

A Study to Assess the Effectiveness of Information Booklet Regarding the Intestinal Parasitic Infestation Among Mother's of Under Five Year Age Children in A Selected Urban Community Jaipur

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How to cite this article : : Sharma A. A study to assess the effectiveness of information booklet regarding the intestinal parasitic infestation among mother's of under five year age children in a selected urban community Jaipur. GFNPSS-IJMR 2026; 7:9: 3707-3711

Submitted: 19 September 2026: **Accepted:** 29 September 2026: **Published:** 30 September 2026

Abstract :

Introduction: Children as the "Nations supremely important asset" to its family and society child is precious gift which has a lot of potentials with one which can be the best resource for the nation if developed and utilized well. Children below five years of age group are known as the under-fives. According to the 2011 census children in the group of 0 – 5 years constitute 13.12% of the total population that is nearly about 170 million children in India. By virtue of this large number they are entitled to large share of health care.

Materials and Methods : An evaluative research approach with a pre-experimental, single-group pre-test and post-test design was adopted. The study was conducted in the urban community of Sanganer, Jaipur, among 50 mothers of under-five children selected through purposive sampling. The independent variable was the information booklet, and the dependent variable was mothers' knowledge regarding the prevention of intestinal parasitic infestation. Mothers who were available and willing to participate were included. Data were collected using a structured knowledge questionnaire.

Results: The study revealed that 70% of mothers had inadequate knowledge regarding immunization in the pre-test, whereas 96% achieved adequate knowledge in the post-test. The mean knowledge score increased from 12.18 ± 1.09 to 18.14 ± 1.58 , showing a significant improvement after the structured teaching programme ($t = 19.74$, $p < 0.05$).

Discussion: The study revealed that the information booklet was effective in improving mothers' knowledge regarding intestinal parasitic infestation among under-five children. The post-test knowledge score was significantly higher than the pre-test score, while no significant association was found between pre-test knowledge and selected demographic variables.

Keywords: Assess; Effectiveness; Information Booklet; Intestinal Parasitic Infestation

INTRODUCTION

The under five children are vulnerable or special risk group in any population deserving special health care because of their immaturity and the various stages of growth and development. The under five children are more prone to acquire some infection which is not seen in adult medical care through their life span. All children are most vulnerable group in the society, certain disease affect them, and result in increased morbidity and mortality rates. These diseases include diarrhea, vector borne diseases, helminthic infestation, respiratory infections and injuries.^{1,2}

WHO reported that the overall prevalence of parasites was 91% followed by Ascariasis (5.28%), ncylostomaduodenae (37.6%). Intestinal parasitic infestation is one of the most common health problems encountered in developing

countries especially among under-five children. WHO recommended that prevalence rate need to be reduced by 10% every year to improve the health2economics of the developing countries. It is the responsibilities of the health care professional to fulfil the goal of the WHO.²

Helminthic infestation is a serious public health problem, especially in areas of low environmental quality and people of low nutritional status. In the growing stage, children are more susceptible to the ill effects of parasitic attacks, as their need for nutrients as high. In young children physical and mental development may be affected by malabsorption, blood and protein loss and diarrhoea generated often by presence worms in the gut. There is also the risk of complications. The continuous presence of worms in marginally nourished children can cause severe anaemia and

affect the growth of children.³

A cross-sectional study was conducted to evaluate the factors associated with Intestinal parasitic infestation in Rajasthan, India. The study findings shows that poor personal hygiene, poor sanitary condition low socio economic data, poor nutritional status, low environmental quality, contaminated soil, open field defecation, poor food hygiene, illiteracy.⁴

Intestinal parasitism is a priority health problem. Since Intestinal parasitic infestation is seldom the direct cause of death, they tend to be regarded as relatively unimportant. Intestinal parasitic infestation is probably more significant than specific vitamin and mineral deficiencies in developing countries. In India, the problem is likely to be more common because of bad hygiene, poor awareness, illiteracy, misbelieves, poverty and variety of allied factors. Studies carried out in various parts of India have reported a prevalence of intestinal parasitism up to 30-50% and anemia from 40-73% among school going girls.^{5,6}

