



## A Comparative study to assess the knowledge regarding water conservation methods among population of rural and urban areas of Guntur District



Assistant Professor,  
**Mrs. J. Anusha,**  
Narayana College of Nursing,  
Nellore, A.P.

**Dr. Indira. S,**  
Principal,  
Narayana College of Nursing,  
Chintharedypalem, Nellore.

**Mrs. V. Jayanthi,**  
Principal,  
Sree Narayana Nursing College,  
Stonehousepet, Chintharedypalem, Nellore.

**Abstract:** Water is the very basis of life and is the foundation for human survival and development. Sustainable and equitable use of water over millennia has been ensured by cultural adaptation to water availability through water conservation technologies, agricultural systems and cropping patterns adapted to different climatic zones, and conservation-based life styles. Aim: The aim of the study was to assess the knowledge regarding water conservation methods among population of rural and urban areas of Guntur district, Andhra Pradesh". Objectives: 1. To assess the knowledge regarding water conservation methods among rural and urban population. 2. To compare the knowledge regarding water conservation methods between the urban and rural population 3. To determine the association between knowledge regarding water conservation methods among rural and urban area population and their selected base line variables. Methodology: A Quantitative non experimental Design was adopted. 150 Male and Female were selected by Purposive sampling technique. Results: In Rural population mean score was 24.53 with standed deviation of 4.63 and In Urban population mean score was 22.79 with standed deviation of 5.64. The obtained calculated 't' value was 1.09, which is less than the table value of 1.96. It determines that there was no significant difference between rural and urban area respondents knowledge regarding water conservation Methods. Conclusions: The present study concluded that urban population had adequate knowledge than rural population regarding water conservation methods. **Keywords: Water conservation, Urban, Rural.**

### Introduction:

Water is essential to life because it heavily influences public health and living standard. However, water is unequally distributed throughout the world. At present, approximately 1.2 billion people live-in areas wherein water is scarce and 1.6 billion people face economic water shortage.

Therefore, the World Health Organization, United Nations Children's Fund, various governments

and public and private sector entities have exerted intensive efforts to provide sufficient water supply to residents, particularly in rural areas in developing countries. Over 2 billion people have gained access to improved water supplies since 1990.

The percentage of the world's population that has access to drinking water has increased from 77% to 89% between 1990 and 2010. This percentage is expected to increase further to 92% by 2015 to meet



the drinking-water target of the Millennium Development Goals, i.e., halve the proportion of the population without sustainable access to safe drinking water (compared to base year 1990) by 2015. Meanwhile, the United Nations estimates that the domestic water consumption of developing countries is expected to increase by over 50% because of improvements in water supply, living standards, and water appliances. As a result, given the unpredictable global demand for water, serious and chronic water shortages may still persist in developing countries.

India is poised to play a major role in the community of nations in the twenty-first century. In order to achieve our potential it is necessary that we eliminate poverty, provide full employment and adequate purchasing power to the people and generate self-confidence among them. The optimum utilization of our water, land and natural resources is extremely important in achieving these objectives. On April 1, 2002 the National Water Resources council met under the Chairmanship of the Prime Minister and adopted the National Water Policy 2002, a revised version of the earlier policy of 1987. The new policy does have a number of positive elements that were not there in the earlier policy. But, in our view, it does not go far enough in preparing the nation for the optimum management of water resources in the 21st century.

At present it is the central and state governments that play the key role in the management of water resources. The policy proposed by us, on the other hand, seeks to involve all the people at the level of the local communities so that they can conserve, develop and manage the water resource at the local level itself. For this purpose the present

organizational structure would have to be suitably restructured.

The research in the present study aimed at assessing the knowledge of people regarding water conservation methods household water use and in general, with the purpose of informing management strategies and enabling successful communication with the public. It focuses on household water use from the householders' perspective, presenting existing and new conservation methods available to conserve water.

#### **OBJECTIVES OF THE STUDY:**

1. To assess the knowledge regarding water conservation methods among rural and urban population.
2. To compare the knowledge regarding water conservation methods between the urban and rural population
3. To determine the association between knowledge regarding water conservation methods among rural and urban area population and their selected base line variables.

#### **MATERIALS AND METHODS:**

Quantitative research approach and comparative research design was used to assess the level of knowledge regarding Water conservation methods among population of rural and urban areas of Guntur district, Andhra Pradesh. Purposive sampling Technique was used to select the sample. The study included the population who was Available at the time of data collection, willing to participate in the study, able to read Telugu or English. The study excluded the population who was not available at the time of data collection, not willing to participate in



the study, mentally and physically challenged.

**DESCRIPTION OF TOOL:**

**Section – A:**

Deals with demographic variables include age, Gender, education, marital status, type of family, size of family, occupation, Income, type of house, ownership of the house, ownership of land, area of residence, information regarding water conservation methods, sources of getting information.

