

# Efficacy of Planned Teaching on Knowledge Regarding Hazards of Open Defecation among People Residing at Rural Area

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**Abstract:** *Elimination of waste is one of the basic needs of human beings. Unhygienic practices may affect the person's general appearance, body image and may also leads to several infections. It increases the susceptibility to various infections affecting mostly the Intugumentary and gastro-intestinal system. Aim of study was to assess the efficacy of planned teaching on knowledge regarding hazards of open defecation. Methodology- Descriptive Evaluatory approach with one group pre test post test research design was used. at rural area of wardha districts Maharashtra. Sample size was 60 rural people. Non probability convenient sampling technique. Results-In this study 33.3% of them were educated upto primary, 31.7% were secondary educated, 13.3% were educated up to higher secondary and illiterates respectively and only 8.3% of them were graduates. 26.7% of them were residing in Kaccha house, 21.7% were residing in Semipakka house and 51.7% were residing in Pakka house. 63.3% of them were belonging to joint families and 36.7% belonging to nuclear families. There was no significant relationship with demographic variables. The tabulated value for n=60-1 i.e 59 degrees of freedom was 2.00. The calculated value was 53.14 respectively for the knowledge regarding hazards of open defecation. The calculated z value is much higher than the tabulated value at 5% level of significance which is statistically acceptable level of significance. Conclusion - planned teaching on the knowledge regarding hazards of open defecation were effective among the people residing in selected rural area of Maharashtra".*

**Keywords:** Planned Teaching, Knowledge, Open Defecation, Rural Area

## 1. Introduction

Learning is the addition of new knowledge and experience Interpreted in the light of past knowledge and experience. Teaching and learning is an integral part of nursing. Nurses have the responsibility to educate patients related to various aspects and keep themselves updated. Various teaching strategies are used to increase knowledge, such as lecturing, demonstration, discussion and self-education. These methods of self-education has an advantage over the others as the learner can educate himself at his own pace and it also stresses on rereading [1]

Elimination of waste is one of the basic needs of human beings. The term defecation is defined as a bowel movement in which faces are evacuated through the rectum and anus. Open air defecation is passage of stools in an open environment. It is commonly practiced custom in rural areas where sanitation facilities are ignored. Human Excreta in open environment health hazards like Hookworm infestation, Diarrhoea, Cholera, Dysentery and other health problems. As majority (80%) of Indian population leave in villages, the health of rural population reflects the general health of our country. Good sanitation has an important effect on the general health of the rural population as majority of diseases have a direct link with poor sanitation facilities. Public spaces are the areas around us that we can all use and enjoy. The proportions of the daily hours spent by users depend on the type of the space and the purpose for which it is patronized. Public space may be open. [2]

Unhygienic practices may affect the person's general appearance, body image and may also leads to several infections. It increases the susceptibility to various infections affecting mostly the Intugumentary and gastro-intestinal system. So a healthy life style with clean and hygienic condition is required for the promotion of health. [3]

Open field defecation is one of such unhealthy practices which is widely prevalent in rural India. Human excreta is a source of infection which contain pathogenic bacteria, viruses, protozoa, parasites and their eggs. An excreta of a sick person is the main source of infection which contain disease agent. About an estimate of 2.6 billion people or about one third of the global population do not access to proper toilet according to WHO and about 700 million people in India doesn't have access to a proper toilet. Defecating in the open field can contaminate water supply which lead to the spread of diseases such as diarrhoea, worm infestation, killing thousands of people every year. These diseases are not only a burden on the community in terms of sickness, mortality and a low expectation of life, but prevent country's social and economic progress. [4]

When it rains these indiscriminate human wastes are washed into our water bodies which are main source of drinking water for both human and live stock .this inevitably leads to the outbreak of cholera, Diarrhoea and other perilous diseases which have claimed many precious lives in the past and is still claiming the lives of many poor children and adults who cannot afford portable accommodation and hygienic toilet facilities .this will go a long way to retard economic development since lot of money is wasted by the

government in treating more kids to compensate for those who will be lost to preventable sanitation diseases .Most Diarrhoea and cholera yearly. Many children are made orphans, and parents tend to have of our beaches have become unattractive due to open defecation and therefore hardly attract any tourists to such sites. [13]

