

EXPLORING THE KNOWLEDGE, ATTITUDE, AND HEALTH-PROTECTIVE BEHAVIORS OF PRECAUTIONS-OBSERVING PAKISTANIS DURING THE COVID-19 PANDEMIC

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ABSTRACT

Objectives: This study aimed to qualitatively explore how those people who regularly observe covid-19 precautions. practice and think about covid-19 health-protective behaviors during this pandemic.

Design of the study: A core research design of the study was qualitative research followed by thematic analysis.

Place and Duration of the study: Data collection was carried out from the cities of Faisalabad, and Sargodha, districts of the Punjab province of Pakistan from June 2021 to August 2021.

Sample and Method: The purposive sample comprising (n=20) participants were selected from cities of Faisalabad and Sargodha from different professions like teachers (public and private school), the armed forces of Pakistan, and also from other business sectors. The participants were first given a questionnaire that asked them about their practices regarding health-protective behaviors and then semi-structured interviews were conducted with only those who scored high on this questionnaire and gave informed consent for the said purpose.

Results and Conclusion: The study resulted in themes and subthemes. Themes that appeared in the study include Covid-19 as a global pandemic, Precautionary Measures, Actions of Government of Pakistan, Importance of Face Mask, Usage of Hand sanitizers, Social Distancing, Covid-19 Vaccination Importance, Difference in Covid-19 waves other health-protective behaviors. Pakistanis are serious about the Covid-19 pandemic and adopted pharmaceutical (vaccine) and non-pharmaceutical (facemask, social distancing, and hand hygiene) health-protective behaviors during the Covid-19 Pandemic.

Keywords: Health Protective Behaviors; Face Mask, Social Distance; Hand Hygiene, and Covid19 vaccination.

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INTRODUCTION

Over the last decade, the world has seen the appearance of various disease outbreaks and epidemics caused by more than 20 infectious agents, according to the WHO (World Health Organization, 2020). Novel infectious diseases such as H1N12 and MERS were responsible for several of these epidemics. Corona virus-related diseases (SARS and MERS) have increased the worldwide risk to the health system for the last 2 decades. Coronavirus is currently an addition to the upgrade list of new viruses that aren't welcome (Study Group of the International Committee on Taxonomy of Viruses, 2020). Coronavirus was declared an emergency for public health at the international level by the WHO on 30, January. 2020, and a pandemic on 11th, March 2020.

Standard health-protective behaviors, such as the usage of face masks, avoiding social gatherings, maintaining hand cleanliness, and minimizing contact with infected individuals, have been suggested by public health organizations to control the virus's spread (Centers for Disease Control and Prevention, 2019). These precautionary interventions are important to prevent the spread of the disease; yet, the hurdles associated with habit adoption can be severe (National health profile of India, 2019). Furthermore, the spread of a Vast volume of inaccurate and ambiguous information on social media can hinder COVID-19 containment efforts and cause public panic (Azlan et al., 2020).

Many health organizations, including the WHO, had previously been discouraging the use of masks by the public and wanted to reserve them only for the healthcare professionals; however, this has now changed because of the evidence that face masks do inhibit the increase in infections of Covid-19 (Baicker, 2020).

Social distancing is a technique for limiting crowd contact and preventing viral transmission within groups of people. COVID-19 can be disseminated by an infected person to up to three or more people, and this will continue until they are separated. There are two common social distance practices: one is social distance, which involves keeping a space of almost 1 meter between people, and the other is staying inside at home. This technique had been effective in the past and is still undeniably effective in the present, whereas; Wuhan has successfully restricted the spread of infection by following these measures (Baicker, 2020).

Hygiene refers to all practices aimed at reducing contact with micro-organisms such as bacteria and viruses. This covers things like hand hygiene, bathing, and keeping the work area, kitchen, and lavatories clean, among other things. Clean hands are the most important instrument for preventing the transmission of microbes. Furthermore, even after cleaning, it may be necessary to disinfect once in a while (National Institute for Public Health and the Environment, 2020). In this view, hand cleanliness is the most preventive technique against the transmission of the Coronavirus caused by the (SARS)-CoV-2 infections. Hand washing is an important part of hand hygiene since it is simple, inexpensive, and one of the first lines of defense in restricting the increase of the current pandemic. It should be sufficient if soap and water are used for about 20 seconds (UNICEF, 2020).

