

**“A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICES  
REGARDING WORM INFESTATION AMONG THE MOTHERS OF  
SCHOOL AGE CHILDREN (6-12 YEARS) IN ORDER TO DEVELOP  
HEALTH EDUCATION PAMPHLET AT PARUVACHI, ERODE DISTRICT”**

**By**

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**Dissertation Submitted to the**

**THE TAMILNADU DR M.G.R. MEDICAL UNIVERSITY,**

**Chennai, Tamilnadu**



**In partial fulfillment  
of the requirements for the degree of  
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IN  
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Degree of Master of Science in Nursing

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- 1. INTERNAL EXAMINER:** -----
- 2. EXTERNAL EXAMINER:** -----

**MARCH - 2010**

## **ENDORSEMENT BY THE RESEARCH GUIDE**

This is to certify that the dissertation entitled “A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode district” is a bonafide research work done by **S. Prathaban** in partial fulfillment of the requirement for the degree of **Master of Science in Child Health Nursing.**

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**ENDORSEMENT BY THE HOD, PRINCIPAL/HEAD OF THE INSTITUTION**

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## **LIST OF ABBREVIATIONS USED**

Dept	=	Department
DMIPSR	=	Dharamarathnakara Dr.Mahalingam Institute of Paramedical Sciences & Research
Fig	=	Figure
H <sub>1</sub>	=	Research hypothesis
H <sub>2</sub>	=	Research hypothesis
H <sub>3</sub>	=	Research hypothesis
HOD	=	Head of the Department
n	=	Total number of samples
F	=	Frequency
No.	=	Number
Prof	=	Professor
S.D	=	Standard deviation
>	=	Greater than
<	=	Less than
X <sup>2</sup>	=	Chi Square
%	=	Percentage

## **ABSTRACT**

Worm infestation is one of the major health problems in developing India. It mainly affects the children, which may deteriorate their health status. Through it affects the health badly, it is easily preventable. Hence, “A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICES REGARDING WORM INFESTATION AMONG THE MOTHERS OF SCHOOL AGE CHILDREN (6-12 YEARS) IN ORDER TO DEVELOP HEALTH EDUCATION PAMPHLET AT PARUVACHI, ERODE DISTRICT”

### **OBJECTIVES OF THE STUDY:**

1. To assess the knowledge and practice regarding worm infestation among the mothers of school age children.
2. To correlate the knowledge and practices of worm infestation among the mothers of school age children.
3. To find out the association between the mothers' knowledge on worm infestation and demographic variables.
4. To find out the association between the mothers' practice on worm infestation and demographic variable.

### **METHODOLOGY:**

The research design adopted for the study was descriptive design and research approach adopted for this study was non experimental approach. The sample size was 100 mothers of school age children. The mothers were selected in Paruvachi at Erode district.

**Data was collected by using structured interview questionnaire:**

This consists of three sections

**Section A:** Comprised of demographic data

**Section B:** Comprised of structured interview schedule on the knowledge regarding worm infestations, which had 30 items.

**Section C:** Comprised of structured interview schedule regarding practices on worm infestations, which had 10 items.

**RESULTS:**

- ❖ The maximum number of mothers 26% was in the age group of 31-35 years.
- ❖ 30% of mothers had completed high school education.
- ❖ Out of 100 mothers 63% were housewives.
- ❖ 44% of the mothers monthly income of the family is between Rs.1001-5000/
- ❖ 46% of mothers had two school age children.
- ❖ 67% were consuming non vegetarian.
- ❖ The maximum number 72% of families were practicing open field defecation.
- ❖ 65% of the families do not have pet animals.
- ❖ Maximum number of mothers 52% acquired information about worm infestation from mass media.
- ❖ Assessment of level of knowledge of mothers regarding worm infestation among school age children showed that majority 42% had moderately adequate knowledge, minority 19% had adequate knowledge and remaining 39% of mothers have inadequate knowledge. Overall mean knowledge score was 12.96 (SD=3.337).
- ❖ Assessment of level of practices of mothers regarding worm infestation among school age children revealed that majority 44% were fair practice and

minority 25% were poor practice and remaining 31% of mothers were good practice of prevention of worm infestation. Overall mean practice score was 5.47 (SD=2.258).

- ❖ The correlation between the knowledge and practices regarding worm infestation  $r=0.8829$  showed that there was a highly significant positive correlation. It means when the knowledge increases their practice also increases highly.
- ❖ There was a statistically significant association found between level of knowledge and demographic variables such as educational qualification of the mothers ( $p=0.0003$ ), source of information ( $p=0.0029$ ) regarding worm infestation.
- ❖ There was a statistically significant association found between level of practice and demographic variables such as educational qualification of the mothers ( $p=0.0001$ ), source of information ( $p=0.0031$ ) regarding worm infestation
- ❖ Research hypothesis stated were accepted.

## CONCLUSION

The present study assessed the knowledge and practices of mothers regarding worm infestation among school age children. The result revealed that majority 42% of the mothers moderately adequate knowledge regarding worm infestation and 44% of them had fair practices towards prevention of worm infestations. Demographic variables have influence on the knowledge and practices of mother regarding worm infestation among the school age children. There is a positive relation between knowledge and practice regarding worm infestation among the school age children.

**Key words:**

Knowledge, practices; mothers; worm infestation; school age children; health education pamphlet.

## **CHAPTER- I**

### **INTRODUCTION**

“Children are the wealth of tomorrow, take care of them if you wish to have a strong India, ever ready to meet various challenges”.

- **Jawaharlal Nehru**

Children constitute a large section of the population in India. It has been a great challenge to the nation to provide health, education and food to the children below 12 years. School age population comprising of 38% of the country, who are dependent, unproductive but has great potential.

The formative years of childhood has greater risk for morbidity and mortality. In most cases, the manifold childhood problems are interrelated and affect the growth and development of children, the most commonness being infections, parasitic infestations and malnutrition. The magnitude of parasitic infestations among children constitutes a major public health problem in many parts of the world. In India, the infestation is particularly heavy in the areas with warm, damp climates with heavy rainfall, as in the west coast.

Worm infestations have a close relationship with the socio demographic and ecological factors like poverty, illiteracy, poor personal and environmental hygiene. Children are at risk due to their activities like play and lack of importance to personal hygiene. From the children, the entire family may eventually get worms and suffer.

Worm infestations are generally not noticed but can sometimes lead to significant problems, which affect organ system. Most of these are a result of

unsanitary living conditions and poor food preparation. In countries like India, these constitute an important public health problem, as anemia is caused by hookworm infestation in a significant number of children.

**Dorothy R. Marlow, (2003)**, stated that the school age children are Vulnerable (or) special risk group in any population deserving special health care because of their immaturity in the various stages of growth and development. The school age children are more prone to acquire some infection which is not seen in adult medical care through their life span.

**Health Action (2007)** stated that children are the most vulnerable group in the society, certain disease affects them, and result in increased morbidity and mortality by rates. These diseases include diarrhoea, malaria as well as other vector borne diseases, acute respiratory infection and unintentional injuries. The children death can be prevented if we know what to do strategies have been developed to face their threats to children's health. The need to be implemented on a global and national scale.

**Table 1**

**IN THE WORLD PREVALENCE RATE OF WORM INFESTATION AMONG  
SCHOOL AGE CHILDREN ARE GIVEN BELOW**

S.No.	Types of worm infestation	Prevalence rate (million)	Mortality rate (million)
1.	Hookworm	15.1	65
2.	Round worm	250	60
3.	Tape worm	127	45
4.	Pin worm	80	10
5.	Whipworm	4.5	-

**(WHO Report 2005)**

In the world, prevalence and mortality rate of hook were 15.1 and 65 million respectively round worm 250, 60 million, Tape warm 127, 45 million pin worm 80, 10 million, simultaneously, prevalence rate of whip worm was 4.5 and there was no mortality rate found in whip worm

**Prevention of worm infestation:**

- ❖ Detection and early treatment of cases
- ❖ Provision of sanitary latrines
- ❖ Provision of good water supply
- ❖ Proper washing of fruits and vegetables before use and cooking
- ❖ Habitual use of foot wear

- ❖ Proper washing of hand before and after defecation
- ❖ Hygienic eating habits
- ❖ Cutting of nails short
- ❖ Keep dogs and cats away from playgrounds and sandboxes.

## **NEED FOR THE STUDY**

“The day will come when nations will be judged not only by their military or economic strength, but by the splendour of their level of health, nutrition and education.”

**- Progress of nations (1996)**

And the time has come health, nutrition and education are the most important issues related to the children. These issues are very closely interrelated, and an unhealthy issues were malnourished child of today will only contribute to unhealthy future of the country. Therefore most countries of the world recognize this urgent need of providing health, nutrition and education of children.

**Gabriela mistral, (1999)** states the significance of giving first priority to the children’s needs can be understood by these words “we are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the foundation of life. Adults can wait for gratification of their needs, but the child cannot. Because right now is the times his bones are being formed, his blood is being made and his senses are being developed. To him we cannot answer ‘tomorrow’. His name is today”.

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

**K. Park(2007)** states that worm infestation mostly occurs in children who are in the age group 6-12 years. School age children are vulnerable (or) special risk group in any population deserving special health care. During the clinical postings, the investigator observed the rural publics were using open field defecation, and the community was not maintained in a proper environmental sanitation. The people were walking with bare foot and they were also not practising hygienic measures like washing hands before and after defecation, wearing slippers, drinking safe water and using latrine facility. The investigator had seen many of the school age children, with anemia. The children were often suffered with abdominal pain, vomiting and diarrhea. These children were not able to maintain their normal routine life. The school age children's health must be promoted and protected to gain good citizen. The mothers play a major role in promoting the health of school age children. The mother is the first person to rear and supervise her child's growth pattern from birth. The mother acts as a military man to maintain and monitor her child's growth and development, nutrition and health pattern.

**Bundy DAP et.al (1999)** states that intestinal parasitic infections are widely prevalent in many developing countries including India. Most of the population chronically affected with intestinal parasites live in the developing countries.

**Stephenson L.S (2002)** states that these are particularly important in the school age children as they cause or aggravate malnutrition including iron-deficiency anemia. These infections, in spite of their considerable morbidity, are often ignored probably due to relatively low incidence of serious morbidity due to such infections.

**Akbar K-Ahmed (2005)** Worm infestation remains one of the main problems of child development. This is especially a greater health hazard in developing countries. In Madagascar, a study revealed prevalence of 93% for Ascaris lumbricoides, 55% for Trichius trichiura and 27% for Hookworm. Worm infestation is one of the major causes of childhood malnutrition, anemia, stunted physical and mental growth, psycho - social problems and this along with repeated gastrointestinal and upper respiratory tract infection contributes to high morbidity in children and remains a major cause of high infant and child mortality in our country. The majority of the school age children in India, as in other developing countries are underweight and stunted. Intestinal helminthic infestations cause malnutrition.

**Srivasthava, Umesh et.al (2007)** surveyed intestinal parasites among children of different income groups. It was observed that the most prevalent parasite was Ascaris lumbricoides (22.17). They suggested that as part of protective measure for children against intestinal parasitic infection, improvement in environmental sanitation for communities is important. They also stress the need for creating awareness of personal hygiene through sustained health education in mothers of school age children.

Moreover Round worm infestations throw an additional burden on the rapidly growing child, particularly on those children whose health status is already

compromised by illness and malnutrition. In India the awareness of parents and children about the mode of spread of various parasitic infestations and their impact on health is poor. Hence they need to be taught about personal hygiene and ways to prevent intestinal parasitic infestation and thereby the impact on various aspects of health in children can be reduced.

There have been many studies on the incidence and prevalence of worm infestation, but limited studies were conducted on awareness of worm infestation among mothers of school age children in rural area. Yet by improving the health of school age children is a crucial investment in the human resource that will determine a nations future development. Hence the investigator is interested to assess the knowledge of mothers particularly the school age children who are more prone for worm infestation and educate them regarding prevention and control of worm infestation. Paruvachi is a rural area. People defecate on roadside open field, which could be due to illiteracy and lack of awareness on environmental sanitation and also inadequacy of sanitary facilities. This results in greater possibility of worm infestation.

Knowledge of the effects of Ascariasis and Ancylostomiasis helps the mothers of school age children in seeking treatment and also in prevention of the disease which results in better nutrition in children and adults. Ascariasis is more common in children and the effects are also more common in children and so they need to be made aware of the effects of Roundworm infestation and its effects.

Mothers could play a significant role in imparting health information to other mothers. Knowledge and habit formation regarding environmental sanitation and hygienic practices can help reduce the incidence of worm infestation.

The mother must able to differentiate the minor and major problems of her children. The commonest problems of the under given may include malnutrition, upper respiratory tract infection diarrhoea and worm infestation. If the child is protected from Worm Infestation means definitely the child will not suffer with weight loss diarrhoea and other frequent infections.

This will minimize morbidity and mortality of the school age children. These for the mother should understand about the cause, signs and symptoms, complication, prevention and treatment. Hence the investigator planned to conduct the study to assess the knowledge and practice of mothers regarding worm infestation among the school age children.

#### **STATEMENT OF THE PROBLEM**

**“A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICES  
REGARDING WORM INFESTATION AMONG THE MOTHERS OF  
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## **OBJECTIVES OF THE STUDY:**

1. To assess the knowledge and practice regarding worm infestation among the mothers of school age children.
2. To correlate the knowledge and practices of worm infestation among the mothers of school age children.
3. To find out the association between the mothers' knowledge on worm infestation and demographic variables.
4. To find out the association between the mothers' practice on worm infestation and demographic variable.

## **OPERATIONAL DEFINITIONS:**

**Knowledge:** Facts, information and skills acquired by a person through experience or education. The theoretical or practical understanding of a subject.

**Practices:** Perform an activity or exercise (a skill) repeatedly or regularly in order to acquire, maintain or improving proficiency in it.

**Mothers:** Women who have school age children.

**Worm infestation:** It means worms such as round worms, pin worms and hook worms infest humans and live in their intestines which may cause deterioration of health status.

**School age children:** Children between 6-12 years.

**Health education pamphlet:** It refers to self-learning information prepared in Tamil and English on worm infestation.

### **ASSUMPTIONS:**

1. The mothers may have inadequate knowledge regarding worm infestation and its prevention.
2. The selected variables have influence on mother's knowledge and practices regarding worm infestation.
3. The adequate knowledge and healthy practices of mothers regarding worm infestation and its prevention lead to healthy life.

### **RESEARCH HYPOTHESES**

**H<sub>1</sub>** – There is a significant relationship between knowledge and practices of mothers regarding worm infestation.

**H<sub>2</sub>** – There is a significant association between level of knowledge of mothers and demographic variables.

**H<sub>3</sub>** – There is a significant association between level of practices of mothers and demographic variables.

### **LIMITATIONS:**

1. Mothers who are residing at rural community, Paruvachi, Erode District.
2. Date collection period limited to 4-6 weeks only.
3. The study is limited to the mothers who are having the school age childrens aged between (6-12 years)
4. Only 100 mothers were selected for this study.

## **CHAPTER- II**

### **REVIEW OF LITERATURE**

The review of literature is an extensive, systematic selection of potential sources of previous work, acquainted fact- findings after securitizations and location of reference to the problem under study. It is helpful in under study. It is helpful in understanding and developing in sight into the selected problem under study and also to develop a conceptual framework for the study.

The review of literature is provided in the following sub headings:

**SECTION: I** Literature related to worm infestation.

**SECTION: II** Studies related of Worm infestation.

#### **SECTION: I LITERATURE RELATED TO WORM INFESTATION**

##### **Hook worm infestation:**

Hook worm infestation is other wise know as Ancylostomiasis, these worms are found throughout the tropical and the subtropical countries of the world.

**K. Ramasamy, (2004),** in Hyderabad, India stated that when a person walks on the soil containing infective larvae they are attracted to man by his body terms. If a man walks with bare foot, their infective larvae come in contact with the skin and penetrate in to the skin, usually the soft skin between toes.

**Achar (2004)**, in Madhya Pradesh, India, stated that is caused by Ancylostoma, necator. It lives inside the duodenum, Jejunum and Small intestine. The hook worm is whitish in colour and is about 10mm in length female worm is about 2mm longer than the male worm.

**K. Park (2002)**, “Prevention is better than cure” hence it is studied that prevention of worm infestation includes, regular use of foot wear, avoid bare foot walking, Construction of sanitary latrines in the villages. Health education to be given regarding causes, spread signs and symptoms, management, complication and prevention of hook worm infestation.

The life cycle of the hook worm is same for both Ancylostoma and necator. The female how lays eggs in side the small intestine and eggs are passed along with the faces of the infected person. It produces 10,000 to 20,000 eggs per day. The eggs of the hook worm can develop further only when faces gets diluted in the soil. Warmth and moisture are important favourable conditions for the development of the eggs. Then it develops in to a larvae stage when a person defecates it comes and contact with the soil along with faces. Then it will get infected with the soil. The infected larval enter through the skin and reach the blood vessels. Then it enters in to the Small intestine and bits the mucus membrane of the Small intestine. The adult worm drinks about 0.67 bloods. It also changes the site of bite and the old wound will continue to bleed for some time.

In mild infection, the common symptoms are weakness, Lethargy, and epigastric pain. In moderate infection the symptoms are anaemia, dry skin, palpation

of the heart, dyspnoea. In case of severe infection the symptoms are severe anemia, emaciation and stunted growth.

Diagnosis is easily made by microscopic examination of the stools. The ova are oval in shape (65-40 microns in length). It is surrounded by a transparent hyaline shell. It floats in saturated solution of common salt.

