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Knowledge and practices regarding sanitation among community resident

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ABSTRACT

Background: “Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. Hygiene may be affected by lack of clean water. Unclean water, inadequate sanitation and unhygiene lead to health problems. Unclean drinking water is one of the most serious threats to people in many parts of the world that cause serious diseases. Contaminated water intake causes various diseases such as cholera, diarrhea, paratyphoid, typhoid, dermatitis, Hepatitis and Enteric fever.

Methods: A descriptive cross-sectional study design was used for this study paper. The convenient sampling technique was used in this study. A sample size of 153 was selected by using Slovic's formula. Aim of this study: knowledge and practices about sanitation among the residents of community Ali Raza Abad Lahore Pakistan.

Results: 75.0% (90) participants were satisfied with using water in their homes and 25.0% (30) participants were not satisfied with using water in their homes. 87.5% (105) participants used water as their requirement and 12.5% (15) did not use water as their requirement. 92.5% (111) bathrooms should have been in homes and 7.5% (9) bathrooms should not have been in homes. 93.0% (112) water should be stored after boiling and 8.0% (8) water should not be stored after boiling. 100% (120) use soap for hand washing.

Conclusions: The results of this study conclude that community people of Ali Raza Abad have inappropriate knowledge about sanitation. Generally, there is a lack of knowledge about the practice of sanitation. Community residents were not using any method to treat the water and felt that water is already clean so there is no need to treat it. Majority of people have no knowledge about the effect of sanitation on health. Community residents have knowledge about the use of soap for hand washing, which avoids the transmission of human excreta, viruses, bacteria, and parasites.

Key Words: Knowledge, Practices, Sanitation

Background

“Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (WHO, 1948). Lack of sanitation through proper latrines or toilets can lead to contaminated water. Hygiene may be affected by lack of clean water. Lack of clean water, sanitation and hygiene lead to health problems such as intestinal infections, cholera and other diseases that may lead to death.

Sanitation includes sewage collection or solid waste disposal. Sanitation is a hygienic condition that promotes safety by avoiding human contact with waste hazards and adequate dispose of unclean water. The Microbiological, physical and biological agent dangers for the health. Different health issues like, solid waste, household waste, industrial waste and agricultural waste due to inadequate sanitation (Tzanelli, 2018).

Safe and clean water in daily life, including, food preparation, drinking and personal hygiene, is vital for all the required purposes. Water is considered safe if over the lifetime intake it does not have a significant health risk. Sadly, this fundamental need is robbed of many people in the world. The poorer state of people in the community regarding awareness of safe water use (Teklehaymanot, 2015).

Unclean of drinking water is one of the most serious threats to people in many parts of the world that cause serious diseases. Contaminated water intake causes various diseases such as cholera diarrhea, paratyphoid, typhoid, dermatitis. Hepatitis and Enteric fever (Larsen, Hoffmann, Lüthi, Truffer, & Maurer, 2016).

The most common way of spreading germs is through hands. Infectious diseases can spread through infected hands from one person to another. Hand washing before and after certain tasks (e.g. before eating food or going to the toilet) is considered to be most effective in the elimination of germs, thus shielding one from infectious diseases such as diarrhea and pneumonia and also in the prevention of germ-causing diseases. Hand washing after defecation prevents disease transmission, such as diarrhea, respiratory infections and skin infections (Dean, Fielding, & Newton, 2016).

The problem of solid waste management is the biggest challenge in developing countries for both small and large communities. This is mainly due to the growing development of such solid waste and the pressure on the municipal budget. The high cost of handling solid waste is associated with a lack of understanding of disease transmission among community people. Due to rapid urbanization, booming economy and increasing population, insufficient solid waste disposal is increasing (Kumari et al., 2018).

Prevention is better than cure at all times. The disease is caused by the pathogenic bacteria in meat when it comes to food-borne diseases. The only protection against food contamination can be careful handling of meat. Keeping food sealed stops the food from getting into the food from harmful bacteria or items or chemicals. There are some defenses that can be used to prevent the spread of harmful bacteria in raw and ready-to-eat foods. Food should be protected as flies or other insects can enter particles of food powder and dust can enter the food (Sultana, Mahumud, Sarker, & Hossain, 2016).

