

Knowledge and Practice of Drinking Safe Water Among the Community People of Horintana, Khulna

*F Ferdaus

ABSTRACT

Background: Water is basic human right, most precious resource for economy and health. Drinking water and sanitation is a fundamental health service. The health of a person largely depends on its quality and quantity of safe water. Water must be safe and wholesome. But unfortunately the problem of water pollution has now become a burning question.

Objective: To explore the knowledge and practice of drinking safe water among the community people.

Method: This was a descriptive type of cross-sectional study conducted at Horintana, Khulna, during the period from January 2018 to April 2018 to assess the Knowledge and practice of drinking safe water among the villagers. The respondents were adult population of the community.

Result: Most of the respondents were in 30-44 years age group, (53.64%) and 15-29 years age group (31.36%). Majority of the respondents were female (84.55%). Majority of villagers drank tube well water (93.64%). 81.36% of the respondents knew about safe sources of drinking water. 14 (6.36%) respondents, who used water other than tube well water applied purification methods. A large portion of respondents (14.09%) did not know about the water borne diseases. Among the water borne diseases they had suffered, most prevalent diseases were diarrheal diseases (57.63%) and parasitic infestations (16.66%). In most cases, treatment providers were MBBS doctors (64.23%).

Conclusion: In conclusion, the study revealed that the knowledge and practice of safe drinking water among the rural people is now satisfactory. But the matter of great sorrow is that, the socio-economic condition and educational status of people is hampering towards the good health.

Key Words: Knowledge, Practice, Safe drinking water

Introduction

Water is the essence of life and basic human right, essential to all and for sustainable development. It is known that drinking water is our most precious resource for our economy, our daily lives and to the health of our environment.¹ Drinking water and sanitation is a fundamental health service without which there cannot be any improvement. Drinking water and sanitation inadequacies hinder economic and social development, constitute a major hurdle to poverty alleviation and inevitably lead to environmental degradation.² Water must be safe and

wholesome. It should be easily accessible, adequate in quantity, free from contamination, safe and readily available throughout the year.³ Positive health is not possible without safe water. But unfortunately the problem of water pollution has now become a burning question. Much of ill health that affect humanity is due to lack of safe water supply, particularly in the developing country like ours.⁴ The incidence of water borne diseases like typhoid, paratyphoid, diarrhea, dysentery, cholera, parasitic infestations etc. are increasing day by day.

*Dr. Farhana Ferdaus, Assistant Professor and Head, Community Medicine, Khulna City Medical College
Mobile: 01744247421, e-mail. farhanasumi87@yahoo.com

*Corresponding Author

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These problems can be drastically reduced by raising awareness among people and providing them safe drinking water.⁵

Water is the basis of life and blue arteries of the earth. Everyone in the environment depends on fresh water to survive.⁶ Villagers are not conscious about the importance of drinking safe water. As a result, they are suffering from various water borne diseases.⁶ It is an urgent need to educate them in order to develop the habit of drinking safe water. They should be encouraged to drink water from safe sources and purify water before drinking by various methods of water purification such as boiling, chlorination, filtration etc. when safe sources are not available. Because- "water is the blood in our veins".⁷ It is not possible to develop the habit of drinking safe water in 100% people but the percentage can be increased by raising consciousness among them about the importance of drinking safe water and providing them information about various methods of water purification. Because they must be aware of that- "Water is the oil of 21 century".⁸ For this purpose a study has been carried out at Horintana, Khulna

This study is not enough to completely assess the present condition of the habit of drinking safe water among the people of whole country as it has been carried out in a small community among small number of people. So it does not reflect the actual scenario of the country. But it creates a scope to conduct repeated study in this field. The quality of drinking-water is a powerful environmental determinant of health.⁹ Drinking-water quality management has been a key pillar of primary prevention for over one-and-a-half centuries and it continues to be the foundation for the prevention and control of water borne diseases. To ensure availability of safe drinking water supply, reliance has to be placed on regular bacteriological analysis to assess portability and to determine the best course of action for protecting the population against water-borne diseases (Ramteke & Bhattacharjee, 1992). In 1998, the National Policy for Safe Drinking Water Supply and Sanitation (NPSWSS) was published. The main objective of this policy is to improve public health and produce a safe

environment by reducing water borne disease and contamination.¹⁰

Methodology

It is a community based cross sectional study conducted during January 2018 in Horintana, Khulna. The study population was all the individual irrespective to their sex, age starting from 15 years. It was possible to collect data from 220 respondents during the scheduled period of data collection. Structured questionnaires were prepared, which include the basic sociodemographic profile, knowledge and practice questions regarding drinking water of households in the rural communities of the study area. The questionnaire was pre-tested in few selected household. The pre-test was conducted near the study area which had similar characteristics to the areas where the actual study was carried out. A purposive type of non-probability sampling is applied, therefore sample size of the study was finalized to 220 respondents.

