American Journal of Water Resources, 2017, Vol. 5, No. 3, 63-71
Available online at http://pubs.sciepub.com/ajwr/5/3/2

DOI:10.12691/ajwr-5-3-2

Determinants of Safe Drinking Water Supply in Nowshera District of Khyber Pakhtunkhwa

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Abstract Safe water supply can altogether enhance the personal satisfaction and is a wellspring of and the condition for economic development and water is at the core of sustainable development. Water resources, and the range of services they provide, underpin poverty reduction, economic growth and environmental sustainability. The issue of water is observed as a general problem for both the urban and the rural population and lack of access to safe and clean water is locked in the heart of the poverty. Looking in to this research report was design with the objectives to access to safe drinking water supply and to find out the problems of households with respect to safe drinking water availability after the 2010 floods in Pirsabaq village of Nowshera by randomly selected 2761 households and was interviewed for the data through structured questioners. Findings revealed that majority of the respondents were of young age and literate having different level of education. Drinking water sources i.e. piped, protected dug well, unprotected dug well, and hand pump. The general methods of water storage were at household level were container with lid, container without lid, water tank on roof, drum, jeri cans, water cooler and pitcher. The household clean drinking water storage source were daily 75.26%, once a week 16.04%, once a month 5.61%, once a year 2.11%, never 0.98% and the reasons for not cleaning were the no time, no mean and not important respectively. The reason of long interval is, that the majority of water is clean is 30.49%. The drawing method of drinking water from the storage source were divided into four categories dipping a glass/jug or mug, long handle scoop, taps and drawing water from the container, 82.08% of the household have touch hand with water. The different water cleaning methods of the respondents were boiling (30.38%), water purification tablet/chlorine, use sachet/ packets and use ceramic/other filters. The study as whole concludes that provision of safe drinking water is still a challenge to the residents of the area and the households are still facing different challenges in it provision which can be overcome by rising awareness, introducing new methods of water treatment and strong monitoring of the water quality for different contents.

Keywords: *safe water, water hygiene, community, development project*

Cite This Article: Muhammad Israr, Anas Faraz, and Shakeel Ahmad, "Determinants of Safe Drinking Water Supply in Nowshera District of Khyber Pakhtunkhwa." *American Journal of Water Resources*, vol. 5, no. 3 (2017): 63-71. doi: 10.12691/ajwr-5-3-2.

1. Introduction

Water is fundamental for life of man, plants, and creatures and from the earliest starting point of development, people have settled near water sources. Shockingly in numerous nations water is rare or defiled. Giving a superior water supply can altogether enhance the personal satisfaction and is a wellspring of and the condition for, a financial improvement [41]. Better water circulation permits evading the nearness of dormant water or wastewater, where creepy crawlies conveying the previously mentioned ailing can be available. Better water dispersion can likewise bring no requirement for ladies or youngsters for conveying water. This permits all the more extra time to commit to better exercises, as childcare, creature rising or vegetable planting. In creating nations groups that need to set up and run an enhanced water supply change extraordinarily. It is critical not to disregard the diverse nature and history of little groups. There is no standard arrangement, however extraordinary answers for various groups. Arranging and settling on choices on the advantages and disadvantages, the ramifications of every alternative and picking the best choice considering the sort of group is urgent for the achievement of the venture [75].

Worldwide, an estimated 768 million people remain without access to an improved source of water – although by some estimates, the number of people whose right to water is not stated could be as high as 3.5 billion – and 2.5 billion remain without access to improved sanitation. More than 1.3 billion people still lack access to electricity, and roughly 2.6 billion use solid fuels (mainly biomass) for cooking. The same people is evidenced by a close association between respiratory diseases caused by indoor air pollution, and diarrhea and related waterborne diseases caused by a lack of safe drinking water and sanitation (UN, 2017).

