ORIGINAL ARTICLE

ASSESSMENT OF THE LEVEL OF CONCERNS REGARDING COVID-19 PANDEMIC AMONG HOSPITAL BASED HEALTHCARE WORKERS IN QUETTA, PAKISTAN

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ABSTRACT

Background: The study was aimed to assess the level of concerns regarding the COVID-19 Pandemic among hospital-based healthcare workers in Quetta, Pakistan.

Material and Methods: It was a cross-sectional study carried out between August to December 2020 among frontline healthcare workers who work in the emergency department of different public sector hospitals of Quetta. The questionnaire was distributed through online social forums and physically at some places. The calculated sample size was n=400.

Results: The most significant findings were that n=179 (44.8%) felt themselves at risk to get Covid 19 from workplace; n=168 (42%) respondents had limited their social activities; n=125 (58.14%) respondents had access to complete Personnel Protective Equipment (PPEs) n=290 (72.5%) cumulative respondents had access to some -PPE items.

Conclusion: The healthcare workers suffered much mental anguish, trauma and isolation during the covid-19 pandemic. Scarcity of resources preventing access to complete PPE further added to it.

Keywords: Covid-19, Concern, Healthcare workers, Quetta

BACKGROUND

Coronavirus is a single-stranded RNA enveloped, positive-sensed, and non-segmented virus that belongs to the Corona Viridae family. About six known coronaviruses can cause human diseases, including four viruses that cause mild respiratory infections.[1] The other two types are recognized as Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS). The novel type of *coronavirus*, also called *COVID-19*, originated in December 2019 from extracted samples of lower respiratory tract infections of several patients in Wuhan, China.[2] The symptoms shown in the patients of *COVID-19* include severe pneumonia with dry cough, respiratory distress, fever, and fatigue. The novel *COVID-19* outbreak continued and finally WHO declared the disease as pandemic on March 11, 2020.[4] Emergency was announced after this outbreak.[5] The whole scientific committee joined hands for research of newer of anti-viral drugs and vaccines for *COVID-19*. During pandemic, healthcare workers suffered from two main factors.[6] One was the increased burden of diseases that exhausted the health care systems, and the other was limited resources that prevented access to complete PPE making them feel vulnerable.

The objective of our study was to assess the concerns regarding the *COVID-19* Pandemic among hospital-based healthcare workers in Quetta, Pakistan.

MATERIAL AND METHODS

It was a cross-sectional study conducted from August to December 2020. The maximum sample size was 384 calculated at 50% proportion with a bound error of 5%, and at 95% confidence level. The sample size was increased to 400 to increase the participation of healthcare workers. The setting was public and private healthcare facilities of Quetta, managing patients with covid-19 cases. The target population was the frontline healthcare workers, including doctors and other allied staff working in emergency departments of different healthcare facilities. A self-structured questionnaire was used based upon the previous survey studies with the concerns of healthcare assessment of medical personnel regarding the novel *COVID-19* pandemic.

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This article can be cited as: Zia A, Ahmad F, Ali A. Assessment of the level of concerns regarding covid-19 pandemic among hospital-based healthcare workers in Quetta, Pakistan. Infect Dis J Pak. 2023; 32: 16-20.

Receiving date: **25 Nov 2021** Acceptance Date: **27 Mar 2023**
Revision date: **14 Dec 2022** Publication Date: **31 Mar 2023**

The questionnaire comprised of two parts. Part one included demographic details, including age, gender, marital status, qualification level, designation, and working place—the second part comprised three domains related to self-satisfaction, social status, and workplace. The questionnaire was validated by a plot on a small group of targeted participants. Since data was collected during the lockdown, the questionnaire was circulated through online social media resources, including WhatsApp, Facebook, and Instagram; informed consent was taken from each participant. The Statistical Package for the Social Sciences software (SPSS version 21.0; IBM Corporation, Armonk, NY, USA) was used for data analysis. Chi-square analysis was performed to check the association at a 95% confidence interval, and a p-value less than 0.05 was considered significant.

