

# Knowledge, Attitude and Practices towards Corona (COVID-19) among General Population in Pakistan

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## ABSTRACT

**Objective:** COVID-19 began in Wuhan, China, and has since spread around the world, becoming the leading cause of death in 2020 from the day it infected the first human. The aim of this study was to determine how well the general public knew about COVID-19 and to investigate their attitudes and practices.

**Methods:** This descriptive cross-sectional survey was conducted for the period of two months from July 2021 to August 2021. The sample size was 907. Questionnaire was divided into three components and gathered information about demographic data, knowledge of COVID-19 and their practice section that involves steps taken by the individual to prevent contracting the infection and data was analysed.

**Results:** In this study, 51 % (463) participants were males and 49 % (444) were females. 91% of respondents responded that they are aware of the fact that covid-19 is contagious infection. 54% of candidates take preventive measures such as they wash hands frequently, use hand sanitizer, steam inhalation, wear facemasks etc. 50% of respondents are practicing social distance through only going out for essentials for food items, while 16% do social distancing by working from home.

**Conclusion:** The participants indicated a high level of awareness about the COVID-19 pandemic, its outbreak, and basic information about it. Educated people are more likely to believe the scientific facts thus more compliance with preventive measures. The majority of them were satisfied with the actions done by the Government of Punjab.

**Keywords:** Awareness; Attitude; Practices; COVID-19; Public.

## INTRODUCTION

On 31<sup>st</sup> December 2019, an unlikely deadly virus struck the world which was first reported by the World Health Organization (WHO) and was later declared as a global pandemic on the 11<sup>th</sup> march 2020 i.e. Coronavirus (COVID-19)<sup>1,2</sup>. Coronavirus which is also known as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) manifests as a severe respiratory disease known as coronavirus disease (COVID-19)<sup>3</sup>. COVID-19 is a highly transmissible virus which has caused a profound descent in the social, economic and political world.<sup>1,3</sup>

It being a viral infection which is effortlessly transmissible, affected a huge sum of people which ended up bringing COVID-19 in the spotlight of pressing global attention<sup>3,4</sup>.

Some of the most common symptoms of COVID-19 reported by patients were fever, dry coughing, and fatigue that may lead to serious symptoms, such as breathing problems, chest pain, difficulties in speaking, and moving<sup>5,6</sup>.

The frequency of transmission and its spread across the world has made it evident that swift evaluations of the population's awareness and perceptions of this infection needs to be done.<sup>7</sup> A survey was conducted through eight studies in which the results showed sturdy evidence about knowledge, attitude, and practice (KAP) voids in COVID-19 infection<sup>8-15</sup>. To explain this study further, it was found that the majority of the sample had good knowledge of COVID-19 clinical symptoms (79%) and its transmission (82%), and the majority (89%) agreed that individuals should refrain from going to crowded places in order to minimize the transmission of this virus<sup>8-15</sup>. Additionally, a number greater than 50% of the cumulative sample had negative acuties about COVID-19<sup>8-15</sup>. Generally, almost three-fourth (73%) of the sample indicated that prioritization of practices such as maintaining hand hygiene and wearing face masks is imperative for the reduction of transmission<sup>8-15</sup>.

Nevertheless, due to the lack of awareness about COVID-19 spread, not paying attention to preventive measures and insufficient understanding of population at risk are still prevalent among different populations and most regions<sup>16,17</sup>. Due to these causes, the mortality and morbidity is on the rise with the spread of

COVID-19 all around the globe<sup>16, 17</sup>. The cross sectional study conducted in Pakistan showed the highest representation about Knowledge, Attitude and Practice (KAP) was from Punjab province (65.6%), female (63%) and age group of 21–30 years (62.1%)<sup>18</sup>. Surveys of knowledge, attitude, and practice (KAP) can accumulate evidence on what is known, understood, and done by a specific population<sup>19</sup>. The need for such information is to reduce the stress, panic and hysteria along with an antagonistic attitude which some people have towards the disease in a community<sup>20</sup>.

