Remittances Review
August 2024,
Volume: 9, No: 4, pp.656-677
ISSN: 2059-6588(Print) | ISSN 2059-6596(Online)

Received : 05 July 2024, Accepted: 20 August 2024
DOI: https://doi.org/10.33282/rr.vx9i2.38

EPIDEMIOLOGICAL STUDY TO FIND OUT THE PHYSICAL MEASURES OF HAND SANITIZATION, HAND WASHING AND SOCIAL DISTANCES ADOPTED AS PER WHO GUIDELINES BY PRIVATE HEALTH PROFESSIONALS OF LAHORE

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Abstract

This study aimed to study is to determine the outcomes of adopting some physical measures such as use of hand sanitizer, wash the hands multiple times and also maintain the social distancing according to WHO guidelines.. A questionnaire was designed to determine physical measures. A total of 300 health specialists tool part in this survey. Among the participants, 35.67% (n=107) were male and 64.33% (n=193) were female. Maximum number of the volunteers followed the suggestions of the WHO (World

Health Organization). Table No. 1. demonstrates that 84.77% (n=254.32) of contestants wash their hands before eating, 90.13% (n=270.39) contestants wash their hands before and after eating, 98.39% (n=295.16) people under consideration wash their hands after using toilet while 88.13% (n=264.39) of the voluntaries wash their hands in all of these earlier mentioned circumstances.

This study suggested that, there are many areas of Pakistan that have much increased cases of COVID-19. The treatment measures are available but not adequate. The people do not follow the hygiene measures as given by the government to control the pandemic. Different areas with increased number of participants might eliminate all kind of errors from study

1. Introduction

Corona Virus Disease – 19 is a deadly condition initiated by the contraction of SARS-CoV-2 virus. It was initially found to have emerged in Wuhan, China in the Hubei province at the end of 2019. The first name given to it was Corona Virus respiratory disease 2019 which was then changed to COVID-19 by the World Health Organization (WHO), in February 2020, when it was also declared a global pandemic. It had begun to spread speedily by then and currently over 8 million people have been infected and over 1 million deaths have been recorded. Across the world, countries have created different measures to control the virus out of which the most common ones are social distancing, repeatedly washing hands, closing down public transport but the most efficient has been testing to trace affected communities. {Pearce, 2020 #1}

A standard guideline was provided by WHO to sanitize and wash hands along with the above measures to prevent cross contamination and hence the spread of the disease. The easiest and fastest way for this disease to spread is through touch; hand shaking, touching handles or objects in markets, etc are the means of germ spread and transfer and to keep this at a minimal, the guidelines were developed. It was also advised to avoid touching any exposed parts of the body like the eyes, nose, and mouth as the person can transfer the virus germs to their own system leading to a full infections.

{Venkatesh, 2020 #5}.Hand hygiene has become the most crucial step and this was achieved by some main methods such as repeatedly washing hands or the use of a hand sanitizer between touching surfaces, or when soap and water was unavailable. It was also advised to wash hands once in a certain period of time and if that was not being followed, the washing of hands before dealing with food was made vital, such as cooking, eating, or after sneezing/coughing or entering the house.{Andersen, 2020 #6}
An alternative process to reduce cross contamination of germs is the application of hand sanitizer. .{Pearce, 2020 #1} Since germs also spread by close proximity, social distancing among people was another important step implemented by the governments in public and private gatherings of people such as offices to reduce the spread of the virus; therefore, it is necessary to follow the proper guidelines given by WHO so that this pandemic can be removed easily.{Lima-Costa, 2020 #8}Another reason for the rise in morbidity, mortality and health care expenses in hospitals around the world, is the nosocomial infections which occur because of poor hand hygiene. Thus the increased prevalence of the COVID infection also became a struggle for the health care providers even in developed countries. Clean hands is the easiest yet most efficient way of prevention. But even considering this; almost 50% of infections related to hospitals are because of hygiene of health care providers.{Dantas, 2020 #10} Back in 2005, WHO released a specific guideline with complete steps and method for washing of hands in a health care setting. {Dantas, 2020 #10}
In developing countries, the spread of infections remains a serious problem, given that health care facilities are not very highly developed or being constantly maintained and hence are high-risk settings.
Front line workers were at double the risk and so were their household members; adjustments were made in the analysis for sex, age, ethnicity, socioeconomic status, and comorbidity Dalton, 2020 #2}

1.2 Objectives of the Study

The primary objective of this study is to determine the outcomes of adopting some physical measures such as use of hand sanitizer, wash the hands multiple times and also maintain the social distancing according to WHO guidelines by private health care professionals of Lahore. The secondary objective is public awareness for Hygiene in order to prevent communicable diseases.

1.3 Significance of the Study

The findings of this study determines that this study is very significant and the steps such as use of hand sanitizer, hand washing as well as social distancing are the non-pharmaceutical interventions to control the pandemic and if whole community involve to follow these instructions than the control on pandemic become more easy. This study is worth full as it is the basic steps that everyone can follow and hence essential to control the pandemic situation.

