Knowledge, attitudes, and practices (KAP) towards COVID-19

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Abstract

COVID -19 begins from Wuhan and spread globally. A large number of population got effected. Main aim of this study was to access knowledge, attitude and practice to find a correlation that are people utilizing their knowledge to avoid disease spread, what about their eating habits. For this online survey was conducted. This paper examines the public's knowledge, attitudes, and practices (KAP) related to COVID-19 and their relationships and identified the pandemic's vulnerable populations to provide recommendations for behavioral interventions and policies. This study was conducted for Pakistani residents for letting know future awareness to stop spread of diseases. Knowledge regarding vaccine SOP and diet was good in people living in urban areas.

Key words: KAP study, COVID 19, Pakistan,Coronavirus

Article History: Received: 9th August 2022, **Revised:** 8th June 2023, **Accepted:** 14th June 2023, **Published:** 30th July 2023.

Introduction

In 2019 respiratory disease was identified in china which was later named as COVID-19. Major culprit in this disease was SARS-CoV-2. It was started from china and soon spread the whole world (García-Ordás et al., 2020). Main spread was via droplets either by coughing or

sneezing. Spread might be direct or indirect direct will be via droplets by mouth nose eyes or indirect via touching contaminated hands that has touched any surface contaminated via droplets as till 9 days. So latter it was hypothesized to disinfect surface to avoid spread. Second was 6

feet distance which was done because air transmission occurs within 2 meters (Kampf, G et al.,2020).

Two things influence everyone's life that were everyone stayed at home, education was influenced because of online education everything was under digital and smart working influence quality of life by effecting lack of physical activity. Another thing was food intake due to smart lockdown or complete lockdown in some phase's people tend to buy more grocery online which mostly includes all the junk stuff another factor for junk food intake was stress which always peruse you to eat comfort food as it contains carbohydrates that help in lowering stress (Di Renzo, L et al., 2020).

In terms of lethality, men suffer more than women. Main reason for this is immune system of females is more superior because of hormonal protection in females. Second is women follows SOP more than males moreover women are affected in other ways as they face society, employment, health, economy crisis and have to do all house chores by their own because of strict lockdown or safety (Chang, 2020).

Pakistan national institute of health designed a prevention layout for public. Main aim was to create awareness among general population to stop spread. In this regard public education was done (Saqlain, et al., 2020).

This disease is affecting from head to toes and no remedy or medicine was affecting to cure this so RNA based vaccine was developed (Shatzmiller et al., 2021). Now many people are avoiding this due to terror created by social media.

By keeping in mind all above mentioned details this study was designed to evaluate knowledge attitude and practice by Pakistani urban population.

Literature Review

Covid-19 is a highly infectious disease which spreads quickly via human-to-human transmission. It is a respiratory infection which is caused by the novel Covid SARS-CoV-2 (Qutob et al.,2021). From December 2019, COVID-19 was started from city of Wuhan to different areas of the China and then spread all around the world. The WHO announced the COVID-19 outbreak as public health emergency of international concern on January 30th, 2020, and it was called a pandemic on March 11th, 2020. Laboratories in the world confirmed 1.4 million cases of Coronavirus and 85,582 deaths related to it till April 9th, 2020 (Hussain, et al., 2020).

Till July 4th, 2020, there were 11,191,676 confirmed cases and deaths were 529,127 which were reported from all over the world. Europe is

known as the most affected region till than with 2,638,903 cases and 196,169 deaths. Furthermore, 268,102 cases and 5,673 deaths were reported from the African region (Noreen et al., 2020).

SARS-CoV-2 is part of Coronaviridae family. Its family comprises of 2 subfamilies which are Coronavirinae & Torovirinae and part from the subfamily Coronavirinae and are further divided in four genera:(i) Alphacoronavirus which contains the HCoV-NL63 and (HCoV)-229E human coronavirus; (ii) Betacoronavirus which have HCoV-OC43, Middle Eastern respiratory syndrome covid (MERS-CoV), (SARS-HCoV), HCoV-HKU1; (iii) Gammacoronavirus which have viruses of birds and whales; (iv) Deltacoronavirus which includes viruses isolated from birds and the pigs (Burrell C et al., 2016).

The symptom of this disease includes fatigue, fever and dry coughing which can further lead to some serious symptoms, for example chest pain, difficulty in moving, breathing and talking. SARS-CoV-2 can be also spread through indirect contact with contaminated objects and human to human transmission. And also through body fluid droplets such as from nose and mouth, when you are with a person with COVID-19 and they sneeze, talk or cough. A droplet typically does not extend more than six feet (Puspitasari et al., 2020). In Pakistan, the battle against COVID-19 is still going on. And to have success against this virus called COVID-19, the cause to the control measures by Public and PHP is important. The knowledge, attitude and practices of our Public as well as PHPs towards this infection play a very important role in controlling this virus. (Hussain, et al., 2020).

