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Fear and Anxiety levels during COVID-19 pandemic in Pakistan: A cross-sectional comparative study

Talha Bin Fazal[1], Yumnah Razzaq[2]. Javeria Razzaq[3], Farhat Ijaz[4], Haroon Rashid[5], RanaKhurram Aftab[6], Musarrat Ijaz[7]
1-2: CMH LMC & IOD (NUMS), Lahore, Pakistan
3: College of Dentistry. Pak
4:Department of Physiology, CMH LMC & IOD (NUMS), Lahore
5: Department of Community Medicine, CMH LMC & IOD (NUMS), Lahore
6:Punjab Institute of Cardiology, Lahore, Pakistan
7: Islamia University of Bahawalpur, Bahawalpur.
Correspondence Author' s Email: farhat_khurram_rana@cmhlahore.edu.pk
Cell: 03214932171

ABSTRACT
Novel Corona-Virus Disease (COVID-19) originating from China has rapidly crossed borders, infecting people throughout the whole world. This phenomenon has led to a massive public reaction, creating a lot of concern for people leading to high levels of anxiety and fear.The aim of study was to determine the level of fear and anxiety being experienced by the public and the health care workers in Pakistan during the corona pandemic 2020 of coronavirus infection, and its comparison between the two populations. This cross- sectional study was done via online Google forms."Fear of COVID-19 Scale '' (FCV-19S) and"Hamilton Anxiety Rating Scale" (HAM-A) was used for the determination of fear and anxiety levels respectively. In health care workers, prevalence of fear and anxiety at severe level was 39.5% and 42.9% respectively. While in general public, severe fear levels (60.5%) and anxiety of severe levels (57.1%) were comparatively higher than the HCWs. Fear and anxiety levels in general public are greater than health care workers because of less education and awareness levels in general public. Effective strategies need to be designed to cater mental health during a pandemic.
Key words: Fear, Anxiety, Health care workers, General public, COVID-19, Pandemic

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INTRODUCTION

COVID- 19 outbreak began from Wuhan, China in December and spread worldwide across the borders, creating a pandemic [1]. For this, WHO declared a public health emergency [2]. It began as a cluster of cases, which reported symptoms of pneumonia but the etiology came out to be unknown [2]. As it was posing a threat, which was of international concern, WHO started awareness programs online to help people and health care workers deal with it [2]. Out of many impacts of pandemic, the global economy got affected seriously, because a state of lock down brought everything to a halt thus breaking the supply chains globally [3]. It also had the impact on transport and the schools and educational institutes were closed. It also affected daily wagers especially, in the developing world where the economy is already below average, daily wagers could not get ration provisions and culminated in deaths due to hunger. Postponing schedules created stress for young people [2]. A drastic change in lifestyle and an atmosphere of anxiety created by the media and news is adding to fear in the general public.
Being a new disease, corona- virus infection is causing feelings of confusion, anxiety and fear [2]. Behaviors like shortage of masks and antiseptics in the market is a clear demonstration of anxiety in the people [4]. Fear is an adaptive response, which comes to emotions when dealing with some potential threat or danger, but when the conditions are uncertain like the threat of corona-virus, in that case fear

can become a burden and can be excessive [5]. The other reasons why there could be fear among the general public is that there are rising concerns of being infected by people themselves. Then lack of faith and trust in the health care system of the country being another [6]. In general, fear of the unknown raises the level of anxiety in both healthy and previously ill people [4]. Alarming it is to note that, the first suicidal case of a 50 year old man surfaced, who was suffering from corona-virus [7]. Reason being obsession with the videos of people collapsing from infection and some being forced to quarantine, which was very disturbing. Media creates feelings of fear and panic during such times [7]. Lastly, staying in a lockdown can be very depressive and affects moods of people causing anger, insomnia, boredom and loneliness, or there can be intense emotional and behavioral responses [4].

The concerns about anxiety and fear are especially important to consider, as mental health issues are on the rise in countries like Pakistan, where mental health is often neglected due to social stigma. There are certain studies which confirm that people who are kept in isolation suffer a lot more confusion, symptoms of anger and post-traumatic stress [8]. Fear and anxiety levels are largely going to influence the attitude of people in times like these, whether they are going to adhere to precautionary measures or are going to suffer at the cost of health. [2]. It is therefore pertinent to address these issues, especially in medical health care workers, who are currently frontline warriors and need major motivation and strategies to cope up with disturbing circumstances. Also when in developing countries, where facilities are not adequate and doctors are made to work without personal protective equipment, concerns of fear and anxiety and other psychological issues rise. Considering all the factors, this study was designed to determine the level of anxiety and fear in health care workers, comparing it to that of the general public, during the corona- virus pandemic, in Pakistan.

MATERIAL AND METHODS
In this cross sectional study, 447 participants were recruited.The data response was obtained from 10th may 2020 to 15th may 2020. The questionnaire was developed on Google forms; it employed a snowball sampling strategy. It was distributed as a link via social networking sites like facebook, shared to contacts on whatsapp and asked to be distributed further via acquaintances thus increasing the number of responses to as many as possible. After ethical approval fromethical review committee of CMH LMC & IOD, Lahore,(Reference Number 56 /ERC/CMHLMC), samples were collected. As the study was conducted online, people having internet access could participate in the study and those who could understand English. Age of 16 and above was set the minimum standard of accepting responses to as many as 60 or above.

The questionnaire had three sections. First section: demographic profile. Second section: "Fear of COVID-19 Scale '' (FCV-19S) was used to assess the fear levels [9]. Fear grading was divided into three categories, mild fear levels of corona having scores ranging from 7-15, moderate levels of fear falling in the range 16-25 and severe fear levels in the range 26-35.Third section consisted of an anxiety assessment, we used the "Hamilton Anxiety Rating Scale" (HAM-A) [10]. Scale consists of fourteen items, each item was scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where <17 indicates mild severity, 18 to 24 mild to moderate severity, 25 to 30 moderate to severe and <30 severe.