## 2. Review of literature

Deshmukh, M., & Shinde, M. (2014). Concluded in their study that Structured Education on Knowledge and Practice Regarding Venous Access Device Care was effective among Nurses[5]. Bhudhagaonkar, J., & Shinde, M. (2014). Also concluded that the Structured Education Regarding Menstrual Hygiene Practices was effective among Adolescent Girls[6]. Kadam,A.(2014) found that Structured education programme was highly effective to improve the knowledge score and to improve the attitude score of subjects/ caregiver towards colostomy care of patient [7]. Anjum,S.(2014)conducted study to assess knowledge of contraceptives methods and appraisal of health education among married women and concluded After the health education married women knowledge was improved to 100% about female sterilization followed by condom 99%, skin implants 86%, oral pills 85% and emergency contraceptives 85%.Sociodemographic variable were significantly associated with existing knowledge and level of married women specially age at marriage, age at first child, occupation,, income ,education [8][9]. Babu, R. L. (2014) The findings of the study concluded that care takers had inadequate knowledge regarding non-curative care of terminally ill cancer patients. The planned education programme on non-curative care of terminally ill cancer patients was highly effective in improving the knowledge of care takers regarding non-curative care of terminally ill cancer patients.[10] Shinde,M.(2014) concluded that demonstration regarding feeding of hemiplegic patient among caregivers was effective in increasing the skill of the caregivers regarding feeding of hemiplegic patient [11].

Amarjeeth Singh and Arvinder Kaur Arora conducted a study with an objective of assessing knowledge, attitude and practices of villagers regarding sanitary latrines in North India .This survey was conducted by female social worker in Kheri and Raipur Rani villages of Amabala .The study reveals that fresh open air and opportunity for morning walk were told as main advantages of open air defecation by 51 to 64% responds in 2 villages. Significantly more respondents (30-52%) in kheri told that they were not accustomed to indoor defecation as compared to 15(25%) in raipur rani .more respondents in kheri that is 13-22% told the reason as availability of plenty of space outside of compared to 2(3%) in Raipur Rani. Few respondents (7-9%) told about fear of pit latrines, getting field early. Many respondents felt that it would smell and be filthy if indoor defecation is practiced (29%).Problem of water storage was also told by few respondents (5-9%). [14]

Abel Omoniyi afon, Olajoke abolade and Simon Ayorinde okanlawon, conduced a study in Nigeria with an objective of Users perception of Environmental Hazards and Risk as a

tool in public space management. the survey shows the permanent users (2.08) and lower than that of transit users (2.77).The study conclude that the information obtained on the health hazards and risks ensure that public spaces are safe for every day users. [15]

P.A. Harvey., et al,(2008). Community -Led Total Sanitation (CLTS) is an innovative approach for mobilizing communities to build their own toilets and stop open defecation. First pioneered in Bangladesh in the year 2000. It has now spread across Asia, Africa, Latin America and the Middle East. CLTS avoids upfront hardware subsidies and creates self-awareness about waste product, through facilitation. the articles highlight, the process evokes powerful emotions and often leads to immediate action: people dig and build their own toilets and, more importantly, start using them and thus stop open defecation. [16]

Maharashtra has taken huge strides in rural sanitation in the last four years, largely as a result of adoption of a community-led total sanitation approach, supplemented by two incentive based schemes this incentive has spurred common villagers, panchayat officials and even those in high-ranking positions who belong to these villages, to explore innovative methods to achieve total sanitation in their villages. The five accompanying field notes describe five types innovations, viz., in technology, procurement, community mobilization, monitoring and financing, while this overview note outline the two schemes and their impact, with the objective of sharing this experience with practitioner and policy makers interested in extending the reach of their rural sanitation program. Since-2001, two different programs were introduced with cash prizes as incentives to improve rural sanitation, the Government of Maharashtra introduced the Saint Gadge Baba Swachhta Abhiyan (also known as the clean village campaign or CVC) in 2001and the Government of India introduced Nirmal Gram Puraskar in 2003. The response from villagers across the 34 district of the state has been impressive and dramatic improvements can be seen on the ground. The clean village campaign is not a program or scheme and is, instead, a campaign to educate and motivate rural communities. It offers annual prizes for clean villages in the name of Rashtrasant Tukdojee Maharaj, who spread the message of sanitation through Gramgeeta in all corners of Maharashtra in the early 19<sup>th</sup> century. Each year villages in different gram panchayat are evaluated by a team of experts using a set of criteria, and awarded cash prizes. Villages interested in participating in the competition register and undertake to implement various specified work, using their own resources that lead to an environmentally clean village. Apart from Grampanchayat, Government also awards cash prizes in the name of Mahatma Gandhi to Panchayat Samitis and Zillah Parishads. [17]

