IJCRR
Section: Healthcare
ISI Impact Factor
(2019-20): 1.628
IC Value (2019): 90.81
SJIF (2020) = 7.893

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Problems Faced by Healthcare Professionals of Lahore Pakistan in Covid-19 Pandemic

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ABSTRACT

Introduction: Corona virus is an uncontrollable pandemic disease spread by the severe acute respiratory distress corona virus disease. Covid-19 pandemic has a great impact on the mental and physical health of people.

Objectives: To find out the sleep problems, depression and anxiety symptoms among front line health care professionals during the Covid-19 pandemic situation in Lahore Pakistan.

Methodology: A comparative cross-sectional study design was used and data was collected from various hospitals of Lahore through a non-probability purposive sampling technique. The study duration was from January 2021 to May 2021. A three-part standardized questioner PSQI (Pittsburgh sleep quality Index), PHQ-9 (Patient Health Questionnaire – PHQ-9) and GAD-7 (Generalized anxiety disorder) was prepared to explore and compare the prevalence of sleep problems, depression and anxiety symptoms among frontline health care workers. Data were analyzed using descriptive statistics.

Results: The study highlighted that there was minimal anxiety in staff nurses. The result of the study showed severe sleep problems in health care workers. The majority of the staff nurses faced sleep problems as compared to doctors or respiratory therapists. Staff nurses were poor sleepers. The result of this study showed a mild level of depression among the doctors.

Conclusion: This study concludes that sleep disturbance is significantly associated with the COVID-19 pandemic situation while it is insignificantly associated with depression and anxiety symptoms resulting due to COVID-19 pandemic situation among front-line health care workers in Lahore, Pakistan.

Key Words: COVID-19, Pandemic situation, Sleep quality, Anxiety, Depression, Healthcare Professionals

INTRODUCTION

World Health Organization announced COVID-19 or the new COVID as a pandemic in March 2020.¹ the fight for survival over assets in the wake of COVID-19 turned into a cosmopolitan issue. Pakistan being poorly developed, Fight to contain and decrease the load of this sickness before it grows out of the assets accessible to battle the destructive infection.² The government is assisting its kin with understanding the need to take prudent steps, presently, like never before.³ With medical clinics stressed and the number of fatalities rising significantly on an everyday premise, Pakistan's delicate health area is preparing for an alarming pandemic.⁴ On

an everyday premise, Pakistan's delicate health area is preparing for an alarming pandemic. Clinics are as yet coming up short in the two most populated urban areas of Pakistan, Karachi and Lahore, because of a huge ascent in covid-19 patients lately. The Health Ministry of Pakistan, Yasmeen Rashid, has pronounced that there are just 539 beds and 200 ventilators for patients with covid in Punjab.⁵

A large number of individuals with coronavirus has a delicate to coordinate respiratory disorder; others experience outrageous infection, for instance, COVID-19 pneumonia. Formal finding requires research focus assessment of nose and throat tests or imaging tests like CT images. However,

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ISSN: 2231-2196 (Print)

ISSN: 0975-5241 (Online)

Received: 19.08.2021

Revised: 07.09.2021

Accepted: 12.10.2021

Published: 13.12.2021

the first and most open suggestive information is from indications and signs from clinical analysis. If basic assurance by signs and signs were exact, the necessity for time-consuming, master insightful tests would be diminished. Are skilled by patients. People with light Coronavirus infection might experience cough, sore throat, high temperature, detachment of the guts, headache, muscle or joint Ache, shortcoming, and loss of sensation of smell and taste.⁶ the covid-19 pandemic has spread around the globe dramatically since it previously showed up in China on December 2019. Infection has become a significant health concern influencing practically all parts of people's lives.^{7,26} By 5 October 2020, measurements show that there were more than 35,241,000 affirmed COVID-19 cases and more than 1,038,000 demise around the world.⁸ To throw away and control the COVID-19 pandemic, the Pakistani government has taken different estimates, for example, testing, separation, following, and restricting the development of people both inside and the nation over.⁹ Without a doubt, as apply such measures have been discovered to be effectual to ensure actual health of individuals against covid-19, the dangers of a second or third flood of the pandemic may cause anxiety and depression among individuals all around the world.¹⁰ A few investigations have assessed rest quality and its relationship to psychological components among medical services labourers, specifically nurses. As indicated by the discoveries of a new meta-examination analyzing the pooled predominance of rest quality across 53 investigations, helpless rest quality was a typical element and was accounted for in 61.0% of nursing staff. This was described by modifications of rest boundaries, for example, rest idleness, span, and rest proficiency (SE), abstract rest quality, and daytime dysfunctions. In addition, subgroup and meta-relapse examinations found that Pittsburgh Sleep Quality Index (PSQI) cutoff esteems, mean age, weight file, test size, study quality, and work experience affected the pervasiveness of helpless rest quality.¹¹

