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## A study to assess knowledge regarding prevention of worm infestation among mothers of under five children in selected community of Guwahati, Assam

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### Abstract

**Background:** Worm infestation is a major public health problem in children of developing countries because of poor socio-economic conditions and lack of good hygienic livings. Helminthic infestation contributes significantly to global burden of diseases in children especially in the tropical and subtropical regions. Intestinal worm infestation can result in impair nutrition and development and is the major etiology for iron deficiency anemia in young children. In Assam around 68 percent children of 1-4 years of age are estimated to be at risk of parasitic intestinal worm infestation.

**Aim:** The study aimed to assess the level of knowledge regarding prevention of worm infestation among mothers of under five children in a selected community of Assam.

**Materials and Methods:** Non-experimental descriptive research design was adopted for the study. In this study 60 mothers of under five children of Dispur, Guwahati, Assam was selected by using purposive sampling technique. The tool used for the study was structured knowledge questionnaire. The analysis was done by using both descriptive and inferential statistics in terms of mean, standard deviation, frequency distribution, percentage and chi square.

**Results:** The results show that most of the mothers of under five children 50% have inadequate level of knowledge regarding prevention of worm infestation in the selected community of Guwahati, Assam whereas only 35% have moderate adequate knowledge and 15% mothers of under five children have adequate knowledge on prevention of worm infestation.

**Conclusion:** The findings of the study reveal that 15% of them have adequate knowledge about prevention of worm infestation. The study concluded that assessing the level of knowledge regarding prevention of worm infestation is found to be effective.

**Keywords:** Worm infestation, under five children

### Introduction

Worm infestation is a major public health problem in children of developing countries due to lack of good hygienic livings and poor socio-economic status

In India because of ignorance illiteracy and poverty and also lack of education nearly 80 percent of children population is affected by worm infestation.

In Assam around 68 percent children of 1-14 years of age are estimated to be at risk of parasitic intestinal worm infestation.

The worm infestation cause effects on children physical growth and well-being and it leads to anemia and under nutrition. So, the world health organization advised regular deworming among the children's and adolescents to achieve the better health and nutritional status.

### Methodology

The objective of the study was to assess the knowledge regarding prevention of worm infestation among mothers of under five children in selected community of Assam. To determine the association of the knowledge regarding prevention of worm infestation among mothers of under five children with the selected demographic variable. Non-Experimental descriptive research design was adopted for the study. In this study 60 mothers of under five children of Dispur, Guwahati, Assam was selected by using purposive sampling technique. The tool used for the study was structured knowledge questionnaire.

The analysis was done by using both descriptive and inferential statistics in terms of mean, standard deviation, frequency distribution, percentage and chi square.

### Sample size

The sample size consists of 60 mothers of under five children of Capital State Dispensary, Guwahati, Assam.

### Sampling technique

Purposive sampling technique was used to draw sample.

### Tools and techniques used for data collection

Tools are the various instruments of data gathering which involves accurate recording forms. Tools were prepared based on objectives of the study and extensive literature review

**Selection of tools:** A structured questionnaire was used to assess the knowledge of mothers regarding prevention of worm infestation.

**Technique:** Technique is the means of gathering data with the use of specific tools used in given methods. The technique use for the study is self-report.

### Development of the tool

The data collection tool or instrument is the vehicle that best obtain the data adds to the body of knowledge in the disciplined.

### Description of the tool

To meet the objectives of the study the following tool were constructed

- **Section I:** Demographic data
- **Section II:** Structure questionnaires to assess the knowledge of mothers regarding prevention of worm infestation.

### Section I: Demographic data

It consisted of age of mother, educational qualification of mother, number of under five children, type of family, monthly family income, housing type, source of drinking water and dietary pattern.

### Section II: Structured questionnaire to assess knowledge of mother regarding prevention of worm infestation

It consists of 20 structured questions on worm infestation to assess the knowledge regarding prevention of worm infestation among mothers of under five children.

The correct answer carries score 1 (one) and wrong answer score 0 (zero). The total score on knowledge regarding prevention of worm infestation is 20.

The score between <7 = inadequate knowledge  
7-13 = moderate knowledge  
>13 = adequate knowledge

### Data analysis

The data collected through administration of questionnaires was organised and tabulated. This data was analyzed in terms of the objectives of the study by using descriptive and inferential statistics, which are necessary to provide substantial summary of results. The analysis was made by

using important parameters like frequency, percentage, and standard deviation.

### The plan of data analysis is as follows

Frequency and percentage distribution were used to describe the demographic variables.

1. Mean and standard deviation was used to describe the level of knowledge score
2. Chi square was used to determine the association between knowledge with selected demographic variables.