All data was analyzed using SPSS software (version 26; IBM). Mean and standard deviation was obtained for quantitative variables: FCV-19 S, HAM-A scores and ages. Student t- test was used for mean comparison between two groups. Chi- square test was used for categorical variables. P value < 0.05 was statistically significant.

RESULTS
In general public, prevalence of fear and anxiety levels in all categories were comparatively higher than HCWs. There was no statistical significance in the prevalence of fear in the two population groups. While the anxiety levels were significantly higher in general public than HCWs (p≤0.05) (Table 1).

Table I: Categorical comparison of fear and anxiety levels among General Public and Health Care Workers

		General Public	Health Care Workers(HCWs)	P-value
Fear of COVID-19 Scale (FCV-19S) score groups	**Mild fear of corona (7-15)**	82(59.4%)	56(40.6%)	0.78
	Moderate fear of corona (16-25)	150(56.4%)	116(43.6%)	
	Severe fear of corona (26-35)	26(60.5%)	17(39.5%)	
Hamilton Anxiety Rating Scale (HAM-A)score groups	**<17 mild severity**	208(55.8%)	165(44.2%)	0.05*
	18-24 mild to moderate	23(82.1%)	5(17.9%)	
	25-30 moderate to severe	15(60.0%)	10(40.0%)	
	>31 severe	12(57.1%)	9(42.9%)	

Chi-square test applied
*p-value significant(0.05)
There was no statistically significant difference between means of FCV-19 scores in study groups (0.68) while mean of HAM-A scores were significantly higher in general public as compare to HCW (0.02).(Table II)

Table II: Comparison of fear and anxiety of mean levels between General Public and Health Care Workers

Study variables		N	Mean	Std. Deviation	P-value
FCV-19 Score	General public	258	18.2093	5.72750	0.68
	Health care worker	189	18.4286	5.65323	
HAM-A score	General public	258	10.1008	9.59275	0.02*
	Health care worker	189	8.0635	9.79830	
Age (Years)	General public	258	22.2558	6.21130	0.000**
	Health care worker	189	26.6190	8.92062	

Student t-test applied
*p-value significant(<0.05)
**p-value highly significant(<0.001)

DISCUSSION
The behaviors of the people are greatly affected by the fear and the anxiety levels created by pandemics and epidemics. Therefore, our study ventured to check the prevalence of fear and anxiety levels between two population groups; the general public and health care workers of the country.
Our study yielded three main findings. Firstly, 59.5% overall Pakistani population under study had moderate levels of fear. Secondly, 83.4% of the population had mild severity of anxiety. Thirdly, a positive correlation of both study groups with the fear and anxiety of COVID-19 was found. Healthcare workers had better emotional states of the two factors under study. Our findings indicate the importance of awareness and education regarding COVID-19 pandemic in general public, which are suffering fromfear and anxiety levels more than HCWs.
Most of the participants in our study were general public (57.7%) – and majority from the province of Punjab and (42.3%) were healthcare professionals. The participants were largely from the age group 16-25 (83%) which shows majority responses came from young aged, college going students. Due to increasing social media usage in this age group, it is clear that circulating information regarding prevention, mode of spread, symptoms and coping is great, but at the same time many false, self created information is also found. This creates feelings of uncertainty among the individuals and becomes the cause of greater anxiety levels and fear of corona. Health care professionals having a good level of education get more sensitized by these instructions [2] or often know the logic to negate the wrong information based on their higher education level.
A study conducted by Adams et al showed that the potentially overwhelming burden of illnesses stresses health system capacity and it adversely affects health care workers, and imposes them the risk of infection. HCWs are especially worried of the risk of transmitting the illness to their families [11]. Our results are supported by study of Mishra et al. that healthcare professionals have a better understanding

and are more aware, this makes them have a more positive outlook towards pandemic/epidemic, and therefore less anxiety is experienced by them [12].

Anxiety and fear impose massive effects on the population causing them to panic-buy, which ultimately exhausts the resources. Daily activities get very limited; avoid socialization, do self-medication and self-isolation [2]. Similarly, things like physical distancing, self-isolation, restricted travel and the escalating speculations all over social media sites, inadvertently affects mental health [13].

In our research, we discovered roughly 29.1% of the population which agree that they are most afraid of corona. 43.6% said it makes them uncomfortable to think about corona. 21.5% agreed that they are afraid of losing their lives because of corona. Physical symptoms like clammy hands, unable to sleep and racing heart were reported less in the population. A significant portion of people 43% said that when they watch news and stories of corona on social media they become anxious. This is very true as Social media has also become a channel for spreading both rumors and deliberate misinformation, and social media such as Facebook, Twitter, YouTube, and WhatsApp are creating a sense of panic and confusion [14]. WHO has identified that the 2019-nCoV outbreak and response has been accompanied by a massive 'infodemic'—an overabundance of information—some accurate and some not—that makes it hard for people to find trustworthy sources and reliable guidance" [15]. But at the same time the importance of social media cannot be undermined as it is the only source left in the times of quarantine and social isolation.

CONCLUSION
We conclude that health care workers being more educated and aware are less anxious about the pandemic than the general public being unsure and uncertain that where the world would go. In challenging situations like these, consulting patients online is considered to be more advantageous. Even then we stress the need to cater health care workers as well, because at times like these, the health system gets exhausted, burnt out and less facilities cause them to panic more.

DECLARATION OF COMPETING INTERESTS
The authors have declared that no competing interest exists".

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