Doctors, paramedical staff and students do not understanding fine value of sleep and that this has raised during the COVID-19 epidemic.¹² some unsteady and possible danger components, such as training level or job in the segregation unit, emerge to participate a vital job in moderating the sleep disturbance.¹³ Most medical staff working in seclusion sectors and medical clinics frequently doesn't get any preparation for giving emotional well-being care. Demonstrated that how the repression "caused a feeling of aggregate insanity, directing the staff to despairing measures."¹⁴ It is conceivable that dread and tension of falling wiped out or passing on, incapability will drive an expansion in the 2020 self-destruction rates. In the United States (US), the coronavirus epidemic's new epicentre, a committed Lifeline was actuated for psychological stress identified with Coronavirus to stop self-destruction. These assessments of sleep quality in Health care workers, notwithstanding, have been surveyed

utilizing subjective and self-revealing estimates, for example, Pittsburgh Sleep Quality Index (PSQI) in this way restricting clinical value.¹⁵

In Pakistan, the previously imported instance of COVID – 19 was confirmed on 26th February 2020 and simply in a couple of months before the end of April 2020, the numbers are moving toward more than 20,000 cases with a mortality rate of around 2%.¹⁶ However, moderately lower in Pakistan, the high death rate in different nations like Italy, Iran and USA is disturbing and cause xenophobia among health care worker and the overall population on the loose. Healthcare professionals, such as front-line physicians, nurses, and paramedical staff, were particularly susceptible since they were dealing with a crisis. In recent research in China, health care personnel directly involved in the care of COVID-19 patients had a very high prevalence of depression (50.4%), anxiety (44.6%), and sleeplessness (34%). Various factors hypothetically account for an increased incidence of anxiety and depression among frontline physicians and general practitioners in Pakistan, as well as other nations. One of the possible causes might be a view of the healthcare system's inability to handle the outbreak, even though even the greatest healthcare systems in the industrialised world have collapsed. Imprudent utilization of individual defensive supplies (PPEs) by general populations prompting its lack of assurance of frontier medical staff is one more tension evoking factor among medical staff.^{17,27}

Additionally, in this period of information technology, while individuals are getting speedy reports on the developing circumstance through different media, this may go about as a blade that cuts both ways to expand their uneasiness concerning the spread of infection and mortality among medical care labourers especially doctors. Doctors and other medical staff is considered as the legends of this epidemic circumstance are the fundamental power on which establishment of any medical care structure rests; so, it is of most extreme significance that their psychological and general health should be dealt with so they can play out their obligations in the most proficient way. Scant information demonstrates 33% of the doctors experiencing tension and stress in Pakistan even before the covid 19. However, due to the oddity and fast advancement of this emergency circumstance, there are no articles papers accessible, particularly in advanced states to identify the effect of these theorized factors on the psychological well-being of frontier doctors. So it is necessary to perform an investigation to assess the information and insight about this epidemic, recurrence of and components related with stress and uneasiness among cutting edge doctors and general specialists performing their duties in private and public area medical services foundations during the coronavirus epidemic in Pakistan. As per official Pakistan Government measurements as of twelfth September 2020, more than 300,955 cases have been affirmed with all outnumber of

demise surpassing 6373. Doctors, nurses, respiratory therapists and paramedical staff are in danger of constant contact as patients are referred to Health care centres or separation centres for analysis, isolation and supervision.¹⁸

METHODOLOGY

A Comparative cross-sectional study was used and data was collected from various hospitals of Lahore, Pakistan. The study duration time was six months from January 2021 to June 2021. The sample size for this study was calculated to be 51 by using the average PSQI- score of a frontline health care worker. The sample size was estimated using the following formula:

$$n = \frac{Z_{1-\alpha/2}^2 \sigma^2}{d^2} \text{ or } \frac{Z_{1-\alpha/2}^2 \sigma^2}{\epsilon^2 \mu^2}$$

Hence sample size (n) calculated was 51 frontline health care workers. On-probability purposive sampling was used for the study. In Inclusion Criteria all frontline health care workers (Respiratory therapists, Doctors and Nurses of both gender). In Exclusion Criteria Includes health care workers that were interns and voluntary workers working in corona. A three-part standardized questionnaire was prepared to explore and compare the prevalence of sleep problems, depression and anxiety symptoms among frontline health care workers. PSQI (Pittsburgh Sleep Quality Index) to measure sleep quality in frontline health care workers was used. GAD-7 (Generalized Anxiety Disorder) to assess the anxiety symptoms in frontline health care workers was used. Patient Health Questionnaire-9 (PHQ-9) to measure the depression symptom in frontline health care workers was used.

