



# Awareness on preventive measures of worm infestation among mothers of toddlers at selected villages of thamballapalle mandal, Chittoor district.

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## ABSTRACT

The aim of the study was to assess the awareness on preventive measures of worm infestation among mothers of toddlers at selected villages of thamballapalle mandal, Chittoor district

## Objectives:

1. To assess the knowledge regarding prevention of worm infestations among mothers of Toddlers.
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding prevention of worm infestations among mothers of toddlers.
3. To find the association between pre and post test knowledge and socio demographic variables regarding prevention of worm infestations among mothers of toddlers.

**Methodology:** By using convenient sampling technique a Pre- experimental one group pre-test post-test design was adopted, 60 mothers of toddlers were taken as samples, and data collection was done by using self structured questionnaire.

**Results:** Out of 60 mothers in pre test 43(71.70%)had inadequate knowledge, 17(28.30%)had moderate knowledge

In post test 46(76.70%) had adequate knowledge, 14(23.30%)had moderate knowledge  
Out of 60 mothers in pre test 40 (66.70%) had inadequate knowledge on practices, 16(26.70%) had moderate knowledge on practices, and 4(6.70%) had adequate knowledge on practices.

In post test 44 (73.70%) had adequate knowledge on practices, 16(26.70%) had moderate knowledge on practices.

**Conclusion:** Knowledge and knowledge on practices were significant at  $p < 0.01$  level regarding prevention of worm infestation, hence hypothesis is accepted.

**Key words:** Awareness, prevention, worm infestation, mothers of toddlers

## INTRODUCTION:

““Prevention is better than cure”

- JURIST HENRY DE BRACON

## BACKGROUND OF THE STUDY:

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. 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<sup>1,2</sup>

World Health Organization (WHO, 2013), reported that worm infestation is one of the common health problem worldwide especially among children. WHO estimated that about 1400 million people worldwide are infected with at least one type of Intestinal worm? Hook worm, Pin worm and, Tape worm commonly acquired orally or parentally or both routs. In 2013 annual report at global prevalence regarding type of worm infestation shows that 1.47 billion are Ascariasis, 1.3 billion for Trichuris and 1.05 billion for hook worm infestation and more than 25% of world population infected with helminthes. Prevalence rates of 50 to 75% have been registered in Asian Countries.<sup>3</sup>

In India, more than 200 million children are infected with roundworm, hookworm and whip worm; 60- 80% of population of West Bengal, Andhra Pradesh, Uttar Pradesh, and Orissa are infected with worms. In low and middle income countries about 1.2 billion people are infected with roundworm and more than 700 million are infected with hookworm or whipworm. In South India hookworm is more prevalent among children. In India intestinal parasitism is the priority health problem because of unhygienic practices, poor awareness, illiteracy, myths, poverty and variety of allied factors<sup>4</sup>

**NEED FOR THE STUDY:**

In 2010 annual report at the global prevalence regarding types of worm infestation shows that 1.47 billion for Ascariasis, 1.3 billion for trichuriasis and 1.05 billion for hook worm infestation and more than 25% of world population infected with Helminthic. 6 Prevalence rates of order of 50 – 75% have been registered in Asian countries. National institute of cholera and enteric diseases.<sup>5</sup>

Intestinal parasitic infection is an important public health problem in Andhra Pradesh. *G.intestinalis* was the most commonly found parasite in multiple infections. 1.5% of *Ascaris lumbricoides*, 5.3% hook worm, 0.8% *Enterobius vermicularis* and 0.8% *Trichuris trichuria* were found in the stool sample.<sup>6</sup>

**V.suganya, jaimy scaria, DR.Indhira during March 2018** conducted to assess the knowledge regarding prevention of worm infestations among the mothers of under five children. The result shows that among 60 samples 60(98.4%) of mothers have inadequate knowledge and 1(1.6%) of mothers have adequate knowledge regarding prevention of worm infestation.<sup>4</sup>

**Mr. Madan Mohan Gupta, Mrs. Sameeksha Bhardwaj 2017** conducted to assess the knowledge regarding worm infestation among mothers of pre-school children. The result shows that, 48 (48%) mothers of pre-school children had moderately adequate knowledge, 42 (42%) had inadequate knowledge and 10 (10%) had adequate knowledge regarding worm infestation.<sup>3</sup>