The importance of KAP in this time is pivotal for understanding the public's level of awareness about the knowledge, attitude, and practice towards COVID-19.<sup>12</sup> In the most recent study, investigation on the Knowledge, Attitude and Practice (KAP) among Pakistan residents concerning COVID-19 during the outbreak has been performed.<sup>19</sup> The aim of this study was to determine how well the general public knew about COVID-19 and to investigate their attitudes and actions. The main focus of the current study is to plan awareness and guide the health authorities to produce policies in order to reduce any gaps in the current protocols and help identify new trends in order to stop the spread of the virus. This will help control and contain the ongoing pandemic. An example of it is the smart lockdown introduced by the government to control the virus.

## MATERIAL AND METHODS

This descriptive cross-sectional survey was conducted for the period of two months from July 2021 to August 2021, after obtaining ethical approval from the Institutional Review Board of Institute of Dentistry, CMH Lahore Medical College to assess the public's knowledge, attitudes, and practices regarding the Coronavirus outbreak in Lahore, Pakistan. The study was conformed to STROBE guidelines for cross-sectional studies.<sup>21</sup> The sample population was selected via convenient sampling technique.

The data was collected online during the COVID-19 pandemic to carry out a community-based survey during the period of the study. A questionnaire was posted/reposted to moments

and groups of their WhatsApp, telegrams, and Facebook and email accounts, based on the authors' networks with local people living in different areas of Lahore. The research focus group was Pakistani nationals aged 16 years or older who had access to the internet and could understand the content of the questionnaire. Individuals were requested to complete the questionnaire by clicking the link after agreeing to participate.

Whereas, the people who were illiterate and living abroad were excluded from the study. The sample size was kept at 384, as estimated using the WHO sample size calculator, based on the proportion of 50% at bound of error 5% and 95 % confidence interval. The response rate was very good and a total of 907 participants submitted their response. Data was collected using a pre-existing questionnaire,<sup>18, 19</sup> voluntarily, and anonymously filled online. It was created and disseminated via survey monkey. Questionnaire was in English language and was kept anonymous. All the questions were Closed-ended.

The questionnaire on average took 2 to 3 minutes to complete. The purpose of study was explained at beginning of questionnaire. Informed consent was taken. Questionnaire was divided into three components. First component (Section I) gathered information about demographic data, second component (Section II) about knowledge and awareness of COVID-19 and third (Section III) about their practice section that involves steps taken by the individual to prevent contracting the infection. This questionnaire was used prior in various studies<sup>18, 22</sup> so the validity of questionnaire is already confirmed. SPSS-23 was used to analyse the response to the questionnaire. Outcome data was of quantitative type. Descriptive statistics were used to summarize the questionnaire's responses, with the results being presented as frequencies and percentages.

**RESULTS**

The response rate was very good and a total of 907 participants submitted their response in a span of 2 months after that the link was kept off for responses and data was analysed. In this study, 51 % ( 463) participants were males and 49 % ( 444) were females. Out of which a majority of 77 % (707) were age ranged between 26-40years. (Table 1)

Table 1: Demographics background characteristics of participants (n=907)

Gender	
Male	463 (51%)
Female	444 (49%)
Age	
10-25	46 (5%)
26-40	707 (77%)
41-60	145 (16%)
>60	9 (1%)
Education	
Grade11-12	20 (2.2%)
Diploma	65 (7.2%)
Graduation	386 (42.6%)
Masters	413 (45.5%)
Doctorate	23 (2.5%)

73% of participants have read guidelines on prevention of covid-19 by WHO, ADA, CDC etc. while 26.9% haven't read any such guidelines. 91% of respondents responded that they are aware of the fact that covid-19 is contagious infection but 1.5% of respondents haven't any idea about covid-19 infection. 96% of candidates says that covid-19 is a viral infection but 0.3% disagree on it and they said that it's a parasitic infection. 41.2% of general people says that mode of transmission of covid-19 is through touch, saliva, air droplets through sneezing and coughing while 15% agree on that touch and air droplets are mode of transmission of infection. 76.1% of participants says that 2 weeks is the incubation period for covid-19 while 1.7% says that it takes 4 weeks to take for symptoms to appear. 65.2% of public Says that

antibiotics are not helpful in treatment or prevention of covid-19 but 6.7% disagree on it. (Table: 2)

