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Assessing the Level of Awareness and Knowledge of the Covid-19 Pandemic Among the Population of Lahore

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Author`s Contribution

[1-3]Conception and design, [2-3] Collection and assembly of data, [2-3]Analysis and interpretation of the data, [3]Critical revision of the article for important intellectual content, [1]Statistical expertise,[1-3]Final approval and guarantor of the article.

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A B S T R A C T

Objective: The objective of this study was to assess the awareness and knowledge of the Covid-19 pandemic among the population of Lahore.

Methodology: This cross-sectional study was completed in six months from 5th February 2021 to 5th August 2021. A self-constructed questionnaire consisting of questions related to general knowledge, prevention, symptoms, spread, and treatment was used. The technique of convenient sampling was used. After taking informed written consent, data were collected from the population of Lahore. An online questionnaire was used to collect data and google forms were generated and shared through social media (Facebook, WhatsApp). SPSS version 25 was used for the analysis of the data.

Results: A total of 164 participants were included in the study. The mean age of the participants was 38.45. Among all participants, 71.28 % have a good awareness of the coronavirus and its precautions related to maintaining social distancing and hygienic measures while 28.72 % were not well aware of the corona and its precautions.

Conclusion: There was a good level of awareness and knowledge regarding Covid-19 among the general population of Lahore. People were well aware of the general knowledge and precautionary measures however some gaps are found in the section on the spread and treatment of coronavirus.

Keywords: Covid-19, Awareness, Knowledge, Pandemic.

Introduction

The emergence and propagation of a novel coronavirus (2019-nCoV) or serious acute respiratory syndrome threaten the world with new public health crises. It is a pathogenic disease that is caused by SARS-COV2, a newly founded virus that spreads from animals to humans, for example, the spread of infection that occurred in Wuhan City's wet animal markets in China. Several extended actions and treatments are implemented to prevent disease transmission from one person to another person. Healthcare providers have been instructed to take serious preventative steps to avoid the spread of the disease and to take knowledge of risk factors, indications, and directions to prevent disease transmission.[1]

Covid-19 spanned over 213 countries with 1995,983 confirmed cases and 131,037 confirmed deaths until 17th April 2020.[2] According to a survey, the Covid-19 pandemic has changed the living standards of many people across the globe as it has affected 1.6 billion people.[3] As Pakistan shares borders with China and Iran, the risk of virus transmission is high for citizens of nearby nations. Due to the lack of awareness, low literacy rate, poor sanitation, and people's lack of seriousness, the virus spreads. The population at high density in major Pakistani cities, namely Karachi, Lahore, and Islamabad, reinforces virus transmission in the country.[2]

Inhalation and incubation times of the disease range from 2 to 14 days. The symptoms usually include fever, cough, sore throat, short breathing, myalgia, fatigue, vomiting, nausea, and diarrhea. These are moderately sensitive symptoms that lead to critical symptoms such as ARDs, pneumonia, and multi-

organ disorders. Neurological symptoms such as dizziness, stroke, seizures, headaches, anosmia, and dysgeusia can be shown by the patients.[4]

Knowledge and awareness about Covid-19, its risk factors, complications, and management are important aspects for better control of coronavirus transmission as well as its prevention. This study aimed to assess the level of awareness and knowledge about the Covid 19 pandemic among the population of Lahore. As per our knowledge, this is the first study to consider the general population of Lahore. This study will help greatly to reflect the level of awareness and attitude of the general population of Lahore towards Covid-19. It will identify the gaps and misunderstandings in their knowledge related to Covid-19. The findings of this study will identify the attitude and behaviour of the public towards Covid-19 and helps to counterpart the virus and to set up recommendations that can be beneficial for the health authorities and in general for the public.