Some of the severe complications have also been reported in the patients of Covid 19; such as, ARDS, hypoxaemia, arrythmia, AKI, shock, and acute cardiac injury (Huang et al., 2020). A previous study was conducted among 99 patients, 17% patients between them developed ARDS and 11% death rate from multiple organ failure. Beginning of duration of first symptoms to acute respiratory distress syndrome was 8 days (Chen et al.,2020).

The occurrence of SARS-CoV-2 has been seen frequently in the male adult patients with middle age between 34-59 years. SARS-CoV-2 has more chances to affect individuals with chronic diseases like cerebrovascular and Cvd & diabetes mellitus. The high proportion of serious cases occurs in people more than 60 years old. Extreme manifestations may also be associated with confections of fungi and bacteria. Less cases have seen in kids under the age of 15 (Harapan et al.,2020).

To control spread of Covid-19, isolation measures, self-quarantine, screening, and diagnostic tools are required. The people who meet diagnostic criteria of SARS-CoV-2 testing, the specimens are collected from upper respiratory tract (oropharyngeal and nasopharyngeal swab) and the lower respiratory tract (tracheal aspirate or sputum). In every

country, the laboratory performed tests of Covid-19 which are allowed through government (Patel et al., 2020). Among the patients of Covid 19 some usual laboratory abnormalities have been seen which include elevated lactate dehydrogenase, lymphopenia, and prolonged prothrombin time. Some patients also had greater creatine kinase, C-reactive protein, creatinine & aspartate aminotransferase (Bai, Y et al., 2020).

Same as SARS-CoV and MERS-CoV, it has no specific treatment yet. Supportive care and isolation such as fluid management, antibiotics and oxygen therapy treatment for this infection should be done. (Habibzadeh, et al., 2020).

Methodology

We adopted a simple random sampling survey design to assess public knowledge, attitude and practice towards COVID-19 using online questionnaire that is generated on Google forms. We used convenient sampling method and Google form survey due to pandemic.

Our questionnaire was divided into 4 parts. First part was about demographic information. Second part was about knowledge. Third about attitude and fourth about practices. In first part there was general information about age, gender, status and to which area they belong. In knowledge we asked them about COVID-19 mode of transmission, symptoms, SOPs, incubation period, high risk population and about wearing face mask with yes, no and may be option. In attitude part we asked them about are they following SOPs, are they worried about transmitting of virus to family and friends and about vaccination. In practice part we asked them if they wear face mask and wash their hands frequently, the use of hand sanitizer and getting vaccinated.

All quantitative variables results were reported as standard deviation (SD), mean (M) or frequency (percentage %).

Study subjects

Knowledge, attitude, and practice (KAP) models are often used by researchers in the field of public health to explore people's healthy behaviors. Both males and females living in urban areas.

Survey tool and ethics

Due to strict lockdown, we collect data through What Sapp and via email in the start of May 2021. A Google form questionnaire was sent to each participant and take their consent and request them to fill the form. We also told them the purpose of our study. The survey was conducted online from random population. Our estimated sample size was 50 and we got nearly 63 responses.

Data processing and analysis

We used Microsoft Excel 2018 and SPSS version 21 for data analysis. Descriptive statistic was used for demographic variables. Whereas continuous data or numerical values was used while getting mean ± SD on other hand

categorical data was used for percentages and numbers (n). Lastly Pearson correlation was used to study relationship among knowledge, attitude and practice regarding COVID.

Discussion (Statistical analysis)

Knowledge related to COVID was assessed by 7 questions. Among 50 samples. Low standard deviation indicates that values are clustered around mean. Our question of knowledge that COVID fall in which category has 0.10 ± 0.364, regarding clinical symptoms of COVID 1.26 ± 0.633, wearing face mask can prevent from getting COVID 0.48 ± 0.839, early treatment help patient to recover 2.36 ± 0.776, washing your hand frequently can prevent you from COVID 0.34 ± 0.745, Isolation period for COVID patient 1.12 ± 0.435, population is more effected y COVID 1.78 ± 0.465 having mean ± SD values respectively.

Knowledge

Knowledge	N	Mean	Std. Deviation
COVID-19 falls in which category?	50	.10	.364
Clinical symptoms of COVID-19 fatigue, cough, fever, body aches	50	1.26	.633
Wearing face mask can prevent us from having COVID-19 infection	50	.48	.839
Early treatment can help most patients recover from COVID-19	50	2.36	.776
Washing your hands frequently can prevent you from having COVID-19 infection	50	.34	.745

Isolation periods for C0VID-19 patient?	50	1.12	.435
Which population is more effected due to COVID-19	50	1.78	.465

Attitude

Attitude	N	Mean	Std. Deviation
Is it important to inform the health authorities about the positive symptoms of COVID?	50	.38	.725
Does Covid 19 can be treated in home from herbal remedies?	50	2.04	.807
Do you follow safety steps while sneezing or coughing?	50	.38	.753
Would you suggest vaccination for your parents?	50	.36	.663
Is it good to check temperature at every place you visit?	50	.50	.814
Do you think smart lockdown in different areas is effective?	50	.80	.881
Does this virus affect those people who have already recovered from it?	50	.60	.808

Is it crucial for kids under 12 years to wear mask when they are out of their home?	50	.68	.741

8 Questions related to attitude regarding Covid was assessed in this study. Questions starts from is it important to inform health authorities about positive Covid test and the result is 0.38 ± 0.725, treated in home from herbal remedies 2.04 ± 0.807, safety steps while sneezing or coughing 0.38 ± 0.753, suggestion of vaccination for your parents 0.36 ± 0.663, checking temperature at every place you visit 0.50 ± 0.814, smart lockdown in different areas is effective 0.80 ± 0.881, virus affect people recovered from it 0.60 ± 0.808, for kids under 12 years to wear mask when they are out of their home 0.68 ± 0.741 having mean ± SD values respectively.