Result

Table-1: Distribution of respondents by age

Age (years)	No. of respondents	Percentage
15-29	69	31.36%
30-44	118	53.64%
45-59	26	11.81%
60 and above	07	3.18%
Total	220	100%

It was found that 118 (53.64%) of the respondents were of age group 30-44 and only 07 (3.18%) of the respondents were of age group 60 and above.

Table-2: Respondents by source of water

Source of water	No. of respondents	Percentage
Tube well	206	93.64%
Pond	14	6.36%
River	00	00%
Total	220	100%

It was found that most of the respondents 206 (93.64%) drink water from tube well.

Table-3: Respondents by knowledge about safe source of drinking water

Knowledge of safe source of drinking water	No. of respondents	Percentage
Yes	179	81.36%
No	41	18.64%
Total	220	100%

It was found that 179 (81.36%) respondents had knowledge of safe source of drinking water and 41 (18.64%) respondents had no knowledge of safe source of drinking water

Table-4: Respondents suffering from water borne diseases in last 12 months

Type of disease	No. of respondents	Percentage
Diarrhea	90	62.5%
Jaundice	18	12.5%
Cholera	28	19.44%
Hookworm infestation	08	5.55%
Total	144	100%

Table shows that most of the respondents 90 (62.5%) suffered from diarrhea and only 8 (5.55%) suffered from hookworm infestation.

Table-5: Respondents regarding treatment providers during last episode of disease

Treatment provider	No. of respondents	Percentage
MBBS doctor	79	64.23%
Quack	28	22.76%
Kabiraj	11	8.94%
Specialist	05	4.07%
Total	123	100%

Table shows that most of the respondents 79 (64.23%) received treatment from MBBS doctor and only 5 (4.07%) respondents received treatment from specialist during last episode of water borne disease.

Discussion

In this study, total sample was 220 respondents. Among them, 118 respondents were in between 30-44 years age group (53.64%) & 15- 29 years

group (3 1.36%). Female were (84.55%) & male were (15.46%). Regarding educational status, highest percentage was observed in secondary level education (28.64%), followed by primary level education (25%) and illiterate (21.36%), which reflected that females were still lagging behind in case of educational status.¹¹ More than 80% (81.82%) of the study population were housewives as information from those who were dealing with collecting water & providing it to the family member. It was proved from the study that most of the villagers of modern age had exposure to media (71.36%) and who had no exposure were of small portion. Observation regarding type of family revealed nuclear family holding the top most position (68.65%), followed by Join family (26.82%) & expended family (4.5%). It gave an idea that, the social trend of the country has been changed.¹² About 43.36% of the respondents were of lower middle class group, upper middle class and upper class were 19.54%, 28.18% & 5.90% respectively, the distribution of class was based on monthly income & others possessions. In the year 1993, it was discovered that ground water was the source of drinking water for 97% of rural population.¹³ In this study 206 (93.64%) respondents used tube well as their source of drinking water. It was revealed that majority (81.36%) of the population had knowledge about safe sources of drinking water & rest (18.64%) did not have. Among the respondents, about 85.91% had knowledge regarding disease caused by unsafe drinking water, this is undoubtedly a good response from them. It was found that among the respondents who suffered from water borne diseases 63.89% suffered once in last 12 months. During the disease process, about 85.42% of the sufferer received treatment & 14.58% waited for self-limitation of the disease which proves that the people of rural community are now a days aware about their own health. Educated people possessed much more a sources of drinking water that was observed 100% respondents having secondary level education or more drank tube well water, whereas 92% people with primary level education, 78% people with no education used tube well as the source of drinking water.