Methodology

This study was completed in six months from 5th February 2021 to 5th August 2021. Ethical Approval was taken from the University of Lahore (ref no. IRB-UOL-FAHS/986/2022). The cross-sectional study was conducted and data were collected by using the technique of convenient sampling. After taking informed written consent, data were collected from the population of Lahore. An online self-structured Covid-19 pandemic questionnaire was used to collect data and google forms were generated and shared through social media (Facebook, WhatsApp) as it is more convenient to collect data, due to the limited amount of time and to avoid face-to-face interaction because of the prevailing Covid-19 pandemic. The sample size was calculated by using the online epi-tools software for the calculation of sample size proportions (epitools.ausvet.com). With an estimated proportion of 0.48 and a confidence level of 0.80, the calculated sample size was 164. [5]

The questionnaire consisted of two parts, in the first part demographic information was collected. The second part of the questionnaire consisted of 21 questions regarding general knowledge, prevention, symptoms, spread, and treatment of Covid-19. 1 point was given for the correct answer and 0 points were given for wrong or don't know the answer. Collected data were analyzed through SPSS version 25.

Results

Table I shows the demographic data of participants, the female participants were 72 (43.9%) and the male participants were 92 (56.1%) respectively. The mean age was 38.45 while the minimum age was 18 and the maximum age was 60. Out of 164 participants, 23 (14.0%) had less than 10 years of education, 39 (23.8%) had 11 to 12 years of education and 102 (62.2%) participants had more than 13 years of education.

Table II shows the responses of the participants for different items of the questionnaire. The score of general knowledge regarding Covid-19, prevention, symptoms, spread, and treatment was 76.52%, 90.5%, 85.7%, 62.2%, and 45.1% respectively. The scores regarding the sections on general knowledge, prevention, and symptoms are satisfactory but knowledge gaps were found in the sections on the spread and treatment of Covid-19.

Among all participants, 71.28% have a good awareness of the corona and its precautions by maintaining social distancing and hygienic measures while 28.72% were not well aware of the corona and its precautions.

Table I: Demographic data of Participants

	Frequency	Percentage
Gender		
Male	92	56.1%
Female	72	43.9%
Education		
Less than 10 years	23	14%
11 to 12 years	39	23.8%
More than 13 years	102	62.2%

Discussion

According to this study, the awareness was 71.28% percent among the general population of Lahore. A study was conducted by Tanveer Hussain et, al. in 2020 to assess the level of awareness of the coronavirus which shows that most people were well aware of the disease outbreak, complications, and the way it is transmitted.[6] A study conducted by Nooh et al also showed that the population of Al-Jouf has a good knowledge of Covid-19. However, in terms of age, education level, and employment there were significant differences.[7] A study conducted by Hussain, Garima et, al. in 2020 also shows a satisfactory level of knowledge (60.0% - 98.7%) regarding Covid-19.[8] According to the findings of this study, the younger age population has more awareness compared to the older age population.

A study conducted in Saudi Arabia also shows the high level of awareness of the younger population as compared to the older population.[9] In this research 93.3% of the respondents agreed with the importance of handwashing for 20 seconds and all the participants concluded that a mask is compulsory to prevent the spread of infection. A study was

