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Original Research Article

Effectiveness of structured teaching programme on knowledge regarding worm infestation among mothers of under-five children

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ABSTRACT

Background: Children from low and middle-income nations continue to be primarily affected by worm infections. Development and nutrition may be hampered by an intestinal worm infection. The study aimed to assess the effectiveness of structured teaching programme on knowledge regarding worm infestation among mothers of under-five children.
Methods: A pre-experimental one group pre-test and post-test research design was used for the study. The sample selected were 40 mothers of under-five children in a selected area of Pulwama, Kashmir. A self-structured interview schedule was used to assess the knowledge.
Results: The collected data was analysed by SPSS. The study findings revealed that the mean knowledge score of nursing students in the pre-test was 16.97 and mean knowledge score of nursing students in the post test was 29.52, with a mean difference of 12.55. In pre-test, 30 (75%) had poor knowledge, 10 (25%) had average knowledge, whereas in the post-test 8 (20%) had poor knowledge, 25 (62.5% had average knowledge and 7 (17.5%) had good knowledge. The present study revealed that there was no significant association between pre-test knowledge score with the selected socio-demographic variables.
Conclusions: The study revealed that mean knowledge score of nursing students in post-test was higher than the mean knowledge score of nursing students in the pre-test. The structured teaching programme was effective in improving the knowledge regarding worm infestation among mothers of under-five children.

Keywords: Knowledge, Mothers of under-five children, Structured teaching programme, Worm infestation

INTRODUCTION

"Children's health is tomorrow's wealth". Children are priceless resources. The primary priority of every nation is their well-being. A child in good health offers hope to the country, excitement to society, and endless delight to parents and the family.[1] Human beings strive hard to lead a healthy lifestyle, but occasionally, due to carelessness, they put themselves at greater risk of illness, which causes them great suffering. Mostly parents discover long whitish/pinkish worms or tiny thread like worms, in their child's stool. This is referred to as worm infestation. It is typical in rural areas where open defecation is a regular occurrence. Globally, parasitic infestation caused immense suffering and financial setback. They can infect all organs of the body.[2]

Worms with soft bodies that can infect both humans and animals are known as intestinal parasites. Parasitic worms are categorised into various types and include hook worms, round worms, tape worms and pin worms. The parasitic worms enter the body by skin penetration,

ingestion and inhalation.[1] Worm infestation with round worm, hook worm and pin worm can cause significant morbidity in both children and adults. While the death rate from this worm infestation is minimal, certain intestinal parasitic infections affect the nutrition, growth and development of the children as well as their work and productivity.[3] Worm infestation is common from 1-5 years of age. In many parts of the world, the prevalence of parasitic infestation in children poses a serious threat to public health.

Despite the severe consequences associated with worm infestation, they don't attract as much attention in the media as some other diseases, even though the harm they inflict can be equally devastating. There are several signs and symptoms that children with worm infestation may exhibit such as weight lost, itching at anal area, abdominal pain, diarrhoea, anaemia, 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 also impede the absorption of nutrients and cause intestinal bleeding, resulting in anaemia and malnutrition which renders the children either too unwell or excessively tried to concentrate effectively. In the case of severe and prolonged infections, children may face the consequence of physical stunting. This may lead to a persistent delay in mental development over the long term.[4]

Awareness is a key to prevention of many diseases. Health and hygiene education among school children reduces the transmission and reinfection by encouraging healthy behaviors. Increasing children's awareness of the problem can help to knowledge of students regarding worm infestation and to educate them regarding prevention of worm infestation so as to reduce the morbidity and mortality rates in school children.

Kuriakose et al conducted a study to assess the effectiveness of structured teaching programme on knowledge regarding helminthic infestations among 30 mothers of under-five children admitted in St. Philomena's Hospital, Bangalore. The findings of the study revealed that in the pre-test, none had adequate knowledge, whereas 11 (36.6%) subjects had moderate knowledge and 19 (63.4%) of them had inadequate knowledge. In the post-test, 9 (30%) subjects had adequate knowledge, whereas 21 (70%) subjects had moderate knowledge and none of them had inadequate knowledge. The mean post-test knowledge (24) score was higher than the mean pre-test (12.5).[5]

Priya et al conducted a study to assess the effectiveness of structured teaching programme on knowledge of worm infestation among 60 mothers of under five children in Selected Hospitals in Dindigul, Tamil Nadu. The findings of the study revealed that the computed post-test 't' value in overall was highly significant ($t=30.22$, $p<0.001$). The mean and SD value (mean =16.92, SD=1.42) of post-test was higher than the pre-test value (mean =7.52, SD=1.76). This shows that there was a highly significant increase of knowledge on worm infestation among mothers of under five children.[6]

Appropriate knowledge and practice related to worm infestation is a key in its management and good health of child. Awareness is a key to prevention of many diseases. Health and hygiene education among mothers of under-five children can help to reduce prevalence of worm infestation. Increasing mother's awareness of the problem can help to combat the disease.