RESULTS

A total of 400 healthcare workers, including physicians, laboratory staff, nurses, X-ray technicians, respiratory technicians, and working staff from government hospitals, submitted their responses to the questionnaire. There were 220 (55%) doctors, 145 (65%) male and 75 (35%) females, enrolled in the study—paramedical staff and other supporting staff comprised 45% of the study participants. Concerning self-satisfaction (Table-I.), most of the participants responded to be anxious and concerned about their health at the workplace, worried during receiving and managing the febrile patients with higher risks of viral transmission in the absence of personal protective equipment (PPE), and hopeless to get appropriate care from any kind of administration.

To identify the exposure of study participants concerning dealing with *COVID-19* patients either directly or indirectly (Figure-I), most of the participants, 215 (53.8%), responded as **"Yes"** as they were dealing with the patients in isolation or quarantine facilities directly. With this, (n=185 (46.3%) participants responded as **'No"** as they were not now receiving or dealing with the Covid-19 patients in their healthcare settings. After asking about their engagement with patients either directly or indirectly, who replied as yes (Figure-I), they were asked about the provision of preventive materials, trainings from management about the use, donning, and doffing of the materials. As shown in Figure-II, most front-line doctors, paramedic staff, and other supporting staff were not given PPE, and they were dealing with Covid-19 patients endangering their and their near one's lives. When asked about trainings provided to them about PPE donning and doffing protocols, 70 (32.56%) responded that they were not given any training and 54 (25.12%) responded as they learned by themselves using YouTube videos (Table-III). Those who were not involved in managing COVID-19 patients directly (Figure-II) were asked about the provision of Semi-Personal Protective materials, and similar results were observed in Figure-III.

Table-I: Responses about self-satisfaction & social status related questions.

	Statements regarding self-satisfaction	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A	I feel unsafe working at my workplace.	40 (10%)	37 (9.3%)	59 (14.8%)	123 (30.8%)	141 (35.3%)
b	I feel worried while receiving and managing a febrile patient nowadays	43 (10.8%)	32 (8%)	58 (14.5%)	124 (31%)	143 (35.8%)
C	I feel at risk to contract Covid 19 at workplace	30 (7.5%)	14 (3.5%)	34 (8.5%)	143 (35.8%)	179 (44.8%)
d	I feel obliged to care for Covid 19-infected patient, but if I am protected well with Personal Protective Equipment (PPE)	19 (4.8%)	27 (6.8%)	46 (11.5%)	136(34%)	172(43%)
E	I feel hopeless because I might eventually get a Covid 19 at work	30 (7.5%)	14 (3.5%)	73 (18.3%)	143 (35.8%)	140 (35%)
f	I feel threatened if one of my colleagues have contracted Covid 19	33 (8.3%)	19 (4.8%)	55 (13.8%)	161 (40.3%)	132 (33%)
g	If I get Covid 19, I don't feel confident an employee will care for me	60 (15%)	44 (11%)	88 (22%)	107 (26.8%)	101 (25.3%)
Statements regarding social status						
a	I have limited my social activities due to Covid 19 Pandemic	20 (5%)	25 (6.3%)	44(11%)	143(35.8%)	168(42%)
b	I may transmit Covid 19 to my family members	28 (7%)	18 (4.5%)	31 (7.8%)	103 (25.8%)	220(55%)

	if I get the infection					
c	I have feeling that my family members avoid me since I work in a hospital	69 (17.3%)	92(23%)	77 (19.3%)	89 (22.3%)	73(18.3%)
d	I have avoided leaving my home unnecessarily due to Covid 19	10 (2.5%)	21 (5.3%)	57 (14.2%)	142 (35.5%)	170(42.5%)
E	I feel my family will not look after me if I am infected	166 (41.5%)	102(25.5%)	60 (15%)	36 (9%)	36(9%)
f	I don't feel confident telling my family and friends if I am infected.	143 (35.8%)	71(17.8%)	64 (16%)	62 (15.5%)	60(15%)

Table-II: Responds about using the same PPE kit multiple times.

