

# Awareness about COVID-19 infection among army personnel and their families

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## ABSTRACT

**Objective:** To assess the knowledge, attitude and practice of COVID-19 infection among army personnel and their families.

**Methodology:** A cross-sectional study was conducted at Kharian Garrison from February to April 2020. The study involved two groups of army personnel and their families, namely soldiers and officers. A structured questionnaire was used to collect data. For data analysis, descriptive statistics have been used. Chi-square test was applied and p-value <0.05 was considered as significant.

**Results:** Mean ages of respondents were 30.27 years (officers and families) and 31.11 years (soldiers and families). The study depicted that 99 (99%) officers and families and 147 (98%) soldiers and families had sufficient knowledge about COVID-19. A total of 96 (96%) of officers and families and 136 (90.7%) of soldiers and families believed that COVID-19 infection is preventable by hand washing and face mask, whereas 4 (4%) and 14 (9.3%) (Officers and soldiers along with families respectively) believed that avoid gathering, hand shaking and eating a healthy diet can prevent COVID-19. A total of 97 (97%) of officers and families and 146 (97.3%) of soldiers and families were practicing handwashing to prevent COVID-19 infection. Similarly, a total of 68 (68%) of officers and families and 104 (69.3%) of soldiers and families were using face mask whereas 32 (32%) and 46 (30.7%) respectively were not using.

**Conclusion:** Army personnel and their families had sufficient knowledge about COVID-19 infection; attitude towards its prevention and control was also adequately positive, though, a significant proportion of individuals have not been practicing their self-reported knowledge of using face mask.

**Key Words:** SARS-CoV 2, knowledge, attitudes, infection control.

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## Introduction

Coronavirus (CoV) is a virus with single stranded RNA, which has been reported from all the nations globally. The Coronavirus found in humans has six distinguished types including 229E, HKU1, NL63, OC43, MERS-CoV, and SARS-CoV.<sup>1</sup> Coronavirus (CoV) has a large virus family with viral species that result in a variety of diseases, mainly in the elderly and immunocompromised

individuals, from "common cold" to much more serious diseases including Respiratory Syndromes (RS) (as, Middle East-"MERS" and Severe Acute-"SARS"). A fresh strain of CoV, termed as "New Coronavirus (CoV)", has recently been identified among humans.<sup>2</sup> In Dec-2019, In Wuhan city of Hubei Province, China, the recent pneumonia-outbreak was recorded, which was linked with a new coronavirus, named serious acute respiratory syndrome (SARS)

coronavirus 2 (CoV-2).<sup>3-5</sup> This viral disease soon became an epidemic throughout China and in further nations globally.<sup>6-8</sup> The major clinical symptoms of this highly infectious disease involve fever, fatigue, dry cough, dyspnea, and myalgia. In China, a serious stage of CoV-disease characterized by metabolic acidosis, septic shock, acute respiratory distress syndrome, and coagulation and bleeding dysfunction developed in 18.5 percent of COVID-19 patients.<sup>9,10</sup> To gain timely identification of the unique virus, the Chinese scientific, clinical and public health communities responded promptly and shared the genetic sequence of novel virus globally.<sup>5, 11</sup> On 30<sup>th</sup>-January-2020, the World Health Organization (WHO) announced the epidemic as a Public Health Emergency of International Concern (PHEIC).<sup>12</sup> The WHO termed this novel coronavirus related disease as COVID-19 (Coronavirus Disease 2019).<sup>13</sup> A group of international experts along with their Chinese colleagues made their efforts to control this outbreak.<sup>14</sup> In Pakistan, the COVID-19 outbreak is subjected to the current COVID-19 pandemic triggered by SARS-CoV-2. On 26th-Feb-2020, this virus was reported to have entered Pakistan, when in Karachi, a student returning from Iran was tested positive for COVID-19.<sup>15</sup> By March-18<sup>th</sup> 2020, numerous cases had been recorded in 2 autonomous and all the 4-provincial territories, and federal region of Islamabad.<sup>16</sup>

During December 2019, COVID-19 emerged from the Wuhan city in China and rapidly spread all over the world in around >215 nations and territories making them the highest pandemics of this time with high devastation and substantial health challenges.<sup>17</sup> Pakistan is among the most densely populated nation in Asia and ranks 6th globally, and its population could be correlated with a greater likelihood of raised mortality and morbidity caused by COVID-19. With the infection control and prevention (IPC) approaches adopted against COVID-19 by the government of Pakistan, the continuity of citizenship is subjected largely to the level of knowledge and awareness on the pandemic. Unconcerned behaviors and public commitment to false and credulous beliefs frequently emerge because of insufficient knowledge, which further influences the efficiency of readiness nationwide or at sub-national level as well as the adequate enforcement of IPC initiatives.

