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Effectiveness of Information booklet on knowledge regarding ill effects of open defecation among people living in a selected slum area of Indore

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Abstract

Aim: A research was conducted on knowledge regarding ill effects of open defecation among people living in a selected slum area of Indore.

Material & Methods Research Design: In the present study the investigator adopted a pre-experimental design is a research design Setting - The study was conducted in 2 community setting of Indore i.e. Bicholi Hapsi and Hathod. Population - The study population consists of people living in selected slum area in Indore.Sampling procedure - a non-Probability convenient sampling technique sampling size-The sample for this study comprised of 40 people living in selected slum area.

Result & conclusion: was that study to relvel that in the present the level of knowledge of ill effects of open defecation in people are average (80%) and poor is (20%). In the post-test level of knowledge was found to be very good (55%) and average (45%).

Keywords: open defecation, Information booklet, slum area, ill effects

Introduction

Most people who live in India defecate in the open. Most people worldwide who defecate in the open live in India. Open defecation has dire consequences: it kills babies, impedes the physical and cognitive development of surviving children, and reduces the human capital of India's workforce.

The Government of India with help of partners like UNICEF is looking at the challenge of Open Defecation very seriously. The government has a target to make India "Open Defecation Free" by 2019 and UNICEF India is a key partner in its flagship programme to achieve this target through the Swatchh Bharat Mission (SBM). As per the most recent Swachhta Status Report of the National Sample Survey Office (NSSO), in 2015, more than half of the rural population (52.1 per cent) of the country still defecates in open —a major public health and sanitation problem.

The World Health Organization estimates that 2.2 million people die annually from diarrheal diseases and that 10% of the populations of the developing world are severely infected with intestinal worms related to improper waste and excreta management. Human excreta diseases predominantly affect children and the poor.

Eliminating Open Defecation in India by 2 October 2019 – the 150th birth anniversary of Mahatma Gandhi – is one of the key aims of the Swachh Bharat Abhiyan movement launched by Prime Minister Narendra Modi two years ago on Gandhi Jayanti.

As per the most recent Swachhta Status Report of the National Sample Survey Office (NSSO), in 2015, more than half of the rural population (52.1 per cent) of the country still defecates in open —a major public health and sanitation problem.

The World Health Organizations report that 2.2 million people die annually from diarrheal diseases and that 10% of the populations of the developing world are severely infected with intestinal worms related to improper waste and excreta management. Human excreta diseases predominantly affect children and the poor.

Open field defecation may leads to various health problems such as soil pollution, water pollution, contamination of foods and propagation of flies. The resulting diseases are typhoid and Para-typhoid fever, dysenteries, diarrhea, and similar other intestinal infections and parasitic infections.

These diseases are not only a burden on the community in terms of sickness, mortality and a low expectation of life, but a basic deterrent to social and economic progress. Proper disposal of human excreta therefore is a fundamental environmental health service without which there cannot be any improvement in the state of community health.

Objectives

1. To assess the pretest knowledge regarding ill effects of open defecation among people living in selected slum area of Indore.
2. To evaluate the effectiveness of information booklet on knowledge regarding ill effects of open defecation among people living selected in slum area of Indore.
3. To find out the association of pretest knowledge score with their selected socio demographic variables among people living in selected slum area of Indore.

Assumptions

1. The information booklet is an effective strategy for improving the knowledge of slum people regarding ill effects of open defecation.
2. The knowledge of urban slum people regarding the ill effects of open field defecation varies according to the socio-demographic variables.
3. The slum people have inadequate knowledge regarding the prevention of ill effects of open defecation.

Hypotheses

1. **H1:** The mean post-test knowledge score of the people on knowledge regarding ill effects of open defecation is significantly higher than mean pre-test knowledge.
2. **H2:** There will be significant association of pre-test knowledge score with selected socio demographic variable among people living in selected slum area of Indore.

Delimitations

1. Those people who are available at the time of the study.
2. Those people who are not willing to participate

Material and Methods

Research Design

In the present study the investigator adopted a pre-experimental design is a research design

Pre-experimental, one group pre-test, post-test design (01, X, 02) was adopted for the study.

Setting - The study was conducted in 2 community setting of Indore i.e. Bicholi Hapsi and Hathod.

Population - The study population consist of people living in selected slum area in Indore.

