ORIGINAL ARTICLE

KNOWLEDGE AND ATTITUDE OF HEALTH CARE PROVIDERS TOWARDS CORONAVIRUS IN KHYBER PAKHTUNKHWA PAKISTAN

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ABSTRACT

Introduction: Coronavirus disease is the top trending pandemic disease in the present era. The disease has now involved about 198 countries globally. Coronavirus disease is very dangerous due to its rate of transmission from one individual to another. This study was designed to explore the knowledge and attitude of health care workers regarding coronavirus disease.

Material & Methods: A study with 150 participants using a descriptive cross-sectional design was conducted in two public sector hospitals of Khyber Pakhtunkhwa Pakistan in April 2020. The sample was selected consecutively, and data was collected through a reliable knowledge and attitude scale

Results: A calculated sample of 150 participants was obtained for this study. Among the study participants, 61.33% (92) presented with a high level of knowledge and only 17.33% (26) presented with a low level of knowledge. Furthermore, 62.7% (94) participants have a good attitude regarding corona disease. Doctors have better knowledge and attitude than nurses which are in turn better than paramedics.

Conclusion: Study results highlighted that doctor had better knowledge and attitude regarding coronavirus as compared to nurses while nurses demonstrated better knowledge and attitude levels than paramedics. Male and married health care workers have better knowledge and attitude.

Key Words: Covid-19, Epidemic, Health care providers, Knowledge and Attitude, Tertiary care hospital

INTRODUCTION

Coronavirus disease is the top trending pandemic disease in the present era. The disease started from the Wuhan city of China and has now involved about 198 countries globally.[1] Since the first reported case in Wuhan, China the disease has affected around 500,000 people around the world.[2] The mortality rate from coronavirus is not much high 3.4%, but the rate of its spread and infectivity is very alarming.[3] The whole world is under a great threat and need great attention to minimize further spread of the Covid-19, thereby it is vital to educate more and more people regarding corona prevention and to prevent the loss of valuable individuals.[4]

The clinical features of the disease commonly include dry cough, fatigue, myalgia and radiographic features of pneumonia, but the difference in medical features between severe and non-severe clients was not described as such.[5] It has been reported according to the situation report 35 of World Health Organization (WHO), the disease is becoming a source of public stigma and harmful stereotyping, which will enforce the infected individuals to hide their ill-status, avoid seeking health care and refuse to adopt health promotion activities.[6] The spread of the corona disease has many reasons as touching one another, touching infected surfaces and not maintaining proper social distance. A study conducted in the United Kingdom has reported that the spread of corona disease can be controlled through incorporating copper surfaces, adopting proper cleaning regimens and effective clinical practices.[7]

As the corona disease can be controlled through proper clinical practices and effective handling of the infected individuals, therefore the knowledge, attitudes and practices of the health care providers regarding corona are important to be at its best. A study conducted in Saudi Arabia concerning the knowledge and attitudes of health care providers regarding corona has concluded that health care providers have very poor knowledge of corona virus disease and therefore needs proper training of the isolation techniques, infection control measures and the use of personal protective equipment.[8] In contrast to the results of this study, a study on knowledge and attitudes of health care workers towards Middle East Respiratory Syndrome-coronavirus MERS-CoV in Saudi Arabia has notified that the Health Care Workers in their study had a very good knowledge and positive attitude towards MERS-CoV.[9] The knowledge and attitude of the general public towards corona disease prevention is as important as health care professionals to prevent the spread of the disease. A study conducted on 714 Saudi Arabian population regarding the knowledge and attitudes towards Middle East Respiratory Syndrome-coronavirus MERS-CoV has reported that they had good knowledge and positive attitudes towards MERS-CoV.[10] The clients recovering

from corona disease do not come to their optimum health at once. A study conducted in Jeddah, Saudi Arabia with 168 Middle East respiratory syndrome coronavirus (MERS-CoV) has notified that the survived clients represented a decrease quality of life in their general, emotional and vitality components.[11] There is no such study found regarding the knowledge and attitude level of health care providers towards COVID-19, thus it is necessary to conduct such studies in the local context on a priority basis.

Previous studies conducted on the knowledge, attitudes and practices among health care providers are not purely regarding the present pandemic form of coronavirus. The present study is therefore intended to analyse the knowledge, and attitudes of health care providers towards COVID-19.