Management of the Hook worm infestation are deworming with iron supplement the drug are thymel, oil of chenopodium, Tetrachlorethylene, Mebendazole, and albendazole. T. Albemnbazole 200 mg for 0-2 years of above mebenzole 50mg for 3 days for children 2 years and above.

#### **Round worm infestation:**

**Dr.G.K.Rathinasamy (2007)**, conducted study in Delhi, India, and stated that man gets infected by swallowing the eggs along with contaminated waste and food. The infections is generally through ingestion on reaching the small intestine, the egg hatches and develop in to larvae. This larvae then penetrates the wall of the small intestine and reaches the blood stream. Now the larvae goes through the bronchiole and trachea. Later, the larvae is coughed out in to the pharynx, and there it goes down the esophagus and reaches the small intestine.

**Dr. Wagle (2006)**, the common symptoms are loss of appetite, abdominal pain, presence of worms in the vomitus and stool, pot belly abdomen, and indigestion. The complication are intestinal obstruction, pancreatitis.

Diagnosis is easily made by microscopic examination of the stool. The ova are oval in shape (60-75 microns in length 40-50 microns in breadth) when it is stained with bile it looks golden brown in colour. This is the confirmative diagnosis for worm infestation.

**B.K. Mahajan (2005)** Round worm infestation is other wise known as Ascariasis. This is the commonest intestinal parasite of man possibly are out of early 4 people in the world is infected. The worm is found in any area of the world where there is no proper disposal of night soil. Common worm is Ascaris lumbricoides.

These worms are commonly found inside the small intestine of man. The Male worm is about 15 to 30 cm in length, 2 to 4 mm in 20 to 40 cm in length with a thickness of 3 to t6 mm.

**Talip V.H (2003)** conducted study in USA, Management of round worm infestation are deworming, the drugs are T.mebendazole 50 mg for 3 days for children of 2 years and above, T.albendazole 200mg for children below 2 years ,400mg for children of 2 years above as a single dose. Preventive measures includes against indiscriminate defecation, protection of water against contamination by eggs, proper disposal of night soil, and fruits, vegetables etc should be washed before use.

### **Tape worm infestation**

Tape worm infestation is otherwise known as cestodiasis. Found inside the small intestine of man. It is found commonly in all parts of the world where pork, beef are eaten without being properly cooked. It is not found in Muslims because they do not eat pork. The commonest worms are taenia solium (pork), taenia saginata (beef).

Taenia solium is about 8-10 feet in length, width is about 8-12 mm. Taenia saginata is about 20-30 feet in length, width is about 6-8 mm.

**Dr.G.K.Rathinasamy (2002)** conducted study in Mumbai, India, T.Niclosamide dose 10-15 mg / kg / day are a drug of choice. Management of tape worm infestation is prevention includes measures against indiscriminate defecation, proper disposal of night soil, (or) faeces proper inspection of pig slaughter house and meat inspection, proper feeding of the pig, proper cooking of the pork and beef, salting of pork and beef about a fortnight before use, freezing of pork at 10° C - 20° C.

**Talip V.H. (2001)** conducted study in USA The adult worm is found in the small intestine of carnivorous animals such as man and dog. The larva form is found in herbivorous animals such as cattle and the infection in them is called cysticercosis. Eggs are passed in the stools and are infective. When eggs are swallowed along with the faeces by the pig which is the intermediate host on reaching the small intestine of the pig and reaches the blood stream. The diagnosis is done by microscopic examination of the stools. The ova are spherical in shape and brown in colour. It measures about 30-43 m. It has a thin transparent shell. It does not float on saturated solution of common salt. It is a confirmative diagnosis for tape worm infestation.

### **Pin worm infestation:**

Pin worm infestation is otherwise known as enterobiasis (or) oxyuriasis. It is found throughout the world. It is more common in children. It is relatively rare in the tropics. The common pin worm is enterobius vermicularis. The adult worm lives inside the caecum, appendices and large intestine. The male worm is about 0.5 cm in length and with thickness of 0.2 mm. The female worm is about 1 cm in length and with thickness of 0.3-0.5 mm. Man gets infected by swallowing the eggs along with contaminated food (or) water. When a person scratches the perineal area, some of the eggs will get under the finger and go to the mouth.

**Dr.Mahajan (2007)** conducted study in Maharashtra, India, the female comes out of the anus on to the perineum of the host to lay eggs. The eggs which are deposited in the skin folds of the perineal area drop down after some time, eggs will be found in place like floor dust, clothing, bed sheet, towels etc. When a person swallows the eggs along with contaminated water (or) food it reaches the small intestine and develop as a larvae. There is also another rare type of development in which the eggs hatch in the skin folds of the perianal area it self and the larvae enter the large intestine through anus.

**Talip V.H (2003)** conducted study in USA the signs and symptoms are irritation and itching of the perineal area, loss of sleep, some times worms are seen around the rectum. The main complication are itching of the extremities, vulvitis. The diagnosis done by microscopic examination of the stools. The ova are colorless measures about 52-60 microns. It is surrounded by a transparent shell. It contains coiled tadpole larvae.

Management includes piperazine 100 mg for 3 days will be the effective drug mebendazole 50 mg for 3 days for children below 2 years, 100 mg for 3 days for children 2 years and above. Prevention of pin worm infestation includes personal cleanliness like frequent washing of hands, close clipped finger nails etc. Frequent change of undergarments exposing clothing, bed sheets to sun light.

### **Whip worm infestation:**

**Dorothy R. Marlow (2008) describes** the worms will not produce any harm to human beings. However, very heavy infection may cause loss of appetite, nausea, and diarrhea. In chronic cause prolapsed rectum can occur but it is not seen.

Management for whip worm mebendazole 50 mg for 3 days for children below 2 years, 100 mg for 3 days for children 2 years and above.

Prevention of whip worm infestation includes proper disposal of night soil (faeces), prevention of water against contamination, measures against indiscriminate defecation.

**Talip V.H (2003)** conducted study in USA stated Whip worm infestation is otherwise known as trichuriasis. Whip worm infestation commonly noticed in the worm moist regions of the world. The whip worm inhabits the caecum and the large intestine of man. The male worm is about 3-4.5 cm in length, the female worm is about 3.5-5 cm in length. On reaching the small intestine, it develops into a larvae. This larvae develops into adult and reaches the caecum. These worms will not cause any harm. The diagnosis done by microscopic examination of the stools. The size

about the ova are 52-75 microns. It is brown in colour and barrel shaped with a mucus plug at each pole. Floats in saturated solution of common salt.

## **SECTION: II STUDIES RELATED OF WORM INFESTATION.**

**Chandrasekhar MR, (2008)** conducted in Delhi, India, stated investigated in study of fecal samples from 1000 children above 6 years of age, 680 detected to have intestinal helminthic infection. The incidence of intestinal helminthiasis in urban group of children was 56.8% in rural group of children was 79.2%. Both in rural and urban population Ascaris lumbricoides were predominant. All cultures of fecal samples were positive for Hookworm ova.

**Akbar K. et al (2007)** investigated intestinal parasitic infestation in four school age children from Abbottbad, India. A total of 283 children examined, 230 tested positive for various intestinal parasites. The frequency of helminthic infestation was found to be above 81% there were 8 different species of helminths and protozoa found in the specimens. By far the highest frequency of 48% was noted for Ascaris lumbricoides while 6.9% of the specimens examined had mixed infestation.

**Gunawardena GS et.al (2007)** conducted study in Srilanka stated studied about the socio -economic and behavioral factors affecting the prevalence of ascaris infection in a low - country tea plantation in Srilanka. Most (90.3%) obtained their drinking water from common taps, and 48.8% boiled their drinking water. In congested living conditions with poor sanitary facilities, the level of faecal contamination of the environment is invariably high. Even under these conditions, however, good hygiene and the boiling of all drinking water can reduce the risks of Ascaris infection. In the study setting and in similar environments, regular

anthelminthic therapy, improvements in housing conditions and sanitary facilities, and health education, to promote risk-reducing patterns of behaviour, would all be beneficial.

**Hosain GM, (2007)** conducted study in UK stated investigated impact of sanitation and health education on intestinal parasites infection among mothers of school age Children to determine the impact of sanitary latrine use. This result is consistent with observations that the effect of sanitation and health education is slow to develop. Concerted primary healthcare activities with community development efforts should be undertaken to improve the overall living conditions of the people of this area to control this problem.

**D. Bora et al, (2006)** made an attempt to compare and correlate findings of a soil Transmitted helminthic survey carried out using WHO sampling methodology for mothers of school age children and community survey by random sampling. 642 stool samples were examined from mothers of school age children age group of 6-12 yrs. overall soil Transmitted Helminthes prevalence in the school age children was found to be 32.4%.

**Bansal D et.al (2005)** conducted study in India, stated that investigated a total of 550 stool samples were collected from a low socio economic population of Chandigarh (North India). The overall prevalence rate was 19.3%. The results of present study indicate that there is a high prevalence of parasitic infection in-the community where personal hygiene and sanitary conditions are poor and may be one of the contributing factors for transmission within the families. Intervention strategies

including health education program should be designed and implemented to control parasitic infections.

**Okyay P et al (2005)** conducted study in Thailand stated that studied the prevalence of intestinal parasitic infections in Aydin among 1-5years old children and to identify associated socio-demographic and environmental factors, behavioural habits and also related complaints. Intestinal parasite prevalence was higher in rural area, in children with less than primary school educated mother, in children who use hands for washing anal area after defecation, and in children who use toilet paper sometimes or never. Children were traditionally taught to wash anal area by hand. Toilet paper usage was not common and might be due to low income or just a behavioral habit also. Interventions including health education on personal hygiene to the child and to the parents, especially to mothers are required.

**Traub RJ. et.al (2003)** conducted study in Africa, stated that reported in this study the prevalence, intensities and associated risk factors for infection with Ascaris, Hookworms and Trichuris in three tea-growing communities in Assam, India. The faecal samples were collected from 328 individuals. The overall prevalence of ascaris was 38%, and the individual prevalence of Hookworm and Trichuris was 43%. A universal blanket treatment with broad - spectrum antihelminthics together with promotion of scholastic and health education and improvements in sanitation is recommended for helminthic control in the communities under study.

**Ulukanligil M, Seyrek A, (2003)** conducted study in England sated that investigated the demographic and parasitic infection status of school age children of mother and sanitary conditions of school. Thirty mothers of school age children were

randomly selected in the shantytown, apartment and rural districts. Sanitation survey indicated that the tap water was limited in shantytown house, toilet's sanitation was poor. While, the house in apartment area was well sanitized. These results indicated that burden of parasitic infections and poor sanitation conditions constituted public health importance among the shantytown schoolchildren.

**Yadia S, Sen H.G. Hote2 P.G (2002)** conducted study in India, stated investigated an epidemiological study of Ancylostomiasis in a rural area of Lcanpur district. Stool samples were collected from 256 study subjects selected from seven villages of Kanpur district, the overall prevalence rate of Hookworm infestation was found to be 34%.

**Maria carol Fernandez et.al (2002)** conducted study in India stated that Investigated on intestinal parasites prevalent among children living in rural and urban settings in chennai. Out of 125 specimens tested from the rural location. Ascaries lumbricoides was the most common helminthic parasite defected (52.8%) followed by trichuris trichura (45.6%) Ancylostoma duodenale (37.6%). Out of 199 stool tested from the urban location, Entamoesa histolytica (10, 6%) T.Trichura (2.01%) H.nana (1.01%), Ascaris lumbricoides (0.50%) were found to have much lower prevalence in comparison to the rural area tested.

**M.Umarul Farook (2001)** conducted study in India stated that investigated on Intestinal Helminthic Infestations among tribal populations of Kottoor and Achankovil Areas in kerala. The study population out of the total 258 stool samples examined. Two areas were studied Hookworm infestation was found to be predominant (58.82%) in Achankoil reming (41.1%) was due to only Roundworm.

Whereas in kottoor area, Roundworm infestation predominated (74.41%) followed by Hookworm (18.6%) and other types (6.975). Among the environmental factors studied in relation to helminthic infestation the practice of hand wash alone was found out to be statistically significant showing that habit of proper hand wash considerably reduces the risk of helminthic infestation.

**Mascie - Taylor GG, (2001)** conducted study in Bangladesh sated that carried out the impact of regular health education in improving knowledge, attitude and practices in the control of intestinal parasites was examined in four rural-areas of Bangladesh; two areas received health education and the other two areas were controls. By the end of the 18-month study, households receiving health education showed highly significant improvements in knowledge, water and sanitation facilities and personal hygiene compared with households in the control areas.

**Paul et.al. (2000)** conducted study in India, stated that carried out a study to determine the prevalence of intestinal helminthic infection among 217 primary school children in Relli Veedhl, slum area in Vishakapatnam, AndhraPradesh. The over all prevalence of infection was 82%, Ascaris lumbricoides was the most common infection with a prevalence of 75% followed by Trichuris Trichura 66% and Hookworm 9%.

**V.A Rao, MC Aggrawal (2000)** conducted study in Delhi, India, stated that Investigated the Intestinal parasitic Infections, Anaemia and under nutrition among tribal adolescents of Madhya Pradesh. High prevalence of under nutrition in terms of underweight, (61.7%) stunting (51.7% and wasting (32.8%) was observed 82.3% were found anemic. Ancylostoma and Hymenolepis nana were the most-common

forms of parasitoids observed among them. There is a need to initiate intervention measures aimed at reducing the problem of worm infection, anemia and under nutrition among adolescents especially in tribal areas.

**Mascie - Taylor G, (1999)** conducted study in Bangladesh sated that depicted the study of the cost effectiveness of selective intervention for the control of intestinal parasites in rural Bangladesh. Health education (through home and school visits and focus group discussions) was aimed at increasing awareness of worm transmission and the disabilities caused by intestinal helminths. Simple ways of improving personal hygiene and sanitation through hand washing, nail trimming, wearing of shoes, and use of a latrine and clean water supplies were encouraged.

**Albonico M (1998)** carried out the control of Intestinal parasitic infections that have been perceived as a public health problem in Seychelles for decades. The initial objectives of the control programme were met after 2 years of activities, with an overall reduction in prevalence of intestinal parasitic infections of 44%. The programme can be seen as a model for other developing countries, even where health and socio-economic conditions are different and the control of parasitic infections will need a much longer-term commitment.

## **CONCEPTUAL FRAMEWORK**

### **Modified Rosenstoch (1974) and Becker's Health Belief Model (1978).**

Theories and conceptual models are the primary means of providing a conceptual context for the study. The aim of the present study is to assess the knowledge and practices of mothers of school age children regarding worm infestations.

Conceptualization is the process of forming ideas, which are utilized, and forms conceptual framework for the development of research design. It helps the researcher to know what data need to be collected and gives direction to an entire research process.

The conceptual framework for the study is based on Health Belief Model. Health Beliefs are person's ideas and attitude, about health and illness. That may be based on factual information or wrong information. The health belief usually results from within a person. So, the investigator felt that Becker's model is suitable as conceptual framework for this study, to asses the knowledge and practices of mothers of school age children regarding worm infestations.

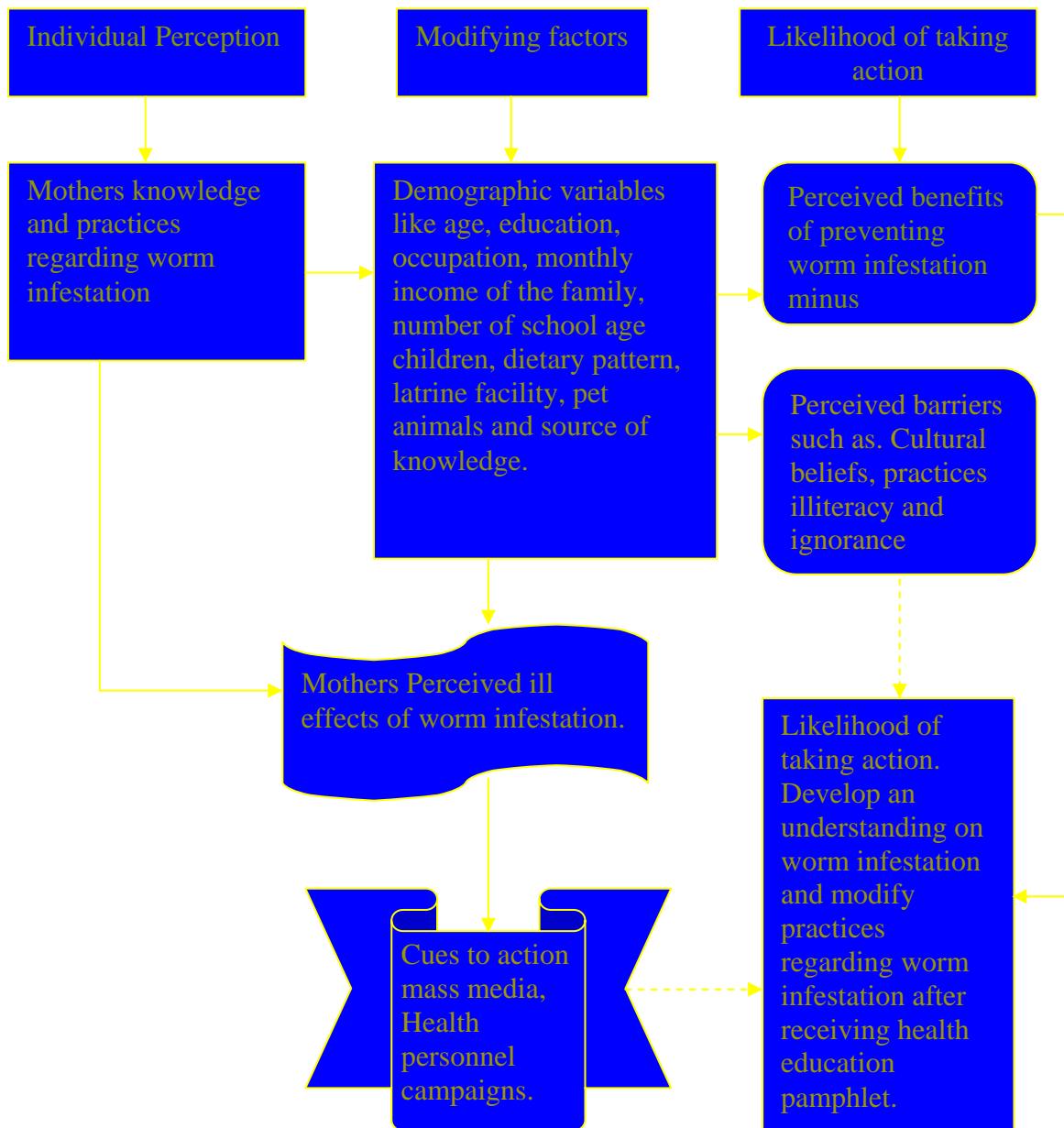
Rosentoch (1974) and Becker's Health Belief Model (1978), addressed the relationship between a person's belief and behaviours, it is way of understanding and predicting how clients will behave in relation to their health care. This model helps the nurses to understand the various behaviours including mother's perception, beliefs and various actions in order to plan the effective care.

