

Assessing Knowledge, Attitude and Practice (KAP) Towards Water, Sanitation and Hygiene (Wash) in District Mardan

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Abstract: *The current study entitled “Assessing knowledge, attitude and practice towards water, sanitation and hygiene in district Mardan”. The prime objective of the study is to explore knowledge, attitude and practices of the local people towards water, sanitation and hygiene and how the existing KAP effect the life of the local people. The nature of the study is quantitative, whereas the data were collected from 390 sample size purposively. A total of 390 sample size were selected through Uma Sekaran sample determination table. The data were collected through structured questionnaire and was analysed through statistical package for social sciences (SPSS) version 21. The data were then analysed through Uni variate analysis and was presentenced in the form of graphs. For clarity and easy understanding, graphs were explained, and based on the results of the study conclusions and recommendations were developed. Results of the study show that most of the local people's drinking water is not safe and nor they are using water purification methods due to a lack of awareness. Similarly, most people are not washing their hands as they don't have access to soap or they are not aware of the importance of hand washing. Similarly, most of the people defecate in the open, which leads to different kinds of diseases in the locality. Further, the people shared that they prefer to be informed regarding WASH on social media.*

Introduction

Access to clean and safe drinking water, sanitation and hygiene (hereafter, WASH) is universal issue which effect each and every aspect of people. For human health, having access to clean water and sanitation is essential (Humphrey, 2019). Interventions related to water, sanitation, and hygiene (WASH) are still being carried out to increase service availability, particularly in low- and middle-income countries (hereafter, LMICs). Cultural customs, for example, can be taken into consideration when designing WASH initiatives. Resource dependence, service quality and satisfaction, (Garn et al., 2017) community norms and procedures, and so forth. Thirteen Moreover, WASH efforts frequently fail in LMICs due to a lack of resources needed for long-term maintenance.¹ A number of factors can lead to the failure of WASH programs, including inadequate community involvement in the design process (Abedin, Habiba & Shaw, 2014), a lack of community ownership; financial misuse or poor management (Jimenez-Redal et al., 2018); a lack of community members' willingness to participate; a lack of communication and connection; and a lack of continuous support and acknowledgment of behaviour change (Nelson et al., 2021).

In order to accomplish Sustainable Development Goal (SDG) 6 and guarantee that everyone has access to water, sanitation, and hygiene (WASH) services by 2030, much progress must still be made in this area (Workman et al., 2021). According to United Nations data from 2020, 2.2 billion people worldwide still lacked access to securely managed drinking water, 4.2 billion to safely managed sanitation, and 3.0 billion to basic household handwashing facilities (Bastable & Russell, 2013). SDGs place a strong emphasis on access "for all," with a particular focus on the most marginalized and disadvantaged. To guarantee that no one is left behind, specialized programs are needed for communities who consistently fall behind in accessing WASH services (Rhodes-Dicker, Brown & Currell, 2022). The current study focuses on the knowledge, attitude and practices of the Water, sanitation and hygiene in district Mardan and how the bad sanitation and lack of access to clean and safe drinking water effect the life of the people in the targeted UCs of district Mardan. Further, the study focuses that how the social, cultural and economic barriers limited the access of local people to clean and safe drinking water and causes of bad sanitation and poor hygiene in the locality.

Objectives of the study

- To know about the access of the people to clean and safe drinking water in the study area
- To asses the KAP towards the water, sanitation and hygiene in the targeted areas
- To put policy recommendation to WATSAN for the betterment of the people

Methodology of the study

Methodology is an integral part of any research/survey to draw a clear guideline for carrying out research studies in Social Sciences (Davidavičienė, 2018 and Bhattacharyya, 2006). The pre-KAP survey was conducted specifically to gather information about general practices and beliefs of the local community about water, sanitation, hygiene, and hygiene and health-related issues (AshaRani et al., 2020 and Domini et al., 2020).

Sampling technique

A stratified random sampling technique was used for data collection because it fulfils the survey requirements. The data were collected by the SABAWON social organizer¹ through a structured questionnaire in targeted UCs of District Mardan. A total 390 of sample size were selected through the Sekran sample size determination table (approved by UNICEF) (Oribhabor & Anyanwu, 2019). Through purposive sampling, the data were collected from the respondents and analyzed through statistical package for social science (SPSS) software (version 21). At the end analyzed data is presented in the form of tables and graphs and were explained for the purpose of better understanding. A total of 390 sample size were selected through Sekaran sample size determination table. The data will be collected through stratified random sampling techniques in the targeted UCs from all segments of the population (Singh & Masuku, 2014). To get equal representation from each area and gender the researcher will fill out three questionnaires from each village, whereas each village has two VWCs² (one male and one female). Below are the details of the villages and sample size;

Number of villages in the targeted UCs: 130

Number of questionnaires per village: 03

$130 * 3 = 390$

Below is the link of the sample size calculator as per Sekran sample size determination;

<https://conjointly.com/blog/sample-size-calculator/>

Universe of the study

The Pre-KAP survey will be conducted in the five targeted UCs³ of district Mardan, as per the project implementation plan. The total targeted population/beneficiaries in the targeted UCs are 303666, according to the village profile.

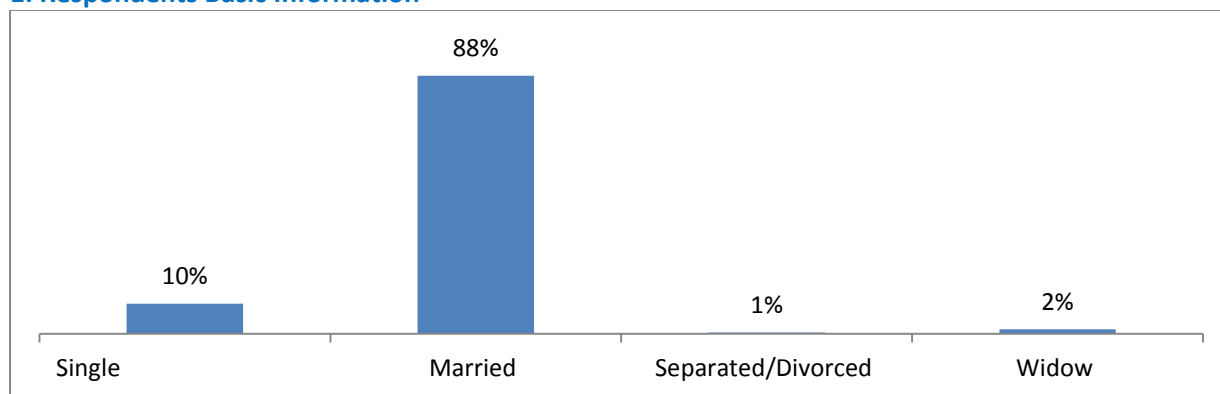
¹ SABAWON project staff

² Village WASH committees

³ The UCs are already identified by UNICEF and SABAWON before the implementation phase