2. Literature Review

Shuo Feng et al. conducted a study to determine the rational use of face mask during this pandemic. It is determined in this study that some communities enforced compulsory use of face mask and social distancing so that the spread of virus become minimized. Every country enforced their policies for the use of face masks but overall WHO gave proper guidelines which were followed by most of the countries for the prevention of spreading disease.

There is a need to take facemask for everyone because it prevents respiratory disease at great level thus it is concluded that the spread of corona or any other infectious disease can be prevented by use of face mask and by enhancing social distancing (Shuo Feng, 2020).

Razvigor et al. conducted a study to determine the effect of COVID-19 pandemic on the skin and how it affects the skin. In this study he determines that world has been changed in this era very dramatically and it brings many challenges for physician and also change the social and personal activities of individuals. In this condition it is very necessary to maintain the personal hygiene especially hygiene of hands because the main cause for the spread of virus is hands. In this study he discussed that there should be a need to determine that what are the effects of COVID-19 pandemic on the health of individual (Razvigor DarlenskiMD, 2020).

Carlo Basiel et al. conducted a study to determine the recommendations as well as preventions for the spread of infectious diseases such as COVID-19 pandemic. In this study it was discussed that Corona is a disease that was caused by a virus and it affect at the global level and estimation shows that no country remain safe in this pandemic. They suggested that transmission of this virus can be reduced by keeping social distancing and avoid socializing also keep the hygiene of hands and thus for dialysis patients there are some recommendations for the patients as well as physicians both to prevent the spread of disease and by implementing these instructions and recommendations we prevent the spread of this disease (Carlo Basile, 2020).

Eli P et al. conducted a study to determine the considerations of social distancing as well as political behavior during the epidemic or pandemic conditions. In this study it is considered that many behavioral changes occur in the pandemic and public policies determines that social distancing is an important factor to control the pandemic and epidemic circumstances. Thus there is a need to develop the proper centralized method and thus by this way the immune system of that person is increased and it becomes easy for the person to fight against that disease (P.Fenichel, 2013).

David M bell et al. conducted a study to determine the non pharmaceutical interventions to prevent the pandemic such as influenza. In this study the author discussed about the recommendations of WHO to prevent pandemic situations. Non pharmaceutical interventions that were given by WHO are social distancing, use of face mask, maintain the good hygiene of hands and other body parts and ate healthy food to boost up the immune system of the individuals. Another intervention that is used widely are to stop the travelling and minimize the social activities so that spread can be minimized and the control on the pandemic can be achieved (Bell, 2006).

Agalar and Engin (2020) stated that throughout the COVID-19 pandemic, which influenced the whole world, felt that quick contact with patients with COVID-19 could imperil the transmission of stars of remedial gatherings (HCPs). Therefore, care has to be taken to guarantee that the patient's respiratory signs are settled rapidly, and the contact division ought to be kept up at any rate 2 COVID-19 ought to be deliberately spread to the suspected or broken patient. During the chance of these patients, HCPs should wear their own accuracy gear (PPE), as appeared and not to disregard hand shortcoming. Patients with known or associated COVID-19 ought to know with the

threats of hazardous factors and evaluate chance for methodology acted in an exploration workplace. PPE ought to be utilized by the best way to deal with keep up. The security of HCPs, which pays in a dangerous condition, is made conceivable by controlling and changing the self-assertive turn of events.

Ahmed et al. (2018) recommend that social isolation is a framework lessening research proposed during the flu pandemic. For instance, in socially thick basic settings, growing or limiting the physical possibility of meeting at school or office can decrease sickness. It was suggested that social gathering issues could be minimized by providing remote learning such as online education and office work to reduce the transmission of the flu in smaller communities.

3. Material and Method

The study was descriptive cross sectional.it was completed in 6 months duration. 300 sample was collected by using convenient sample technique. These individuals were meticulously drawn from different hospitals of Lahore. Participants included were.

- Physicians treat corona patient
- Medical health workers that assist the physician
- People have good health
- Physicians have the age above than 20 years
- People having direct as well as indirect relation with patients

While, People having neurological diseases and People having some other acute or chronic disease were excluded from study

DATA COLLECTION PROCEDURES AND TOOLS

Data was collected by using different procedures such as interviews, online, questionnaire but the most common method use for the data collection are questionnaire in this method questionnaire was filled by the physicians, health care professionals, medical workers and other patients of corona virus. There are some data collection tools used for conducting qualitative as well as quantitative research such as observations,

visual analysis, interviews as well as textual analysis but the most common method use is interviews as well as focus groups.

RESULTS

A total of 300 health specialists tool part in this survey. Among the participants, 35.67% (n=107) were male and 64.33% (n=193) were female. Maximum number of the volunteers followed the suggestions of the WHO (World Health Organization). Table No. 1. demonstrates that 84.77% (n=254.32) of contestants wash their hands before eating, 90.13% (n=270.39) contestants wash their hands before and after eating, 98.39% (n=295.16) people under consideration wash their hands after using toilet while 88.13% (n=264.39) of the voluntaries wash their hands in all of these earlier mentioned circumstances.