The common guidelines to avoid infection spreading involve, hand washing regularly, covering the nose and mouth while sneezing or coughing, proper cooking of eggs and meat and avoiding direct contact with the individuals who have respiratory disease symptoms, like sneezing or coughing.<sup>2</sup> Given the rapid spread of Covid-19, we determined that an awareness assessment about coronavirus (Covid-19) infection among army personnel and their families may be carried out at Kharian Garrison.

## Methodology

This descriptive study was carried out among the army Officers and families/ Soldiers and families at Kharian Garrison from February 2020 to April 2020. The study that army personnel and their families reporting at various OPDs of combined Military Hospital Kharian were included but families below the age of 18 years were excluded. An assessment was done for the existing practice of adopting preventive procedures against the infection of the corona virus (COVID-19). To determine the status of knowledge, attitude and preventive practices against coronavirus infection, a structured survey questionnaire was utilized.

Following the disclosure statement, a well-versed consent was received from army personnel (officers and soldiers along with their families). The responders' confidentiality was also kept. This study has a limitation as being confined to Kharian Garrison the results of this study cannot be generalized.

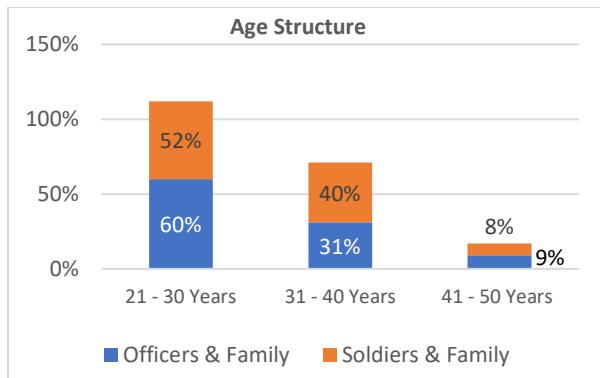
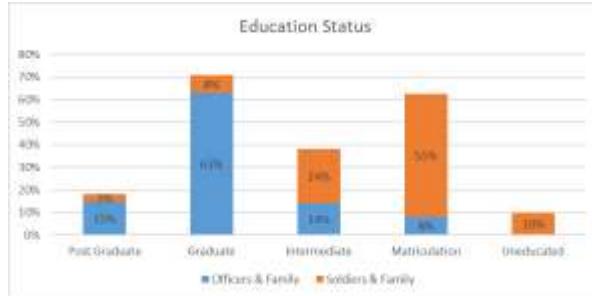
Data was entered and analyzed by SPSS version 20. For data analysis, descriptive statistics have been used. Chi-square test was applied and p-value  $\leq 0.05$  was considered as significant.

## Results

Mean age of officers and families was 30.27 whereas of soldiers and families was 31.11 years. Details of age group are shown in figure 1.

Regarding educational status of officers and families 63 (63%) were graduate and 15 (15%) were postgraduate while 82 (55%) soldiers and families were matriculate and 36 (24%) were intermediate. Details are shown in figure 2.

Knowledge of army personnel and their families regarding corona virus infection is given in table I.

**Figure 1: Age structure of the participants.****Figure 2: Education status of the participants.**

Source of information of 42 (42%) officers and families was social media, 30 (30%) electronic media, 2 (2%) print media, 20 (20%) doctors and 6 (6%) other sources whereas that of 23 (15.3%) of soldiers and families was social media, 96 (64%) electronic media, 7 (4.7%) print media, 20 (13.3%) doctors and 4 (2.7%) other sources ( $p=0.537$ ).

A total of 86 (86%) of officers and families believed that in case of signs and symptoms similar to corona virus infection they should report to doctor/hospital, 14 (14%)

were in favor of self-isolation whereas 147 (98%) soldiers and families were in favor of reporting to doctor/hospital and 3 (3%) were in favor of self-isolation ( $p=0.537$ ).

A total of 53 (53%) of officers and families believed that COVID19 infection can be prevented by the use of face mask, 34 (34%) hand washing, 9 (9%) face mask hand washing both and 4 (4%) avoid gathering, hand shaking, eating healthy diet whereas 107 (71.3%) of soldiers and families believed that COVID19 infection can be prevented by the use of face mask, 29 (19.3%) hand washing, 14 (9.3%) avoid gathering, hand shaking and eating a healthy diet ( $p=0.001$ ).

A total of 97 (97%) of officers and families were practicing handwashing frequently to prevent COVID19 infection and 3 (3%) were not washing hand whereas 146 (97.3%) of soldiers and families were washing hands frequently and 4 (2.7%) were not doing this practice ( $p=0.559$ ).