Vaccination is considered one of the most effective ways to control infectious diseases (Andre et al., 2016). So willingness to get oneself vaccinated is also of supreme importance in the battle against the Covid-19 pandemic. The media's and the general public's excitement about having a vaccine that protects them against COVID-19 can only produce lasting results if the intention to get oneself vaccinated turns into action. This excitement is a result of vaccines' incredible success in the control of infectious diseases in the past and present. However, there are few contagious viruses for which vaccines are not super effective, and we've seen a succession of dramatic vaccination failures (Mantovani, 2018), so, other Covid-19 related health-protective behaviors remain important even in the presence of multiple vaccines.

The coronavirus was (and somewhat still is) a major public health concern around the world. Wearing masks, hand hygiene and social distancing are among the strategies used to combat COVID-19. The impact of these techniques on covid-19 is investigated in a study by Chiu (2020), who has stated that these strategies are enough to control the spread of covid-19, along with these precautionary measures pharmaceutical (vaccine) inventions should be provided.

The present study aims to explore the knowledge, attitude, and experiences of health-protective behaviors adopted by the precautions-observing Pakistanis (people who were following Covid-19 Standard Operating Procedures or SOPs) during the Covid-19 pandemic. The aim of this qualitative study is to investigate and understand what the participants thought about their health-protective behaviors. This knowledge can contribute to the knowledge-base of

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the Pakistani society that can be used in promoting health-protective behaviors. The current study is investigating why people used face masks and followed other SOPs and what they thought regarding these health-protective behaviors playing an effective role in saving them from this COVID-19 pandemic.

METHOD

Participants

Data was collected from Faisalabad and Sargodha cities, from different professions like teachers (public and private schools), the armed force, and people from other business sectors. Four hundred participants filled out the screening questionnaire by Lüdecke and Knesebeck (2020). Only those participants were made part of the in-depth interviews who scored high (7 yes's on following SOPs including the item about face masks) on the questionnaire. Out of the initial 400, around 50 fulfilled our criteria, however, 23 gave consent for interviewing. Finally, 23 people were interviewed but the data of only 20 people were further selected for analysis as 3 interviews had to be discarded due to their brevity. Hence, a purposive sample comprising n=20 participants was included using semi-structured interviews.

Inclusion Criteria & Exclusion Criteria

- People who followed most of the SOPs (especially of wearing face masks) were made part of the study.
- Minimum 18 years and maximum 50 years of age groups were a part of this study
- Participants who did not use face masks were excluded from the study since wearing a mask is required when filling out the screening scale.
- Any participants who scored less than 7 of the maximum 11 score on the screening questionnaire by Lüdecke and Knesebeck (2020). Furthermore, participants who did not give complete responses on the screening questionnaire were not included in the study.

Measures

At the participant selection stage, an 11 item screening questionnaire by Lüdecke and Knesebeck (2020) was used which measures the extent to which a person is precautions-observing regarding Covid-19. After screening, the

researchers acted as a research instruments to answer the research questions as it is a common practice of qualitative research.

Procedure

The current study investigated what precautions-observing persons' thoughts, knowledge, and attitudes were regarding following the SOPs during Covid-19 pandemic; what were their reasons behind using face masks etc. First of all, the researchers obtained a permission letter from the Institutional Review Board of the Government College University Faisalabad. Then participants were sought from different professional settings by all the three researchers. One of the obvious signs of our potential participant was that he/she would be wearing a face mask. The participants were approached by any one of the three researchers and the researcher introduced himself/herself and then informed the participant about the study and all of his/her rights. The written informed consent was taken from each of the participants on the initial page of the screening questionnaire. The data was collected from Faisalabad and Sargodha city from people working in different public and private sectors. For the investigation and data collection, a semi-structured interview guide was designed to ask questions related to the health-protective behaviors of Pakistanis during the pandemic crisis.

A purposive sampling technique was used to approach the sample. The thematic analysis was used for this research. Confidentiality of the information was ensured. All the Participants were involved in semi-structured one-to-one interviews conducted by the researchers. These interviews were either conducted by inviting the participant to our university or by reaching out to the participant at his/her place of comfort i.e., participants' homes, local markets, shopping malls, etc. The interviews were then conducted and transcribed in the Urdu language. However, the data analysis (coding onwards) was done in the English language. Responses were recorded on audio recorders for ease of the researchers. Later, the data were analyzed using the qualitative data analysis technique called thematic analysis, and then the results were reported.