MATERIAL AND METHODS

A descriptive cross-sectional design was used while conducting this study at two public sector hospitals (Saidu Group of Teaching Hospital Swat and District Headquarter Hospital Timergara Dir Lower) of Khyber Pakhtunkhwa Pakistan. It was conducted from May 15th to October 10th, 2020, after taking ethical approval from institutions. Participants' confidentiality, privacy and anonymity were maintained through administration of written and signed informed consent. A convenient sampling technique was used to select 150 participants through Raosoft sample size calculator while considering a population response rate of 90%, confidence interval of 95% and 10% non-response rate. Data was collected from doctors, nurses and paramedics who were working in these hospitals and were willing to participate in the study. A validated and a reliable self-administered questionnaire containing informed consent, demographics and having 14 items of knowledge and 08 items of attitude were used. Statistical analysis was done through SPSS version 22. Mean and standard deviation were calculated for continuous variables like age, mean score of knowledge. Frequency and percentage were calculated for a categorical variable like gender, professional status of health care workers.

RESULTS

Our sample consisted of 66% (99) Female, 34% (51) Male in a sample of 150 participants. Furthermore, 77.3% (110) were married and 22.7% (40) were unmarried. The mean age of the participants was 36.5±7 years and 66.7% was in the age group of 27-37, 21.3% in 38-48 years and 12% in 49-58 years respectively.

Moreover, health care professionals' participation by the department was as; (42.7%) from Accident and Emergency department (A&E), (21.3%) from Outpatient Department, (18.7%) from Wards and (17.3%) from Labor room.

Knowledge of Health Care Providers regarding Coronavirus disease

In the present study, the mean Knowledge of Health Care Providers regarding coronavirus disease was 16.7±5.8 which can be regarded as the average level of knowledge. Male participants represented more number 67.3% (66) in the high level of knowledge score as compared to females which was 50% (26). The cross-tabulation of marital status and level of knowledge revealed that married participants showed more

percentage of 63.7% (74) at a good level of knowledge as compared to unmarried 52.9% (18). Comparing the scores for the age of the participants; the age group 38 years to 48 years participants illustrated more percentage 81.2% (26) in a good level of knowledge as compared to 27-37years 52% (52), and 49-58years 77.7% (14). When compared the level of knowledge with the type of profession it revealed that paramedics have the fewest percent in the high level of knowledge as only 45.4% as compared to nurses 54.1%, and doctors 79.3%. Covid related knowledge scores are shown in figure 2.

The Attitude of Health Care Providers regarding Coronavirus disease

In this study 62.7% (94) of the participants presented with a good level of attitude regarding Corona virus and 37.3% (56) presented with a moderate level of attitude regarding Coronavirus as given in table 1.

The cross-tabulation of different demographic variables with the attitude level of the participants showed that male had a good level of attitude (71%) compared to female (46%). Furthermore, the age group 38-48 year's attitude was good (68.75%) as compared to other age groups.

DISCUSSION

A sample of 150 participants was selected from two tertiary care public sector hospitals to assess the knowledge and attitude of health care providers towards coronavirus disease. The study consisted of 66% of female participants and only 34% of male participants. A study conducted in Saudi Arabia has notified that majority of the participants (57.5%) covering their sample were females.[8] The majority of the participants (66.7%) in our study were from the age group of 27 years to 37 years and the mean age of our study participants was 36.5±7 years, but the mean of participants included in a study conducted in Saudi Arabia was 22.3±3.17 years.[12]

In the study, 61.3% (46) of the participants presented with a good level of knowledge regarding Coronavirus disease and only 17.3% (13) presented with a very low level of knowledge regarding Coronavirus disease. A study in Najran has found that majority of the health care providers (>80%) in their study had good knowledge and awareness regarding coronavirus disease.[9] But another study conducted in Saudi Arabia on health care providers has shown that health care providers had poor knowledge regarding coronavirus disease.[8]

In our study, male participants represented a higher number (67.3%) in the high level of knowledge score as compared to females (50%). A study in Egypt supports the results of our study that males have comparatively better knowledge than female participants regarding coronavirus disease.[13] In our study, paramedics had the fewest percent 45.4%, as compared to nurses 54.1%, and doctors 79.3% in a high level of knowledge regarding coronavirus disease. A study in Italy has also notified that doctors have comparatively greater knowledge than nurses and paramedics regarding coronavirus disease.[14] In contrast to the results of our study a study in Saudi Arabia has shown that nurses have more knowledge regarding coronavirus disease than doctors and other health care workers because of

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their greater contact with patients as compared to any other health care professionals.[15]

In the present study majority of the participants (62.7%) have good level of attitude towards coronavirus disease. A study in South America has also notified that study participants in their study had good attitudes towards coronavirus disease.[16] Similarly, another study conducted in Pakistan has also revealed that health care workers have good attitudes towards coronavirus disease.[17] Contrary to the results of our study, a research in Uganda has shown that only 21% of the participants have good attitude towards coronavirus disease, while the majority of participants had poor attitudes regarding the pandemic.[18]

More researches are recommended to find out the factors influencing the level of knowledge and attitude of the health care providers and its correlation with each other. Trainings and educational sessions should be adopted at every level to enhance the knowledge and attitudes of heath care providers towards coronavirus disease. Consequently, studies are recommended to find out the correlation between knowledge, attitude and practices of health care providers regarding Covid-19.

