JPSIM Journal of Pakistan Society of Internal Medicine Code

Original Article

The Prevalence of Anxiety among Health Care Population working in Covid-19 Isolation Wards in the Capital of Pakistan

Nasim Akhtar[1], Ayesha Javed[1], Hassan Ur Rehma[1], Sadia Ashraf[1], Palwasha Rehman[2]

[1]Pakistan Institute of Medical Science Islamabad, [2]Shaukat Khanum Memorial Cancer & Research

Abstract

Objective: To Assess the Prevalence of Anxiety among Health Care Population working in Covid-19 Isolation Wards in the Capital of Pakistan.

Methods: Cross-sectional study conducted using snow-ball sampling technique. Questionnaire constructed in google forms was distributed via social media among the isolation ward staff. Data was collected from 7th April 2020 (1700 hrs. PST) till 27th April 2020 (1330 hrs. PST). Anxiety level was assessed using Beck Anxiety Inventory. Data was analysed in SPSS. Chi-square test was applied for relation between anxiety level and various variables. P value <0.05 was considered as significant.

Results: Severe anxiety was seen among females (n=6) as compared to the men (n=1). no specific gender relation was observed p value > 0.05. Insignificant relation was seen between the health care professional's anxiety level (p value >0.05). Anxiety level compared among individuals with co-morbids was also not significant p value > 0.05.

Conclusion: Mild anxiety was seen which was conspicuous among female healthcare workers. Regular Interval, larger scale studies should be conducted to evaluate mental health of hospital staff to timely diagnose and treat disorders due to stress in such pandemics to prevent psychiatric illness.

Keywords: Infectious Diseases, psychiatry, covid-19, generalized anxiety disorder, professional well-being, global health.

How to cite this:

Akhtar N, Javed A, Rehma HU, Ashraf S, Rehman P. The prevalence of anxiety among health care population working in Covid-19 isolation wards in the capital of Pakistan. J Pak Soc Intern Med. 2020;1(1):55-59.

Corresponding Author: Dr. Nasim Akhtar **Email:** drnasimakhtar74@gmail.com

Introduction

SARS-COV-2 (COVID-19) is a pulmonary tract infectious disease caused by a new virus that begun in republic of China in last year December right before Chinese were around The New Year celebration. The root of the viral spread was the animal market in Wuhan city.[1] Due to its genomic resemblance to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) an epidemic in 2003, the World Health Organization named it "COVID-19" .[2] Within a duration of just two months, this virus extended from Wuhan to over 143 countries and terrains; since then, its blowout has been exponential. On 11th March, 2020 it was declared as global pandemic and on 30th January 2020 worldwide health emergency was proclaimed in relation to this viral illness. Before this internationally there was a reluctance to declare this ailment as an international emergency. Approximately 2.2 million people have been infested with >0.15 million bereavements globally. The United States of America is the utmost pretentious country with the greatest patients of nearly 0.7 million. there is no cure of this infection, irrespective of continuous struggles and progress. Nevertheless, fairest

therapy possibilities are prevention and symptomatic management.[4] Patients infected with covid-19 are having a wide-range of signs and symptoms. majority of them appear to have mild illness, and almost 20% appear to make headway to severe disease, including viral pneumonia later superimposed with bacterial, acute respiratory failure and, in some cases even fatality. WHO on Feb 12, 2020,reported that 45,171 individuals have been identified with SARS-CoV-2 universally, and 44,730 of these cases are in Republic of China.[5]

The deadly viral illness was no doubt initially speeded from food market as a zoonotic disease but in no time It was revealed that it easily and rapidly spreads from human to human contact and was labelled to be air-borne disease and contact precautions are very necessary to prevent the disease spread.4 Details of the clinical and Virological pattern of this sickness are not well understood till present time though studies have enlightened many aspects of symptoms and signs pertaining to the disease .[6]

Past infectious pandemics like zika virus and Ebola displayed an imbalance in human behaviour relating to the stressful situations and fear out-burst due to such lethal viruses and this fear had negative impact on patient care and management on many levels when found among the health care professionals along the general population.[7] Anxiety is an adaptive behavior that facilitated entities deal with threatening situations and that extreme stress and anxiety was rampant in nearly all psychiatric maladies. In 1966 Cattell while analysing anxiety, focused on distinguishing emotional state relating to anxiety and its impact on different personalities.[8]

Deficient information regarding an illness, its progression and consequences relating to that viral illness can cause serious mental and psychological despoilment. Such apprehension and emotional disturbance can lead to psychiatric ailments and post-traumatic stress disorders which can lead to incompetent decision making skills among both medical and non-medical personnel.[9] In pandemics and epidemics social loneliness and fear of disease mortality along disease complications leads to sever anxiety and mental disability among effected population. In some instances, even after the pandemic is over, psychological impact of damage caused by the fearful situation remains around and has pronounced effect on the daily routine of affectees. along patient disease management, focus should also encompass the psychological health of patients, their relatives and general population regarding the post disease effects and behavioural therapies should be designed to address both mental and physical health.[9]

