and after the lockdown period. This test is suitable when the same participants are measured twice, as was the case in this study. Independent sample t-test was used to compare the levels of burnout and stress among healthcare professionals with respect to gender, occupation, and work settings. This test compares the means of two independent groups and is useful when the variables being compared are categorical. ANOVA (Analysis of Variance) was used to examine the differences in burnout and stress levels among healthcare professionals with respect to age and working shift. This statistical test is useful when comparing the means of three or more groups. Finally, correlation analysis was used to examine the relationship between stress and burnout among healthcare professionals. This test measures the strength and direction of the linear relationship between two variables.

Overall, the statistical tests used in the study were appropriate for the research questions being addressed. These tests provided valuable insights into the levels of burnout and stress experienced by healthcare professionals during the COVID-19 pandemic.

RESULTS

Demographic Characteristics of the Participants

Table 2. Respondent's demographic profile (n=300)

	Group	Frequency	Percentage (%)
Gender	Male	140	46
	Female	160	54
Age	21-30	80	27
	31-40	70	23
	41-50	70	23
	51-60	50	17
	Above 60	30	10
Occupation	Doctor	119	40
	Nurse	151	60
Living Situation	Living alone	94	32
	Living with Family	114	38
	Living with partner	92	30
Work setting	Specific COVID-19 unit	132	44
	Regular Hospital Care	168	56
Work shift	Morning shift	74	25
	Rotating without night shifts(mornings/evenings)	67	22
	Rotating with night shifts	80	27
	Fixed night shift	79	26

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The table 2 shows the frequency and percentage of healthcare professionals in different groups based on gender, age, occupation, living situation, work setting, and work shift.

Burnout and Perceived Stress in Healthcare Professional during and After Lockdown

Table 3. Paired samples statistics for burnout

	Mean	Mean Difference	t-value	df	Sig. (2-tailed)
Burnout during lockdown	4,1567	1,04333	19,066	99	0,001**
Burnout after lockdown	3,1133				

Note: **indicated p value < 0,05.

Table 3 shows the statistics of the paired samples t-test that compared the average levels of burnout experienced by healthcare professionals during and after the lockdown. The mean level of burnout during the lockdown was 4,1567, while the mean level of burnout after the lockdown was 3,1133. The outcome suggests that there was a significant difference between the mean levels of burnout during and after the lockdown (t=19,066, df=99, p< 0,001). Specifically, healthcare professionals experienced higher levels of burnout during the lockdown, compared to the levels of burnout they experienced after the lockdown (mean difference=1,04333).

Table 4. Paired samples statistics for perceived stress

	Mean	Mean Difference	t-value	df	Sig. (2-tailed)
Stress during lockdown	3,6089	0,96778	25,982	99	0,001**
Stress after lockdown	2,6411				

Source: SPSS
Note: **indicated p value < 0,05.

The results of the paired-samples t-test in table 4 indicate that there was a significant difference in the mean scores for stress reported by the participants during and after the lockdown period (t (99) = 25,982, p < 0,001). The mean score for stress during the lockdown was 3,6089, while the mean score for stress after the lockdown was 2,6411. The difference between these means was 0,96778. These findings suggest that the level of stress reported by the participants decreased significantly after the lockdown period, as compared to during the lockdown. The p-value of less than 0,001 provides strong evidence against the null hypothesis of no difference in stress levels. Therefore, it can be concluded that there was a statistically significant reduction in stress levels reported by the participants after the lockdown period compared to during the lockdown period.

Burnout and Perceived Stress with Respect to Gender, Occupation and Work Settings

Table 5. Statistics for independent sample T-test

	Organisation type	Mean	Std. Deviation	t-value	Sig. (2-tailed)	Mean Difference
Gender	Female	4,5650	1,11668	2,341	0,021	0,53000
	Male	4,0350	1,14732			
Occupation	Nurse	4,6500	0,75678	3,135	0,002	0,63000
	Doctor	4,0200	1,23864			
Work setting	Specific COVID-19 unit	4,7010	0,89784	2,656	0,009	2,65600
	Regular Hospital Care	4,1309	1,10130			

Source: SPSS

Table 5 presents the statistics for the independent variables gender, occupation, and work setting. The table shows that the mean score for females (4,5650) is higher than for males (4,0350) in terms of burnout. Nurses reported a higher mean score (4,6500) than doctors (4,0200), and those working in the specific COVID-19 unit reported a higher mean score (4,7010) than those in regular hospital care (4,1309).

