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Impact of Educational Intervention on Knowledge Regarding Household Waste Management among Urban Adults

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Abstract

Background: Household waste management is the process of collecting, transporting, processing or disposing, managing and monitoring waste materials. By properly managing them, many illnesses can be prevented.

Objectives: Are to assess the pre-test knowledge on household waste management among adult in selected urban community, to assess the impact of educational intervention on knowledge regarding household waste management, to associate the knowledge with socio demographic variables.

Methods: Pre experimental one group pre-test post-test design. Non Probability convenient sampling was used and 50 subjects were selected. Data was collected and analysed by using descriptive and inferential statistics.

Result: This study explained that in pre-test only 5 (10%) subjects had adequate knowledge, after education maximum samples knowledge improved 40 (80%). There was significant difference between pre-test and post-test scores as the 't' value is higher than the tabulated value in the 'p' value at 0.05 level of significance.

Conclusion: These study findings indicated that, people need proper education on waste management.

Keywords: Household waste management, Materials; Illnesses; Urban community; educational intervention.

INTRODUCTION

One of the most significant environmental issues facing the globe today is waste management. Inadequate waste management leads to the reproduction of infectious diseases, such as plague and cholera. Waste disposal is the process of taking apart, destroying, or storing damaged, used, or undesirable items. This might include packing waste (made of glass, paper, or plastic), as well as waste from homes, businesses, or farms. A study population consisting of 125 rural families selected. The study shows how important it is for individuals to be aware of proper trash management and disposal practices. to evaluate the residents of the Kaiparambu panchayat's knowledge, attitudes, and practices surrounding the disposal of household garbage. The survey involved 125 homes from the Kaiparambu panchayat in Thrissur, Kerala. Simple Random sample was the sample strategy employed in the investigation. A

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questionnaire given by the interviewer was used to collect information on the knowledge, attitudes, and practices of the Kaiparambu Grama Panchayat about household management. 125 households were surveyed by the interviewer. 62 (49.6%) and 63 (50.4%) males completed the questionnaire. Approximately 101 (80.8%) individuals are unaware of the waste minimization principle. Merely 58 (46.4%) individuals are aware of garbage segregation. Seventy – two percent or about 88 individuals, dispose of their household waste outside. Approximately 103 (82.3%) individuals think that outlawing plastic will help reduce plastic waste.[1]

Solid waste generation and poor management represent a global concern. By 2050, trash production is expected to rise by 3.40 billion tons annually. In an academic public health institution in Mexico, this study evaluated the effects of an environmental education intervention (EEI) designed to lessen waste generation and promote pro-environmental behavior. The EEI was put into practice over a 20-month period utilizing a behavior change methodology. Qualitative results indicated a connection between recycling and being a position of authority within the organization. They also showed that a significant portion of the observed impact was attributable to the infrastructure that was in place for waste separation. Through actions focused on institutional policy components, community practice, and physical structure, the EEI enhanced participants' pro-environmental behaviors and perceptions.[2]

There were one hundred households in the rural area where a cross-sectional survey was conducted. The information was gathered by asking respondents directly about their regular waste disposal practices and using a pre-tested questionnaire. The majority of respondents (72.0%) knew that poor wastedisposal has negative effects, whereas 28.0% did not know. 95.0% of people view disposing of rubbish well. In terms of waste disposal practices, the majority of respondents (52.0%) had subpar methods, while 41.0% had satisfactory practices.[3]

Need for the study

2.6 billion People worldwide do not dispose of their waste in an appropriate manner. Numerous health issues are associated with the 1.1 billion individuals who still dispose of their waste in open areas. Approximately 450 metric tons of solid waste are currently produced in Kathmandu each day, according to the Central Bureau of Statistics. This study's goal was to evaluate middle-aged adults in Banepa Municipality's knowledge and practices around household waste management. Sixty participants participated in a descriptive cross-sectional study that used a non-probability purposive sample technique. Pre-tested (r=0.85) face-to-face interview schedules with semi-structured and structured Nepali version questionnaires were used to gather data. The majority of respondents had solid behaviors but low levels of knowledge, according to the study's findings. According to the study's findings, family members of the community can benefit from a variety of awareness initiatives that aim to avoid various diseases, hence improving household waste management.[4]

In small and large towns alike, the current creation of Indian municipal solid waste ranges from 100 to 500g/person. Just 13–20% of this are made of recyclable materials. Therefore, it is crucial to develop constructive behavioral modifications for home garbage management. Appropriate waste management is essential for both environmental and human safety. We can alter people's health-related behaviors by educating them.

Statement of the problem

Impact of educational intervention on Knowledge regarding household waste management among adults residing in selected urban community.

OBJECTIVES

1. To assess the to assess the pre-test knowledge regarding household waste management among adult in selected urban community.
2. To assess the impact of educational intervention on knowledge regarding household waste management.
3. To associate the knowledge regarding household waste management with socio demographic variables.

Hypothesis

H_1: There is a significant increase in level of knowledge score on household waste management among adults after educational intervention.

H_2: There is a significant association between the pre-test knowledge scores with selected socio demographic variables.

Assumption

- Adults of urban community may have inadequate knowledge about household waste management.
- Educational intervention may improve the knowledge on household waste management.

