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Knowledge, Attitude and Practice Towards COVID-19 among General Public of Islamabad, Pakistan

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Abstract – The World Health Organization declared COVID-19 as a pandemic on the 11th of March 2020 and Pakistan imposed health emergency on 25 March. Then strict control measures were taken to control the COVID-19 outbreak. For this purpose, the study carried out to analyze the Knowledge, attitude and practice of general public towards coronavirus outbreak. The aim of the study is to assess the knowledge, attitude and practice among general public during Novel Coronavirus 2019 outbreak. The aim of the current cross-sectional study is to assess the knowledge, attitude and practice among general public. A cross-sectional study was conducted from 7th April to 10th April 2020 by using an online structured questionnaire involving 290 participants by a systematic random sampling. Descriptive analysis is performed on the data to illustrate the mean knowledge, practice and attitude of participants. A positive response of knowledge 82%, attitude 76% and practice 86% was highly satisfied among participants. The knowledge about the symptoms of COVID-19 was observed in more than 80% of the participants. About 85% participants have a practice of wearing masks and 99.9% were habitual of hand washing as preventive measure. Only 8 % of participants were visiting crowded places and 4 % of them were using public transport. Thus, there is a need for more detailed and directed measures and awareness campaigns to improve the knowledge, attitude and practice in some critical aspects to contain the virus. The present study during the COVID-19 shows an enhanced knowledge and effective practice and high attitude towards COVID-19 among the participants. This study brings a new potential for in depth survey and aimed approaches to develop strategies to counter COVID-19 attack.

Keywords – COVID-19, Knowledge, practice, attitude, prevalence

1. Introduction

A novel coronavirus that causes a coronavirus disease 2019 is an emerging disease that was first reported in December 2019 so named as COVID-19 in Wuhan China. The disease is highly contagious and causes the respiratory syndrome. The clinical symptoms include fever, dry cough, fatigue, myalgia, and dyspnea that lead to failure of the respiratory system and death. The studies in China reported 18.5% of the patients were shifted to the intensive critical units who have developed acute respiratory distress syndrome, septic shock, and bleeding and coagulation pathies [1, 2] In china the fatality rate of COVID-19 is 2.3% that is lower than of SARS (9.5%), MERS (34.4%), and H7N9 (39.0%) [1-3]

The COVID-19 pandemic is highly contagious and spreading instantly and within three months it reaches to 210 countries [4]. In the alarming situation on 11 march, the World Health Organization (WHO) declared COVID-19 as an international public health emergency and requests all countries for collaborative efforts to break the chain of spreading [5]. As the cases were increasing drastically, over three months to reach the first 100,000 confirmed cases, and only 12 days to reach the next 100 000 (Who.int. 2020)[6]

Pakistan shares the boundaries and a main strategic partner of china, may undergone a major outbreak. Pakistan reported first two cases on 26 February having travel history of Iran. (Wiki2.org. 2020) [7]. Within a week cases move to five and up to 10th march about 16 cases of COVID-19 were confirmed. In view of the COVID-19 graph increasing, the Pakistani government takes serious necessary actions and preventive measures to combat coronavirus. On 25th March, the Pakistani government along with provincial authorities imposes lockdown in a country and bans all international flights and stops local transport and train services. The government stops all the outpatient departments of hospitals to perform their duties and establish a coronavirus facilitation center in every hospital. Sanction 144 imposed to tackle crowd and gathering in public places. Moreover, all hotels, restaurants and markets were closed to implement social distancing. Along with mosques, churches and other religious places were also closed as the safety measures of COVID-19[7].

The battle against COVID-19 is continuing in Pakistan along with hunger and poverty. These control measures were strictly followed by the law enforcing agencies for the success against COVID-19. The research studies are planned and executed to scores the peoples knowledge, attitude and practice towards coronavirus [8, 9] There is an urgent need to check the public behavior and adherence to understand awareness during the rapid rise of the COVID-19 outbreak.