Results of the study

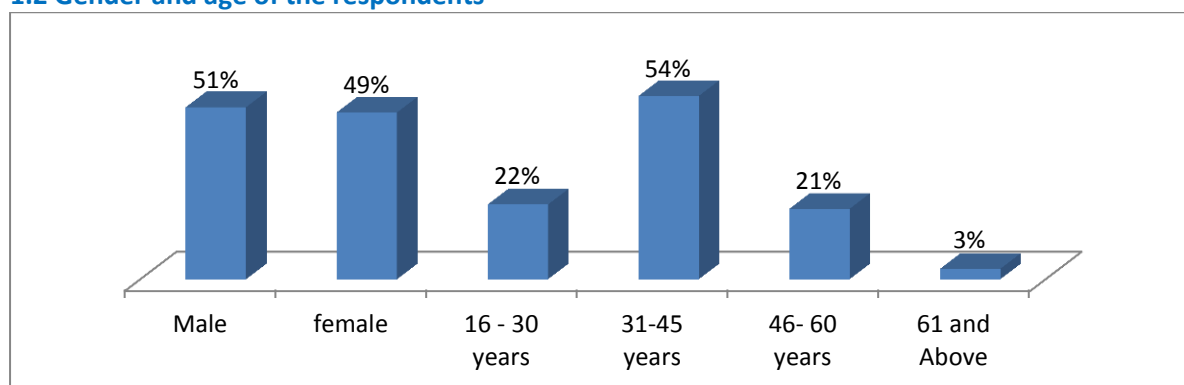
1. Respondents Basic Information



1.1 Marital status of the respondents

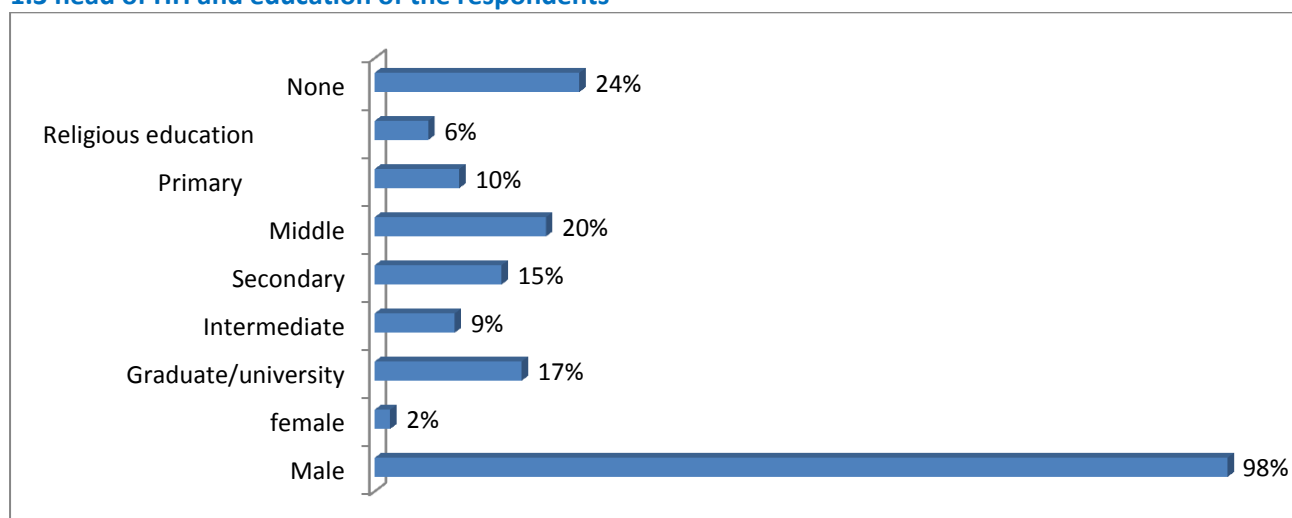
The table 1.1 shows data regarding the marital status of the respondents. In this regard, 10% respondents were founded single, majority of the respondents 88% were founded married, 1% were founded separated /Divorced and the remaining 2% were founded widow.

1.2 Gender and age of the respondents



The analyzed data in the table 1.2 shows gender and age of the respondents. The analyzed data in the table shows that 51% of the respondents are male and 49% of the respondents are female. Similarly, 22% of the respondents ages were founded between 16 to 30 years, 54% of the respondents ages were founded between 31-45%, 21% of the respondents ages were founded between 46-60 years and a less number of the respondents i.e 3% ages were founded 61 and above.

1.3 head of HH and education of the respondents



The above table shows data regarding the head of the households and level of education of the respondents. In this regard, 98% of the respondents were male headed HH whereas 2% of the HH were founded women headed. Similarly, 17% of the respondents were founded that they have

completed graduation, 9% were founded that they have completed intermediate, 15% completed secondary level education, 20% completed middle, 10% completed primary, 6% completed religious education and 24% of the respondents were founded illiterate.

1.4 Household and other member’s membership status

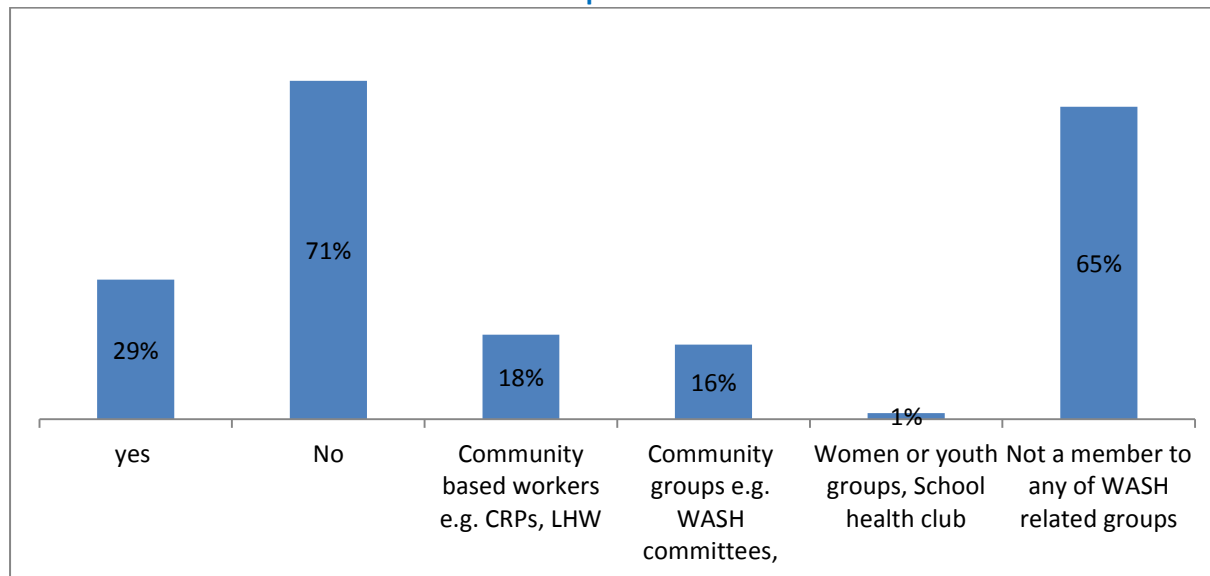
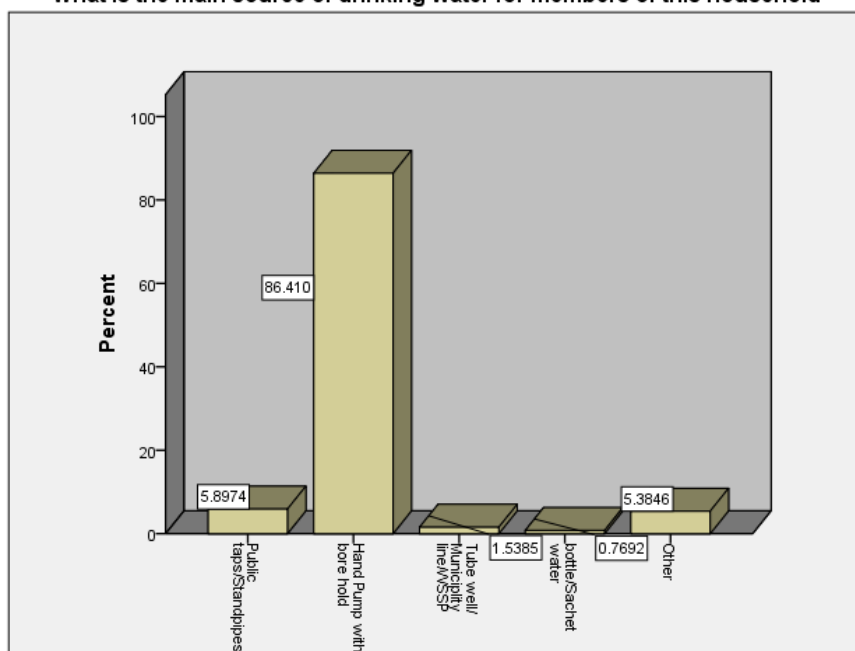


