ORIGINAL ARTICLE

Knowledge, Awareness, and Attitudes of Pakistani Population towards Second Wave of COVID-19 – A Questionnaire Based Survey

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ABSTRACT

Background and Objective: COVID-19 hit 2020 as one of the worst pandemics, which happens over 100 years. Although people across the globe did not respond effectively to the pandemic, yet Pakistani population responded to this pandemic with a different mindset, as it was difficult for them to accept the infectious nature, spread, and associatedrestrictions. This study was designed to determine the awareness and attitudes of the Pakistani population towards the second wave of COVID-19 pandemic regarding reservation to quarantineand trust in healthcare system.

Methods: The study was carried out from November-December 2020 during the second wave of COVID-19. The data was collected through a self-administered online questionnaire and included subjects from all provinces across Pakistan. Responses about awareness, attitudes, and trust in health care were recorded. The social stigma associated with COVID-19 was also recorded through this questionnaire. Data was entered in SPSS-20 and results were interpreted accordingly.

Results: Of all the participants, 70-80% of individuals knew about the disease and its spread, 48.8% of participants knew about the severity and prognosis of the disease, only 45-46% of patients were comfortable in getting themselves or their families tested if advised and reporting to healthcare about COVID-19. Out of all participants, 57.9% people admitted that there was a stigma associated with COVID-19 diagnosis, 37.8% believed that lack of testing and reporting was associated with this stigma, 46.6% individuals believed in rumors of false COVID-19 diagnosis and wrong treatment in Pakistani hospitals, 46.9% showed that they did not trust healthcare for patient management,65.9% attributed hiding disease to mistrust in healthcare and 57.5% participants did not want to be quarantined in government centers, if needed.

Conclusion: Knowledge of COVID-19 among people in Pakistan was nearly sufficient, their attitudes were mainly positive, while their practices needed approach that is more satisfactory. There exists a gap in the trust in government policies and local health care system. Pakistani people need more education to beat the stigma associated with COVID-19 to ensure early reporting and prompt treatment for these types of infectious diseases in the future.

KEYWORDS: Attitudes, COVID-19; Coronavirus disease, Quarantine, Second wave.

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INTRODUCTION

Since December 2019, Coronavirus disease (COVID-19) has been a significant threat to global human health. The outbreak of COVID-19 caused by the coronavirus emerged in Wuhan China in December[1] and within three months it has spread to more than 120 countries.[2] COVID-19 was declared as a public health emergency by World Health Organization (WHO) in February 2020.[3] By December 2020, during the second wave, COVID-19 cases and deaths continued to rise with 70 million cumulative cases and 1.6 million deaths globally whereas 10,176 deaths with 482,178 cumulative cases with 10,176 deaths in Pakistan since the start of the pandemic. The Regions of the Americas and Europe continue to shoulder the burden of the pandemic, accounting for 85% of new cases and 86% of new deaths globally.[4] Coronavirus is enveloped single-stranded RNA virus. These occasionally can be transmitted to a larger human population and can cause severe respiratory illnesses exemplified by Severe Acute Respiratory Syndrome (SARS) and Middle-East Respiratory Syndrome (MERS) in 2003 and 2012 respectively.[5]

Due to the similarity between COVID-19 and SARS Coronavirus, and because the virus was posing to be a global threat, funds were raised globally and Strategic Preparedness and Response Plan (SPRP) was set up aimed to protect the states with weaker health systems.[3]

Since COVID-19 is a highly contagious disease and it spreads rapidly across the borders and especially in areas of gathering like schools, colleges, universities, markets, work areas, restaurants, and marriage and funeral gatherings.[6,7] Air operation restriction, city lockdown, restrictions on gatherings, wearing masks and using sanitizers have opted as measures to control the disease.[8]

Pakistan had its first case in February 2020 with a rapid surge in 1 – 2 months. Government actions included quarantine centers, special COVID-19 wards, the compulsion of masks, restrictions on gatherings, and area lockdown.[9,10] The situation improved over-time until the second wave in October.