95.07% (n=285.20) people stated that hand washing is quite helpful in maintaining hand hygiene while only 4.93% (n=14.80) of the people analyzed, contradicted with this statement. Similarly, almost 98.44% (n=295.31) of the participants stated that using hand sanitizer maintains the hand hygiene whereas on the other hand only 1.56% (n=4.69) people were against this statement.

Furthermore, it was observed that 94.22% (n=282.67) of the individuals who take part in the study uses hand sanitizer after analyzing the patients however 5.78% (n=17.33) didn't work out this practice. 14.43% (n=43.50) of the participants wash their hands twice a day, 48.96% (n=146.88) individuals wash their hands thrice a day, 27. 71% (n=83.14) four time a day and, 8.89% (n=26.68) wash their hand five times a day. Additionally, 91.01% (n=273.03) of the volunteers practice as well as believe that social distancing is quite helpful in controlling the infectious disease, contrastingly 8.99% (n=26.97) has the opposite opinion.

Finally, it was observed that approximately 88.83% (n=266.49) of the participants who were assessed follow the recommendations in order to maintain hygiene while about 11.17% (33.51) of the contestants didn't followed the hygienic recommendations.

Data analysis plan for descriptive and analytical statistics

Data analysis plan is basically a roadmap which his used to pan the data analysis and organize the data and also analyze the data. There is a need of proper planning in the data analysis because it is most important part of the research and thus if analysis of data is not conducted in a proper way than the whole purpose of research is diminished because the results are not proper.

Descriptive statistics are used to analyze or describe the basic features of the data within the study. It provides the basic summary about the sample as well as measures they obtained from it. Descriptive analysis also give some graphs of the results by which the analysis is done easily. There are different statistical tools are used such as SPSS for the statistics and for the data analysis different test such as T-test, chi-square test and some other tests are used for the analysis.

TABULAR PRESENTATION OF RESULTS

12.1 Age Table

Age	Participants
20-30 years	143
30-40 years	57
40-50 years	67
50 Above	33

Table 3: Age table

12.2 Gender Table

Male	107
Female	193

Table4: Gender table

12.3 Marital Status Table

Married	152
Unmarried	148

Table 5: Marital Status table

12.4 Profession Table

Physician	135
Nurses	151
Allied Health Professionals	14

Table 6: Profession Table

12.5 Questionnaire Table

Variable	**Gender**					
	Males (107)		**Females (193)**		**Total (300)**	
	%	**N**	**%**	**N**	**Total %**	**Total N**

How often wash your hands in a non-hospital setting?						
Before eating	82.2	87.95	86.2	166.37	84.77	254.32
Before & after eating	87.3	93.41	91.7	176.98	90.13	270.39
After using toilet	97.1	103.9	99.1	191.26	98.39	295.16
All of the these	84.4	90.31	90.2	174.09	88.13	264.39
Is hand washing helpful in maintain the hygiene of hands?						
Yes	91.4	97.8	97.1	187.4	95.07	285.2
No	8.6	9.2	2.9	5.6	4.93	14.8
Is use of hand sanitizer helps in maintain the hygiene?						
Yes	97.6	104.43	98.9	190.88	98.44	295.31
No	2.4	2.57	1.1	2.12	1.56	4.69

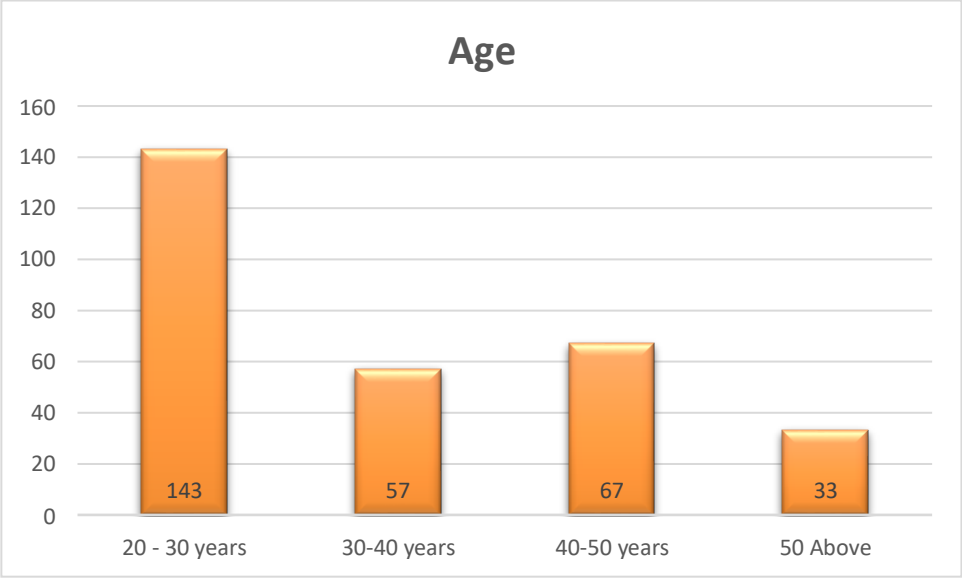
Is physician used hand sanitizer after checking the patients?						
Yes	91.2	97.584	95.9	185.087	94.22	282.67
No	8.8	9.416	4.1	7.913	5.78	17.33
How many times public use hand sanitizer to maintain the hygiene in a day?						
2 times	7.1	7.597	18.5	35.705	14.43	43.3
3 times	45.1	48.257	51.1	98.623	48.96	146.88
4 times	37.3	39.911	22.4	43.232	27.71	83.14
5 times	10.5	11.235	8	15.44	8.89	26.68
Is social distancing helps in controlling the pandemic?						
Yes	87.6	93.732	92.9	179.297	91.01	273.03
No	12.4	13.268	7.1	13.703	8.99	26.97
Are the people follow these recommendations to maintain the hygiene?						