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The t-test results indicate that there was a significant difference in burnout levels based on gender, occupation, and work setting. Females reported higher levels of burnout than males (t (98) = 2,341, p = 0,021). Nurses reported higher levels of burnout than doctors (t (98) = 3,135, p = 0,002). Those working in the specific COVID-19 unit reported higher levels of burnout than those in regular hospital care (t (148) = 2,656, p = 0,009).

Burnout and Perceived Stress with Respect to Age and Working Shift

Table 6. ANOVA Statistics for age

		df	F	Sig.
Stress	Between Groups	4	11,077	0,001**
	Within Groups	296		
	Total	300		
Burnout	Between Groups	4	15,990	0,001**
	Within Groups	296		
	Total	300		
	Burnout Tukey HSD			
Age	N	Subset for alpha = 0,05		
		1	2	
Above 60	80	4,3000		
51 - 60 Years	66		3,6212	
41 - 50 Years	80		3,9750	
31 - 40 Years	88		3,5341	
21 - 30 Years	90		3,6667	
Sig.		1,000	0,207	
	Stress Tukey HSD			
Age	N	Subset for alpha = 0,05		
		1	2	
Above 60	80	4,8500		
51 - 60 Years	66		3,3030	
41 - 50 Years	80		3,9000	
31 - 40 Years	88		3,3409	
21 - 30 Years	90		3,9333	
Sig.		1,000	0,121	

Source: SPSS
Note: ** indicated p value < 0,05.

The ANOVA results of age on stress and burnout are presented in table 6. The between-groups variance for stress is significant (F (4,296) = 11,077, p < 0,001), indicating that there are notable differences in stress levels among different age groups. Similarly, for burnout, the between-groups variance is significant (F (4,296) = 15,990, p < 0,001), indicating that there are significant differences in burnout levels among different age groups. The post hoc Tukey test for burnout compares the mean burnout scores among the age groups. The results reveal that there are considerable differences in burnout scores between any of the age groups at the alpha level of 0,05. The post hoc Tukey test for stress compares the mean stress scores among the age groups. The results show that there are significant differences in stress scores between the above 60 age group and any of the other age groups at the alpha level of 0,05, while there is a significant difference between the 51-60 age group and the above 60 age group (p = 0,121).

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Table 7. ANOVA table for working shift

		df	F	Sig.
Burnout	Between Groups	3	0,323	0,809
	Within Groups	297		
	Total	300		
Stress	Between Groups	3	0,627	0,599
	Within Groups	297		
	Total	300		

Source: SPSS

The ANOVA table 7 present the outcomes of two distinct analyses, one for burnout and the other for stress, with the independent variable being the working shift. Both for burnout and stress, the differences between groups were not significant, as indicated by the F-test values of 0,323 and 0,627, respectively, and their corresponding p-values of 0,809 and 0,599, respectively. This implies that there were no notable differences in burnout or stress levels among the different working shifts. As a result, regardless of the work shifts, healthcare workers experienced higher levels of stress and burnout during the lockdown period.

Correlations between the Burnout and the Perceived Stress Scale

Table 8. Correlation table

		Perceived Stress
Pearson Correlation	Burnout	0,702**
Sig. (2-tailed)		0,001**

Source: SPSS
Note: ** indicated p value < 0,05.

According to table 8, there is a strong positive correlation between Burnout and Perceived Stress during the COVID-19 pandemic. The correlation coefficient of 0,702 indicates that higher the burnout, higher the stress. The p-value of 0,000 is less than the significance level of 0,01, indicating that this correlation is statistically significant. Therefore, it can be concluded that Burnout and Perceived Stress have a significant relationship.