**Suresh ray (2015)**, conducted a cross-sectional survey on Knowledge of mothers regarding worm infestation in selected slums of Pune City. The results of the study are 75% of the mothers were having average knowledge, 22% of mothers had poor knowledge & only 3% of mothers were having good knowledge regarding worm infestations.<sup>1</sup>

**MATERIAL AND METHODOLOGY:**

**Research approach:** pre - experimental one group pre-test post-test design

**Setting of the study:** selected villages of thamballapalle mandal, Chittoor district

**Study population:** mothers of toddlers

**Study sample:** mothers of toddlers in selected villages of thamballapalle mandal, Chittoor district.

**Sample size:** 60 mothers of toddlers were taken

**Sampling technique:** selected villages of thamballapalle mandal, Chittoor district was adopted for the present study.

**CRITERIA FOR SAMPLE SELECTION:****INCLUSION CRITERIA:**

- ❖ Mothers of toddlers.
- ❖ Mothers who are available at the time of data collection.
- ❖ Mothers who can read and understand Telugu or English

**EXCLUSION CRITERIA:**

- ❖ Mothers of toddlers those who are severely ill at the time of data collection.
- ❖ Mothers of toddlers who don't know Telugu or English

**DESCRIPTION OF TOOL**

The tool was developed with the help of related literature from journals, websites, discussion and guidance from the experts in the field of nursing and medicine.

The tool consists of three sections

- ❖ **SECTION 1:** consists of Socio-demographic data.
- ❖ **SECTION 2:** Questionnaire consists of 10 questions to assess the level of knowledge on prevention of worm infestation among mothers of toddlers.
- ❖ **SECTION 3:** questionnaire consists of 15 questions to assess the level of knowledge on practice on prevention of worm infestation among mothers of toddlers.

**SCORE INTERPRETATION:**

Scoring key is prepared for section-I by coding the socio demographic data. In section-II and section-III each correct answer has a score of one mark and wrong answer scores zero. Thus maximum score of 10 were allotted for knowledge on prevention of worm infestation and maximum score of 15 for practices on prevention of worm infestation among mothers of toddlers. The maximum total score was 25.

The scores were interpreted in the following manner.

<50% inadequate knowledge

50-75% moderately adequate knowledge

>75% adequate knowledge

**CONTENT VALIDITY**

Content validity was obtained for the questionnaire from 10 experts: 2 in the field of pediatric medicine, 8 in the field of nursing. Accordingly necessary modifications were incorporated in the tool.

## RELIABILITY OF THE TOOL

Reliability of tool was established by using Guttman split half formula and Spearman-Brown equal and unequal length formula.

$$R = \frac{2r}{1+r}$$

Where R = Reliability co-efficient of the whole test.

r = correlation co-efficient

Reliability of coefficient of correlation related to knowledge of prevention of worm infestation was 0.799 and knowledge on practices was 0.888

## PILOT STUDY

The pilot study was conducted from 20/5/2020 to 27/5/2020 with the sample size of 10 mothers having mothers of toddlers at kannemadugu (village), thamballapalle (mandal), Chittoor (dst). The reliability of questionnaire related to knowledge of prevention of worm infestation was 0.799 and knowledge on practices was 0.888 of pre and post-test respectively.

After pilot study relevant changes were made with the guidance of experts.

## DATA COLLECTION PROCEDURE:

Data was collected selected villages of thamballapalle mandal, Chittoor dst. Convenient sampling technique was adopted. The investigator was introduced to the group of 60 mothers of toddlers assigned for the study. A structured for pre-test, 45mts for post test and 45mts for health education for each group was allotted. They were divided into six groups. The same procedure was adopted for six sections. The mothers were cooperative and attentive.

## PLAN FOR DATA ANALYSIS:

After giving score of each mother, pre and post test results were tabulated. Descriptive and inferential statistics were used for the analysis of knowledge regarding prevention of worm infestation and knowledge on practice regarding prevention of worm infestation between pre-test and post-test.

