EAS Journal of Nursing and Midwifery
Abbreviated Key Title: EAS J Nurs Midwifery
ISSN: 2663-0966 (Print) & ISSN: 2663-6735 (Online)
Published By East African Scholars Publisher, Kenya

OPEN ACCESS

Volume-5 | Issue-5 | Sep-Oct -2023 | DOI: 10.36349/easjnm.2023.v05i05.007

Original Research Article

An Evaluative Study to Assess the Effectiveness of Structured Teaching Program on Knowledge of Prevention of Worm Infestations through Child-To-Child Program among School Children Aged Between 8-12 Years in School, Rangareddy Dist

Dr. Seema Yadav[1*]

[1]Principal College of Nursing, Sarojini Naidu Medical College, AGRA, Uttar Pradesh, India

Article History
Received: 15.09.2023
Accepted: 18.10.2023
Published: 21.10.2023

Journal homepage:
https://www.easpublisher.com

Quick Response Code

Abstract: ***The Objectives of the Study*****:** 1) Assess the knowledge regarding hook worm infestation among 6th class students and 4th class students. 2) Develop and administer the structured teaching program on knowledge of prevention of hook worm infestation among 6th class students. 3) Assess the knowledge regarding hook worm infestation among 4th class students taught by 6th class students in child-to-child program. 4) Compare the effectiveness of child-to-child programs and structured teaching programme about the prevention of hook worm infestation. 5) Associate the knowledge of school children with selected demographic variables. The study adopted the pre-experimental two group pre-test and posttest design with structured teaching programme on knowledge of prevention of worm infestations through Child-to-child program. The study was conducted on population consists of the school children who are studying 6th and 4th class in school, rangareddy dist. The sample size consists of 100 school children aged from 8 -12 years. The sample was selected through convenient sampling technique. The structured questionnaire was used to collect the data from school children; the instrument/tool was given for content validity to the experts in the field of nursing, community medicine, English, and Telugu. The reliability of tool was tested by test and retest method. The correlation co-efficient was calculated by using Karl Pearson formula and value of r= 0.9608 is of 6th class students and the 0.982 is of 4th class students was obtained. A pilot study was conducted on 6 subjects, and it was found that the tool was feasible, appropriate, and practicable. Pretest and structured teaching programme with help of lesson plan and A.V aids was conducted on the for the 6th class students. selected in the ratio of 1:5. One 6th class student was selected for five 4th class students. The investigator conducted a pre-test using structured questionnaire to 4th class students. After pretests, the child-to-child program were conducted separately by the 6th class students to the 4th class student's post-test was conducted for the same both groups using structured questionnaire by the investigator within one week. The analysis and interpretation of data was done with the help of descriptive and inferential statistics. The post-test knowledge scores were significantly improved to 44.00% above average level after structured teaching programme on prevention of hook worm infestation. The Pre-test mean scores of 6th class students was12.12 and the post-test mean was 18.12, the calculated' t' value 8.726 was highly significant at 0.05 level, the table value was 2.39 which was lower than the calculated 't' value hence it conclude that the structured teaching programme was effective. The post-test knowledge scores were significantly improved to 56.00% average level after Child-to-child program on prevention of hook worm infestation. The Pre-test mean scores of 4th class students was 9.48 and the post-test mean was 11.16, the calculated' t' value 3.109 was highly significant at 0.05 level, the table value was 2.39 which was lower than the calculated 't' value hence it conclude that the child-to-child program was also effective. But the findings of the study clearly have shown that the child-to-child program is less effective compared to the structured teaching programme. Because the structured teaching programme was taught by experienced people and the child-to-child program was taught by a school child.

Keywords: hook worm infestation, knowledge of school children, nursing, Nutrition.

INTRODUCTION

The basic needs of children include love, hygiene, nutrition, safety& security. Nutrition plays a major key role in growth &development of children. Some of the factors like low socio-economic status, illiteracy, poverty misbeliefs, poor awareness, bad

***Corresponding Author:** Dr. Seema Yadav
Principal College of Nursing, Sarojini Naidu Medical College, AGRA, Uttar Pradesh, India

hygiene may influence malnutrition in children. Not only is these factors worm infestations also a major cause for malnutrition in children. Worms are parasites that live in the human body, usually gastrointestinal tract. The parasites that infiltrates children occur when the conditions are unsanitary, the children may consume dirty drinking water, eating unwashed fruits & vegetables, open field defecation, walking with barefoot in fields.

There are over 100 types of parasites. The most common types of worms are round worms (including hookworms, pin worms & thread worms) and tape worms. Worms are a frequent problem for humans across the world and can affect any of us irrespective of age or gender, but the problem is most prevalent among toddlers &children. Worm infestations can cause some serious complications if neglected that may even be life threatening. However, they are more common in tropical and subtropical areas and are widely prevalent during the rainy season. The continuous presence of worms in marginally nourished children can cause severe anaemia and subsequently affect the growth and development of children.

NEED FOR THE STUDY

Worm infestation is more significant than specific vitamin &mineral deficiencies in developing countries. In India, the problem is likely to be more common because of bad hygiene, unsanitary sewage disposal, the habit of eating raw vegetables & fruits, poor sanitation, inadequate medical care & absence of safe drinking water supplies. Studies carried out in various parts of India have reported a prevalence of intestinal parasitism and anaemia from among school going girls.

According to World Health Organization Globally over 600 million people are estimated to be infected by S. stercoralis; however, since also this parasite is transmitted in areas where sanitation is poor, its geographical distribution overlaps with the one of the other soil-transmitted helminthiases

Soil-transmitted helminth (STH) infections are among the most common infections worldwide with an estimated 1.5 billion infected people or 24% of the world's population. These infections affect the poorest and most deprived communities with poor access to clean water, sanitation, and hygiene in tropical and subtropical areas, with the highest prevalence reported from sub-Saharan Africa, China, South America, and Asia. They are transmitted by eggs present in human faeces, which in turn contaminate soil in areas where sanitation is poor. Over 260 million preschool-age children, 654 million school-age children, 108 million adolescent girls and 138.8 million pregnant and lactating women live in areas where these parasites are intensively transmitted, and need treatment and preventive interventions

The high prevalence of parasitic infestation seems related to the unhygienic living conditions associated with lack of knowledge about the communicable disease & variety of allied factors, which need to be studied. Amongst the intervention measures, it is important to take up sustained health education, provision of safe drinking water and improvement in environmental sanitation. It would also be useful to teach them about personal hygiene and conduct health education at schools through 'school health project'. During the school health check-ups, periodic screening for intestinal parasites and blood indices can be evaluated.

Nutrition play a major role to provide resistance from diseases. Worm infestations are a major problem in school going children may cause malnutrition &growth retardation prevalence of worm infestations are high among school children.so the investigator felt to conduct a study about worm infestations and prevent further complications of worm infestations because it is not treated properly it may become life threatening problem in children.

STATEMENT OF THE PROBLEM

An evaluative study to assess the effectiveness of structured teaching programme on knowledge of prevention of worm infestations through Child-to-child program among school children aged between 8-12 years in school, rangareddy dist.

OBJECTIVES:

1. Assess the knowledge regarding hook worm infestation among 6th class students and 4th class students.
2. Develop and administer the structured teaching program on knowledge of prevention of hook worm infestation among 6th class students.
3. Assess the knowledge regarding hook worm infestation among 4th class students taught by 6th class students in Child-to-child program.
4. Compare the effectiveness of Child-to-child program and structured teaching programme about the prevention of hook worm infestation.
5. Associate the knowledge of school children with selected demographic variables.

EFFECTIVENESS:

It is the difference in the percentage of correct responses & mean knowledge scores of pretest & post tests conducted for school children in the present study.

STRUCTURED TEACHING PROGRAMME:

Planned lesson plan along with the appropriate AV aids prepared &administered by the investigator to impart knowledge to the school children regarding prevention of worm infestation.

CHILD TO CHILD PROGRAMME:

It refers to the planned set of activities, implemented in a sequence by a schoolchild to spread the knowledge to the peer groups regarding prevention of worm infestation.

HOOK WORM INFESTATION:

It is defined as any infection caused by Ankylostoma duodenale or Nectar americanus. They may occur as single or mixed infections in the same person.

CONCEPTUAL FRAMEWORK:

Conceptual framework is theoretical approach to study the problem that are scientifically based and emphasize the selection, arrangement &clarification of its concepts. A conceptual framework states the functional relationships between events and is not limited to statistical relationship.

The present study is based on Ludwig Vonbertalaniffy's "general system approach" and "nursing process". A system is defined as a set of elements or units in interaction to achieve a specific goal. System refers to the orderly logical arrangement of interdependent parts into an interrelated whole to accomplish a given purpose.

A system operates to convert or process energy information or materials into a planned outcome, product, and information .1t is characterised by:

Input: The first component of the system is input, which is the information, energy or matter that enters the system. For a system to work well input should contribute to achieve the purpose of the system. 1t refers to demographic data &knowledge on prevention of hook worm infestation. These factors were taken into consideration on input for evaluation of effectiveness in bringing out the change in school children knowledge level.

Throughput/process: The action needed to accomplish the desired task, to achieve the desired task i.e.to evaluate the effectiveness of planned teaching on prevention of hook worm infestation through child-to-child program, the following process is adapted .Assessment of knowledge by pre-test, questionnaire preparation of planned teaching on prevention of hook worm infestation ,validation of planned teaching, administration of post-test questionnaire and evaluation of planned teaching & child-to-child.

Output: After the input and process the system returns output to the environment in an altered state of the result or product of the system .0utputs vary widely depending on type purpose of the system affecting environment. Here output refers to knowledge level of school children regarding hook worm infestation .1f knowledge levels found adequate rectification can be done by strengthening the existing knowledge through continuous monitoring which is not under preview of study.

Feedback: The process of communicating what found in evaluation of system. The feedback can be measured by output whether knowledge is adequate or in adequate i.e. If the mother gains adequate knowledge of administration of planned teaching or not. The developed planning teaching will be considered useful to update school children's knowledge of the same. If the knowledge gained is in- adequate, it means that the system's input & throughput must be re-evaluated, which is not included in the study.

Input measures include children's knowledge level, experience, and characteristics of those which promote or inhibit teaching learning interactions. Process include two phases, the first phase consists of assessment of knowledge using knowledge test, second phase includes planning & organization& evaluation of teaching programme. Output refers to the expected change in behaviour in target population for whom the teaching was given.

CONCEPTS

System: System is the school children.

Subsystems: Age, religion, type of family, education, occupation, income are the subsystems of school children.

Interdependent parts

1. Assessment of knowledge on prevention of hook worm infestation among 6^{th} class students and 4^{th} class students by pre-test to group.
2. Planned and implementation of planned teaching programme with prepared AV aids to 6^{th} class students.
3. Assessment of knowledge of 4^{th} class students taught by 6^{th} class students in Child-to-child program.
4. Assessment of knowledge on prevention of hook worm infestation by post-test to the 6^{th} and 4^{th} class students compare the knowledge scores to determine the effectiveness of planned teaching and child-to-child program, to assess the gain of knowledge.

These interdependent parts are together from into an interrelated whole to accomplish specific goal of preventing potential complications related to 6^{th} and 4^{th} class students.

