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Research Article

Effectiveness of Organised Teaching Programme on Knowledge regarding Water Conservation among the People of Soura, Srinagar

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A B S T R A C T

Background: Water is one of the important natural resources in our lives; without water, life cannot exist on the earth, but this natural resource is being polluted and wasted by human activities.

Objectives: The objectives of the study were to assess the pre-test and post-test knowledge scores regarding water conservation among the people of Soura, Srinagar, assess the effectiveness of organised teaching programme on knowledge regarding water conservation among the people of Soura, Srinagar by comparing pre-test and post-test knowledge scores, and to determine the association of pre-test knowledge scores regarding water conservation among the people of Soura, Srinagar with their selected demographical variables.

Methodology: A quantitative research approach with a descriptive design was used. 60 study subjects were selected by non-probability convenience sampling. The study was conducted in Tiploo Mohalla, Soura, Srinagar. The assessment of knowledge was done using a self-structured interview schedule.

Results: The pre-test showed that the maximum study subjects (55.0%) had poor knowledge, 43.3% had average knowledge, and 1.7% had good knowledge regarding water conservation while the post-test showed that maximum study subjects (51.7%) had average knowledge, 25.0% had poor knowledge, and 23.3% had good knowledge regarding water conservation. The mean post-test knowledge score was 30.55 ± 6.26, which was higher than the mean pre-test knowledge score of study subjects (25.88 ± 5.79) with a mean difference of 4.670 which was found significant at 0.05 level of significance.

Conclusion: The findings of the study concluded that study subjects had inadequate knowledge regarding water conservation.

Keywords: Assess, Effectiveness, Organised Teaching Program, Knowledge, Water Conservation

Introduction

Water is one of the important natural resources in our lives as without water, life cannot exist on the earth. Every single drop of water is priceless still, we continue to waste it like it is a free natural commodity. About 98% of the total water on the earth is found in marine regions with higher salt concentrations and is not fit for human consumption. Among the remaining 2% of freshwater reserves, 1% is locked up in the form of ice in various regions around the world. Hence, only 1% of total water reserves are available for domestic and industrial use. Many regions in our country and around the globe are suffering due to water shortage and water pollution resulting from less rainfall, industrialisation, and lack of judicious use by human beings.[1]

Water is a vital natural resource for all forms of life on this planet. It is a basic human need and a priceless asset human beings own. It is equally important for the plant and animal kingdom. It is vital for agricultural activities. The water cycle is essential for ecological balance too. Though a major portion of the earth is covered with water, we should be very careful while using it.[2]

Water is important for the survival of human beings as the majority of body systems depend on freshwater to function normally. Nearly 60% of our body weight is formed by water. It helps us to create saliva which is required for breaking down food and for easy passage of food in our body. It also helps us to maintain homeostasis and keeps our joints and tissues healthy.[3]

Water scarcity is the unavailability of fresh water required for the survival of human beings. It is becoming a major issue, especially in the dry regions of our country like Gujarat and Rajasthan, which in turn has affected our agriculture and food security.[3]

Water conservation may be defined as the reduction in the loss of water and making it available for future generations. Its main objective is to reduce surface run-off, increase groundwater storage, and improve water management practices. The judicious use of water by human beings helps us to preserve freshwater habitats as well as reduce the need to build new dams and other water diversion infrastructure. It also helps us to provide food security through the availability of enough water for agricultural purposes. It is helpful in the reduction of the cost of building new wastewater treatment facilities and in saving energy used for water pumping, delivery and wastewater treatment facilities.[4]

Water has infinite uses. It is used for drinking, washing and domestic purposes, irrigation, electricity generation, and as a means of transporting goods. Water was free and has now become an economic commodity due to the rising population and industrial growth. Hence water needs to be conserved at all levels so that we can save enough water for future generations.[5]

Water demand is expected to increase by 55% between 2000 and 2050. Much of the demand is driven by agriculture, which accounts for 70% of global freshwater use. This will be a big challenge to our freshwater sources.

We all enjoy the benefits of water in many ways, so we should take care of our water resources and conserve our water bodies. Small steps can bring a big change in our world. We need to ensure that we do not waste or pollute our water bodies. We should teach ourselves and others to conserve water to preserve its quality and quantity for the future. Hence, we should train and educate people to adopt the practice of water conservation. The lack of awareness among people related to water conservation motivated the investigator to undertake this study that aims to explore the knowledge of people regarding water conservation and to enhance their knowledge so that they are able to use water judiciously and conserve it for our future generations.

Methodology

A quantitative research approach with a descriptive design was selected to carry out this study. Permission was obtained from the concerned authorities of Mader-e-Meharban Institute of Nursing Sciences and Research (MMINSR), SKIMS Soura, Srinagar to conduct the final study. Ethical clearance was obtained from Institutional Ethics Committee (IEC) to conduct the study on conveniently selected 60 study subjects living in Tiploo Mohalla, Soura, Srinagar. Permission was also obtained by taking informed consent individually from each study subject, prior to their inclusion as sample in the study. Privacy, confidentiality, and anonymity of the subjects were guarded.

