



Effectiveness Of Video Assisted Teaching (Vat) Program On Knowledge Regarding Waste Management Among Adolescent Students In A Selected High School, Mizoram

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ABSTRACT

Waste management addresses the entire lifecycle of waste, starting from its generation to its recovery or elimination. Each year, over 2 billion tons of municipal solid wastes are generated globally. The Objectives of the study is to Assess the Effectiveness of Video Assisted Teaching (VAT) Program on Knowledge regarding Waste Management among Adolescent Students in a selected High School, Aizawl, Mizoram. The study adopted a Pre-experimental (one group pre-test post-test design), 100 samples of students from 9th and 10th standard were selected for the study using Non-Probability Simple random sampling technique. Demographic variables and Self-Structured knowledge questionnaire were used to collect data required for the study. The findings of the study reveals that majority of respondents were 15 years old (39%), followed by 16 years (32%) and 14 years (29%). Females made up 51% of the sample, and males 49%. All participants were Christian. Regarding family type, 61% belonged to nuclear families, 29% to joint families, and 10% to extended families. Educationally, 50% were in Standard IX and 50% in Standard X. In terms of prior exposure to waste management education, 45% had previous knowledge, while 55% did not. Analysis showed the association between pre-test knowledge score regarding Waste Management with selected demographic variables. It reveals that there is a significant association between pre-test knowledge score regarding Waste Management with selected demographic variables like age, type of family and standard at 0.05 level of significance. Thus, the null hypothesis was accepted, and the research hypothesis was rejected. Thus the study concludes that the Video Assisted Teaching Program (VAT) Program on knowledge regarding Waste Management was effective.

Key words: Assess, Effectiveness, Adolescent, Waste Management, Video Assisted Teaching (VAT) Program.

INTRODUCTION

Waste management is the process of collecting, transporting, processing, recycling, or disposing of waste materials in an environmentally responsible way. It involves various methods and systems to handle waste generated by households, industries, hospitals, and other sectors. Effective waste management is essential for protecting human health, reducing environmental pollution, and conserving natural resources. On 14 December 2022, the United Nations General Assembly adopted a resolution at its seventy-seventh session to proclaim 30 March as International Day of Zero Waste.¹

STATEMENT OF THE PROBLEM

A Study to Assess the Effectiveness of Video Assisted Teaching (VAT) Program on Knowledge Regarding Waste Management among adolescent students in a selected High School, Aizawl, Mizoram.

HYPOTHESIS

H1: There is a significant difference between mean of pre-test and post-test Knowledge score among adolescent students in selected High School Aizawl, Mizoram.

H2: There is a significant association between pre-test Knowledge score regarding Waste Management with selected demographic variables.

METHODOLOGY

The objectives of the study was to Assess the Effectiveness of Video Assisted Teaching Program (VAT) regarding Waste Management and to find out the association between the pre-test Knowledge scores regarding Waste Management with selected demographic variables. The research approach chosen for the study was Quantitative Research Approach and Pre-experimental (one-group pre-test post-test) research design was selected. The study was conducted among adolescent students at Home Missions School, Zarkawt. Formal permission was obtained from each participant. A total of 100 adolescent students studying at Home Missions School, Zarkawt, Aizawl were selected using Non-probability purposive sampling technique. The tools for data collection includes Demographic variables, Self-structured knowledge questionnaire and Video-Assisted Teaching (VAT) Program. Pre-test knowledge score was assessed using a self-structured knowledge questionnaire and Video Assisted Teaching (VAT) Program on Waste Management was shown to the samples. Post-test Knowledge Score was assessed after one week using the same self-structured knowledge questionnaire.

RESULT :

Table 1: Frequency and Percentage Distribution of Adolescent Students according to Demographic Variables.

n=100

Demographic Variables		Frequency (f)	Percentage (%)
Age in years	a) 14	29	29
	b) 15	39	39
	c) 16	32	32
Gender	a) male	49	49
	b) female	51	51
Religion	a) hindu	-	-
	b) christian	100	100
	c) muslim	-	-
Type of family	a) nuclear family	61	61
	b) joint family	29	29
	c) extended family	10	10
Standar	a)	50	50

d	X		
	b)	50	50
Previous exposure to educational program related to waste management program	a)Yes If yes, specify the source of information		45
	• television	5	
	• mobile phone	30	
	• newspaper	5	
	• school	5	
	b) No	55	55

The above table I shows that majority of the adolescent students 39% were 15 years, 51% were female, 100% were Christian, 61% belongs to nuclear family, 55% does not have previous exposure to educational program related to waste management program.

TABLE 2: Description of Pre-test and Post-test knowledge score regarding Waste Management Among Adolescent Students in a Selected High School, Aizawl, Mizoram **n=100**

Score		Pre-test		Post-test	
		Frequency(f)	Percentage (%)	Frequency(f)	Percentage (%)
Inadequate	Below 10	36	36	-	-
Moderate	11-20	58	58	82	82
Adequate	21-22	6	6	18	18

The above table 2 shows that among the selected 100 adolescent students, majority 58% have moderate knowledge in Pre test and majority 82% have moderate knowledge in post test.

TABLE 3: Effectiveness of Video Assisted Teaching (VAT) Program Regarding Waste Management.

Knowledge	Mean	SD	Mean Difference	t-test value	df	p-value	n=100
							Inference
Pre-test	11.70	2.85	5.80	18.13	99	0.001	S*
Post-test	17.50	1.62					

The above data on table 3 shows that mean post-test knowledge score 17.50 was higher than the mean pre-test knowledge score 11.70 with mean difference of 5.80. The mean difference between pre-test and post-test knowledge score was tested using paired t-test with obtained $t=18.13$ at $df=99$ was statistically significant at $p < 0.05$ level of significance. Finding shows that Video Assisted Teaching Program was highly effective in improving knowledge about waste management among adolescent students. Hence hypothesis H_1 is accepted.

TABLE 4: Association between the pre-test knowledge scores regarding Waste Management with selected Demographic Variables

n=100

Demographic Variables		Knowledge score			Chi square (χ^2)	df	p-value	Inference
		Below 10 Inadequate	11-20 Moderate	21-22 Adequate				
Age	14	14	15	-	8.12	2	0.017	S*
	15	26	13	-				
	16	17	15	-				
Gender	Male	26	25	-	3.24	1	0.072	NS
	Female	18	31	-				
Religion	Hindu	-	-	-	N/A	N/A	N/A	NS
	Christian	44	46	-				
	Muslim	-	-	-				
Type of family	Nuclear family	29	32	-	6.19	2	0.045	S*
	Joint family	11	18	-				
	Extended family	4	16	-				
Standard	IX	16	34	-	6.86	1	0.009	S*
	X	28	22	-				
Previous exposure to educational program related to waste management program	Yes If yes, specify the source of information -Television -Mobile Phone -Newspaper -School	16	29	-	1.64	1	0.200	NS
	No	26	29	-				

S*= Significant at 0.05 level of significance

NS= Not Significant

Table 4 indicates Chi square test showing the association between pre-test knowledge score regarding Waste Management with selected demographic variables. It reveals that there is a significant association between pre-test knowledge score regarding Waste Management with selected demographic variables like age, type of family and standard at 0.05 level of significance. It also reveals that there is no significant association between pre-test knowledge score regarding Waste Management with selected demographic variables like gender, religion and previous exposure to educational program related to waste management program. Hence the research hypothesis was accepted.

CONCLUSION

From the findings of the present study, it can be concluded that Video Assisted Teaching (VAT) Program effectively enhances the students' knowledge regarding Waste Management.

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