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Effectiveness of Planned Teaching Program on Worm Infestation among Parents of Under-five Children at Selected Rural Area of Vadodara

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Abstract--- Introduction: *Worm infestation in children is very common in India. Worm infestations are seen in warm and moist climates in tropical and subtropical region. These infections are more common in under-five period because children of this age group are more likely than others to eat inedible substances 1.*

Material and Methods: *Pre-experimental design with one group pre-test post-test study was conducted among 100 parents of under-five children to assess the effectiveness of teaching program. Mothers of under-five children were selected by using convenient sampling technique, Tool consisted of demographic variables of parents and 20 items of self structured knowledge questionnaire, which were administered and collected the data, which was then tabulated, analyzed by using descriptive and inferential statistics.*

Results: *The pre-test findings showed that 78% of the parents had average knowledge, 14% had good knowledge and only 8% had poor knowledge regarding worm infestation. After administration of planned teaching program, there was marked improvement in post-test knowledge in which majority 81% of parents gained good knowledge, 15% had very good knowledge and only 4% had average knowledge. The mean post-test knowledge score (13.63) was higher than the mean pre-test score (8.44), which depict better efficacious on teaching. There was no significant association found between pre-test knowledge scores and demographic variables.*

Conclusion: *Thus, the planned teaching program had a positive variation in the knowledge about the worm infestation in parents. This may be due to effective teaching skills and parent's ability to capture the information while educating. However, did not recognize any significant association of pretested knowledge scores with demographic data.*

Keywords--- *Effectiveness, Planned Teaching Program, Worm Infestation, Parents of Under-five Children.*

I. INTRODUCTION

Children are one of the most valuable in the society. Factors such as economic, social, political and

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environmental changes in society have more effect on children health[2]. Most of the children often complain of abdominal pain which is major causes of intestinal infection, this may be due to intestinal parasites[3]. It is a major public health problem which has been estimated that more than 25% of the world's populations were infected with worm infections. The main cause of high morbidity and mortality rates due to worm infestation are poor sanitary conditions, open defecation, poor hand washing facilities, and ingestion of contaminated water and vegetables. Intestinal worms, also known as parasitic worms, are one of the main types of intestinal parasites. Common types of intestinal worms include: flatworms, which include tapeworms and flukes. Round worms cause ascariasis, pinworm, and hookworm infections[4].

Objectives: To assess the pre-test knowledge scores regarding worm infestation, evaluate the effectiveness of teaching program on worm infestation among the parents of under-five children and to find out the association between pre-test knowledge scores and demographic variables.

Hypothesis

H_1: There will be statistically significant differences between pre-test and post-test knowledge scores.

H_2: There will be significant association between pre-test knowledge scores and demographic variables.

II. MATERIAL AND METHODS

Pre-experimental research with one group pre-test post-test study was conducted in selected rural areas of Vadodara among 100 parents of under-five children. Participants were selected by using the Non-probability convenient sampling technique, who were eligible with inclusion criteria as parents who have under-five children, willing to participate, can read Gujarati or Hindi. Excluded the parents who were health care professionals, mentally ill and those who had already received the information regarding worm infestation. Tool consisted of demographic variables and 20 items of self structured knowledge questionnaire. Prior permission was obtained from the concerned authority. Informed consent was taken from the samples and explained the purpose of the study. Initially, the tool issued to parents, collected after 20 minutes and then, planned teaching programme regarding worm infestation was administered and finally after 7 days, post-test was conducted on the same questionnaire. Descriptive statistics such as frequency distribution, percentage, mean, was used for describing demographic variables. Inferential statistics such as 't' test for effectiveness of planned teaching programme and chi-square test was used to find the association of pre-test knowledge score with selected demographic variables.

III. RESULTS

Description of Socio Demographic Variables

Out of 100 parents, around half 52(52%) of them were in the age group of 18-33 years, 44(44%) of them were 36-46 years of age and only 4(4%) of them were 47-60 year of age. Nearly half 48 (48%) of parents had primary education, 36(36%) of them had secondary education, few 11(11%) did higher secondary and only 5(5%) were graduated. Around half proportion 45(45%) of parents had their monthly family income between 5,000 and 10,000 rupees and remaining 55(55%) had less than 10,000 rupees. Moreover, 51(51%) and 49(49%) of parents were vegetarian and mix diet respectively. In addition, about parents occupation, more than half 57(57%) were farmer,

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25(25%) were employed and 18(18%) were not employed.

