PSYCHOLOGICAL STRESS OF INCREASING FREQUENCY OF COVID-19 PATIENTS AMONG FRONT LINERS/ EMERGENCY HEALTH CARE WORKERS

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ABSTRACT

Objective: To determine psychological stress of increasing frequency of covid-19 patients among front liners/ emergency health care workers at Ziauddin Hospital. **Study design:** Hospital based descriptive study. **Setting:** Emergency department of Ziauddin Institute and Hospital **Period:** April 2020 to May 2020. **Material and Methods:** The inclusion criteria involved all front line health care workers working in emergency department including medical (physicians, nurses, postgraduates) and Non Medical personnel visiting emergency departments (administrators, technicians, maintenance staff, allied health professionals. The exclusion criteria involved other health care professionals not being exposed to suspected COVID patients. **Results:** Out of 65 working staff enrolled the mean age was 34.02 ± 6.017 years. Mostly working staff in emergency included males compared to females 48:17 (73.8%: 26.2%). During the first wave of Covid-19, there was increasing stress n=16 (24.6%) most commonly seen compared to isolated anxiety n= 6(9.2%), and depression n=4(6.2%). The severity of symptoms was mostly mild to moderate, very less patients had severe symptoms of depression, anxiety or stress or combined symptoms with statistical significant correlation found among severity and symptoms p value 0.000. **Conclusion:** Our study showed the psychological impact of first wave of COVID19 among front liners with nearly almost all had symptoms of depression, stress and anxiety. The impact of pandemic seemed to be greater especially among our front line team.

Keywords: Covid19, Health care workers, Emergency.

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INTRODUCTION

Worldwide the Covid-19 pandemic has affected up to 3.93 million people with 1.31 recovered and 274,000 mortalities.[1,2] In Pakistan, with population of 212.2 million, Covid-19 has been detected in 27,474 with mortality of 618 individuals.[3,4]

Worldwide around 59 million health care workers, providing services to ailing population with aim to provide better health, diagnosis and treatment, and disease prevention.[5] Since Covid-19 pandemic, health care system has faced overwhelming situation with increased morbidities, intensification in disabilities and mortalities due to outbreak as well as other communicable and non-communicable illnesses. WHO recommendations are also aimed towards protection of front liners, anticipation of mental health needs of workforce, maintain health care services etc.[6,11]

Important dilemma seen during Covid-19 among health care workers was the mental health being most affected. In China, survey conducted among health care workers showed 56% affected with depression, 53% anxiety, insomnia 79%[5]. Mental health was most affected among front lines. Another survey during this pandemic in Singapore has shown 14.5% anxiety, 8.9% depression, 6.6% stress, 7.7% posttraumatic stress disorder which was higher among front liners and non-clinical health care staff[7]. The reason behind is the increased risk of exposure with suspected or confirmed Covid-19 cases, fatigability, long duration of working hours, mental and physical exertion and exhaustion. Increased vulnerability has been seen among people with pre-existing illnesses like depression, stress and anxiety. Benjamin et al has found increased anxiety 20.7% vs 10.8% among non-Medical personnel's in health care facility. [7]

The aim of the study is to understand psychological impact of outbreak Covid-19 among health care workers working in the facility with an increasing outbreak seen in our population.

MATERIAL AND METHODS
This is a hospital based descriptive study was conducted in Ziauddin Institute and Hospital from April to May 2020. Prior commencing study, Ethical committee approval was taken. Informed consent was taken from participants. The inclusion criteria involved all front line health care workers working in emergency department including medical (physicians, nurses, postgraduates) and non-medical personnel visiting emergency departments (administrators, technicians, maintenance staff, allied health professionals. The exclusion criteria involved other health care professionals not being exposed to suspected Covid patients.
The psychological impact was calculated by DASS-21 scoring system which measured stress, anxiety and depression. It is a three self-report scale that consist of sub-scales with similar content. The stress scale assesses nervous arousal, difficulty in relaxing, agitated or irritable, and impatient, while the anxiety scale was assessed situational anxiety, autonomic arousal, skeletal muscle effects and self-anxiousness experience. While the depression scale assess hopelessness, lack of interest, self-disapproval, not able to feel pleasure in daily activities and apathy. Scores recommended are categorized into normal, mild, moderate and severe.

The main outcome of the study was to determine the frequency of the depression, anxiety and stress among health care professionals working in emergency departments and facing Covid-19 suspected or test awaited patients. Data was entered in the SPSS version 21. All demographic data was entered including both qualitative and quantitative variables like age, gender, marital status, comorbid conditions. The outcomes were compared between two groups by Pearson correlation keeping p value <0.05 as significant.

RESULTS
Out of 65 working staff enrolled the mean age was 34.02 ± 6.017 years. Mostly working staff in emergency included males compared to females 48:17 (73.8%: 26.2%). The working staff in emergency included n=20 doctors in all shifts together with some of consultants visiting emergency department for critical patients review and medical administrators of emergency. The nursing staff were n= 35, while constantly in two divided shifts included porters and guards with increased duration of exposure. (table 1)

During the first wave of Covid-19, there was increasing stress n=16 (24.6%) most commonly seen compared to isolated anxiety n= 6(9.2%), and depression n=4(6.2%). However most of the patients reported mixed symptoms of both depression and anxiety n=18 (27.7%), stress and anxiety n= 7(10.8%), while depression and stress among n= 8(12.3%). There was only n=6 (9.2%)working staff who do not report to have any symptom and were labelled as having normal response to pandemic of covid-19. (figure 1). As a whole 90.8% reported to have either the isolated symptoms or mixed symptoms of depression,

anxiety and stress.

