Original Research Paper

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Nursing

A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PREVENTION OF WORM INFESTATION AMONG MOTHERS OF UNDER-FIVE CHILDREN IN SELECTED HOSPITAL OF SRINAGAR KASHMIR.

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ABSTRACT Worm infestation is common from 1-5 years of age when the child begins to lead a more independent life. The magnitude of worm infestation among children constitutes a major health problem in many parts of the world. It is estimated that 85% of the total incidence is due to ineffective disposal of human excreta.[5] Worm infestation is the sources of severe morbidity in children as well as in adults. Although mortality from such infestation is low, some intestinal parasitic infections interfere with the nutrition, growth and development of the children as well as with work and productivity of children[4].Intestinal parasitic infection (IPI) constitutes a global health problem. These parasites are estimated to affect approximately 3.5 billion persons worldwide and cause morbidity in 450 million, many of these being children in developing countries.[1]

Aim: Aim of the study is to enhance the knowledge of mothers regarding prevention of worm infestation in under five children. Material and **Method:** a pre-experimental study was conducted using one group pre-test post-test research design to assess knowledge of mothers of under-five Children regarding prevention of worm infestation. The study was conducted in two selected ward of SKIMS hospital (Pediatric Medicine and Pediatric Surgery). The sample was selected by purposive sampling technique. The sampling size was 60. Self structured interview schedule was used to assess knowledge of mothers of underfive children.

Result and conclusion: The overall mean knowledge score 62.26 obtained by the subjects in post test was higher than mean knowledge score 42.7 in the pre test and with the improvement score as 19.56. There was a significant difference between pre-test and post-test knowledge score at $p< 0.05$. the result of the study revealed that the planned teaching programme was significantly effective in improving the knowledge of mothers of under five children regarding prevention of worm infestation

KEYWORDS : Planned teaching programme, Effectiveness, Knowledge, mothers of under five children, hospital, prevention of worm infestation.

Introduction

"Children are the wealth of tomorrow. Take care of them if you wish to have strong India. Every day to meet various challenges" Jawaharlal Nehru

Children are the most valuable asset for any society. They are the builders of the future of any nation."Children's health is Tomorrow's wealth". Children are priceless resources. Their well being is the basic concern of every nation. A healthy child brings happiness to the family, eternal joy to the parents and thrill to the society and hope to the nation.[1]

The under five children are vulnerable or special risk group in any population deserving special health care because of their immaturity and various stages of growth and development. The under five children are more prone to acquire some infections which is not seen in adults. As a result, there is an increased morbidity and mortality rate in under-five children. These diseases include diarrhea, vector borne diseases, worm infestation, and respiratory infections etc.[2]

Human beings strive hard to acquire a healthy life style, but in times because of negligence, human beings are at highest risk of diseases because of which, they suffer a lot. Most of the parents find long white/pinkish worms or tiny thread like worms, in their child's stool. This is called worm infestation or infection by worms. It is common in rural areas where practice of defecation in open fields is prevalent. Parasitic infections lead to an untold misery and economic loss throughout the world. They can infect all organs of the body.[3]

Worm infestation with roundworm, hookworm, and pinworm are the sources of severe morbidity in children as well as adults. Although mortality from such infestation is low, some intestinal parasitic infections interfere with the nutrition, growth and development of the children as well as with work and productivity of children.[4]

Worm infestation is common from 1-5 years of age when the child begins to lead a more independent life. The magnitude of parasitic infestation among children constitutes a major health problem in many parts of the world. It is estimated that 85% of the total incidence is due to ineffective disposal of human excreta. [5]

Need of the Study

"The day will come when nations will be judged not only by their military or economic strength, but by the splendor of their level of health, nutrition and education"

- Progress of nations (1996)

And the time has come, health, nutrition and education are the most important issues related to children. These issues are very closely interrelated. An unhealthy malnourished child of today will only contribute to unhealthy future of the country. Therefore most countries of the world recognize this urgent need of providing health, nutrition and education to children.