Yes	87.8	93.95	89.4	172.54	88.83	266.49
No	12.2	13.05	10.6	20.46	11.17	33.51

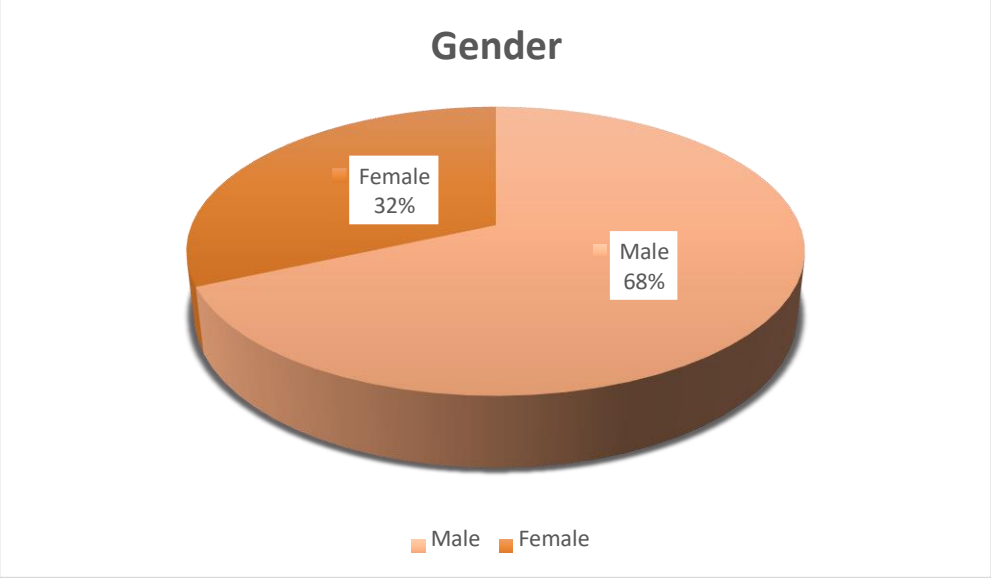
Table 7 : Questionnaire table

GRAPHICAL PRESENTATION OF RESULTS

12.6 AGE



12.10 Gender Chart



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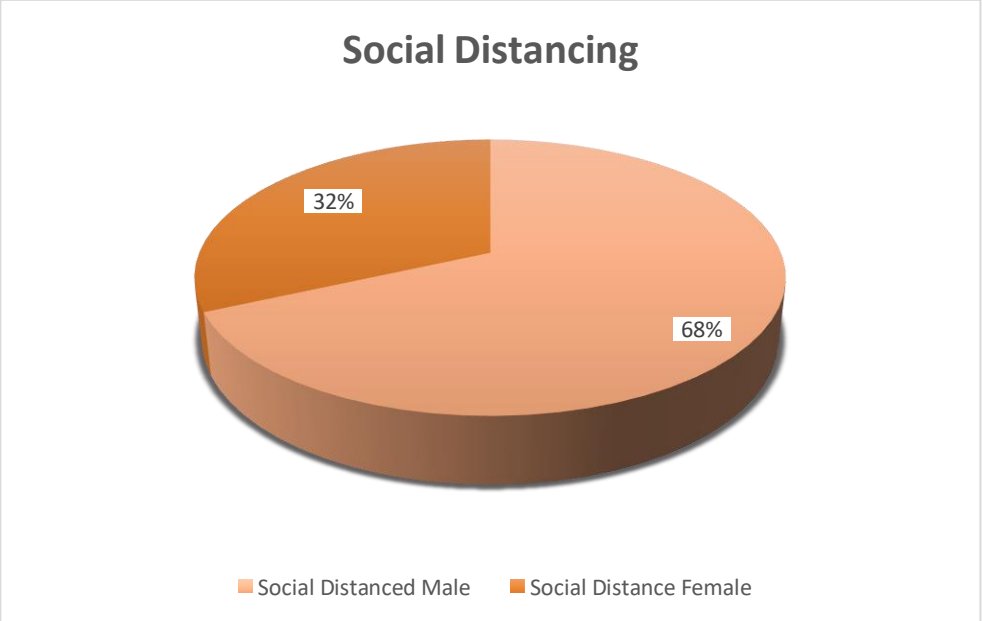
12.11 Gender and Hand Sanitization Chart