This study was limited because of cross-sectional design and convenient sampling technique was used due to the lockdown and Covid-19 pandemic. Majority of the study participants were from the age group 27 years to 37 years. The participants were taken from only two centres. The study might have different results with the different age group of the participants and multiple centres.

CONCLUSION

The health care providers' knowledge and attitude regarding coronavirus disease have a very important role in the control and management of the infection. The risk of Covid-19 infection spread is associated with the knowledge and attitude of health care workers. The greater the knowledge of the health care workers regarding the coronavirus the lower the risk of the infection. Furthermore, the study identified that doctors have better knowledge and attitude towards Covid-19 than nurses and paramedics. The study highlights the further need for education and training for health care providers to overcome the spread of the infection.

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Table 1: Attitude of Health Care Providers regarding Corona Virus Disease

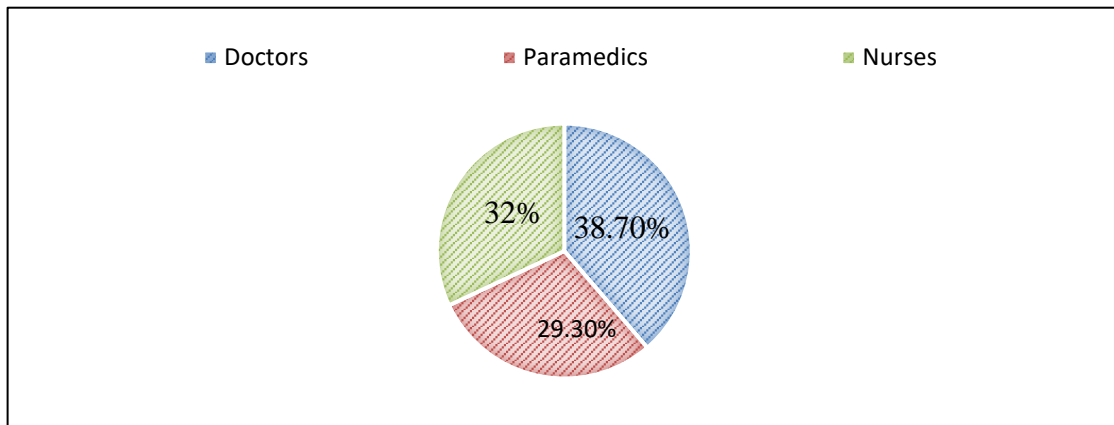| Level of Attitude regarding Coronavirus	Frequency	Percentages
Good level of attitude	94	62.7%
Moderate level of attitude	56	37.3%

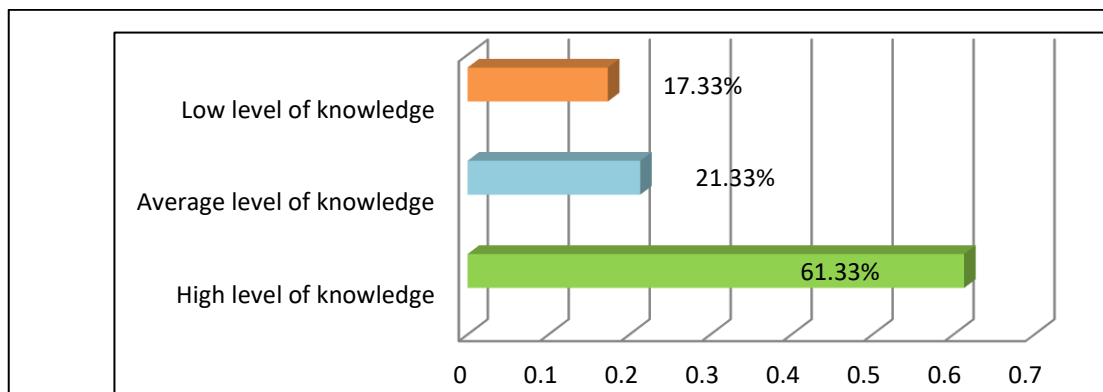Figure 1: Professional Status (Doctor, Paramedics and Nurses) by Percentage

Figure 2: Covid-19 related knowledge level of participants

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