BASED ON NURSING PROCESS:

Phase-I: Assessment: The assessment of 6^{th} and 4^{th} class students will be done after conducting a pre-test by structured questionnaire on prevention of worm infestation among the school children.

Phase-2: Planning & Implementation: The teaching program is prepared, and 6th class students will be given structured teaching program, and the 4th class students will be taught by the 6th class students in Child-to-child program on prevention of hook worm infestation to gain knowledge.

Phase-3; Evaluation: The effectiveness of structured teaching and CHILD to child programme will be determined by conducting post-test for6th and 4th class student.

ASSUMPTIONS:

1. The school children will have some knowledge regarding hook worm infestation.
2. The school children will cooperate and respond appropriately to the items on questionnaire.
3. The selected variables influence on school children knowledge about hook worm infestation
4. The structured teaching programme will help to improve their knowledge of hook worm infestation.
5. The Child-to-child program will help to communicate between the elder children to young children.

The Child-to-child program will help to spread the knowledge to younger children.

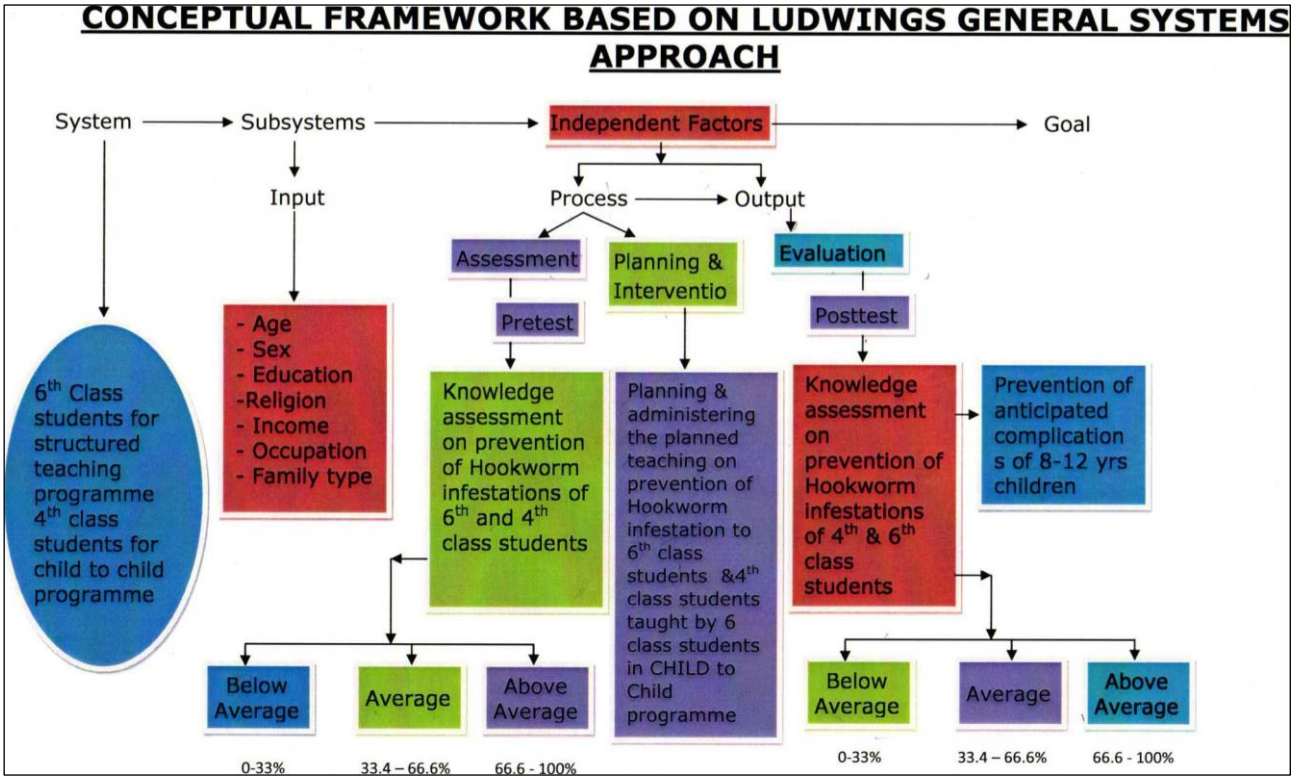
The tool prepared by the investigator will gather reliable and valid data for study.

DELIMITATIONS:

1. The study is limited to the school, rangareddy dist.
2. The study was limited to the 6th and 4th class students, who are studying in school, rangareddy dist.
3. The study is limited to the written responses of the 6th and 4th class students to the questionnaire.
4. The study is limited to Telugu, English speaking and writing school children and who are willing to participate in the study and who are available during the time of Data collection.

RESEARCH HYPOTHESIS

In Structured teaching programme there will be a significant improvement in pretest & post test knowledge of 6th class students regarding hook worm infestation. In Child-to-child program there will be a significant improvement in pre-test & post-test knowledge of 4th class students regarding hook worm infestation. Hence the research hypothesis is accepted.



REVIEW OF LITERATURE

This deals with the review of literature, the purpose of which is obtaining scientific material relevant to the present study. The term literature review refers to the activities involved in identifying and searching for information on a topic and further developing a comprehensive picture of a topic.

Review of literature is an essential part of every research project. Review of literature refers to an

extensive thorough and systematic examination of publication that certain information relevant to researcher project. Review of literature gives an insight into various aspects of problems under study. It helps the investigator in designing the framework developing the methodology and tool for data collection.

Review of literature is necessary for the following reasons:

- To determine how well theory and research are developed in the field of study to determine concepts.
- To examine research designs, methods, scales, instruments, measures, and technique of data analysis, used by others. To identify a study for replication and comparison to examine difficulties reported by others.
- To identify a guide to use in drafting the research report.

An extensive search was made to explore the studies, reports and publications published in medical and nursing field in India and Abroad. Both manual and computer search was utilized. To gain a better insight into the present study, the related literature review has been made and described under the following areas.

METHODOLOGY

This deals with the Methodology adopted for the present study .1t includes research approach, research design, setting variables, sample, sample selection, development& administration of the tool, pilot study, procedure for data collection and plan of the data analysis.

In the present study, the investigator intends to assess the effectiveness of planned teaching programme on knowledge of prevention of selected worm infestation through Child-to-child program among school children in school, Rangareddy.

Research methodology is a way to systematically solve research problems may be understood as a science of studying how research is done scientifically. C.R.Kothari (2002).

RESEARCH APPROACH

The research approach refers to a general set of orderly disciplined procedures used to acquire dependable and useful information. In the present study the investigator aimed to assess the effectiveness of structured teaching programme on knowledge of prevention of selected worm infestation through child-to-child program among school children aged between 8-12 yrs. in school, rangareddy dist.

RESEARCH DESIGN:

A researcher 's overall plan for obtaining answers to the research questions or for testing the research hypothesis referred to as the research design (Polit 1999). The research design adopted for the present study was "Two Group pre-test post-test". It is also like experimental approach without any control group and randomization .1n this design the total sample was taken as group and is pretested. After pre-test, the independent variable was introduced to the complete sample irrespective of pre-test knowledge scores (dependent variable). The independent variable structured teaching programme was given to whole group within 24 hours after pre-test. The effectiveness of the independent variable was tested with the help of posttest after one week.

DESCRIPTION OF VARIABLES:

Independent variable: The independent variable in this study is structured teaching on prevention of hook worm infestation. Structured teaching is prepared by the investigator with the help of textbooks, journals, published articles and other literature on related subjects and in consultation with the experts.

Dependent variable: The dependent variable in this study is the knowledge of prevention of hook worm infestation among school children (6^{th} & 4^{th} class).

Extraneous variable: Extraneous variables, which could influence the knowledge of school children (6^{th}&4^{th} class) on prevention of hook worm infestation are sex, religion, education of mother & father, occupation of mother & father, type of family, income.

POPULATION:

The population for this study consists of school children who are studying 6^{th} & 4^{th} class in school, rangareddy dist.

SAMPLE SIZE:

50 (6^{th} and 4^{th} class) students were selected for this study. Structured teaching programme "25" 6th class students. Child-to-child to child program "25" 4^{th} class students.

SAMPLING TECHNIQUE:

Sampling refers to the process of selecting a portion of the population to represent the entire population. The convenient sampling technique was adopted for the present study, which is Nonprobability sampling design has the advantage of being convenient and economical.

CRITERIA FOR SAMPLE SELECTION:

Inclusive Criteria:

1. The school children who are studying 6^{th} and 4^{th} class.
2. The 6^{th} and 4^{th} class students who are studying in school, rangareddy dist.
3. The students who can speak and write Telugu or English

4. The students who are willing to participate in the study can respond coherently.

Exclusive Criteria:

1. The school children who are not willing to participate in the study.
2. The students who are having learning and speech difficulties
3. The students who have Attention Deficit Disorders, Attention Deficit Hyperactivity Disorder.

SAMPLE CHARACTERISTICS

The sample is described in terms of demographic data, which includes sex, religion, education of mother & father, type of family, occupation of mother &father, income of the family, previous exposure to mass media and presence of health personnel in the family. The frequency distribution tables are used to describe the sample characteristics.

METHOD OF DATA COLLECTION:

In the present study the data has been collected with the help of structured questionnaire. Research data, particularly in quantitative studies, is often collected according to a structured plan that indicates what information is to be gathered & how to gather it. Most self-administered questionnaires are highly structured. They include a fixed set of questions that were answered in a specified sequence and predesigned responses. The questionnaire was selected as the most appropriate useful data gathering device in research projects to collect desired information.

DEVELOPMENT&DESCRIPTION OF THE TOOL

A search of literature was made for the purpose of developing appropriate tools for assessing knowledge on prevention of hook worm infestation. An instrument in the form of structured questionnaire was developed with the help of selected literature from various textbooks, journals, internet & discussions with the experts in the field of nursing &community. The structured teaching programme was administered for 30 minutes on prevention of hook worm infestation with the help of selected literature books, journals& internet material.

The structured questionnaire consists of two parts:

Part 1: It was dealt with demographic characteristics of the school children such as sex, religion, type of family, occupation of mother &father, education of mother & father, income of the family per month, participation in health awareness camps and presence of health personnel in the family.

Part 2: It was dealt with assessment of knowledge on prevention of hook worm infestation among 6th & 4th class students in school, rangareddy dist. It consists of 30 multiple choice questions carrying 30 marks.

SCORE INTERPRETATION:

The sample was categorized into three groups based on the knowledge of subjects.

Below Average	**0-33%**
Average	**33.4% - 66.6%**
Above Average	**66.7% - 100%**

RELIABILITY OF TOOL:

The reliability of the measuring instrument is a major criteria for assessing its quality and adequacy (Polit& Hungler, 2002). Test-retest method was done in order to assess the reliability by administering the tool twice to the same sample of 6 subjects in the pilot study. Each subjects first score was compared with the same subject's second score with the help of Pearson's product movement coefficient correlation (r). The structured teaching programme of 6th class students r value is 0.968, the Child-to-child program r value is 0.982. Hence both were statistically determined to be reliable.

PILOT STUDY:

The pilot study was conducted to assess the effectiveness of planned teaching programme on prevention of selected worm infestation to see the practicability and feasibility of the study and to plan for statistical analysis of the data pilot study was conducted at school, rangareddy dist. Of school children were selected for pilot study based on sample criteria. The study was found feasible, practicable and appropriate.