The significance of giving first priority to the children's needs can be understood by these words "we are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the foundation of life. Adults can wait for gratification of their needs, but the child cannot. Because right now is the time his bones are being formed, his blood is being made and his senses are being developed. To him we cannot answer 'tomorrow'.His name is today".

(Gabriela mistral, 1999)

Even though the problems associated with the worms are drastic, these do not grab headlines like other diseases. The sickness they cause can be equally devastating. Children who are affected with worm infestation may show the sign and symptoms of weight lost, itching at anal area, abdominal pain, diarrhea, anemia, sleeplessness, irritability and fever. Worm infections can also cause stomach pain, cough, fever, vomiting, loss of appetite, a swollen belly, blood in stools or urine, fatigue and restlessness. Worms can limit nutrient absorption and cause intestinal bleeding, leading to anemia and malnutrition thereby making children either too sick or too tired to concentrate. In the case of serious chronic infections children may also be physically stunted. This can lead to long term retardation of mental development. In rare cases worms can lead to conditions that are live threatening.[6]

Intestinal parasitic infection (IPI) constitutes a global health problem. These parasites are estimated to affect approximately 3.5 billion persons worldwide and cause morbidity in 450 million, many of these being children in developing countries.[1]

During the clinical posting the investigator had seen most of the children below the age of five years were suffering from worm infestation with abdominal pain, vomiting, diarrhea and malnutrition etc. Most of the mothers were unaware of the ill effects, causes, signs and symptoms, prevention and management of worm infestation. Since mothers play an important role in promoting the health of under-five children so the mothers should essentially have the knowledge of

prevention of worm infestation so that they can protect the children from the risk of worm infestation. Therefore the investigator planned to conduct a study regarding the prevention of worm infestation among mothers of under-five children as the problem is more prevalent among under-five children.

Statement of Problem

"A study to assess the effectiveness of planned teaching programme on knowledge regarding prevention of worm infestation among mothers of under-five children in selected hospital of Srinagar Kashmir**".**

Objectives

1. To assess Pre test knowledge scores regarding prevention of worm infestation among mothers of under-five children in selected hospital of Srinagar.
2. To assess the post test knowledge scores regarding prevention of worm infestation among mothers of under-five children in selected hospital of Srinagar.
3. To compare pre test and post test knowledge scores regarding prevention of worm infestation among mothers of under-five children in selected hospital of Srinagar.
4. To determine the association of pre test knowledge scores regarding prevention of worm infestation among mothers of under-five children in selected hospitals of Srinagar with their demographic variables i.e. Age, Education, Occupation, Monthly Family Income, Type of Family, Number of under-five children & Residence.

Hypothesis:

H_1: There is significant difference between pre-test knowledge and post test knowledge scores regarding prevention of worm infestation in mothers of under-five children at ≤ 0.05 level of significance.

H_2: There is significant association between pre-test knowledge scores with selected demographic variables i.e. age, education, occupation, monthly family Income, type of family, number of under-five children and Residence among mothers of under-five children regarding prevention of worm infestation after planned teaching programme at ≤ 0.05 level of significance.

Conceptual Frame Work:

The Conceptual framework of the present study is based on Ludwig Von Bertanloffys General Systems Theory (1950) or system model

Materials and Methods :

The research design used in this study was Pre- experimental in nature. The study was conducted at two ward of SKIMS Hospital i: e pediatric surgery ward and pediatric medicine ward Srinagar, Kashmir. The sample of 60 mothers of underfive children on the basis of inclusion and exclusion criteria were selected by using purposive random sampling. The tool used for the study was Knowledge Based Self Structured interview schedule which consists of **Section-1**(Demographic performa: Age, Education, Occupation, Monthly family Income, Type of Family, Number of under-five children, Residence) and **Section –II** (consists of 50 items related knowledge assessment regarding prevention of worm infestation) .The content validity of Knowledge Based Self Structured interview schedule was ensured by submitting the tool to the experts in the field of community health nursing and pediatric nursing .A pilot study was conducted on 10% of total sample size at pediatric medicine ward of SKIMS Srinagar. Reliability of tool was established by Karl Pearson's Correlation coefficient. The reliability of tool was calculated and it was 0.99.