Sampling procedure - a non-Probability convenient sampling technique

Sampling size - The sample for this study comprised of 40 people living in selected slum area.

Sample Selection Criteria

Inclusion criteria

- Those sample who are living in selected slum area.
- This study is only limited to 40 peoples.

Exclusive criteria

- Those peoples who are not available at the time of the time.
- Those people who are not willing to participate.

Instrumental Used

Part 1 - Baseline Performa containing demographic characteristics was analysed using frequency and percentage distribution.

Result

The study relvel that in the present the level of knowledge of ill effects of open defecation in people are average (80%) and poor is (20%). In the post-test level of knowledge was found to be very good (55%) and average (45%). Thus the informative booklet regarding knowledge of ill effect of open defecation among people living in selected slum area of Indore.

Conclusion

After the detailed analysis, this study leads to the following conclusions that people living in slum area did not have enough knowledge regarding ill effects of open defecation.

There was a highly significant increase in knowledge of the subjects after giving the booklet, the paired (t) test computed (24. 70) between mean pre-test knowledge score (7.42) and mean post-test knowledge score (15.85) which indicated a high significance.

Sample Characteristics

This section deals with the data pertaining to the sample characteristics of the subjects. It is presented and analysed in terms of frequency and percentage distribution. Table 1 shows the distribution of sample characteristics with respective subject's age, sex, toilets in home, type of family, educational status, family income.

Frequency and percentage of socio demographic among people living in selected slum area of Indore.

Table no. 0.1 Frequency and percentage distribution of sample characteristics (N = 40). Part 2- Structural knowledge questionnerior on ill effects of open defecation.

Table 1: Frequency and percentage distribution of sample characteristics (N = 40)

Sl. No	Demographic variable	Frequency	Percentage
1	AGE IN YEARS		
	I. 21-30 years	14	35
	II. 31-40 years	16	40
	III. 41-50 years	9	22.50
	IV. 51 – 60 years	1	2.50
2	GENDER		
	I.Male	19	47.50
	II. Female	21	52.50
3	TOILET IN HOME	4	10
	I. Yes	6	90
	II. No		

Sl. No	Demographic variable	Frequency	Percentage
4	TYPE OF FAMILY		
	I. Joint family	19	47.50
	II. Nuclear family	21	52.50
5	EDUCATIONAL STATUS		
	I. Primary education	12	30
	II. Secondary education	26	65
	III. Higher education	2	5
	IV. Graduation & above	0	0
6	FAMILY INCOME (Per month)		
	I. Rs.< 2000 /-	7	17.50
	II. Rs.2001 – 5000 /-	27	65.50
	III. Rs. 5001 – 10000 /-	6	15
	IV. Rs. > 10000 /-	0	0

Data presented in table no. 1 reveals that most of the subject 16 were in the age group of 31-40 years, 35% were in the age group of 21 – 30 years, 22.50% were in the age group of 41-50 years &2.50% were in the age group of 51-60 years.

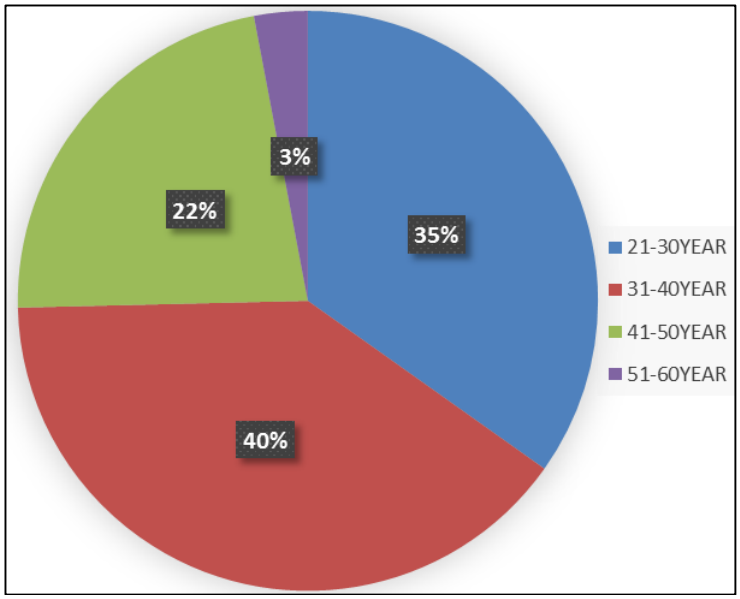
With regards to gender, most of the samples 52.5% are female and 47.5% are male.