RESULTS

This study included 51 participants 28 staff nurses, 12 doctors and 11 Respiratory therapists out the 51 study participants, 18 (35.3%) participants were male and 33 (64.71%) were female, 39 .22% of participants were of age 0-25 other participants were of above 25 years.

Table 1: Descriptive frequencies of anxiety concerning the designation

Designation	Frequency	Percentage (%)
Staff nurse		
Minimal anxiety	14	50.0
Mild anxiety	9	32.1
Moderate anxiety	5	17.9
Total	28	100.0

Table 1: (Continued)

Designation	Frequency	Percentage (%)
Doctors		
Minimal anxiety	5	41.7
Mild anxiety	4	33.3
Moderate anxiety	3	25.0
Total	12	100.0
Respiratory therapist		
Minimal anxiety	7	63.6
Mild anxiety	2	18.2
Moderate anxiety	2	18.2
Total	11	100.0

Table 5.1 describes descriptive frequencies of anxiety concerning the designation. According to the GAD-7 anxiety scale, this table indicates that out of 28 staff nurses, 14(50 %) of staff nurses had minimal anxiety, 9 (32.1 %) had mild anxiety and 5 (17.9%) staff nurses had moderate anxiety. The table shows that 12 doctors, 5 (41.7%) had minimal anxiety, 4 (33.3%) had mild anxiety and 3 (25 %) had moderate anxiety. In the given table out of 11 Respiratory therapists, 7 (63.6) had minimal anxiety, 2 (18.2%) had mild anxiety and 2 (18.2%) had moderate anxiety.

Table 2: Descriptive Frequencies of Depression concerning the designation

Designation	Frequency	Percentage
Staff nurse		
minimal	12	42.9
Mild	14	50.0
Moderate	1	3.6
Moderate severely	1	3.6
Total	28	100.0
Doctor		
minimal	2	16.7
Mild	7	58.3
Moderate	3	25.0
Total	12	100.0
Respiratory therapist		
minimal	3	27.3
Mild	2	18.2
Moderate	6	54.5
Total	11	100.0

Table 2 shows that According to (PHQ-9) scale, out of 28 staff nurses, 12 (42.9 %) of staff nurses had minimal depression, 14 (50.0 %) staff had mild depression, 1 (3.6%) staff nurses had moderate depression and 1 (3.6) had severely moderate depression. This table indicates that out of 12 doctors, 2 (16.7%) had minimal depression, 7 (58.3%) had mild depression and 3 (25 %) had moderate depression. Out of 11 Respiratory therapists, 3 (27.3%) had minimal depression, 2 (18.2%) had mild depression and 6 (54.5%) had moderate depression.

Table 3: Descriptive Frequencies of sleep quality concerning the designation

Designation	Frequency	Percentage
Staff nurse		
Good sleeper	6	21.4
Poor sleeper	22	78.6
Total	28	100.0
Doctor		
Good sleeper	3	25.0
Poor sleeper	9	75.0
Total	12	100.0
Respiratory therapist		
Good sleeper	1	9.1
Poor sleeper	10	90.9
Total	11	100.0

In table 3 according to (PSQI) scale, this table shows that out of 28 staff nurses, 6 (21.4 %) of staff nurses had no sleep problems, they were good sleepers, and 22 (78.6 %) staff was poor sleeper. out of 12 doctors, 3 (25 %) doctors had no sleep problems, they were good sleepers and 9 (75 %) had sleep problems and were categorized as poor sleepers. Out of 11 Respiratory therapists 1 (9.1%) had no sleep problems; they were good sleepers while 10 (90.9 %) were poor sleepers.

Figure 1: Descriptive statistics of the frequency of Anxiety according to (GAD-7) score.

Figure 5.1 indicates that out of 51 health care professionals 26 (50.98%) had minimal anxiety, 15 (29.41%) had mild anxiety and 10 (19.6%) had moderate anxiety.

Figure 2: Descriptive statistics of frequency of Depression according to (PHQ-9) score.

Figure 2 describes descriptive frequency of Depression in frontline health care worker according with (PHQ-9) score. To check the Depression in frontline health care worker we used PHQ-9 scale. Out of 51 participants 17 (33.3%) had minimal depression, 23 (45.1 %) had mild depression, 10 (19.6 %) had moderate depression and 1 (2.0) % had moderately severe depression.

Figure 3: Descriptive statistics of the frequency of sleep quality according to (PSQI) score.

Figure 3 indicates the descriptive frequency of sleep quality in frontline health care workers according to (PSQI) score. To check the sleep disturbance in frontline health care workers we used the PSQI scale. Out of 51 participants, 10 (19.6 %) were good sleepers and 41 (80.4) were poor sleepers.