12.12 Gender and Social Distancing



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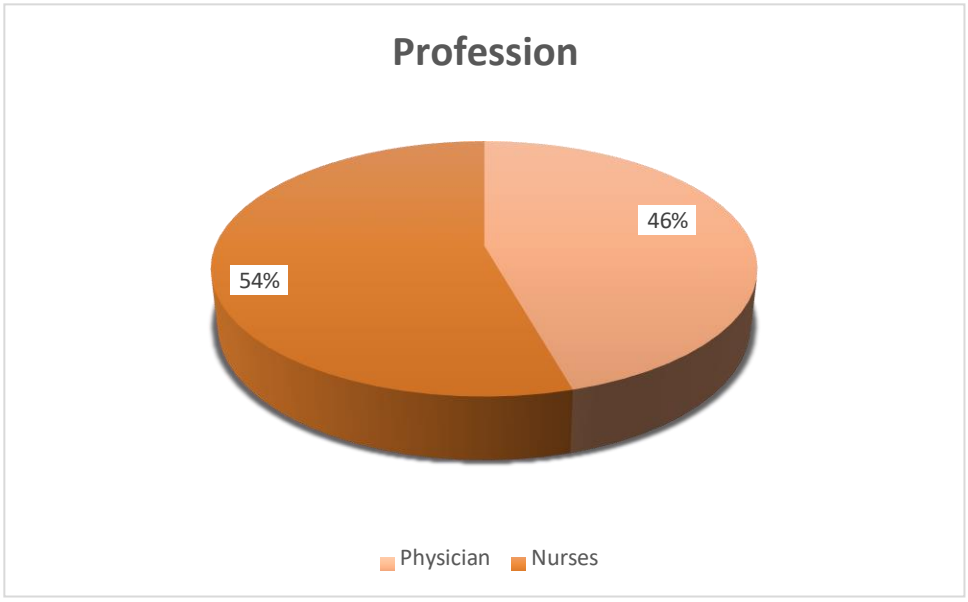
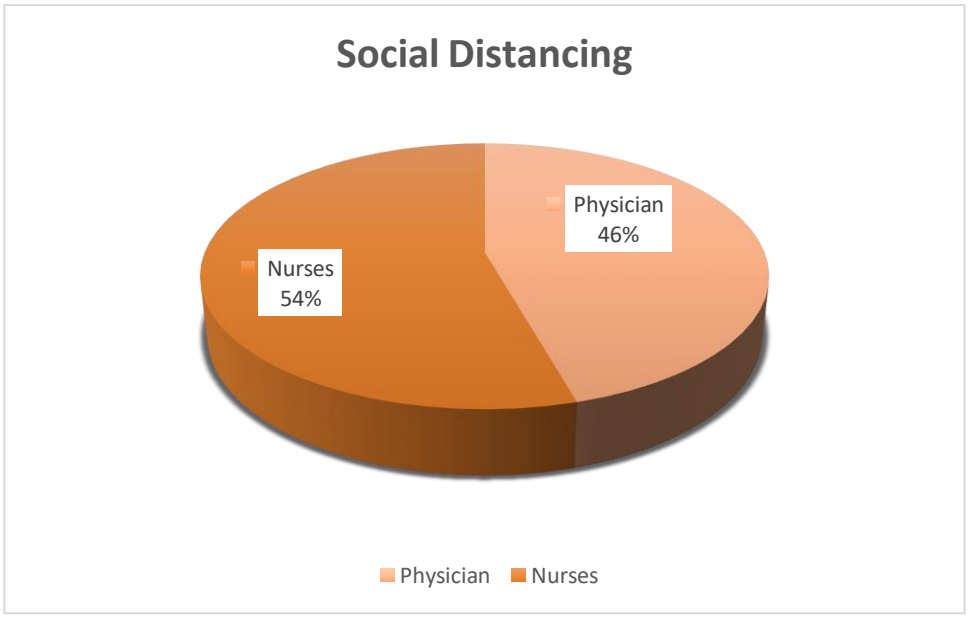
12.14 Marital Status and Hand Sanitization Chart