Data were analyzed using thematic analysis. The steps of thematic analysis put forth by Lorelli (2017) were followed in analyzing the qualitative data. The first step was conducting semi-structured interviews; then these interviews were transcribed verbatim by the researcher who conducted the interview. The second step was, discourse units demarcation (DU) which was done by arranging the data into response segments of transcription and then

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assigning a number to these units. The next step was the coding of data, which involved the organization of data in a meaningful and systematic way. Coding breaks down large amounts of data into manageable chunks of information. For coding, the data QDA Miner Lite software was used. The next step was that of making subthemes; they were generated by combining two or more codes from the transcribed data. The last step was of combining these themes across the dataset. Many codes combine to form a subtheme and many subthemes combine to form a theme in an organized way that can easily be understandable by readers. After transcription of the data, all the three researchers worked together to reach the resulting themes.

RESULTS

In this study thematic analysis was used to analyze the raw data in a meaningful form (Degand & Simon, 2009). Participants' quotations were coded regarding the transcript of the interviews. In reference, DU stands for discourse unit, and number stands for the line number of transcript of the participant.

This study found nine major themes of health-protective behaviors, including Covid-19 as a global pandemic, Precaution, and Prevention, Actions of the Government of Pakistan, the Importance of Face Mask, *Used of Hand Sanitizers*, Social Distance, Covid-19 Vaccination Importance, The difference in Covid-19 Waves and Other health-protective behaviors, after an in-depth analysis of health-protective behaviors. Each main theme has some subthemes which are discussed below.

1. Covid-19 as a global pandemic

The participants reported that coronavirus is a pandemic that is spreading fast over the world. The virus, not only has global effects but also marked a negative impact on our lives. Also mentioned is that in different parts of the world, cases of COVID-19 are continuously rising which can easily transmit from one person to another. "*Covid-19 rapidly spreads in the world and it's a dangerous virus and is becoming a long lasting virus*" (Participant 16, DU 04)

Another participant stated: "*Corona is a type of disease which can transmit person to person easily in short covid-19 is a contagious virus*" (Participant 08, DU 02).

2. Precaution and Prevention

The Participants reported that since March 2020, the COVID-19 pandemic has been a part of our daily lives, we have started to take precautions and different preventative measures because, at the time, this was the only way to get rid of infectious disease. After taking precautions, it seems that we were protected to some extent from this harmful virus.

As a participant reported that: "*and this virus creates too many damages so we need to start doing precautions and we did too much-preventing measures, we wear a mask and used hand sanitizers frequently*" (participant 20, DU 04).

3. Actions of Government of Pakistan

The participants revealed that it's an important theme and the National Action Plan was serving as a policy document to ensure that the guiding principles for pandemic preparation, containment, and mitigation are adhered to. In our country, an emergency was declared by the Government, and the Government of Pakistan fulfilled its responsibilities actively

One of the participants stated that: "*Government showed strict actions and lockdown done by government, due to strict actions covid-19 was in control and whenever any Islamic event occurred like eid and other events government already took actions related to preventions. Second thing was that the government closed the wedding halls because the covid-19 ratio decreased. The government played advertisements on tv for hand washing and other preventing measures like wearing of face mask and avoid social gatherings.*" (participants 4, DU 56).

4. Importance of Face Mask

As participants' responses concluded that face masks are recommended as part of personal protective equipment and as a health intervention to prevent the spread of the coronavirus disease pandemic. The participants also reported that now face masks become a mandatory part of our lives. The participant stated that: "*If I talk about Covid-19, wearing the mask is beneficial. if I wear a mask someone's droplets of mouth cannot split toward me and my mouth droplets cannot transmit to others. if someone is not wearing mask droplets can stay on my hands and later on I touched my face and transfer it in me and wherever I*

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go these germs are with me if we both wear the mask we both are saved from the transmission of covid germs" (participant 19, DU 10)

5. Used of Hand Sanitizers

The participants' reported that hand cleaning helps to lower the number of germs, chemicals, and metals on your hands. Knowing when to wash our hands and how to clean them will offer you the best chance of staying healthy. Sanitizer use has become more important during covid-19 because the fear of covid-19 has become so common that every second person now uses hand sanitizers.