2. Methodology

This cross-sectional survey was conducted from 7th April to 10th April, the week immediately after the cases raised up to 4000 with 58 deaths. Due to coronavirus outbreak, it was difficult to do community-based sampling survey, so an online survey was designed. We have created a Google forms into survey and shared it to social circle Gmail, WhatsApp and Facebook.

2.1. Inclusion Criteria:

- Any gender
- Have internet facility
- Willing to participate in survey

2.2. Exclusion Criteria

- Outside the study period

2.3. Ethical Consideration:

The e-survey participant accepts the consent before participation in the study.

2.3. Questionnaire:

1. Demographic
2. Knowledge about Coronavirus
3. Attitude towards coronavirus
4. Practice during a covid-19

2.4. Measures:

COVID-19 questionnaire was developed by the authors. The questionnaire consisted of four parts: Demographic variables included age, gender, marital status, education, occupation, and place of current residence. According to guidelines for clinical and community management of COVID-19 by the National Institute of Health, Islamic Republic of Pakistan. The knowledge scoring questions were related to Coronavirus information, spread, common and specific symptoms, and any other disease if the participant has to share with us. The practices during COVID-19 were basic precautionary measures like the use of masks and sanitizer or soap. Hand washing, the movement to crowded places, and use of local transport. Attitude towards COVID-19 is shown by fear and psychological thinking. The study shows the participant's satisfaction towards government policies to control COVID-19.

2.5. Statistical Analysis:

Descriptive analysis is performed on the data, percentages were calculated and Mean and standard deviation were calculated to determine the scoring of questionnaire. The survey evaluates the knowledge attitude and practice towards covid-19 by use of SPSS 23 version.

3. Results

In the e-survey, 290 participants take part in the study. About 33 % (98) females participated among which 8 (2%) were married. Among 192 (66%) males, only 60 (20%) were married. The participants were of age ranges 17 to 58. About 72% participants were of age between 21-30 years includes 22% female and 50% males. About 47.6% participants have undergraduate and 8% have postgraduate level of study. Only 10% were employed and 2% were jobless. About 42% belongs to non-medical and 53 % medical profession. About 83% were healthy with no other disease and others have diabetes, tuberculosis, influenza, seasonal allergy and depression. Table 1 shows the demographic information.

Knowledge about coronavirus outbreak is highly present in 93% of participants. The prevalence of knowledge about main clinical symptoms of COVID-19 is present among 80 % general public and common symptoms knowledge up to 83 %. The novel coronavirus spreads via infected droplets, surfaces, Handshake, was known to 77% population. Table 3 shows the knowledge about COVID-19 during pandemic. Prevalence of attitude against COVID-19 among the participants was shown in Table 4. The study shows that 78 % of participants fear of coronavirus and they worried if any of their family members get infection. Participants were highly assured that coronavirus outbreak will be controlled. About 70% participants were satisfied with government policies to combat outbreak. Due to social media, participants were highly aware of safety precautions against coronavirus. About 85% of participants wearing masks in crowded places or outside homes. The study revealed that almost 99.9% participants were habitual of hand washing as a necessary personal hygiene for prevention of infection. Sanitizer and soaps is used by 78% participants. Only 24 (8 %) participants were visiting crowded places or moving outside house and 12(4 %) of them were using public transport. Practice during COVID-19 shown in Table 5. The explanatory answer about knowledge of COVID-19 shows understandable knowledge. The awareness about Covid-19 spreads is highly satisfied. Participants selected the cough and sneezing droplets 85% (246), contaminated surface 83% (240), infected hand shake 75% (218), and hands touch to mouth, nose ear and eye is 89% (258) shown in Table 6.

About 44% participants know COVOD-19 is respiratory syndrome and 37% as contagious disease shown in the table 06. The knowledge about main clinical symptoms were as fever 78.6%, dry cough 78.6%, throat pain 55%, shortness of breath 85% shows that people were aware of disease (Table 8). Only 3% were not introducing about the main symptomatic disease.