Water boiling is effective in killing many pathogens, bacteria, viruses, protozoa, helminths. Boiling is a disinfecting process that is simplest and easiest to extract contaminants from water. Use of drinking boiled water improves the flow of blood (Najnin et al., 2019).

Poor water quality, hygiene and sanitation are a main cause of morbidity and mortality attributable to diarrheal diseases that are often spread by contaminated water. The use of soap for hand washing avoids the transmission of human excreta, viruses, bacteria and parasites. This infection is a main cause of diarrhea, the 2nd-largest child mortality in developing countries, contributing to other main diseases like, schistosomiasis, cholera and trachoma. Reducing the impact of these diseases through the adequate sanitation (Mbroh, 2019).

Water and sanitation conditions were found to be low in both urban and rural areas, but it was worse in rural communities. The drinking water services were also limited. It was noticed that the drinking water was polluted (Pathak & Chakravarty, 2019).

PROBLEM STATEMENT

The Contaminated water, lack of basic sanitation hinders efforts to end severe poverty and disease in the poorest countries of the world. There are reportedly 2, 3 billion people worldwide who do not yet have basic sanitation facilities such as toilets or latrines. According to the Joint Monitoring Program for Water Supply and Sanitation of WHO / UNICEF, at least 1.8 billion people worldwide are expected to drink non-contaminated water from faeces. An even greater number of drinking water supplied by a system without adequate sanitary protection (Gebreyessus & Adem, 2018).

About 827 000 people die each year from insufficient food, sanitation and hygiene in low- and middle-income countries, representing of total deaths from diarrhea (Sah et al., 2013).

In Pakistan, as of 2005, 50.7 million people lack access to adequate sanitation facilities and 38.5 million people do not have access to safe drinking water source. If such condition persists by the year 2015 in Pakistan, 43.2 million people will have no access to adequate sanitation facilities

and 52.8 million people will be without safe drinking water. Hygiene and sanitation have always been an integral part of the delivery system for health care. Most communicable and non-communicable diseases are associated with poor sanitation directly or indirectly. Poor hygiene improves infection transmission. There have been several promotions of irrigation, sanitation, health and hygiene in the Ali Raza Abad region, and inevitably the insecurity and high prevalence of water and sanitation and disease outbreaks.

OBJECTIVES

This study determines:

- What is the knowledge of community people regarding the sanitation?
- What is practice of community people regarding sanitation?

OPERATIONAL DEFINITION

KNOWLEDGE:

The fact or condition of knowing something with familiarity gained through experience or association (Eliufoo, 2018).

PRACTICES:

The actual application or use of an idea, belief, or method, as opposed to regular life style (oxford dictionary)

SENITATION:

It is conditions relating to public health, especially the provision of clean drinking water and adequate sewage disposal (Eliufoo, 2018).

MATERIAL AND METHODS

Study Design: A descriptive cross sectional study design used for this study paper.

Setting: Research work is conducted in rural community in Lahore Ali Raza Abad

Duration of Study: duration of study from September 2019 to January 2019.

Target population: Target population of my study was people of community Ali Raza Abad in Lahore.

Sample Size: The following formula has been used for calculating sample size:

$$n = PQZ^2/e^2$$

- Desired sample size= n=?
- Prevalence of knowledge about sanitation= p
- Margin of error= E= 0.05% (If we take confidence interval 95%)
- Z = the standard normal deviate (considered 1.96 for 95% confidence interval)
- Q=1-p

Let p = 92%

$$n = 92/100(1-0.9) (1.96)^2/0.05^2$$

$$n = 0.92(0.8)3.84/0.0025$$

$$n = 120$$

Where n is the required sample size, E the marginal error and z the standard normal deviate (considered 1.96 for 95% confidence interval). The formula provided that the significant sample size was 120. p is prevalence of knowledge in Pakistan 92% (Hussain, 2019).

Sampling Technique: A Convenient sampling technique use in this study.

Sample Selection:

Inclusion Criteria: People of community Ali Raza Abad Lahore willing for participant in this study.

Both male and female was included.

Exclusion Criteria: People who are not willing to participate in this study.

Equipment: Questionnaires

ETHICAL CONSIDERATIONS

The rules and regulations set by the ethical committee of university of Lahore will be followed while conducting the research and the rights of the research participants will be respected.