**Table 1:** Frequency and percentage distribution of mothers according to the age n = 60

Age (In years)	Frequency	Percentage
<20 years	10	17%
20- 25 years	19	32%
26-30 years	20	33%
>31 years	11	18%
Total	60	100%

**Table 2:** Frequency and percentage distribution of mothers according to education qualification n = 60

Education qualification	Frequency	Percentage
Primary school	4	6%
Middle school	15	25%
High school	15	25%
Higher secondary	16	27%
Graduate	6	10%
Above graduate	4	7%
Total	60	100%

**Table 3:** Frequency and percentage distribution of mother according to number of under five children n = 60

Number of children	Frequency	Percentage
1	27	45%
2	26	43%
3 and above	7	12%
Total	60	100%

**Table 4:** Frequency and percentage distribution of family income n = 60

Family income	Frequency	Percentage
<Rs 10,000/month	15	25%
Rs 10,000 - 20,000	23	38.3%
Rs 20,000 – 30,000/month	14	23.3%
>Rs 30,000/month	8	13.3%
Total	60	100%

**Table 5:** Frequency and percentage distribution of mother according to Housing type n = 60

Housing type	Frequency	Percentage
Kaccha	14	23%
Pucca	30	50%
Semi Pucca	16	27%
Total	60	100%

**Table 6:** Frequency and percentage distribution of mothers according to type of family n = 60

Type of family	Frequency	Percentage
Joint family	20	33%
Nuclear family	30	50%
Extended family	10	17%
Total	60	100%

**Table 7:** Frequency and percentage distribution of mothers according to source of drinking water n = 60

Source of drinking water	Frequency	Percentage
Tap water	15	25%
Well water	18	30%
Mineral/bottle water	8	13%
Boil water	19	32%
Total	60	100%

**Table 8:** Frequency and percentage distribution of mothers according to dietary pattern n = 60

Dietary Pattern	Frequency	Percentage
Vegetarian	15	25%
Non-Vegetarian	45	75%
Total	60	100%

**Table 9:** Association between levels of knowledge of mothers with selected demographic variables

Variables	Knowledge				Chi square (X)		df	Remarks
	IA	MA	A	Total	Calculated value	Table value		
<b>Age (in years)</b>								
a.<20 years	2	8	3	13	5.07	12.59	6	NS
b.20-25 years	7	3	2	12				
c.26-30 years	7	5	5	17				
d.>31 years	7	6	5	18				
	23	22	15	60				
<b>Education Qualification</b>								
a. Primary school	2	2	2	6	4.07	18.3	10	NS
b. Middle school	3	3	2	8				
c. High school	5	5	3	13				
d. Higher secondary	5	5	5	15				
e. Graduate	1	5	2	8				
f. Above graduate	2	5	3	10				
	18	25	17	60				
<b>Number of under five children</b>								
a. 1	3	10	3	16	3.99	9.49	4	NS
b. 2	10	7	5	22				
c. 3 and above	7	10	5	22				
	20	27	13	60				
<b>Family income</b>								
a. <Rs 10,000/month	5	7	5	17	0.52	12.59	6	NS
b. Rs 10,000-20,000	3	6	5	14				
c. Rs 20,000-30,000/month	3	7	5	15				
d. >Rs 30,000/month	3	6	5	14				
	14	26	20	60				
<b>Housing type</b>								
a. Kaccha	5	9	7	21	0.82	9.49	4	NS
b. Pucca	3	10	6	19				
c. Semi pucca	5	8	7	20				
	13	27	20	60				
<b>Type of family</b>								
a. Joint Family	11	8	5	24	4.16	9.45	4	NS
b. Nuclear Family	6	12	2	20				
c. Extended Family	8	5	3	16				
	25	25	10	60				
<b>Source of Drinking water</b>								
a. Tap water	9	10	10	29	8.99	12.59	6	NS
b. Well water	5	5	2	12				
c. Mineral/Bottle water	10	2	1	13				
d. Boil water	3	2	1	6				
	27	19	14	60				
<b>Dietary Pattern</b>								
Vegetarian	11	13	8	32	0.6	5.99	2	NS
Non-Vegetarian	7	13	8	28				
	18	26	16	60				

IA = Inadequate, MA = Moderately adequate, A = Adequate, NS = Not significant, df = Degree of freedom

The table IX represents association between levels of knowledge of mothers with selected demographic variables such as age, education qualification, number of under five children, family income, housing type, type of family, source of drinking water and dietary pattern.

**Conclusion**

In conclusion it was found that majority 50% of the mothers of under five children have inadequate knowledge, 35% of mothers have moderate knowledge and 15% of mothers of

under five children have adequate knowledge regarding prevention of worm infestation.

As for the association, there was no significant association between knowledge and selected demographic variables.

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