Table II: Assessment of knowledge of the Covid-19 pandemic among the population of Lahore			
Questions	**Yes**	**No**	**Don't Know**
General Knowledge:			
1) A virus is the causal factor of the Covid- 19.	153(93.3%)	6(3.7%)	5(3.0%)
2) The time Covid-19 takes to incubate is 5-14 days.	69(42.1%)	54(32.9%)	41(25.0%)
3) The elderly population is not at high risk of Covid-19 related mortality.	7(4.3%)	151(92.1%)	6(3.7%)
4) Do you think you are well aware of Covid- 19?	129(78.6%)	17(10.36%)	18(10.97%)
Prevention:			
5) Face masks can be used to prevent Covid-19.	164(100%)	0(0%)	0(0%)
6) 20 seconds of hand washing is ineffective to avoid Covid-19.	3(1.8%)	153(93.3%)	8(4.9%)
7) A strong immune system is beneficial to defend against Covid-19.	153(93.3%)	4(2.4%)	7(4.3%)
8) A balanced diet is not effective against Covid-19.	24(14.6%)	119(72.6%)	21(12.8%)
9) Vaccine is effective to avoid Covid-19.	153(93.3%)	11(6.7%)	0(0%)
Symptoms:			
10) Both upper and lower respiratory symptoms are due to Covid-19.	148(90.2%)	8(4.9%)	8(4.9%)
11) Digestive tract symptoms are not related to Covid-19.	18(11.0%)	116(70.7%)	30(18.3%)
12) Pyrexia and muscle ache are due to Covid-19.	158(96.3%)	2(1.2%)	4(2.4%)
Spread:			
13) Covid-19 can spread from one person to another.	153(93.3%)	4(2.4%)	7(4.3%)
14) Air droplets can carry the Covid-19 virus.	78(47.6%)	66(40.2%)	20(12.2%)
15) The droplets on surfaces can act as a carrier.	82(50.0%)	56(34.1%)	26(15.9%)
16) Through coughing and sneezing Covid/19 can travel.	156(95.1%)	4(2.4%)	4(2.4%)
17) Through exhalation Covid-19 can affect.	41(25.0%)	88(53.7%)	35(21.3%)
Treatment:			
18) For Covid-19 no drug therapy is feasible.	49(29%)	54(32.9%)	61(37.2%)
19) For the survival of Covid-19 patients' a ventilator is irrelevant.	52(31.7%)	51(31.1%)	61(37.2%)
20) For the management of Covid-19 vitamin C is significant.	136(82.9%)	11(6.7%)	17(10.4%)
21) Vitamin D is useful to treat Covid-19.	55(33.5%)	45(27.4%)	64(39.0%)

conducted by Xuyu Chen et, al to investigate the importance of hand washing and mask-wearing among school students in

China. Among all of the participants, 42.05% of students showed positive behavior toward handwashing and 51.60% of students were aware of the importance of wearing a mask for corona prevention.[10] 93.3% of participants agreed that vaccination is important to prevent coronavirus and death rates among all age populations. A study conducted by Wang et al, in 2020 also shows similar findings. Among them, 91.3% answered that they will get vaccinated when the vaccine will be available. 52.2% wanted to get vaccinated as soon as possible while 47.8% denied getting a vaccine until the safety of vaccination is confirmed.[11] This study has shown the knowledge gap regarding the spread of coronavirus. Only 62.2% of the participants were well aware of the modes of transmission of coronavirus.

A study conducted by Kaushik, Agarwal et, al. in 2021 also shows a low level of knowledge regarding the spread and mode of transmission of Covid-19.[12] Another study conducted by Adella Halim, Kurniawan et, al in 2020 shows that the majority of participants have shown poor knowledge in the questions related to controlling the spread of Covid-19.[13] This study shows that 82.9% of the participant knows that Vitamin-C is important in Covid-19 treatment and 33.5% of the participant believes that Vitamin-D has significance in the treatment of Covid-19. A study conducted in 2021 shows that 34.8% of the Jordanian respondents and 47.3% of the Iraqi participants believe that 82.9% of the participant knows that vitamin supplements are important for the treatment of coronavirus.[14] According to this study, 54.9 % of the participants were unaware of the treatment for Covid-19. The findings of a study conducted on the Albanian population are in line with this research and show that almost half of the population had a misconception about the treatment of Covid-19.[15] Another study conducted by Alabed, Elengoe et, al. in 2020 shows that 70.2% of the participants believe that there is no vaccine or treatment available for Covid-19.[16]

The limitations of this study were that a small sample size was used in the study and only targeted areas were involved to conduct the studies. Another limitation was its generality due to the non-probability sampling technique used. The study was only conducted in urban metropolitan populations. The availability of resources for the research was also limited.

This research recommends that further studies should be conducted with large sample size and in different provinces and cities should be conducted. Also, the rural population should be focused on. Studies on corona-recovered patients should also be conducted.

Conclusion

According to the findings, there was a satisfactory level of awareness and knowledge about corona among the general population of Lahore. People were well aware of the general knowledge, symptoms, and precautionary measures that can be used to prevent infection however some knowledge gaps were found in the sections on the spread and treatment of Covid-19.

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