- Written informed consent attached will be taken from all the participants.
- All information and data collection will be kept confidential.
- Participants will remain anonymous throughout the study.
- The subjects will be informed that there are no disadvantages or risk on the procedure of the study.
- They will also be informed that they will be free to withdraw at any time during the process of the study.
- Data will be kept in under key and lock while keeping keys in hand. In laptop it will be kept under password.

DATA COLLECTION PROCEDURE

Data Collection Tool:

The research tool used will be an authentic, well-organized questionnaire with close ended questions in it, as per the Likert scale. Questionnaire will be taken from the prior research article “A cross-sectional study to determine knowledge and practice of sanitation in rural areas of Tamil Nadu, India. The questions asked will be according to the factors highlighted in the study. The components of this research tool were tested using the Cronbach’s Alpha which showed the reliability and validity value 0.940

The questionnaire has two parts. The first part consists of the demographic data of the participants such as name, gender, age, material status, occupation, education, and source of drinking water. The second part consists of the closed ended questions that are related to the factors.

DATA ANALYSIS PROCEDURE

Statistical analysis of the data was completed with SPSS statistics 21. after the collection of data was transferred into SPSS for mathematical analysis. This SPSS addition eliminated human data entry errors and reduced the amount of time required for data entr

RESULTS

Socio-demographic characteristics of the participants

Respondents were selected from rural community of Ali Raza Abad, Lahore Pakistan.

Table No: 1

Demographic characteristics			
Variables	Category	Frequency	Percent
Gender	Male	55	45.8%
	Female	65	54.2%
Age	18-22	27	22.5%
	22-26	61	50.8%
	26-30	32	26.7%
Materialstatus	Married	83	69.2%
	Unmarried	35	29.2%
Education	Undergraduate	65	23.3%
	Post graduate	76	63.3%
	Illiterate	6	5.0%
Source of drinkingwater	Tap	24	20.0%
	Municipal	18	15.0%
	Bore hole	78	65.0%

Above figure show that the demographic characteristics of participant. Respondents 45.8 %(55) were male and 54.2 %(65) were female participated in this study. Age of participant was 18-22 years 22.5 % (27), 22-26 years 50.8 % (61), and 26-30 years 26.7% (32) in this study. 69.2% (83) was married, 29.2% (35) was unmarried participant in this study. Education of participant 63.3% (76) under graduate, 5.0% (6) post graduate, illiterate 31.7% (38) in this study. source of drinking water of participant was 20.0 %(24) tap, 15.0 %(18) municipal, 65.0% (78) bore hole in this study from the community of Ali Raza Abad Lahore Pakistan.

Knowledge about sanitation of participant

Table No: 2

Sr no	Statement	Yes	No	SD
1	Do you think water quality affects health?	60.0%	40.0%	0.5
2	Know about water-borne diseases	87.5%	12.5%	0.33
3	Wash hands before eating	88.0%	13.0%	0.4
4	Wash hands after eating	77.5%	22.5%	0.41
5	Wash hands after going to the bathroom	78.0%	23.0%	0.5
6	Should the household garbage be dumped in the street?	82.3%	17.5%	0.38
7	Should the house have a latrine and bathroom separate?	70.6%	30.6%	0.46
8	Disease is spread by street garbage	95.6%	5.6%	0.21
9	Food should be covered	87.5%	12.5%	0.33
10	Does using waste water pose a threat to your health?	80.6%	20.0%	0.41

According to table 2 shows that 60.0 % (72) yes, 40.0 % (48) No, participant about that water quality affects health. 87.5 %(105) participant Know about water-borne diseases and 12.5 % (15) participant don't know about water-borne diseases. 88.0% (105) participant have knowledge about wash hands before eating and 13.0% (15) participant have no knowledge about

wash hands before eating.77.5% (93) participant have knowledge about wash hands after eating and 22.5%(27) participant have no knowledge about wash hands after eating.78.0%(93) participant have knowledge about wash hands after going to the bathroom and 23.0% (27) have no knowledge about wash hands after going to the bathroom.82.3% (99) have knowledge about household garbage be dumped in the street and 17.5% (21) have no knowledge about household garbage be dumped in the street.70.6% (84) have knowledge about latrine and bathroom separate in home and 30.0% (36) have no knowledge about latrine and bathroom separate in home.95.6% (114) have knowledge about disease is spread by street garbage and 5.6% (6) have no knowledge about disease is spread by street garbage.87.5%(105) have knowledge about Food should be covered and 12.5% (15) have no knowledge about Food should be covered.80.6% (96) have knowledge about using waste water is threat of our health and 20.0 % (24) have no knowledge about using waste water is threat of our health.