Since the onset of the COVID-19 pandemic, there has been an increased use of masks and sanitizers resulting in the exhaustion of resources in the market.[11] A shortage of personal protective equipment endangers health workers worldwide; the absence of appropriate protective measures is a major cause of concern among medical personnel. Especially in a country like Pakistan, which is a densely populated country without a robust healthcare infrastructure, it is a cause of worry.[12]

All of this resulted in fear, anxiety, depression, and uncertainty in public all over the world including the Pakistani population. The second wave after initial control brought more uncertainty and fear.[13] People purposefully started hiding symptoms and preferred staying home than being admitted to hospitals. People started believing it to be some biological warfare, the political gain of governments to get financial aid. This behavior was worst in developing countries to an extent that in Pakistan certain group of the population started believing that corona was being falsely diagnosed in Pakistan and people were being treated by wrong medication. Different studies including online surveys have been conducted all over the world especially developing countries like India, China, and Malaysia, etc.[14&15]

Emergencies like COVID-19 are rare but still can happen anytime so we must know about general population attitude and behavior so that we can find solutions accordingly. For this reason, to know about public responses in this condition we conducted this study to exactly know population percentage needing serious awareness, attention, and reassurance in any possible health emergencies like COVID-19 if ever faced.

METHODS

This was a cross-sectional study carried out from November-December 2020 during the second wave of COVID-19 in Pakistan after approval from the Institutional Ethical Review Committee of CMH Lahore Medical College, Pakistan vide Letter No: 58 /ERC/CMHLMC dated 9th June, 2020. An online semi-structured questionnaire was developed by using Google forms, with a consent form appended to it. The link of the questionnaire was sent through e-mails, Whats App, and other social media to the contacts of the investigators. The participants were encouraged to roll out the survey to as many people as possible. Thus, the link was forwarded to people apart from the first point of contact and so on. Microsoft word copy of the questionnaire with English and Urdu translation was developed, people were personally interviewed, and forms filled in areas where illiteracy was common or internet services were lacking. Responders above 13 years of age who gave informed consent were included in the study.

Written informed consent was taken from each patient for participation in the study and confidentiality was maintained. Their demographic profiles (i.e. age, sex, occupation, address, level of education) were noted using a structured questionnaire. There were 13 questions about different aspects of COVID 19 and responders had to answer with Yes, No, or Maybe if they were unsure of the answer.

All the collected information was entered analyzed using SPSS version 20.0 and analyzed. Age was presented mean ± SD. Frequency tables were made for gender, age, education level, area of living. Responses to questions about COVID- 19 were recorded as percentages. Cross tabs were computed for education and age with responses. P-value < 0.05 was considered statistically significant.

RESULTS

Results of the online, as well as Proforma-based survey, showed that 1108 participants consented and filled forms Mean age of the responders was 29.5 ± 10 with 766 (69.1%) of young age, 317 (28.6%) of middle age and 25 (2.3%) of old age. There were more female responders 646 (58.3%) than male responders i.e. 462 (41.7%). Out of these 58 (5.1%) people never attended any educational institute (illiterate), 38 (3.4%) started school but did not complete primary school, 119 (10.7%) completed primary school, 69 (6.2%) studied till middle school, 140 (12.6%) had Matriculation, 6l 9 (6.2%) studied till higher secondary, 126 (11.4%) were graduates, 341 (30.8%) had Master degree and 150(13.5%) had other professional degrees (Table-1).

Table-1; Demographic Profile.

Demographic Profile	
Age in years (Mean ±SD)	29.5±10
< 30 years	766 (69%)
31 – 60	317 (28.6%)
> 60	25 (2.3%)
Gender	
Males	646 (58.3%)
Females	462 (41.7%)
Education	
Illiterate	56 (5.1%)
Under primary	38 (3.4%)
Primary	119 (10.7%)
Middle	69 (6.2%)
Matric	140 (12.6%)
Higher secondary	69 (6.2%)
Graduation	126 (11.4%)
Masters	341 (30.8%0
Other professional	150 (13.5%)

Participants from all over Pakistan responded to questionnaire with maximum responders from Lahore (35.2%), Rawalpindi (12.6%), Faisalabad (3.26%), Multan (4.5%), Karachi (2.5%), Okara (3.6%) and rest from all over Pakistan. Participants working in all sorts of fields responded with 22.3% students, 11.1% housewives 10% house helpers, 6.3% students, 8.7% laborers, and rest from different occupations. There were 55 (5%) individuals who were unemployed.

The questionnaire had the first 3 questions about the knowledge of disease and its precautions. A total of 70 – 80% of individuals had knowledge and awareness about the disease and its spread.

Question 1 was about denial of COVID- 19 and in response to that 877 (79.2%) patients believed that COVID-19 was a real disease, 92 (8.3%) denied the existence of disease and 139 (12.5%) were unsure about any response. About the transmission of disease, 769 (69.4%) believed that the virus can spread by close contact, 205 (18.5%) denied the fact and 134 (12.5%) were unsure about it.

Question 3 was about social distancing beliefs and 823 (74.9%) agreed to the concept of social distancing and use of masks and glove s, 181 (16.3%) did not agree, and 104 (9.4% were unsure about it.