Results and Findings

In this study, 60 mothers of under five children participated. The data and the findings were entered in a master data sheet followed by the analysis and interpretation using descriptive statistics (i.e. frequency, percentage, mean, median and standard deviation) and inferential statistics (i.e. t-test and ANOVA) according to the objectives of the study. The results obtained were presented in the following headings:

\Section I: Findings related to Demographic variables

Table 1:Shows Frequency and Percentage distribution of study subjects according to Demographic variables.

Demographic Variables	Category	Frequency	Percentage
Age	Below 20	1	1.7
	21-25	11	18.3
	26-30	19	31.7
	31-35	18	30.0
	36-40	11	18.3
	Above 40	0	0
	Total	60	100.0
Education	Illiterate	6	10.0
	Middle Pass	17	28.3
	Secondary	12	20.0
	Higher Secondary	6	10.0
	Graduate	13	21.7
	P.G and above	6	10.0
	Total	60	100.0
Number of under five children	1	34	56.7
	2	25	41.7
	3	1	1.7
	4 and above	0	0
	Total	60	100.0
Monthly family income	Less Than 10,000	14	23.3
	10000-30000	40	66.7
	Greater Than 300000	6	10.0
	Total	60	100.0
Type of family	Nuclear	40	66.7
	Joint	20	33.3
	Extended	0	0
	Total	60	100.0
Residence	Urban	23	38.3
	Rural	37	61.7
	Total	60	100.0
Occupation	Housewife	37	61.7
	Government Employee	13	21.6
	Private Employee	10	16.7
	Total	60	100.0

Section II. Knowledge of study subjects regarding Prevention of Worm Infestation before and after implementation of planned teaching Programme.

Table 2: Shows Mean, median, S.D, range of pre and post test knowledge scores of study subjects regarding prevention of worm infestation.

N=60

Group	Mean	Median	Mode	Standard Deviation	Range	Minimum	Maximum
Pre Test Score	21.35	21.00	30.00	6.164	28	9	37
Post Test Score	31.13	30.00	27	6.888	27	19	46

Table 3: Shows Comparison of Pre & Post Test Mean Knowledge Scores of study subjects regarding Prevention of Worm Infestation.

To test research hypothesis, following Null Hypothesis was formulated.

H_0: There is no significant difference between the pre test and post test knowledge scores regarding prevention of worm infestation.

N=60

Group	Mean score	Mean score (%)	Standard deviation	Mean Difference	P Value
Pre test score	21.35	42.7%	6.1	19.56	≤0.001
Post test score	31.13	62.26%	6.8		

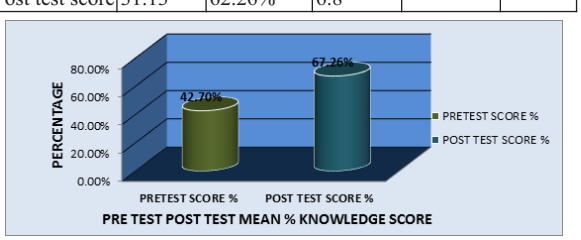

Figure 1: Cylindrical diagram showing comparison of pre and post test mean scores.

Table 3 & Figure 13 revealed that pre test score mean% was 42.7% and post test score mean % was 62.26% with mean difference of 19.56 at p value ≤0.001 which indicates that there was high significant difference between pre test & post test mean knowledge score. So there was enough evidence that this change occurred after implementation of intervention. Hence the Null hypothesis (H0) is rejected and on contrary Research hypothesis H 1 "There is significant difference between pre-test knowledge and post test knowledge scores regarding prevention of worm infestation among mothers of under five children" is accepted.

Table 4: Shows Comparison of pre & post test level of Knowledge of study subjects regarding prevention of worm infestation.