TECHNIQUE OF DATA COLLECTION:

The subjects of the study were selected according to the criteria by Nonprobability sampling method. The purpose of the study was explained to the subjects and the pre-test was given with the help of structured questionnaire. The investigator administered structured teaching programme on prevention of hook worm infestation at school, rangareddy dist. Post test was conducted 1 week after the structured teaching programme to the same sample by self-administered questionnaire which was used for the pre-test.

PLAN OF DATA ANALYSIS:

After collecting data, it was analyzed the same by using descriptive and inferential statistics i.e., mean, standard deviation, and standard error, "paired "t" test for obtained knowledge scores in pre-test and post-test. The analysis and interpretation of the data is presented in 3 parts.

Part-I: Frequency and percentage distribution of demographic data of school children (6th and 4th class students)

Part-2: Comparing pre-test and post-test knowledge scores on prevention of hook worm infestation.

Part-3: Identifying the relationship between school children on prevention of hook worm infestation with demographic variables.

ANALYSIS AND INTERPRETATION

The analysis and interpretation of an evaluative study to assess the effectiveness of Structured Teaching Program on knowledge of prevention of worm infestation through Child-to-child program among school children aged between 6-12 years. Analysis and interpretation was done with the help of descriptive and inferential statistics to meet the objectives of the study.

Descriptive statistics such as Frequencies, Percentages, Mean, and Standard deviation, Standard Error and Karl Pearson Correlation Coefficient were utilized for assessing the knowledge on Round Worm Infestation among the School Children. Inferential statistics such as Paired t-test was used to test the effectiveness of child-to-child program on the prevention of round warm infestation among school children and Nonparametric tests such as chi square was utilized to determine the significant association between the posttest knowledge scores of the children and selected demographic variables.

The data collected and analyzed and presented in two parts.

Part I: Description of the demographic characteristics of the school children in terms of frequencies and percentages.

Part Il: Findings related to knowledge scores of the school children were described under three sections.

Section —I: Description regarding the knowledge scores of the school children on the prevention of Hook worm infestation.

Section — Il: Description of the knowledge scores of the school children regarding the effectiveness of Child-to-child program on Hook infestation by using paired t test.

Section — Ill: Description regarding the association between the posttest knowledge scores of the school children and the selected demographic variables.

PART 1

Demographic data of the samples includes the Gender, Religion, Education, Occupation of father, Occupation of mother, Father Education, Mother Education, Family Income per month and Type of family.

Table-1: Frequency and Percentage distribution of the school children according to the Gender, Religion and Education, (N=25 + 25)

Demographic data	6th Class		4th Class	
	f	%	f	%
Gender				
• Boy	11	44.00%	07	28.00%
• Girl	14	56.00%	18	72.00%
Religion				
• Hindu	18	72.00%	11	44.00%
• Muslim	01	04.00%	03	12.00%
• Christian	04	16.00%	10	40.00%
• Others	02	08.00%	01	04.00%
Education				
• 6th Class	25	100.00%	00	00.00%
• 4th Class	00	00.00%	25	100.00%

This described the demographic data the Out of 25 subjects in most of the subjects 14 (56.00%) were girls and least 11 (4.00%) were boys. In the 4th Class majority 18 (72.00%) of the subjects were girls and least 7 (28.00%) were boys.

Data related to the religion of the school children in most of the subjects 18 (72.00%) were Hindus and least 1 (4.00%) were Muslims whereas in the 4th Class majority 11 (44.00%) were. Hindus and least 1 (4.00%) were Muslims.

Table-2: Frequency and Percentage distribution of the school children according to the father occupation and mother occupation, (N=25 + 25)

Demographic data	6th Class		4th Class	
	f	%	f	%
Father Occupation				
• Labour	12	48.00%	13	52.00%
• Business	10	40.00%	4	16.00%
• Health Professional	1	4.00%	4	16.00%
• Govt Employee	1	4.00%	0	0.00%
• Unemployed	1	4.00%	0	0.00%
• Others	0	0.00%	4	16.00%
Mother Occupation				
• Housewife	3	12.00%	1	4.00%
• Labour	13	52.00%	7	28.00%
• Govt Employee	0	0.00%	4	16.00%
• Business	5	20.00%	9	36.00%
• Others	4	16.00%	4	16.00%

This described the demographic data includes the father occupation and mother occupation. Out of 25 subjects in the 6th Class the father occupation of majority of the subjects 12 (48.00%) was labor. In the 4th Class the father occupation of majority 13 (52.00%) of the subjects was labor.

Data related to the mother occupation of the school children in the 6th Class the mother occupation of majority of the subjects 13 (52.00%) was labor. In the 4th Class the mother occupation of majority 9 (36.00%) of the subjects was Business.

Table-3: Frequency and Percentage distribution of the school children according to the father education and mother education, (N=25 + 25)

Demographic data	6th Class		4th Class	
	f	%	f	%
Father Education				
• Illiterate	10	40.00%	5	20.00%
• Primary Education	6	24.00%	7	28.00%
• Secondary Education	8	32.00%	12	48.00%
• Intermediate	1	4.00%	1	4.00%
• Graduate	0	0.00%	0	0.00%
• Post Graduate	0	0.00%	0	0.00%
Mother Education				
• Illiterate	19	76.00%	6	24.00%
• Primary Education	5	20.00%	5	20.00%
• Secondary Education	1	4.00%	11	44.00%
• Intermediate	0	0.00%	3	12.00%
• Graduate	0	0.00%	0	0.00%
• Post Graduate	0	0.00%	0	0.00%

This described the demographic data includes the father education and mother education. Out of 25 subjects in the 6th Class the father education of majority of the subjects 10 (40.00%) was Illiterate. In the 4th Class the father education of majority 13 (52.00%) of the subjects was secondary education.

Data related to the mother education of the school children in the 6th Class the mother education of majority of the subjects 19 (76.00%) was illiterate. In the 4th Class the mother education of majority 11 (44.00%) of the subjects was secondary education.

Table-4: Frequency and Percentage distribution of the school children according to the family income and family type, (N=25 + 25)

Demographic data	6th Class		4th Class	
	f	%	f	%
Family Income				
• Below Rs 5000	18	72.00%	13	52.00%
• Rs 5001 - Rs 10000	2	8.00%	7	28.00%
• Rs 10001 - Rs 20000	4	16.00%	3	12.00%
• More than Rs 20001	1	4.00%	2	8.00%
Type of Family				
• Single Family	17	68.00%	19	76.00%
• Joint Family	3	12.00%	5	20.00%
• Single Parented family	3	12.00%	1	4.00%
• Extended Family	2	8.00%	0	0.00%

This described the demographic data of the school children including the family income and type of family. Out of 25 subjects in the 6th Class the family income of majority of the subjects 18 (72.00%) was Below Rs 5000. In the 4th Class the family income of majority 13 (52.00%) of the subjects was Below Rs 5000.

Data related to the type of family of the school children in the 6th Class the type of family of majority of the subjects 17 (68.00%) was single family. In the 4th Class the type of family of majority 19 (76.00%) of the subjects was single family.

PART - 11
SECTION – 1

Section-I describes the knowledge scores of the school children regarding the prevention of round warm infestation. Paired t test was used to test the effectiveness of child-to-child program on round warm infestation. Frequencies, percentages, standard deviation, standard error, and Karl Pearson's Correlation Coefficient were used to assess the knowledge scores of the school children on the prevention of round warm infestation.

Table-5: Frequency and Percentage distribution of knowledge scores of the school children in pretest and posttest on Hook worm infestation, (N = 25+25)

Knowledge Levels	6th Class				4th Class			
	pretest before STP		Pretest after STP		Pretest before CHILD to child prog		Posttest after CHILD to child prog	
	f	%	f	%	f	%	f	%
Below Average	10	40.00%	4	16.00%	15	60.00%	11	44.00%
Average	15	60.00%	10	40.00%	10	40.00%	14	56.00%
Above Average	0	0.00%	11	44.00%	0	0.00%	0	0.00%
Total	**25**	**100.00%**	**25**	**100.00%**	**25**	**100.00%**	**25**	**100.00%**

Table-5 Fig-5 showed the knowledge scores of the school children. In the 6th Class 40 % of the school children were having below average knowledge levels, 60 % of the school children were having average knowledge levels in the pretest and in the posttest 16.00 % of the school children were having below average knowledge levels, 40.00 % of the children were having average knowledge levels and 44.00 % of the children were having above average knowledge levels.

In the 4th Class 60 % of the school children were having below average knowledge levels, 40 % of the school children were having average knowledge levels in the pretest and in the posttest 44.00 % of the school children were having below average knowledge levels, 56.00 % of the children were having average knowledge levels on the prevention of Hook worm infestation.

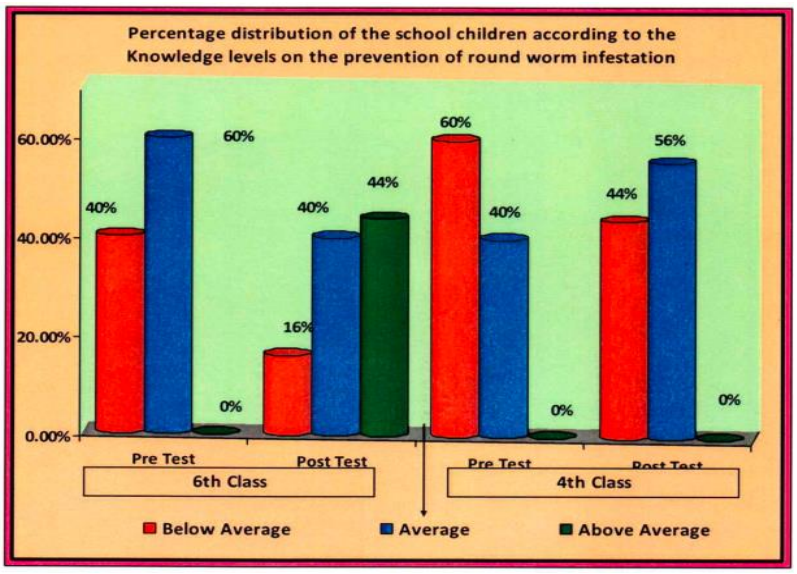


Fig 5: Percentage distribution of the school children according to the pretest and posttest knowledge levels on the prevention of Hook worm infestation

SECTION-II

Description regarding the effectiveness of child-to-child Program on round warm infestation among school children.

Table-6: Pretest and posttest Mean, Standard Deviation, Standard Error, and t value of significance of the subjects in the 6th Class regarding the knowledge scores on Hook worm infestation, (N=25)

Knowledge Scores	6th Class					
	Mean	SD		SDD	SED	t value
Pre-Test Knowledge	12.12	4.61	6	2.01	0.40	8.726 S*
Post Test Knowledge	18.12	6.62				

Note: 1) S*: Significant at 0.05 level of significance.
2) NS: Not Significant at 0.05 Level of Significance.
3) Table value of 't' for 24 do at 0.05 level of significance is 2.39.