**Section – B:**

It consists of 25 multiple choice questions on knowledge regarding water conservation.

**Score Interpretation:**

The score was interpreted as follows:

High knowledge : 76-100%

Moderate knowledge : 51-75%

Low knowledge : 0-50%

**Data analysis:**

Data was analyzed by using descriptive and inferential statistics. Frequency, percentage, Item analysis, mean, standard deviation and chi-square.

**Results and Discussion:**

Most of the respondents were (47%) of samples in the urban area and (33%) of the samples in rural area belongs to the age group of 20-25 years. Majority (86%) of respondents from urban area were females, (78%) of respondents from rural area.

About (38%) of the respondents were non-formal education in rural area and (54%) were urban area. Just more than (53%) of subjects in the urban area and (51%) in rural area were self employed. About (47%) of the subjects were getting information regarding water conservation methods through print

materials in urban area, (34%) of samples in rural area.

**Table-1 : Distribution of the samples according to the level of knowledge among rural population regarding water conservation methods.**

Level of knowledge	Scores	Fre	Per
High Knowledge	35-40	02	2.6
Moderate Knowledge	22-34	32	45.3
Low knowledge	14-21	41	54.6

**Table-2: Distribution of the samples according to the level of knowledge among urban population regarding water conservation methods.**

Level of knowledge	Scores	Fre	Per
High Knowledge	35-40	12	16
Moderate Knowledge	22-34	30	40
Low knowledge	14-21	33	44

**Table-3: Comparison of the knowledge regarding water conservation methods between the urban and rural population.**

Knowledge of Rural and Urban population	Mean	Mean difference	SD	un paired t-test value
Rural population	24.53	0.73	4.63	t=1.09
Urban population	23.8		3.53	df=148
				P<0.05NS

The obtained calculated ‘t’ value was 1.09, which is less than the table value of 1.96. It determines that there was no significant difference between rural and urban area respondents knowledge regarding water conservation methods. Therefore the research hypothesis H1 was rejected.

**Table 4: Range of score, mean and standard deviation of knowledge of the population in rural and urban areas regarding water conservation methods.**



Reference Group	Maximum score	Range of score	Mean	S.D
Rural respondents	46	12-33	24.53	4.63
Urban respondents		9-34	22.79	5.64

The above table depicts that the maximum score for knowledge variable was 46 and the range of scores for rural population was 12-33, with mean score of (24.53+4.63). While the urban peoples' scores ranged from 9-34 with mean score of (22.79+5.64). This shows that subjects were having below average knowledge regarding water conservation methods in both the areas.

#### **Association between levels of knowledge and socio demographic variables among rural population.**

There was no significant association exist between selected variables and their knowledge which indicates irrespective of age, education and occupation there was not much difference in their knowledge regarding water conservation methods among rural respondents.

#### **Association between levels of knowledge and socio demographic variables among urban population.**

There was significant association between knowledge and their age, (0.017,  $p < 0.05$ ) education (0.043). Whereas there was no significant association found between knowledge and occupation (0.209,  $p > 0.05$ ).

**DISCUSSION:** The discussion of the present study was based on the findings obtained from the descriptive and inferential statistical analysis of collected data. It is presented in the view of the objectives of the study.

That majority 41 (54.6%) of rural subjects were having low knowledge regarding water conservation methods and 30(40%) of urban respondents were having moderate knowledge. There was no significant association exist between selected variables and their knowledge.

**Conclusion:** The present study concluded that the the urban population had moderate knowledge than rural population regarding water conservation methods

#### **REFERENCES:**

1. Liangxin Fan, et al. Public Perception of Water Consumption and Its Effects on Water Conservation Behavior. *Water* 2014 (6); 1771-1784. Also available at [www.mdpi.com/journal/water](http://www.mdpi.com/journal/water).
2. Ellis Adjei Adams. Behavioral Attitudes towards Water Conservation and Re-use among the United States Public. *Journal of Resources and Environment* 2014, 4(3): 162-167
3. Mohammed habi, Omar harrouz. Domestic water conservation and water consumption 2008:11 (2).
4. Sandhya Iyengar. A collection of traditional practices for water conservation and management. *International journal of communication development* 2005; 4(3); 401-410.
5. Anshul Bhutani. Assessment of knowledge level of people regarding rain water harvesting. *International journal of agriculture and veterinary science* 2014; 31-33.

#### **Net reference:**

1. Water conservation. Available at [research-pubs @ uow.edu.au](http://research-pubs@uow.edu.au).
2. Water conservation. Available at [en. Wikipedia.org/wiki/water conservation](http://en.Wikipedia.org/wiki/water_conservation).