Criteria for Selection of Sample

Inclusion Criteria

- Willing to participate in the study
- Living in Tiploo Mohalla, Soura
- Available at the time of data collection
- Able to understand and speak Kashmiri, Urdu, and English languages

Exclusion Criteria

- Those who had suffered any disability
- Below the age of 15 years
- Already exposed to similar knowledge
- Unwilling to participate in the study

Data were collected through a self-structured interview schedule from 60 study subjects living in Tiploo Mohalla, Soura, Srinagar from 17th Sep to 4th Oct 2022. The knowledge scores were categorised into various levels

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based on the criteria developed by Patidar and Patidar[6] in his study. If the score was more than 75%, it was considered good knowledge; if the score was 50-75%, it was considered average knowledge, and if the score was less than 50%, it was considered poor knowledge.

The Statistical Package for Social Sciences (SPSS) software was used for data analysis. Frequency distributions were obtained and descriptive statistics were calculated.

Results

Demographic Variables of Study Subjects

The present study showed that an equal number of study subjects (48.3%) were in the age group of 20-30 and 30-40 years, whereas 3.3% of study subjects were in the age group of more than 40 years (Table 1). 51.7% of respondents were male. Majority of study subjects (75%) belonged to nuclear families and 25% belonged to joint families. Maximum study subjects (40%) were illiterate, 23.3% were graduate and above, 20.0% were educated up to higher secondary level, and 16.7% were educated up to primary level. Most of the study subjects (66.7%) were unemployed, whereas 20 (33.3%) were employed. Majority of study subjects (78.3%) had a family monthly income of less than INR 30,000, whereas 20.0% had a family monthly income of INR 30000-40000, and 1.7% had a family monthly income of more than INR 40000.

Assessment of Pre-test Knowledge Level of Study Subjects regarding Water Conservation

The present study revealed that in the pre-test, maximum study subjects (55.0%) had poor knowledge, 43.3% had average knowledge, and 1.7% had good knowledge regarding water conservation (Table 2).

Assessment of Post-test Knowledge Level of Study Subjects regarding Water Conservation

The post-test showed that most of the study subjects (51.7%) had average knowledge, 25.0% of study subjects had poor knowledge, and 23.3% had good knowledge regarding water conservation (Table 3).

Effectiveness of Organised Teaching Programme on Knowledge regarding Water Conservation among the People of Soura, Srinagar

The present study showed that the mean pre-test knowledge score of study subjects regarding water conservation was 25.88 ± 5.79 (Table 4). The mean post-test knowledge score was 30.55 ± 6.26. This was higher than the mean pre-test knowledge scores with a mean difference of 4.670, which was found to be significant at 0.05 level of significance.

Association of Pre-test Knowledge Scores regarding Water Conservation among the People of Soura, Srinagar with their Selected Demographic Variables

The present study showed a statistically significant association between the pre-test knowledge scores of study subjects and demographic variables like educational status ($p = 0.000$) and occupation ($p = 0.013$), while no significant association was found between the pre-test knowledge scores of study subjects with other demographic variables like age ($p = 0.438$), gender ($p = 0.273$), type of family ($p = 0.169$), and family monthly income ($p = 0.756$) (Table 5).

Table 1.Frequency and Percentage Distribution of Study Subjects according to Demographic Variables (N = 60)

Variables	Category	Frequency	Percentage
Age (years)	20-30	29	48.3
	30-40	29	48.3
	> 40	2	3.3
Gender	Male	31	51.7
	Female	29	48.3
Type of family	Nuclear	45	75.0
	Joint	15	25.0
Educational status	Graduate and above	14	23.3
	Higher secondary	12	20.0
	Primary	10	16.7
	Illiterate	24	40.0
Occupation	Unemployed	40	66.7
	Employed	20	33.3
Monthly family income (INR)	< 30000	47	78.3
	30000-40000	12	20.0
	> 40000	1	1.7

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Table 2.Frequency and Percentage Distribution of Study Subjects according to their Pre-test Knowledge Score regarding Water Conservation (N = 60)

Pre-test Knowledge Score	Frequency	Percentage
Poor	33	55
Average	26	43.3
Good	1	1.7
Total	60	100

Table 3.Frequency and Percentage Distribution of Study Subjects according to Post-test Knowledge Score regarding Water Conservation (N = 60)

Post-test Knowledge Score	Frequency	Percentage (%)
Poor	15	25
Average	31	51.7
Good	14	23.3
Total	60	100

Table 4.Comparison between Mean Pre-test and Post-test Knowledge Scores of Study Subjects regarding Water Conservation (N = 60)

Knowledge Assessment	Mean ± SD	Mean %	Range	Mean Diff.	Paired t Test	p Value
Pre-test knowledge	25.88 ± 5.793	49.80	18-39	4.670	20.179	< 0.001**
Post-test knowledge	30.55 ± 6.269	58.80	21-44			