This describes that the posttest knowledge scores mean 18.12, Standard Deviation 6.627 and standard error 1.3245 obtained by the school children in the 6th Class were higher than the pretest knowledge scores mean 12.12, Standard Deviation 4.61 and standard error 0.9225 with mean difference 6, Standard Deviation difference 2.01 and Standard Error difference 0.40. The obtained difference between the mean knowledge scores in pretest and posttest was found statistically significant, as evident from the paired t value of 8.726 with 24 degrees of freedom at 0.05 level of significance. Hence the structured teaching program was effective in increasing the knowledge scores of the 6th Class children on the prevention of Hook worm infestation.

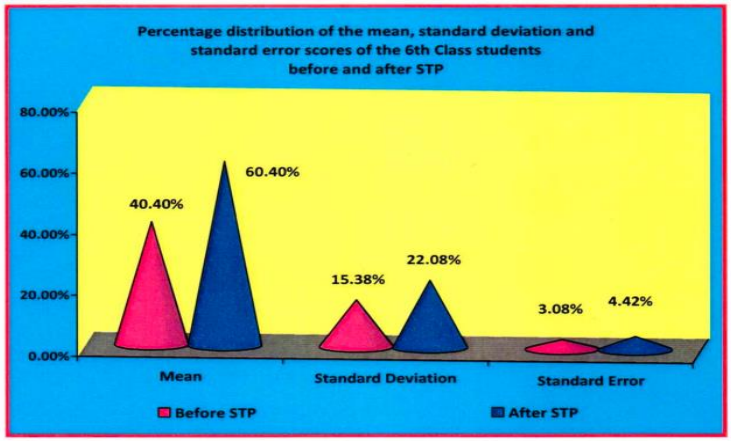


Fig 6: Percentage distribution of the mean, standard deviation, and standard error scores of the 6th Class before and after the teaching program on Hook worm infestation

Table-7: Pretest and posttest Mean, Standard Deviation, Standard Error, and t value of significance of the subjects in the 4th Class regarding the knowledge scores on Hook worm infestation

Knowledge Scores	4th Class					
	Mean	SD		SDD	SED	t value
Pre-Test Knowledge	9.48	2.91	1.68	0.14	0.03	3.109
Post Test Knowledge	11.16	2.77				

Note: 1) S*: Significant at 0.05 level of significance.
2) NS: Not Significant at 0.05 Level of Significance.
3) Table value of 't' for 24 df at 0.05 level of significance is 2.39.

The Table 7 describes that the posttest knowledge scores mean 11.16, Standard Deviation 2.77 and standard error 0.555 obtained by the school children in the 4th Class were higher than the pretest knowledge scores mean 9.48, Standard Deviation 2.9172 and standard error 0.5834 with mean difference 1.68, Standard Deviation difference 0.14 and Standard Error difference 0.03. The obtained difference between the mean knowledge scores in pretest and posttest was found statistically significant, as evident from the paired t value of 3.1097 with 24 degrees of freedom at 0.05 level of significance. Hence the structured teaching program was effective in increasing the knowledge scores of the 4th Class children on the prevention of Hook worm infestation.

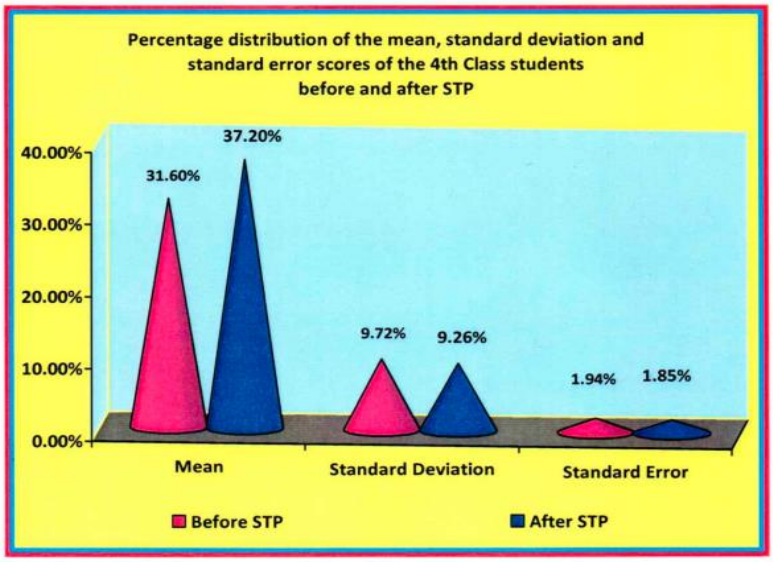


Fig 7: Percentage distribution of the mean, standard deviation, and standard error scores of the 4th Class before and after the teaching program on Hook worm infestation

Table-8: Comparison of Post test Means, Standard Deviations, Standard Errors, and t value of significance of the subjects in both the classes regarding the knowledge on the prevention of Hook worm infestation, (N=25+25)

Experimental Group	Post test Knowledge Parameters						
	Mean	SD	MD	SDD	SED		t value
Class	18.12	6.62	6.96	3.84	0.77	-0.299	4.845
4th Class	11.16	2.77					

Note: 1. S*: Significant at 0.05 level of significance.
2. NS: Not Significant at 0.05 Level of Significance.
3. Table value of 't' for 48 df at 0.05 level of significance is 2.01.

Table 8 describes Karl Pearson's Correlation Coefficient and determines the significant difference between the posttest knowledge scores of the 6th Class and the 4th Class. For the 6th Class the posttest mean was 18.12 with standard deviation 6.62 whereas for the 4th Class the posttest mean was 11.16 with standard deviation 2.77 with the mean difference 6.96, standard deviation difference 3.84 and standard error difference 0.77. The obtained difference between the mean knowledge scores in the two classes was found statistically significant, as evident from the t value of 4.8453 with 48 degrees of freedom at 0.05 level of significance. Karl Pearson's Correlation Coefficient value "r" (-0.2999) indicates there is a less degree of negative correlation between the posttest knowledge scores of the two groups.

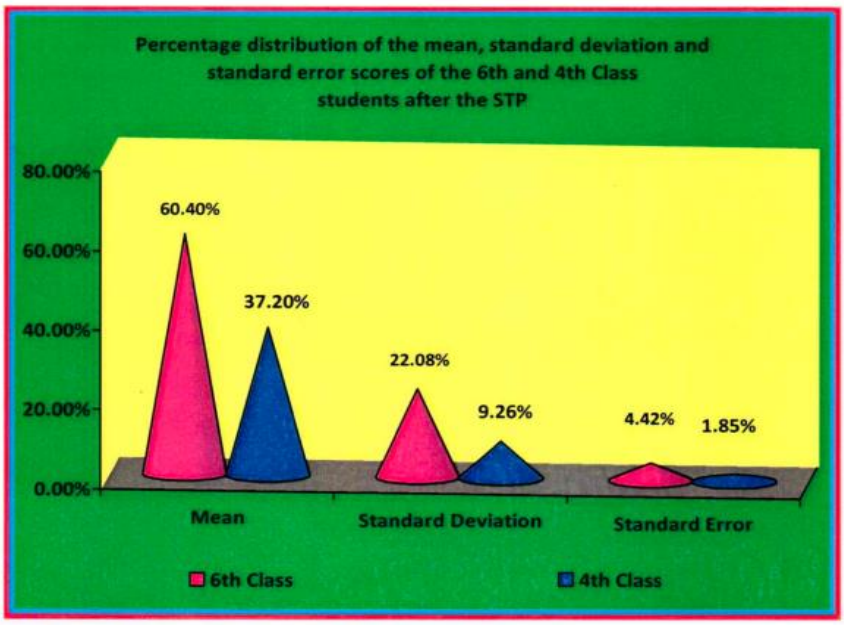


Fig 8: Percentage distribution of the mean, standard deviation, and standard error values of both the classes after the teaching program on Hook worm infestation

SECTION – III

Section Ill deals with the relationship between the knowledge scores of the school children on the prevention of Hookworm infestation with the selected demographical variables such as Gender, Father Education, mother education etc., Nonparametric test such as Chi Square test was applied for testing the association between the posttest knowledge scores and the selected demographical variables.

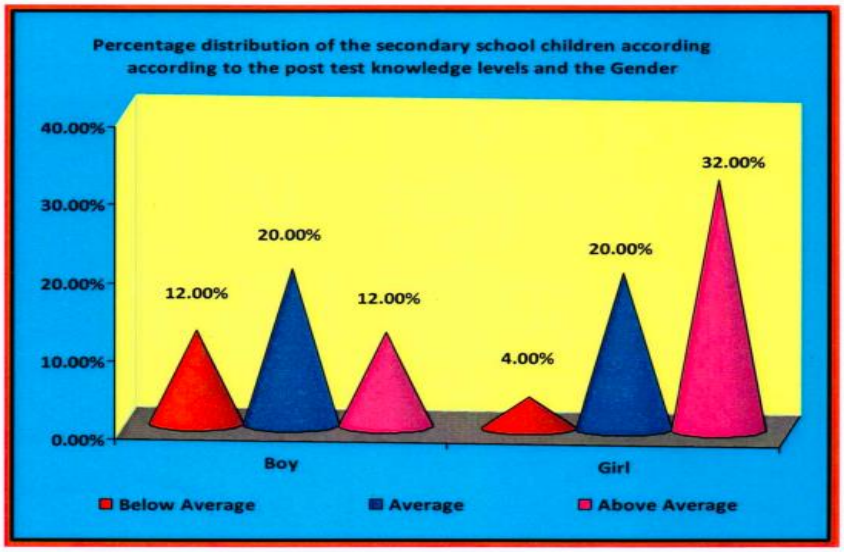


Table-9: Relationship between the posttest knowledge scores of 6th Class children and the Gender, (N = 25)

Table-10: Relationship between the posttest knowledge scores of 4th Class children and the Gender, (N = 25)

Gender	4th Class						N	χ^2
	Below Average		Average		Above Average			
	f	%	f	%	f	%		
Boy	0	0.00%	7	28.00%	0	0.00%	7	7.63
Girl	11	44.00%	7	28.00%	0	0.00%	18	S*
Grand Total	**11**	**44.00%**	**14**	**56.00%**	**0**	**0.00%**	**25**	

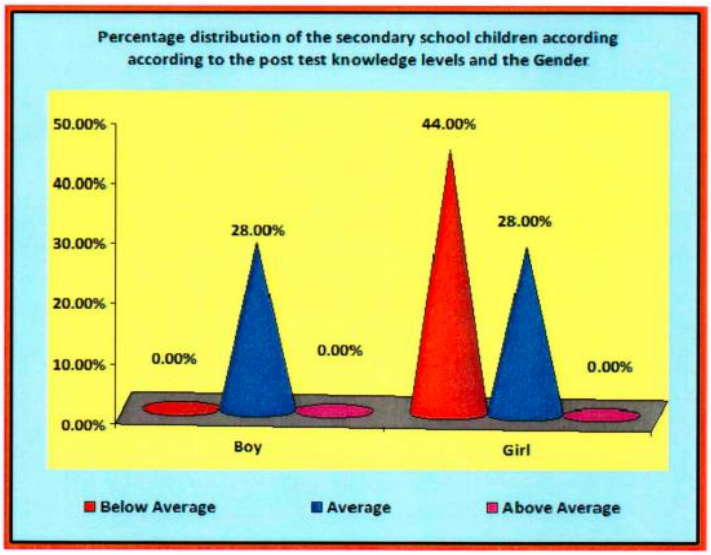


Fig 10: Percentage distribution of the 4th Class students according to the post test knowledge levels and the Gender

Table-11: Relationship between the posttest knowledge scores of 6th Class children and the father education, (N = 25)

Father Education	6th Class						N	χ^2
	Below Average		Average		Above Average			
	f	%	f	%	f	%		
Illiterate	3	12.00%	5	20.00%	2	8.00%	10	6.34
Primary Education	0	0.00%	3	12.00%	3	12.00%	6	NS
Secondary Education	1	4.00%	2	8.00%	5	20.00%	8	
Intermediate	0	0.00%	0	0.00%	1	4.00%	1	
Graduation	0	0.00%	0	0.00%	0	0.00%	0	
Post Graduate	0	0.00%	0	0.00%	0	0.00%	0	
Grand Total	**4**	**16.00%**	**10**	**40.00%**	**11**	**44.00%**	**25**	

Note: 1.S*: Significant at 0.05 level of significance.
2. NS: Not Significant at 0.05 Level of Significance
3. Table value of x^2 for 6 df at 0.05 level of significance is 12.59

Table-10 showed the relationship between posttest knowledge levels of the 6th Class students and the father education. The value of x^2 at 0.05 level of significance with 6 df was found not significant. As the calculated value of x^2 (6.34) was smaller than the table value of x^2 (12.59) it can be concluded.