One participant stated that: *"First of all government start giving add's and in those add's they told that washing hands again and again easily protect from virus. Covid-19 spread more from touch and washing hands can save us and we keep us safe. if we can wash our hands again and again and keep sanitizer with us, whenever we feel we need to wash our hands at that point we used sanitizer to sanitize our hands and from the government side, they told us to wash our hands for 20 sec and teach us the proper way of washing hands"* (participant 17, DU 27)

6. Social Distance

As participant responses concluded that social distance is a public health practice that aims to avoid infected people from coming into close contact with healthy people to reduce the chance of disease transmission. By minimizing groups of people and congested locations, social distancing increases the physical space between us, reducing the spread of disease. If we stay at least six feet apart from other people, COVID-19 is less likely to infect us.

The participant reported that: *"Social distancing saves from the covid-19 virus in this way, if you maintain the distance of 6 feet from others then germs cannot transfer toward you. face mask and sanitizers came on the second number and when no one is near to you how could you be infected by this virus. social distancing reduces the chance for infected from this virus social distancing provides much safety"* (participant 18, DU 55).

7. Covid-19 Vaccination Importance

According to the participant responses its is reavealed that WHO recommended that the body's natural immune system helps to recognize and fight particular viruses. Strengthening the immune system is a simple, safe, and successful technique for defending against harmful infections before coming into contact with them. As a result, the COVID-19 vaccination reduces the risk of becoming seriously disease and after done with vaccination we feel ourself more save. One of the participant stated that: *"The benefit of the injected vaccine is that person become vaccinated and if they infected from this virus they can easily recover from it and with this, I want to tell you that after covid-19 vaccine invention we notice the control in the spread of the covid virus"* (participant 14, DU 50).

8. The difference in Covid-19 Waves

The participants reported that till now 3 waves of covid occurred and every wave is different from the other one, all these four waves show variance. The fear was increased in our lives because no one has an idea about this deadly virus, and later on, we start taking it seriously but the first wave has a more badly impact on all worldwide and on ourlives.

The participant reported that: *"in the start when the first wave occurred people took it seriously and people have more fear I already told you how people desperately followed sops"* (participant 2, DU 75)

9. Other health-protective behaviors

The participants reported that when sops are given in these sops main focused on the face mask, hand hygiene, and social distance but after following these we took some extra steps or protective behaviors, such as steam in which the process of steam discuss. Boiling water also protects against many other bacteria. Along with sops the most excessively protective behavior was doing spray in our homes. One of the participant stated that: *"too strong the immunity drink orange fresh juice in winters did this because want to strengthen the immunity and excessively drink green tea because it's effective along with this only drink hot water not even touched cold water and took steam almost every second day because steams saves us from thid deadly virus"* (participant 11, DU 06).

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DISCUSSION

The current study is carried out to explore the health-protective behaviors of precautions-observing Pakistanis during the covid-19 pandemic. An in-depth analysis of the responses of the participants revealed the theme 'covid-19 is a global pandemic' that affects individual lives. Subthemes include "covid-19 threats," "covid-19 is a worldwide disease," "effects of covid-19 on their life," "covid-19 outbreak," and "covid-19 and death ratio." These themes and subthemes are supported by the literature as according to a large body of evidence, Covid-19 is a global epidemic. The WHO has upgraded the global COVID-19 risk to its maximum level. COVID-19 has spread around the world, posing a serious threat to public health (Minhua, 2020). This theme marks that the precautions-observing individuals understood the gravity of the situation they were dealing with. Therefore, it can be said that realizing the true harmfulness of a situation makes a person careful and precaution-observing.

Another important theme reported by the participants is "Precautionary measures" in which sub-themes are; People did Precautions and Preventions and Precaution is Mandatory. These theme and subthemes are strongly supported by the previous studies, as in one study it was revealed that precaution and prevention have now become a mandatory part of life and beneficial way to prevent this virus named as COVID-19 virus. Health literacy appeared to be a predictor of health-protective behavior among university students (Michie et al., 2020).

In this study, according to the Participant's responses, "Actions of Government of Pakistan" was the main theme, which subthemes are; Government of Pakistan plays its role and Government Responsibilities. After the results analysis, it concluded that the government's robust measures and prompt responses to the COVID-19 situation in the country. . Literature supported one study concluded that Pakistan's economy, resources, social and religious nature, and political infrastructure, without a doubt, provide a significant difficulty for the government and the country in dealing with the COVID-19 Pandemic.COVID-19.In the future, we can focus on treating COVID-19 with previously available drugs and working on its immunization (Waqar, 2020).