The prevalence of Intestinal parasitic infestation was 71.73%. The maximum infestation was of *Ascaris lumbricoides* (23.73%) followed by *Hymenolepis nana* (16.36%), *Entamoeba histolytica* (10.34%), *Ankylostoma duodenale* (8.46%) and *Trichuris trichura* (6.34%). In severely anemic children, *Ankylostoma duodenale* infestation was 4.76%, and multiple infestation was seen in 5.56% girls. *Enterobius vermicularis*, *Giardia lamblia*, and *Diphyllobothrium latum* were demonstrated in 2.76%, 2.16% and 1.1% cases respectively.⁷

The Indian system of medicine includes as well developed, non-allopathic system of medicine and regimens namely Ayurveda, Siddha, Unani, Naturopathy and Yoga. Ayurveda is the original science of medicine of great antiquity and an organized system with distinct aims and objectives and also a rich storehouse of principles and generalization of medicine which can be of great value of modern science. It is curatives well as it provides a deeper insight in to the various problems of human life.⁸

In Ayurveda, drugs are meant not to attack germs or microorganisms, but to restore the harmony of the tridoshavata, pitha, kapha. The fresh juice of neem leaves with honey is used in the treatment of skin diseases and jaundice, 1 gm of neem leaves powder with jiggery for 15 days helps in Intestinal parasitic infestation completely because of its anti-helminthic effects, the juice of neem leaves of 10 ml along with honey and asafoetida powder (5gms) removes intestinal parasite in children, 100gm of the extract was obtained from 10 kg of neem leaves. 1113gm of the extract was administered to patients orally as single dose in empty stomach, exhibited remarkable anthelmintic property.^{9,10}

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding prevention of intestinal parasitic infestation among mothers of under five year age children.
2. To assess the effectiveness of Information Booklet on Knowledge regarding prevention of Intestinal parasitic infestation among mothers of under five-year age children.
3. To determine the association between pre-test

knowledge score and selected demographic variables.

HYPOTHESIS

H: There is a significant difference between pre-test and post-test mean knowledge score on knowledge regarding prevention of Intestinal parasitic infestation among mothers of under five-year age children.

MATERIALS AND METHODS

Research approach

The selection of research approach is the basic procedure for conducting of research enquiry. Research approach tells the researcher about what data has to be collected and how to analyse. It also suggests possible conclusions to be drawn from adaptation view of nature of the problem selected and objectives to be accomplished, evaluative research approach was adopted for the present study.

Research Design

Research design refers to the plan for organization of a scientific investigation. Pre-experimental design was used for the study with single group pretest posttest design. The schematic representation of research study design used by the research investigation is given below

Setting

Study will be conducted in the urban community, Sangner at Jaipur which is a distance of 12kms from IMT\$NE College of Nursing.

Variables

A variable is any phenomena or characteristics or attributes under the study. Variable are the measurable characteristics of a concept of logical of attributes

Independent variable

Information Booklet.

Dependent Variable

Knowledge of mothers under five-year age children's regarding prevention of Intestinal Parasitic infestation

Population

Mothers of under-five children was the target population

Sample

The sample for the present study was mothers of under five-year age children in urban community at Sangner, Jaipur.

Sample Size

The sample comprises 50 mothers of under-five year age children who met the inclusion criteria at sangner urban community.

Sampling Technique

The sampling technique used for the study was purposive sampling technique, which is a type of non – probability sampling technique.

Criteria for sample selection

Inclusion criteria

- Mothers of under-five year age children.
- Mothers who are available at the time of data collection.
- Mothers willing to participate in the study

Exclusion criteria

- Mother of who are not having under-five year age

children

- Mother of who are not available at the time of data collection
- Mother of who are not willing to participate in the study

Development and description of tool

The tool used for gathering relevant data about prevention of intestinal parasitic infestation was structured knowledge questionnaire

Description of the tool

On modifying the tool as per the expert's suggestion, the final tool consists of two sections

Section I: Demographic data

It consists of selected demographic variables like the age of the mother, education, occupation, Source of Information, income, source of water supply.