**This model describes about the following three variables:**

- 1) **Mother's perception:** Mother's perceived knowledge regarding worm infestations.
- 2) **Modifying factors:** The mother's perception is influenced and modified by demographic variables like age, education, occupation, no of children, latrine facility, dietary habits, pet animals and structural variables like knowledge and practices on worm infestations.

The mother's perception is also influenced by cues to action, like health care personnel, mass media, information from friends and relatives etc.

- 3) **Likelihood of action:** This part indicates that mothers may try to take action to prevent worm infestation in school age children. So the mothers are likely to adopt the healthy practices. Some of the perceived barriers like illiteracy; lack of knowledge of mothers may lead to unhealthy practices.



**FIGURE 1 : Conceptual Framework**  
Modified Rosentoch's (1974) Becker's (1978) Health Belief Model

## **CHAPTER III**

### **METHODOLOGY**

This chapter deals with the methodology adopted for the study. The methodology of the investigation is of vital importance. The methodology of research indicated the general pattern of organizing the procedure it gathers valid and reliable data for the problem under the investigation.

This chapter deals with description of methodology of different steps that are undertaken for collecting and organizing data for investigation. It includes research design, research approach, research setting, population, sample, sampling technique, development and description of the tool, pilot study, data collections and plan for data analysis.

#### **RESEARCH APPROACH:**

Research approach is the most significant part of any research. The appropriate choice of research depends upon the purpose of the research study, which has been undertaken. Non experimental approach was considered as the best to assess knowledge and practices of mothers regarding worm infestations among school age children.

## **RESEARCH DESIGN:**

The research design refers to the researchers overall plan for obtaining answer to the research questions and for testing the research hypothesis. The research designs adopted for the study descriptive design.

## **VARIABLES:**

Variables are the quality of properties or characteristic of person.

- **Study variable includes:** knowledge and practice of cardiac patients on cardiac rehabilitation measures.
- **Extraneous variables includes:** Age, educational, occupation, income, source of information.

## **SITE:**

Bhavani Taluk, Erode District.

## **SETTING:**

Paruvachi, Bhavani Taluk, Erode District.

## **POPULATION:**

The population is defined as the entire aggregation of cases that meet a designated set of criteria (Polit & Hungler).

It includes all mothers who are residing at Paruvachi.

## **SAMPLE**

Mothers who are having school age children (6-12 years)

## **SAMPLING TECHNIQUE:**

Convenient sampling technique.

## **SAMPLING SIZE:**

The sample used for the study was 100 mothers of school age children.

## **INCLUSION CRITERIA:**

1. Mothers who are having school age children.
2. Mothers who are, residing at Paruvachi.
3. Mothers who understand and speak Tamil language.
4. Mothers who are Present during the data collection

## **EXCLUSION CRITERIA:**

The study excluded mother who were

1. not willing to participate in the study
2. mothers of deaf and dumb

## **DEVELOPMENT OF THE TOOL:**

A structured interview schedule was prepared to assess the knowledge and practices of mothers regarding worm infestation among school age children (6-12 years). It was felt that face-to-face contact would encourage the subjects to give prompt information and will help in collecting data from illiterate mothers.

### **The tool considered of three sections:**

**Section I:** Comprised of demographic data

**Section II:** Comprised of structured interview schedule on the knowledge regarding worm infestations, which had 30 items.

**Section III:** Comprised of structured interview schedule regarding practices on worm infestations, which had 10 items.

## **DESCRIPTION OF THE TOOL**

The structured interview schedule consisted of 3 sections.

**Section I:** included demographic data such as age, education, occupation, monthly income of the family, type of family, number of school age children in the family, dietary pattern, latrine facility, pet animals and source of information on worm infestations.

**Section II:** Questionnaire regarding knowledge of worm infestation among the mothers of school age children. It comprised of 30 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 30. The level of knowledge was categorised as follows:

- 0-10 - Inadequate knowledge
- 11-20 - Moderately adequate knowledge
- 21-30 - Adequate knowledge

**Section III:** Questionnaire regarding practice of worm infestation among the mothers of school age children. Consisted of 10 items. Each correct answer was given a score of one and each wrong answer a score of zero. The total possible score was 10. The level of practices was categorised as follows:

- 0-3 - Poor practices
- 4-7 - Fair practices
- 8-10 - Good practices

### **PREPARATION OF THE BLUEPRINT**

A blue print on structured interview schedule on worm infestations was prepared. It depicted the distribution of items according to content areas based on three domains, namely knowledge, comprehension and application. Knowledge domain had 30 items, and practice domain had 10 items. According to content areas in blue print, adequate number of items was prepared in each area. The prepared items were subjected to content validation, pre testing and estimation of reliability.

## **CONTENT VALIDITY:**

Content validity is concerned with the sampling adequacy of items, for the construct, that is being measured. Content validation is relevant for both affective measures and cognitive measures.

Validity of the tool was assessed by obtaining opinion from 4 experts in this topic which includes 3 nurse educators, 1 pediatrician.

The tool consisted of 30 items on knowledge and 10 items on practices and then based on suggestions given by experts, modifications and rearrangements of few items were done.

## **RELIABILITY:**

Reliability of the research instrument is defined as the extent to which the instrument yields the same results on repeated measures. The structured interview schedule was tested for reliability. The structured interview was conducted for 10 mothers of school age children. The reliability of the tool was established by testing the internal consistency. The internal consistency was assessed by using split half technique.

## **ETHICAL CONSIDERATION:**

Formal permission was obtained before the conduct of study from the President of Paruvachi Village through the Principal of our college before conducting the study. Informed consent got from the subjects of the study after explaining about

the purpose of the study and assuring confidentiality of collected data. There was no ethical issue confronted while conducting the study.

### **PILOT STUDY:**

Pilot study is small-scale version or a trial run done in preparation for main study. Formal permission was obtained from the authorities. 10 mothers of school age children were selected by simple random sampling technique. The structured interview was conducted at Appakudal from 01/11/2009 to 07/11/2009 and was found that the study was feasible, practicable and acceptable.

### **PROCEDURE FOR DATA COLLECTION**

Data collection is the gathering of information needed to address a research problem. A validated structured interview schedule was used to collect the data about knowledge and practices of mothers regarding worm infestations among school age children.

The investigator met each mother individually and obtained the consent for data collection. Data was collected for a period of 4 weeks i.e. from 11/11/2009 to 30/11/2009 by conducting face-to-face interview with structured interview schedule. Each day around 8-10 mothers were interviewed and each session lasted for 40-50 minutes.

## **Processing of data**

Data collected was processed every day for appropriateness and relevancy.

Missed out data was identified and it was rectified next day itself.

## **Plan for data analysis:**

The obtained data was planned to analyze on the basis of the objectives of the study by using descriptive and inferential statistics.

### **Descriptive statistics:**

- Frequency and percentage distribution were used to study the demographic variables of the mothers regarding worm infestations among school age children.
- Mean and standard deviation were used to determine the level of knowledge and practices of mother regarding worm infestations among school age children.

### **INFERENTIAL STATISTICS:**

- Spearman's co relation was used to correlate the knowledge and practices of mothers regarding worm infestations.
- Chi square test was used to find out the association between demographic variables and level of knowledge and practices of mothers regarding worm infestations.
- Level of significance was fixed at 5% level.

## Schematic representation of research study



Figure 2: Schematic representation of research study

## **CHAPTER- IV**

### **ANALYSIS AND INTERPRETATION**

Analysis is the method of organizing data in such a way that the research question can be answered. Interpretation is the process of making sense of the results and of examining implications of the findings within a broader concept.

#### **STATISTICAL ANALYSIS:**

This chapter deals with systematic presentation of the analysed data followed by its interpretation. The collected information was organized tabulated analyzed and interpreted by using descriptive and inferential statistics. The findings were organized and presented in two parts with tables and figures. The details of each section are presented below to based on the objectives on the study.

#### **OBJECTIVES OF THE STUDY:**

1. To assess the knowledge and practice regarding worm infestation among the mothers of school age children.
2. To correlate the knowledge and practices of worm infestation among the mothers of school age children.
3. To find out the association between the mothers' knowledge on worm infestation and demographic variables.
4. To find out the association between the mothers' practice on worm infestation and demographic variable.

## **ORGANIZATION OF FINDINGS:**

The data analyzed were presented with following headings.

**Section I:** Description of sample characteristics.

**Section II:** Knowledge and practice regarding worm infestation among the mother of school age children.

**Section III:** Correlation between knowledge and practice of the mothers of school age children.

**Section IV:** Association between the knowledge of mothers regarding worm infestation and demographic variables

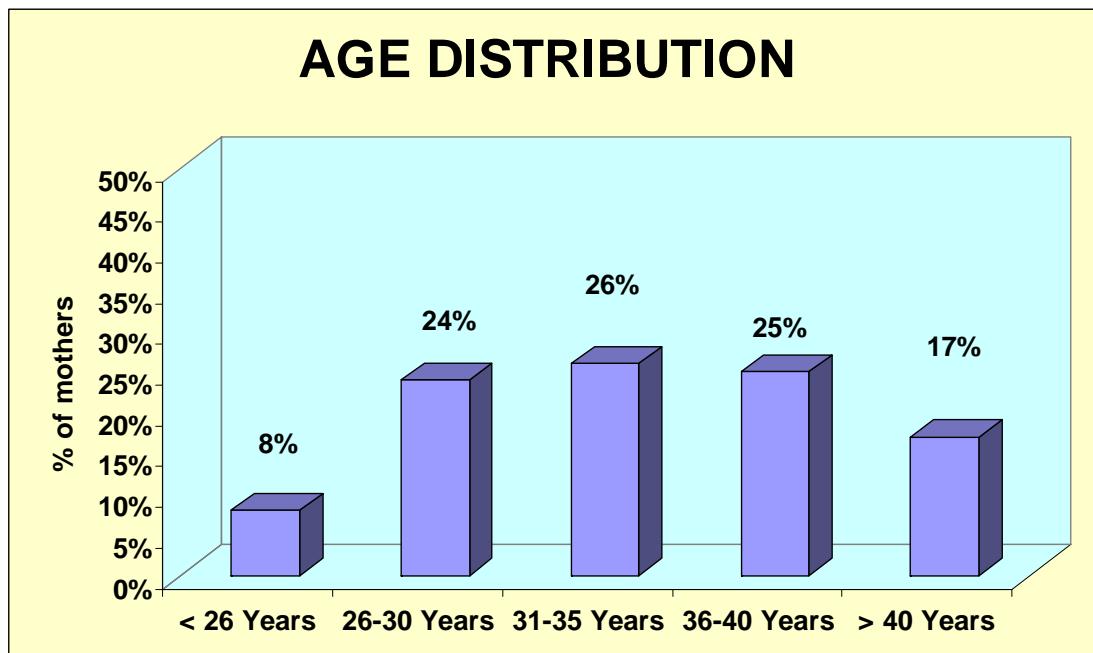
**Section V:** Association between the practice of mothers regarding worm infestation and demographic variables.

**SECTION – I**  
**DESCRIPTION OF SAMPLE CHARACTERISTICS**

**TABLE 2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF MOTHERS ACCORDING TO DEMOGRAPHIC VARIABLES AND SOURCE OF KNOWLEDGE.**

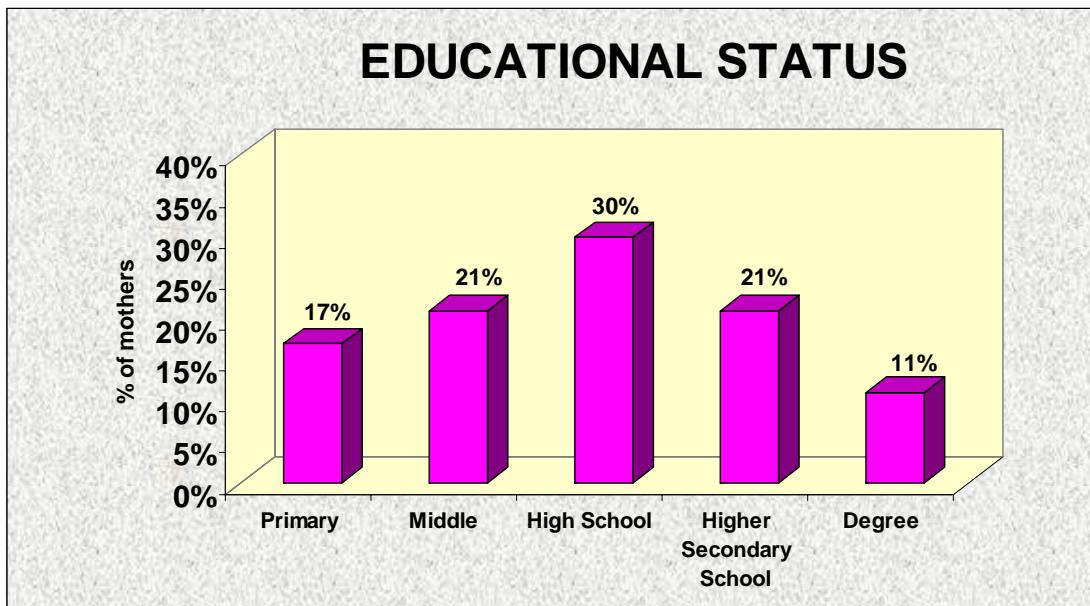
<b>Demographic Variable</b>		<b>Frequency</b>	<b>Percentage</b>
<b>Age of the mothers</b>	< 26 Years	8	8.00%
	26-30 Years	24	24.00%
	31-35 Years	26	26.00%
	36-40 Years	25	25.00%
	> 40 Years	17	17.00%
<b>Educational Status of mothers</b>	Primary	17	17.00%
	Middle	21	21.00%
	High School	30	30.00%
	Higher Secondary School	21	21.00%
	Degree	11	11.00%
<b>Occupation of the mothers</b>	Housewife	63	63.00%
	Working women	37	37.00%
<b>Monthly family income</b>	< Rs.1001/-	13	13.00%
	Rs.1001-5000/-	44	44.00%
	Rs.5001-10,000/-	36	36.00%
	>Rs.10,000/-	7	7.00%
<b>Number of school age children in the family</b>	One	28	28.00%
	Two	46	46.00%
	Three	17	17.00%
	Above Three	9	9.00%
<b>Dietary pattern</b>	Vegetarian	33	33.00%
	Non vegetarian	67	67.00%
<b>Latrine Facility</b>	Indoor defecation	28	28.00%
	Open field defecation	72	72.00%
<b>Pet Animals</b>	Yes	35	35.00%
	No	65	65.00%
<b>Source of information about worm infestation</b>	Mass media	52	52.00%
	Friends and relatives	30	30.00%
	Health personnel	18	18.00%

**Fig. 3: Bar diagram shows percentage distribution of demographic variables of the mothers' of school age children (6-12 Yrs)**



It is observed from the fig.3 that according to age of mothers 8% of mothers are in the category <26 years, 24% of mothers are in the category 26-30 years, 26% of mothers are in the category 31-35 years, 25% of mothers are in the category 36-40 years and 17% of mothers are in the category above 40 years.

**Fig. 4: Bar diagram shows percentage distribution of demographic variables of the educational status of the mothers**



From fig.4, it is clear that 17% of the mothers had completed their studies at primary school, 21% of mothers at middle school, 30% of mothers at high school, 21% of mothers at higher secondary school and 11% of mothers had completed graduation.