Table 1.4 shows data regarding head of households and their status of membership and other members of the family membership with any organization. In this regard, 29% of the respondents shared that their HH are members of some voluntary organization, whereas 71% were founded that they are not member of any organization. Similarly, 18% of the respondents shared that that their family member have the membership of community based work like CRPs, LHWs etc., 16% were founded members of community or WASH groups, 1% were founded members of women or school group whereas 65% of the respondents were founded that they are not member of any WASH related groups.

2. Drinking water status

2.1 Access to water

What is the main source of drinking water for members of this household

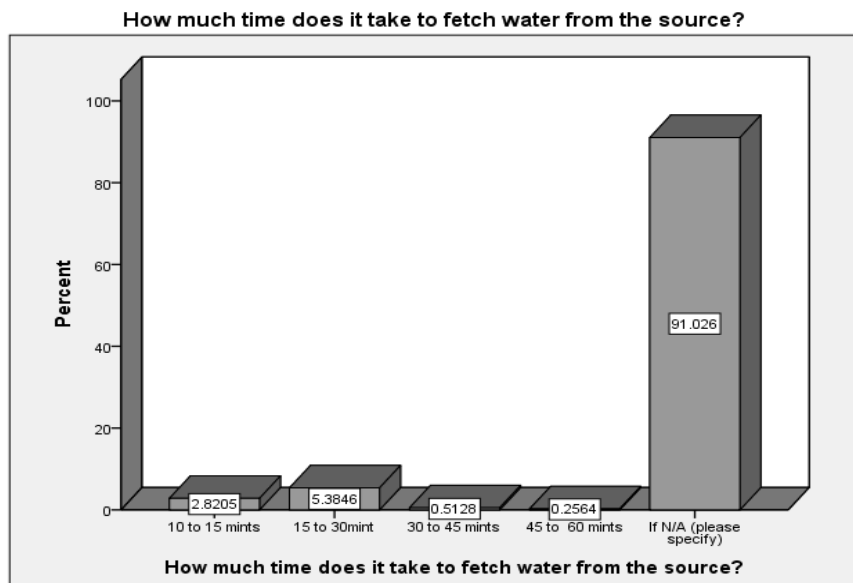


Safe and readily available water is blessing from Allah and important for public health, whether it is used for drinking, domestic use, food production or recreational purposes. Improved water supply and sanitation, and better management of water resources, can boost countries' economic growth and can contribute greatly to poverty reduction. The figure shows the main source of drinking water of the locality, among all 5.8% of

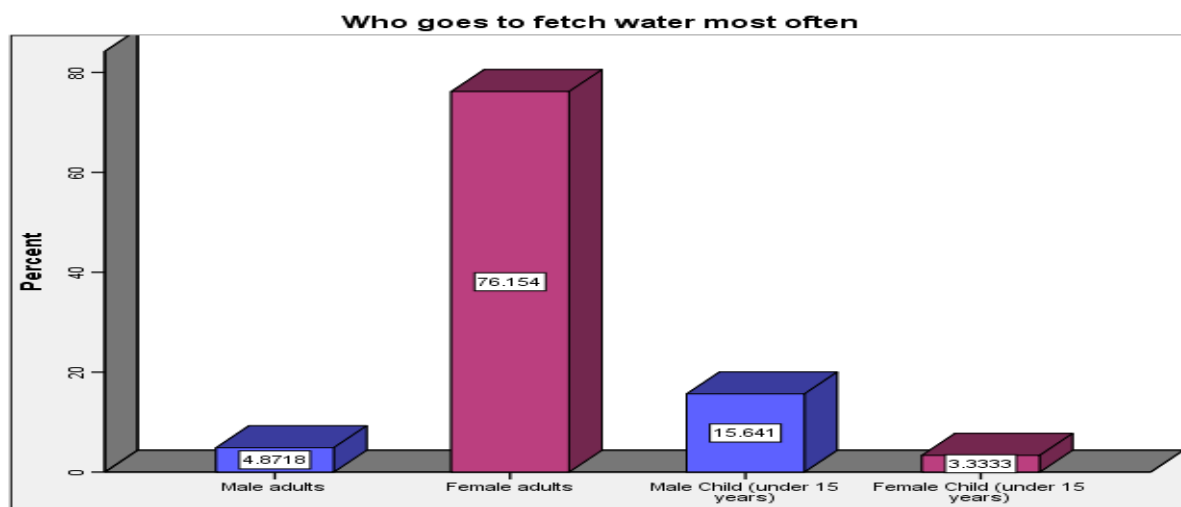
the local people use water from public taps. The majority of the local people i.e. 84.4% are having hand pumps with bore holes or access to communal or neighbor’s hand pumps. While 1.5% are using

tube wells as a source of drinking water, whereas 0.7% are using bottled/Sachet water for the purpose of drinking. Similarly, 8.5% are using water from other sources like motor pumps, electricity pumps etc.

The table is about how much time is needed to fetch water from the source. As most of people have to fetch water from their own borehole, so it does not take too much time. The majority of the respondent i.e. 91% opined that they are using their own bore hole water and not taking time to fetch it from the source. 2.8% of the respondents shared that it needed 10 to 15 minutes

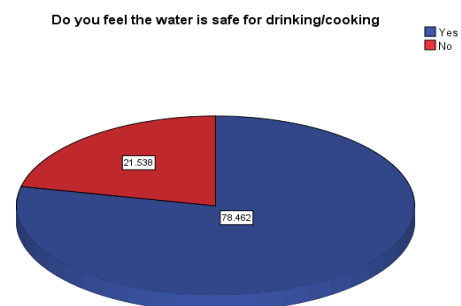


from the source to take water. Whereas 5.3% were of the opinion that it takes 15 to 30 minutes. Some of the people bring water from the neighbors or near the mosque which takes more time. 0.5% responded that it takes 30 to 45 minutes to take water. Furthermore, 0.2% responded that it takes 45-60 minutes to take water from the main source as they don't have their own water source and they are bringing water from far-flung areas for their daily need.