Delimitations

1. The study is delimited to only the adults of selected urban community area at Deoria.
2. A sample of 50 primary school children selected.
3. The study is delimited to the information obtained through questionnaire developed by the investigator.

Sample selection criteria

Inclusion Criteria

1. Adults who are willing to participate in the study.
2. Adults who are can read/write and understanding Hindi language.

Exclusion Criteria

Adults who cannot follow the instructions.

Adults who are not available during the data collection time.

METHODOLOGY

The research approach used in study was quantitative approach. The investigator adopted a pre-experiment alone group pre-test post-test design. 50 adults were selected from urban community in Deoria district. Samples were selected through non probability convenient sampling technique. Self-administered questionnaire was used to assess the Knowledge. It consists of 30 multiple choices related to household waste management. Validity of the tool was established in consultation with guide and experts from the field of Community Health Nursing. After obtaining consent data was collected, education given and post test conducted.The collected data was organized and tabulated for analysis.

RESULTS

Table 1: Frequency and percentage distribution of knowledge among the children

N=50

	Pre-test		**Post-test**	
Level of knowledge	**frequency**	**Percentage**	**frequency**	**Percentage**
Inadequate	34	68	3	6
Moderate	11	22	7	14
Adequate	5	10	40	80

The above table 1 showed the Frequency and percentage distribution of knowledge level among adult and the finding revealed that after teaching 40(80%) of students had adequate knowledge about household management.

Table 2: Impact of educational intervention on knowledge regarding household waste management

N-50

Aspects	**Standard Error mean**	**Mean**	**SD**	**df**	**Students paired t-test**
Household waste management basics	.362	2.980	2.559	49	8.233 P<0.05; S
Type of wastes	.291	2.800	2.060	49	9.610 P<0.05;S
Problem related to wastes	.224	1.660	1.586	49	7.402 P<0.05;S
Management of wastes	.545	5.680	3.857	49	10.414 P<0.05;S
Overall	1.256	13.120	8.882	49	10.445 P<0.05;S

The above table reveals that there is significant difference between pre-test and post-test scores as the "t" value is higher than the tabulated value in the p value at 0.05 level of significance. It shows that there is a significant impact on the administration of educational program.

DISCUSSION

The results of this survey revealed that a maximum of 15 samples (30%) were older than 31 years old; 18 samples (36%), were married; 20 samples (40%) were Hindu, and the majority of them worked for private companies; 41 samples (82%), had individual homes; and so on. Only 5 (10%) of the samples in the pre-test had sufficient knowledge, whereas 40 (80%) of the samples in the post-test had sufficient knowledge following the teaching intervention, demonstrating the effectiveness of the intervention.

The findings also explained that there is significant difference between pre-test and post test scores as the "t" value is higher than the tabulated value in the 'p' value at 0.05 level of significance. Hence, there is a significant impact on the administration of teaching intervention. Therefore, H_1 Hypothesis is accepted at 0.05 level of significance.

In Kenya, a similar study was carried out to evaluate the success of a planned awareness program regarding the health risks associated with household garbage. The survey included 100 residents of Mutomo town. To get the data, in-depth interviews were conducted. N Vivo and theme analysis were used to analyze the transcription. Every sample showed a favorable attitude about recycling, reusing, and gathering garbage. The mean post-test knowledge score differed significantly from the mean pre-test knowledge score. The calculated "t" value demonstrated the importance of the intended teaching awareness program's success in raising awareness.[5]

The chi-square shows that sociodemographic factors like family size and type and knowledge scores are significantly correlated with post-test scores since the chi-square value is greater than the tabulated value at the 0.05 level of significance ($p<0.05$). Therefore, the H_2 is approved.

CONCLUSION & SUMMARY

The study concluded that adult of selected urban community area needs proper education about household waste management. The main outcome of the study is that after educational intervention knowledge was dramatically increased. Hence proper education is mandatory for proper disposal of waste.

Recommendations

- Similar study can be conducted with the more samples to validate and generalize the findings.
- The study can be conducted as a true experimental design and as comparative study with various IEC materials.
- A descriptive study can be done to assess the public perception about the household waste management.

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REFERENCES

1. Charles Chacko Porathoor. Knowledge, attitude and practices towards householdwaste management in kaiparambu panchayat of Thrissur District. Indian Journal of Applied Research. Volume - 10 | Issue - 11 | November – 2020.
2. P. Torres-Pereda *et al.* Impact of an intervention for reducing waste through educational strategy: A Mexican case study, what works, and why? August 2020. Waste Management 114(1):183-195. DOI:10.1016/j.wasman.2020.06.027
3. Shahzadi A, Hussain M, Afzal M, Gilani SA. Determination the Level of Knowledge, Attitude, and Practices Regarding Household Waste Disposal among People in Rural Community of Lahore. Int J Soc Sci Manag. 2018 Jul 27;5(3):219–24.
4. Knowledge and Practice Regarding Household Waste Management among Middle Aged Adult People of Banepa Municipality. December 2022. Nepal Medical College Journal 24(4):311-315. DOI:10.3126/nmcj.v24i4.50585
5. Selin E. Umea University, solid waste management and health effects. A qualitative study on awareness of risks and environmentally significant behavior in Mutomo, Kenya. Degree Thesis in Environmental and Health Protection 15 ECTS.