** Signifance level at 0.05

Table 5.Association of Pre-test Knowledge Scores of Study Subjects regarding Water Conservation with their Selected Demographic Variables (N = 60)

Variables	Category	Good Knowledge	Average Knowledge	Poor Knowledge	Chi-square Test	p Value	Df	Table Value	Result
Age (years)	20-30	1	12	16	3.771	0.438	4	9.488	Non-significant
	30-40	0	12	17					
	> 40	0	2	0					
Gender	Male	0	16	15	2.594	0.273	2	5.991	Non-significant
	Female	1	10	18					
Type of family	Nuclear	0	21	24	3.552	0.169	2	5.991	Non-significant
	Joint	1	5	9					
Educational status	Graduate and above	1	13	0	50.694	0.000	6	12.592	Significant
	Higher secondary	0	11	1					
	Primary	0	1	9					
	Illiterate	0	1	23					

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Occupation	Unemployed	0	13	27	8.659	0.013	2	5.991	Significant
	Employed	1	13	6					
Monthly family income (INR)	< 30000	1	19	27	1.888	0.756	4	9.488	Non-significant
	30000-40000	0	6	6					
	> 40000	0	1	0					

Discussion

Demographic Variables

The present study showed that 48.3% of study subjects were in the age group of 20-30 years and 30-40 years. Maximum study subjects (51.7%) were male and majority (75%) belonged to nuclear families. Most of the study subjects (66.7%) were unemployed and 78.3% had a monthly income of less than INR 30000.

These findings are supported by a research study conducted by Patidar and Patidar,[6] in which an almost equal number of study subjects (48.3%) were in the age group of 20-30 years and 30-40 years. Maximum study subjects (58.%) were male. Majority of study subjects (62%) belonged to nuclear families. Maximum study subjects (70%) were unemployed, and majority (57%) had a monthly income of less than INR 30000.

Pre-test Knowledge Scores of the Participants regarding Water Conservation

The present study revealed that prior to the administration of the planned teaching programme, maximum study subjects (55.0%) had poor knowledge, 43.3% had average knowledge, and 1.7% had good knowledge regarding water conservation.

Similar to our study, in a study conducted by Patidar and Patidar,[6] in the pre-test, 34% of study subjects had poor knowledge, 66% had average knowledge, and 0% had good knowledge regarding water conservation.

Post-test Knowledge Scores of the Participants regarding Water Conservation

The present study revealed that in the post-test, maximum study subjects (51.7%) had average knowledge, 25.0% had poor knowledge, and 23.3% had good knowledge regarding water conservation.

These findings are similar to those of a research study by Patidar and Patidar[6] which showed that after the administration of the planned teaching programme, 5% of study subjects had poor knowledge, 71% had average knowledge, and 24% had good knowledge regarding water conservation.

Effectiveness of Organised Teaching Programme on Knowledge regarding Water Conservation among the Participants by Comparing their Pre-test and Post-test Knowledge Scores

The present study showed that the mean pre-test knowledge score of study subjects regarding water conservation (25.88 ± 5.79) was lower than the mean post-test knowledge score (30.55 ± 6.26). This shows that there was a significant increase in the post-test knowledge score regarding water conservation which was due to the implementation of the organised teaching programme.

These findings of the present study were similar to those of a study conducted by Patidar and Patidar[6] which stated that the mean post-test knowledge score (15.40 ± 2.22) of subjects was significantly higher than their mean pre-test (9.68. ± 2.22) knowledge score, thereby proving the efficacy of the planned teaching programme.

Association of Pre-test Knowledge Scores of Participants regarding Water Conservation of the People of Soura, Srinagar with their Selected Demographical Variables

A statistically significant association was seen in the present study between the pre-test knowledge scores of study subjects and demographic variables like educational status ($p = 0.000$) and occupation ($p = 0.013$). No significant association was found between the pre-test knowledge scores of study subjects and other demographic variables like age ($p = 0.438$), gender ($p = 0.273$), type of family ($p = 0.169$), and monthly income ($p = 0.0756$).

These findings are supported by a study done by Patidar and Patidar.[6] It showed a statistically significant association between the pre-test knowledge scores of study subjects and demographic variables like educational status ($p = 0.000$) and occupation ($p = 0.010$) while no significant association was found between the pre-test knowledge scores of study subjects and other demographic variables like age ($p = 0.438$), gender ($p = 0.373$), type of family ($p = 0.569$), and monthly income ($p = 0.0756$).

Conclusion

This study showed that the knowledge of people regarding water conservation is inadequate, and considering the importance of water, it is vital to educate them regarding its conservation. One such way of improving their knowledge is an organised teaching programme which proved to be effective in improving the level of knowledge. Thus an effective organised teaching programme must be instituted in communities with a view to making the people knowledgeable about water sources, water pollution, and methods and techniques of water conservation.

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