



A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING WORM INFESTATION AMONG MOTHERS OF UNDER FIVE CHILDREN OF SELECTED VILLAGES OF ROHTAS, BIHAR

Nursing

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ABSTRACT

Introduction Intestinal parasitism is a priority health problem. Since worm infestation is seldom the direct cause of death, they tend to be regarded as relatively unimportant. Worm 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, misbeliefs, 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. **Method:** A quantitative research approach Non experimental Descriptive research design was used to assess the knowledge regarding worm infestation among mothers of under five children of selected villages of Rohtas, Bihar. The sample size is 60 mothers of under five children. A Self structured questionnaire was prepared to assess the knowledge of mothers of under five children regarding worm infestation and analyzed by using descriptive and inferential statistics. **Result:** the analysis and interpretation of the data, we can conclude that most of the samples have moderate knowledge regarding worm infestation and it need to be improved. Further on, hypothesis regarding association of knowledge and the demographic variable. It was found out that all the demographic variable found to be significant at the level of $p = 0.05$. It was reported that out of 60 samples, most of the samples 36(60%) found to be in moderately adequately knowledge, 14(23.3%) found in the inadequate knowledge and rest 10(16.7%) found in the adequate knowledge. From the above results, we can interpret that there exist an association between the knowledge score and the demographic variable. **Conclusion:** The findings of the study revealed that Community awareness about intestinal parasite prevention and control should be created through community mobilization like weekend campaigns or structured training for mothers. Worm infestation is one of an easily preventable disease. Simply educating the children at grass root level can help to develop awareness among school children and subsequently they become more conscious about their health. More and more educational programmes should be carried out and the health workers, nursing students should be involved in these programmes. Apart from teaching programmes focus should also be placed on providing basic services to children so that a healthy nation can be developed.

KEYWORDS

Knowledge, Parasite, Worm infestation

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. The term parasite relates to "any living thing that lives on or in another living organism". Many parasites interfere with bodily function, cause irritation; some destroy the host's tissues and release toxin into the blood stream.

WHO reported that the overall prevalence of parasites was 91% followed by Ascariasis (5.28%), Ancylostoma duodenae (37.6%). Worm infestation is one of the most common health problems encountered in developing countries especially among under five children. 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.

it is estimated to affect over 200 million people in India and public health specialists are concerned that these infections impair children's growth and development. New research shows that parasites such as 02 worms not only control the behavior of their hosts, they can change entire ecosystems to suit their needs. "Hookworms sink their teeth into the intestinal walls of more than a billion people every day to drink their fill of blood.

Worm infestations contribute significantly to Global burden of disease in children especially in the tropical & sub-tropical regions. The Intestinal nematodes are the most common type of Helminthes. The three major intestinal nematodes of children are ascaris lumbricoides, tricuris tricurria and hook worm together have a substantial impact on the health and wellbeing of the children living in less developed nations of the world.

Globally, India continues to be the country with the highest number of people (597 million people) practicing open defecation," says the report the Progress on Drinking Water and Sanitation 2014 8 update released in Geneva the report jointly prepared by the WHO and the

UNICEF says that eighty-two per cent of the one billion people are practicing open defecation in the world live in just 10 countries.

Prevention is the key, but early intervention can improve the outcomes. The global strategy is health for all which move towards primary health care that can be possible only by encouraging the community participation and mobilizing the community resources and using appropriate technology for reducing the mortality and morbidity among children.

A co relational study was conducted to identify the relationship between helminthiasis and hygiene conditions of 20 school in Tkenne Nigeria. The study concluded that burden of parasitic infestation and poor sanitary conditions are greater public health importance, including deworming, health education and improvement of conditions are recommended. During the clinical posting the investigator found that many of the children were affected with worm infestation and shows suffering with abdominal pain, vomiting, diarrhoea and malnutrition etc. There were the children were not able to maintain their normal routine life. The mother plays an important role in promoting the health of under five children.

OBJECTIVES

1. To assess the knowledge regarding worm infestation among the mothers of under five children.
2. To find out the association between the mother's knowledge with selected demographic variables.

Hypothesis:

1. H1: - There will be an inadequate level knowledge among mother of under five children regarding worm infestation.
2. H2: - There will be significant association between the level of knowledge among mother of under five children with their selected demographic variables.

Delimitations

1. The study includes only the mother of under five children.
2. The study is limited to people who are interested to participate.