Most of the sample have not toilets in their home and only 10% sample have toilets in their home.

52.5% of the sample lived in nuclear family and remaining 47.5% lived in joint family.

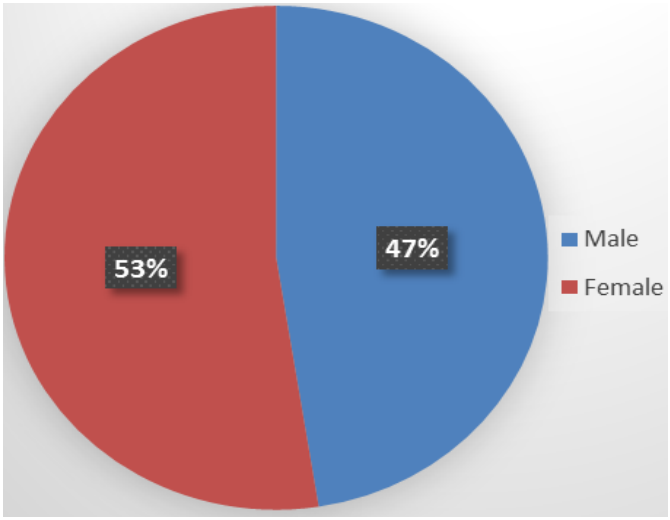
With regards to education , most of the sample 65% had studied upto secondary education, 30% each had primary education, higher education 5% & none of them graduation or above.

Regarding the income of the family 65.5% of the sample had income of between the Rs.2001 to 5000, 17.5% had income of less than Rs.2000, 15% had income between Rs.5001 to 10000 and none of them had income of above Rs.10000.



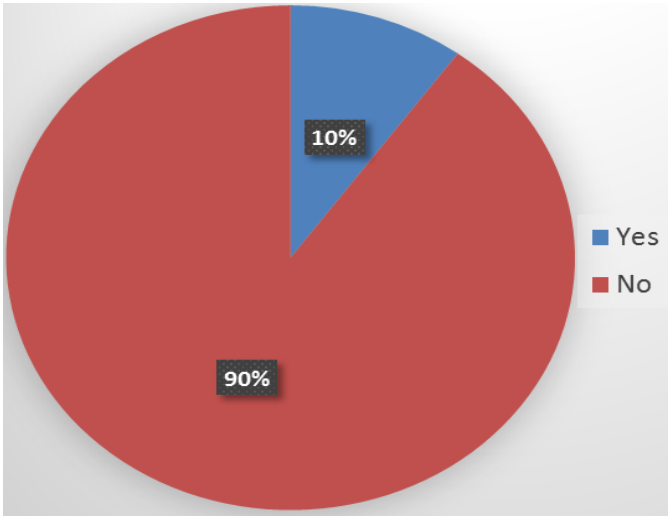
Age in Year

Fig 1: Pie diagram showing percentage distribution of age.



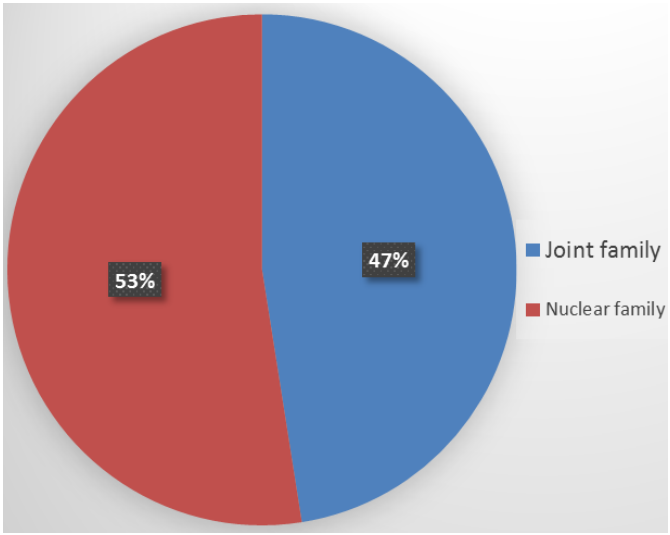
Gender

Fig 2: Pie diagram showing percentage distribution of age.