The severity of symptoms was mostly mild to moderate, very less patients had severe symptoms of depression, anxiety or stress or combined symptoms with statistical significant correlation found among severity and symptoms p value 0.000. (figure 2).
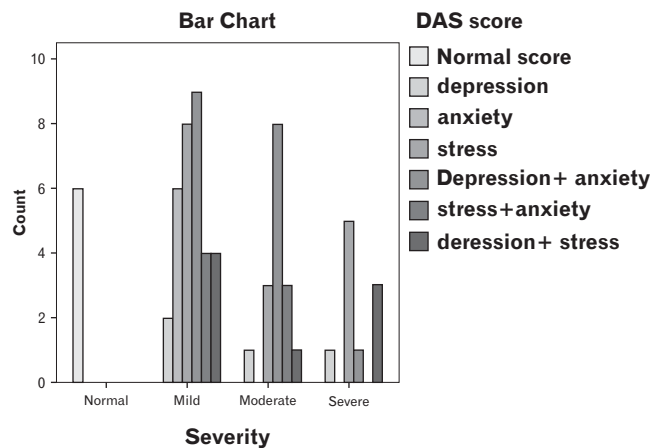
Table 1.	
Demographic variables	Frequency (percentages) n=65
Age in yrs ± SD	34.02 ± 6.017
Gender	48: 17
M:F	73.8%: 26.2%
Working staff in ER	
Doctors	20
Nursing staff	35
General support services	
Porters	4
Guards	6
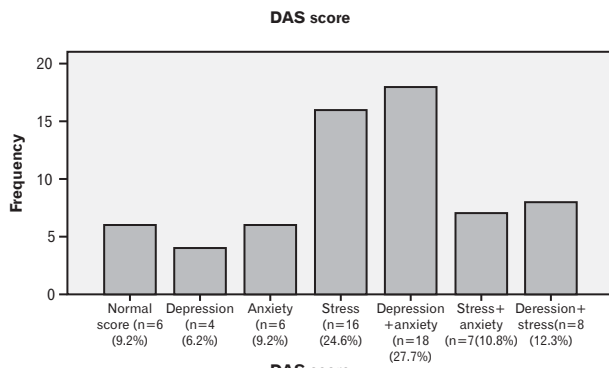
Figure: 1

Figure: 2

DISCUSSION

Covid-19 pandemic is the one of the greatest challenge faced by the whole world population.[9,12] It is evident that mostly health care workers especially front liners are most exposed. In Pakistan the reported corona virus in first wave in 2020 were around 2289 with 31 deaths on 1st April 2020with increasing pattern rose to 1184 cases in one month with 417 deaths on May1st 2020 as reported.[13] Studies worldwide have been reported with serious impacts on social, mental and physical health of medical and non-medical professionals however in Pakistan impact of Corona virus and its pandemic was variable.[14,18]

In our study most of front liners i-e; emergency working staff including nursing staff, doctors were highly exposed due to increasing burden of disease as there was fear among people that brings them to hospital especially in times of strict lockdown. Despite the personal protective equipment's and contact prevention approach by the hospital and staff, the increasing stress was the commonest symptom found in our study compared to depression and anxiety alone.[20,24]

Studies have shown in April 10th, 2020 around 4695 patients were infected with Covid-19 and the 138 health professionals were infected with 61.5% were from Sindh.[12,13] The doctors and staff have the stress of contracting COVID9 and therefore stress of contracting and spreading of disease to their homes was the most common cause.[21,25] As mostly the patients in lockdown coming to hospital had mild symptoms of covid19 according to WHO criteria of screening of patients. However, many patients came also with moderate to severe symptoms of respiratory compromise which were given first immediate care with stabilization are referred to hospital with facility of admitting the Covid-19 patients.

Most of the working staff and doctors have mild to moderate depression and anxiety and some had stress and anxiety symptoms in combination. While the rest have isolated symptoms of stress, depression and anxiety. Some even reported of not having fear but when followed over time and when they contracted covid19 had severe

symptoms of stress, depression with fear mostly had of getting died after contracting with Covid19. Salari et al has found in his meta-analysis in five researches in around 9074 patients; 29.6% suffered from stress, 31.9% anxiety, and depression in 33.7%.[19] While in our study isolated stress was in 29.6%, depression 6.2%, anxiety 9.2% while the remaining had mixed symptoms of mild to moderate stress, depression and anxiety. Sandesh et al has also reported 72.3% moderate to extreme depression, 85.7% moderate to severe anxiety, and 90% moderate to severe stress during Covid19 in July 2019.[19]

While in our study 90.8% reported to have symptoms either isolated symptoms or combined symptoms of depression, anxiety and stress while only 9.2% had no symptoms however when followed them over time they too had symptoms which were severe ones with fear of death from Covid-19.

CONCLUSION
Our study showed the psychological impact of first wave of Covid19 among front linerswith nearly almost all had symptoms of depression, stress and anxiety with fear of death and contracting of disease to their families even when they have been provided with all personnel protective equipment's.

Conflict of interest
Authors have no conflict of interest.

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