Question 4 was about knowledge of the severity of the disease and only 536 (48.4%) individuals were aware of the prognosis of the disease and the rest were either unsure or did not know at all.

Question No 5 about any COVID patient in the family showed that 402 (36.3%) participants had old or new or old cases in the family, 658 (59.4%) denied any patent whereas the rest 48 (4.3%) had no idea about it.

Question No 6 and 7 were about testing for COVID-19 and reporting to healthcare services. Only 527 (47.5%) patients were comfortable in getting the COVID-19 test advised for themselves and their families and 504 (45.5%) were comfortable in reporting tests to health care services. Rest did not want testing and reporting.

Questions No 8 and 9 were about the stigma associated with COVID 19. 642 (57.9%) believed that there was stigma or social taboo associated with COVID 19 and 419 (37.8%) associated that lack of testing and reporting was associated with stigma linked with COVID 19, although 223 (20.1%) individuals disagreed on stigma and 21.9% were unsure about it.

In response to question No.10, 520 (46.6%) individuals believed people were falsely diagnosed as COVID-19 while 290 (26.2%) disagreed and the rest were unsure.

In response to question 11, only 505 (46.9%) people trusted healthcare for patient management whereas 423 (38.2%) did not trust, and the rest were unsure.

For disease reporting, 730 (65.9%) individuals responded that they did not want to be tested or did not want to report the disease.

Similarly, 637 (57.5%) respondents conveyed that they did not want to be quarantined in quarantine centers if needed, only 360 (32%) agreed to be quarantined and the rest were unsure (Table-2).

Table 2: Questionnaire (N = 1108.

Questionnaire	*Yes*	*No*	*Maybe*
1. Do you think corona is the real disease?	(877) 79.2%	(92) 8.3%	(139) 12.5%
2. Do you think it spreads from person to person	(769) 69.4%	(205) 18.5%	(134) 12.1%
3. Do you believe in social distancing, and using masks and gloves?	(823) 74.3%	(181) 16.3%	(104) 9.4%
4. Do you think that corona patients if seriously ill can die within hours irrespective of full medical care?	(536) 48.4%	(303) 27.3%%	(269) 24.3%
5. Do/Did you have any corona patients in your family or friends?	(402) 36.3%%	(658) 59.4%	(48) 4.3%
6. Are you comfortable in getting you or anyone know to you be tested for COVID- 19?	(527) 47.6%%	(443) 40%	(138) 12.5%
7. Are you comfortable in reporting corona test positive to health care?	(504) 45.5%	(501) 45.2%	(103) 9.3%
8. Do you think there is a stigma associated with corona in our society?	(642) 57.9%	(223) 20.1%	(243) 21.9%
9. Is lack of testing and reporting associated with corona being a social stigma or taboo?	(419) 37.8%	(254) 22.9%	(435) 39.3%
10. Do you think wrong injection s or faking corona diagnosis is happening in Pakistani hospitals?	(520) 46.9%	(290) 26.2%	(298) 26.9%
11. Do you trust your doctors and hospital teams for corona management?	(505) 45.6%	(423) 38.2%	(180) 16.2%
12. Do you think that lack of testing and reporting is associated with mistrust in healthcare and hospital management?	(730) 65.9%	(203) 18.3%	(175) 15.8%
13. If needed will you like to be in quarantine in quarantine centers?	(360) 32.5%	(637) 57.5%	(111) 10%

The educated community had better knowledge and attitudes towards pandemics. In the cross tab of responses with education level, awareness and attitudes towards preventive practices were better in the educated group as compared to uneducated ones with Chi-Square 198 (P = 0.001).

Participants with higher education levels were more comfortable in getting tested for COVID-19 if advised and reporting it to healthcare as compared to people with no or lower education with (Chi-square: P = 0.001) (Table-3).

Table-3: Relationship of Attitudes with Education Level.