Table 2: Showing knowledge regarding COVID- 19

Questions	No of Participants (%)	
Have you read any guideline on prevention of COVID-19 by WHO, ADA CDC, etc?	Yes	663(73%)
	No	244(26.9%)
Can transmission of corona (COVID-19) be prevented by using standard precautions given by WHO, CDC, ADA, etc	Yes	495(54.6%)
	No	62(6.8%)
	May be	350(38.6%)
What type of infection is COVID-19?	Bacterial	33(3.3%)
	Parasitic	3(0.3%)
	Viral	871(96%)
Is COVID-19 infection fatal?	Yes	519(57.2%)
	No	67(7%)
	May be	321(35.4%)
Is COVID-19 infection contagious?	Yes	828(91%)
	No	14(1.5%)
	May be	65(7.2%)
Do you think patients with underlying chronic diseases (diabetes, hypertension, asthmatic) are at a higher risk of corona (COVID-19)?	Yes	842(92.8%)
	No	26(2.9%)
	May be	39(4.3%)
Can early diagnosis of COVID -19 help in treatment?	Yes	640(70.6%)
	No	79(8.7%)
	May be	188(20.7%)
What is the mode of transmission of Covid-19?	Touch,saliva,air droplets due to coughing sneezing	374 (41.2%)
	Blood contact	150 (16.5%)
	Touch ,air droplets	136(15%)
	Air droplets due to sneezing/coughing	139(12.5%)
What are symptoms of covid19?	Cough, flu, fever, shortness of breath, shivering, tiredness	186(20%)
	cough, flu, fever, body aches, shortness of breath, tiredness	113 (12.5%)
	cough fever, body aches, shortness of breath, tiredness	77(8.5%)
What is the incubation period for COVID-19/ How long does it take for symptoms to appear?	1 week	149(16.4%)
	2 week	690(76.1%)
	3 week	53(5.8%)
	4 week	15(1.7%)
What is the Quarantine period for infected patient?	1 week	28(3%)
	2 week	653(72%)
	3 week	55(6%)
	4 week	171(18%)
Should a suspected COVID-19 case be quarantined?	Yes	866(95%)
	No	17(1.9%)
	May be	24(2.6%)
Are antibiotics helpful in treatment or prevention of COVID-19?	Yes	61(6.7%)
	No	591(65.2%)
	May be	255(28%)

54% of candidates take preventive measures such as they wash hands frequently, use hand sanitizer, steam inhalation, wear facemasks etc. 50% of respondents are practicing social distance through only going out for essentials for food items, while 16% do social distancing by working from home as shown in table 3.

23.9% of general people improve immunity against covid-19 by eating fruits and vegetables while 1.32% take multivitamin and immunity booster drinks and do home remedies for boosting their immunity against covid-19.(Figure:1)

Table 3: Showing Attitude and Preventive practices

Questions	Response
If a corona (COVID-19) vaccine is available, would you have it?	Yes 648(71%) No 130 (14%) May be 129(14%)
What are preventive measures you are following? Frequent handwashing; Using a sanitizer; Precautions while coughing sneezing; Steam inhalation; Wearing face masks; Avoiding crowd	492(54%)
What is the frequency of hand washing? How many times a day? 5-10times 10-15 times 15-20times More than 20 times	298(33%) 274 (30%) 179 (20%) 156 (17%)
Do you think that a normal face mask helps in prevention? Yes No May Be	244 (27%) 358 (40%) 305 (37%)
How are you practicing social distancing? Only going out for essentials or food items; Working from home Only going out for essentials or food items Working from home	455 (50%) 292 (32%) 149 (16%)

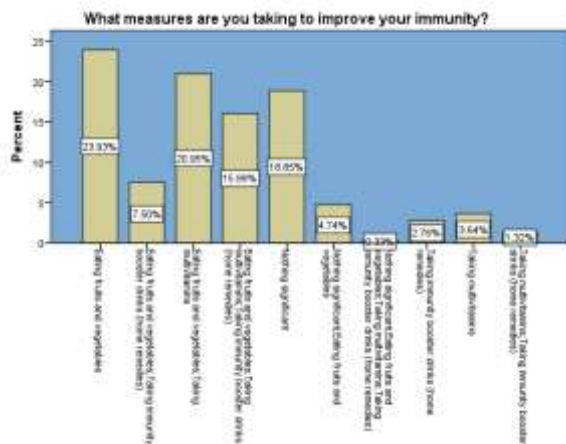


Figure 1: Measure taken to improve immunity in COVID- 19

**DISCUSSION**

Pakistan is among one of the countries who have been affected to a greater extent by COVID pandemic.<sup>1, 9, 18, 19</sup> It is a developing country having limited infrastructure for management of pandemic, and having other severely affected countries in its surroundings in map, further increase the risk of fatality caused by COVID-19 apart from effect on other factors like economic status of the country.<sup>19</sup>