Practices about sanitation of participant

Table No: 3

Sr no	Statement	Yes	No	SD
1	Do you use clean water?	87.5%	12.5%	0.33
2	Do you use boiling water?	77.5%	22.5%	0.41
3	You are satisfied with the water you use	75.0%	25.0%	0.43
4	You use water as per your requirement	87.5%	12.5%	0.33
5	You think the home should have a bathroom	92.5%	7.5%	0.26
6	Water should be stored after boiling	93.0%	8.0%	0.27
7	Must use soap for hand washing?	100%	0.00%	0.00

According to table 3 shows that 87.5 % (105) participant use the clean water and 12.5% (15) participant were not use clean water.77.5% (93) participant use the boiling water and 22.5%(27)

were not use boiling water.75.0% (90) participant satisfied with using of water in theirs home and 25.0% (30) participant were not satisfied with using of water in theirs home.87.5% (105) participant were water use as their requirement and 12.5%(15) were not water use as their requirement.92.5%(111) bathroom should have in home and 7.5% (9) bathroom should have not in home.93.0% (112) water should be store after boiling and 8.0% (8) water should not be store after boiling.100%(120) use soap foe hand washing.

DISCUSSION

Water is the elixir of our life. Good, clear, clean, odorless, easy accessible drinking water is the need for everyone in spite of religious differences, ethnicity, and socio-economic status. Knowledge of the community resident in which 60.0 % (72) known about the water effect on health 40.0 % (48) participant were not know about that water quality affects health. 87.5 % (105) participant Know about water-borne diseases and 12.5 % (15) participant don't know about water-borne diseases. 88.0% (105) participant have knowledge about wash hands before eating and 13.0% (15) participant have no knowledge about wash hands before eating.77.5% (93) participant have knowledge about wash hands after eating and 22.5%(27) participant have no knowledge about wash hands after eating.78.0%(93) participant have knowledge about wash hands after going to the bathroom and 23.0% (27) have no knowledge about wash hands after going to the bathroom.82.3% (99) have knowledge about household garbage be dumped in the street and 17.5% (21) have no knowledge about household garbage be dumped in the street.70.6% (84) have knowledge about latrine and bathroom separate in home and 30.0% (36) have no knowledge about latrine and bathroom separate in home.95.6% (114) have knowledge about disease is spread by street garbage and 5.6% (6) have no knowledge about disease is spread by street garbage.87.5%(105) have knowledge about Food should be covered and 12.5% (15) have no knowledge about Food should be covered.80.6% (96) have knowledge about using waste water is threat of our health and 20.0 % (24) have no knowledge about using waste water is threat of our health.

Practices of the community resident about the storage of water in clean containers, boiling them before use to prevent the spread food borne infections such as fever, diarrhea other illness should be educated to them because in the current study, 78% of the respondents were not using any method to treat the water and 94% felt that water is already clean so there is no need to treat it. Only 53% of the participants washed their hands before handling of the food and after eating the food 80% washed their hands. Total of 68% of the participants washed their hands after defecation. 87.5% (105) participant use the clean water and 12.5% (15) participant were not use clean water.77.5% (93) participant use the boiling water and 22.5%(27) were not use boiling water.75.0% (90) participant satisfied with using of water in theirs home and 25.0% (30) participant were not satisfied with using of water in theirs home.87.5% (105) participant were water use as their requirement and 12.5%(15) were not water use as their requirement.92.5%(111) bathroom should have in home and 7.5% (9) bathroom should have not in home.93.0% (112) water should be store after boiling and 8.0% (8) water should not be store after boiling.100%(120) use soap foe hand washing

CONCLUSION

The results of this study conclude that community people of Ali Raza Abad have inappropriate knowledge about sanitation. Generally, there is lack of knowledge about the practice of sanitation. Community resident were not using any method to treat the water and felt that water is already clean so there is no need to treat it. Majority of people have no knowledge about sanitation effect on health. Community resident have knowledge about the use of soap for hand washing avoids the transmission of human excreta, viruses, bacteria and parasites.

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