**Fig. 5: Pyramid diagram shows percentage distribution of demographic variables of the occupational status of the mothers**

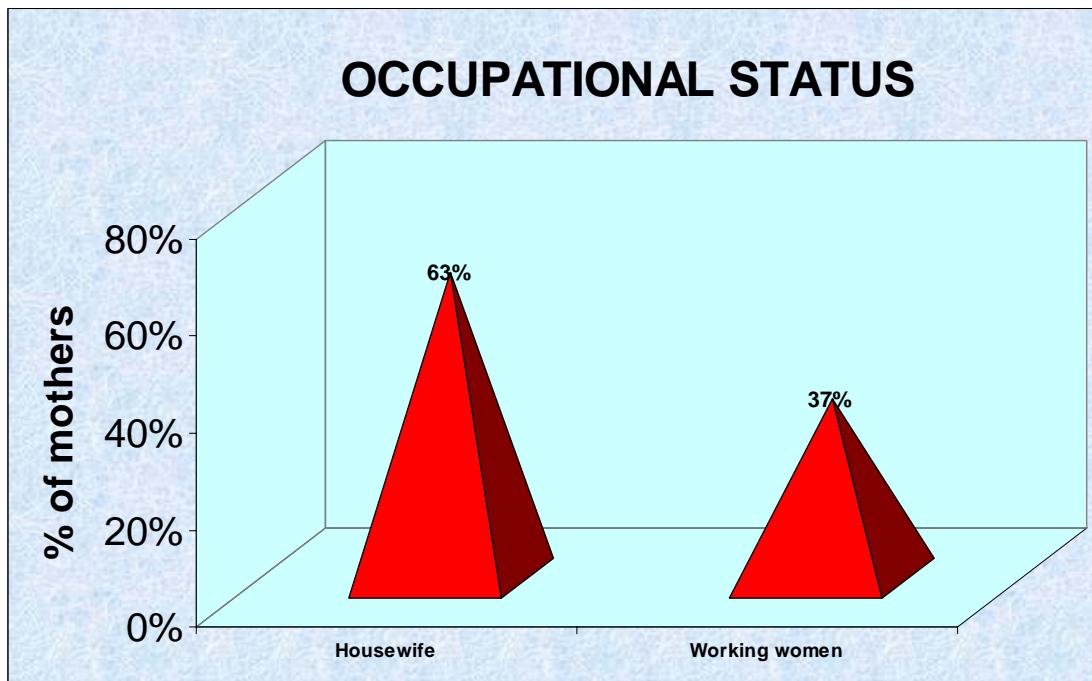


Fig. 5 indicates that 63% of mothers are housewives and 37% of mothers are working women.

**Fig 6: Cylinder diagram shows percentage distribution of demographic variables of the monthly income**

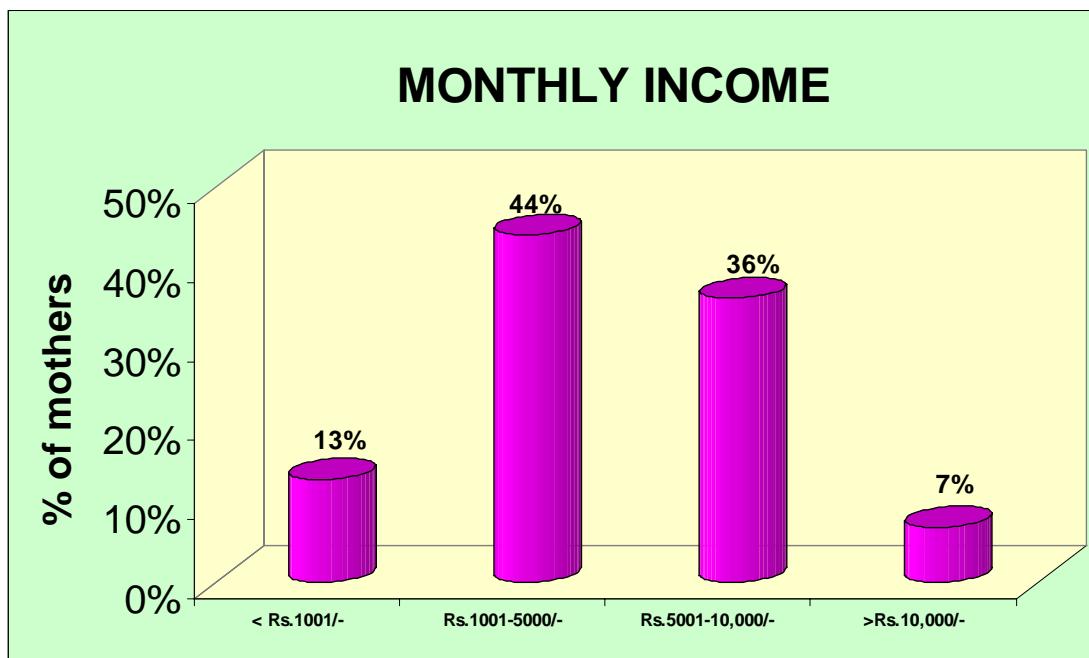


Fig. 6 shows that 13% of mothers' family income is less than Rs.1001/-, 44% of mothers family income is between Rs.1001-5000/-, 36% of mothers family income is between Rs.5001-10000/- and 7% of mothers family income is above Rs.10000/-.

**Fig 7: Pyramid diagram shows percentage distribution of demographic variables of the number of school age children in the family**

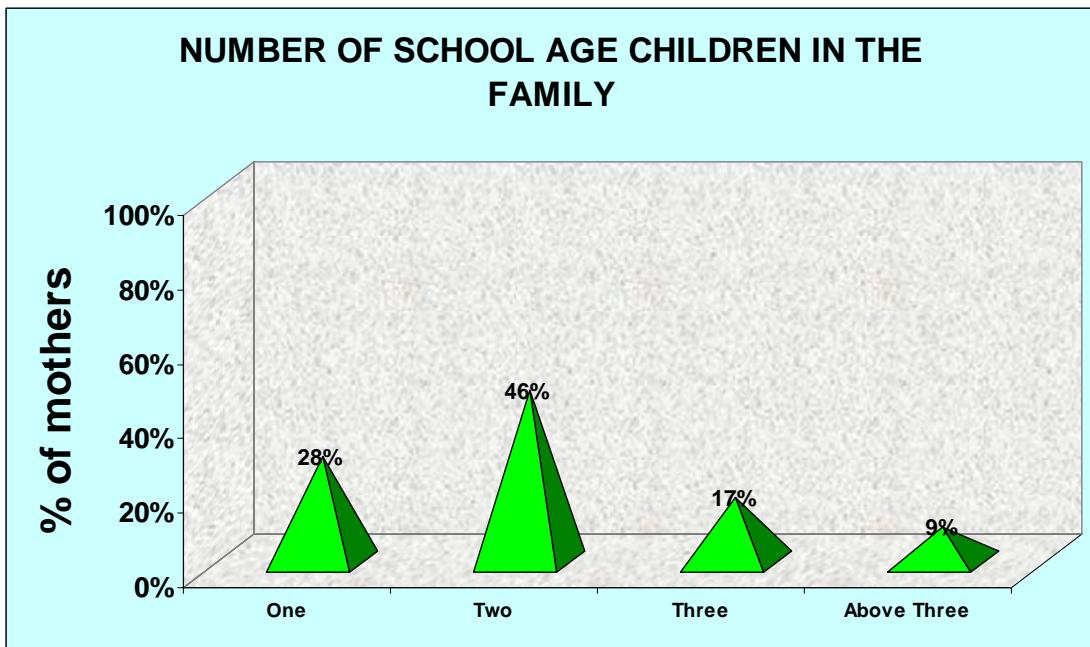


Fig.7 shows that 28% of mothers have one child in school age, 46% of mothers have two children in school age, 17 of mothers have three children in school age and 9% of mothers have more than three children in school age.

**Fig 8: Pie diagram shows percentage distribution of demographic variables of the diet pattern**

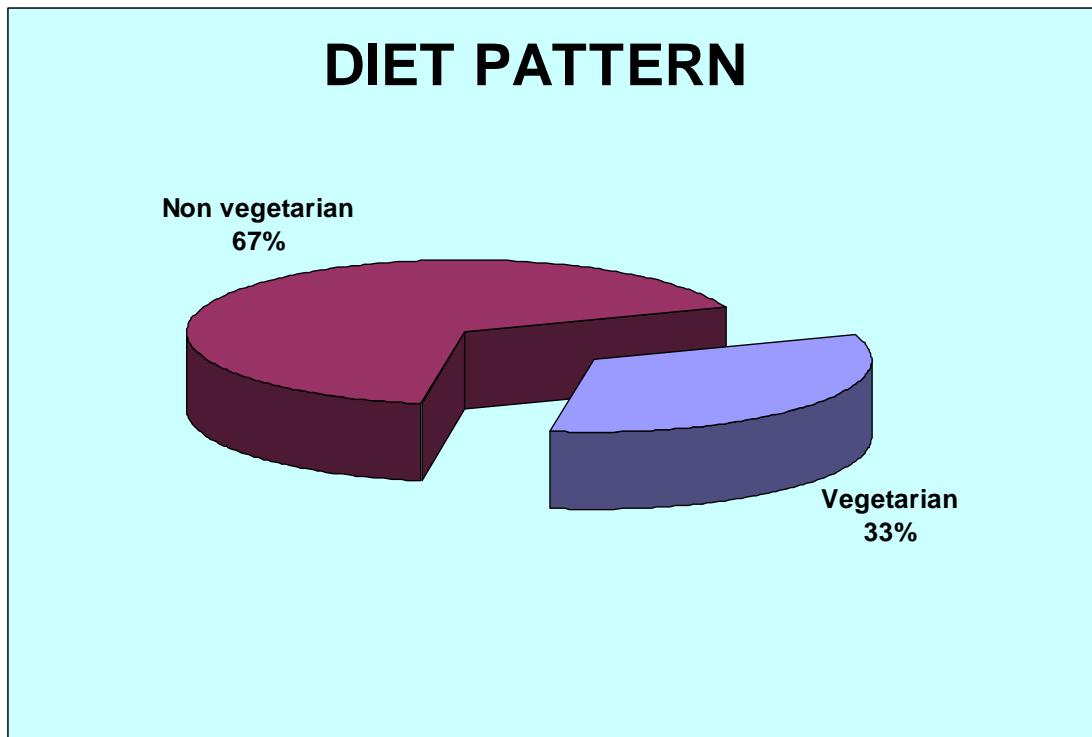


Fig. 8 shows that 33% of mothers have only vegetarian foods and 67% of mothers have non vegetarian foods.

**Fig 9: Doughnut diagram shows percentage distribution of demographic variables of the latrine facility**

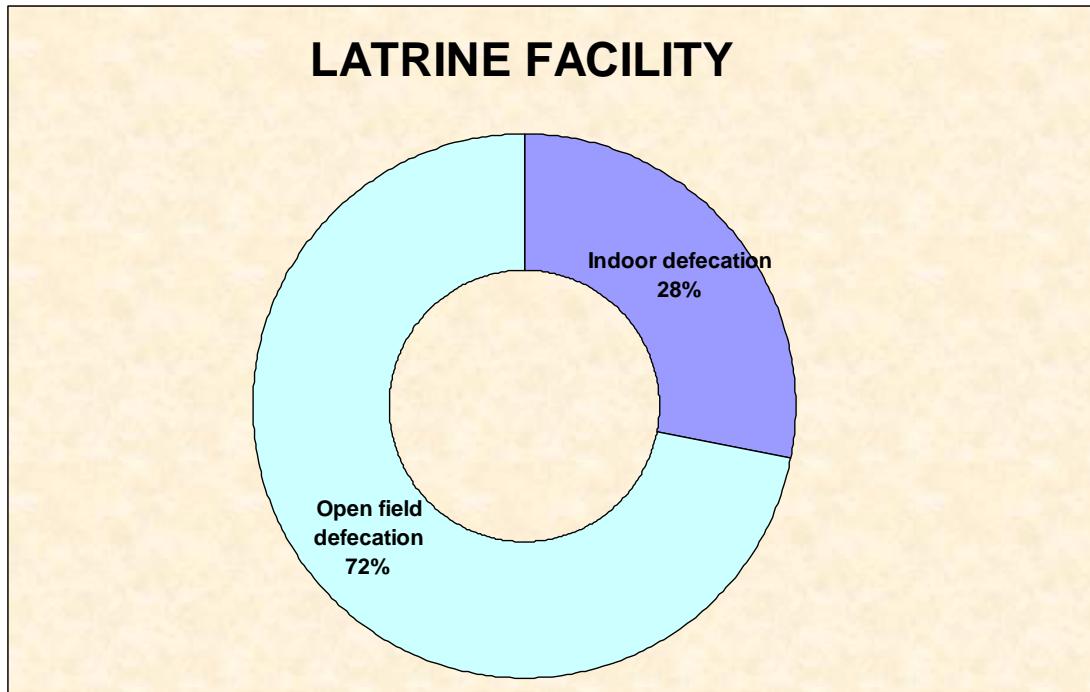


Fig 9 shows that 28% of mothers practice indoor defecation and 72% of mothers practice open field defecation.

**Fig 10: Pie diagram shows percentage distribution of demographic variables of the pet animals**

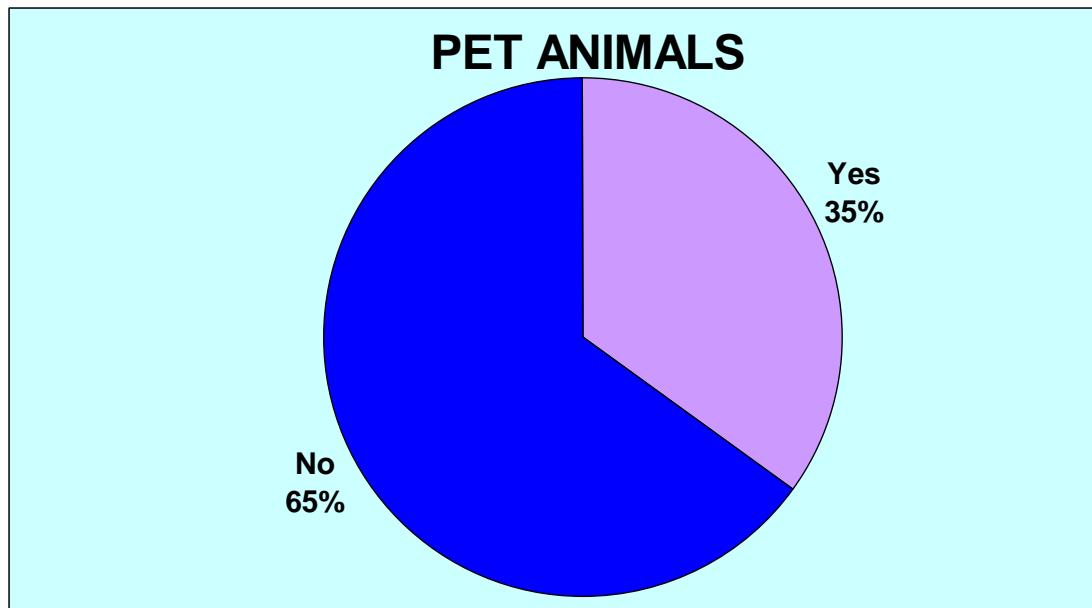


Fig 10 shows that 35% of families have pet animals and 65% of families don't have pet animals.

**Fig 11: Pyramid diagram shows percentage distribution of demographic variables of the sources of knowledge about worm infestation**

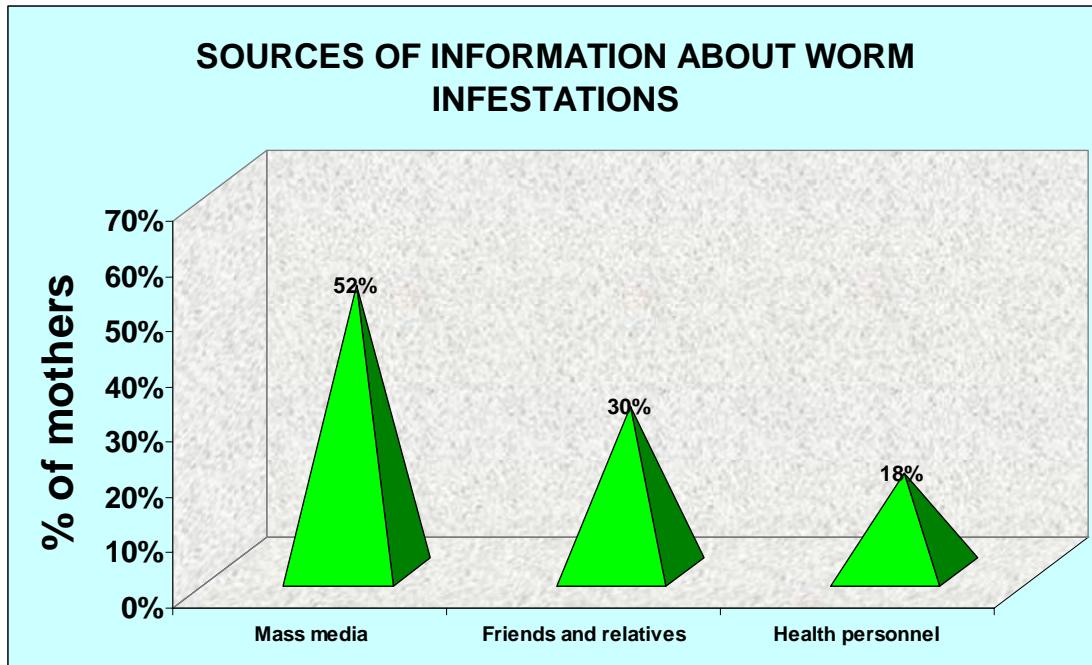


Fig 11 shows that (52%) of the mothers acquired information from mass media, 35% of the mothers acquired information from friends & relatives, and 18% of the mothers acquired information from health personnel.