Keeping this in mind, researcher felt the need to conduct the present study to assess the knowledge of mothers regarding worm infestation and to educate them regarding worm infestation so as to reduce the morbidity and mortality rates among children.

Statement of the problem

A study to assess the effectiveness of structured teaching programme on knowledge regarding worm infestation among mothers of under-five children in a selected area of Pulwama, Kashmir.

Objectives

To assess the pre-test knowledge score regarding worm infestation among the mothers of under-five children in a selected area of Pulwama, Kashmir. To assess the post-test knowledge score regarding worm infestation among the mothers of under-five children in a selected area of Pulwama, Kashmir. To evaluate the effectiveness of structured teaching programme by comparing pre-test and post-test knowledge scores regarding worm infestation among the mothers of under-five children in a selected area of Pulwama, Kashmir. To seek association between the pre-test knowledge score of mothers of under-five children with the selected socio-demographic variables.

Hypothesis

There will be a significant difference between pre-test and post-test knowledge scores among mothers of under-five children.

METHODS

A quantitative research approach was used for the study. A pre-experimental one group pre-test and post-test research design was adopted. The sample of 40 mothers of under-five children was selected using purposive sampling technique.

The study was carried out in a selected area of Pulwama, Kashmir. The sample size for the study was calculated using Raosoft.

Inclusion criteria

Mothers having one or more than one child in the age group of 6 months to 5 years and mothers who were willing to participate, were included as participants in the study.

Exclusion criteria

Mothers who were not available at the time of data collection and mothers who were not willing to participate, were excluded from the study.

Data collection

Data was collected using a self-structured interview schedule. The study was carried out for 2 months, from February 2024 to April 2024.

Data collection tool

The tool used for the study was a self-structured interview schedule. The tool comprised of two sections: Section-I: participant information sheet- this section comprised questions related to demographic characteristics such as age, education, number of under-five children and type of family. Section-II: self-structured interview schedule- this section comprised of 45 questions regarding worm infestation. A score of 0-15 was interpreted as poor knowledge, while 16-30 was considered as average and a score of 31-45 was considered as good knowledge. Using the Kuder-Richardson-20 formula, the reliability of the structured knowledge questionnaire was calculated and determined to be r=0.94, which was highly reliable.

Statistical method

The data collected was analysed using SPSS. To determine the effectiveness of structured teaching programme, paired 't' test was used and Chi-square test was used to seek association between pre-test knowledge score with the selected socio-demographic variables.

Ethical considerations

The study was carried out after obtaining permission from Block medical officer of the selected area of Pulwama, Kashmir. An informed consent was taken from the participants. Information provided by the participants was kept confidential and anonymous.

RESULTS

The findings of the study have been organized into 3 sections:

Section-I: findings related to demographic characteristics of the sample

The data given in Table 1 reveal that 5% of mothers were below the age of 25 years, 37.5% were in the age group of 25-36 years, 47.5% were in the age group of 37-47 years and 10% were above the age of 47 years, 10% were illiterate, 7.5% had primary education, 22.5% were middle pass, 32.5% had secondary education, 20% were graduate and 7.5% were post-graduate and above, 57.5% of mothers had 1 under-five children and 42.5% had 2 under-five children, 52.5% of mothers were from nuclear family, 40% were from joint family and 7.5% belonged to extended family.

Table 1: Distribution of nursing students based on demographic characteristics (n=40).

Demographic variables	Frequency	Percentage
Age (years)		
<25	2	5
26-36	15	37.5
37-47	19	47.5
>47	4	10
Education		
Illiterate	4	10
Primary	3	7.5
Middle pass	9	22.5
Secondary	13	32.5
Graduate	8	20
Post graduate and above	3	7.5
Number of under five children		
1	23	57.5
2	17	42.5
3	0	0
4 and above	0	0
Type of family		
Nuclear	21	52.5
Joint	16	40
Extended	3	7.5

Section-II: findings related to knowledge of nursing students regarding worm infestation before and after structured teaching programme

The data in the Table 3 reveals that the mean knowledge score of nursing students in the pre-test was 16.97 and mean knowledge score of nursing students in the post test was 29.52, with a mean difference of 12.55. As shown by t value of 14.13 at 0.05 level, the obtained mean difference between the pre-test and post-test was determined to be statistically significant.

The data in the Table 4 reveals that in pre-test 30 (75%) had poor knowledge, 10 (25%) had average knowledge, whereas in the post-test 8 (20%) had poor knowledge, 25 (62.5% had average knowledge) and 7 (17.5%) had good knowledge.

Table 2: Mean, median, mode and standard deviation of nursing students regarding worm infestation (n=40).