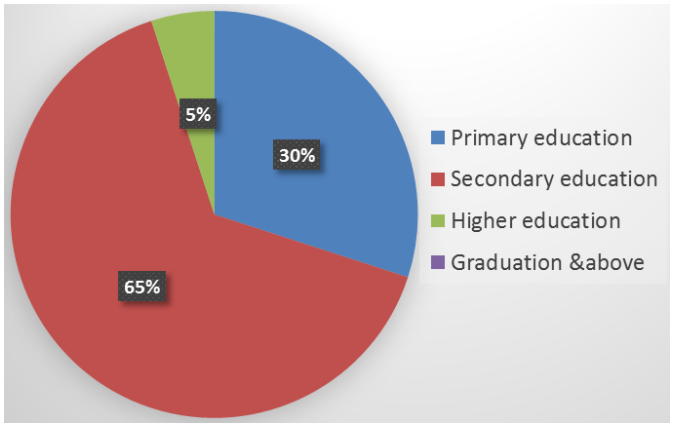
Toilet in Home

Fig 3: Pie diagram showing percentage distribution of toilet in home.



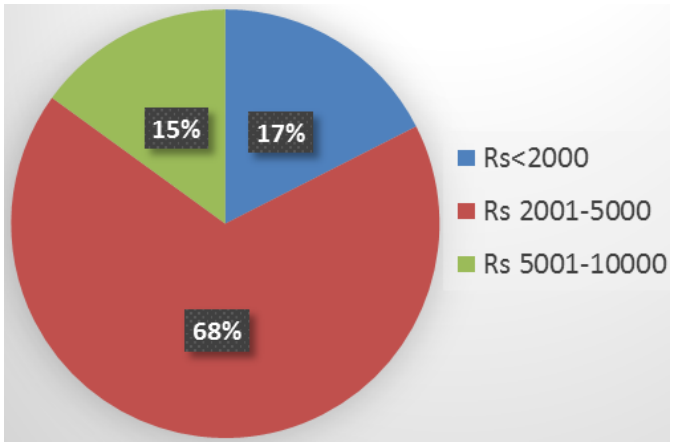
Type of Family

Fig 4: Pie diagram percentage distribution of type of family.



Educational Status

Fig 5: Pie diagram percentage distribution of educational status.



Family Income (per month)

Fig 6: Pie diagram percentage distribution shows of family income.

The pretest knowledge score with their selected socio demographic variables among people living in selected slum area of Indore.

The assessment of existing knowledge was based on broad on broad areas of introduction of open defecation, definition, incidence, causes, ill effects of open defecation,safety impact preventive measures and integrated initiatives.Thepretest knowledge score is represented in Table no. 4.2

Table 4.2: Pretest knowledge score of the sample (n = 40)

Pretest knowledge score	Pre test	
	Frequency	Percentage
16 – 20 (V. good)	0	0%
11 – 15 (Good)	0	0%
6 – 10 (Average)	32	80%
0 – 5 (Poor)	8	20%
Total	40	100%

Pretest mean score = 7.42
S.D. = 1.65

This table shows that 20% of sample had poor knowledge score ranging between 0-5 and 80% sample had average knowledge score ranging between 6 - 10 regarding ill effects of open defecation and none had good and very good knowledge regarding ill effect of open defecation.

Pre test Knowledge Score of the Sample

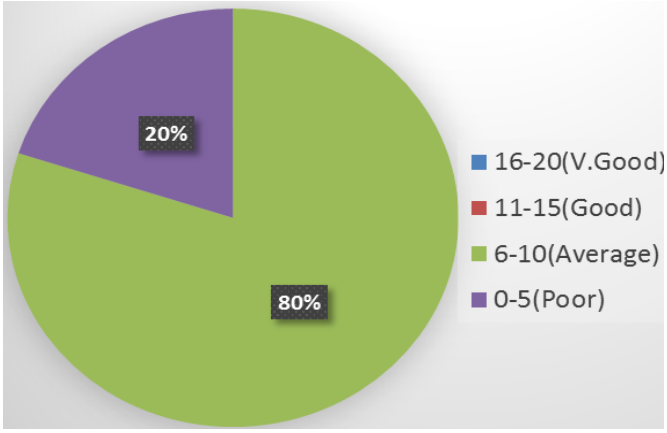


Fig 7: Pie diagram showing percentage distribution of Pretest knowledge score.