## **SECTION- II**

### **KNOWLEDGE AND PRACTICE REGARDING WORM INFESTATION AMONG THE MOTHER OF SCHOOL AGE CHILDREN.**

#### **PART A: LEVEL OF KNOWLEDGE**

**TABLE 3**

#### **ASSESSMENT OF MEAN AND STANDARD DEVIATION OF KNOWLEDGE SCORE**

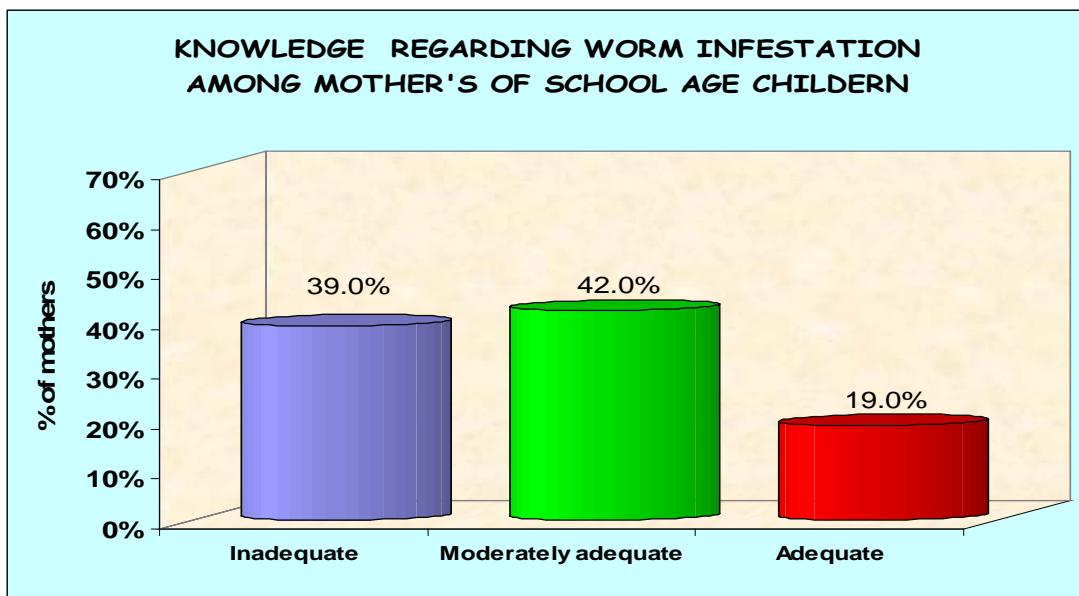
<b>Number of samples</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>100</b>	<b>12.96</b>	<b>3.337</b>

**TABLE 4**

#### **LEVEL OF KNOWLEDGE**

<b>Level of Knowledge</b>	<b>Frequency</b>	<b>Percentage</b>
Inadequate	39	39%
Moderately adequate	42	42%
Adequate	19	19%

The table 4 shows that 39% mothers had inadequate knowledge, 42% of mothers had moderately adequate knowledge and 19% mothers had adequate knowledge regarding worm infestation.



**Fig 12: Cylinder diagram shows level of knowledge regarding worm infestation among to mother of school age children**

## PART B: LEVEL OF PRACTICE

TABLE 5

### ASSESSMENT OF MEAN AND STANDARD DEVIATION OF PRACTICE SCORE

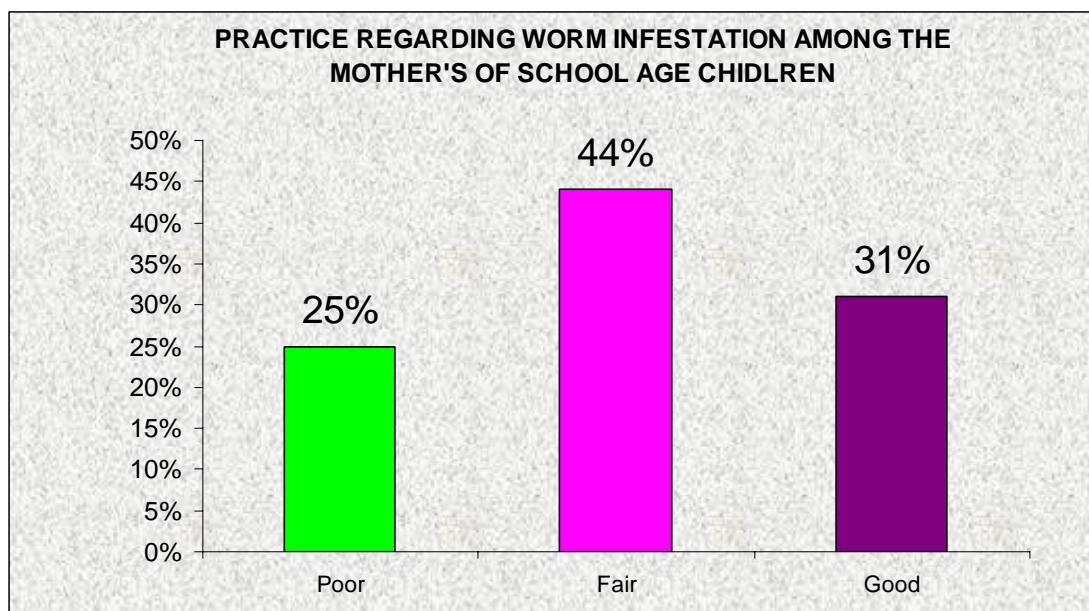
Number of samples	Mean	Standard Deviation
100	5.47	2.258

TABLE 6

### LEVEL OF PRACTICE

Level of Practice	Frequency	Percentage
Poor	25	25%
Fair	44	44%
Good	31	31%

The table 6 depicts that 25% mothers had poor practice, 44% mothers had fair practice and 31% mothers had good practice of worm infestation.



**Figure 13: Bar diagram shows level of practices regarding worm infestation among to mother of school age children**

### SECTION- III

#### **CORRELATION OF KNOWLEDGE AND PRACTICES OF MOTHERS OF SCHOOL AGE CHILDREN REGARDING WORM INFESTATION**

**TABLE 7**

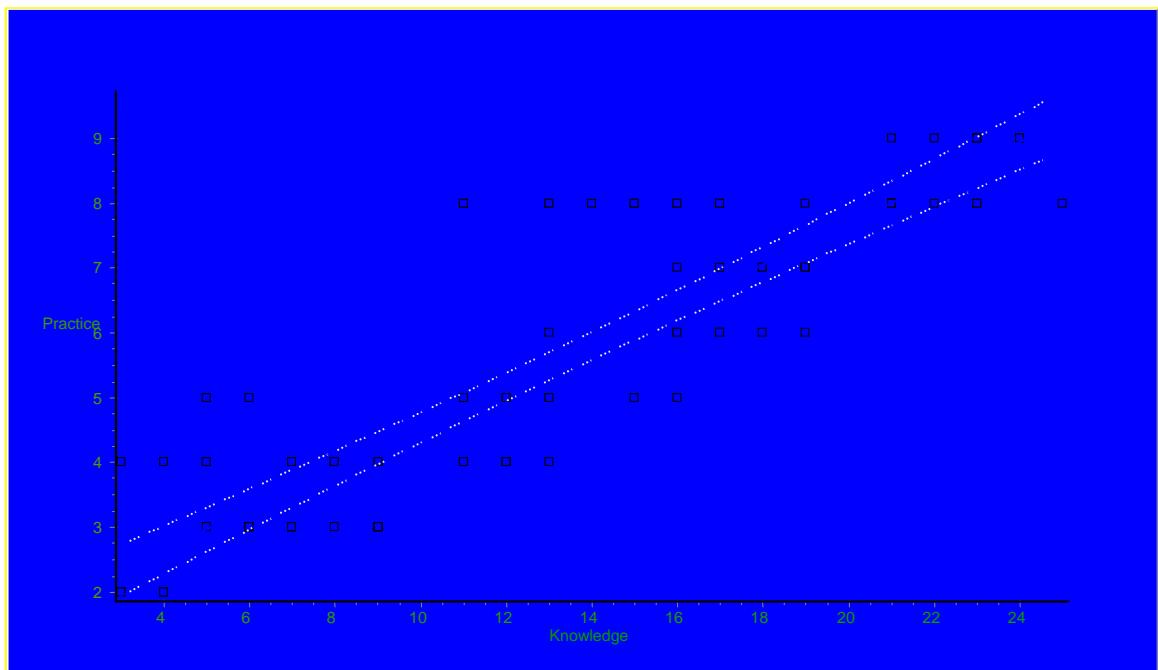
Correlation between	mean score	Karl Pearson correlation coefficient	Interpretation
	Mean±SD		
Knowledge	12.96±3.337	$r = 0.8829$ $P < 0.0001$	Highly Significant Positive Correlation It means when knowledge increases their Practice also increases highly.
Practice	5.47±2.258		

Pearson correlation coefficient is denoted by “r”

“r” always lies between -1 to +1

-1 to 0 → Negative correlation

0 to +1 → Positive correlation



**Fig. 14: Scatter diagram showing correlation between knowledge and practice**

## SECTION – IV

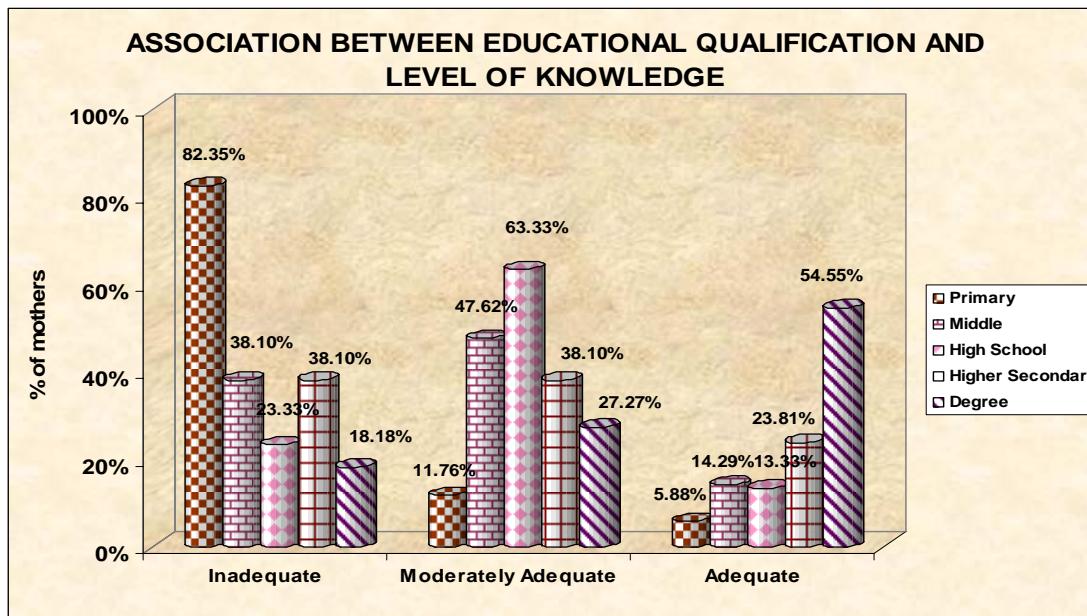
### ASSOCIATION BETWEEN THE KNOWLEDGE AND PRACTICE WITH SELECTED DEMOGRAPHIC PROFILES

**TABLE 8 Association between the knowledge and selected demographic profiles**

Demographic Variable		Inadequate		Moderately adequate		Adequate		Chi Square	Significance
		F	%	F	%	F	%		
<b>Age of the mothers</b>	<26 Years	2	25.00	4	50.00	2	25.00	$\chi^2=14.428$	$P=0.0713$ NS
	26-30 Years	14	58.33	7	29.17	3	12.50		
	31-35 Years	13	50.00	8	30.77	5	19.23		
	36-40 Years	6	24.00	16	64.00	3	12.00		
	>40 Years	4	23.53	7	41.18	6	35.29		
<b>Educational Status of mothers</b>	Primary	14	82.35	2	11.76	1	5.88	$\chi^2=28.928$	$P=0.0003$ Significance
	Middle	8	38.10	10	47.62	3	14.29		
	High School	7	23.33	19	63.33	4	13.33		
	Higher Secondary	8	38.10	8	38.10	5	23.80		
	Degree	2	18.18	3	27.27	6	54.55		
<b>Occupation of the mothers</b>	Housewife	21	33.34	32	50.79	10	15.87	$\chi^2=5.413$	$P=0.0668$ NS
	Working women	18	48.65	10	27.03	9	24.32		
<b>Monthly family income</b>	< Rs.1001/-	6	46.15	4	30.77	3	23.08	$\chi^2=1.395$	$P=0.9662$ NS
	Rs.1001-5000/-	17	38.64	19	43.18	8	18.18		
	Rs.5001-10,000/-	14	38.89	16	44.44	6	16.67		
	>Rs.10,000/-	2	28.57	3	42.86	2	28.57		
<b>Number of school age children in the family</b>	One	11	39.29	10	35.71	7	25.00	$\chi^2=2.976$	$P=0.8118$ NS
	Two	17	47.22	10	27.78	9	25.00		
	Three	6	35.29	9	52.94	2	11.76		
	Above Three	5	55.56	3	33.33	1	11.11		
<b>Dietary pattern</b>	Vegetarian	15	45.45	11	33.33	7	21.21	$\chi^2=1.534$	$P=0.4644$ NS
	Non Vegetarian	24	35.82	31	46.27	12	17.91		
<b>Latrine Facility</b>	Indoor defecation	12	42.86	8	28.57	8	28.57	$\chi^2=3.693$	$P=0.1578$ NS
	Open field defecation	27	37.50	34	47.22	11	15.28		
<b>Pet Animals</b>	Yes	16	45.71	10	28.57	9	25.71	$\chi^2=4.212$	$P=0.1217$ NS
	No	23	35.38	32	49.23	10	15.38		
<b>Source of information about worm infestation</b>	Mass media	22	42.31	26	50.00	4	7.69	$\chi^2=16.071$	$P=0.0029$ Significance
	Friends and relatives	13	43.33	11	36.67	6	20.00		
	Health personnel	4	22.22	5	27.78	9	50.00		

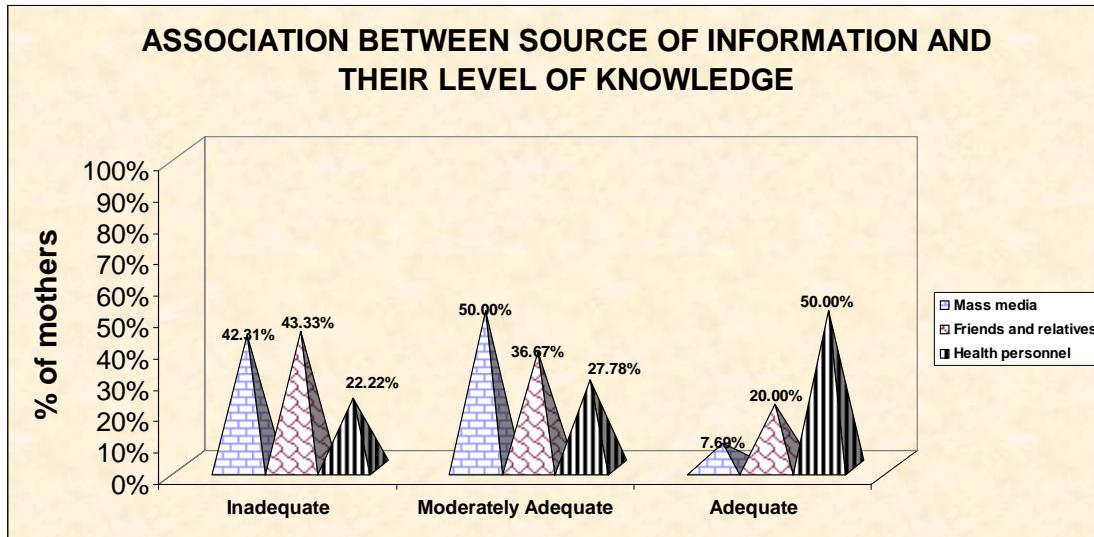
NS= Not Significance

**Fig. 15: Cylindrical diagram shows association between education status and level of knowledge**



The above figure shows that there is association between the educational status of mothers and their level of knowledge regarding worm infestation. Mothers who had completed graduation, had adequate knowledge regarding worm infestation.

**Fig. 16: Pyramid diagram shows association between source of information and their level of knowledge**

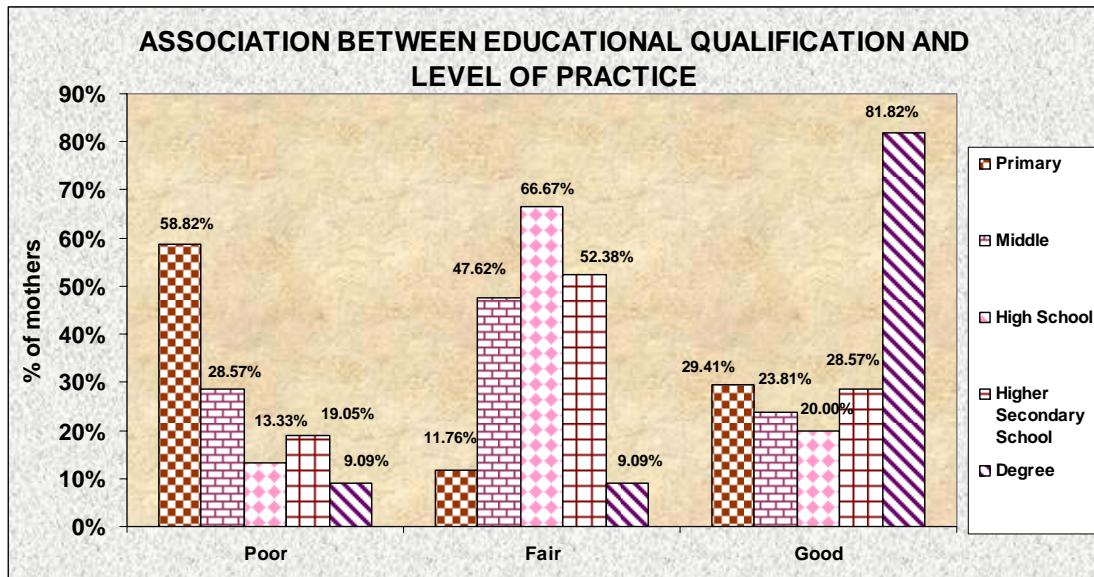


The above figure shows that there is association between the source of information of mothers and their level of knowledge regarding worm infestation. Mothers who acquired information from the health personnels had adequate knowledge regarding worm infestation.