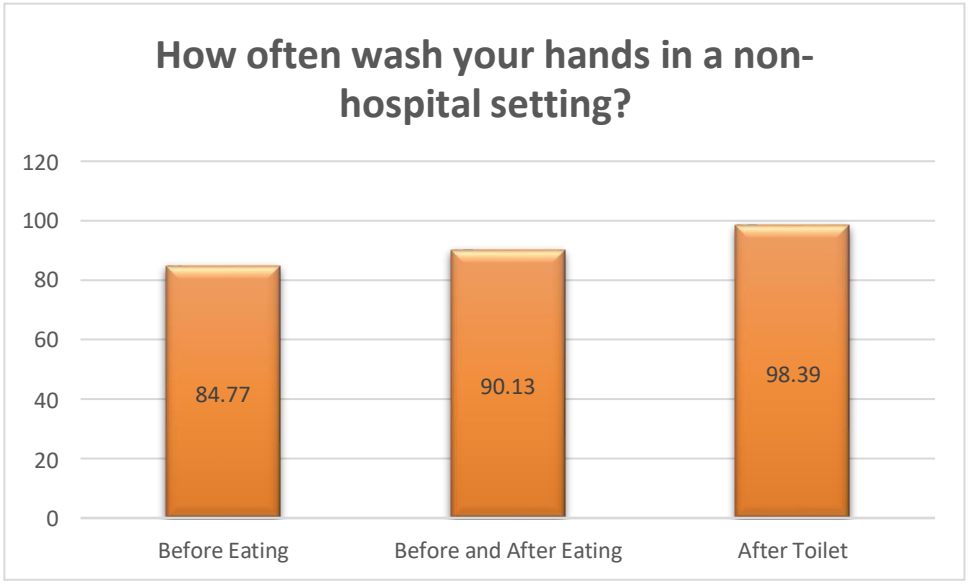
12.16 Profession



12.17 Profession And Social Distancing Chart



12.18 Washing hands in a non-hospital setting Chart



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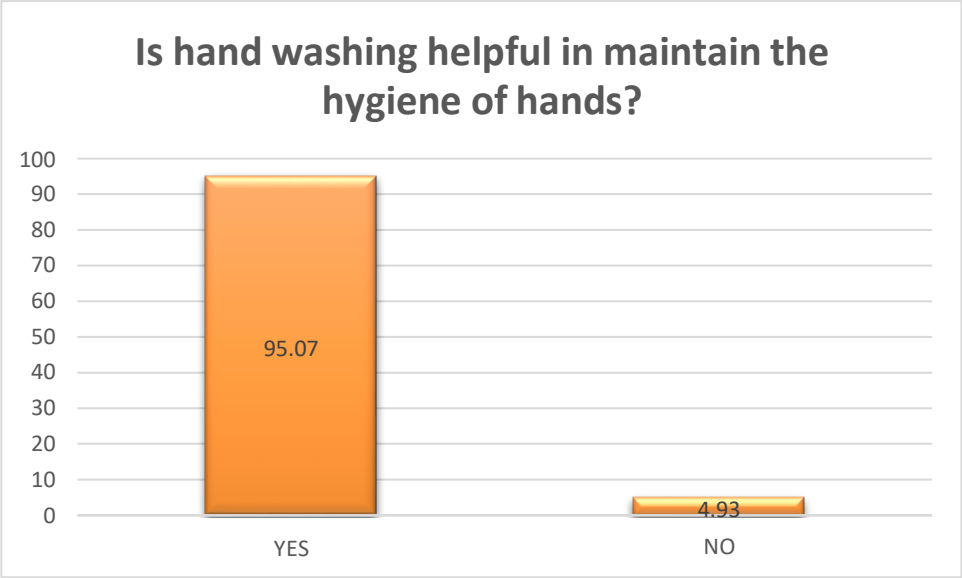
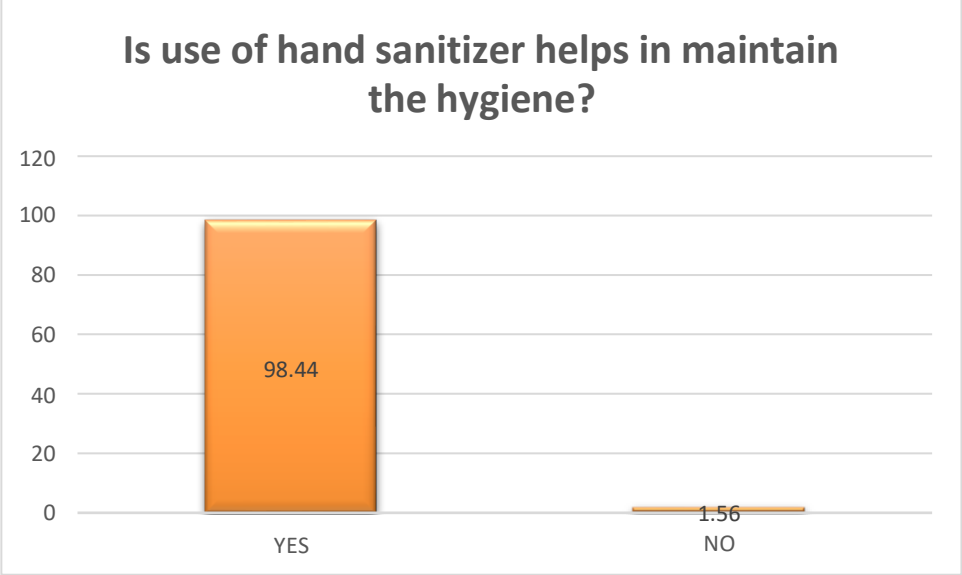
12.19 Hand washing in maintaining the hygiene Chart