In unparalleled public health catastrophe of the COVID-19 contagion, the impact of this illness upon mental health of medical professionals has to be addressed and dealt accordingly to prevent unwanted consequences and treat such ailments to heal precious lives and their capacity to make important decisions regarding patient care . literature relating to current situation and preceding pandemics have demonstrated that health care connoisseurs and nursing staff dealing with such situations when encountered continuous stress and work related strain had mental health ailments and gloomy illness.[10] Covid-19 has brought serious mental health ailment to our sight among health care workers dealing with patients suffering from SARS-COV-2 pneumonia and other moderate to severe disease patterns. Although data is limited but work related stress has shown poor prognostic factors related to current pandemic and this issue needs appropriate management and concern.[10]

This study was undertaken to assess anxiety level among healthcare workers working with Covid-19 Patients in Isolation wards of public and private sector Hospitals in the Capital of Pakistan.

Materials and Methods

A cross-sectional observational study was carried out in Pakistan Institute of Medical Sciences. Snowball sampling technique was used. An online questionnaire was made using the google forms, which was then sent to the health care workers via emails, Whats App, and social media. The participants were encouraged to share the online link with their colleagues who were working in other public/private sector hospitals and clinics treating Covid-19 patients. Participants with age more than 18 years and working in Covid-19 treating facility were included in the study. Data was collected from 7th April 2020 (1700 hrs. PST) till 27th April 2020 (1330 hrs. PST). The questionnaire included the

age, gender, marital status, qualification, job description followed by the duration of working with Covid-19 positive patients. They were also asked about any co-morbid conditions.

The anxiety level was calculated using the BAI - Beck Anxiety Inventory, total score was calculated by finding the sum of the 21 items. Score 0-21 was labelled as low, 22-35 as moderate, score of 36 and above potentially concerning levels of anxiety. Data was analyzed using the SPSS (v.20). Descriptive statistics were reported as frequencies and percentages for quantitative data like age, gender. Chi-square test was applied for relation between anxiety level and various variables. p-value <0.05 was considered as significant.

Results

An online survey related to the mental health of health care workers (n=222) in Pakistani population was conducted. All the participants were above 20 years of age. Maximum individuals included in the study had higher qualification, 56.8% had post graduate qualification, 39.2% were graduates whereas 4.1% were undergraduate. Among them 197 individuals (88.7%) were doctors, 21 (9.5%) nurses, 2 individuals (0.9%) were health care assistants and 2 (0.9%) were security guards.

The mean age of the population included was 30.68 years (SD-5.89). Among the population there were 106 males (47.7%) and 116 females (52.3%). 55.9% individuals were married whereas 43.7% were single. At the time of the survey 29.7% of the individuals had children. Among the females (n=116), only 8 individuals were pregnant. The maximum number of individuals that participated were working in public sector hospital (74.8%), followed by private sector (23 %), whereas minority of individuals were working in clinical set up (2.3%). All the participants included had worked or were working in facilities treating COVID-19 patients. Forty-nine individuals (22.1%) were working for more than four weeks, 118 individuals (53.2%) for one to four weeks, whereas 55 individuals (24.8%) less than a week. Personal protective equipment (PPEs) were provided regularly only to 83 individuals (37.4%), sometimes to 51 (23%) individuals. Whereas 39.2% were not provided with PPEs.

Among the participants, 28 individuals had co-morbidities. Three individuals (1.3%) were suffering from diabetes mellitus type II, six (2.7%) from hypertension while three (1.3%) were suffering from both. Twenty-four individuals (10.8%) had dust, pollen allergies, among them 10 people were diagnosed with asthma. Sixteen participants (7.2%) were active smokers at the time of survey, whereas 9 (4%) were ex-smokers. Two participants were treated for pulmonary tuberculosis. Two participants were involved in illicit drug use. When inquired about their relatives, if they are suffering from any co-morbidities, 69 individuals (31.1%) responded positively. Eighteen individuals (8.1%) had psychiatric illness and were on medication, among them 6 were diagnosed with depression, 11 individuals with anxiety disorder and one had postpartum depression. Becks Anxiety Inventory (BAI) score was calculated, 189 individuals (85.1%) were diagnosed with low anxiety, 26 individuals (11.7%) with moderate anxiety, 7 (3.2%) with concerning levels of severe anxiety **(Table-1).** Anxiety was observed among the pregnant health workers, p-value was significant (0.036). When anxiety levels were compared with the gender of the participants, severe anxiety (potentially concerning) was seen among the females (n=6) as compared to the males (n=1), no specific gender relation was observed as p value > 0.05 **(Table- 2).**

Table-1: Anxiety level among healthcare-workers.