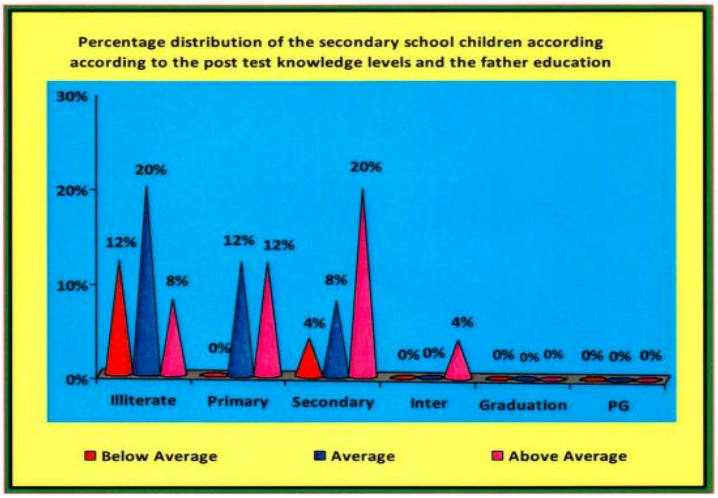


Fig 11: Percentage distribution of the 6th Class students according to the post test knowledge levels and the father education

Table-12: Relationship between the posttest knowledge scores of 6th Class children and the mother education, (N = 25)

Mother Education	6th Class						N	χ^2
	Below Average		Average		Above Average			
	f	%	f	%	f	%		
Illiterate	3	12.00%	9	36.00%	7	28.00%	19	8.5
Primary Education	0	0.00%	1	4.00%	4	16.00%	5	NS
Secondary Education	1	4.00%	0	0.00%	0	0.00%	1	
Intermediate	0	0.00%	0	0.00%	0	0.00%	0	
Graduation	0	0.00%	0	0.00%	0	0.00%	0	
Post Graduate	0	0.00%	0	0.00%	0	0.00%	0	
Grand Total	**4**	**16.00%**	**10**	**40.00%**	**11**	**44.00%**	**25**	

Note: 1. S*: Significant at 0.05 level of significance.
2. NS: Not Significant at 0.05 Level of Significance
3. Table value of x^2 for 4 df at 0.05 level of significance is 9.48.

Table-12 showed the relationship between posttest knowledge levels of the 6th Class students and the mother education. The value of x^2 at 0.05 level of significance with 4 df was found not significant. As the calculated value of x^2 (8.5) was smaller than the table value of 2 (9.48) not the 6th post test knowledge levels and the mother education.

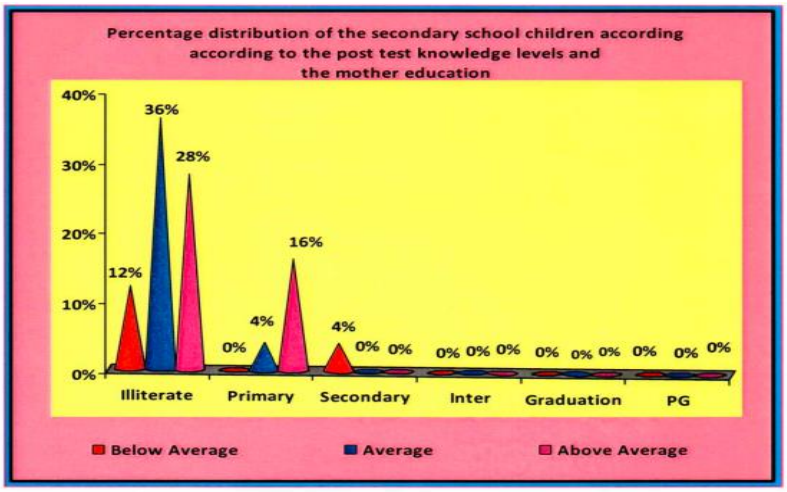


Fig 12: Percentage distribution of the 6th Class students according to the post test knowledge levels and the mother education

Table-13: Relationship between the posttest knowledge scores of 4th Class children and the father education, (N = 25)

Father Education	4th Class						N	χ^2
	Below Average		Average		Above Average			
	f	%	f	%	f	%		
Illiterate	2	8.00%	3	12.00%	0	0.00%	5	2.35
Primary Education	4	16.00%	3	12.00%	0	0.00%	7	NS
Secondary Education	4	16.00%	8	32.00%	0	0.00%	12	
Intermediate	1	4.00%	0	0.00%	0	0.00%	1	
Graduation	0	0.00%	0	0.00%	0	0.00%	0	
Post Graduate	0	0.00%	0	0.00%	0	0.00%	0	
Grand Total	**11**	**44.00%**	**14**	**56.00%**	**0**	**0.00%**	**25**	

Note: 1. S*: Significant at 0.05 level of significance.
2. NS: Not Significant at 0.05 Level of Significance
3. Table value of x^2 for 3 df at 0.05 level of significance is 7.81.

Table-13 showed the relationship between posttest knowledge levels of the 4th Class students and the father education. The value of x^2 at 0.05 level of significance with 3 df was found not significant. As the calculated value of x^2 (6.34) was smaller than the table value of x^2 (7.81).

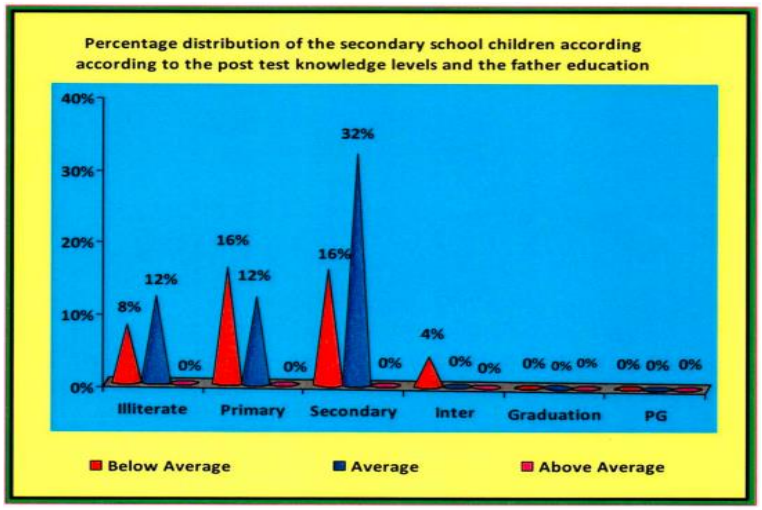


Fig 13: Percentage distribution of the 4th Class students according to the post test knowledge levels and the father education

Table-14: Relationship between the posttest knowledge scores of 4th Class children and the mother education, (N = 25)

Mother Education	4th Class						N	χ^2
	Below Average		Average		Above Average			
	f	%	f	%	F	%		
Illiterate	3	12.00%	3	12.00%	0	0.00%	6	1.89
Primary Education	1	4.00%	4	16.00%	0	0.00%	5	NS
Secondary Education	5	20.00%	6	24.00%	0	0.00%	11	
Intermediate	2	8.00%	1	4.00%	0	0.00%	3	
Graduation	0	0.00%	0	0.00%	0	0.00%	0	
Post Graduate	0	0.00%	0	0.00%	0	0.00%	0	
Grand Total	**11**	**44.00%**	**14**	**56.00%**	**0**	**0.00%**	**25**	

Note: 1. S*: Significant at 0.05 level of significance.
2. NS: Not Significant at 0.05 Level of Significance
3. Table value of X^2 for 3 df at 0.05 level of significance is 7.81.

Table-14 showed the relationship between posttest knowledge levels of the 4th Class students and the mother education. The value of X^2 at 0.05 level of significance with 3 df was found not significant. As the calculated value of X^2 (1.89) was smaller than the table value of X^2

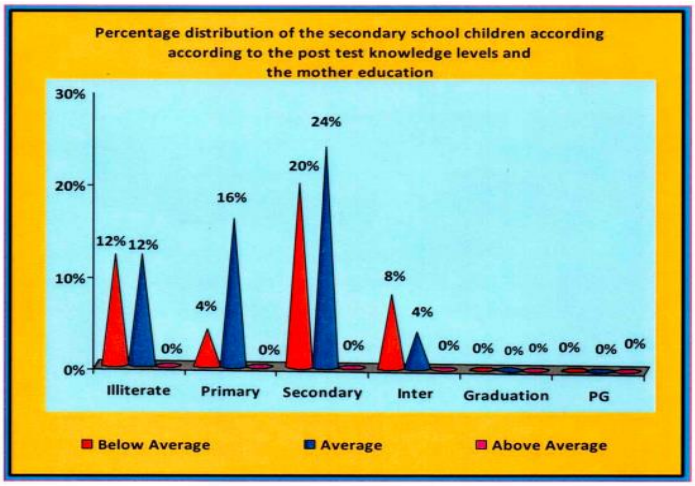


Fig 14: Percentage distribution of the 4th Class students according to the post test knowledge levels and the mother education

Table 15: Item wise frequency and percentage distribution of correct responses of the school children regarding the knowledge on the prevention of round worm infestation, N=25+25

Item	Area of Knowledge	6th Class				4th Class			
		Pretest correct responses		Post test correct responses		Pretest correct responses		Post test correct responses	
1	Causes of Hookworm infestation	1	4.00%	9	36.00%	9	36.00%	6	24.00%
2	Existence of Hookworm infestation	13	52.00%	18	72.00%	10	40.00%	10	40.00%
3	Age Predilection of Hookworm infestation	10	40.00%	20	80.00%	10	40.00%	11	44.00%
4	Deficiency disorder of worm infestation		28.00%	18	72.00%	10	40.00%	16	64.00%
5	Common cause of spread of worm infestation	17	68.00%	17	68.00%	2	8.00%	3	12.00%

The above table 15 shows that from the 6th class 4% of the school children were having the knowledge regarding the causes of hook worm infestation in the pretest whereas in the post test it was increased to 36% and for the 4th class 36% of the school children were having the knowledge in the pretest and it was decreased to 24% in the post test. Regarding the existence of the hookworm infestation 52% of the school children were having the knowledge in the pretest and it was increased to 72% in the post test in the 6th class whereas in the 4th class in the pretest 40% of the students were having the knowledge and it was also 40% in the post test.