One more important theme is reported by the participants in their responses "Importance of Face Mask". according to the participant responses the

importance of face masks was revealed that how face masks became a mandatory part of life and subthemes are “FaceMask Mandatory Part of life, Protection with Face Mask, Usage of Face Mask in gatherings, Experiences with Face Mask”, previous studies, strongly support this finding as covering nose and mouth can reduce the risk of virus. Regular use of face masks can save lives from the covid-19 deadly virus (Christina, 2020).

An in-depth analysis of the participant's responses concluded that the Usage of Hand sanitizers was the most important theme in which subthemes are “Protection with Hand Washing, Using Hand Sanitizers, literature supports the theme and subthemes as it is concluded in one study that one should take steps to avoid the transmission of COVID-19, with handwashing featuring prominently in all of them”. When soap and water are not available use alcohol-based hand sanitizers or take 20 seconds for washing hands with soap and water, preventing the spread of the virus its acts as a first-line defense (CDC, 2020).

Social Distancing is also the basic theme, in which subthemes are, “Protection with Social Distancing, Avoid Social Gatherings, and Maintaining social distancing” according to the participant's responses. Participants' responses revealed that to control the disease from spreading, people should use social distancing measures and should keep their distance from one another for a while. Literature also supports this theme and subthemes as one study concluded that the virus's basic reproduction number (R_0) would be reduced, limiting the disease's spread. By 2020, an estimated 92 percent of cases would gradually decrease if social distancing measures are properly implemented (Aslam, 2020).

Another significant factor that can reduce the spread of the virus is the “Importance of Vaccination”. According to participants' responses the “Importance of Vaccination” is the main theme for the study and participants also revealed that the Covid-19 vaccine prevents the virus from spreading. One of the previous research supports the findings and shows that after infection with SARS-CoV2, permanent immunity is established; nevertheless, 60–70 percent of a community must be immune to obtain hard immunity against SARS-CoV2. The safest and most controlled technique for preventing COVID-19 in a population is to have an effective and safe vaccination. (Archana et al., 2020).

Other health-protective behaviors is one of the important themes as reported by the participants' responses. Participants believe that using fresh juices and boiled water, use of spray during the Covid-19 virus, and taking supplements

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to strengthen the immune system. Literature supports this theme and subtheme as in one study it is reported that Steam inhalation is a low-cost, simple, and commonly available treatment approach for COVID-19 infections prevention. As this is commonly available and is very inexpensive, steam inhalation is an appealing choice for treating viral infections of the upper airway. Steam inhalation should be allowed as an adjunct to handwashing, social distancing, and wearing a face mask in order to effectively limit COVID-19 infections in this current outbreak. More research on a bigger scale in Asian and Western countries is needed to confirm the benefit of steam inhalation in COVID-19 patients. (Santosh, 2021).

Conclusion

The present qualitative study aimed to examine the health-protective behaviors of Pakistanis during the Covid-19 pandemic. Research questions are being answered in the findings of the study. The current study gives interesting and deep information about how people observed and adopted the health-protective behaviors during the covid-19 pandemic. Some of the information that we got from this research included some already known aspects like the use of facemask, maintaining 6 feet distance, hand washing, and covid-19 vaccine, and some novel aspects like Actions of the Government of Pakistan, Negative effects regarding hand hygiene, Consciousness regarding Germs and other health-protective behaviors.

Limitations and Recommendations

The current study brought up several results but some limitations were also identified:

1. Participants for this study were approached only from Faisalabad and Sargodha. Participants from other cities were not included in the study.
2. Realist form of thematic analysis was used which takes the participants' account on an 'as it is' basis, hence, the data was not subjected to critical analysis by the researchers
3. In the current study, those participants were not approached for the interviews who didn't mark item number 8 on a screening test.

This research should provide some basis for educating the public on the use of masks and other SOP's to increase compliance which can reduce

morbidity and mortality. The finding of the study can also contribute to the field of health psychology. Health psychologists strengthen the health-protective behaviors of the Pakistanis to protect them from the covid-19 virus and further covid-19 related viruses.

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