

Original Research Article

Effectiveness of child to parent educational package in terms of knowledge among adolescents and practice among their parents regarding household waste disposal methods

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Received: 10 January 2021

Revised: 03 March 2021

Accepted: 05 March 2021

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ABSTRACT

Background: The clean environment not only promotes good health but also enhances the quality of life. Waste management is one of the most concerning issues among developing countries like India. Poor waste management is harmful not only for our environment but it also affects human health. For many infectious diseases like diarrhea, dengue, flu, cholera, etc. The main cause is improper waste management. The largest part of municipal waste is household/ domestic waste hence, it is important to manage waste at a primary source that it household waste.

Methods: A quasi-experimental design with quantitative approach was undertaken for the study. Total 103 adolescents who was studying in 6-12th standard in Government Inter College Badowala, Doiwala Block (Dehradun) and their parents were selected as study participants by using a systematic random sampling technique. For data collection Demographic tools, structured knowledge questionnaire and self-reported practice checklist were administered. Data was collected from 17 December to 30 December, 2019. Data were analyzed using descriptive statistics.

Results: The present study revealed that 90.2% of adolescents had average knowledge but it was surprising to note that very less (32%) parents had good practice regarding household waste management. After providing education to adolescents regarding household waste disposal methods there was a significant increase in mean posttest knowledge score (20.84) than the mean pretest knowledge score (13.55) of adolescents. The mean posttest practice score-II (9.17) was higher than mean post-test practice score -I (7.55) after children were educating their parents. There was a significant association of pretest knowledge with the type of house and number of people live in house of adolescents.

Conclusions: The study concluded that child to parent educational package is an effective intervention to improve the knowledge of adolescents and the practice of their parents regarding household waste disposal methods.

Keywords: Adolescents, Child to parent educational package, Household waste disposal methods, Knowledge, Practice, Parents

INTRODUCTION

A clean environment not only promotes good health but also enhance the quality of life.¹ According to WHO (2016) 13 million people die yearly due to environmental issues that can be prevent and it was estimated that 24%

disease burden and 23% of total deaths across the world are due to environmental elements.² The waste management refers to the steps of process which starts with a collection of waste, segregation of waste, storage of waste, transportation followed by its treatment and at the end its disposal. Lack of proper collection and poor

transportation leads to the accumulation of waste here and there.³ In India average waste per person per day is about 450 grams.⁴ The current scenario in India regarding solid waste generation is around 42 million tons annually that is a very stressful challenging issue regarding waste management of the country.⁵

Bhattacharjee et al conducted an interventional study to assess the knowledge and practice on disposal of waste among people of Marjiani, Assam. The result shows that people have poor knowledge and adopting wrong practice regarding household waste management. So there was need of awareness regarding the correct practice of household waste management.⁶

Objectives of the study were to assess the effectiveness of child to parent educational package in terms of knowledge of adolescents regarding household waste disposal methods, to assess the effectiveness of child to parent educational package in terms of practice regarding household waste disposal methods among their parents, to find association between level of knowledge with their selected demographic variables and to find association between level of practice with their selected demographic variables.

METHODS

A keeping in mind the nature and objective of the study, quantitative research approach with quasi-experimental research design was adopted. By using systemic random sampling technique 103 adolescents (11-16 years) studying in 6-12th standard in Government Inter College Badowala, Doiwala Block (Dehradun) and their parents, was selected as study participants. Consent from each parent and assent from every adolescent was obtained before collecting data.

On day first pretest knowledge of adolescents were assessed by structured knowledge questionnaire, on the same day educational package was administered to adolescents and instructed them to teach the same to their parents in homes. Post-test was collected after one week from adolescents. Post-test 1st of parents were also collected to assess the practice of household waste disposal methods by using self-reported practice checklist. Post-test 2nd was collected after 30 days of post-test 1st by using same tool. Ethical Committee permission was obtained from the concerned Institutional authorities. Analysis was done using SPSS version 20 d.

RESULTS

Data presented in Table 1 show that mostly adolescents (55.3%) were in the age group of 14-16 years and 58.3% adolescents were male 0.53.8% of adolescents was studying in 6-9 standard. Majority (73.85%) of the participants were living in pucca house. About (68.9%) participants had previous knowledge about household waste disposable methods and 59% adolescents received

information through mass media. Table 2 shows that only 63.1% fathers were in the age group of 36-45 and 52.4 % fathers were higher secondary pass-out. Most of the mother (74.8%) belongs to 31-40 years of age and 48.5% mothers had completed their higher secondary education. All of parents were waste handlers. All of parents had previous knowledge about household waste management and 55.4% parents got information from other source of information like family members and friends.

Table 1: Socio demographic variables of adolescents by frequency and percentage (n=103).