Total Sanitation Campaign (TSC) is a comprehensive program to ensure sanitation facilities in rural areas with the broader goal to eradicate the practice of open defecation. To add vigor to the TSC, in October 2003, Government of India initiated an incentive scheme named the 'Nirmal Gram Puraskar' (NGP). NGP is given to those "open defecation free" Nirmal Gram Panchayat, Blocks, and Districts which have become fully sanitized. The incentive provision is for

Panchayat Raj Institutions (PRIs) as well as individuals and organizations that are the driving force for full sanitation coverage. A "Nirmal Gram" is an "Open Defecation Free" village where all houses, Schools and Anganwadi having sanitary toilets and awareness amongst community on the importance of maintaining personal and community hygiene and clean environment [18].

Borban A 'Hagandari Mukt Gaon' Borban is a small community of about 185 families in Sangamner Taluka of Ahmednagar district in Maharashtra. Today the villagers have an air of achievement and confidence about them as all households have constructed individual household toilets. This transformation started with the village actively taking part in the Saint Gadge Baba sanitation campaign and ranked second at the district level competition. However, the practice of open defecation made the village lose valuable points. The village therefore decided to adopt the challenge of ending open defecation in their villages. Each household decided, to construct a household toilet. Since it was the lean period, the people had no financial resources available to buy even the material required for a low cost toilet. The Surpanch of the village immediately agreed to stand guarantee for supply of construction material thus making it possible for the people to purchase on credit from the local market. The district administration exposed them to low cost technology toilets so that everyone can construct toilets according to their paying capacity. The lack of any prescriptive technologies had led to different types of toilets being constructed of varying costs. In fact the villages now impose a fine if anyone is seen to continue the open field defecation/ traditional practice. The community solidarity and status has become a model for the entire district. [19]

### **3. Problem Statement**

"A study to assess the efficacy of planned teaching on the knowledge regarding hazards of open defecation among the people residing in selected rural area of Maharashtra".

### **4. Objectives of the Study**

- 1) To assess the knowledge of people regarding hazards of open defecation.
- 2) To assess the efficacy of planned teaching on knowledge regarding hazards of open defecation.
- 3) To associate the knowledge score with demographic variables.

### **5. Hypothesis**

**H<sub>0</sub>:** There is a no significant difference between pre and post test knowledge score regarding hazards of open defecation which is measured by structured questionnaire at p<0.05 level of significance.

**H<sub>1</sub>:** There is a significant difference between pre and post test knowledge score regarding hazards of open defecation which is measured by structured questionnaire at p<0.05 level of significance.

## **6. Methodology**

Research methodology involves the systematic procedure by the researcher which starts from the initial identification of programme to its final conclusion [12]

### **6.1 Research Approach**

Descriptive Evaluatory approach was used in this study.

### **6.2 Research Design**

In the present study one group pre test post test research design was used.

### **6.3 Setting of the Study**

The study was conducted in rural area of vardha districts Maharashtra.

### **6.4 Population**

In this study the population was the rural people in selected village of Maharashtra. In this study the target population was all the rural people in selected village of Maharashtra.

### **6.5 Sample Size**

In this study sample size was 60 rural people of Maharashtra.

### **6.6 Sampling Technique**

The sampling technique used in the study was non probability convenient sampling.

### **6.7 Criteria for Sample Selection**

#### **Inclusion criteria:**

- The peoples who are residing in rural area.
- The people who are willing to participate in the study.
- Peoples who are available at the time of data collection.
- Peoples who can read and write Marathi language.

#### **Exclusion criteria:**

- Peoples who are using toilets for defecation.