Anxiety Level	No. of Individuals	Frequency
Low Anxiety	189	85.1
Moderate Anxiety	26	11.7
Potentially concerning levels of anxiety	7	3.2
Total	222	100

Table-2: Anxiety level among male and female genders.

		Becks Anxiety level (n=222)			
		Low Anxiety	Moderate Anxiety	Potentially Concerning levels of Anxiety	P-value
Gender	Male	9650.84%	0934.6%	114.3%	0.06
	Female	9649.2%	1765.4%	685.7%	
Total		189100%	26100%	7100%	

No significant relation was seen between the health care profession (doctor, nurses) and the anxiety level as the p value >0.05. When the anxiety level was compared with the individuals having co-morbidities, it was not significant as p value > 0.05.

Discussion

Though Sars-Cov-2 pandemic has been here since 2019 December, yet it has instigated considerable mortality, morbidity, patient admissions, transportation miseries, travel constraints, redundancy, and social distancing, that lead to horrific instinctual and psychological impact. Currently limited data is accessible in this interest, yet few significant surveys have offered eye opening results. Study conducted in china showed that prevalence of anxiety, stress and depressive symptoms were significantly greater in participants younger than age 35 years when compared with those who were above 35years of age and older, they also compared healthcare-workers with other occupational assemblages. 23.6% healthcare staff stated the maximum rate of insomnia.[11] Indian dermatologists suffering from anxiety during current situation of covid-19 was compared with doctors from other specialties, and dermatologists who are known to have the minutest stress during their out-patient consultations also suffered from stress and fear of self-infection whereas non-dermatologists were stressed to be the source of infection for their friends and families. In both groups there was considerable volume of anxiety and stress due to the pandemic.[12] Study conducted in republic of china concluded that the medicinal staff underwent immense fear, nervousness, and anxiety than the non-medical workforce of a health-care facility. Furthermore, the front-line medical personnel working in Pulmonary, Intensive care, and infectious disease unit, were twice more likely to endure anxiety and despair than the non-clinical body with bare minimum probability to get infected with covid-19 pneumonia patients. Efficient strategies in the direction of improving the mental and psychological health should be provided to these individuals.[13]

Conclusion

With the world-wide spread of COVID-19, the task for many countries who are now interacting and facing the enormous cluster or community spread is evident. As hospitals constitute the Red Zone for not only COVID-19 but also several other illnesses especially infectious diseases, healthcare staff is at increased risk social, physical, and mental deterioration. Further studies on larger population size are needed for other countries to diagnose, assess, and implement psychological intervention and support for medical staff as soon as possible.

Financial disclosures: None.

References

1. Riou J, Althaus CL. Pattern of early human-to-human transmission of Wuhan 2019-nCoV. bioRxiv. 2020; doi: https://doi.org/10.1101/2020.01.23.917351.
2. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, Ren R, Leung KS, Lau EH, Wong JY, Xing X. Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. New Eng J Med. 2020; 382(3): 1199-1207.
3. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, Iosifidis C, Agha R. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). Int J Surg. 2020;76(4):71-76.
4. Ali I, Alharbi OM. COVID-19: Disease, management, treatment, and social impact. Science of the Total Environment. 2020;728(8):138861.
5. Xu Z, Li S, Tian S, Li H, Kong LQ. Full spectrum of COVID-19 severity still being depicted. Lancet. 2020;395(10228):947.
6. Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, Xiang J, Wang Y, Song B, Gu X, Guan L. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. The lancet. 2020;395(10229): 1054-1062.
7. Ornell F, Schuch JB, Sordi AO, Kessler FH. "Pandemic fear" and COVID-19: mental health burden and strategies. Braz J Psych. 2020;42(3):232-5.
8. Spielberger CD. State-Trait anxiety inventory. The Corsini encyclopedia of psychology. 1st Edition. England. 2010:pp 1.
9. Zandifar A, Badrfam R. Iranian mentalhealth during the COVID-19 epidemic. Asian

journal of psychiatry. 2020;51 https://doi.org /10.1016/j.ajp.2020.101990.
10. Botha E, Gwin T, Purpora C. The effectiveness of mindfulness-based programs in reducing stress experienced by nurses in adult hospital settings: a systematic review of quantitative evidence protocol. JBI Datab Syst Rev Impl Rep. 2015;13(10):21-9.
11. Huang Y, Zhao N. Generalized anxiety disorder, depressive symptoms, and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. Psych Res. 2020:288(6):112954.
12. Podder I, Agarwal K, Datta S. Comparative analysis of perceived stress in dermatologists and other physicians during home-quarantine and COVID-19 pandemic with exploration of possible risk factors-A web-based cross-sectional study from Eastern India. Derm Ther. 2020; https://doi.org/10.1111 /dth.13788.
13. Lu W, Wang H, Lin Y, Li L. Psychological status of medical workforce during the COVID-19 pandemic: A cross-sectional study. Psych Res. 2020; 288(6):112936.