Effectiveness of information booklet in terms of gain in knowledge scores.

This section deals with analysis and interpretation of the data in order to evaluate the effectiveness of information booklet in terms of gain knowledge.

Table 4.3: Mean, standard deviation and 't' value of pretest and posttest knowledge score (N=40)

Knowledge score	Mean	Standard deviation	Mean difference	't' value
Pretest	7.42	1.65	8.43	24. 70
Posttest	15. 85	1.91		

Df- P > 0.5

The data presented in Table No.4.3 shows that the mean posttest knowledge score (15.85) is apparently higher than the mean pretest knowledge score (7.42). The dispersion of pretest scores (SD=1.65) is more than that of their post – test scores (SD=1.91) and the Computed't' value shows that there is a significant difference between pretest and posttest mean knowledge score (t=24.70). This indicates that Information Booklet was effective in increasing the knowledge of people living in selected slum area of Hathod. Thus the hypothesis that there will be significant increase in mean posttest knowledge score than mean pretest knowledge score is accepted.

Mean of Pretest and Posttest Knowledge Score

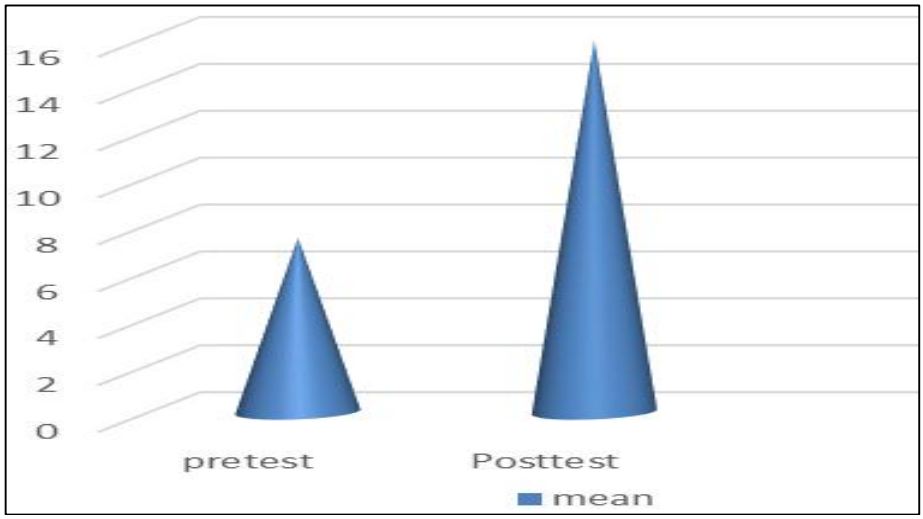


Fig 4.8: Bar graph showing mean of pretest and posttest knowledge score.

Table 4.4: Grading of sample based on pretest and post-test knowledge score (N = 40)

Score	Grading	Pretest		Posttest	
		Frequency	Percentage	Frequency	Precentage
16-20	V. Good	0	0%	22	55%
11-15	Good	0	0%	18	45%
6-10	Average	32	80%	0	0%
0-5	Poor	8	20%	0	0%

Data in the above table No. 4.4 shows that maximum number of people had increased knowledge as seen in post-test. In pretest 0 % had scores between 16 -20 as compared to 55% % in post-test. 45% had good Knowledge scores between 11 - 15 in post-test while only 0 % had good score in pre-test. 80 % had pre-test score of average that is between 6-10 and 20 % had pretest score between 0-5 i.e poor while none of the partcipants had average and poor scores.