100% of the teachers and service holders used tube well water for drinking, among housewives the percentage was 97%, in contrast to pond water consumers were maximum in farmers (42%) and day laborers (40%). It was also noticed that among illiterate people only 22% knew what are the water borne diseases, in people having primary and secondary education level the percentages were 65% and 92% respectively. 100% people having education SSC or more knew about water borne diseases, which was obvious. 100% people of upper middle class group had knowledge about water borne diseases, the percentage was 27% in lower class group and 36% in lower middle class group. It revealed that socio-economic condition has a great effect on the health status.¹⁴

Conclusion

The survey was successful and informative enough. From the study investigators have gathered experiences and practical knowledge about the field application of academic knowledge. From the study it was revealed that, awareness regarding drinking safe water is increasing. Most of the villagers (93.64%) use tube well water as source of drinking water and other use purification methods for safe water while a little population are using unsafe water. Striking fact is that they have little knowledge about use of unsafe water. Education and awareness campaign may be powerful tool for public health interventions. Planned awareness of safety measures especially to uneducated and rural women along with relative empowerment of woman in household affairs would be the key tools of success. Print & electronic media can be used to play a role in sensitizing and informing people about health hazards from unsafe drinking water.

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References

1. World Health Organization (WHO) (2004). Water, sanitation and hygiene links to health, facts and figures. Geneva. Available at: http://www.who.int/water_sanitation_health/en/factsfigures04.pdf. Assessed 4 February 2014.
2. Choudury N, Hossain MA. Exploring the current Status of Sanitary latrine use in shibpur Upazila, Narsingdi district. BRAC report. 2006.
3. Moe CL, Rheingans RD. Global challenges in water, sanitation and health. *J Water Health*. 2006; **4(Suppl 1)**: 41-57.
4. Progress on drinking water and sanitation 2012 update: JMPreport2012. Available at: <http://www.unicef.org/media/files/JMPreport2012.pdf>. Assessed on 8th February 2014.
5. WHO/UNICEF Joint monitoring programme for water supply and sanitation. Meeting the MDG drinking water and sanitation target: a mid-term assessment of progress. World Health Organization, Geneva and United Nations Childrens Fund, New York; 2004. Available at: http://www.who.int/water_sanitation_health/monitoring/jmpfinal.pdf. Assessed on 12th February 2014.
6. Howard G, Jahnel J, Frimmel FH, McChesney D, Reed B, Schijven J, *et al*. Human excreta and sanitation Potential hazards and information Needs. World Health Organization. London UK. IWA Publication:2006.
7. Pandve HT. Environmental sanitation: an ignored issue in India. *Indian Journal of Occupational Environmental Medication*. 2008;**12(1)**: 40. Available at: <http://www.ijoem.com/article.asp>. Assessed on 15th February 2014.
8. Tamilnadu: Main source of drinking water, 2011. Available at: http://www.census.tn.nic.in/HLO_Datasheet_Final/HLO_Datasheet_Drinking_Water_Page1.pdf. Assessed on 18th February 2014.

9. Bilas R, Singh RP. Rural water supply and the problem of health in village India, case of the Varanasi district. *Geogr Med*. 1981;**11**: 65-85.
10. Kang G, Ramakrishna BS, Daniel J, Mathan M, Mathan VI. Epidemiological and laboratory investigations of outbreaks of diarrhoea in rural South India: implications for control of disease. *Epidemiol Infect*. 2001;**127**:107-12.
11. Tamil Nadu Water Supply and Drainage (TWAD) Board. Guidelines for provision of water supply and hygiene for the village panchayat: book in tamil. Northern Zone, Vellore, Tamil Nadu. Tamil Nadu Water Supply and Drainage Board. Communication and Human Resource Development Division. 2007.
12. Gopal S, Sarkar R, Banda K, Govindarajan J, Harijan BB, Jeyakumar MB. Study of water supply and sanitation practices in India using geographic information systems: some design and other considerations in a village setting. *Indian J Med Res*. 2009; **129**: 233-41.
13. Swaroop N, Janish A, Fernandez S, Ramakrishna GB, Agrawal T, Ravi S. Access to improved drinking water and sanitation facilities in a rural area of Bangalore urban district; *Nat J Res Com Med*. 2012; 1(2).
14. Bharti, Malik M, Kumar V, Verma R, Chawla S, Sachdeva S. Knowledge attitude and practices regarding water handling and water quality assessment in a rural block of Haryana. *Int J Basic Appl Med Sc*. 2013; **3(2)**: 243-7.