Table 4: The association between sleep quality and anxiety in frontline health care professionals

Sleep Quality			Poor sleeper	Total
Good sleeper				
Anxiety	Minimal anxiety	5 (19.2%)	21 (80.8%)	26 (100.0%)
	Mild anxiety	3 (20.0%)	12 (80.0%)	15 (100.0%)
	Moderate anxiety	2 (20.0%)	8 (80.0%)	10 (100.0%)
Total		10 (19.6%)	41 (80.4%)	51 (100.0%)
P – value =0.998				
Depression	Minimal Depression	5 (29.4%)	12 (70.6%)	17 (100.0%)
	Mild Depression	5 (21.7%)	18 (78.3%)	23 (100.0%)
	Moderate Depression	0 (0.0%)	10 (100.0%)	10 (100.0%)
	Moderately severe Depression	0 (0.0%)	1 (100.0%)	1 (100.0%)
Total		10 (19.6%)	41 (80.4%)	51 (100.0%)
P – value =0.286				

Table 4 shows p-value=0.998, the insignificant results indicate there is no association between sleep quality and anxiety. Table 4 also shows p-value=0.286, the insignificant results indicate there is no association between sleep quality and depression.

DISCUSSION

This research study was conducted to investigate the sleep problems, depression and anxiety symptoms among frontline Health care workers fighting coronavirus disease 2019 (COVID-19) in Lahore Pakistan. The result of this study showed a minimal level of anxiety among the staff nurses. This result is contradicted with the result of the study conducted by denying Hua (2020).this study showed that the majority of staff nurses had a high level of anxiety. This research tracked down that the commonness of burnout, uneasiness, discouragement, and dread was high in forefront medical attendants.¹⁹ This study was conducted at the start of the first wave (February 2020) when the anxiety and depression levels were very high in health care professionals, due to newel situation, heavy work of load and continues hours of duty. as compared to this study was conducted at the start of third-wave 2021, so minimum anxiety was observed in health care workers in this present study because of mental acceptance of pandemic situation.²⁰

Results of this study are different from another study of a similar nature conducted and showed that the extensiveness of depression and anxiety in staff nurses was very high. This study was conducted by Nedar Salar (December 2020). The consequences of this investigation show that the predominance of sorrow, uneasiness and stress in the Hospital staff focusing on the COVID-19 patients is high. Our work has additionally examined the significance of treating these is-

sues and their likely effect on all parts of a clinical specialist's life. Along these lines, intercessions are important to work on such specialists' ways of life, through normal observing of expected sadness, uneasiness and stress issues, and to lessen the related incidental effects.²¹ This study was conducted at the start of the second wave (December 2020) when the depression level was very high in health care professionals, due to shortage of health care professionals .as compared to this study was conducted at the start of the third wave 2021, so minimum anxiety was observed in health care worker in this present study The result of this study showed a mild level of depression among the doctors. This result is contradicted with the result of the study conducted by Muhammad Elhadi.²² (January 2020). this study showed that the majority of Doctors had a high level of depression. This study conducted the prevalence of depression in frontline health care workers to check degrees of tension, misery, and burnout among Doctors from Libya who worked during the coronavirus epidemic and common conflict emergency.²³

Another study of a similar nature, conducted in China, regarding the prevalence of anxiety and depression among frontline HCWs during COVID-19, Majority of HCW had higher levels of depression and anxiety. The current research explored the uneasiness, misery and stress and view of the danger of Covid-19 in cutting edge HCWs in an assigned emergency clinic during the episode of Covid-19 in China. Of the cutting edge HCWs for coronavirus pandemic, the greater part had nervousness or despondency, which is like different examinations in bleeding-edge clinical staffs for Covid-19.²⁴

The result of the study showed sleep very severe sleep problems in health care workers. The majority of the staff nurses faced sleep problems as compared to Doctors or Respiratory therapists. Staff nurses were poor sleepers. The result of this

study showed a high level of sleep deprivation among the staff nurses. This result is consistent with the result of the study conducted by Wei Wang (July 2020). Cutting edge health care professionals are more defenceless against rest aggravations. Psychosocial mediations are expected to help associated medical care faculty to more readily react to coronavirus and future pandemics.²⁵

CONCLUSION

This study concludes that sleep disturbance is significantly associated with the COVID-19 pandemic situation while it is insignificantly associated with depression and anxiety symptoms resulting due to COVID-19 pandemic situation among frontline health care workers in Lahore, Pakistan. This research indicates that sleep disturbance is still prevalent besides the difference in the time frame of study conduction.

ACKNOWLEDGEMENT

I would like to say thank you to Professor D. Muhammad Sikander Gayas Khan for the English proofreading of this article.

Source of Funding: Nil

Conflict of Interest: We have not conflicted of interest to disclose

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