MATERIAL AND METHODOLOGY**Research Approach**

In view of nature of the problem and objectives accomplished Quantitative research approach was selected for the present study.

Research Design

Non experimental Descriptive research design.

Research Setting

Selected villages of Rohtas, Bihar.

Sample

The sample is comprised of mothers of under- five children.

Sample Technique

Non probability purposive sampling technique.

Sample Size

The sample size is 60 mothers of under five children.

Inclusion Criteria:

- Mothers who have under five children.
- Mothers who are available at the time of data collection.

Exclusion Criteria:

- Mothers who are not willing to participate in the study.
- Mothers who got sick children at the time of data collection.
- Mothers who don't read and understand Hindi.

Development Of The Tool

A Self structured questionnaire was prepared to assess the knowledge of mothers of under five children regarding worm infestation.

Description Of The Tool

The self-structured questionnaire consisted of two sections.

Section I: included demographic data such as age, religion, education of the mother, occupation of the mother, type of family, monthly income of the family, Methods of drainage system, Exposure to source of health information, Health services available from, Type of water supply, place of defecation, no. of under-five children.

Section II: Questionnaire regarding knowledge of worm infestation among the mothers of under-five children. It comprised of 25 multiple-choice questions. Each correct answer was given a score of one and each wrong answer a score of 0. The total possible score was 25.

The Level Of Knowledge Was Categorized As Follows:

- 1 - 8: - Inadequate knowledge
- 9 - 16: - Moderately adequate knowledge
- 17 - 25: - Adequate knowledge

Validity Of Tools

The tool developed by the researcher was submitted to 5 experts in the field, along with the tool, the objectives , hypothesis, operational definition, scoring key, and evaluation criteria checklist were submitted to establish content validity. Modification were made based on experts suggestions.

Reliability Of Tool

The reliability of the tool was computed by using KARL PEARSON'S CORRELATION COEFFICIENT formula . The reliability of the tool is 0.8 for the knowledge score of 6 care takers of bed ridden patients . Therefore, the tool is found to be reliable.

Data Collection Procedure

The data collection was scheduled date on 06/02/2023 to 11/02/2023 in selected villages of Rohtas. Before taking the permission from Mukhiya of village of Rohtas. Before that, data was collected on 10/02/2023 in selected village of Rohtas. The investigator selected 60 care takers inclusion criteria for data collection using convenient sampling technique. In one day, 30 samples and next day 30 samples were collected. The investigator interacted through face to face meet collectively at two times and explain the purpose of the study, the cooperation required and the anonymity assured before obtaining verbal and written consent. Attempts were made to establish good rapport to gain confidence and cooperation from the subject who facilitated the data collection process. The data was collected using

self-structured questionnaire administered.

The data was collected from 10:00 AM – 04:00 PM. After obtaining the response we recorded it and end of the data collection investigators thanked the participants for their cooperation.

Ethical Considerations

Confidentiality and anonymity of the study subjects was obtained prior to the study , consent has taken from the mother of under five children regarding their willingness to participate in the study.

Plan For Data Analysis

The data analysis was planned on the basis of objectives and hypothesis of the study. The data obtained was analyzed by descriptive and inferential statistical test. The plan of data analysis was as follows:

- Socio demographic data was analyzed by using frequency and percentage.
- The assessment of knowledge regarding worm infestation among mother of under-five children were analyzed in terms of percentage
- The assessment of knowledge regarding worm infestation among mother of under-five children were analyzed in terms of mean, median, mean percentage and standard deviation.
- Association between and socio demographic data was calculated using chi square test.

Results

Table-1 Showing the distribution of study participants according to their socio-demographic variables.

Socio-demographic variables	Frequency	Percentage
1. Age in year		
a. < 26 years	32	53.3%
b. 26-30 years	22	36.7%
c. 31-35 years	04	06.7%
d. 36-40 years	02	03.3%
e. Above 40 years	00	00.0%
2. Region		
a. Hindu	42	70%
b. Muslims	15	25%
c. Christian	03	05%
3. Educational status		
a. Primary	19	31.7%
b. Secondary	36	60.0%
c. Graduate	04	06.7%
d. Post Graduate	01	01.6%
e. Doctorate	00	00.0%
4. Occupational status		
a. Housewife	33	55%
b. Private Job	17	28.3%
c. Business/ Company	06	10.0%
d. Government	04	6.7%
5. Type of family		
a. Nuclear	21	35%
b. Joint	39	39%
6. Family income		
a. Below 5000	07	11.7%
b. 5001-10000	14	23.3%
c. 10001-20000	36	60.0%
d. 20001-above	03	05%
7. Methods of drainage system		
a. Open	13	21.7%
b. Closed	47	78.3%
8. Exposure to sources of health information		
a. Self -learning	02	3.3%
b. Mass media	37	61.7%
c. Friends	03	05%
d. Health Personnel	18	30%
9. Health Service Available		
a. P.H.C	02	3.3%
b. Sub-Centre	37	61.7%
c. Nursing Home	03	05%
d. Hospital	18	30%
10. Type of Water Supply		
a. Tap Water	38	63.3%