12.20 Hand sanitizer in maintaining hygiene Chart



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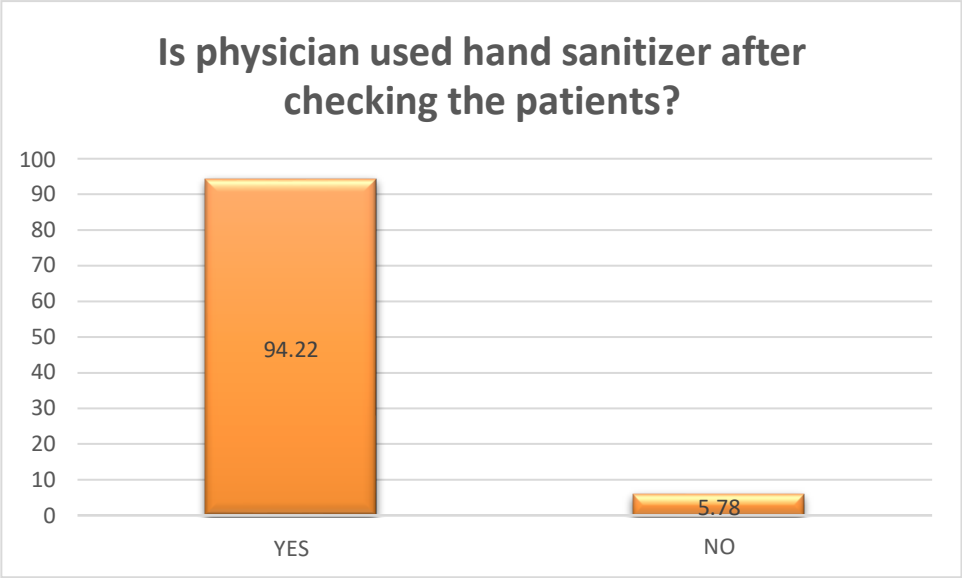
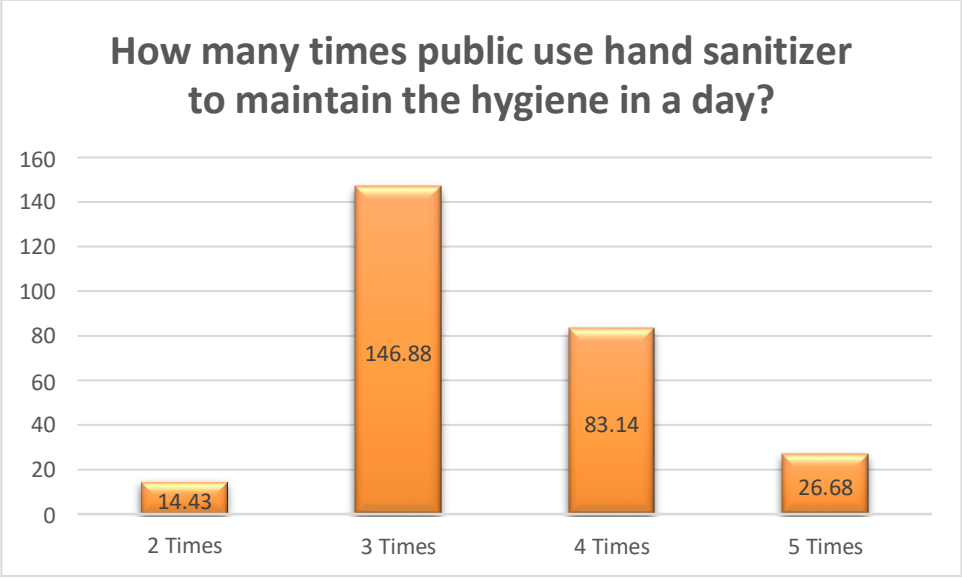
12.21 Hand sanitizer after checking the patients Chart