Section II: A questionnaire to assess the level of knowledge of the mothers on intestinal parasitic infestation. It contains 20 close ended questions on the knowledge aspects of intestinal parasitic infestation such as definition, causes, types, signs & symptoms, and prevention. Each correct answer was given a score of "1" and wrong answer was scored as "0". The total score was 20.

The score was interpreted as follows: -

Level of knowledge percentage

Inadequate < 50% Moderate 51 - 75% Adequate 76 - 100%

Section III: Information booklet on intestinal parasitic infestation.

Ethical Consideration the study was proposed and submitted to the ethics committee, institute of medical technologies and nursing education and the experts on the committee approve the study. All respondents were carefully informed about the purpose of the study and their part during the study. Informed consent for the study was obtained from all participants. Confidentiality of the subject's information was maintained. Thus, the investigator followed the ethical guidelines, which were issued by research committee. The study was done without any violation of human rights.

Validity of the Tool

The content validity of the instrument was assessed by obtaining opinion from 7 experts in the field of pediatric nursing and pediatrician. The experts suggested simplification of language, reorganization and addition of certain items. Appropriate modifications were made accordingly, and the tool was finalized.

Reliability of the Tool

After pilot study reliability of the tool was assessed by using Test retest method. The knowledge score reliability correlation coefficient 'r' value was 0.92.

RESULTS

Table: 1, Frequency and percentage distribution of mothers of under five-year age according to their demographic variable.

S.n.	Demographic variable	Frequency	Percentage (%)
1.	Age of the mother		
	a) Below 20 Years	1	2%
	b) 21-25 Years	7	13%
	c) 26-30 Years	28	57%
	d) Above 35 Years	14	28%
Total		50	100%
2.	Educational status		
	a) Up to Primary	0	0%
	b) Up to Secondary	0	0%
	c) Up to High Secondary	12	25%
	d) Graduate and Post Graduate	38	75%
Total		50	100%
3.	Occupation		
	a) Private job	3	5%
	b) Government Job	3	5%
	c) House wife	44	90%
	d) Self employed	0	0%
Total		50	100%
4.	Source of Information		
	a) No information	4	8%
	b) Friends and Relatives	3	5%
	c) Mass Media and news paper	35	70%
	d) Books	8	17%
Total		50	100%
5.	Family income /month		
	a) Up to 10000	0	0%
	b) 10000 to 20000	8	15%
	c) 20000 to 30000	12	25%
	d) Above 30000	30	60%
Total		50	100%
6.	Source of Water supply		
	a) R.O. Water	15	30%
	b) Tap Water	10	20%
	c) Personal boring	3	5%
	d) Government supply	22	45%

Total		50	100%
7.	Number of under five-year age children		
	a) Number of children 1	20	40%
	b) Number of children 2	15	30%
	c) Number of children 3	12	25%
	d) Number of children above 3	3	5%
Total		50	100%

Table: 2, frequency and percentage distribution of pre-test and post-test knowledge score regarding immunization among mothers of under-fives.

Level of knowledge	Pre test		Post test	
	Frequency	Percentage	frequency	Percentage
In adequate	35	70	-	-
Moderate	15	30	2	4
Adequate	-	02	48	96

Table 4,Over all mean, standard deviation, paired't' value of pre test and post test

Test	Mean	Standard deviation	Paired 't' test
Pre test	12.18	1.09	19.74
Post test	18.14	1.58	

HS* highly significant, df –degree of freedom

Table-5, Association between demographic variables and pre-test level of knowledge of mothers of under five children regarding prevention of worm infestation