### **6.8 Tool for Data Collection**

a self administered structured knowledge questionnaire was used.

## **7. Method of Data Collection**

### **Phase I**

In this phase, pre-test was conducted by distributing the structured knowledge questionnaire and instructions were given on answering the questionnaire and doubts were clarified. Each client took 10 mints to answer the demographic data and 45 mints to fill the questionnaire.

### Phase II

In this phase, an planned teaching regarding hazards of open defecation was administered to subjects.

### Phase III

In this phase, post-test was conducted on 7<sup>th</sup> day of administration of planned teaching regarding hazards of open defecation. It was conducted by administering the same structured knowledge questionnaire. During the conduction of the study there was no problem aroused and subjects were co-operative to conduct the study.

**Table 1:** Percentage wise distribution of variables according to demographic data, n=60

Variables	Freq.	(%)
<b>Age(yrs)</b>		
5-19	4	6.7
20-40	28	46.7
41-60	27	45.0
> 60	1	1.7
<b>Gender</b>		
Male	56	93.3
Female	4	6.7
<b>Educational Status</b>		
Primary	20	33.3
Secondary	19	31.7
Higher Secondary	8	13.3
Graduate	5	8.3
Illiterate	8	13.3
<b>Occupation</b>		
Laborer	20	33.3
Farmer	17	28.3
Private Employee	13	21.7
Govt. Employee	6	10.0
Unemployed	4	6.7
<b>Religion</b>		
Hindu	34	56.7
Muslim	1	1.7
Christian	0	0.00
Buddhist	25	41.7
Others	0	0.00
<b>Type of house</b>		
Kaccha	16	26.7
Semipakka	13	21.7
Pakka	31	51.7
<b>Type of family</b>		
Nuclear	22	36.7
Joint	38	63.3
<b>Monthly family income(Rs)</b>		
2000-4000	23	38.3
4000-6000	18	30.0
6000-8000	11	18.3
>8000	8	13.3

- The above table regarding demographic variables of age shows that 46.7% of the people belongs to the age group of 20-40 years, 45% were from the age of 41-60 years, 6.7% were from the age of 5-19 years and remaining 1.7% were from the age of > 60 years.
- Distribution of samples according to their gender shows that 93.3% of peoples are male and 6.7% of them were females.
- Distribution of people according to their educational status shows that 33.3% of them were educated up to primary,

31.7% were secondary educated, 13.3% were educated up to higher secondary and illiterates respectively and only 8.3% of them were graduates.

- Distribution of people residing in rural area of Maharashtra according to their occupation shows that 33.3% of them were laborer, 28.3% of them were farmer, 21.7% of them were private employees, 10% of them were Government employees and remaining 6.7% were unemployed.
- Distribution of people residing in rural area of Maharashtra according to their type of house reveals that 26.7% of them were residing in Kaccha house, 21.7% were residing in Semipakka house and 51.7% were residing in Pakka house.
- Distribution of people according to their religion shows that 56.7% of them were Hindus, 1.7% were Muslims, 41.7% were Buddhist and none of them were Christian and others.
- Distribution of people residing in rural area of Maharashtra according to their type of family reveals that 63.3% of them were belonging to joint families and 36.7% belonging to nuclear families.
- Distribution of people residing in rural area of Maharashtra according to their monthly family income (Rs) reveals that 38.3% of the people had income in the range of 2000-4000 Rs, 30% had income between 4000-6000 Rs, 18.3% had income in the range of 6000-8000 Rs and 13.3% of them had income > 8000 Rs.

### Significance of difference between knowledge score in pre and post test in relation to hazards of open defecation n=60

Overall	Mean knowledge score	SD	Mean percentage	Z-value	p-value
Pre Test	7.70	2.70	28.51	53.14	< 0.05
Post Test	21.21	2.01	78.58		

This table shows the comparison of pre test and post test knowledge scores of the knowledge regarding hazards of open defecation. Mean, standard deviation and mean score percentage values are compared and z test is applied. The tabulated value was 1.96. The calculated values was 53.14 respectively for the knowledge regarding hazards of open defecation. The calculated z value is much higher than the tabulated value at 5% level of significance which is statistically acceptable level of significance. In addition the calculated 'p' value for all the area of knowledge regarding hazards of open defecation was p < 0.05 which is ideal for any population. Hence it is statistically interpreted that the planned teaching programme regarding hazards of open defecation was effective. Thus the H<sub>1</sub> is accepted.