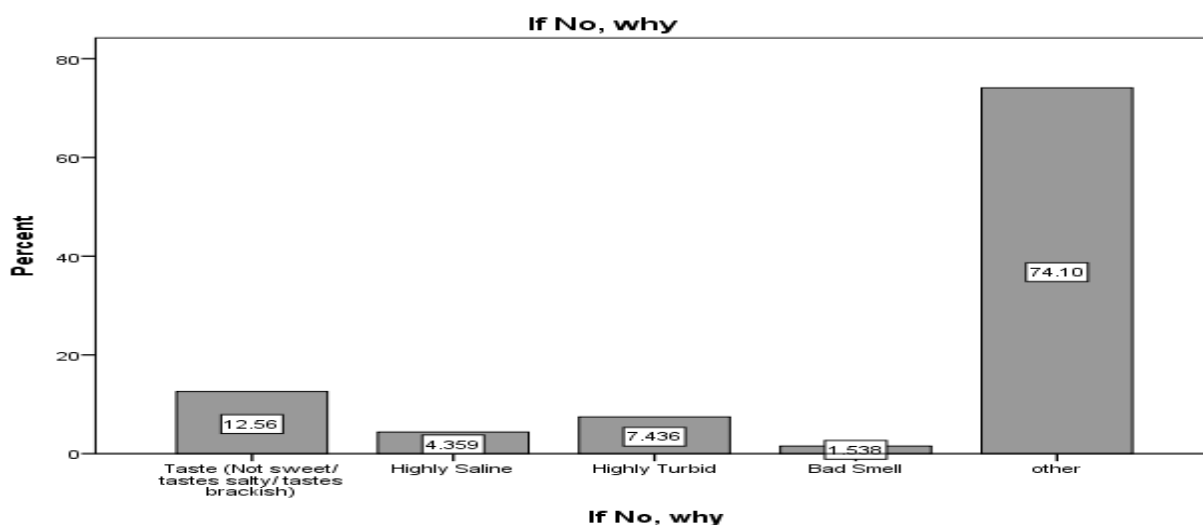


In many parts of the world, fetching water is mainly considered a job for women and children. It is well known, that this places a huge burden on them. Similarly, in the prevailing culture of district Mardan fetching water is mainly associated with women. Therefore, the majority of the respondents i.e. 76.1% were female adults having the responsibility of fetching water. Whereas 15.6% were male children fetching water from the source, 4.8% were male adults and 3.3% were female children.

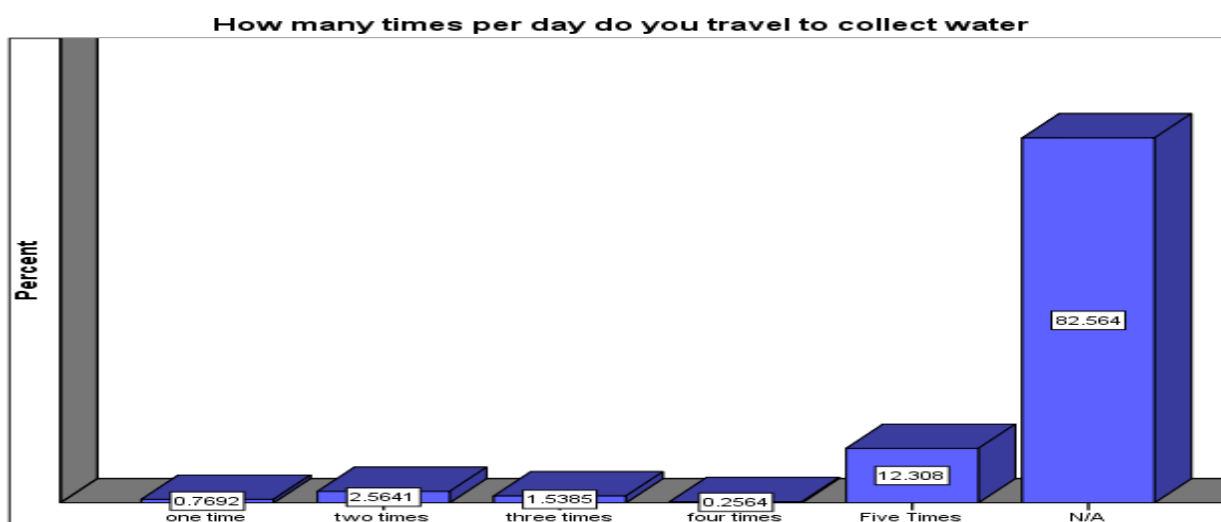
The figure shows that 78.4% of the respondents agreed that water is safe for drinking/cooking purposes. As majority of the people use water from borehole and they have their own water source, which is safe for drinking and other domestic



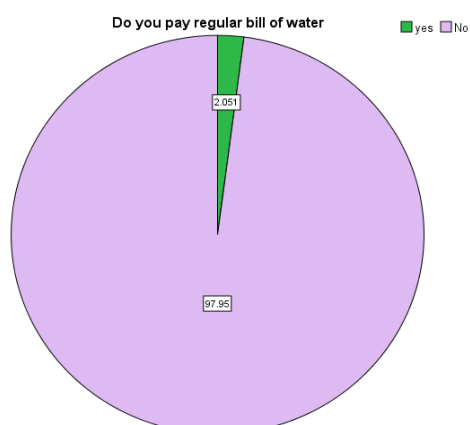
purposes. While 21.5% of the respondents were of the view that their water is not safe for the purpose of drinking/cooking, such water leads to health problems.



The above table shows why water is unsafe for drinking and cooking purposes. In this concern, 12.5% responded that water has a bad taste and is not suitable for drinking purposes. While, 4.3% of the respondents opined that it is highly saline, and 7.4% were of the opinion that due to highly turbid the water is not safe for drinking/cooking. A less number of respondent i.e. 1.5% reported that the water has a bad smell. Whereas a high number of the respondents 74.10% responded that due to other reasons, water is not safe for drinking and cooking purposes.



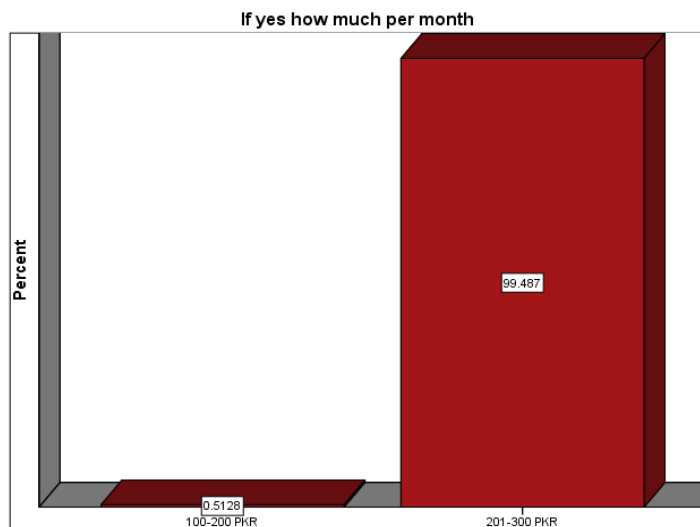
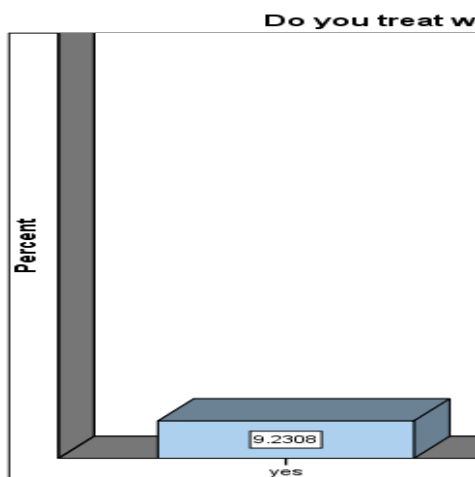
The above figure shows that most of the respondent's i.e. 82.5% opined that they don't collect water as they have water source inside in their homes. 0.7% responded that they collect water one time per day. The analyzed data shows that 2.5% of the respondents collect water two times a day from their source and 1.5% responded that they collect water three times per day. Similarly, a less number of the respondent's i.e. 0.2% opined that they collect water four times per day and the remaining 12.3% responded in favor of five times per day.