During the last two decades it has been recognized that water supply improvements alone do not bring optimum health and development impact in developing countries. Community participation in water projects is certainly very important. There is need of inclusive approach avoiding marginalization of the poor. This can be gained through programs that are series of integrated activities directed to the establishment and continue functioning and use of water supply services. The challenge of a program is social, organizational and administrative. It is important that agencies and partners work together with communities group and users and plan their activities on a mutual agreement. The people group water supply outlines ought to be all encompassing, so to meet every one of the nuts and bolts needs of individuals, expandable, in perspective of group development with access to the group enhanced water supply, and upgradeable, in perspective of a financial development and a need of later updating. Institutionalization, regardless of the possibility that regularly more practical, is not generally a decent decision since it can infer rivalry between various brands, poor motivating force for the contribution in the private part and the innovation may not react to the requirements and inclination of the clients. Water is at the core of sustainable development. Water resources, and the range of services they provide, underpin poverty reduction, economic growth and environmental sustainability. From food and energy security to human and environmental health, water contributes to improvements in social well-being and inclusive growth, affecting the livelihoods of billions (UN, 2015). In a feasible world that is achievable sooner rather than later, water and related assets are overseen in support of human prosperity and biological system honesty in a powerful economy. Adequate and safe water is made accessible to meet each individual's essential needs, with sound ways of life and practices effectively maintained through solid and reasonable water supply and sanitation administrations, thusly upheld by evenhandedly amplified and productively oversaw framework. Water assets administration, framework, and administration conveyance are reasonably financed. Water is properly esteemed in every one of its structures, with wastewater regarded as an asset that profits vitality, supplements, and fresh water for reuse. Human settlements create in agreement with the normal water cycle and the biological systems that bolster it, with measures set up that lessen powerlessness and enhance flexibility to water-related calamities. Incorporated ways to deal with water assets improvement, administration and utilize − and to human rights − are the standard. Water is administered participatory that draws on the maximum capacity of ladies and men as experts and nationals, guided by various capable and learned associations, inside a fair and straightforward institutional system (UNDP, 2016).

Social, financial and ecological variables are implanted being developed as the three interlinking mainstays of manageable human advancement. They likewise, to a huge degree, decide populace wellbeing and the dissemination of wellbeing. Wellbeing Inequities are avoidable, crooked orderly contrasts in wellbeing between gatherings with various levels of social favorable position and hindrance (UNDP, 2017).

Sustainability in the Asia region is intimately linked with progress in access to safe water and sanitation; meeting water demands across multiple uses and mitigating the concurrent pollution loads; improving groundwater management; and increasing resilience to water-related disasters. Water management is the responsibility of many different decision-makers in public and private sectors. The issue is how such shared responsibility can be turned into something constructive and elevated to a rallying point around which different stakeholders can gather and participate collectively to make informed decisions (UN, 2017).

There are major uncertainties about the amount of water required to meet demand for food, energy and other human uses, and to sustain ecosystems. These uncertainties are compounded by the impact of climate change on available water resources. Greater recognition is needed of the fact that water is not solely a local, national or regional issue that can be governed at any of those levels alone. On the contrary, global interdependencies are woven through water, and decisions relating to water use on a local, national, river basin or regional level often cannot be isolated from global drivers, trends and uncertainties (WWDR, 2017).

In the situation of 2010 flood deteriorated when an unprecedented flood hit a village named Pir Sabaq in Nowshera district of Khyber Pakhtunkhwa. The heavy rainfall destroy majority of household wells, which are the primary source of drinking water. Unfortunately, those that were not destroyed had become contaminated as a result of the floods. Keeping the importance of drinking water Integrated Regional Support Program with the funding support from Swiss Development Corporation (SDC) commits to ensure the provision of adequate quantity of safe drinking water to Pir Sabaq along with other villages of district Nowshera at affordable cost and in an equitable, efficient and sustainable manner. SO, resting on the above importance of water in the human development the research report will contribute bitterly.

This report will answer to the questions that;

i. How do improved water supply systems of the IRSP affect household water use behaviors and consumption after the 2010 devastating flood?
ii. What are the key factors that affect domestic water consumption and water use behavior once households gain access to improved water supply by the IRSP?

1.1. Problem Statement

The issue of water is observed as a general problem for both the urban and the rural population and lack of access to safe and clean water is locked in the heart of the poverty. Because of the importable water provision at the households, women and children suffer from disease, have limited participation in education, and both income generating activities and engagement in cultural and political issues are often compromised. Several studies have been carried out to analyze people's perception and attitude about the drinking water source quality and accessibility. Creating good community awareness about water source management issues and the associated problems like sanitation and hygiene services is important

to alleviate health effects but it remains below the expected rate of coverage in all parts of the country including the Pir Sabaq village of district Nowshera.

1.2. Objectives of the Study

Objective of the safe drinking water project was to assess safe drinking water supply scheme in Pirsabaq village of Nowshera district of Khyber Pakhtunkhwa. The specific objectives are of the report are as follow;

I. To access to safe drinking water supply of the IRSP in district Nowshera.
II. To find out the problems of households with respect to safe drinking water availability after the 2010 floods and its remedial measures.
III. To suggest recommendations on the basis of findings.