A total of 68 (68%) of officers and families were using face mask while going out and 32 (32%) were not using whereas 104 (69.3%) of soldiers and families were using and 46 (30.7%) were not using it ( $p=0.057$ ).

## Discussion

The results of the study depicted a positive picture. The military personnel and their families have fair awareness of corona virus (COVID-19) infection.

In this study, the majority of the participants considered themselves knowledgeable about COVID19 infection and its prevention. Ninety nine (99%) of officers and

**Table I: Knowledge of army personnel and their families**

	Variables	Officers and families n (%)	Soldiers and families N (%)	p-value
Do you know what corona virus infection is?	Yes	99(99.0%)	147(98.0%)	
	No	01 (1.0%)	03 (02.0%)	0.537
Is it dangerous for humans?	Yes	99 (99.0%)	147 (98.0%)	
	No	0 1 (1.0%)	03 (02.0%)	0.537
What is the source of Corona Virus?	Animals	56 (56.0%)	119 (79.3%)	
	Birds	15 (15.0%)	12 (8.0%)	
	Humans	27 (27.0%)	18 (12.0%)	0.001
	Did not know	02 (2.0%)	01 (0.7%)	
How does Corona Virus transmit?	Direct from one to another	46 (46.0%)	58 (38.7%)	
	Through cough and sneeze	42 (42.0%)	72 (48.0%)	
	By hand shaking	09 (9.0%)	12 (08.0%)	0.559
	Any other	03(3.0%)	08 (05.3%)	
What are the common signs and symptoms of Corona Virus infection?	Fever, Sore throat	47 (47.0%)	48 (32.0%)	
	Cough, High fever, Diarrhea, Headache	52 (52.0%)	100 (66.7%)	0.057
	Did not know	01 (1.0%)	02 (01.3%)	

families and one hundred forty seven (98%) of soldiers and families expressed that they knew about corona virus infection and its dangerous effects on human beings. A study carried out by Arina Anis Azlan et al in March/April 2020 among the Malaysian Public revealed that 80.5% of participants were knowledgeable about COVID-19 and also the majority of respondents were conscious that the individuals who had been in contact with diseased individuals must immediately be isolated for around 14 days (99.1%) and that using this approach can effectively diminish the viral proliferation (98.9%).<sup>18</sup>

In this study majority of the respondents showed a positive attitude regarding protective procedures being recommended by their native governmental authorities or the WHO. Fifty three (53%) of the personnel who were at officer rank as well as their families considered that infection with COVID-19 is preventable by wearing face masks, 34 (34%) hand washing, 9 (9%) face mask hand washing both and 4 (4%) avoid gathering, handshaking, eating healthy diet whereas 107 (71.3%) of soldiers and families believed that COVID-19 infection can be prevented by the use of face mask, 29 (19.3%) hand washing, 14 (9.3%) avoid gathering, handshaking and eating a healthy diet. A study carried out by Elnadi Hager et al among two African nations (Egyptians and Nigerians) in July 2020 revealed that 68.9% of respondents showed a positive attitude regarding protective procedures being recommended by their native health authorities or the WHO. The majority of respondents (81%) appreciated the significance of self-isolation, good hygiene, face mask usage, and keeping an ideal distance among 2 or more individuals to control the viral spread.<sup>19</sup> The study also depicted that 97 (97%) of officers and families were practicing handwashing frequently to prevent COVID19 infection and 3(3%) were not washing hand whereas 146 (97.3%) of soldiers and families were washing hands frequently and 4 (2.7%) were not doing this practice. Similarly, 68 (68%) of officers and families were using face mask while going out and 32 (32%) were not using whereas 104 (69.3%) of soldiers and families were using and 46 (30.7%) were not doing the practice.

In Pakistan 293,711 confirmed cases have been reported till 25<sup>th</sup> August 2020 with 6,255 deaths which is 2.1%.<sup>20</sup> Different nations have different literacy rate. Various governments worked hard to create awareness. In Pakistan Army awareness campaign has been carried out

at various levels for control and prevention of COVID-19 infection.

## Conclusion

The knowledge and attitude of army personnel and their families are irrespective of their social status whether officers or soldiers, about COVID-19 infection was satisfactory but the use of face mask while going out needs more attention. Social networking and the internet, even with their downsides, contributed greatly to the development of the information required. It is of primary importance to properly track electronic and social media outlets to validate and enhance the accuracy of information provided to people. In reducing COVID-19, efforts aimed at every community of the Pakistani population will constitute a comprehensive and viable strategy.

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