Comparision between Knowledge Test Scores

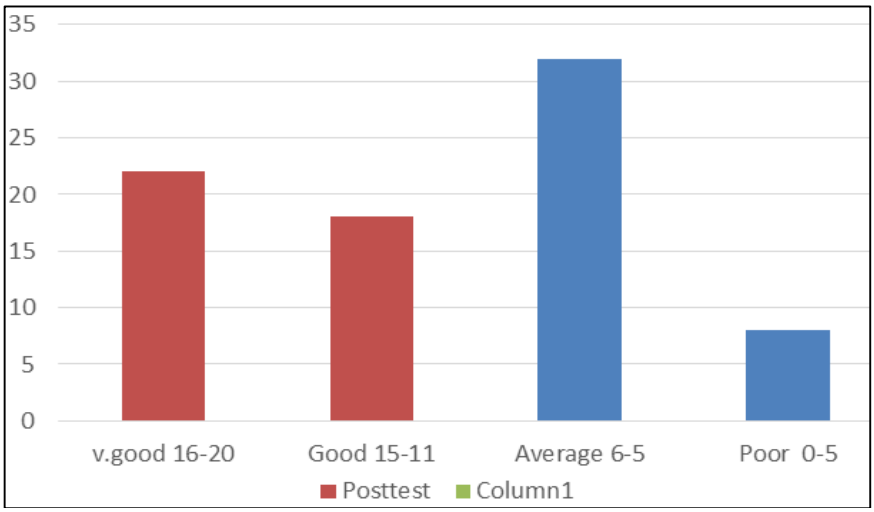


Fig 4.9: Bar Diagram showing categorical comparison of knowledge scores between Pre Test and Post Test.

Association between Pre Test Knowledge Score and Selected Demographic Variables.

Table 4.5: Chi-square value showing association between pretest knowledge score and selected demographic variables.

Marks		0-5 (poor)	6-10 (average)	11-15 (good)	16-20 (v. good)	Df	X2 Value
Age in years	21-30	2	13	0	0	3	1.66
	31-40	3	12	0	0		
	41-50	3	6	0	0		
	51-60	0	1	0	0		
Gender	Male	5	14	0	0	1	.88
	Female	3	18	0	0		
Toilet in home	Yes	2	2	0	0	1	2.5
	No	6	30	0	0		
Type of family	Joint family	6	15	0	0	1	2.02
	Nuclear family	2	17	0	0		
Educational status	Primary education	3	10	0	0	3	1.44
	Secondary education	4	21	0	0		
	Higher education	1	1	0	0		
	Graduation &above	0	0	0	0		
Family income	Rs<2000	3	6	0	0	3	2.5
	Rs2001-5000	5	20	0	0		
	Rs5001-10000	0	6	0	0		
	Rs>10000	0S	0	0	0		

*=Not significant at p <0.05 level
**= Significant at p <0.05 level

The data in table 4.5 depicted the computed chi-squares values between pretest knowledge score and the demographic variables indicated that there is no significant association between Gender, Toilet in home, Type of family, Family income, age and educational status.

Summary

This chapter has dealt with the analysis and interpretation of data collected from 40 peoples of 21-60 age group of selected slum area Hathod Indore. Descriptive and inferential statistics were used for analysis. It was found that mean post test score

of people was higher than the mean pretest knowledge score. The 't' value computed('t' 40 24.7)showed significant differences suggesting that the Information Booklet regarding ill effects of open defecation among people of selected slum area (21-60years) was effective in increasing the knowledge of people of selected slum area (21-60 years).

Discussion

In this chapter findings of the study are discussed in line with objective, review of literature, hypothesis in relation to similar studies conducted by other researchers. Discussion of finding is based on the sample characteristics, knowledge of people living in selected slum area, effectiveness of information booklet, association of knowledge and selected demographic variables.

The main aim of this study was to assess the knowledge and effectiveness of information booklet regarding awareness for knowledge and effectiveness of information booklet regarding ill effects of open defecation in selected slum area.

Pre-test knowledge score of people regarding awareness of ill effect of open defecation.

The finding showed that people living in slum area had inadequate knowledge regarding ill effect of open defecation. The total mean score secured by the people are 7.42 on a scale 1-20.

The finding showed that 80% respondent had average and 20% respondent had poor knowledge.

The finding showed that pre-test knowledge was inadequate in people living in slum area, regarding ill effect of open defecation.

It is found that the people living in slum area had poor knowledge regarding ill effect of open defecation. Thus there was a need to educate the people living in slum area improve their knowledge and thus to decrease the occurrence of open defecation.

Effectiveness of information booklet regarding awareness of ill effect of open defecation.

Pre-test knowledge score of 8 respondents was limited to 0-5 score (poor) 32 respondents had average knowledge and score between 6-10 score regarding ill effect of open defecation and none of the respondent had good or very good score.

In the post-test 22 respondent (55%) had scored between 16-20 score i.e. very good and 18 respondents (45%) had scored between 11-15 score i.e. good and none of the respondent had scored less than 10 score.

The mean post-test knowledge score (15.85) is higher than mean pre-test score (7.42). The result shows that information booklet was effective in increasing the knowledge score regarding ill effect of open defecation among people living in slum area. And thus the research hypothesis was accepted.