Regarding the existence the age of the people affected by worm infestations 40 % of the school children were having the knowledge in the pretest and it was increased to 80% in the post test in the 6th class whereas in the 4 the class in the pretest 40% of the students were having the knowledge and it was improved to 44% in the post test.

Regarding the deficiency disorders of worm infestations 28 % of the school children were having the knowledge in the pretest and it was increased to 72% in the post test in the 6th class whereas in the 4 the class in the pretest 40% of the students were having the knowledge and it was improved to 64% in the post test.

Regarding the common cause of spread of worm infestation 68 % of the school children were having the knowledge in the pretest and it was 68% in the post test in the 6th class whereas in the 4th class in the pretest 8% of the students were having the knowledge and it was improved to 12% in the post test. Total number of items in this specific area was 5. The mean score of the specific area related to the prevention of round worm infestation in the 6th class was 1.92 with SD 1.037 in the pretest and it was improved to the mean score of 3.28 with SD 1.24 in the post test.

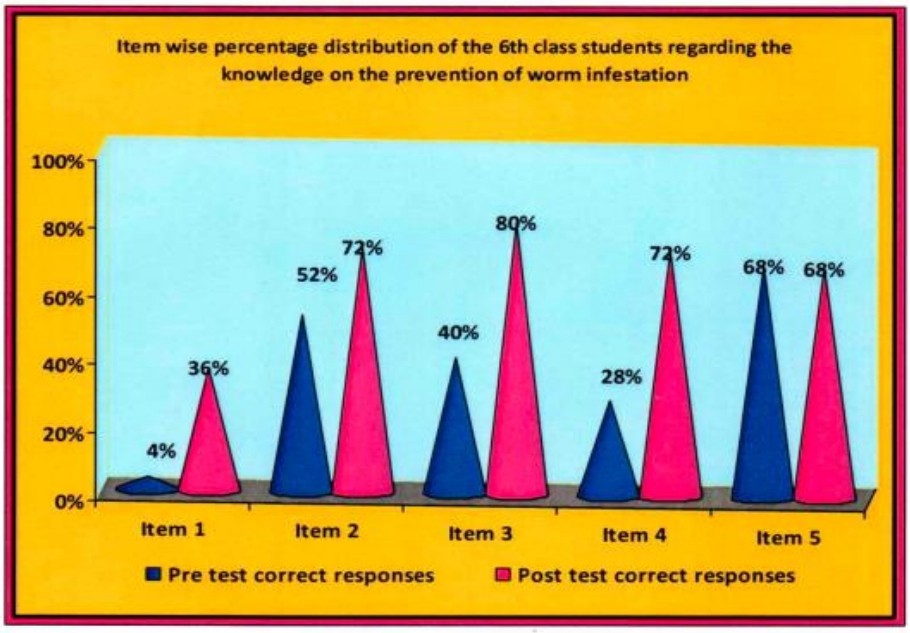


Fig 15: Item wise percentage distribution of the correct responses of the 6th class students regarding the knowledge on the prevention of worm infestation

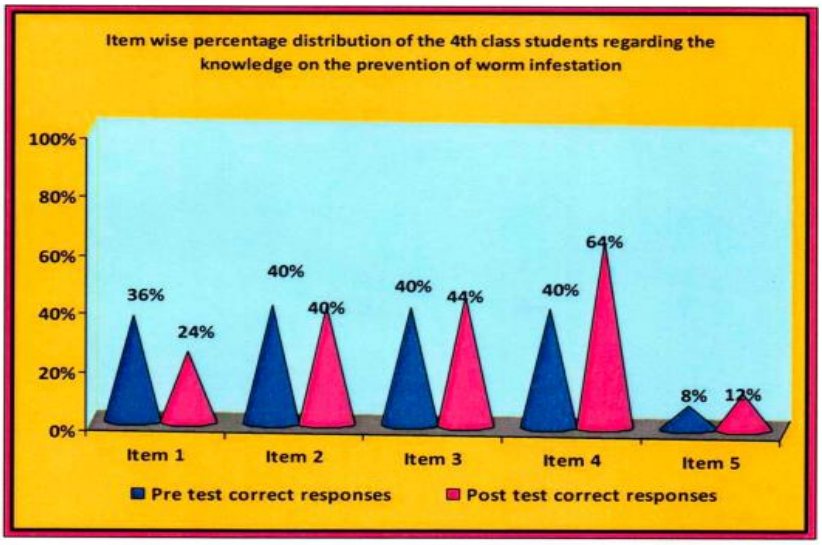


Fig 15.1: Item wise percentage distribution of the correct responses of the 4th class students regarding the knowledge on the prevention of worm infestation

Table 16: Item wise frequency and percentage distribution of correct responses of the school children regarding the knowledge on the spreading methods of worm infestation, N=25+25

Item	Area of Knowledge	6th Class				4th Class			
		Pretest correct responses		Post test correct responses		Pretest correct responses		Post test correct responses	
6	Fecal oral route	14	56.00%	11	44.00%	7	28.00%	7	28.00%
7	Oral	14	56.00%		60.00%	4	16.00%		44.00%
8	Soil transmission	13	52.00%	15	60.00%	7	28.00%	17	68.00%
9	Food animal transmission	17	68.00%	16	64.00%	9	36.00%	14	56.00%
10	Types of parasitic worm infestation	11	44.00%	20	80.00%	6	24.00%	10	40.00%
11	Growth retardation in children	3	12.00%	14	56.00%	4	16.00%	9	36.00%
12	Worm infestation in a •cultural areas	3	12.00%	11	44.00%	10	40.00%	9	36.00%
13	Cause for transmission of hook worm infestation	13	52.00%	16	64.00%	7	28.00%	10	40.00%
14	Social cause influence to cause of hook worm infestation	3	12.00%	14	56.00%	6	24.00%	7	28.00%
15	Life span of human hook worm infestation	1	4.00%	17	68.00%	8	32.00%	2	8.00%
16	Clinical feature of hook worm infestation	10	40.00%	21	84.00%	13	52.00%	16	64.00%
17	Complication of infected child	10	40.00%	22	88.00%	12	48.00%	13	52.00%
18	Diagnostic procedure of hook worm infestation	6	24.00%	14	56.00%	9	36.00%	8	32.00%
19	Correction of anemia	4	16.00%	9	36.00%	9	36.00%	12	48.00%
20	Nutrition	9	36.00%	13	52.00%	5	20.00%	8	32.00%

The table 16 shows that from the 6th class 56 % of the school children were having the knowledge regarding the Fecal oral route in the pretest whereas in the post test it was decreased to 44 % and for the 4th class 28% of the school children were having the knowledge in the pretest and it was 28% in the post test. Regarding the oral route 56% of the school children were having the knowledge in the pretest and it was increased to 60% in the post test in the 6th class whereas in the 4th class in the pretest 16% of the students were having the knowledge and it was increased to 44% in the post test.

Regarding the knowledge on Soil transmission 52% of the school children were having the knowledge in the pretest and it was increased to 60% in the post test in the 6th class whereas in the 4th class in the pretest 28% of the students were having the knowledge and it was improved to 68% in the post test.

Regarding the knowledge on Food animal transmission 68 % of the school children were having the knowledge in the pretest and it was decreased to 64% in the post test in the 6th class whereas in the 4th class in the pretest 36% of the students were having the knowledge and it was improved to 56% in the post test.

Regarding the knowledge on Types of parasitic worm infestation 44 % of the school children were

having the knowledge in the pretest and it was increased to 80% in the post test in the 6th class whereas in the 4th class in the pretest 24% of the students were having the knowledge improved 40%

About the knowledge on Growth retardation in children 12 % of the school children were having the knowledge in the pretest and it was increased to 56% in the post test in the 6th class whereas in the 4th class in the pretest 16% of the students were having the knowledge and it was improved to 36% in the post test.

Regarding the knowledge on Worm infestation in agricultural areas 12 % of the school children were having the knowledge in the pretest and it was increased to 4% in the post test in the 6th class whereas in the 4th class in the pretest 40% of the students were having the knowledge and it was decreased to 36% in the post test.

In regard to the knowledge on the Cause for transmission of hook worm infestation 52 % of the school children were having the knowledge in the pretest and it was increased to 64% in the post test in the 6th class whereas in the 4th class in the pretest 28% of the students were having the knowledge and it was improved to 40% in the post test.

Regarding the knowledge on social cause influence to cause of hook worm infestation 12 % of the school children were having the knowledge in the pretest and it was increased to 56% in the post test in the 6th class whereas in the 4th class in the pretest 24% of the students were having the knowledge and it was improved to 28% in the post test.

Regarding the knowledge on the Life span of human hook worm infestation 4 % of the school children were having the knowledge in the pretest increased 68% in the 6th class whereas in the 4th class in the pretest 32% of the students were having the knowledge and it was decreased to 8% in the post test.

Regarding the knowledge on the Clinical feature of hook worm infestation 40 % of the school children were having the knowledge in the pretest and it was increased to 84% in the post test in the 6th class whereas in the 4th class in the pretest 52% of the students were having the knowledge and it was improved to 64% in the post test.

Regarding the knowledge on the Complications of infected child 40 % of the school children were having the knowledge in the pretest and it was increased to 88% in the post test in the 6th class whereas in the 4th class in the pretest 48% of the students were having the knowledge and it was improved to 52% in the post test.

Regarding the knowledge on the Diagnostic procedure of hook worm infestation 24 % of the school children were having the knowledge in the pretest and it was increased to 56% in the post test in the 6th class whereas in the 4th class in the pretest 36% of the students were having the knowledge and it was decreased to 32% in the post test.

Regarding the knowledge on the Correction of anemia 16 % of the school children were having the knowledge in the pretest and it was increased to 36% in the post test in the 6th class whereas in the 4th class in the pretest 36% of the students were having the knowledge improved 48%

Regarding the knowledge on the Nutrition 36 % of the school children were having the knowledge in the pretest and it was increased to 52% in the post test in the 6th class whereas in the 4th class in the pretest 20% of the students were having the knowledge and it was improved to 32% in the post test. Total number of items in this specific area was 15. The mean score of the specific area related to the knowledge on the transmission methods of worm infestation was 5.24 with SD 2.367 in the pretest and it was improved to the mean score of 9.12 with SD 3.876 in the post test.