2. Materials and Methods

The study was carried out in Pir Sabaq village of Nowshera district of Khyber Pakhtunkhwa. Nowshera. District is isolated into 47 Union Councils and 5 commonplace seats. The region was a piece of the Peshawar metropolitan locale. Nowshera was the third District of Peshawar Division, which was isolated from Peshawer. This area is likewise called the connection between Central Asia and India. It is of more essentialness in view of being arranged at the riverbank of Sindh (Indus). Old Peshawar was well known because of the huge mechanical base of Nowshehra Tehsil. The district having an area of 1,748 km². The populace thickness is 608 people for every square kilometer. Add up to rural zone is 52,540 hectors. The fundamental wellspring of pay of the district is agribusiness. Until 1988 Nowsehra was a Tehsil (sub division) of Peshawar. Sub tribe Akorra Khattak of primary Khattak tribe is the overwhelming tribe in the area, separated in with right around seven families i.e Babar , Akorkhels , Khwarra khattak , SweRa khattak , Uryakhels , Sami khel (Ismaeel Khels), and Kaka khels(Miangan). Main occupations are professionals 5.5%; technicians 3%; agriculture laborers 21.8%; elementary occupations 33.6%; service and shop specialists 12.9%; armed strengths 8.5%; Craft and related exchange laborers 4.5%; Clerks 3.3%. All the household residing in Pir Sabaq were selected as the respondents for the study which were 2761 and hence it serves as a sample size of the study. The data was collected through structured household questioners from the household's heads regarding different aspects of the water supply in the area. After the collection of data it was transformed from questionnaire in to computer, the analysis was done by using M.S Excel through frequency and percentage.

3. Results and Discussion

3.1. Socio-economic Characteristics And Safe Drinking Water

3.1.1. Age of the Household Heads

Safe drinking-water for human consumption cannot be considered in isolation from other issues, of which age of the household's heads is the most important. Numerous studies have shown a strong correlation between the age of household head and water safe use accessibility and consumption [3,68]. The data shows that 35.61% respondents were in the age group of less than 5 years, 27.71% were in the age group of 5-20 years and 36.68% were in the age group of above 20 years (Table 1). This implies that the people in the age group of above 20 years of age were more and these young age's people having more concerned with the water safe uses and its consumptions and the spreads of different types of water born diseases.

Table 1. Frequency distribution of household heads age

Age group (Years)	Frequency	Percentage
Less than 5	983	35.61
5-19	765	27.71
20 and above	1013	36.68
Total	2761	100

Source: Field survey, 2017.

3.1.2. Households Members

Households with more residents use more water (*Aitken et al., 1991, 1994; Gregory and Di Leo, 2003; Jeffrey and Gearey, 2006]*. There were total 1420 (51.44%) male and 1341(48.56%) female in the respondent's families. Out of the total male, 23.02% were at the age of less than 5 years, 31.76% were of the age of 5-20 years, 45.22% were in the age group of above 20 years. Of the total female family members, 22.59% were in the age group of less than 5 years, 31.18% were in the age group of 5-20years, and 46.23% were in the age group of above 20 years (Table 2). Majority male and female family members of the respondents were in the age group of the above 20 years representing the active age group, because in this group the people were the most energetic and could do hard work.

Table 2. Frequency distribution of the sex of household's members

Age	Male household members		Female household members		Total
	Frequency	Percentage	Frequency	Percentage	
Less than 5 years	327	23.02	303	22.59	630
Up to 19	451	31.76	418	31.18	869
20 and above	642	45.22	620	46.23	1262
Total	1420	100	1341	100	2761

Source: Field data, 2017.

3.1.3. Educational Status and Level

The findings of different researcher in different parts of the world demonstrates that family units with advanced education levels frequently have more grounded aims to preserve water [21,42] and have additionally shown more grounded goals to introduce water proficient machines [43]. As far as real family unit water utilize, be that as it may, families with lower instruction participate in more water protection practices and utilize less water than advanced education families [15,23]. The findings show that 48.49% of the respondents were illiterate and 52.51% were literate, out of which 7.89% having primary level of education, 9.97% having secondary level of education, 4.76% having higher secondary level and 2.02% having above secondary level education (Table 3). This implies that most of the respondents were education and have a concerned for the safe utilization of the water resources in the area.

Table 3. Frequency distribution of the educational level of the sample respondents

Educational status and level	Frequency	Percentage
Illiterate	1339	48.49
Literate	742	26.87
Primary	218	7.89
Secondary	276	9.97
Higher secondary	130	4.76
Secondary and above level	56	2.02
Total	2761	100

Source: Field data, 2017.