**TABLE 9 Association between the practice and demographic variables**

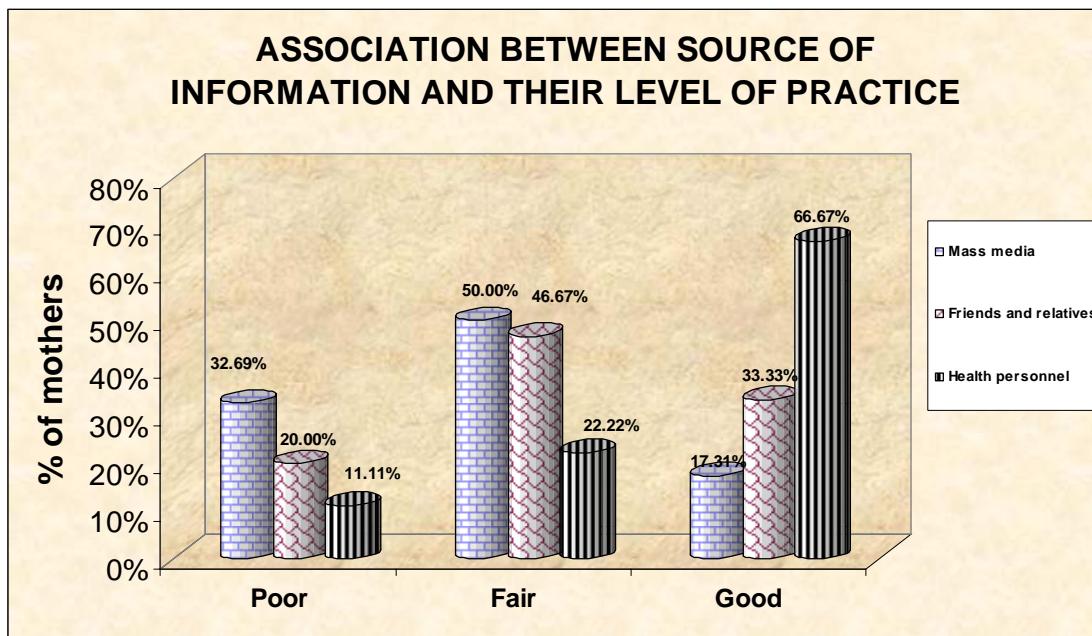
Demographic Variable		Poor		Fair		Good		Chi Square	Significance
		F	%	F	%	F	%		
<b>Age of the mothers</b>	< 26 Years	1	12.50	4	50.00	3	37.50	$\chi^2=14.536$	P=0.0688 Not Significance
	26-30 Years	9	37.50	7	29.17	8	33.33		
	31-35 Years	10	38.46	9	34.62	7	26.92		
	36-40 Years	3	12.00	17	68.00	5	20.0		
	> 40 Years	2	11.76	7	41.18	8	47.06		
<b>Educational Status of mothers</b>	Primary	10	58.82	2	11.76	5	29.41	$\chi^2=32.632$	P=0.0001 Significance
	Middle	6	28.57	10	47.62	5	23.81		
	High School	4	13.33	20	66.67	6	20.00		
	Higher Secondary	4	19.05	11	52.38	6	28.57		
	Degree	1	9.09	1	9.09	9	81.82		
<b>Occupation of the mothers</b>	Housewife	14	22.22	32	50.79	17	26.98	$\chi^2=3.197$	P=0.2022 Not Significance
	Working women	11	29.73	12	32.43	14	37.84		
<b>Monthly family income</b>	< Rs.1001/-	2	15.38	5	38.46	6	46.15	$\chi^2=2.917$	P=0.8192 Not Significance
	Rs.1001-5000/-	12	27.27	19	43.18	13	29.55		
	Rs.5001-10,000/-	10	27.78	17	47.22	9	25.00		
	>Rs.10,000/-	1	14.29	3	42.86	3	42.86		
<b>Number of school age children in the family</b>	One	8	28.57	10	35.71	10	35.71	$\chi^2=3.250$	P=0.7769 Not Significance
	Two	12	26.09	21	45.65	13	28.26		
	Three	3	17.65	10	58.82	4	23.53		
	Above Three	2	22.22	3	33.33	4	44.44		
<b>Dietary pattern</b>	Vegetarian	7	21.21	13	39.39	13	39.39	$\chi^2=1.640$	P=0.4405 Not Significance
	Non vegetarian	18	26.87	31	46.26	18	26.87		
<b>Latrine Facility</b>	Indoor defecation	8	28.57	9	32.14	11	39.29	$\chi^2=2.302$	P=0.3163 Not Significance
	Open field defecation	17	23.61	35	48.61	20	27.78		
<b>Pet Animals</b>	Yes	10	28.57	12	34.29	13	37.14	$\chi^2=2.085$	P=0.3526 Not Significance
	No	15	23.08	32	49.23	18	27.69		
<b>Source of information about worm infestation</b>	Mass media	17	32.69	26	50.00	9	17.31	$\chi^2=15.918$	P=0.0031 Significance
	Friends and relatives	6	20.00	14	46.67	10	33.33		
	Health personnel	2	11.11	4	22.22	12	66.67		

**Fig. 17: Bar diagram shows association between educational qualification and their level of practice.**



The above figure shows that there is association between educational qualification of mothers with their level of practice to prevent the worm infestation. Mothers who had completed the graduation followed good practices to prevent the worm infestation.

**Fig.18: Cylinder diagram shows association between education status of mothers and level of practice.**



The above figure shows that there is association between the source of information and their level of practice of mothers to prevent worm infestation. Mothers who acquired information from health personnel followed good practices to prevent the worm infestation.

## **CHAPTER – V**

### **DISCUSSION**

This chapter discusses the main findings of the research study and reviews that in relation to the findings from the result of the present study. For this study the data was obtained regarding worm infestations among the mothers of school age children in Paruvachi, Erode district.

#### **STATEMENT OF THE PROBLEM:**

**“A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICES REGARDING WORM INFESTATION AMONG THE MOTHERS OF SCHOOL AGE CHILDREN (6-12 YEARS) IN ORDER TO DEVELOP HEALTH EDUCATION PAMPHLET AT PARUVACHI, ERODE DISTRICT”**

#### **OBJECTIVES OF THE STUDY:**

1. To assess the knowledge and practice regarding worm infestation among the mothers of school age children.
2. To correlate the knowledge and practices of worm infestation among the mothers of school age children.
3. To find out the association between the mothers' knowledge on worm infestation and demographic variables.
4. To find out the association between the mothers' practice on worm infestation and demographic variable

**1. To assess the knowledge and practice regarding worm infestation among the mothers of school age children.**

The table 3 and 4 revealed that the level of knowledge regarding worm infestation among the mothers of school age children. In this mean score was 12.96, standard deviation was 3.337 and 39% of mothers had inadequate knowledge, 42% of mothers had moderately adequate knowledge, 19% of mothers had adequate knowledge regarding worm infestation.

Table 5 and 6 revealed that level of practice regarding worm infestation among the mothers of school age children, mean score was 5.47, standard deviation was 2.258 and 25% of mothers had poor practice, 44% of mothers had fair practice, 31% of mothers had good practice of worm infestation.

**2. To correlate the knowledge and practice of worm infestation among the mothers of school age children.**

Table 7 revealed that correlation of knowledge and practice of school age children regarding worm infestation knowledge mean score and standard deviation was  $12.96 \pm 3.337$ , practice mean score and standard deviation was  $5.47 \pm 2.258$ ,  $r=0.8829$ ,  $p<0.0001$ . It shows that **highly significance positive correlation between knowledge and practice of worm infestation among mothers of school age children**. When knowledge increases their practice also increases highly.

**3. To find out the association between the knowledge of mothers regarding worm infestation and selected demographic variables.**

Table 8 revealed that age of mothers shows <26 years had 25% inadequate knowledge, 50% moderately adequate knowledge, 25% had adequate knowledge. In the age group of 26-30 years 58.33% had inadequate knowledge, 29.17% had moderately adequate knowledge, 12.50% had adequate knowledge. In the age group of 31-35 years 50% had inadequate knowledge, 30.77% had moderately adequate, 19.23% had adequate knowledge. In the age group of 36-40 years 24% had inadequate and 64.00% had moderately adequate knowledge and 12% had adequate knowledge. Above 40 years 23.53% of inadequate knowledge, 41.18 had moderate aduqate knowledge, 35.29% had adequate knowledge. In this p value =0.0713, hence age of mothers shows statistical not significance

The education status of mothers shows that in primary education 82.35% had inadequate, 11.76% had moderately adequate knowledge and 5.88% had adequate knowledge. In middle school education 38.10% had inadequate, 47.62% had moderately adequate knowledge and 14.29% had adequate knowledge. In High school education 23.33% had inadequate, 63.33% had moderately adequate knowledge and 33% had adequate knowledge. In Higher secondary education 38.10% had inadequate, 38.10% had moderately adequate knowledge and 23.80 % had adequate knowledge. In degree holders 18.18% had adequate, 27.27% had moderately adequate knowledge and 54.55% had adequate knowledge. In this **p= 0.0003, hence education shows statistical significance. Mothers who had completed graduation, had adequate knowledge regarding worm infestation**

The occupation status of mothers shows that in housewife 33.34% had inadequate, 50.79% had moderately adequate knowledge and 15.87% had adequate knowledge. In working women 48.65% had inadequate, 27.03% had moderately adequate, 24.32% had adequate. In this  $p= 0.0668$ , hence it was statistically not significant.

The monthly family income of mothers shows that, < Rs.1001/- 46.15% had inadequate, 30.77% had moderately adequate knowledge and 23.08% had adequate knowledge. In Rs.1001–5000/-, 38.64% had inadequate, 43.18% had moderately adequate knowledge and 18.18% had adequate knowledge. In Rs.5001 -10000/-, 38.89% had inadequate, 44.44% had moderately adequate knowledge and 16.67% had adequate knowledge. In greater than Rs.10000/- 28.57% had inadequate, 42.86% had moderately adequate knowledge and 28.57% had adequate knowledge. In this  $p= 0.9662$ , hence it was statistically not significant.

The findings shows that number of school children in the family shows that, in one child 39.29% had inadequate, 35.71% had moderately adequate knowledge and 25.00% had adequate knowledge. In two child, 47.22% had inadequate, 27.78% had moderately adequate knowledge and 25.00% had adequate knowledge. In three, 35.29% had inadequate, 52.94% had moderately adequate knowledge and 11.76% had adequate knowledge. In above three 55.56% had adequate, 33.33% had moderately adequate knowledge and 11.11% had adequate knowledge. In this  $p= 0.8118$ , hence it was statistically not significant.

The findings shows that dietary pattern shows that, in vegetarian 45.45% had inadequate, 33.33% had moderately adequate knowledge and 21.21% had adequate

knowledge In non-vegetarian 35.82% had inadequate, 46.27% had moderately adequate knowledge and 17.91% had adequate knowledge. In this  $p= 0.4644$ , hence it was statistically not significant.

The findings shows that latrine facilities, in indoor defecation 42.86% had inadequate, 28.54% had moderately adequate knowledge and 28.57% had adequate knowledge. In open field defecation 37.50% had inadequate, 47.22% had moderately adequate knowledge and 15.28% had in adequate knowledge. In this  $p= 0.1578$ , hence it was statistically significant.

The findings of the family have pet animals shows 45.71% had inadequate, 28.57% had moderately adequate and 25.71% had adequate knowledge. In family have not pet animals shows 33.38% had inadequate, 49.23% had moderately adequate knowledge and 15.38% had adequate knowledge. In this  $p= 0.1217$ , hence it was statistically significant.

The findings shows that source of information about worm infestation shows that, in mass media 42.31% had inadequate, 50.00% had moderately adequate and 7.69% had adequate knowledge. In friends and relatives, 43.33% had inadequate knowledge, 36.67% had moderately adequate knowledge and 20.00% had inadequate knowledge. In health personnel, 22.22% had inadequate, 27.78% had moderately adequate knowledge and 50.00% had adequate knowledge. In this  **$p= 0.0029$ , hence it was statistically significant.** **Mothers who acquired information from the health personnels had adequate knowledge regarding worm infestation**

#### **4. To find out the association between the practice of mothers regarding worm infestation and selected demographic variables.**

Table 9 revealed that age of mothers shows <26 years had 12.50% poor practice, 50% fair practice, 37.50% had good practice. In the age group of 26-30 years 37.50% had poor practice, 29.17% had fair practice, 33.33% had good practice. In the age group of 31-35 years 38.46% had poor practice, 34.62% had moderately good, 26.92% had good practice. In the age group of 36-40 years 12.00% had poor and 68.00% had fair practice and 20% had good practice. Above 40 years 11.76% of poor practice, 41.18% had fair practice, 47.06% had good practice. In this p value =0.0688, hence age of mothers shows statistical not significance

The education status of mothers shows that in primary education 58.82% had poor, 11.76% had fair practice and 29.41% had good practice. In middle school education 28.57% had poor, 47.62% had fair practice and 23.81% had good practice. In High school education 13.33% had poor, 66.67% had fair practice and 20.00% had good practice. In Higher secondary education 19.05% had poor, 52.38% had fair practice and 28.57% had good practice. In degree holders 9.09% had good, 9.09% had fair practice and 81.82% had good practice. In this **p=0.0001, hence education shows statistical significance.** **Mothers who had completed the graduation followed good practices to prevent the worm infestation.**

The occupation status of mothers shows that in housewife 22.22% had poor, 50.79% had fair practice and 26.98% had good practice. In working women 29.73% had poor, 32.43% had moderately good, 37.84% had good. In this p= 0.2022, hence it was statistically not significant.

The monthly family income of mothers shows that, < Rs.1001/- 15.38% had poor, 38.46% had fair practice and 46.15% had good practice. In Rs.1001–5000/-, 27.27% had poor, 43.18% had fair practice and 29.55% had good practice. In

Rs.5001 -10000/-, 27.78% had poor, 47.22% had fair practice and 25.00% had good practice. In greater than Rs.10000/- 14.29% had poor, 42.86% had fair practice and 42.86% had good practice. In this  $p= 0.8192$ , hence it was statistically not significant.

The findings shows that number of school children in the family shows that, in one child 28.57% had poor, 35.71% had fair practice and 35.71% had good practice. In two child, 26.09% had poor, 45.65% had fair practice and 28.26% had good practice. In three, 17.65% had poor, 58.82% had fair practice and 23.53% had good practice. In above three 22.22% had good, 33.33% had fair practice and 44.44% had good practice. In this  $p= 0.7769$ , hence it was statistically not significant.

The findings shows that dietary pattern shows that, in vegetarian 21.21% had poor, 39.39% had fair practice and 39.39% had good practice In non-vegetarian 26.87% had poor, 46.26% had fair practice and 26.87% had good practice. In this  $p= 0.4405$ , hence it was statistically not significant.

The findings shows that latrine facilities, in indoor defecation 28.57% had poor, 32.14% had fair practice and 39.29% had good practice. In open field defecation 23.61% had poor, 48.61% had fair practice and 27.78% had in good practice. In this  $p= 0.3163$ , hence it was statistically significant.

The findings of the family have pet animals shows 28.57% had poor, 34.29% had fair and 37.14% had good practice. In family have not pet animals shows 23.08% had poor, 49.23% had fair practice and 27.69% had good practice. In this  $p= 0.3526$ , hence it was statistically significant.

The findings shows that source of information about worm infestation shows that, in mass media 32.69% had poor, 50.00% had fair and 17.31% had good practice. In friends and relatives, 20.00% had poor practice, 46.67% had fair practice and 33.33% had poor practice. In health personnel, 11.11% had poor, 22.22% had fair practice and 66.67% had good practice. In this **p=0.0031, hence it was statistically significant.** **Mothers who acquired information from health personnel followed good practices to prevent the worm infestation.**

## **CHAPTER- VI**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter presents the summary of the study, conclusions and implications for nursing and the recommendations.

#### **SUMMARY OF THE STUDY**

The purpose of the study was to assess the knowledge and practice of mothers of school age children regarding worm infestations, at Paruvachi, Erode district. Structured questionnaires were used and data was collected by self report method.

The conceptual framework of this study was based on Modified Rosenstock (1974) and Becker's Health Belief Model (1978). Convenient sampling was used for selecting the samples. Descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (chi-square) was used to analyze the data and to test hypothesis.

#### **OBJECTIVES OF THE STUDY:**

5. To assess the knowledge and practice regarding worm infestation among the mothers of school age children.
6. To correlate the knowledge and practices of worm infestation among the mothers of school age children.
7. To find out the association between the mothers' knowledge on worm infestation and demographic variables.