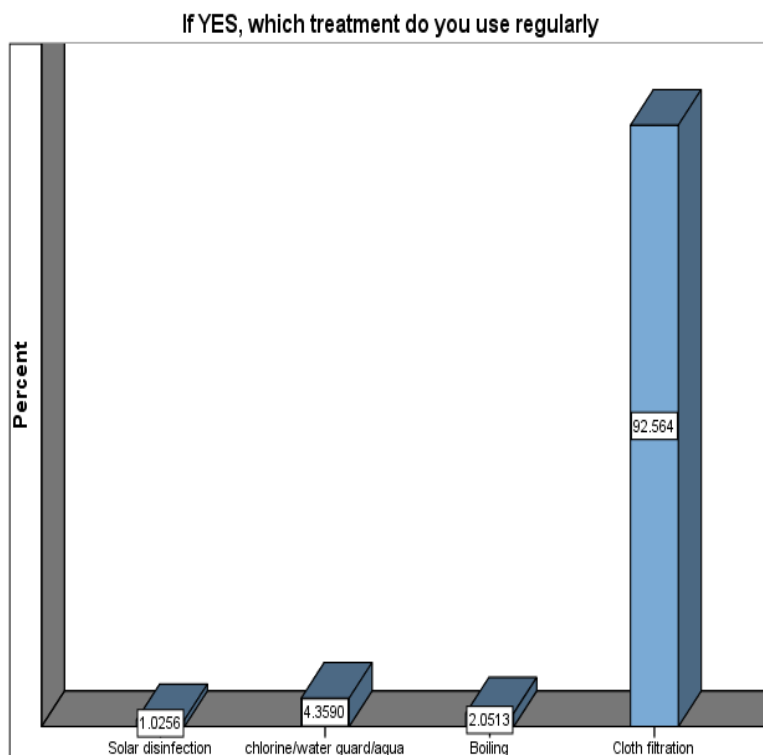
The table is about to pay water bill. As in the area there is no proper government system to provide water to people. However, the 2% of the respondents are paying water bill as they are using

government tube well water and the remaining 97.9% of the respondents are not paying bill as they are using water from their own or communal sources.

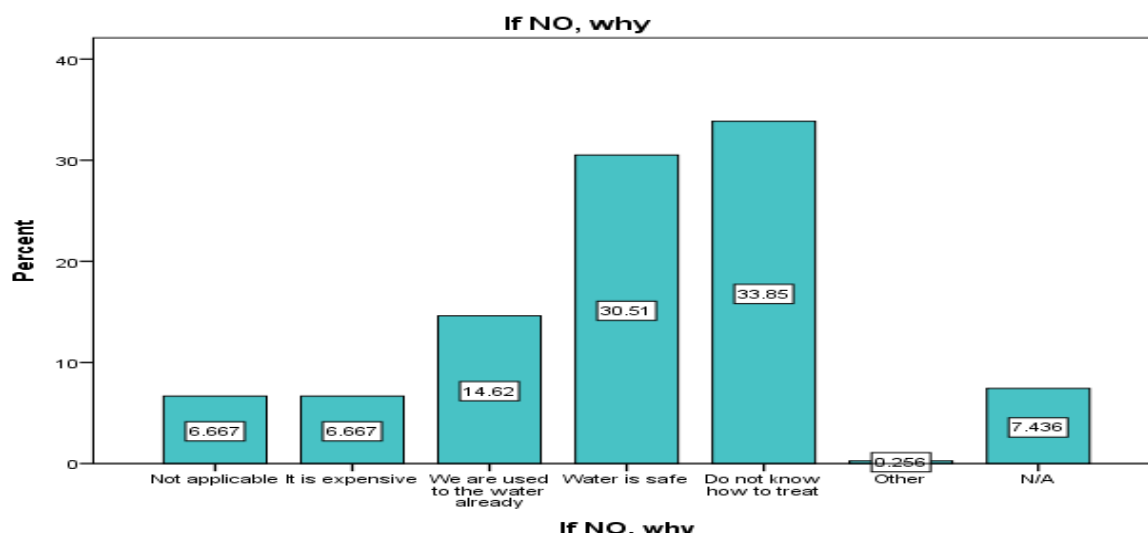
The analyzed data in the table shows that a very less number of people are paying bill as they are using the government tube well water. Among 0.5% of the respondents shared that they are paying water bill from 100 – 200 PKR and the remaining 99.4% are paying water bill from 201-300 PKR.



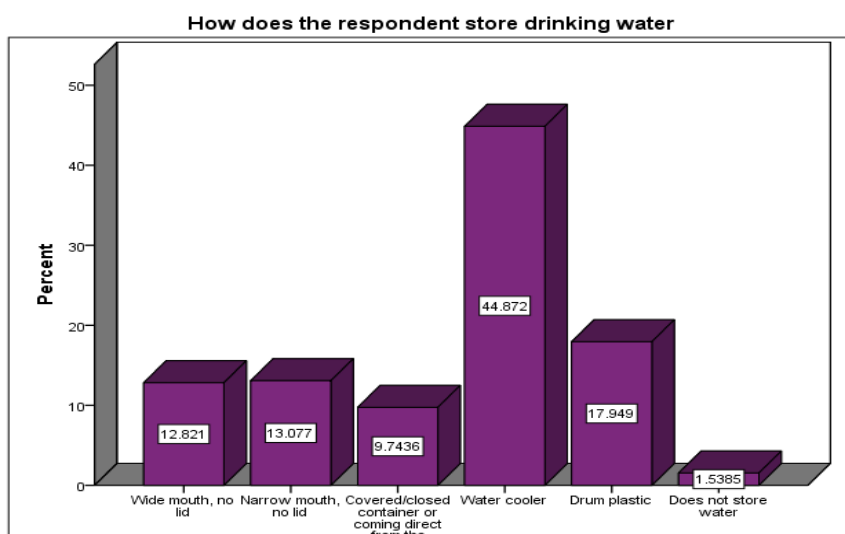
The above figure shows information regarding treatment of water for drinking purpose. In this regard, 9.2% responded that they treat water for the purpose to make it safer for drinking purpose. While, majority of the respondents i.e. 86.4% were of the opinion that they don't treat water to make it safe, and the remaining 4.3% responded that they don't know.



The analyzed data in the table shows that 1.2% of people purify water through solar disinfection process and make it safer for drinking. The local people are also purifying water for drinking through chlorine/ Aqua tab, which is 4.3%. similarly, 2% of the respondents are purify water through boiling process and majority of the respondent's i.e. 92.5% responded that they are using cloth filtration method for water purification as such method is essayist and low cost.



The table shows the data about those who are not purify water through treatment. 6.6% responded that it is not applicable having any impacts. Similarly, 6.6% of the respondents were of the opinion that such kind of method is expensive. Whereas 14.6% of the respondents were of the opinion that we are used the water from since their childhood. 30.5% responded in favor that it is safe for the purpose of drinking and cooking and having no need to make it purify. Majority of the respondent's i.e. 33.8% opined that they are not aware how to treat water, nor any one aware them regarding the importance and method of water treatment. A less number of the respondent's i.e. 0.2% reported in favor of other and the rest of 7.4% responded in favor of not applicable.