3.2. Status and Safeness of Drinking Water Sources

3.2.1. Drinking Water Sources

Water assets and resources will be put under further weight in coming decades by populace development and financial improvement [75,76] and environmental change is probably going to additionally compound existing stressors on water supplies [30]. In spite of the fact that meeting this test will require sourcing elective water supplies and expanding the efficiency of existing water supplies [55]. Four types of drinking water sources i.e. piped, protected dug well, unprotected dug well, and hand pump were found in the study area. It was found that about 25.86% of the households were using piped water as the main source of available drinking water while 34.44% of the households reported that they obtain drinking water from the hand pumps. Among the households, 21.69% were getting drinking water from the protected dug wells. However, 18.01% of the households explained that they obtain water from unprotected dug well (Table 4). This implies that the respondents used different types of water sources in the area for drinking water purposes, irrespective of their safety for the health.

3.2.2. Methods of Water Storage at Household Level for General Use

Identifying the most accessible and effective methods for household water storage and treatment are matters of considerable importance and different studies demonstrated that enhancing the microbiological nature of family unit water by on location or, then again purpose of-utilization treatment and safe stockpiling in enhanced vessels lessens diarrheal and other waterborne illnesses in groups and families of creating and created nations. In the world the different literature motioned that storing tap water in clean and rinsed plastic, glass, enameled metal, or fiberglass containers can extend the shelf life of water and once filled in the container, it should be tightly sealed and stored in a dark, cool location. Method of water storage at household level is divided in to seven categories i.e. container with lid, container without lid, water tank on roof, drum, jeri cans, water cooler and pitcher. The household reported for storing in different methods viz. 2.47% in container with lid, 2.68% in container without lid, 3.54% in water tank on roof, 2.47% in drum, 22.38% in jeri cans, 63.88% in water cooler, 2.58% in pitcher (Table 5). This depicts that the respondents use of used containers with narrow openings for filling, and dispensing devices such as spouts or taps/spigots, protect the collected water during storage and household use.

Table 4. Frequency distribution of sources of drinking water

Water sources	Frequency	Percentage
Piped	714	25.86
Protected dug well	599	21.69
Unprotected dug well	497	18.01
Hand pump	951	34.44
Total	2761	100

Source: Field survey, 2017.

Table 5. Frequency distribution on method of water storage at household

Water storage methods	Frequency	Percentage
Container with lid	68	2.47
Container without lid	74	2.68
Water tank on roof	98	3.54
Drum	68	2.47
Jeri cans	618	22.38
Water cooler	1764	63.88
Pitcher	71	2.58
Total	2761	100

Source: Field survey, 2017.

3.2.3. Storage of Water Sources for Drinking Purposes

Safe water storage means at once the water has been treated and is safe to use for drinking purposes are; Container with lid, Container without lid, water tank on roof, drums, Jeri cans, water cooler, and pitcher. The data in the Table 6 shows that the household store drinking water in container with lid 8.62%, container without lid 23.22%, water tank on roof 10.14% , drums 17.82%, water cooler 5.17% and pitcher 3.11% followed by 31.90%. of the household store drinking water in jerry cans.

Table 6. Responded distribution on storage of water sources for drinking purposes

Drinking purposes	Frequency	Percentage
Container with lid	238	8.62
Container without lid	641	23.22
Water tank on roof	280	10.14
Drum	492	17.82
Jeri cans	881	31.90
Water cooler	143	5.17
Pitcher	86	3.11
Total	2761	100

Source: Field survey, 2017.

3.2.4. Interval of Drinking Water Storage Source Cleaning

Drinking water is drawn from freshwater sources, which represent only 2.5% of the 1.4 billion cubic kilometers of water covering the earth. Less than 1% of this fresh water is safe to drink without prior treatment. Clean water is vital to our health, communities, and economy. Clean and reliable water is an economic driver, including for manufacturing, farming, tourism, recreation, and energy production. Drinking water storage cleaning source at household level is divided into five categories; daily, once a week/month, once a year and never. The data in the Table 7 shows that the household clean drinking water storage source, daily 75.26%, once a week 16.04%, once a month 5.61%, once a year 2.11%, never 0.98%. This implies that an over whelming majority of the respondents were too much aware about the importance of clean drinking water and worked for its improvements.