Variables	Frequency	Percentage
Age (in years)		
11-13	46	44.7
14-16	57	55.3
Gender		
Male	60	58.3
Female	43	41.7
Educational status		
6-9 standard	56	54.4
10-12 standard	47	45.6
Type of house		
Pucca	76	73.7
Semi pucca	22	21.4
Kaccha	5	4.9
Number of people living in house		
3-4	37	35.9
5-6	59	57.3
7-8	7	6.8
Previous knowledge		
Yes	71	68.9
No	32	31.1
Source of information		
Mass media	41	59
Other (family, school etc.)	30	41

Table 3 shows that mean post-test knowledge score (20.84±2.62) was higher than mean pre-test score (13.55±2.77). This depicts that the educational package was beneficial for adolescents in terms of increasing their knowledge regarding household waste disposal methods. Table 4 shows that mean post-test practice score II (9.17±1.29) after providing educational package was higher than mean post-test practice score I (7.55±1.66) with the mean difference 1.62. This depicts that the educational package was beneficial for parents in terms of increasing their practice regarding household waste disposal methods.

Association between levels of pre-test knowledge of adolescents with their selected sociodemographic variable

There was significant association of pre-test knowledge of adolescent regarding household waste disposal methods with type of house they live in (0.005), number

of family member their house (p=0.001) and previous knowledge (0.001).

Association between levels of post-test practice-I of parents with their selected sociodemographic variables

There was significant association of post test practice 1 of parents regarding household waste disposal methods with age of father (p<0.002) and education status of mother (p<0.015).

Table 2: Demographic profile of parents by frequency and percentage (n=103).

Variables	Frequency (f)	Percentage
Age of father		
36-45 years	65	63.1
46-55 years	38	36.9
Age of mother		
31-40 years	77	74.8
41-50 years	26	25.2
Educational status of father		
No formal education	4	3.9
Primary education	10	9.5
Secondary education	17	16.5
Higher secondary education	54	52.4
Graduate/post-graduation	18	17.5
Educational status of mother		
No formal education	11	10.7
Primary education	15	14.6
Secondary education	22	21.4
Higher secondary education	50	48.5
Graduate/post graduate	5	4.8
Waste handler		
Yes	103	100
No	0	
Previous knowledge		
Yes	103	100
No	0	
Source of information		
Mass media	46	44.6
Other (family, society etc)	57	55.4

Table 3: Effectiveness of educational package for adolescents regarding household waste disposal methods (n=103).

Knowledge score	Mean ± SD	Mean difference	't' value	P value
Pre-test	13.55±2.771	7.29	20.79	<.001
Post-test	20.84±2.623			

df=102 at p<0.05, t tab=1.98

Table 4: Effectiveness of child to parent education regarding household waste disposal methods (n=103).

Practice score	Mean ±SD	Mean difference	't' value	P value
Post-test 1	7.55±1.66	1.62	9.99	<.001
Post-test 2	9.17±1.29			

df 102 =1.9 at p<0.05

DISCUSSION

Section A

Effectiveness of educational package regarding knowledge of household waste disposal methods of adolescents

The finding of present study highlighted that mean post-test knowledge score was significantly higher (20.84±2.623) than pre-test knowledge score (13.55±2.771). The study was consistent supported by cross sectional descriptive survey study which was conducted by Manuel et al in which there was a significant increased knowledge of adults after the education programme as it was higher in post-test (80.48%) than pre test (42.5%).⁷

Section B

Effectiveness of child to parents educational package regarding practice of household waste disposal method

In present study revealed that mean post-test practice score 2 was higher (9.17±1.29) than mean post-test practice score 1(7.55±1.66) after giving child to parent educational package with mean difference 1.62. The study was consistent supported by a quasi-experimental study which was conducted by Widiyanto et al study findings shows that intervention was effective to improve practice of the household regarding waste management.⁸

Section C

Association between level of adolescent knowledge regarding household waste disposal methods with their selected demographic variable

The findings revealed that there was a significant association of pre-test knowledge with the type of house they live in (p=0.005), the number of family member in their house (p=0.001) and their previous knowledge (p=0.001). This finding was supported by cross-sectional survey which was conducted by Barlao et al in that knowledge of students was significantly associated with family size and parents education backgrounds.⁹

Section D

Association between level of parents post-test practice I with their selected demographic variables

The study findings shows that there was significant association of post-test practice score I with age of father ($p < 0.002$) and education status of mother ($p < 0.015$). The study was consistent supported by a quasi-experimental study which was conducted by Widiyanto et al study findings shows that the respondents who were educated i.e. high school or graduated have more knowledge and capacity to absorb new learning and teachings.¹⁰

Limitations

Parents practice were assess only by self-reported practice checklist and sample size was limited to 103 adolescent and their parents.

Strength

In this study, researcher highlight that adolescent who are living in rural area having average knowledge about house hold waste management. Researcher implement educational package regarding knowledge of household waste disposal methods for adolescents, so that adolescents can improve knowledge and practice of theirparents at home.

CONCLUSION

This study suggests that child to parent educational package is more effective intervention to improve the knowledge and practice of parents regarding house hold waste disposal methods especially in rural areas. Parents practice was also associated with father age and educational status of the mother.

Recommendations

Comparative studies can be done between rural community people and urban community regarding household waste disposal practices and direct observation of practice regarding house hold waste disposal methods can be done in future studies.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Sharma A, Kumar A, Bala K. Effectiveness of child to parent educational package in terms of knowledge among adolescents and practice among their parents regarding household waste disposal methods. Int J Res Med Sci 2021;9:1043-6.