## 8. Discussion

Findings of the study were based on the objective of the study. Distribution of people knowledge regarding hazards of open defecation shows that in pre test scores, 58.33% of people were having average knowledge, 31.67% each were having poor level of knowledge and only 1.67% of them had good level of knowledge. But in post test scores 41.67% of people were having good knowledge and 58.33% had excellent knowledge regarding hazards of open defecation.

Based on this finding it is clear that village people will have good and improve knowledge regarding hazards of open defecation ,if they get frequent teaching . Significance of difference between knowledge score in pre and post test regarding hazards of open defecation. Mean, standard deviation and mean score percentage values are compared and z test is applied at 5% level of significance. The tabulated value for n=60-1 i.e 59 degrees of freedom was 2.00. The calculated values were 53.14 respectively for the knowledge regarding hazards of open defecation. The calculated z value is much higher than the tabulated value at 5% level of significance which is statistically acceptable level of significance. In addition the calculated 'p' values for all the area of knowledge regarding hazards of open defecation were 0.001 which is ideal for any population. Hence it is statistically interpreted that the planned teaching programme regarding hazards of open defecation was effective.

## 9. Conclusion

After the detailed analysis, this study leads to the following conclusion:

There was a significant increase in the knowledge of subjects after the introduction of planned teaching. To find the effectiveness of planned teaching z test was applied and 'p' value was calculated, post test score was significantly higher at 0.05 level than that of pre test score. Thus it was concluded that planned teaching on hazards of open defecation was found effective as a teaching strategy.

Demographic variables did not show a major role in influencing the pre test and post test knowledge score among village people. Hence based on the above cited findings, it was concluded undoubtedly that the planned teaching helped the village people to improve their knowledge on hazards of open defecation.

## 10. Scope of Study

### Nursing Implication

The findings of this study have implications for nursing practice, nursing education, nursing administration, nursing research and public health services.

### Nursing Services

The crucial role of the community health nurse is to provide individual, family and community health services to improve the health status of the community for that she should give an adequate attention to their attitude sand practices of the group to modify the behavior. To stop or banning the open defecation practices among the community people consider as a felt need of the community which is acceptable. And Make the community people aware about their health and illnesses through health education, role play, drama, or demonstration and enlighten the facts their ill practice (open field defecation) are accountable for their health problems. Get the active Community participation in awareness program which is easily available in the community which very important everlasting and effective one. Community health nursing personnel's can plan 'health awareness and

healthy practices program' for the school children to modify and change their behaviors through knowledge to create positive attitude towards healthy practices.

### Nursing Education

Currently nursing curriculum mostly emphasize on imparting health information to nursing students by using different teaching methods but In the context of community health nursing it should be based on practical and demonstration method, field visits, field work, health survey, and home visits, community health projects and community health case studies and practical health education in the field etc. needed extensively in term of work and duration of study to expertise the student nurses in community field.

This study will help the student nurses to understand the level of knowledge among community people about hazards of open defecation which help them to educate the community people on preventive aspect of health problems. Open defecation is an evil practice responsible for many Health problems. Community health nurses and health worker educate the people at the peripheral levels, by motivating and interacting them to educational visit can be organized to see the organization of governmental and, nongovernmental scheme.

### Nursing Administration

To insure the better professional standard and nursing services, nursing administrators like district public health nurses, supervisors along with the other health services administrators, can plan to prevent communicable diseases and to improve the health status of the community people through planning and implementation of effective health services. Finding of the study can be used by the nurse administrator, motivator to improve the environmental sanitation and health problems. Nurse administrators can arrange in-service education, workshop, group discussion meeting, and school health programs, in the community and discuss the various policy protocols and other issues related with the health hazards due to open defecation.

### Nursing Research

- The findings of the study have added to the existing body of the knowledge regarding hazards of open defecation.
- Other researchers may utilize the suggestions and recommendations for conducting further study.
- The tool and technique used have added to the body of knowledge and can be used for further references.
- A large scale study can be done for the generalization of the research.

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