8. To find out the association between the mothers' practice on worm infestation and demographic variable.

## **METHODOLOGY:**

The research design adopted for the study was descriptive design and research approach adopted for this study was non experimental approach. The sample size was 100 mothers of school age children. The mothers were selected in Paruvachi at Erode district.

### **Data was collected by using structured interview questionnaire:**

This consists of three sections

**Section A:** Comprised of demographic data

**Section B:** Comprised of structured interview schedule on the knowledge regarding worm infestations, which had 30 items.

**Section C:** Comprised of structured interview schedule regarding practices on worm infestations, which had 10 items.

## **RESULTS:**

- ❖ The maximum number of mothers 26% was in the age group of 31-35 years.
- ❖ 30% of mothers had completed high school education.
- ❖ Out of 100 mothers 63% were housewives.
- ❖ 44% of the mothers monthly income of the family is between Rs.1001-5000/
- ❖ 46% of mothers had two school age children.
- ❖ 67% were consuming non vegetarian.
- ❖ The maximum number 72% of families were practicing open field defecation.
- ❖ 65% of the families do not have pet animals.
- ❖ Maximum number of mothers 52% acquired information about worm infestation from mass media.

- ❖ Assessment of level of knowledge of mothers regarding worm infestation among school age children showed that majority 42% had moderately adequate knowledge, minority 19% had adequate knowledge and remaining 39% of mothers have inadequate knowledge. Overall mean knowledge score was 12.96 (SD=3.337).
- ❖ Assessment of level of practices of mothers regarding worm infestation among school age children revealed that majority 44% were fair practice and minority 25% were poor practice and remaining 31% of mothers were good practice of prevention of worm infestation. Overall mean practice score was 5.47 (SD=2.258).
- ❖ The correlation between the knowledge and practices regarding worm infestation  $r=0.8829$  showed that there was a highly significant positive correlation. It means when the knowledge increases their practice also increases highly.
- ❖ There was a statistically significant association found between level of knowledge and demographic variables such as educational qualification of the mothers ( $p=0.0003$ ), source of information ( $p=0.0029$ ) regarding worm infestation.
- ❖ There was a statistically significant association found between level of practice and demographic variables such as educational qualification of the mothers ( $p=0.0001$ ), source of information ( $p=0.0031$ ) regarding worm infestation
- ❖ Research hypothesis stated were accepted.

## **CONCLUSION**

The present study assessed the knowledge and practices of mothers regarding worm infestation among school age children. The result revealed that majority 42% of the mothers moderately adequate knowledge regarding worm infestation and 44% of them had fair practices towards prevention of worm infestations. Demographic variables have influence on the knowledge and practices of mother regarding worm infestation among the school age children. There is a positive relation between knowledge and practice regarding worm infestation among the school age children.

## **IMPLICATIONS:**

The investigator had drawn the following implications from his study, which is of vital concern to the field of nursing practice, nursing education, nursing administration and nursing research.

### **Nursing practice:**

Health education is an important function of the health personnel. Nurses as resource persons working in Paediatric settings should impart education to the mothers regarding worm infestations and its prevention. It helps in improving their knowledge and practices towards the prevention of worm infestations among school age children.

### **Nursing education:**

The present study emphasizes on enhancement regarding knowledge and practices regarding worm infestations. In order to achieve this, the students, nurses

and all health personnel should be given the responsibility to teach the community and the teaching should be repeated until they have gained knowledge.

### **Nursing Administration:**

Nurse as an administrator plays an important role in educating the professionals and in policy making such as mass health education measures in the paediatric. The special implication of nursing administration in paediatric is that they should pay attention to all mothers and see whether they are provided with enough education about worm infestation. Being a nurse administrator, one can arrange in-service education and special training programmes regarding worm infestations.

### **Nursing Research:**

The essence of research is to build a body of knowledge in nursing. The findings of the present study serve as the basis for the professionals and the students to conduct further studies. The generalization of the study results can be made by replication of the study. Nursing research is the means by which nursing profession is growing.

### **RECOMMENDATIONS:**

On the basis of the findings of the study is recommended that

1. A study can be undertaken with a large sample for better generalization.
2. A similar study can be undertaken by adopting an experimental design.
3. A similar study can be done to assess the knowledge of school teachers.
4. A comparative study can be done between rural and urban mothers.
5. A similar study can be done among school children.
6. A similar study can be done among tribal children.

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## **WEBSITE**

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6. www.mamma.com

## ANNEXURE - I



SRI ADICHUNCHANAGIRI SHIKSHANA TRUST®

Phone : 04256-247321

### COLLEGE OF NURSING

DHARMARATHNAKARA Dr. MAHALINGAM INSTITUTE OF PARAMEDICAL SCIENCES & RESEARCH

(Kannada Linguistic Minority Institution)

Sakthinagar - 638 315. Bhavani Taluk, Erode District, Tamilnadu.

Ref. No. :

Date .....

#### LETTER SEEKING PERMISSION TO CONDUCT PILOT STUDY

To

The President  
Appakkudal Town Panchayat,  
A. Pudupalam,  
Sakthi Nagar, Erode Dist

Dear Sir / Madam,

**SUB:** Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences &  
Research, Sakthi Nagar – Permission to conduct study – Mr.S.Prathaban– Reg.

In anticipation to the above subject and as per the curricular requirement, I kindly request you to grant permission to Mr.S.Prathaban M.Sc., (N) II year Post graduate student to conduct Pilot study at your esteemed institution / Hospital.

Kindly oblige and grant his to undergo his study.

Thanking you,

  
18/11/2003  
**CHAIRMAN,**  
Appakkudal Town Panchayat,  
Sakthi Nagar-638 315.  
ERODE DISTRICT.

Yours Faithfully,



(Prof.Mrs.R.Vasantha)  
Principal

**PRINCIPAL,**  
**COLLEGE OF NURSING**  
Dharmarathnakara Dr.Mahalingam Institute  
of Paramedical Sciences and Research,  
(Sri Adichunchanagiri Shikshana Trust)

---

Head Office : Sri Adichunchanagiri Shikshana Trust®, Sri Adichunchanagiri Kshethra. PIN : 571 811.  
Nagamangala Taluk, Mandya Dist., Karnataka. Phone : 08234 - 287333, 287444

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## ANNEXURE – II

### **LETTER SEEKING PERMISSION TO CONDUCT MAIN STUDY**

From

Mr. S. Prathaban, M.Sc., (N), II Year,  
(Speciality – Child Health Nursing),  
Dr.Mahalingam College of Nursing,  
Sakthi Nagar (Po),  
Bhavani (TK),  
Erode (DT),  
Tamilnadu.

To

The President,  
Paruvachi village Panchayat,  
Paruvachi,  
Erode District.

Through,

The Principal,  
Dr.Mahalingam College of Nursing,  
Sakthi Nagar (Po),  
Bhavani (TK),  
Erode (DT).



Respected Sir /Madam,

Sub: Request for to conduct main study-reg..

I am II year M.Sc., Nursing student of Dr.Mahalingam College of Nursing, Sakthi Nagar. As a partial fulfillment of Master of Science in Nursing, I have undertaken the following research study, which has to be submitted to The Tamilnadu Dr.M.G.R.Medical University, Chennai.

“A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District”.

-- 2 --

I Kindly request you to permit met to do the study to evaluate the effectiveness of lower back massage on pain during the first stage of labor “A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District” with effect from 11.11.2009 to 30.11.2009

I kindly request you to permit me to conduct the proposed study and provide necessary facilities. Please do the needful.

Thanking You

Date : Yours Sincerely,

Place : (S. PRATHABAN)

சுப்பிராமணி  
பூதூர்,  
ஏற்குடி மாவட்டம்

### **ANNEXURE – III**

### **LETTER SEEKING EXPERT OPINION FOR TOOL VALIDATION**

From

Mr. S. Prathaban, M.Sc., (N), II Year,  
(Speciality – Child Health Nursing),  
Dr.Mahalingam College of Nursing,  
Sakthi Nagar (Po),  
Bhavani (TK),  
Erode (DT),  
Tamilnadu.

To

Mrs. Amutha, M.Sc.(N),  
Vice Principal,  
Dhanvanthiri College of Nursing,  
Sankari,  
Namakkal District.

Through,

The Principal,  
Dr.Mahalingam College of Nursing,  
Sakthi Nagar (Po),  
Bhavani (TK),  
Erode (DT).

Respected Sir /Madam,

Sub: Request for the validation the tool-reg.

I am II year M.Sc., Nursing student of Dr.Mahalingam College of Nursing, Sakthi Nagar. As a partial fulfillment of Master of Science in Nursing, I have undertaken the following research study, which has to be submitted to The Tamilnadu Dr.M.G.R.Medical University, Chennai.

“A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District”.



**ANNEXURE – IV**

**CONTENT VALIDITY CERTIFICATE**

This is to certify that the student Mr. S. Prathaban is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

**Topic Entitled:**

“A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District”.

Her content for the study is validated and was found reliable.

Date:  
Place:



Signature of guide with seal  
Principal  
Vellalar College Of Nursing  
Maruthi Nagar,  
Thindal, Erode - 12.

## **CONTENT VALIDITY CERTIFICATE**

This is to certify that the student Mr. Prathaban is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

### **Topic Entitled:**

“A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District”.

Her content for the study is validated and was found reliable.

Place:



Signature of guide with seal

Date:

**PRINCIPAL,  
SHIVPARVATHI MANDRADIAR  
INSTITUTE OF HEALTH SCIENCES.**

## **CONTENT VALIDITY CERTIFICATE**

This is to certify that the student Mr. S. Prathaban is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

### **Topic Entitled:**

“A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District”.

Her content for the study is validated and was found reliable.

Date:

Place:

Signature of guide with seal

MEDICAL OFFICE  
M KAILASAM HOSPITAL  
SAKTHINAGAR - 638 315

## **CONTENT VALIDITY CERTIFICATE**

This is to certify that the student Mr. S. Prathaban is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

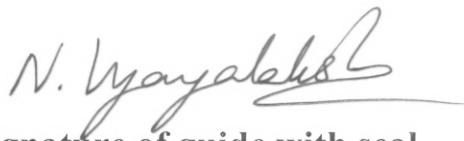
### **Topic Entitled:**

“A study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District”.

Her content for the study is validated and was found reliable.

Date:

Place:

  
Signature of guide with seal

## **CERTIFICATE BY THE EDITOR**

This is to certify that the dissertation entitled “a study to assess the knowledge and practices regarding worm infestation among the mothers of school age children (6-12 years) in order to develop health education pamphlet at Paruvachi, Erode District” is a bonafide research work done by Mr. S. Prathaban II Year M.Sc., (Nursing) student of Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences & Research, Sakthi Nagar, Bhavani Taluk, Erode District. Mrs.T.S.Sumithra Devi., M.A., (M.Phil) edited this manuscript on behalf of the partial fulfillment of the prerequisite for the degree of **Master of Science in Nursing** (Paediatric Nursing).

**Date:**

**Place: Sakthi Nagar**

  
Signature of the Editor

**ANNEXURE V**  
**STRUCTURED QUESTIONNAIRE**  
**SECTION - I**

Kindly read the following and please tick [✓] mark against the correct answer

**DEMOGRAPHIC DATA**

- 1) Age of the mother
  - a) < 26 years [ ]
  - b) 26-30 years [ ]
  - c) 31-35 years [ ]
  - d) 36-40 years [ ]
  - e) above 40 years [ ]
- 2) Educational status of the mother
  - a) primary [ ]
  - b) middle [ ]
  - c) high school [ ]
  - d) higher secondary school [ ]
  - e) degree [ ]
- 3) Occupation of the mother
  - a) housewife [ ]
  - b) working women [ ]
- 4) Monthly family income (In Rupees)
  - a) Below Rs.1001/- [ ]
  - b) Rs.1001- 5000/- [ ]
  - c) Rs.5001- 10000/- [ ]
  - d) Above Rs.10000/- [ ]
- 5) Number of school children in the family
  - a) One [ ]
  - b) Two [ ]
  - c) Three [ ]
  - d) Above three [ ]
- 6) Dietary pattern
  - a) Vegetarian [ ]
  - b) Non vegetarian [ ]

- 7) Latrine facility
- a) Indoor defecation [ ]
  - b) Open field defecation [ ]
- 8) Is there any pet animals in your house?
- a) Yes [ ]
  - b) No [ ]
- 9) Source of knowledge about worm infestation
- a) Mass media [ ]
  - b) Friends and relatives [ ]
  - c) Health personnel [ ]

## SECTION- II

### Knowledge items related to worm infestation

1. What is worm infestation?
- a) Worms enter into human body and get their food [ ]
  - b) Worms enter in and simply stay [ ]
  - c) Worms enter in to body and simply get out through feaces [ ]
  - d) Worms live outside the body and produces diseases [ ]
2. Name some common worms affecting the school children?
- a) Earth worm, wood worm and sand worm [ ]
  - b) Pin worm, hook worm and round worm [ ]
  - c) Silk worm, cotton worm and plant worm [ ]
  - d) Curd worm, vegetable worm and milk worm [ ]
3. Which part of the human body is affected by worms?
- a) Nails [ ]
  - b) Eye lashes [ ]
  - c) Hair [ ]
  - d) Intestines [ ]
4. What is the main cause of worm infestation?
- a) Poor nutrition [ ]
  - b) Poor cleanliness [ ]
  - c) Poor immunization [ ]
  - d) Poor ventilation [ ]

5. How do the worms enter in to the human body?
- a) Air [ ]
  - b) Feco-oral route [ ]
  - c) Clothes [ ]
  - d) Needle prick [ ]
6. What is the common complaint of child with worm infestation?
- a) Fever [ ]
  - b) Leg pain [ ]
  - c) Tooth ache [ ]
  - d) Abdominal discomfort [ ]
7. What does the stool of the infected child contain?
- a) Blood [ ]
  - b) Pus [ ]
  - c) Worms [ ]
  - d) Stones [ ]
8. How do you recognize the child is suffering from worm infestation?
- a) Pass stool with worms [ ]
  - b) Diarrhoea [ ]
  - c) Eating more food [ ]
  - d) Sleeping more time [ ]
9. What are the general signs and symptoms of worm infestations?
- a) Headaches [ ]
  - b) Fainting [ ]
  - c) Abdominal pain and anal itching [ ]
  - d) Leg pain [ ]
10. Which type of worm is more dangerous and deteriorates the health of the child?
- a) Pinworm [ ]
  - b) Hookworm [ ]
  - c) Roundworm [ ]
  - d) All the above [ ]
11. How do we diagnose the worm infestation?
- a) Sputum examination [ ]
  - b) Urine examination [ ]
  - c) Blood examination [ ]

- d) Stool examination [ ]
12. What will you do if the child has worm infestation?
- a) Give self medication [ ]
  - b) Give home made liquids [ ]
  - c) Consult with doctor [ ]
  - d) Isolate the child [ ]
13. What are the complications of worm infestation?
- a) Anemia, malnutrition and intestinal obstruction [ ]
  - b) Fits and muscle tightness [ ]
  - c) Joint pains and inability to walk [ ]
  - d) Jaw pain and inability to swallow [ ]
14. How the round worms look like?
- a) Thread shape [ ]
  - b) Round shape [ ]
  - c) Square shape [ ]
  - d) Hook shape [ ]
15. How do roundworms enter the body?
- a) From contaminated food and water [ ]
  - b) From improperly cooked meat [ ]
  - c) From bare-foot [ ]
  - d) From dirty clothes [ ]
16. What are the symptoms of roundworm infestation?
- a) Nose bleeding [ ]
  - b) Mouth ulcer [ ]
  - c) Headache and giddiness [ ]
  - d) Fever, skin rash [ ]
17. What is the main complication of roundworm?
- a) Respiratory obstruction [ ]
  - b) Intestinal obstruction [ ]
  - c) Cardiac obstruction [ ]
  - d) Urinary obstruction [ ]
18. How the pinworms look like?
- a) Needle shape [ ]
  - b) Thread shape [ ]

- c) Round shape [ ]
- d) Hook shape [ ]

19. How do pinworms enter the body?

- a) Due to bare-foot [ ]
- b) Due to improperly cooked food [ ]
- c) Due to infected clothes and finger nails [ ]
- d) Due to infected persons [ ]

20. What is the main symptoms of pinworm infestation?

- a) Itching around anus [ ]
- b) Itching on the head [ ]
- c) Itching on the legs [ ]
- d) Itching on the face [ ]

21. What is the main complication of pinworm infestation?

- a) Appendicitis [ ]
- b) Anemia [ ]
- c) Tonsillitis [ ]
- d) Diarrhoea [ ]

22. How the hookworms can be identified?

- a) By naked eyes [ ]
- b) By microscope [ ]
- c) By concave lens [ ]
- d) By convex lens [ ]

23. How do the hookworms enter the body?

- a) Through mouth [ ]
- b) Through skin [ ]
- c) Through nails [ ]
- d) Through nose [ ]

24. What is the main symptoms of hookworm infestation?

- a) Mouth ulcer [ ]
- b) Eye irritation [ ]
- c) Foot ulcer [ ]
- d) Skin irritation [ ]

25. What is the main complication of hookworm?

- a) Reduction in haemoglobin level [ ]
- b) Breathlessness [ ]
- c) Urinary obstruction [ ]
- d) Cardiac obstruction [ ]

26. Name of the drugs used for worm infestation?

- a) Albendazole [ ]
- b) Diclofenac [ ]
- c) Nimesulide [ ]
- d) Paracetamol [ ]