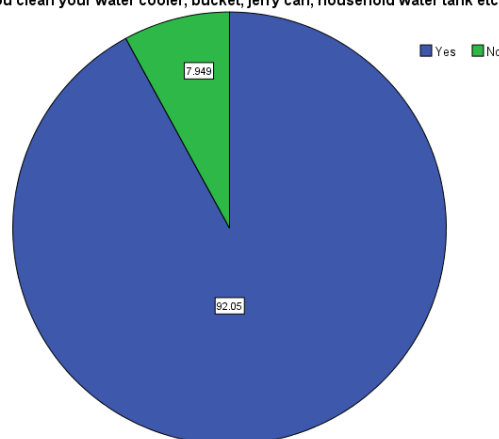


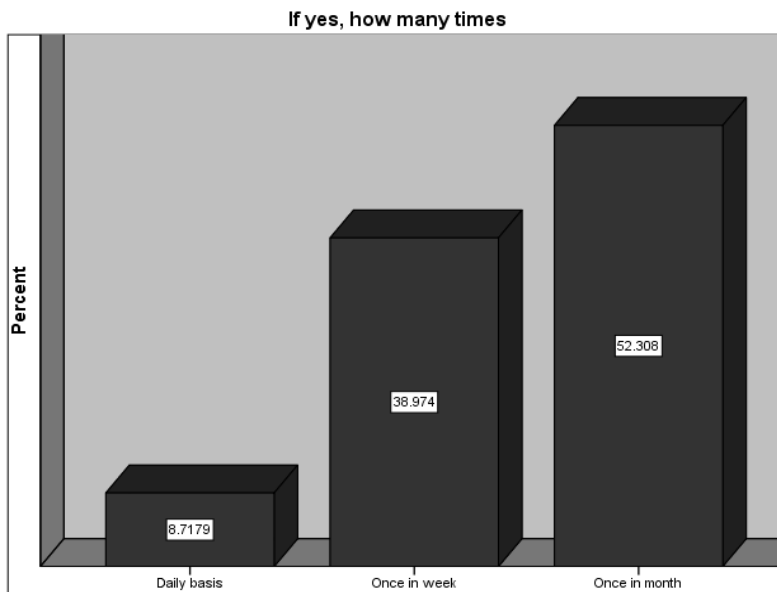
The analyzed data in the table is about how the respondents store water for drinking/cooking purpose. Majority of the respondent's i.e. 44.8% are store water in water cooler for the purpose of drinking. Similarly, 12.8% of the respondents store water in wide mouth having no lid. Furthermore, 9.7% of the respondent's store water in Narrow mouth having no lid, which is not safe

for drinking purpose. While the 17.9% store water in drum plastic for the purpose to store water and the remaining 1.5% does not store water.

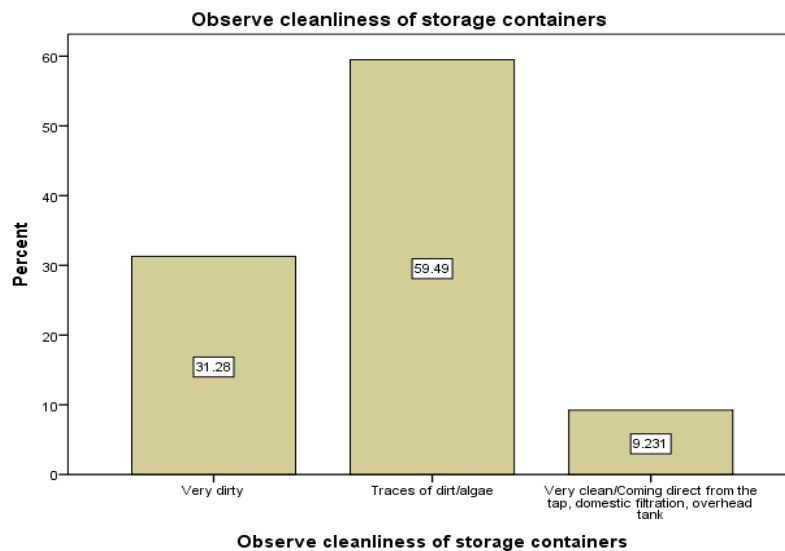
The above table is about cleaning the water storage that whether the respondents are cleaning the water storage or not. In this regard, 92.5% of the respondents shared that they are cleaning their water storage and the remaining 7.9% shared that they are not cleaning their water storage.

Do you clean your water cooler, bucket, jerry can, household water tank etc



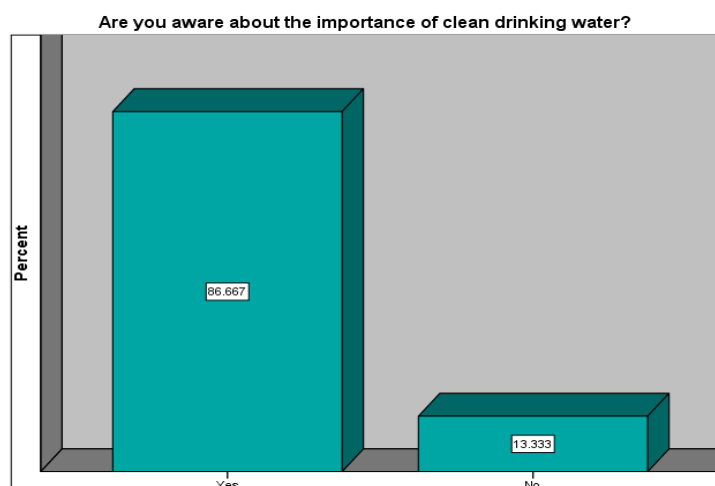


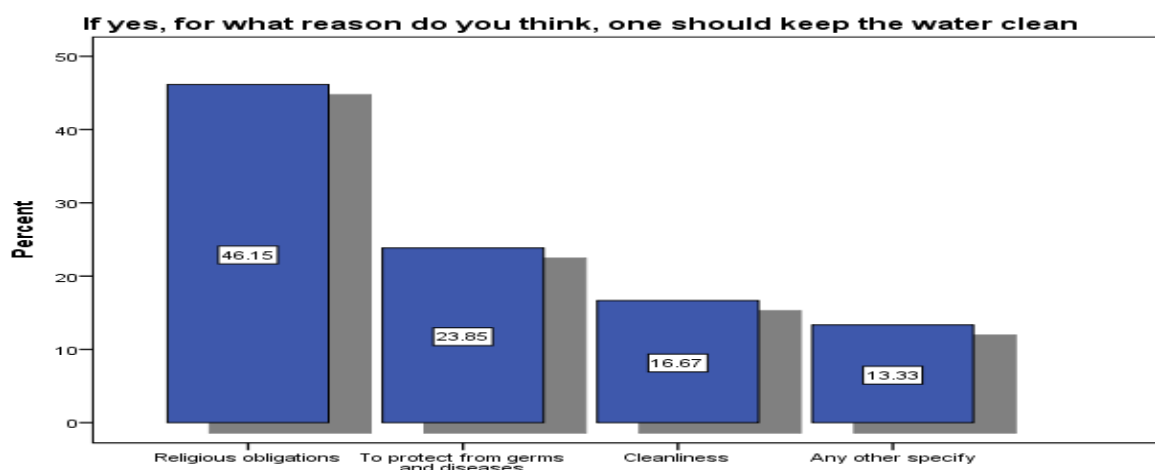
The analyzed data in the table shows that 8.7% of the respondents were of the opinion that's they clean water storage on daily basis. Similarly, 38.9% of the respondents reported that they are cleaning their water storage once in a week. Majority of the respondent's i.e. 52.3% were of the opinion that they clean water storage pot once in a month, which shows their hygienic condition.



The table shows data regarding the cleanliness of water storage through observation. In this regard 31.9% of the respondents were observed that their storage were very dirty. Similarly, 59.4% of the respondents observed that the water storage has traces of dirt around, whereas 9.2% were observed very clean or coming direct from the tap.

The table is about the importance of clean drinking water. Clean drinking water is a blessing from Allah and protect from a lot of diseases. A less number of respondent's i.e. 13.3% responded that they not aware from importance of clean drinking water, whereas 86.6% are aware from the importance of clean drinking water.