## DESCRIPTIVE STATISTICS:

Such as Frequency, Percentage, Mean and Standard deviation were used for demographic data in pre and post test scores.

## INFERENCE STATISTICS:

Chi-square test was used to determine the association between knowledge and knowledge on practice of prevention of worm infestation among mothers of toddlers with their socio demographic variables.

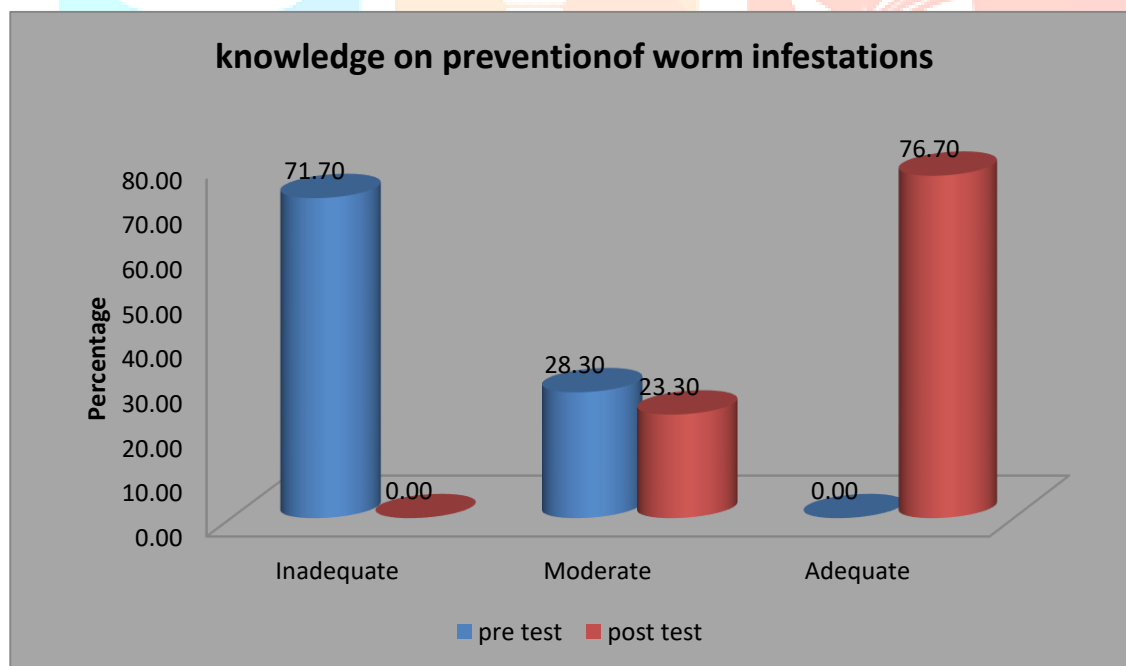
Paired t-test value was obtained between pre and post test knowledge and knowledge on practice of prevention of worm infestation among mothers of toddlers.

## FINDINGS OF THE STUDY:

**TABLE 1: DISTRIBUTION OF LEVEL OF PRE AND POST TEST KNOWLEDGE ON PREVENTION OF WORM INFESTATIONS**

Level of knowledge	Pre test		Post test	
	Frequency	Percent	Frequency	Percent
Inadequate	43	71.70	0	0.00
Moderate	17	28.30	14	23.30
Adequate	0	0.00	46	76.70

**Table 1:** Shows that out of 60 samples regarding pre test majority 43[71.70] were inadequate, whereas the least 17[28.30%] were moderate and regarding post test majority 46[76.70 %] were adequate, whereas the least 14[23.30%] were moderate.