Further to know the statistical significant between pre-test and post-test knowledge score.t value ('t'39 =24.70 p <0.001)showed that there was a highly significant difference between pre-test and post test score.

On the whole the study showed that information booklet is an effective teaching strategy.

Association between pre-test knowledge and selected demographic variables

In order to find the relationship between pre-test knowledge and selected demographical variables chi-square test was used.

The findings on relationship of selected demographical variables to people living in slum area ,pre-test knowledge score regarding ill effect of open defecation, shows that there is very less relationship between some of the parameter.

With regard to age 35% were in the age group of 21-30 year, 40 % were in the age group 31-40 year, 22.5% were in the age group 41-50 year and 2.5% were in the age group 51-60 year and there was no significant association between age and pre-test score. The value chi-square is 1.66 which shows insignificance of association ($p < 0.5$).

47.5% were male and 52.5 % are female. The gender has no significant association with pre-test knowledge score. The value chi-square is 0.88 which shows no significance of association ($p < 0.05$)

10% were having toilet in home and 90 % are not having toilet in home. Toilet in home has no significant association with pre-test knowledge score. The value chi-square is 2.5 which shows no significance of association.

47.5% were living in joint family and 22.5% in nuclear. Type of family has no significant association with pre-test knowledge score. The chi-square value is 2.02 which shows no significance of association.

30 % were educated up to primary education, 65% were in secondary education, 5% were in higher education and none of samples were educated up to graduation and above. Significant relationship was observed between educational status and pre-test score. The chi-square value is 1.44 which shows no significance of association.

Regarding the income of family 17.5% of the sample had income of Rs>2000, 65.5 % had income between Rs 2001-5000, 15% had income between Rs 5001-10000, and none of the samples had income Rs> 10000. The value chi-square is 2.5 which shows no significance of association. ($p < 0.5$).

A hypothesis was formulated that mean post-test knowledge score of the people living in slum area regarding ill effect of open defecation will be significantly higher than mean pre-test knowledge score.

The finding of the present study showed that mean post-test knowledge score (15.85) is higher than mean pre-test knowledge score (7.42).Hence the research hypothesis is accepted.

This indicates that information booklet is effective in increasing the knowledge score among people living in slum area for the ill effect of open defecation.

Summary

Summary including objectives, hypothesis, assumption, tools used for the study and the finding of the study. Open defecation in slum is a human development emergency that is causing infant death, child stunting &widespread infectious disease.

Hence the investigator took up this challenge to assess effectiveness of information booklet regarding ill effect of open defecation among the people living in slum area.

This study made use information booklet to improve the knowledge of people living in slum area. Information Booklet is one method which is adopted to improve knowledge regarding ill effect of open defecation among people living in slum area.

Problem statement

A Pre - experimental study to assess the effectiveness of information booklet on knowledge regarding ill effects of open

defecation among people living in a selected slum area of Indore.

Objectives of the study

1. To assess the pre-test knowledge regarding ill effects of open defecation among people living in slum area.
2. To evaluate the effectiveness of information booklet on knowledge regarding ill effects of open defecation among people living in slum area of Indore.
3. To find out the association of pre-test knowledge score with their selected socio demographic variables among people living in slum area of Indore.

In order to examine the effective of information booklet a hypothesis was formulated that there will be significant increase in post-test knowledge score than pre-test knowledge score.

Information booklet regarding ill effects of open defecation among people living in slum area.

The conceptual frame work of the study was based on the concept of the Hilda Taba model.

The variables in this study were

Independent variable

In the present study the independent variable is the information booklet regarding ill effects of open defecation among people living in slum area.

Dependent variable

In the present study depended variable refer to the knowledge regarding ill effects of open defecation.

This study made use of an evaluation approach with pre experimental one group pre-test and post-test research design. The population of the study consisted of people living in slum area i.e. Bicholihapsi and Hathode, Indore. Purposive sampling technique was utilized to selected 40 people living in slum area based on certain predetermined criteria.

The investigator prepared a structured knowledge questionnaires consisting of 20 question to assess the knowledge of people living in slum area.

2 Experts did the validation of the tools and information booklet. Pre-test and reliability of the tools and were established prior to the pilot study. Reliability of the tool was found to be r= 0.88

Pilot study was conducted 8 people living in slum area, this gave a basis for investigator to conduct the main study. The main study was conducted on 40 people living in Hathode. The duration of the study was from 27/2/2017-6/3/2017.