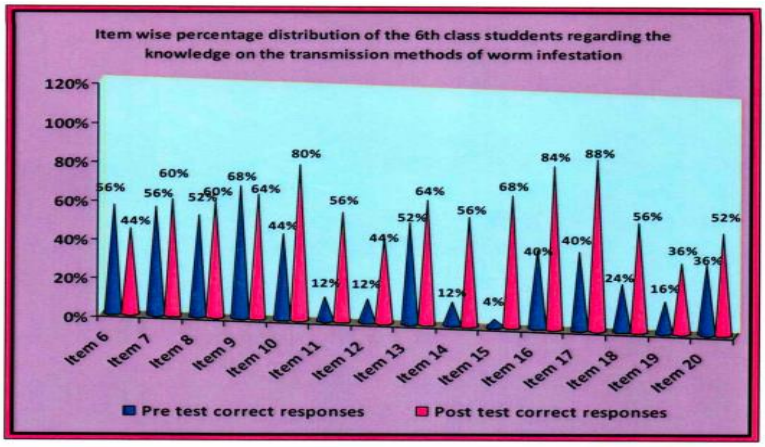


Fig 16: Item wise percentage distribution of the correct responses of the 6th class students regarding the knowledge on the transmission methods of worm infestation

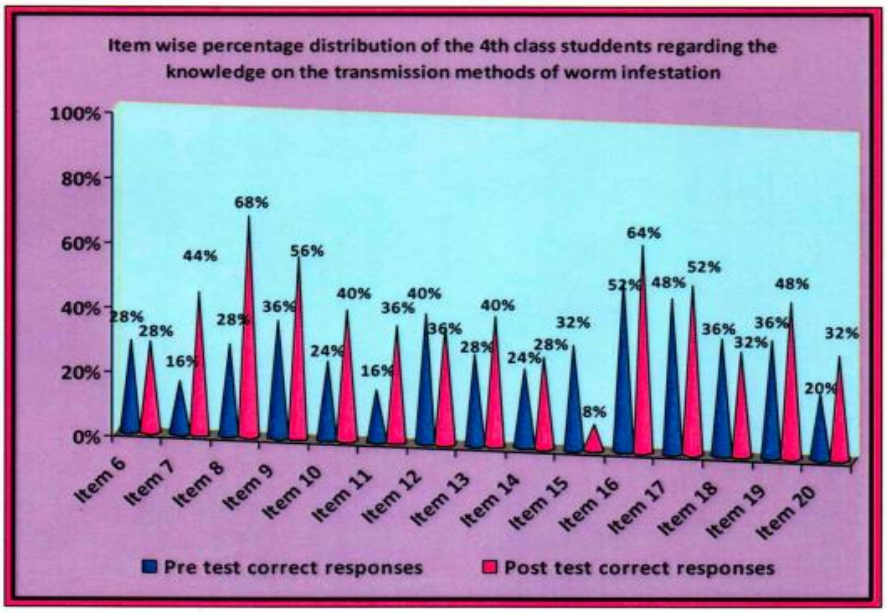


Fig 16.1: Item wise percentage distribution of the correct responses of the 4th class students regarding the knowledge on the transmission methods of worm infestation

Table 17: Item wise frequency and percentage distribution of correct responses of the school children regarding the knowledge on the personal hygiene, N=25+25

Item	Area of Knowledge	6th Class				4th Class			
		Pretest correct responses		Post test correct responses		Pretest correct responses		Posttest correct responses	
21	Personal Hygiene	17	68.00%	20	80.00%	10	40.00%	7	28.00%
22	Skin care	17	68.00%	21	84.00%	10	40.00%	7	28.00%
23	Brushing and care of teeth	16	64.00%	19	76.00%	12	48.00%	7	28.00%
24	Comb and hair care	18	72.00%	19	76.00%	9	36.00%	14	56.00%
25	Foot care	5	20.00%	7	28.00%	7	28.00%	7	28.00%
26	Grooming	15	60.00%	15	60.00%	9	36.00%	11	44.00%
27	Hand washing	14	56.00%	16	64.00%	7	28.00%	16	64.00%
28	Eating habits	12	48.00%	13	52.00%	2	8.00%	4	16.00%

The Table 17 shows that from the 6th class 68% of the school children were having the knowledge regarding the personal hygiene in the pretest whereas in the post test it was increased to 80 % and for the 4th class 40% of the school children were having the knowledge in the pretest and it was 28% in the post test. Regarding the knowledge on the skin care 68% of the school children were having the knowledge in the pretest and it was increased to 84% in the post test in the 6th class whereas in the 4th class in the pretest 40% of the students were having the knowledge and it was 28% in the post test.

Regarding the knowledge on the brushing and care of teeth 64% of the school children were having the knowledge in the pretest and it was increased to 76% in the post test in the 6th class whereas in the 4th class in the pretest 48% of the students were having the knowledge and it was 28% in the post test.

Regarding the knowledge on Combing and hair care 72 % of the school children were having the knowledge in the pretest and it was increased to 76% in the post test in the 6th class whereas in the 4th class in the pretest 36% of the students were having the knowledge and it was improved to 56% in the post test.

Regarding the knowledge on Foot care 20% of the school children were having the knowledge in the pretest and it was increased to 28% in the post test in the 6th class whereas in the 4th class in the pretest 28% of the students were having the knowledge and it was improved to 28% in the post test.

Regarding the knowledge on the Grooming 60% of the school children were having the knowledge in the pretest and it was 60% in the post test in the 6th class whereas in the 4th class in the pretest 36% of the students were having the knowledge and it was improved to 44% in the post test.

Regarding the knowledge on the hand washing 56 % of the school children were having the knowledge in the pretest and it was increased to 64% in the post test in the 6th class whereas in the 4th class in the pretest 28% of the students were having the knowledge and it was decreased to 64% in the post test.

Regarding the knowledge on the eating habits 48% school children were having the knowledge in the pretest and it was increased to 52% in the post test in the 6th class whereas in the 4th class in the pretest 8% of the students were having the knowledge and it was improved to 16% in the post test.

Total number of items in this specific area was 8. The mean score of the specific area related to the knowledge on the personal hygiene was 4.56 with SD 2.181 in the pretest and it was improved to the mean score of 5.2 with SD 2.273 in the post test.

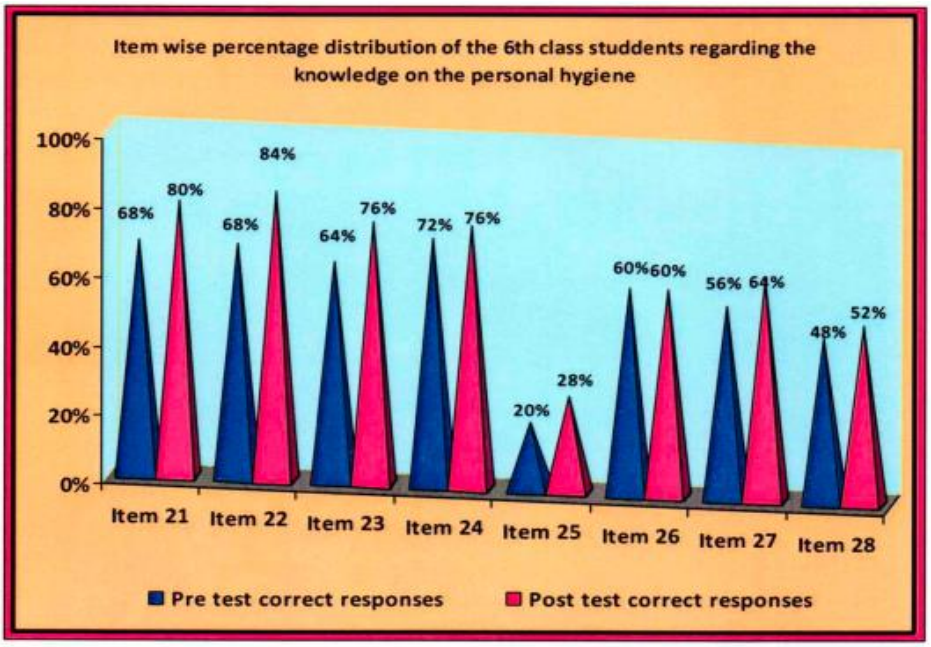


Fig 17: Item wise percentage distribution correct responses of the 6th class students regarding the knowledge on personal hygiene

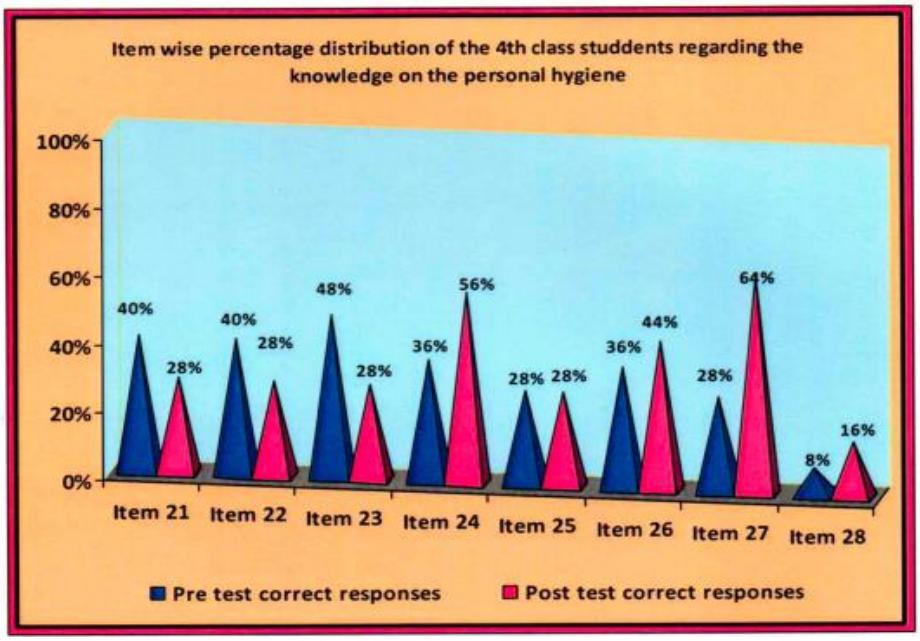


Fig 17.1: Item wise percentage distribution correct responses of the 4th class students regarding the knowledge on personal hygiene

Table 18: Item wise frequency and percentage distribution of correct responses of the school children regarding the knowledge on the Environmental hygiene, N = 25 + 25

Item	Area of Knowledge	6th Class				4th Class			
		Pretest correct responses		Post test correct responses		Pretest correct responses		Post test correct responses	
29	Open field defecation	8	32.00%	6	24.00%	8	32.00%	5	20.00%
30	Sanitary latrine	2	8.00%	7	28.00%	6	24.00%	2	8.00%

The Table 18 shows that from the 6th class 32% of the school children were having the knowledge regarding the Environmental hygiene in the pretest whereas in the post test it was 24 % and for the 4th class 32% of the school children were having the knowledge in the pretest and it was 20% in the post test. Regarding the knowledge on the Sanitary latrine 8% of the school children were having the knowledge in the pretest and it was increased to 28% in the post test in the 6th class whereas in the 4th class in the pretest 24% of the students were having the knowledge and it was 8% in the post test.

Total number of items in this specific area was 2. The mean score of the specific area related to the knowledge on the environmental hygiene was 0.4 with SD 0.5 in the pretest and it was improved to the mean score of 0.52 with SD 0.58 in the post test.