12.22 Use of Hand sanitizer In a Day Chart



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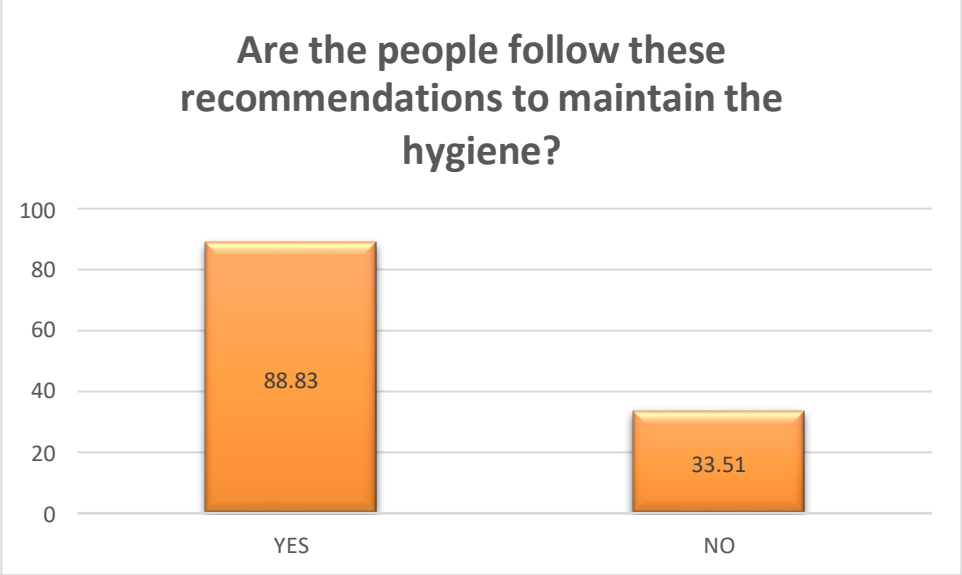
12.23 Recommendations to maintain the hygiene Chart



DISCUSSION

This is the first survey to give details on the broad preventative actions taken and approaches executed by the WHO for private health workers to combat with the pandemics e.g. COVID-19. It was found that health professionals responded quite well to the recommendations presented by WHO in order to tackle infectious diseases at private hospitals such as COVID-19 pandemic, by rigorously following the suggestions of health organizations. The incidence of enchanting precautionary actions by contestants were high as 84.77% of the contestants wash their hands before eating, 90.13% contestants wash their hands before and after eating, 98.39% people under consideration wash their hands after using toilet while 88.13% of the voluntaries wash their hands in all of these earlier mentioned circumstances.

Though, reactions differed amongst contestants, and females showed superior defiance with all sanitization procedures such hand wash and hand hygiene than men—a

phenomenon that was also found in other studies (Alzyood *et al.,* 2020; Aslam, 2020; Chiu *et al*., 2020). Sexual Category differentiations occurred in the exercise of all precautionary actions, with females being more in compliance with all hygiene methods than men.

95.07% (n=285.20) people stated that hand washing is quite helpful in maintaining hand hygiene while only 4.93% (n=14.80) of the people analyzed, contradicted with this statement. Similarly, almost 98.44% (n=295.31) of the participants stated that using hand sanitizer maintains the hand hygiene whereas on the other hand only 1.56% (n=4.69) people were against this statement.

Furthermore, it was observed that 94.22% (n=282.67) of the individuals who take part in the study uses hand sanitizer after analyzing the patients however 5.78% (n=17.33) didn't work out this practice. 14.43% (n=43.50) of the participants wash their hands twice a day, 48.96% (n=146.88) individuals wash their hands thrice a day, 27. 71% (n=83.14) four time a day and, 8.89% (n=26.68) wash their hand five times a day. Additionally, 91.01% (n=273.03) of the volunteers practice as well as believe that social distancing is quite helpful in controlling the infectious disease, contrastingly 8.99% (n=26.97) has the opposite opinion. Our outcomes indicate that while the health training and guidance movement was quite helpful in Pakistan, additional training on exercising respirational hygiene is required, as sneezing and coughing are key dispersal paths for COVID-19 (Ahmed et al., 2020; Agalar and Engin, 2020; Cavanagh and Wambier, 2020; WHO, 2020). Furthermore, sexual category must be held in account when designing and executing health campaign and training activities.

Finally, it was observed that approximately 88.83% (n=266.49) of the participants who were assessed follow the recommendations in order to maintain hygiene while about

11.17% (33.51) of the contestants didn't followed the hygienic recommendations. Moreover, a small number of males as compare to ladies take part in our assessment (35.67% vs 64.33%); an additional analysis similarly had a parallel sexual role dissemination regarding contestants (30% male vs 70% female) (Chu *et al*., 2020; Jamie, 2020; Liu *et al*., 2020; Teslya *et al*., 2020). It may perhaps be that ladies are usually more apprehensive regarding their healthiness as compare to males; therefore, they are more eager to recognize formal suggestions and take part in health-related studies.

CONCLUSION

Our investigation demonstrated a comprehensive explanation of protective actions exercised by private health care professionals in Lahore to avoid being infected with various infectious diseases such as the novel coronavirus and the main strategies implemented by the WHO, government, health workers, factories, companies, and media to protect citizens. Private health care takers practiced the hygiene recommendations of WHO (World Health Organization) very well; though, additional training on practicing respiratory hygiene is yet necessary. In addition to traditional response strategies, portable web innovations has assisted with forestalling the spread of COVID-19 and encourage the resumption of work. Online training has improved the limit of wellbeing HCPs on the anticipation, analysis, and treatment of COVID-19 of every a protected and productive way. With day by day diminishes in the quantity of new cases, we reason that WHO measures to control the spread of COVID-19 has been successful. Our discoveries recommend that pandemics like COVID-19 can be managed if the correct measures are taken.

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CHAPTER: 17
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