Table 7. Frequency distribution of drinking water storage source cleaning

Cleaning of drinking water	Frequency	Percentage
Daily	2078	75.26
Once a week	443	16.04
Once a month	155	5.61
Once a year	58	2.11
Never	27	0.98
Total	2761	100

Source: Field survey, 2017.

3.2.5. Reasons of Long Interval

Many water treatment works abstracting from surface waters, such as rivers and reservoirs, have long adopted the 'multi-barrier' approach to water treatment, where a number of treatment processes are employed to provide treatment and disinfection. Failure of an upstream process such as clarification or filtration may mean that the chlorination stage will not be able to achieve disinfection. Both chemical coagulation based treatment followed by rapid gravity filtration and slow sand filtration can provide effective removal of protozoan pathogens, bacteria and, sometimes to a lesser extent, viruses. Once water treated it well safe for long interval from diseases. The data in the Table 8 show the reasons of long interval of water storage source cleaning i.e. 30.49%, 24.19%, 19.17%, 26.15%, water is clean, no time, no mean and not important respectively. The reason of long interval is, that the majority of water is clean which is 30.49%

Table 8. Frequency distribution of long interval reasons

Category	Frequency	Percentage
Water is clean	842	30.49
No time	668	24.19
No means	529	19.17
Not important	722	26.15
Total	2761	100

Source: Field survey, 2017.

3.2.6. Drawing Method of Drinking Water from the Storage Source

Many observations suggest that treating water in the home can prevent illness. In many parts of the developing world, drinking water is collected from unsafe surface sources outside the home and is then held in household storage vessels. Drinking water may be contaminated at the source or during storage; strategies to reduce waterborne disease transmission must safeguard against both events. The drawing method of drinking water from the storage source were divided into four categories dipping a glass/jug or mug, long handle scoop, taps and other. The data in the Table 9 shows that the household drawing drinking water from the storage source using dipping a glass/jug or mug 78.34%, long handle scoop 6.66%, taps 14.48%, and other 0.62%. Majority (78.34 %.) of the household drawing drinking water from the storage source using dipping a glass/jug or mug

Table 9. Respondents distribution on drawing methods of drinking water from the storage source

Category	Frequency	Percentage
Dip a glass, jug or mug	2163	78.34
Long handle scope	184	6.66
Taps	400	14.48
Other	14	0.52
Total	2761	100

Source: Field data, 2017.

3.2.7. Drawing Water Hand Touches

Water contamination occurring during its home storage and uses for the households activities. The data in the Table 10 is about regarding carefulness of drinking water drawn from the water storage source in the home. It was found that in 82.08% household's hands touched while drawing water from the storage source, while 17.92% households responded for non hand did the water while drawing it from the storage source. It shows that although majority of the households were careful while drawing drinking water from the storage source. Their hands touched the water thus the chances of water contamination increased which further increase the incidence of water borne diseases.

Table 10. Distribution of respondents by drawing water hand touches

Category	Frequency	Percentage
Yes	2266	82.08
No	495	17.92
Total	2761	100

Source: Field data, 2017.

3.2.8. Treatment of Drinking Water

Treatment of water is very necessary in daily life to avoid water borne diseases and for good health. Water treatment removes contaminants and undesirable components, or reduces their concentration so that the water becomes fit for drinking. The data in the Table 11 presents drinking water treatment at household level. It was found that 11.87% of the household treat drinking water while 88.13% of the household not treated there water. The result indicates that a majority of the household not treat drinking water which is 88.13%.

Table 11. Frequency distribution of drinking water treatment

Treatment of drinking water	Frequency	Percentage
Yes	328	11.87
No	2433	88.13
Total	2761	100

Source: Field data, 2017.

3.2.9. Drinking Water Treatment Method

The processes and technologies used to remove contaminants from water and to improve and protect water quality are similar all around the world. The choice of which treatments to use from the great variety available depends on the characteristics of the water. The data in the Table 12 indicates treatment method of drinking water which is divided in to nine category, boiling, water purification tablet/chlorine, use sachet/ packets use ceramic/other filters, use cloth to sieve it, let it stand and settle, household filter, and other and treat it 30.38%, 5.61%, 8.07%, 21.87%, 4.38%, 13.65%, and 16.04% respectively.

Table 12. Respondents distribution on treatment method of drinking water

Category	Frequency	Percentage
Boiling	839	30.38
Water purification tablet /chlorine	155	5.61
Use sachet/packets	223	8.07
Use ceramic/other filters	604	21.87
Use cloth to sieve it	121	4.38
Let it stand and settle	377	13.65
Household filter	442	16.04
Total	2761	100

Source: Field data, 2017.