b. Well Water	04	06.7%
c. Tank Water	07	11.7%
11. Place of Defecation		
a. Open field	00	00%
b. Public Latrines	12	20%
c. Private Latrines	48	80%
12. Number Of Children		
a. One	20	33.3%
b. Two	36	60.0%
c. Three	03	05%
d. Four And above	01	1.7%

Table-2 Showing the knowledge score of study participants

S. No.	Knowledge Score	Score	
		No.	%
1.	Inadequate Knowledge (1-8)	14	23.3%
2.	Moderately Adequate Knowledge (9-16)	36	60.0%
3.	Adequate Knowledge (17-25)	10	16.7%
	Total	60	100.0%

Table-2 depict their participants were given a questionnaire regarding knowledge about oral health, which consisted of 25 questions they were given 1 number for each correct answer and 00 for a wrong answer. These scores were than graded in four categories – Inadequate knowledge (1-8), Moderate Adequate Knowledge (9-16) and adequate knowledge (17-25) score regarding worm infestation. It was revealed that among 60 samples 36(60%) had moderately adequate knowledge, 14(23.3%) had inadequate knowledge and only 10(16.7%) had adequate knowledge.

Table-3 Showing the distribution of study participants association between knowledge score and selected demographic variables.

demographic variables	Knowledge Score	Degree of Freedom	2 value
1. Association of Age		06	21.47
a.< 26 years	32		
b.26-30 years	22		
c.31-35 years	04		
d.36-40 years	02		
e.Above 40 years	00		
2.Association of Religion		04	10.81
a.Hindu	42		
b.Muslims	15		
c.Christian	03		
3.Association of Educational Status		06	15.06
a.Primary	19		
b.Secondary	36		
c.Graduate	04		
d.Post Graduate	01		
e.Doctorate	00		
4.Association of Occupational Status		06	14.67
a.Housewife	19		
b.Private Job	36		
c.Business/Company	04		
d.Government	01		
5.Association of Type of Family		02	24.81
a.Nuclear	36		
b.Joint			
6. Association of Family Income		06	15.3
a.Below 5000	07		
b.5001-10000	14		
c.10001-20000	36		
d.20001 – above	03		
7.Association of Methods of Drainage System		02	35.08
a.Open	13		
b.Closed	47		
8.Association of Exposure to Sources of Information			
a.Self-learning	02	06	14.69
b.Mass media	37		
c.Friends	03		
d.Health Personnel	18		

9.Association of Health Services Available		06	47.22
a.P.H.C	02		
b.Sub-Centre	37		
c.Nursing Home	03		
d.Hospital	18		
10.Association of Type of Water Supply		06	17.02
a.Tap Water	38		
b.Well Water	04		
c.Tank Water	07		
11.Association of Place of Defecation		02	15.75
a.Open field	00		
b.Public Latrines	12		
c.Private Latrines	48		
12.Association of Number of Children		06	39.98
a.One	20		
b.Two	36		
c.Three	03		
d.Four And above	01		

Table-3 revealed that the was a no significant association between the knowledge score and selected demographic variables such as age, religion, occupational, educational status, income, no. of children, place of defecation, source of water, and health services regarding worm infestation among mothers of under-five year children's.