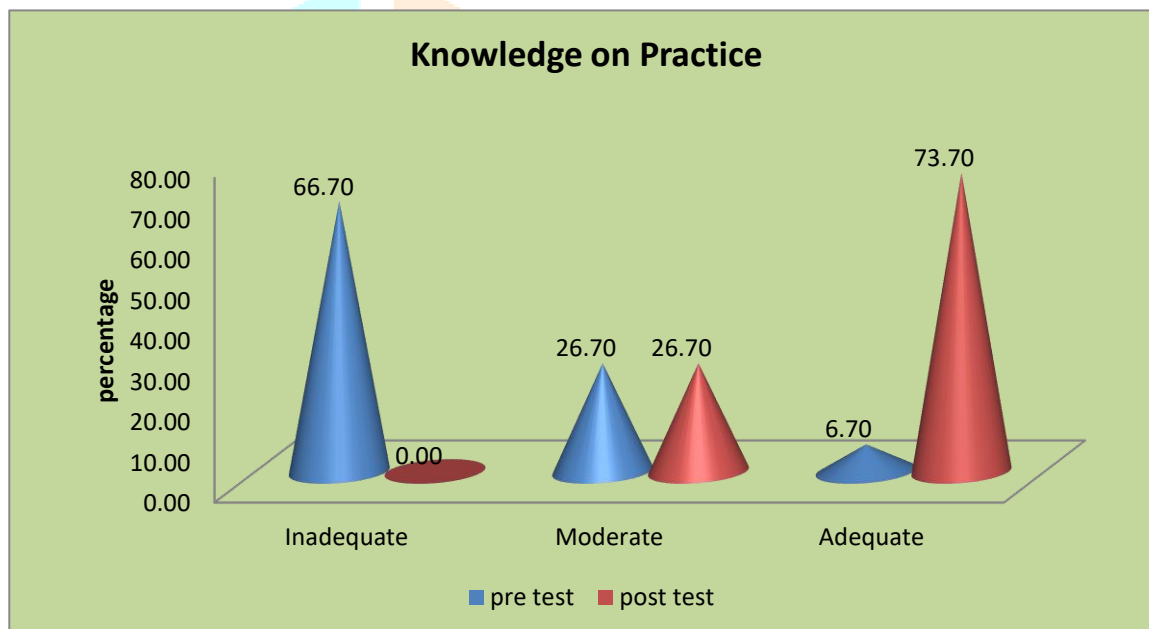


**Fig 1: Percentage distribution of the respondents according to their knowledge on prevention of worm infestations**

**TABLE 2:FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF PRE AND POST TEST KNOWLEDGE ON PRACTICE REGARDING PREVENTION OF WORM INFESTATIONS**

Sl.no	Level of knowledge	Pre test		Post test	
		Frequency	Percent	Frequency	Percent
1.	Inadequate	40	66.70	0	0.00
2.	Moderate	16	26.70	16	26.70
3.	Adequate	4	6.70	44	73.70

**Table 2:** shows that out of 60 samples regarding pre test majority 40[66.70%] were inadequate, whereas the least 4[6.70%]were adequate and post test majority 44[73.70%] were adequate, whereas the least 16[26.70 %] were moderate.



**Fig 2: Percentage distribution of the respondents according to their Knowledge on Practice**

**Table 3: Mean standard deviation of pre and post test knowledge on prevention of worm infestation among mothers of toddlers**

Sl.no	Level of knowledge	Mean	N	Std. Deviation	t-value	p value
Pair 1	Pre test Knowledge on prevention of worm infestation	4.98	60	0.87	37.207	0.000
	Post test Knowledge on prevention of worm infestation	8.22	60	1.21		
Pair 2	Pre test Knowledge on Practice prevention of worm infestation	8.03	60	2.33	24.156	0.000
	Post test Knowledge on Practice prevention of worm infestation	13.10	60	1.25		
Pair 3	Total Pre test Knowledge	13.02	60	3.12	35.400	0.000
	Total Post test knowledge	21.32	60	2.32		

**Table 3:** reveals that the effectiveness of level of knowledge and knowledge on practice regarding prevention of worm infestation scores the mean of knowledge was 4.98 and standard deviation was 0.87 and mean of practice was 8.03 and standard deviation was 2.33.