Comparison based on designation	How many times have you been asked to use the same PPE kit?				
Designation	One Time	Once A Week with repeated sanitizing shower spray every day	if it is infected with any material like blood etc., it can be changed the next day	it has been asked by authorities to use the kit multiple times, and no new equipment will be given	Total
Doctor (Healthcare Administrator, Consultant, MO, PG, HO, etc.)	33 (15.39%)	53 (24.65%)	42(19.53%)	45 (20.93%)	173
Other Paramedical Staff (Nurse, MT, FMT, LHV, Laboratory staff, OT Staff, etc.)	7 (3.26%)	6 (2.79%)	9 (4.19%)	9 (4.19%)	31
c) Any other, please mention:	3 (1.40%)	3 (1.40%)	5 (2.32%)	0	11
Total	43(20%)	62(28.84%)	56 (26.05%)	54 (25.12%)	215

Table-III: Responses about protocols of PPE use

Training regarding donning and doffing of PPE				**Total**
	Have you been trained on donning (Put on) and doffing (put off) the PPE as per International Protocols?			
Designation	Yes	No	No Training was given, but I watched it on YouTube and applied the method myself.	
Doctor (Healthcare Administrator, Consultant, MO, PG, HO, etc.)	49(22.79%)	70(32.56%)	54(25.12%)	173
Other Paramedical Staff (Nurse, MT, FMT, LHV, Laboratory staff, OT Staff, etc.)	10(4.65%)	10(4.65%)	11(5.12%)	31
Any other, please mention:	5(2.36%)	3(1.40%)	3(1.40%)	11
Total	**64(29.77%)**	**83(38.60%)**	**68(31.63%)**	**215**

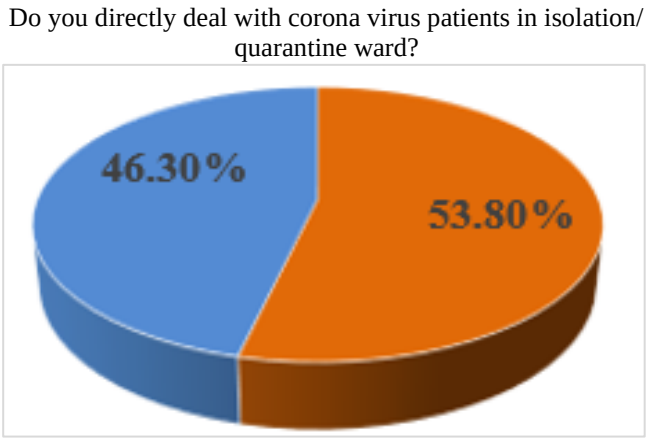

Figure-I: Responses regarding the direct involvement of staff in the management of COVID-19 patients.

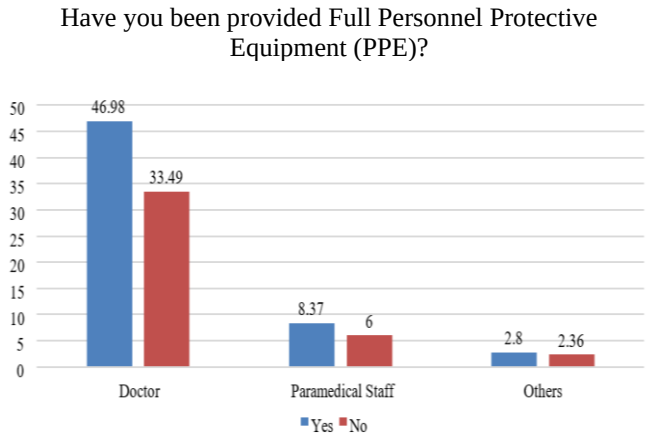

Figure-II: Comparison based on designation.