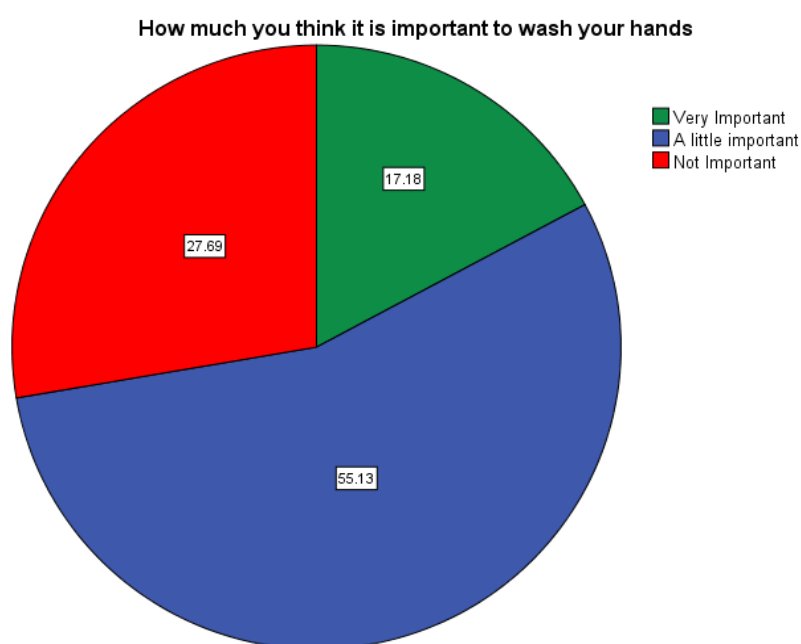




If yes, for what reason do you think, one should keep the water clean

The above table shows that 46% of the respondents opined that it is religious obligation to drink clean water. 23.8% responded that they use clean drinking water for the purpose to protect from germs and diseases. While 16.6% responded that they use clean drinking water for the purpose of cleanliness and the remaining 13.3% responded in favor of any other reason.

3. Hand washing



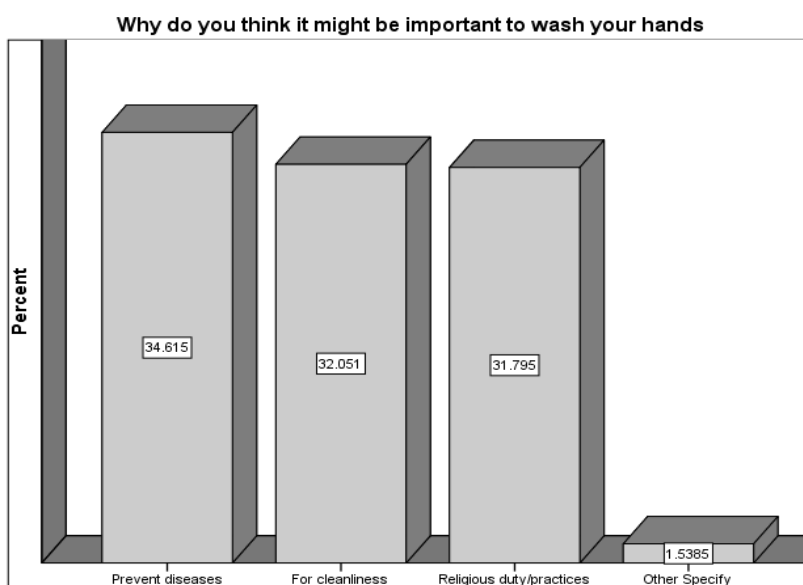
Hand washing is one of the best ways to protect yourself and your family from getting sick. Washing hands can keep you healthy and prevent the spread of respiratory and diarrheal infections. Germs can spread from person to person or from surfaces to people when you:

- Touch your eyes, nose, and mouth with unwashed hands
- Prepare or eat food and drinks with unwashed hands
- Touch surfaces or objects that have germs on them
- Blow your nose, cough, or sneeze into hands and then touch other people’s hands or common objects

The above table shows data regarding hand washing practices and importance of hand washing. Majority of the respondent’s i.e. 55.3% were of the opinion that it is little important to wash your hands. 17.1% of the respondents reported that it is very important to Wash your hands and protect your family from different kind of diseases. The remaining 27.6% opined that washing hand is not important nor they were aware from the importance of hand washing.



The above table shows that majority of the respondent's i.e. 38.9% were of the opinion that they wash their hands after using toilet and consider it important. Similarly, 5.80% of the respondents reported that they wash hands after handling animal excreta. 7.9% are washing hands before cooking or preparing food. Majority of the respondents i.e. 33.3% responded that they wash hands before eating. Whereas, 5.8% opined that they wash hands before breast feeding.

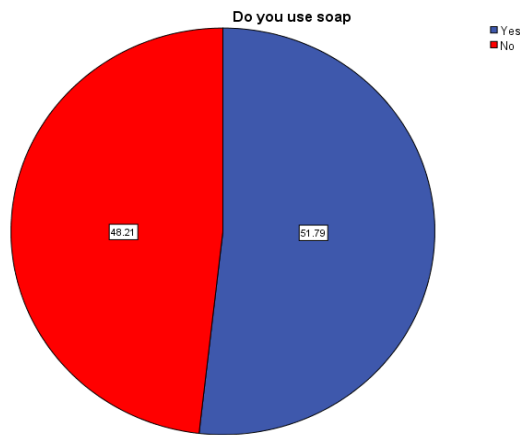


The table is about the importance of hand Washing. The analyzed data shows that 34% were of the opinion that it is important to wash hands for the purpose to prevent diseases. 32% responded that it is important for the purpose of cleanliness. While 31.7% of the respondents shared that hand washing is important as it is a religious duty. A less number of the respondents i.e. 1.5% responded that hand washing is important due to other reasons

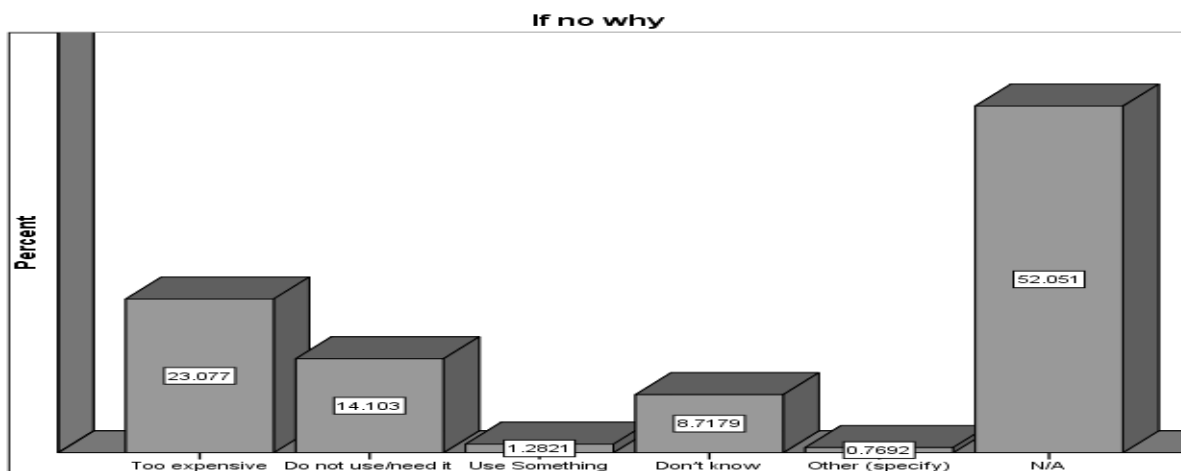


The figure shows data regarding those who don't wash their hands. According to analyzed data 19.7% respondents shared that hands washing is not so important, that's why they don't wash their hands. Similarly, 4.8% responded that it is wastage of time and

take too much time. Whereas 9.2% responded that they don't have access to sufficient water for hands washing. 13% of the respondents don't have access to soap and they don't wash hands. While a less number of respondents i.e. 1.5% was of the opinion that they don't wash their hands due to other reasons. Majority of the respondent's i.e. 51.5% were reported not applicable as they are washing their hands.