3.2.10. Reasons of no Treatment

The importance of good drinking water in maintaining health was recognized early in history. However, it took centuries before people understood that their senses alone were not adequate for judging water quality. Water from surface sources is often contaminated by microbes; whereas groundwater is normally safer, but even groundwater can be contaminated by harmful chemicals from human activities or from the natural environment. Rainwater captured by a rooftop harvesting system or with small catchment dams is relatively safe, provided that the first water is allowed to flow to waste when the rainy season starts. Table 13 data presents reasons of not treating drinking water in the study area. A total of five reasons (i.e. doesn't smell, no colour, no taste, source already cleaned and other) were identified due to which households did not treat drinking water. It was found that 29.30%, 3.94%, 12.15%, 48.53% and 6.08%, households were of the view that water have no smell, no colour, no taste, water source are clean and others, respectively. This implies that households did not treat drinking water due to their perception that water storage source was cleaned so the water will be also clean. The second major reason was that water taste was not disturbed so the water needs no treatment. It overall indicates that households were not aware about the importance of drinking water treatment.

Table 13. Frequency distribution of no treatment reasons

Category	Frequency	Percentage
Does not smell	809	29.30
Has no color	109	3.94
No taste	335	12.15
Source is clean	1340	48.53
Other	168	6.08
Total	2761	100

Source: Field data, 2017.

3.2.11. Water Contamination after Treatment

Clean drinking water is important for overall health and plays a substantial role in infant and child health and survival (Anderson et al. 2002; Fewtrell et al. 2005; Ross et al. 1988; Vidyasagar 2007). The World Health Organization (2005) estimates that worldwide about 1.8 million people die from diarrheal diseases annually. The people most vulnerable to water-borne diseases are those who use an unclean drinking water source. Throughout the less developed world, the proportion of households that use an unclean drinking water source has declined, but it is extremely unlikely that all households will have a clean drinking water source in the foreseeable future (c.f. Mintz et al. 2001). UNICEF (2010: 7-9) reports that in 2010, 884 million people in the world use an unimproved drinking water source, and estimates that in 2015, 672 million people will still use an unimproved drinking water source. Thus it is important to understand what leads a household with an unclean water source to treat its drinking water. Contamination of drinking water supply can occur in the source water as well as the distribution system after water treatment as already occurred. The data in the Table 14 shows that 42.37% of the respondents reported that water are contaminated after treatment, 57.63% answered that water are not contaminated after treatment. Majority of the water are not contaminated after treatment because household store water in clean container after treatment the water.

Table 14. Frequency distribution of water contamination after treatment

Category	Frequency	Percentage
Yes	1170	42.37
No	1591	57.63
Total	2761	100

Source: Field data, 2017.

3.2.12. Accessibility to Safe Drinking Water Source

Safe drinking water is drawn from fresh water source which represent only 2.5% of the 1.4 billion cubic kilometers of water covering the earth. Less than 1% of this fresh water is safe to drink without prior treatment. Safe drinking water can also be obtained from salt water through desalination [18]. The data in the Table 15 shows that 79.14% of household have accessibility to safe drinking water source, and 20.86% of household have not accessibility to safe drinking water source.

Table 15. Frequency distribution of accessibility to safe drinking water source

Category	Frequency	Percentage
Yes	2185	79.14
No	576	20.86
Total	2761	100

Source: Field data, 2017.

4. Conclusion

Findings of the study conclude that all households were using piped water and hand pump as the main source of available drinking water. The storing methods of the drinking water were the container with lid, water tank on roof, drum, jeri cans, water cooler and pitcher. The interval of drinking water storage was daily, once a week, once in a month, once a year and never. The reasons of long interval of water storage source cleaning were water is clean, no time, no mean and not important. The drawing method of drinking water from the storage source was dipping a glass/jug or mug, long handle scoop, taps and other. Majority of the households were careful while drawing drinking water from the storage source. Majority of the household not treated there water. Treatment method of drinking water which was boiling, water purification tablet/chlorine, use sachet/ packets use ceramic/other filters, use cloth to sieve it, let it stand and settle, household filter, and other. The reasons of none treating the drinking water were doesn't smell, no color, no taste, source already cleaned. The study recommends the introduce new techniques for the provision of safe drinking water to the target area and the development of a long-term study is required to carry out the complete water quality analysis and treatability performance of various coagulants to tackle the total submerged water resources units, which may get affected with either sewage or rainfall run-off.

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