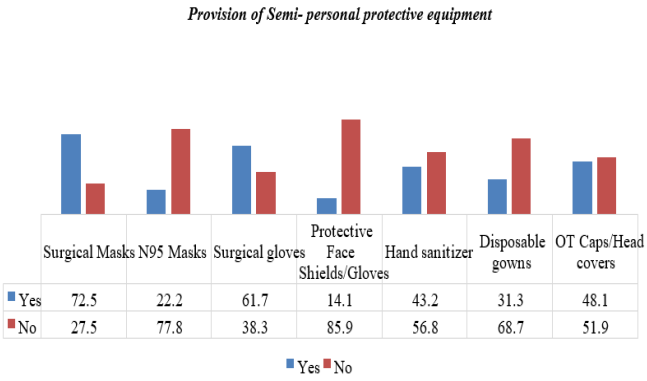

Figure-III: Responses about Semi- personal protective equipment (PPE).

DISCUSSION

The analysis of the research literature related to the intensity of transmission and the health risks associated with the *COVID-19* pandemic promoted the concept of performing this research to assess the concerns of the frontline health care workers serving in the private and government health care centers of Quetta, Baluchistan. The current study identified that the healthcare workers working as frontline warriors were not given preventive equipment that could have protected them from infection and decreased their anxiety. The lack of resources and poor health care infrastructure contributed significantly towards the increased mortality and morbidity rate among the health care workers.[10,11]

Protective gears such as masks, gloves and other precautionary measures at workplaces can significantly reduce the risk of transmitting the virus.[12,13] As the virus droplets persist on the surfaces for longer, use of disinfectants in environmental cleaning is also important to deactivating the virus.[13] The present study highlighted that during pandemic very little community efforts were seen to ensure safety of frontline workers. They were made to use single use PPE for more than one time. In developing countries like Pakistan, the poor infrastructure of basic health facilities, feeble governance, inadequate health resources, and unawareness in public to adopt safety measures further aggravated the concern and anxiety of the medical practitioners.[14,15]

The government and other shareholders failed to organize the genuine requirements in taking care of an enormous number of clinical staff from minor and acute patients facing respiratory problems exposed to COVID.[15] In Pakistan, during *COVID-19*pandemic the frontline physicians were mentally and physically exhausted, as there was no support system in sight in case of infection. Unlike other studies[16,17]the HCW of Quetta looked up to their families for supporting them in case of infection.

Smartphones are highly embedded in people's lives, and thus mobile applications are the best ways to spread awareness. It also enabled us to recognize that the majority of the people were in favor of strict guidelines and measures taken by the government and other shareholders in the healthcare system.[18] Though the awareness and education were provided to the population for taking preventive measures, leaving the healthcare workers helpless without preventive equipment showed the reluctant attitude of the government towards the healthcare system, which led to an increase in the level of concern among healthcare workers towards the *COVID-19* pandemic.

CONCLUSION

The concerns among healthcare workers increased during the *COVID-19*pandemic as they were not given the essential protective equipment.

RECOMMENDATIONS

Sympathetic and clear communication can contribute to a proper healthcare delivery system. All administrative authorities and medical staff must concentrate on the immediate needs of *COVID19* management and care. Likewise, food provision, rest breaks, decompression time, and sufficient duty times may be as vital as the availability of protective equipment and protocols. Compliance with the WHO recommendations are essential to ensure adequate support for frontline healthcare workers. Supplies must be made to protect them via infection-control methods, personal-protection equipment, and vaccines in the future.

CONFLICT OF INTEREST

Authors declare no conflict of interest

GRANT SUPPORT / FINANCIAL DISCLOSURE

None

AUTHOR CONTRIBUTION

Anjum Zia: Conception, the acquisition, analysis, interpretation of data and manuscript writing

Farah Ahmad: Conception, Analysis and interpretation of data
Akhtar Ali: Data collection and analysis

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