In post test mean of knowledge was 8.22 and standard deviation was 1.21 and mean of practice 13.10 and standard deviation was 1.25

Overall pre test knowledge and knowledge on practice regarding prevention of worm infestation among mothers of toddlers obtained in pre test the mean was 13.02 and standard deviation was 3.12. In post test the mean was 21.32, standard deviation was 2.32

Knowledge and practice were significant at  $p < 0.01$



**Table 4: Association between demographic variables with of level of knowledge and knowledge on practice regarding prevention of worm infestation among the mothers of toddlers in pre test and post test**

S.No	Demographic variables	Chi-square	P value
1.	Age of the mother	24.058	0.001 S*
2.	Religion of the mother	1.579	0.813 NS
3.	Education of the mother	45.170	0.000 S*
4.	Education of the father	37.443	0.000 S*
5.	Occupation of the mother	23.030	0.000 S*
6.	Occupation of the father	16.071	0.013 S*
7.	Type of family	3.750	0.153 NS
8.	Family income per month	21.832	0.001 S*
9.	Number of children	10.894	0.004 S*
10.	Place of residence	0.000	1.000 NS
11.	Source of water	19.211	0.000 S*
12.	Type of drainage system	5.377	0.251 NS
13.	Mode of defecation	4.371	0.112 NS
14.	Children suffered with worm infestation	5.156	0.076 NS
15.	Received any health teaching	11.364	0.003 S*
16.	If yes received information from	3.016	0.555 NS

**Table 4:** revealed that there is a statistically significant association between the level of knowledge and knowledge on practice regarding prevention of worm infestation with age of the mother, education of the mother, education of the father, occupation of the mother, occupation of the father, family income per month, number of children, source of water, health teaching  $p < 0.01$  .

**Table 5: Association between demographic variables with level of knowledge and knowledge on practice regarding prevention of worm infestation among mothers of toddlers in post test**

S.No	Demographic variables	Chi-square	P value
1.	Age of the mother	13.952	0.003 S*
2.	Religion of the mother	15.789	0.000 S*
3.	Education of the mother	8.314	0.081 NS
4.	Education of the father	18.927	0.001 S*
5.	Occupation of the mother	12.040	0.002 S*
6.	Occupation of the father	12.955	0.005 S*
7.	Type of family	2.400	0.121 NS
8.	Family income per month	2.676	0.444 NS
9.	Number of children	2.940	0.086 NS
10.	Place of residence	0.000	1.000 NS
11.	Source of water	0.632	0.427 NS
12.	Type of drainage system	20.350	0.000 S*
13.	Mode of defecation	12.955	0.000 S*
14.	Children suffered with worm infestation	0.214	0.643 NS
15.	Received any health teaching	3.030	0.082 NS
16.	If yes received information from	0.244	0.885 NS

**Table 5:** revealed that there is a statistically significant association between the level of knowledge and knowledge on practice regarding prevention of worm infestation in post test with age of the mother, religion of the mother, education of the father, occupation of the mother, occupation of the father, type of drainage system, mode of defecation  $p < 0.01$ .

**Conclusion:**

Out of 60 mothers in pre test 43(71.70%) had inadequate knowledge, 17(28.30%) had moderate knowledge and in post test 46(76.70%) had adequate knowledge, 14(23.30%) had moderate knowledge.

Out of 60 mothers in pre test 40 (66.70%) had inadequate knowledge on practices, 16(26.70%) had moderate knowledge on practices, and 4(6.70%) had adequate knowledge on practices and in post test 44 (73.70%) had adequate knowledge on practices, 16(26.70%) had moderate knowledge on practices.

Knowledge and knowledge on practices were significant at  $p < 0.01$  level regarding prevention of worm infestation, hence hypothesis is accepted.

Worm infestations in children are very common in India. Worm infestation remains one of the main problems of the development. Children growing up can expect to be infected soon after weaning and to be re-infected constantly for the rest of their life. Since mothers play a vital role in developing healthy life style among children it is very important to empower those with knowledge and practice about prevention of worm infestations

**Recommendations:**

- ❖ The study can be replicated in large sample for better generalization.
- ❖ A similar study can be done in attitude and practice regarding prevention of worm infestation among mothers of toddlers.
- ❖ This study will be reference for research scholars.
- ❖ Evidence based nursing practice must take higher profile in order to increase awareness among mothers of toddlers.
- ❖ A comparative study between urban and rural knowledge, attitude and practice on worm infestation can be conducted.

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