DISCUSSION

It was seen that most of the 32(53.3%) found to be in age group <26 years, followed by 22(36.7%) found to be in age group 26-30 years . It was also stated that 04(6.7%) and rest 02(3.3%) found in the age group above 40 years. The researcher stated that among 60 samples, 42(70%) were found to be Hindu , followed by 15(25%) were Muslims and remaining 03(5%) found to be Christians. The investigator reported that out 60 mother of under five children, 36(60%) were in secondary education, 19(31.7%) were found to have just primary education . It was also seen that 04(6.7%) were graduate and one (1.6%) found to complete post -graduation course. The data analysis reported that among total of 60 mothers, 33(55%) found to be house wife, followed by 17(28.3%) were engaged in the private job, 06(10%) were have self-company and business and 04(6.7%) were engaged in government sector. The researcher revealed that 39(65%) found to be in joint family and 21(35%) were found in the joint family. The researcher stated that among 60 samples, 36(60%) had income between 10001-20000, followed by 14(23.3%) had monthly earning in between 50001-10000 Rs . further on, 07(11.7%) found to be below 5000 Rs and lastly, 03(05%) were 200001 and above. The researcher reported that out of 60 samples, 47(78.3%) were to have closed drainage system and rest 13(21.7%) were in open methods of drainage system. The study revealed that out of 60 samples, 37(61.7%) had got influence through mass media, followed by 18(30%) got aware by health personnel. further on, 03(05%) were influenced by friends and 02(3.3%) were found to be self- learning. The study reported that out of 60 samples, 37(61.7%) were found to have sub centre facilities nearby, followed by 18(30%) had hospital nearby. It was followed by 03(05%) had health facilities nearby nursing home and 02(3.3%) had facilities from PHC. The study revealed that among 60 mothers, 38(63.3%) have water supply from tap , 11(18.3%) had water supply from sources like hand pump , 07(11.7%) have supply of water from tank and 04(6.7%) have sources of water from well. It was inferred that 48(80%) were had their own private latrines for defecation and rest 12(20%) had public toilets for defecation. The study demonstrated that majority of the samples, 36(60%) had two children, 20(33.3%) had one children. It was also seen that 03(05%) had three children and 01(1.7%) had four and above children.

The investigator revealed that out of 60 samples, majority of the samples, 36(60%) had moderately adequate knowledge, 14(23.3%) had inadequate knowledge and only 10(16.7%) had adequate knowledge. Supportive study also conducted by **Kassaw M W, Abebe AM (2020)** reported a study on the topic which aims to assess mothers' knowledge, attitude, and practice on prevention and control of intestinal parasitic infestations. A cross-sectional study was carried out on 378 mothers who had under six and over two-year-old children. Although 384 mothers were selected using sample size calculation, the data were collected from 378 mother-child pairs using a face to face interview-based questionnaire. The study reported that overall level of good maternal knowledge, positive attitude, and good practice in

preventing and controlling intestinal parasitic infection concerning pre-school children in Sekota town was 45.2%, 55.3%, and 51.1% respectively. Seventy-seven (20.4%) respondents reported that they knew about *A. lumbricoides*, and 62 (16.4%) participants washed vegetables as a means of intestinal prevention.

Study revealed that there was no significant association between the knowledge score and selected demographic variables such as age, religion, occupational, educational status, income, no. of children, place of defecation, source of water, and health services regarding worm infestation among mothers of under-five year children's. supportive study also conducted by **Gadisa E (2019)** depicted a study with an aim to determine the prevalence and associated risk factors of intestinal parasitic infections (IPIs) among under-five children live in and around Haro Dumal Town. Community-based cross-sectional study was conducted in 561 randomly selected under-five children. The study revealed that of the 561 total under-five children, 216 (38.5%) were found to be infected with intestinal parasites. *E.histolytica/dispar* (15.3%) was the most prevalent parasite, followed by hook worm (14.4%) and *T.trichuria* (13.9%). Regarding risk factors, geo-phage, tungiasis, eating raw vegetable, were significantly associated with intestinal parasitic infections. It was concluded that improving sanitation, controlling ecto-parasite such as tungiasis, provision of safe water and successful mass-deworming are important.

CONCLUSION

Thus, after the analysis and interpretation of the data, we can conclude that most of the samples have moderate knowledge regarding worm infestation and it need to be improved. Further on, hypothesis regarding association of knowledge and the demographic variable. It was found out that all the demographic variable found to be significant at the level of $p = 0.05$. It was reported that out of 60 samples, most of the samples 36(60%) found to be in moderately adequately knowledge, 14(23.3%) found in the inadequate knowledge and rest 10(16.7%) found in the adequate knowledge. From the above results, we can interpret that there exist an association between the knowledge score and the demographic variable.

Recommendations

- A similar study can be replicated on large samples, there by findings can be generalized for a large population
- A similar study can be repeated with experimental and control group for more generalized findings.
- A similar study can be conducted to assess the effectiveness of structured teaching among the parents admitted in the selected hospitals.

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