The table is about use of soap and importance of use of soap. Maximum numbers of the respondent's i.e. 51.79% were of the opinion that they are using soap, whereas 48.2% responded that they don't use soap for hands washing nor they aware from the importance of hand washing.

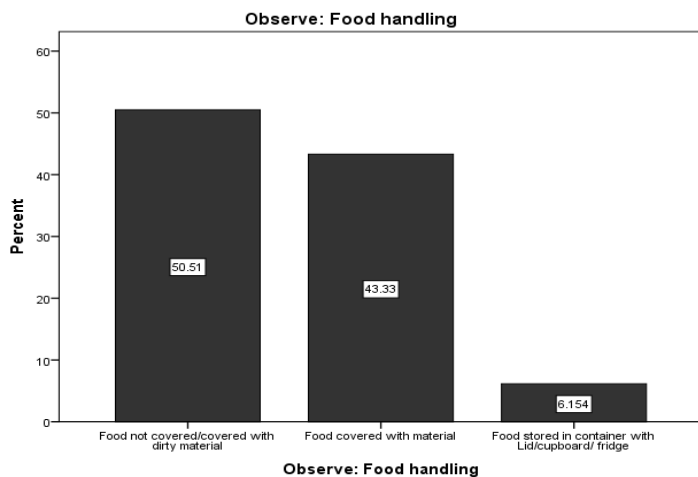


The above table shows data regarding those respondents who are not using soap. In this regard, the question was asked if they don't use soap so what the reasons are. Among all 23% responded that soap is too expensive and we don't have money to buy it. Similarly, 14.1% of the respondents reported that we don't need to wash hands with soap. While, a less number of the respondents i.e. 1.2% responded that they use something else to wash hands, and 8.7% responded that they don't know. Furthermore, 0.7% respondents shared that they use other things and maximum of the respondents i.e. 52% reported in favor of not applicable.



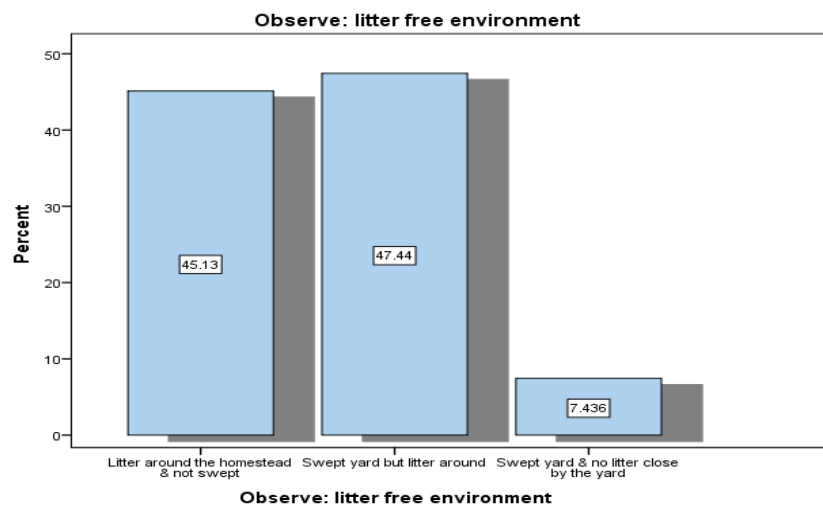
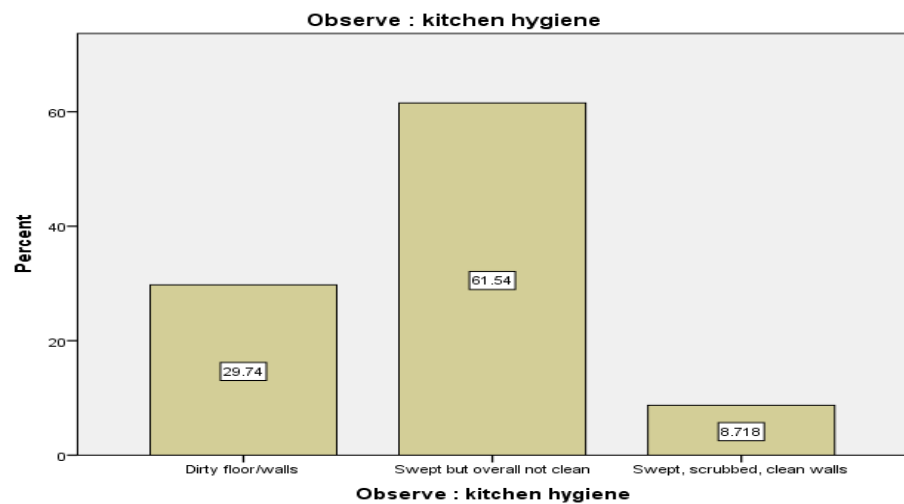
The table shows data regarding observation of hand washing facility for general use in the household. In this regard it is observed that majority of the respondent's i.e. 61% don't have hand washing facility or their hand washing facility is non-functional. While 27.9% of the respondents observed that they have hand washing facility but the soap is not available at hand washing facility. The remaining 11% of the respondents were observed that they have hand washing

facility along with soap as well as observed practices of regular hand washing.



The table shows data regarding observation of food handling with in the household. In this regard, majority of the respondent's i.e. 50.5% were observed that they were not properly covering food or covered with dirty food. Similarly, 43.3% of the respondents opined that food is properly covered with some sort of material. Whereas a less number of the respondents i.e 6.1% of the respondents were observed to store food in the container/fridge.

The figure shows data regarding observation of kitchen that whether the kitchen is clean or dirty. Majority of the respondents were observed that their kitchen were not properly clean. 29.7% of the respondents were observed that their kitchen was dirty floor and walls, whereas 8.7% of the households were observed swept and clean kitchen.



The table shows data regarding observation of litter free environment in the households. In this regard, 45.1% of the households were observed litter around the homestead and not properly swept. Similarly, 47.4% of the households were founded swept yard but litter around the yard, whereas 7.4% were founded swept yard and no litter around the yard.

Conclusion

The core purpose of this study is to explore hygienic condition of the residence of district Mardan and how they manage their daily routine activities related to water, sanitation and hygiene. The

study also focuses on all those issues and dimensions which are because of unhygienic environment. The parameter of the study was developed accordingly data was generated.

Analysis of the primary data shows that main source of drinking/cooking water is households bore and tube wells in the locality. Similarly, the majority respondents were agreed that water is safe for cooking and drinking purpose as they use bore water. However, some of the respondents consider it unsafe for drinking/cooking purpose. They were of the view that water is highly slimes, turbidity and bad smell. Further, the primary data shows that most of the respondents opined that they don't treat water is there is no need to purify it.

Good personal hygiene is one of the best ways to protect you from getting gastro or infectious diseases such as COVID-19, colds and flu. The primary data shows that hand washing is little important and they wash their hands due to religious duty. The people of community are not aware about proper use of latrine and proper hand washing along with soap and steps, which cause a lot of diseases i.e. infections, diarrhea, scabies, eyes infection and hepatitis etc. due to unhygienic environment people of the local area, is affected from diarrhea. While, due to unawareness during the diarrhea they are using herbs and go to traditional healer.

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