Practice

7 Questions related to practice regarding COVID was assessed. Questions starts from symptoms faced 0.22 ± 0.582, family members eligible for vaccine been vaccinated 0.78 ± 0.737, use of hot water or steam 0.90 ± 0.707, preventing yourself from virus 0.26 ± 0.600, wearing face mask while going out 0.20± 0.535, following SOPs 0.48± 0.839, trying to eat healthy 0.64 ± 0.875 having mean ± SD values respectively.

Practice	N	Mean	Std. Deviation
What you will do if you face any symptoms	50	.22	.582
Have your family member eligible for vaccine have been vaccinated?	50	.78	.737
Are you using hot water and steam to prevent yourself from COVID?	50	.90	.707
Are you preventing yourself from one having virus?	50	.26	.600
Do you wear face mask when go outside?	50	.20	.535

Are you obeying the rules of government? (SOP)	50	.48	.839
Do you try to eat healthy due to the current situation?	50	.64	.875

Comparison of KAP score

Gender:

Gender:M/F		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	14	28.0	28.0	28.0
	Female	36	72.0	72.0	100.0
	Total	50	100.0	100.0	

Out of 50 participants, 14 were male and 36 were females.

Questionnaire was filled by more females sample as compared to males which is an indication of a frequently asked question why males suffer from COVID more than females. Reason is female take care of hygienic practice and SOP more than males and female's hormonal immunity also protect them. Out of 50 participants were from middle class only 1 was from upper class and 7 were from lower class. On seeing filled questionnaires more response was from middle class and show they have good knowledge and attitude follow practices related to COVID. Ratio of lower and upper class was small but they also have knowledge positive attitude and good practice one of main reason is all population was urban so they can protect themselves from getting infected.

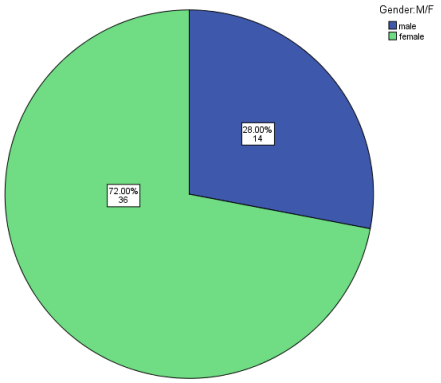

Figure 1. Out of 50 participants, 14 were male and 36 were females

To which class do you belong?

Class		(f)	Percent	Valid Percent	Cumulative Percent
Valid	Upper	1	2.0	2.0	2.0
	Middle	42	84.0	84.0	86.0
	Lower	7	14.0	14.0	100.0
	Total	50	100.0	100.0	

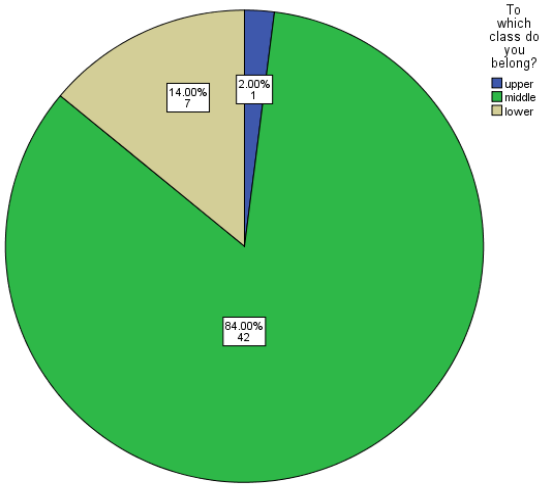

Figure 2. Out of 50 more participants were from middle class only 1 was from upper class and 7 were from lower class

Conclusion

The conclusion of this study is that people have well knowledge, positive attitude and better practices related to Covid-19 and the recommended preventive measured. People should be more educated about more reliable sources that may be used and encouraged to be vigilant in verifying any information that they come across before conveying it to others. Hopefully, by arranging effective Covid-19 management and prevention programs at Government level; the countries such as, Pakistan

will be able to manage the spread of this pandemic in future.

Limitations

Investigators can't access data from rural areas due to lock down. So population based survey will be best for next time to identify both urban and rural population among with gender bases.

Recommendations:

- People have good knowledge regarding this virus but practices should be improved.
- Due to shortage of time and lockdown we could not get more data so for further research the sample size should be increased.
- We can also differentiate between the knowledge, attitude and practice of rural and urban population.

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