N=60

Level Of Knowledge	Score	Pre Test		Post Test	
		Frequency	**%age**	**Frequency**	**%age**
Inadequate	≤50%	49	81.7%	11	18.3%
Moderate	51-75%	11	18.3%	38	63.3%
Adequate	>75%	0	0	11	18.3%
Total		60	100%	60	100%

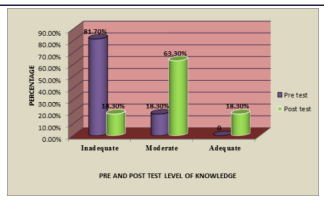

Figure 2. Cylindrical diagram showing Pre and Post test level of knowledge of study subjects.

Table 4 & Figure 2 revealed that in pre test 49(81.7%) study subjects had inadequate knowledge, 11(18.3%) had moderate knowledge & none had adequate knowledge and in post test 11(18.3%) study subjects had adequate knowledge , 38(63.3%) had moderate knowledge & 11(18.3%) had inadequate knowledge regarding prevention of worm infestation. This indicates that Planned Teaching Programme was effective in increasing knowledge regarding prevention of worm infestation.

Section III: Findings related to association of pre –test knowledge scores of subjects with their selected demographic variables.

Here the researcher tests the null hypothesis H0 : There is no significant association between pre test knowledge scores of subjects with their selected demographic variables

Table 5: shows Association between pre–test knowledge scores of study subjects with selected demographic variables

Variables	**Category**	**Freq.**	**Pre Test Knowledge**			**df**	**Chi Sq. Test $\chi 2$**	**P Value**
			Indequate	Moderate	adequate			
Age	< 20	1	1	0	0	4	1.703	0.790 NS
	21-25	11	10	1	0			
	26-30	19	16	3	0			
	31-35	18	14	4	0			
	36-40	11	8	3	0			
Education	Illiterate	6	4	2	0	5	2.107	0.834 NS
	Middle Pass	17	13	4	0			
	Secondary	12	11	1	0			
	Higher Secondary	6	5	1	0			
	Graduate	13	11	2	0			
	P.G And Above	6	5	1	0			
Number of under five children	1	34	29	5	0	2	1.059	0.589 NS
	2	25	19	6	0			
	3	1	1	0	0			
Monthly family income	< 15,000	14	10	4	0	2	6.854	0.032 S
	15000-30000	40	36	4	0			
	> 300000	6	3	3	0			
Type of family	Nuclear	40	35	5	0	1	2.727	0.099 NS
	Joint	20	14	6	0			
Residence	Urban	23	20	3	0	1	0.697	0.404 NS
	Rural	37	29	8	0			
Occupation	House Wife	37	31	6	0	2	1.917	0.383 NS
	Govt. Employee	13	9	4	0			
	Private Employee	10	9	1	0			

Note: N.S–Not significant. S*-Significant at p≤ 0.05 level

The data presented in table 5 revealed that there was significant association between monthly family income **(p≤0.032)** of the study subjects with their pre test knowledge score while as no significant association between mothers age, mothers education, number of under five children ,mothers occupation and residence**(p≥0.05)** was found with their pre test knowledge score.Hence the researcher partially accepts the Null hypothesis for variable mothers age, mothers education, number of under five children, mothers occupation and residence **(H_0** : There is no significant association between pre test knowledge scores regarding prevention of worm infestation among mothers of under five children in selected hospitals of Srinagar with their demographic variables) & partially accepts the Research hypothesis for variable monthly family income **(H_2**: There is significant association between pre-test knowledge scores regarding prevention of worm infestation among mothers of under five children in selected hospitals of Srinagar with their demographic variables) at ≤ 0.05 level of significance .

Discussion

The findings of the study revealed that knowledge level of mothers of underfive children regarding prevention of worm infestation is inadequate and there is a great need to improve this knowledge. In pre test knowledge score **49(81.7%)** were having inadequate knowledge, **11(18.3%)** were having moderate knowledge & none had adequate knowledge regarding prevention of worm infestation.This reveals that majority of mothers of under five children were having inadequate knowledge, so they need to be educated and informed regarding prevention of worm infestation.