27. How many days one should take the treatment for Worm infestations?

- a) One week [ ]
- b) Two days [ ]
- c) One single dose [ ]
- d) One month [ ]

28. How do you prevent the spread of worm infestation?

- a) Thorough cleaning of hands before food and after defecation [ ]
- b) Not allowing the child to play outside [ ]
- c) By cleaning hands thoroughly before playing [ ]
- d) By proper immunization [ ]

29. Which is the best method to dispose excreta?

- a) Composting [ ]
- b) Usage of sanitary latrine [ ]
- c) Burning [ ]
- d) Dumping [ ]

30. Which of the following is the most favourable environment for the development of Round worms?

- a) Clay soil [ ]
- b) Dry soil [ ]
- c) Mud soil [ ]
- d) Red soil [ ]

### **SECTION- III**

#### **Practice Items Related To Worm Infestations**

31. Fruits and raw vegetables should be washed thoroughly before eating YES/NO
32. Consumption of raw foods prevents worm infestation? YES/NO
33. Food prepared outside of the home are good for health? YES/NO
34. Meat should be properly washed before cooking? YES/NO
35. Wearing chapels lead to worm infestation? YES/NO
36. Cleaning private parts thoroughly with soap and water helps to prevent worm infestation? YES/NO
37. Open field defecation helps to prevent the worm infestation? YES/NO
38. Child should wash the hands before food and after defecation YES/NO
39. Nail should be cut once in a week? YES/NO
40. Stool is observed for worms after deworming? YES/NO

**ghfk;- I**

**Flw; GO jhf;Fjy; gw;wpa tbtikf;fg;gl;l tpdhj;jhs;**

**fPNo nhLf;fg;gl;l tpguq;fis \$He;J gbj;J rhpahd ,lj;jpy; [✓] ,f;Fwpia ,ITk;;:**

1. jhapd; taJ
  1. 26 taJf;Fs; [ ]
  2. 26 – 30 taJ [ ]
  3. 31 – 35 taJ [ ]
  4. 35 – 40 taJ [ ]
  5. 40 taJf;F Nky; [ ]
2. jhapd; fy;tpj;jFjp
  1. Muk;g epiyf; fy;tp [ ]
  2. ,il epiyf; fy;tp [ ]
  3. caH epiyf; fy;tp [ ]
  4. Nky;epiyf; fy;tp [ ]
  5. gl;lg;gbg;G [ ]
3. jhapd; njhopy;
  1. ,y;yj;jurp [ ]
  2. Ntiy nra;Ak; ngz; [ ]
4. FLk;g tUkhdk; (&gha;> khjk;)
  1. &.1000 f;F fPo; [ ]
  2. &. 1001 Kjy; 5000 tiu [ ]
  3. &.5001 Kjy; 10>000 tiu [ ]
  4. &.10>000 f;F Nky; [ ]
5. FLk;gj;jpy; cs;s gs;sp nry;Yk; Foe;ijfspd; vz;zpf;if
  1. xd;W [ ]
  2. ,uz;L [ ]
  3. %d;W [ ]
  4. %d;W mjjw;F Nky; [ ]
6. czT tif

- 1. irtk; [ ]
- 2. mirtk; [ ]
  
- 7 foptiw trjp
  - 1. cs; fopg;gplk; [ ]
  - 2. jpwe;j ntsp [ ]
  
- 9 tPl;by; VNjDk; nry;yg;gpuhzp cs;sjh?
  - 1. Mk; [ ]
  - 2. ,y;iy [ ]
  
- 10 Flw;GO gw;wp mwpit vt;thW ngWtJ
  - 1. jfty; xypgug;G rhjdq;fs; (njhiyf;fhl;rp> thndhyp. [ ]  
nra;jpj;jhs;)
  - 2. ez;gHfs; kw;Wk; cwtpdHfs; %ykhf [ ]
  - 3. kUj;Jt cjtpahasHfs; %yk;. [ ]

## ghfk;- II

**Flw;GO jhf;Fjy; gw;wpa tptuk; Fwpj;j NeHfhzy;**  
**fPNo nfhLf;fg;gl;l tpguq;fis \$He;J gbj;J rhpahd ,lj;jpy; [✓] ,f;Fwpia**  
**,ITk;;**

- 1. Flw;GO vd;why; vd;d?
  - 1. GOf;fs; clypy; nrd;W mq;F mjd; czit ngw;Wf;nfhs;StJ.  
[ ]
  - 2. GOf;fs; clypy; nrd;W mq;Nf jq;fp ,Ug;gJ [ ]
  - 3. GOf;fs; clypy; nrd;W gpd;G kyj;jpd; %yk; ntspNa tUtJ.  
[ ]
  - 4. GOf;fs; ntspNa jq;fp ,Ue;J Nehia cz;lhf;FtJ. [ ]
  
- 2. nghJthf gs;spf; Foe;ijfis ghjpf;Fk; xU rpy GO;fspd; ngaHfis \$Wf.
  - 1. ehf;F G+r;rp> kug; GO kw;Wk; kz; GO [ ]
  - 2. ehlhg;GO> nfhf;fp GO> kw;Wk; cUisg; GO [ ]
  - 3. gl;Lg;G+r;rp> gQ;R GO kw;Wk; ,iyg;GO [ ]
  - 4. japH GO> fha;fwp GO kw;Wk; ghy;GO [ ]

Tamil Font: Bamini

3. kdpj clypy; ve;j gFjpia Flw;GO jhf;FfpwJ?
  1. efq;fs; [ ]
  2. fz; ,ikfs; [ ]
  3. jiyKb [ ]
  4. Fly; [ ]
4. Flw;GO Neha;tu vd;d fhuzk;
  1. rj;JzT FiwghL [ ]
  2. J}a;ikapd;ik [ ]
  3. Fiwthd vjph;G;G rf;jp [ ]
  4. Fiwthd fhw;Nwhl;lk;.. [ ]
5. Flw;GO fPo;fz;l vtw;wpd; %yk; guTfpwJ?
  1. fhw;wpd; %yk; [ ]
  2. Mrd tha; topahf [ ]
  3. Rj;jkpy;yhj Jzpf; [ ]
  4. Crpapd; %yk; [ ]
6. Flw;GO jhf;Fk; NghJ Foe;ijfSf;F nghJthd mwpFwpfs; vd;d?
  1. fha;r;ry; [ ]
  2. fhy;typ [ ]
  3. gy; typ [ ]
  4. tapW typ [ ]
7. ghjpf;fg;gl;l Foe;ijfapd; kyj;jpy; vd;d fye;jpUf;Fk;?
  1. ,uj;jk; [ ]
  2. rPo; [ ]
  3. GOf;fs; [ ]
  4. fw;fs; [ ]
8. vg;gb Flw;GO ghjpf;fg;gl;l Foe;ijia fz;Lgpbg;gJ?
  1. GOf;fSld; \$ba kyk; fopj;jy; [ ]
  2. tapw;Wg; Nghf;F [ ]
  3. mjpfkhf rhg;gpLjy; [ ]
  4. mjpfkhf J}q;Fjy; [ ]

Tamil Font: Bamini

9. Flw;GO jhf;Fk; NghJ Vw;gLk; mwpFwpfs; vd;d?  
1. jiyytyp [ ]  
2. kaf;fk; [ ]  
3. tapw;Wtyp kw;Wk; kyk; ntspNaWk; ,lj;jpy; mhpG;G [ ]  
4. fhy;typ [ ]
10. fPo;fz;ltw;wpy; ve;j tifahd Flw;GO Foe;ijfSf;F mjpfkhd ghjpg;ig cz;lhf;fpwJ?  
1. ehlhg;GO [ ]  
2. nfhf;fp GO [ ]  
3. cUz;il GO [ ]  
4. NkNy cs;s midj;Jk; [ ]
11. Foe;ijfSf;F Flw;GO ghjpg;ig vt;thW fz;Lgpbg;gJ?  
1. rsp ghpNrhjid [ ]  
2. rpWePH ghpNrhjid [ ]  
3. ,uj;j ghpNrhjid [ ]  
4. ky ghpNrhjid [ ]
12. cq;fs; Foe;ijfSf;F Flw;GO ghjpg;G ,Uf;Fk; NghJ ePq;fs; vd;d nra;tPHfs;?  
1. kUj;Jthplk; nry;yhky; ePq;fNs kUe;J nfhLj;Jjy; [ ]  
2. tPl;by; jahhpFk; ePuhfuq;fis nfhLj;jy; [ ]  
3. kUj;Jthplk; \$br; nry;Yjy; [ ]  
4. Foe;ijia jdplkg;gLj;Jjy; [ ]
13. Flw;GO ghjpg;gpdhy; Vw;gLk; gpd; tpisTfs; vd;d?  
1. ,uj;j Nrhif> rj;JzT FiwghL kw;Wk; FiwghL [ ]  
2. ,Og;G kw;Wk; rij ,Wf;fk; [ ]  
3. %l;L typ kw;Wk; elf;f ,ayhik [ ]  
4. eil vYk;G typ> czTfis KOq;f Kbahik [ ]
14. cUz;il GOtpd; tbtk;  
1. fhy; Nghd;wJ. [ ]  
2. cUis Nghd;wJ [ ]

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- 3. fl;lk; Nghd;wJ [ ]
- 4. nfhf;fp Nghd;wJ [ ]
- 15. Foe;jjfSf;F cUz;il GO guTk; Kiw
  - 1. J}a;ikaw;w czT kw;W jz;zPiu cl;nfhs;tjhy; [ ]
  - 2. rhpahd Kiwapy; Ntf itj;jy; [ ]
  - 3. khkprk; cl;nfhs;tjhy; [ ]
  - 4. ghj mzp mzpahy; elg;gJ. [ ]
  - 5. Rj;jkpy;yhj Jzpfss; [ ]
- 16. cUz;il GO ghjpg;gpdh; VwgLk; mwpFwpfs; vd;d?
  - 1. %f;fpypUe;J ,uj;jk; tbjy; [ ]
  - 2. tha;g;Gz; [ ]
  - 3. jiyyt kw;Wk; kaf;fk; [ ]
  - 4. fha;r;ry; [ ]
- 17. cUz;ilg;GOtpdh; Vw;gLk; Kf;fpakhd ghjpg;G vd;d?
  - 1. %r;rilg;G [ ]
  - 2. Fly; milg;G [ ]
  - 3. ,Uja milg;G [ ]
  - 4. rpWePH milg;G [ ]
- 18. ehlhg; GOtpd; tbtk;
  - 1. Crp tbtk; [ ]
  - 2. E}y; tbtk; [ ]
  - 3. cUz;il tbtk; [ ]
  - 4. nfhf;fp tbtk; [ ]
- 19. ehlhg; GO guTk; Kiw
  - 1. ghjk; topahf [ ]
  - 2. rhpahd Kiwapy; Ntf itf;fhj czit cz;gjhy; [ ]
  - 3. Rj;jkpy;yhj Jzpfss; kw;Wk; ifefj;jpd; %yk; [ ]
  - 4. Neha; ghjpf;fg;gl;l eghpkplUe;J [ ]
- 20. ehlhg; GO ghjpg;ghy; Vw;gLk; Kf;fpakhd mwpFwp vd;d?
  - 1. kyk; ntspNaWk; ,lj;jpy; mhpj;jy; [ ]

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- 2. jiyapy; mhpj;jy; [ ]
- 3. fhy;fspy; mhpj;jy; [ ]
- 4. Kfj;jpy; mhpj;jy; [ ]
- 21. ehlg; GOtpdhy; Vw;gLk; Kf;fpakhd ghjpg;G vd;d?
  - 1. Fly;thy; Neha; [ ]
  - 2. ,uj;j Nrhif [ ]
  - 3. njhz;il rijapy; tPf;fk; [ ]
  - 4. tapw;Wg;Nghf;F
    - [ ]
- 22. nfhf;fp GOtpid vg;gb fz;Lgpbg;gJ
  - 1. ntWk; fz;fshy; [ ]
  - 2. Ez;ZapH Nehf;fp [ ]
  - 3. Fop nyd;R [ ]
  - 4. Ftp nyd;R [ ]
- 23. nfhf;fp GO guTk; Kiw
  - 1. thapd; %yk; [ ]
  - 2. Njhypd; %yk; [ ]
  - 3. efq;fspd; %yk; [ ]
  - 4. %f;fpd; %yk; [ ]
- 24. nfhf;fp GOtpd; Kf;fpakhd mwpFwp vd;d?
  - 1. tha;g;Gz; [ ]
  - 2. fz;vhpr;ry; [ ]
  - 3. Njhy; vhpr;ry; [ ]
- 25. nfhf;fp GOtpdhy; Vw;gLk; Kf;fpakhd ghjpg;G
  - 1. ,uj;jj;jpy; rptg;gZf;fs; Fiwjy; [ ]
  - 2. %r;rpiwg;G [ ]
  - 3. rpWePH milg;G
    - [ ]
  - 4. ,Uja milg;G [ ]
- 26. Flw;GO Neha;f;F nfhLf;fg;gLk; kUe;Jfspd; ngaHfis \$Wf.
  - 1. my;gz;INrhy; [ ]

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2. ilf;Nshkpdhf; [ ]
3. epKrikL [ ]
4. ghuhrpl;lkhy; [ ]
27. vj;jid ehl;fSf;F xUKiw Flw;GO Neha;f;F kUe;J nfhLf;f Ntz;Lk;.
  1. xU thuk; [ ]
  2. ,uz;L ehl;fSf;F [ ]
  3. xNu xU Kiw kl;Lk; [ ]
  4. xU khjj;jpw;F xU Kiw [ ]
28. Flw;GO Neha; guTtij vg;gb jLg;gJ?
  1. czT cz;gjw;F Kd;Gk; kw;Wk; kyk; fopj;j gpd;Gk; iffis Kiwahf fOTtjpd; %yk; [ ]
  2. Foe;ijfs; ntspNa tpisahl mDkjpf;ff; \$lhJ. [ ]
  3. Foe;ijfs; tpisahLk; Kd;G iffis fOTtjpd; %yk; [ ]
  4. Kiwahd jLg;G+rp %yk; [ ]
29. fPo;fz;ltw;wpy; kdpj fopTfis ntspNaw;w vJ rpwe;j Kiw?
  1. xhplj;jpy; \$l;b itj;J [ ]
  2. foptiwfis cgNahfpj;jy; [ ]
  3. vhpj;jy; [ ]
  4. Mokhd xhplj;jpy; Ftpj;J itj;jy; [ ]
30. fPo;fz;ltw;wpy; cUz;ilf;F tsu VJthd #o;epiy vd;d?
  1. fspkz; fopT [ ]
  2. <ukpy;yhj fopT [ ]
  3. kz; fopT [ ]
  4. rpgf;G fopT [ ]

### **gFjp- III**

1. goq;fs; kw;Wk; fha;fwpfis cz;gjw;F Kd;G Rj;jkhf fOt Ntz;Lk;  
Mk; [ ] ,y;iy [ ]
2. rhpahd Kiwapy; rikf;fhj czit cl;nfhs;tjhy; Flw;GO Nehia jLf;fyhk;  
Mk; [ ] ,y;iy [ ]
3. ntspapy; rikf;fg;gLk; czT cly;eyj;jpw;F ey;yJ  
Mk; [ ] ,y;iy [ ]
4. khkprj;ij rikg;gjw;F ed;whf fOt Ntz;Lk;  
Mk; [ ] ,y;iy [ ]
5. ghjzpdfs; mzpe;J elg;gJ FlwGO Nehia cz;lhf;Fk;  
Mk; [ ] ,y;iy [ ]
6. Gwg;ghYg;GWg;Gfis J}a;ikahf itg;gjpd; %yk; Flw;GO Nehia  
jLf;fyhk;  
Mk; [ ] ,y;iy [ ]
7. jpwe;j ntspapy; kyk; fopj;jy; Flw;GO Nehia jLf;f cjTk;  
Mk; [ ] ,y;iy [ ]
8. czT cz;gjw;F Kd;Gk; kyk; fope;j gpd;Gk; Foe;ijfs; iffis J}a;ikahf fOt  
Ntz;Lk;  
Mk; [ ] ,y;iy [ ]
9. thuj;jpw;F xU Kiw efq;fis ntl;l Ntz;Lk;  
Mk; [ ] ,y;iy [ ]
10. Flw;GOtpw;fhd kUe;J nfhlj;j gpwF kyj;jpid ghpNrjhpf;f Ntz;Lk;  
Mk; [ ] ,y;iy [ ]

**ANNEXURE VI**  
**LIST OF EXPERTS**

1. Prof. Mrs. R. Vasanthi, M.Sc., (N),  
Principal,  
Department of Child Health Nursing,  
Dr. Mahalingam College of Nursing,  
Erode- 638315.
2. Prof. Mrs. Kavimani, M.Sc., (N),  
Principal,  
Department of Child Health Nursing,  
Shivparvathi Mandradiar Institute of Health Sciences,  
Palayankottai- 638108.
3. Prof. Mrs. Vijayalakshmi, M.Sc., (N),  
HOD of Child Health Nursing,  
K.G. College of Nursing,  
Coimbatore.
4. Prof. Mrs. Prabavathi, M.Sc., (N),  
Principal,  
Department of Child Health Nursing,  
Vellalar College of Nursing,  
Erode – 12.
5. Dr. Murugan, M.B.B.S., D.C.H.,  
Medical Officer,  
V.M.K Hospital,  
Sakthi Nagar

## ANNEXURE VII