DISCUSSION

The study highlights the significant impact of the COVID-19 pandemic on the mental well-being of healthcare professionals, particularly regarding burnout and stress. Healthcare workers experienced elevated levels of burnout and stress, with the peak occurring during the lockdown period. This surge can be attributed to the intensified workload and pressures they faced. The constant influx of COVID-19 cases required longer working hours and strained resources, leading to heightened burnout and stress. Additionally, the fear of contracting the virus or spreading it to their families added to their emotional burden. A noteworthy gender disparity emerged from the study, with females consistently reporting higher levels of burnout compared to males. Several factors contribute to this difference. Women in healthcare often bear a dual burden, juggling professional and domestic responsibilities, making them more susceptible to burnout. Gender-related psychosocial factors also play a role, with women more likely to express their emotional struggles and seek support as it supports the previous study done.[10] In contrast, men may underreport burnout due to a reluctance to acknowledge emotional challenges. Female healthcare professionals faced unique pandemic-related challenges, such as caregiving responsibilities and concerns for their families' health, further contributing to stress and burnout.

The study also revealed significant differences in burnout levels between nurses and doctors. Nurses reported higher burnout levels, primarily due to the nature of their roles, involving direct and continuous patient care, physical and emotional demands, and less control over schedules and patient interactions. The hierarchical structure in healthcare settings affects nurses' autonomy, while doctors, as senior members, experience a greater sense of control, potentially reducing burnout. Nurses' emotional labour, involving the management and expression of emotions during patient interactions, contributes to their increased burnout. Moreover, healthcare professionals working in COVID-19 units reported significantly higher burnout and perceived stress levels than those in regular hospital care. This finding aligns with expectations, given the unique stressors associated with caring for COVID-19 patients, including increased virus exposure, longer working hours, and emotionally charged patient interactions.

The age-based analysis indicated that older healthcare professionals, particularly those above 60, experienced higher stress levels and burnout. This was contradicting to the previous studies results which states that younger people are more vulnerable to stress and burnout.[40,41,42] Possible reasons include concerns about their health due to age and additional stressors related to their experience and expertise.

The study's findings have significant implications for healthcare organizations and policymakers. Healthcare institutions must prioritize addressing burnout and stress among their workforce, providing robust support systems, including counselling and mental health services. Ensuring access to resources and assistance to perform effectively is crucial. Targeted interventions to alleviate burnout factors, such as workload reduction and work-life balance initiatives, should be considered. Gender-sensitive mental health support programs and flexible work arrangements can address the unique challenges faced by female healthcare professionals. Equitable task allocation and a collaborative work environment can mitigate disparities between nurses and doctors. Specialized training and resources for COVID-19 unit staff, along with rotation policies, can prevent chronic burnout.

Policymakers should consider funding mental health services and training programs to reduce burnout among healthcare professionals. Regulations and guidelines to protect healthcare workers and ensure adequate support are essential. Maintaining a holistic approach to support all healthcare professionals, regular well-being assessments, and open communication channels are vital.

CONCLUSIONS

The study has some limitations that need to be considered. Firstly, it was cross-sectional in design which means that it was unable to establish causal relationships or track changes in burnout and stress over time. More longitudinal studies are necessary to address these issues. Secondly, the study did not take into account pre-existing mental health conditions or personal life events that could have affected the results. It also did not explore the impact of healthcare organizations' interventions or support programs, which may have influenced the outcomes. Additionally, the findings may be influenced by language, cultural factors, and regional healthcare practices. Therefore, it is important to interpret the study's results with caution, and more comprehensive research is required to address these factors in greater depth.

The study primarily focuses on investigating the levels of burnout and perceived stress among healthcare professionals during the COVID-19 pandemic. The goal is to examine the prevalence of burnout and stress, identify potential variations based on factors such as gender, occupation, age, and work setting, and understand the implications of these findings for healthcare organizations and policymakers. The study provides valuable insights into the mental well-being of healthcare workers and serves as a basis for discussions on strategies to mitigate burnout and stress within the healthcare sector. It's worth noting that the study is limited to a particular region or population, and the findings may not be applicable universally. Future research can expand on these findings by replicating similar studies in diverse healthcare settings and regions to gain a more comprehensive understanding of this critical issue.

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