Table 1: Area-wise Effectiveness of Pre-test and Post-test Knowledge Score

n=100

Knowledge Area	***Max. score***	***Pre-test (X)***		***Post-test (Y)***		***Effectiveness (Y-X)***	
		Mean ± SD	***Mean%***	***Mean ±S D***	***Mean%***	***Mean ± SD***	***Mean%***
General information of worm infestation	3	1.32±0.897	44%	2.28±0.725	76%	0.96±896.27	0.96%
Signs and symptoms	5	2.03±1.132	40.6%	3.58±1.006	71.6%	1.55±0.314	1.55%
Causes and risk factors	5	2.05±0.978	41%	3.02±1.014	60.4%	0.97±0.036	0.97%
Diagnosis	1	0.34±0.476	34%	0.57±0.497	57%	0.23±0.021	0.23%
Treatment	3	1.23±0.750	41%	1.91±0.683	63.66%	0.68±0.067	0.68%
Prevention	3	1.47±0.858	49%	2.29±0.714	76.33%	0.82±0.144	0.82%
Total	20	**8.44±1.981**	**42.2%**	**13.63±1.812**	**68.15%**	**5.19±0.169**	**5.19%**

The above table 1 showed that the total pre-test mean score and standard deviation was 8.44±1.981 and the total post-test mean score and standard deviation was 13.63±1.812.

Table 2: Pre-test and Post-test Level of Knowledge of Parents of under Five Children.

n=100

Knowledge Level	***Pre-test***		***Post-test***	
	Frequency	***Percentage (%)***	***Frequency***	***Percentage (%)***
Poor	8	8%	0	0%
Average	78	78%	4	4%
Good	14	14%	81	81%
Very good	0	0%	15	15%

The above table 2 showed that majority of 78 (78%) parents of under-five children had average knowledge, few 14(14%) and only 8(8%) had good and poor knowledge level respectively in pre-test. But in post-test, majority 81(81%) had good knowledge, 15(15%) and 4 (4%) had very good and average knowledge level.

Table 3: Effectiveness of Planned Teaching Programme.

n=100

Variable	***Pre-test***	***Mean score***	***Mean difference***	***STD. deviation***	***Df***	***'t'- value***
Knowledge regarding worm infestation	Pre-test	8.44	5.19	1.918	99	21.45*
	Post-Test	13.63		1.812		

t (99) =1.98, p<0.05* Significant

Table 3 shows that the calculated t-value ($t_{(99)}$ =21.45*, p<0.05) was greater than the table value ($t_{(99)}$ 1.98 =p<0.05) at 5% level of confidence. Hence, H_1 was accepted and inferred that the significant differences between pre-test and post-test scores, therefore planned teaching program was effective in the improving the knowledge regarding worm infestation among parents.

Association between Pre-test Knowledge Scores and Socio-demographic Variables

The calculated chi-square value was less than the table value for all the demographic variables of age, education, occupation, family income & dietary pattern. Hence, H_2 was rejected and inferred that there was no statistically significant association between pretest knowledge scores and demographic variables.

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IV. DISCUSSION

In the current study, around half of the proportion 54 (54%) of parents were in the age group between 18 and 33 years, which is almost similar to the study carried out by Mulik MS and Salunkhe AH [5] reported that 50 (50%) of parents were between 20 and 25 years of age group. In the study done by Shinde S, found that 75% of the mothers had average knowledge, 22% mother had poor knowledge and 3% had good knowledge in pre-test[6], similarly in present study also, 78% of parents had average knowledge, 8% had poor, and 14% had good knowledge, whereas, Lukose A, inferred that majority of 83% mother had good knowledge and 16% had average knowledge[7], which is similar to our study.

A study carried out by Gupta. M., findings showed that the mean knowledge score was 14.50 and the standard deviation was 2.526[8]. There was slight difference in our study 8.44 mean knowledge and SD with 1.918, this may due to sample size in the above study was 35 and in our study was 100.

A study conducted by Swami P.G.N., couldn't found any significant association of knowledge of mothers with socio demographic variables such as age, religion, occupation, type of family, family income, number of under five children, source of information, available health services, water supply drainage system, and place of defecation only educational status[9]. Even in our study also not detected any significant association between pre-test knowledge score and demographic variables.

V. CONCLUSION

In a nutshell, after implementation of planned teaching program, the knowledge of parents had remarkably increased, hence there was effectiveness in teaching program. This gained knowledge by parents will be beneficial in preventing worm infestation and even they can educate their family members, neighbors and relatives.

Conflict of Interest: Nil

Source of Funding: Self

Ethical Clearance: Obtained from Sumandeep Vidyapeeth Institutional Ethical Committee. Permission was granted from concerned authority to conduct study and informed consent was taken from parents.

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