Group	Mean	Median	Mode	Standard deviation	Minimum	Maximum
Pre-test	16.97	17.5	9	6.366	4	30
Post-test	29.52	30	30	4.840	19	38

Table 3: Comparison of Pre-test and Post-test knowledge score of nursing students regarding worm infestation.

Group	Mean	Standard deviation	Mean difference	t-value	
Pre-test	16.97	6.366	12.55	14.13	**P value<0.05**
Post-test	29.52	4.840			

Table 4: Comparison of pre-test and post-test level of knowledge of nursing students regarding worm infestation.

Level of knowledge	Pre-test	Post-test
	Frequency (%)	**Frequency (%)**
Poor (0-15)	30 (75)	8 (20)
Average (16-30)	10 (25)	25 (62.5)
Good (31-45)	0	7 (17.5)

Table 5: Association between pre-test knowledge score of nursing students with the selected sociodemographic variables.

Variables	Category	Knowledge level of subjects				df	P value	Remarks
		Frequency	Poor	Average	Good			
Age (years)	<25	2	1	1	0	3	0.31	NS
	26-36	15	11	4	0			
	37-47	19	15	4	0			
	>47	4	3	1	0			
Education	Illiterate	4	3	1	0	5	0.071	NS
	Primary	3	2	1	0			
	Middle class	9	6	3	0			
	Secondary	13	12	1	0			
	Graduate	8	6	2	0			
	Post-graduate and above	3	1	2	0			
Number of under five children	1	23	16	7	0	3	0.407	NS
	2	17	14	3	0			
	3	0	0	0	0			
	4 and above	0	0	0	0			
Type of family	Nuclear	21	19	2	0	2	0.073	NS
	Joint	16	9	7	0			
	Extended	3	2	1	0			

Section III: findings related to association between pre-test knowledge score of nursing students with the selected sociodemographic variables

The data in the Table 5 reveals that there was no significant association between pre-test knowledge score with the selected socio-demographic variables.

DISCUSSION

The findings of the present study reveal that the mean knowledge score of nursing students in the pre-test was 16.97% and mean knowledge score of nursing students in the post test was 29.52%, with a mean difference of 12.55. The mean post-test knowledge score was found to be significantly higher than mean pre-test knowledge score as evident from t=14.13 at 0.05 level of significance. The findings of the present study are in line with the study conducted by Awasthi et al to assess effectiveness of structured teaching programme on knowledge regarding prevention of worm infestation among mothers of under-five children's in selected hospital at Sitapur. In their study, the findings reveal that the pre-test score of mothers of under five children was 9.73 and post-test score was 24.33.[7] The findings of the study are also in line with a previous study conducted by

Priya et al to assess the effectiveness of structured teaching programme on knowledge of worm infestation among 60 mothers of under five children in Selected Hospitals in Dindigul, Tamil Nadu. In their study, the findings revealed that the computed post-test 't' value in overall was highly significant (t=30.22, p<0.001). The mean and SD value (mean =16.92, SD=1.42) of post-test was higher than the pre-test value (mean =7.52, SD=1.76).[6]

The results of the current study reveal that in pre-test 30 (75%) had poor knowledge, 10 (25%) had average knowledge, whereas in the post-test 8 (20%) had poor knowledge, 25 (62.5% had average knowledge and 7 (17.5%) had good knowledge. The findings of the current study are consistent with the study conducted by Kuriakose et al to assess effectiveness of structured teaching programme on knowledge regarding worm infestation among mothers of under-five children at St. Philomena's hospital in Bengaluru. In their study, the findings reveal that in the pre-test, none had adequate knowledge, 11 (36.6%) study subjects had moderate knowledge and 19 (63.4%) of them had inadequate knowledge, where as in the post-test, 9 (30%) had adequate knowledge, 21 (70%) had moderate knowledge and none of them had inadequate knowledge.[5]

The findings of the current study reveal that there was no significant association between pre-test knowledge score with the selected socio-demographic variables. The findings of the current study are consistent with the previous study conducted by Dutta et al to assess the effectiveness of planned teaching programme on prevention of intestinal worm infestations in terms of knowledge among mothers in a selected rural community, West Bengal. In their study, the findings reveal that there was no association between the pre-test knowledge score of the experimental group with selected demographic characteristics of the sample.[8] The findings of the study are also in line with the previous study conducted by Yadav et al to assess the effectiveness of planned teaching programme regarding worm infestation on knowledge among mothers of under-five children in rural area of Lucknow district. In their study, the findings reveal that there was no significant association between, pre-test knowledge score and selected socio-demographic variables.[9]

CONCLUSION

The study revealed that mean knowledge score of nursing students in post-test was higher than the mean knowledge score of nursing students in the pre-test. It can be concluded that structured teaching program was effective in improving the knowledge regarding worm infestation among mothers of under-five children.

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