4. Discussion

The Knowledge, Attitude and Practices can be influenced by disease pattern, severity of spread and fatality rate. After the pandemic outbreak, the knowledge, attitude and practices toward COVID-19 has been growing day by day [11]. The complete clinical picture of COVID-19 is yet to be understood, however, fever, dry cough, shortness of breath and pneumonia were the most commonly associated symptom of COVID-19 [12]. Till date no specific antiviral drug or vaccine for the virus has been reported [10, 13].

Table 1: shows the detailed Demographic information of general public

		Gender		
		Female	**Male**	**Total**
Marital status	Single	90	132	222 (76.5%)
	Married	8 (2.7%)	60 (20.4%)	68 (23.4%)
	Total	**98 (33.7%)**	**192 (66.2%)**	**290 (100%)**
Age	15-20	28 (9.6%)	18 (6.2%)	46 (15.8%)
	21-30	64 (22%)	146 (50.3%)	210 (72.4%)
	31-40	2(0.6%)	12 (4.1%)	14(4.7%)
	41-50	4 (1.4%)	6 (2.0%)	10 (3.4%)
	51-above	0	10 (3.4%)	10 (3.4)
	Total	**98 (33%)**	**192 (66%)**	**290**
Education	Matric	12 (4.1%)	22 (7.5%)	34 (11.7%)
	Intermediate	22 (7.5%)	32 (11.0%)	54 (18.6%)
	Undergraduate	44 (15.1%)	94 (32.4%)	138 (47.6%)
	Postgraduate	6 (2.0%)	20 (6.8%)	26 (8.9%)
	Other	4 (1.3%)	4 (1.3%)	8 (2.8%)
	Employed	6 (5.5%)	24 (8.2%)	30 (10.3%)
	Total	94 (32.4%)	196 (67.5%)	**290**
Occupation	Medical	35 (12.0%)	87 (30%)	122 (42.0%)
	Non-Medical	64 (22.0%)	92 (31.7%)	156 (53.7%)
	Other	8 (2.7%)	4 (1.3%)	12 (4.1%)
	Total	**107 (36.8%)**	**183 (63.1%)**	**290**

Table 2: Shows Frequency of participants having other diseases

No	240 (82.7%)
Diabetes	4 (1.4%)
Tuberculosis	6 (2.1%)
Influenza	6 (2.1%)
Allergy	4 (1.4%)
Asthma	4 (1.4%)
Depression	11 (3.7%)
Other	15 (5.2%)
Total	**290**

Table 3.

Questions	Frequency	Mean	S.D
K1. Do you know about Novel Coronavirus?	260 (89.6%)	81.8	5.7
K2. Do these symptoms (Runny nose, Common, cold, Sneezing) show COVID-19	240 (82.7%)		
K3. Do these (Fever, Dry Cough, Throat Pain, Body Pain, Shortness of Breath) were main clinical symptoms of COVID-19	226 (77.9%)		
K4. The COVID-19 virus spreads via infected Cough or sneezing droplets, surfaces, Handshake, Touch to Mouth, Nose, Ear and Eye	224 (77.2%)		

Table 4:

Questions	**Frequencies**	**Mean**	**S.D**
A1. Have you fear of Coronavirus? *	226 (77.9%)	75.6	4.6
A2. Were you worried if one of your family members can get an infection? *	228 (78.6%)		
A3. Can Coronavirus outbreak control? *	204 (70.3%)		

Table 5:

Questions	**Frequencies**	**Mean**	**S.D**
P1. Were you wearing a Mask outside the house?	246 (84.8%)	86.4	9.4
P2. Were you washing hands?	290 (99.9%)		
P3. Were you using Sanitizer?	226 (77.9%)		
P4. Were you not visiting Crowded places (Up to 5 Persons)	226 (77.9%)		
P5. Were you not using Public places and transport?	266 (91.7%)		

Table 6:

Cough or sneezing droplets	246(84.8%)
Contaminated surfaces	240(82.7%)
Hard surface	96(33.1%)
Handshake	218(75.1%)
Touch to Mouth, Nose, Ear and Eye	258(88.59%)
Other	9(3.1%)
I don't Know	5(1.7%)
Prevalence of knowledge about Novel Coronavirus among the participants	
Contagious disease	109 (37.5%)
Respiratory Syndrome	128 (44.1%)
Like general flu	39 (13.4%)
Other	18 (6.2%)
I don't know	2 (0.6%)
Prevalence knowledge of general public about the main clinical symptoms of COVID-19.	
Is fever is specific symptom of COVID-19?	228 (78.6%)
Is dry cough is specific symptom of COVID-19?	228 (78.6%)
Is throat pain is specific symptom of COVID-19?	160 (55.1%)
Is shortness of breath is specific symptom of COVID-19?	246 (84.8%)
Is body pain is specific symptom of COVID-19?	128 (44.1%)
Is fatigue is specific symptom of COVID-19?	100 (36.5%)
Is nausea is specific symptom of COVID-19?	34 (11.7%)
Other	10(3.4%)
I don’t know	10(3.4%)

In this cross-sectional study, we provided an insight to the knowledge, preventive measures and attitude of the general public towards COVID-19. And to the best of our knowledge, this is the first study carried out in Pakistan. The study resulted that the overall knowledge about the symptoms of COVID-19 was good. About 82% participants were well aware of COVID-19 and awareness about the spread of covid-19 is remarkable up to 77%. Due to severity of disease and its spread explained by health authorities, WHO declared COVID-19 as a pandemic [11] As only six thousand cases were only diagnosed in two months at the time of conducting the study[14] the majority of the participants were aware of the disease symptoms and its safety precautions by media campaigns conducted within country.

In this study, the findings regarding the knowledge about COVID-19 among the public reflect a good relationship between their deep understanding and the information available about COVID-19 in the literature and media. The majority of participants new that fever, cough and dyspnea can be the common clinical manifestation of COVID-19 and have knowledge about the unavailability of specific treatment and vaccines [10, 15] As 81% have understandable knowledge of covid-19 common and specific symptoms.

The study also resulted in an overall high level of attitude and good practice towards the disease preventive measures and their responses if contracted infection. The attitude of the participants on practices reflects the right way to prevent the infection by various means namely hand washing, using alcohol rub, avoidance of hand shaking and follow preventive etiquettes during coughing and sneezing. These measures were well known to prevent many infectious diseases particularly respiratory transmitted infections such as COVID-19 [18]

About 87% participants were showing optimistic attitude against COVID-19. About 85% people wearing mask outside house as preventive measure but this contradict the WHO statement that does not recommend the use of face masks in public in those individuals without respiratory symptoms [16]

Regarding the behavior and practice of wearing face masks, hand washing and social distancing, it might be a reflection of the large amount of information circulated in the community and perceived by them. About 78% public is fear of covid-19 and worried if any of their family members acquire infection. The Fear and anxiety about COVID-19 can cause people to become psychopath and depressed [17].

About 70 % participants were satisfied with the ministry of health and government policies to control coronavirus outbreak. Till the time of writing this manuscript, the Pakistani government and ministry of health has carried out early significant strict measures to fight the diseases such as early closure of the national and international transport, closing all educational institutes, offices and markets. As a result, the health authorities should timely aware the public about the efforts and necessary advices enacted by them in containing the spread of the virus [18]. National command and control center give real time reporting of COVID-19 and it is of worth on specific control measures. Ministry of health setup quarantine centers in hospitals and building with equipped facilities. The testing facility is enhanced day by day to trace every suspect case. Government will establish an infection center in the capital and up gradation of Molecular laboratories to BSL 3.

5. Conclusion

The present study during the COVID-19 shows an enhanced knowledge and effective practice and high attitude towards COVID-19 among the participants. After the pandemic outbreak, the initiatives made by Pakistani government and health authorities, sensitize the public to take necessary precautionary measures. A little minority shows unsatisfactory behavior that requires urgent need of awareness campaign to cover broad spectrum of public. This study brings a new potential to develop strategies to counter COVID-19 attack and helpful in conducting research on other perspectives.

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