	Education	*Yes*	*No*	*Maybe*	*Total*	*Chi-Square*	*P-value*
Do you believe in social distancing, and using masks and gloves?	Illiterate	32	16	8	56	198	.000
	Under Primary	14	16	8	38		
	Primary	51	48	20	119		
	Middle	45	5	19	69		
	Matric	91	29	20	140		
	Higher secondary	61	8	0	69		
	Graduation	109	4	13	126		
	Masters	288	41	12	341		
	Other professional	132	14	4	150		
Are you comfortable in getting you or anyone is known to you to be tested for COVID- 19?	Illiterate	20	28	8	56	120	.000
	Under primary	16	10	12	38		
	Primary	40	67	12	119		
	Middle	34	26	9	69		
	Matric	32	96	12	140		
	Higher secondary	37	32	0	69		
	Graduation	70	44	12	126		
	Masters	186	102	53	341		
	Other professional	92	38	20	150		

DISCUSSION

In this study, we studied attitudes and behaviors of the Pakistani population and their trust in healthcare their response to quarantine and COVID-19 testing. The moment it spread to Pakistan and the government started taking action regarding social gatherings, reporting, and isolation of patients, chaos was created and people denied the presence of COVID-19 altogether. Different theories emerged including false diagnosis of COVID-19 and lethal injections for political and financial gains. People started hiding disease symptoms, deferred tests, and isolation. Similar chaos happened all over the world especially developing countries and researchers made an effort to know about the attitudes and anxieties of people.

In a study from China by Lin Y.[13] at all knowledge about COVID-19, impact and anxiety in the general population were studied and it shows a good level of knowledge, a higher degree of impact in every aspect of life, and a higher level of anxiety seen in about 80% of the population. In our study, we found a fair level of knowledge about COVID-19 and its prevention as about 70 – 80% of people know about disease prevention but people generally lack faith in government policies and health care so did not prefer testing and reporting.

In a similar study from India, Roy et al,[14] reported that 72% of participants agreed the need to use gloves, and sanitizers result almost similar in our study where 74.3 percent of participants agreed. In this study, sleep difficulties, paranoia about acquiring COVID-19 infection, and distress-related social media were reported in 12.5%, 37.8%, and 36.4 % of participants respectively. In another study from China by Zhongetal.[15] The overall knowledge questionnaire was 90%. The majority of the respondents (97.1%) had confidence that China can win the battle against COVID-19. Nearly all of the participants (98.0%) wore masks when going out in recent days, our population was not very optimistic about health care and government in contrast to this study, almost 50% of participants did not show trust in health care workers and policies, an area where special attention is required.

In a survey from Malaysia by Azlaan et al.[16] adequate knowledge about COVID-19 was in 80.5% of individuals. Most participants held positive attitudes toward the successful control of COVID-19 (83.1%), the ability of Malaysia to conquer the disease (95.9%), and the way the Malaysian government was handling the crisis (89.9%). Most participants were also taking precautions such as avoiding crowds (83.4%) and practicing proper hand hygiene (87.8%) in the week before the movement control order started. However, the wearing of face masks was less common (51.2%).

Hanger et al,[17] studied knowledge and attitudes in the general population and the results were almost similar to our study. (68.9%) were using preventive measures. The majority of the respondents (96%) practiced self-isolation and

social distancing but only 36% follow all health recommendations. Only 22% of the respondents were satisfied with their country's handling of the pandemic whereas 45.5% of participants of our study have trust in healthcare and government policies.

Quarantine was not liked or supported by our study participants. Brooks et al,[18] in a review of 24 studies concluded that quarantine has a negative psychological impact on people and was also associated with post-traumatic stress disorder and anger. Only 32.5% of participants agreed that they will be quarantined if needed and the rest did not like the idea.

COVID-19 is still new to the literature and new advances in clinical, biochemical manifestations, complications, and management strategies are developing day by day.

The response of the public is a revelation for us, to improve healthcare services and to educate the community to understand the situation. This pandemic is a lesson for all of us to improve healthcare.[19] Prevention is the key and social distancing, personal protective equipment is mandatory for healthcare workers being front liners.[20]

LIMITATIONS OF THE STUDY

Sampling for the study was conducted via a convenience sample through the networks of the researchers and disseminated through different social media platforms (Whatsapp, Facebook, Twitter, etc.). As a result, there is a possibility of bias as underprivileged populations may not have been able to participate. A further limitation of the present study is the possibility of participants giving socially desirable responses.

CONCLUSION

In general, participants had good knowledge about the disease and a positive attitude toward protective measures. The government and the public are taking the effective measures; there remains a need for further awareness campaigns and knowledge of safe interventions to combat the spread of disease. Lack of trust in the healthcare system and stigma associated with disease needs serious attention. There is a serious need to develop trust in the general public for government policies and healthcare services. Education and teamwork are the keys to combat this situation.

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CONFLICT OF INTEREST

None to declare.

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None to disclose.

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Author's Contributions

SF: Conception and design of study, analysis of data, drafting of manuscript.

MH, AC and SS: Acquisition of data and drafting of manuscript.

HM, RN: Analysis of data and critical review of the manuscript.

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ALL AUTHORS: Approval of the final version of the manuscript to be published.