These findings of the study are supported by a Evaluative study conducted by **Thomas SP (2012)** [7] to assess the Effectiveness of structured teaching programme on knowledge regarding prevention of worm infestation, among 30 mothers with under five children at uttarahalli, Bangalore. During pre test **26(86%)** mothers had inadequate knowledge**, 3(10%)** mothers had moderate knowledge and very few **1(3%)** of mothers had adequate knowledge about prevention of worm infestation. Results of the study concluded that knowledge regarding prevention of worm infestation amoung mothers with underfive children is insufficient & prior information is necessary to create awareness to take preventive measures regarding prevention of worm infestation .

The findings in post test revealed that **11(18.3%)** study subjects were having adequate knowledge regarding prevention of worm infestation,

38(63.3%) had moderate level of knowledge & **11(18.3%)** had inadequate knowledge regarding prevention of worm infestation after implementation of planned teaching programme.

The findings are supported by a Evaluative study conducted by **Thomas SP (2012)**[7] to assess the Effectiveness of structured teaching programme on knowledge regarding prevention of worm infestation, among 30 mothers with under five children at uttarahalli, Bangalore. In post-test, majority **22(73%)** of mothers had adequate knowledge and **8(23%)** mothers had moderate knowledge and none had inadequate level of knowledge after implementation structured teaching programme.

While comparing the knowledge scores of study subjects regarding prevention of worm infestation, the mean post-test knowledge score **62.26%** was greater than the mean pre-test knowledge score **42.7%**.The mean difference between pre-test & post-test knowledge score was 19.56 at $p < 0.001$, which indicates that there was significant difference between pre-test and post-test mean knowledge scores. So, there was enough evidence that change occurred due to intervention.

The findings are supported by a Evaluative study conducted by **Thomas SP (2012)**[7] to assess the Effectiveness of structured teaching programme on knowledge regarding prevention of worm infestation, among 30 mothers with under five children at uttarahalli, Bangalore. The mean score of pre test and post test level of knowledge regarding prevention of worm infestation were 7.3 and 12.87 respectively. From the mean scores it was clear that mothers gained knowledge after structured teaching programe .

A significant association was found between monthly Family Income **($p \leq 0.032$)** with their pre-test knowledge score. While as no association was found between Age **($p \leq 0.0.790$),** Mothers Education **($p \leq 0.834$),** Number of under five children **($p \leq 0.589$**), Type of Family (**$p \leq 0.099$),** Residence (**$p \leq .0.404$),** Mothers Occupation **($p \leq 0.383$**) of study subjects.

The findings are supported by a evaluative study conducted by **Thomas SP (2012)**[7] to assess the Effectiveness of structured teaching programme on knowledge regarding prevention of worm infestation, among 30 mothers with under five children at uttarahalli, Bangalore. From the chi-square value of knowledge scores, it was found that the significant association was found with their educational status (Chi-square=3.862). And there is no significant association between their age, income, occupation, and number of children.

But in present study, researcher found significant association between pre-test knowledge scores and monthly family income of study subjects at **$p \leq 0.001$** level of significance. Results may vary because of small sample size.

From the above findings, it can be concluded that the knowledge level of mothers of underfive children regarding prevention of worm infestation can be enhanced by conducting different teaching Programmes. By imparting this kind of knowledge it can help prevent worm infestation among underfive children & can improve their quality of life.

Recommendations:

- A similar study can be conducted on a large sample in order to draw more definite conclusions and generalizations.
- A similar study can be recommended by using different method of teaching.
- A similar study can be recommended to compare effectiveness of planned teaching programme and other methods on knowledge regarding prevention of worm infestation.
- A comparative study can be conducted between rural and urban areas.
- A comparative study may be conducted to assess the knowledge of students regarding worm infestations in different schools.
- A similar study can be recommended in different settings to find factors responsible for worm infestation.
- Follow up of the study subjects can be done to evaluate long term effectiveness of planned teaching programme.
- Similar study can be conducted on knowledge regarding complications of worm infestation.

Conclusion:

- Based on the findings of the study it can be concluded that there was evident increase in the knowledge scores in all the areas included in the study after administration of PTP. Thus it was proved that PTP was effective for creating awareness regarding prevention of worm infestation among mothers of underfive children of selected hospital in Srinagar.

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