The participants of study were 51% males and 49% females which shows almost same proportion of participants. This is in accordance with another study conducted in Pakistan by Afzal MS et al.<sup>18</sup> Though the results of this study are in contrast with study by Zhong et al who reported 66% of female participants and also not in accordance with study by Rine chritopher et al who reported 60% males.<sup>12, 23</sup> This reflects that in Pakistan, awareness is not influenced by gender. The reason may be due to up to date knowledge of population due to increased use of technology.

In present research, when evaluating the knowledge and awareness of the population, 73% people had read the guidelines about covid-19 thus, having adequate information regarding corona infection. 77% of people were in age range of 26 to 40 years and majority were well educated. These findings were in

accordance with other studies by Ali A. and colleagues<sup>19</sup>, Rine et al<sup>23</sup>, Almutairi KM et al.<sup>22</sup>, who reported that there was adequate knowledge about COVID-19 in terms of guidelines for prevention, mode of spread, quarantine period and symptoms.<sup>19, 22</sup>

92.8% participants knew that comorbidities like diabetes, hypertension, etc. can increase the risk of fatality with COVID-19. 91% participants knew that COVID-19 is contagious but a small percentage did not have enough awareness about spread, fatality and incubation period. These findings show similar trend as reported in another study by Afzal MS et al.<sup>18</sup> The wide spread knowledge among the population may be due to awareness campaign and internet spreading the facts like wild fire. The knowledge reached most people as most of the participants of the study had graduate or above educational level. Thus more education level increase chances of being able to read about the facts of disease and being better informed of the surrounding news.

When enquired that if people are willing to get vaccinated for prevention, 71% showed positive response. Whereas 14% were clear about no willingness to get vaccinated and other 14% were not sure if they would like to get vaccinated or not. This small percentage not willing may be due to the fear of unknown or no information about the side effects of vaccine available.

The population surveyed showed that most of the population did follow preventive measures and practiced ways to enhance immunity. This shows that knowledge does positively influence attitude and practices.<sup>18</sup> The good practices as shown by results of the present study involved hand washing, wearing masks, compliance to social distancing and eating fruits and vegetables along with multivitamins and other home based remedies to improve immunity. These result are in accordance with results of another study conducted in Pakistan on general public of Karachi by Ali A. and associates who reported that 98% of the participants believed in social distancing.<sup>19</sup> These results show positive correlation of education level with awareness and acceptance of information. Educated people are more likely to believe the scientific facts thus more compliance with preventive measures.

Earlier many studies have been conducted on awareness and practices regarding different disease involving different strains of influenza.<sup>19</sup> Most of the studies conducted to explore awareness of such outbreaks involve healthcare workers and very limited studies are present to see the attitude of general population.<sup>18,19</sup> Thus, this can be a beneficial information for government and other bodies involved in management of COVID-19. Also general population needs a reflection on compliance and how they are contributing to the control or spread of this infection.

As the study was conducted during lockdown, electronic media and platforms on internet were used to conduct the surveys. Thus most of the participants were well educated. This is the limitation of this study that people not having access to internet facility or uneducated individuals or population from rural areas were not surveyed. This group of population might show limited awareness, knowledge and lack of compliance to preventive measures.

For further studies, populations with high risk from rural areas or uneducated individuals should be targeted to get better insight into the actual scenario. Moreover, sample size can be increased including the entire cities and surrounding areas for a clearer picture. This will help in better understanding of the population that need more targeted awareness programs to control the outbreak.

**CONCLUSION**

This study gives an extensive insight of the knowledge, attitude and practice of general population of Lahore city during COVID-19 outbreak in Pakistan. The results suggest that targeted population show good knowledge about pandemic and thus positive attitude for control of the spread is observed. Internet and social media platforms have been a major source for educating the people. Although there were other programs run by government as well to

spread awareness at a larger scale. Uneducated or unprivileged population should be targeted more by officials for spread of authentic information to further increase the positive outcomes and control the COVID-19 outbreak in less time.

**Source of Funding:** This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Conflict of interest:** The authors have no conflict of interest to declare

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