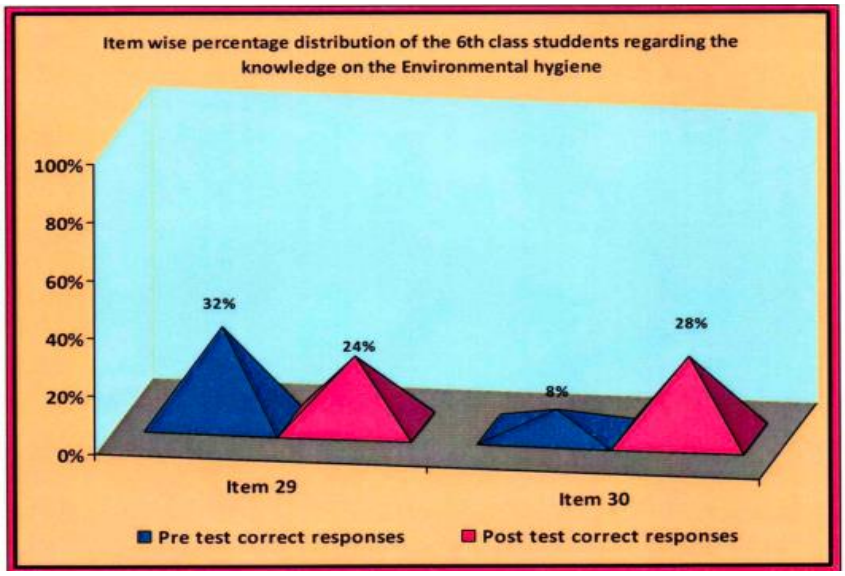


Fig 18: Item wise percentage distribution of the correct responses of the 6th class students regarding the knowledge on Environmental hygiene

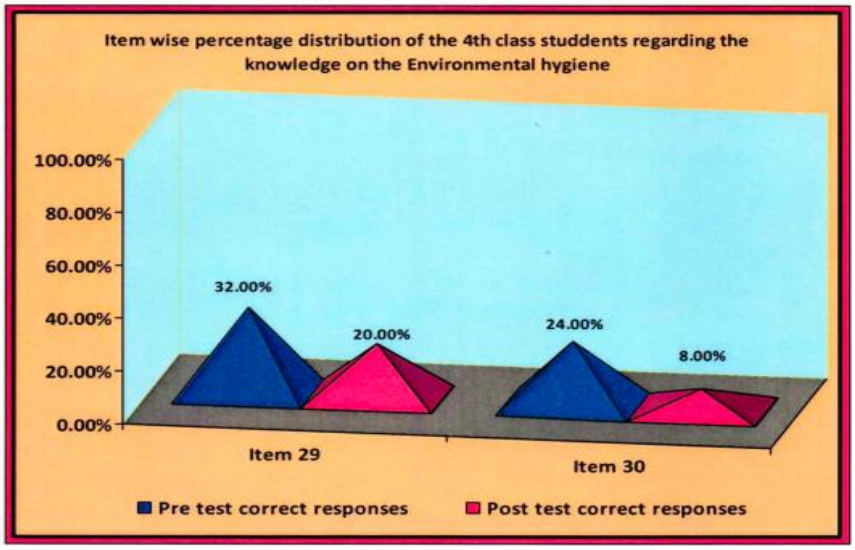


Fig 18.1: Item wise percentage distribution of the correct responses of the 4th class students regarding the knowledge on Environmental hygiene

FINDINGS AND RECOMMENDATIONS

Present summary of findings and recommendations of this study. The present study was undertaken to assess the effectiveness of structured teaching program on knowledge of prevention of worm infestations through Child-to-child program among school children aged between 8-12 years in school, rangareddy dist.

The investigator felt that study would help the school children (6th and 4th class students) to improve knowledge on prevention of hook worm infestation. Review of literature helped the investigator to get an insight into present problem to gain in depth knowledge to develop the conceptual framework for the study and development of a questionnaire for data collection.

The data collection was done with the help of structured questionnaire prepared by the with the demographic data and Part-B deals with prevention of hook worm infestation. A questionnaire was given for content validity to experts in the field of community health nursing& pediatric nursing. The questionnaire was tested for reliability by using Carl Pearson's correlation coefficient formula and was found exceptionally reliable.

Pilot study was conducted on six samples at school, rangareddy. It revealed that the study is feasible, practicable, & appropriate to conduct main study.

The data collected from the sample was organized, tabulated & analyzed with the help of descriptive and inferential statistics like frequencies, percentage, mean, standard deviation, standard error, and t-test of significance.

The sample of present study consists of 50 school children who are studying 6th and 4th class in school, rangareddy. For the structured teaching program 25 samples of 6th class students and for the Child-to-child program 25 samples of 4th class students. The basic knowledge of 6th class students regarding prevention of hook worm infestation was assessed by the pretest and the structured teaching program on prevention of hook worm infestation was given on the same day. For Child-to-child program the 4th class students taught by 6th class students. They were selected by the investigator with the help of the teacher based on the criteria of academic performance, leadership qualities, communication skills and extra-curricular activities. 6th class students selected in the ratio of 1:5. One 6th class student was selected for five 4th class students. A total of five 6th class students were selected for the total of "25" 4th class students to conduct the CHILD-to-child program. The investigator conducted a pre-test using structured questionnaire to 4th class students. After pre-test, the Child-to-child program were conducted separately by the 6th class students to the 4th class student's post-test was conducted for the same both groups using structured questionnaire by the investigator within one week. The post-test knowledge scores were significantly improved to 44.00% above average level after structured teaching program on prevention of hook worm infestation. The calculated' t' value of structured teaching program is 8.726, it is higher than the table value 2.39(0.05). The post-test knowledge scores were significantly improved to 56.00% average level after Child-to-child program on prevention of hook worm infestation. t' value 3.109 was higher than the table value 2.39. Hence stated research hypothesis for the study has been accepted.

The relationship between knowledge of school children with selected demographic variables was tested with the Chi Square test of significance and found that there was no meaningful relationship between knowledge of school children with selected demographic variables.

The following conclusions were drawn based on findings of the study:

1. In pre-test most of the 6th class students (60.00%) have scored average marks.
2. After the structured teaching program there was a significant increase in knowledge on hook worm infestation, which is indicated by post test scores of the 6th class students (44.00%) scored above average marks.
3. 6th class students responded well and showed their improved knowledge in post-test performance, which was a clear indication of the effectiveness of structured teaching program.
4. In pre-tests most of the 4th class students (40.00%) have scored average marks.
5. After the Child-to-child teaching program there was a significant increase in knowledge on hook worm infestation, which is indicated by post test scores of the 6th class students (56.00%) have scored average marks.
6. 4th class students responded well and showed their improved knowledge in post-test performance, which was a clear indication of the effectiveness of child-to-child teaching program.
7. Relationship between the school children knowledge on prevention of hook worm infestation and selected demographic variables such as religion, type of family, education, occupation, family income per month on prevention of worm infestation were computed by using mean and paired 't' test of significance and chi square test of significance.

Implications:

Implications for nursing research

8. The findings of the study revealed that the structured teaching program could improve the knowledge of 6th class students on prevention of hook worm infestation.

9. The findings of the study revealed that the structured teaching program through Child-to-child program could improve the knowledge of elder children(6th class students) to younger children (4th class students)
10. The findings of this study results shown that the child-to-child program is also effective, so this study will encourage the coming investigators.
11. This study will improve the teaching skills of students and interaction between seniors and juniors.
12. The study is the reference for the coming investigators in the field of hook worm infestation.
13. The study will encourage the nurse researchers to take up similar studies in the field of community health nursing.

Implications for nursing education:

14. The findings of the study revealed that structured teaching programs were effective when planned properly and provided in a conducive environment with appropriate audio-visual aids.
15. The nurses are vital persons in meeting changing needs of the society; they are in demand for updating the knowledge through in service education, and continuing nursing education regarding the current preventive modalities in preventing hook worm infestation and prevention of complications in school children. The student nurses should be motivated and encouraged to provide health talks and education programs in every health care setting whether community area or clinical area.

Implications to nursing practice:

1. The findings of the study revealed that the structured teaching program improved knowledge of 6th class students on prevention of hook worm infestation.
2. The findings of this study revealed that the Child-to-child program improved knowledge of 4th class students taught by 6th class students.
3. The health personnel have a key role in bringing awareness to school children especially conducting health programs. Community health nurses will personalize the acquired knowledge on prevention of hook worm infestation by educating the students in urban and rural areas through health talks.
4. The acquisition of information is not only limited to knowledge and applicable in practice.
5. The study will enhance the scope of nursing practice.

Implications to nursing administration:

1. The findings of this study showed that administration of structured teaching program on prevention of hook worm infestation.
2. The study will encourage nurse administrators to organize more programs on prevention of worm infestation.

Limitations:

1. The results of this study are limited to the school children who are studying 6th and 4th class in school, rangareddy
2. Findings are limited to the statistical results which are used for the study.

RECOMMENDATIONS

1. A similar study can be conducted on a large sample.
2. A comparative study may be undertaken between the adults in urban areas.
3. A similar study can conduct among the health care personnel,

BIBILOGRAPHY

- Best, W. J., & Khan, V. J. (1992) "Research in education", (6th edition), New Delhi, prentice Hall of India.
- Basavanthappa, B. T. (1998). "Nursing Edition, Jaypee brothers' publications.
- Basavanthappa B. T. A Textbook of Community Health Nursing 2nd edition, Jaypee brothers' medical publishers.
- Sridhar, R. B. (M.D, L.L.B) "principles of community medicine" 4th edition, published by AITBS Publishers and distributors, New Delhi.
- Fawcett's. (1980). A framework for "Analysis and Evaluation of Conceptual Models of Nursing" Saint Louis, C. V. Mosby Company.
- Gupta, C. B. (1998). An Introduction to statistical Methods, 21 set edition, Vikas publishing house, New Delhi
- Gupta, M. C. "Textbook of Preventive and Social Medicine" 3 rd. edition, Jaypee brothers' medical publishers PW. LTD.
- Dhar, G. M., & Robbani, I. "Foundations of Community Medicine" 2 nd edition Published by Elsevier, a division of Reed Elsevier India PVT. LTD.
- Kasthuri Sundar Rao. "An introduction to community health Nursing", 4th edition, B.I publications PT LTD, Chennai.
- Lokesh, K. (1993). "Methodology of educational Research" 2 nd revised edition, Vikas publishing house PVT. LTD.
- Mahajan, B. K. "Methods in Biostatistics" 6th edition, New Delhi, Jaypee Brother's medical publishers.
- Meenakshi, M. "Textbook of Communicable Diseases" IS Edition, published by NR Brothers, Indore.

- Essie, C. "Pediatric Nursing" Bengaluru, Gajanana Book publishers and distributors.
- Polit, F. D., & Hungler, P. B. (1983). Nursing Research, 2nd edition, Philadelphia, J.B. Lippincott Company.
- Park, K. "Textbook of Preventive and Social Medicine" 20th edition, Jabalpur, M/S Banarsidar Bhanot Publishers.
- Prabhakara, G. N. (2005). "A textbook of community health for nurses" Peepee publishers and distributors PVT LTD.
- Polit, D. F., & Hungler, B. P. "Nursing Research Principles and Methods, 6th edition, Philadelphia, Lippincott Publishers.
- Swanson, J. M., & Albrecht, M. "Community health nursing. Promoting the health of aggregates", Philadelphia, W. B. Saunder's Company.
- Sunitha, P. (2008). "Textbook of community health nursing", CBS publishers and distributors, New Delhi.

Cite This Article: Seema Yadav (2023). An Evaluative Study to Assess the Effectiveness of Structured Teaching Program on Knowledge of Prevention of Worm Infestations through Child-To-Child Program among School Children Aged Between 8-12 Years in School, Rangareddy Dist. *EAS J Nurs Midwifery, 5*(5), 107-130.