Sample were selected by convenient sampling technique. Structured knowledge questionnaires was used to collect data.

Then pre-test was done using structured knowledge questionnaires following the pre-test the information booklet was given to the people living in slum area .On the 7th day post test was conducted using the same structured knowledge questionnaires.

The data obtained were analysed in term of the objective and hypothesis using descriptive and inferential statistics.

Area wise distribution of mean scores also show that there is significant in all the area, thus the information booklet is effective in improving the knowledge of ill effects of open defecation.

The finding of the study proved that the people having inadequate knowledge regarding ill effects of open defecation. The mean pre-test knowledge score was 7.42 and the mean post-test knowledge score was 15.85 .Thus we can say that the introduction of information booklet was effective in terms of gain in knowledge and the finding showed that it was statistically highly significant at $p< 0.001$ level.

On the whole carrying out the present study was really an enriching experience to the investigator. It also helped a great deal to explore and improve the knowledge of the research and respondents. The constant encouragement and guidance of the guide cooperation and interest of the respondents to participate in the study contributed to the fruitful completion of the study.

Conclusion

After the detailed analysis, this study leads to the following conclusions that people living in slum area did not have enough knowledge regarding ill effects of open defecation.

There was a highly significant increase in knowledge of the subjects after giving the booklet, the paired (t) test computed (24. 70) between mean pre-test knowledge score (7.42) and mean post-test knowledge score (15.85) which indicated a high significance.

Thus, it is concluded that the information booklet regarding ill effects of open defecation is effective as teaching strategy. Selected demographic variables do not show a major role in pre-test knowledge score. Hence, on the basis of above cited finding, it could be concluded undoubtedly that the written material prepared by the investigator in the form of information booklet helped the people in selected slum area to improve their knowledge, will also serve as a ready reference for the subject.

Recommendation

On the basis of the finding of the study, it is recommended that,

1. A similar study can be replication on a large sample so that the finding can be generalized.
2. A comparative study may be conducted to find out the effectiveness between information booklet and planned teaching programme regarding the same topic.
3. A study can be conducted to assess long term effects of information booklet in people living in slum area.
4. An exploratory study may be conducted to identify the attitude and self-care practices of people regarding ill effect of open defecation.

Implication

The finding of this study have implication for nursing practice, education, nursing administration and nursing research.

Nursing Practice

Information booklet is an effective way of delivering knowledge to people living in slum area. Nurses can use this information booklet to distribute and circulate among the people living in slum areas.

All the people living in slum area can be provided with a copy of information booklet that may help them for independent learning to improve their knowledge regarding ill effects of open defecation.

Nursing Education

Nurse education can use and develop newer effective teaching strategies and enhance the psychometric domain of learning among nursing students in clinical pratice. Nursing education is

another important area of nursing research where nurse researchers try to generate or refine ideas or refine the knowledge which is useful to improve the teaching method and environment in nursing discipline. The information booklet can be used by the nursing students in clinical as well as community setting to promote learning and spread prevention strategy in the community.

Every students should be encourage to teach the people regarding ill effects of open defecation. Nursing students should be trained to acquire the knowledge and skill in assessing the learning needs of people in community and plan out teaching programme based on the same in the hospital and community setting.

Nurse Administration

Nurse administration should take an initiative in creating policies or plans in providing education to the patient during their hospital stay and the time of the discharge. This study will help nurse administrators to sees the organizational structure, community the finding and evaluate the practice .In addition it will help administrator in developing new knowledge or refining the old knowledge regarding nursing administrative phenomenon. They should plan for manpower, money, material, methods of time to conduct successful patient's education programmes. Health administrator should assign the staff to conduct health teaching in the hospital.

Nursing Research

The study throws light on the knowledge of ill effects of open defecation among people living in slum area. There is lot of scope for exploration in this area. There is a need for extended and extensive research to assess the knowledge regarding ill effects of open defecation, in different aspects like integrated initiatives, prevention etc. Research can be conducted to detect the attitude and practices of the people living in slum area about ill effect of open defecation.

5.6 Limitation

The few limitation of the study are listed below:

1. Those sample who are living in slum area.
2. This study is only limited to 40 peoples.
3. Sample who are willing to participate.

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