Sl.no	Demographic variables	Categories	Scores						Total		Chi Square value
			Adequate		Moderate		Inadequate				
			Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
1	Age of the mother	Bellow 20 Years	0	0%	1	2%	0	0%	1	2%	Chi-test value=1.749
		21-25 Years	2	4%	4	8%	1	2%	7	13%	
		26-30 Years	4	8%	20	40%	4	8%	28	57%	
		Above 30 Years	3	6%	8	16%	3	6%	14	28%	
		TOTAL	9	18%	33	66%	8	16%	50	100%	
2	Educational status	Up to Primary	0	0%	0	0%	0	0%	0	0%	Chi-test value=9.9
		Up to Secondary	0	0%	0	0%	0	0%	0	0%	
		Up to High Secondary	3	6%	6	12%	3	6%	13	25%	
		Graduate and Post Graduate	5	10%	5	10%	28	56%	38	75%	
		TOTAL	8	16%	11	22%	31	62%	50	100%	
3	Occupation	Private job	1	2%	1	2%	1	2%	3	6%	Chi-test value=3.3
		Government Job	1	2%	2	4%	0	0%	3	6%	
		House wife	7	14%	33	66%	4	8%	44	90%	
		Self employed	0	0%	0	0%	0	0%	0	0%	
		TOTAL	9	18%	36	72%	5	10%	50	100%	
4	Source of Information	No information	1	2%	2	4%	1	2%	4	8%	Chi-test value=2.8
		Friends and Relatives	1	2%	1	2%	1	2%	3	6%	
		Mass Media and news paper	5	10%	25	50%	5	10%	35	70%	
		Books	2	4%	5	10%	1	2%	8	16%	
		TOTAL	9	16%	33	66%	8	16%	50	100%	
5	Family income /month	Up to 10000	0	0%	0	0%	0	0%	0	0%	Chi-test value=2.619
		10000 to 20000	1	2%	6	12%	1	2%	8	16%	
		20000 to 30000	3	6%	6	12%	3	6%	12	24%	
		Above 30000	5	10%	22	44%	3	6%	30	60%	
		TOTAL	9	18%	34	68%	7	14%	50	100%	
6	Source of Water supply	R.O. Water	2	4%	10	20%	3	6%	15	30%	Chi-test value=5.66
		Tap Water	1	2%	8	16%	1	2%	10	20%	
		Personal boring	1	2%	2	4%	0	0%	3	6%	
		Government supply	1	2%	20	40%	1	2%	22	44%	
		TOTAL	5	10%	40	80%	5	10%	50	100%	
7	Number of under five-year age children	Number of children 1	2	4%	15	30%	3	6%	20	40%	Chi-test value=2.704
		Number of children 2	2	4%	11	22%	2	4%	15	30%	
		Number of children 3	2	4%	9	18%	1	2%	12	24%	
		Number of children above 3	1	2%	1	2%	1	2%	3	6%	
		TOTAL	7	14%	36	72%	7	14%	50	100%	

NS= Not significant.

X2= Chi- square.

The above table shows the association of pre-test knowledge score with their selected demographic variables by using Chi=quare (X2), it was evident that, there was no significant association between the pre-test knowledge score with their age of the mother, educational status, type of family, age of the child, occupation and family income.

DISCUSSION

The findings of the present study revealed that the information booklet was effective in improving mothers' knowledge regarding intestinal parasitic infestation among under-five children. The post-test mean knowledge score (18.14 ± 1.58) was significantly higher than the pre-test mean score (12.18 ± 1.09). The calculated t value (19.74) was greater than the table value (1.7), indicating a significant improvement in knowledge after the intervention. Therefore, the research hypothesis was accepted. However, no significant association was found between pre-test knowledge scores and selected demographic variables.

CONCLUSION

The present study assessed the knowledge among mothers of under five-year age children regarding prevention of Intestinal parasitic infestation and found that the mothers had inadequate knowledge related to Intestinal parasitic infestation. After the structured teaching programme on Intestinal parasitic infestation there was significant improvement on knowledge of the mothers of under five-year age children regarding Intestinal parasitic infestation. The study concluded that the structured teaching programme was effective in improving knowledge of mothers of under five-year age children regarding prevention of Intestinal parasitic infestation.

RECOMMENDATIONS

- 1) The study can be replicated in large sample for better generalization.
- 2) A similar study can be done in attitude and practice

regarding prevention of Intestinal parasitic infestation among mothers of under five-year age children.

- 3) This study will be reference for research scholars.
- 4) Evidence based nursing practice must take higher profile in order to increase awareness among mothers of under five-year age children.
- 5) A comparative study between urban and rural knowledge, attitude and practice on Intestinal parasitic infestation can be conducted.

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