

Effect of Structured Teaching Program on Knowledge Regarding Prevention of Worm Infestation among High School Students

Mrs. Babitha N¹, Mr. Abidfaheem T.K², Dr. Assuma Beevi T.M³

¹MSc Nursing Student, ²Associate Prof. MIMS College of Nursing, ³Principal MIMS College of Nursing, Kerala, India

Corresponding Author: Mrs. Babitha N

ABSTRACT

The present study was aimed to assess the effect of structured teaching program on knowledge regarding prevention of worm infestation among high school students. The objectives of the study were to assess the knowledge on worm infestation among high school students, and evaluate the effect of structured teaching program on knowledge of worm infestation among high school students and to find the association between knowledge on worm infestation of high school students with selected demographic variables. The conceptual framework was developed from Health Promotion Model of Nola J Pender. A quantitative approach with one group pretest-posttest, pre-experimental research design was used. The study was conducted in Sevamandir post basic school in Ramanattukara, Calicut District. The subjects who met inclusion criteria were selected by using convenient sampling technique. Written informed consent was obtained from each sample. On day 1 pre-test was conducted by using structured knowledge questionnaire on 200 samples and a structured teaching program was given on the same day. Then a post test was conducted on 14th day by using the same structured knowledge questionnaire. Collected data was categorized and analyzed with SPSS Version 17. The mean pre-test score was 11.33 with $SD \pm 2.751$. Mean post-test score was 18.44 with $SD \pm 4.128$. The 't' test value is 20.683 and the 'p' value is less than 0.0001 which is significant at 0.05 level of significance. So there is significant difference in pretest and post-test knowledge score on prevention of worm infestation among high school students. Thus the structured teaching program was effective among high school children in improving knowledge regarding the prevention of worm infestation. Chi-square test result showed that there was no significant, association between knowledge score and selected demographic variables. (age, class of study, sex, religion, educational status and occupation of father, educational status and occupation of mother, and monthly income.

Keywords: worm infestation, structured teaching program, knowledge questionnaire

INTRODUCTION

School age is a formative period physically as well as mentally, transforming the school child into a promising adult. Unhealthy habits like using unclean water to drink, not maintaining hand hygiene, not trimming the nails properly, not having bath every day, nail biting and thumb sucking may lead to worm infestation. These habits

formed at school age will be carried up to the adult age and is essential to teach good health habits. ^[1]

Soil transmitted helminthes infestation [STH] occurs by ingestion of infective eggs from soil contaminated with human faeces. Larvae remain viable in the soil for about 10 years. When one comes in contact with contaminated soil the larvae

enters the skin and after 3-4 weeks the child develops anemia, abdominal pain, puffiness of face, edema of legs, palpitation, loss of appetite ,growth retardation and impaired cognitive development. [2]

According to WHO estimates every year 1,500 million children; world-wide are infected with worms. Globally there are 1221-1472 million cases of Ascariasis 740-1300 million cases of hookworm infection are reported. Intestinal parasitic infection [IPI] constitutes a global health burden causing diminished physical growth and delayed intellectual development. [3]

RESEARCH METHODOLOGY

The present study was aimed at assessing the knowledge of high school students regarding prevention of worm infestation. In order to accomplish the objectives of the study, a quantitative research approach pre-experimental design was adopted. The study conducted at Sevamandir Post basic school Ramanattukara. In this study total of 200 students who met inclusion criteria were selected by convenient sampling method. A Structured questionnaire was used to collect the data, it consists of two sections, Section A consists, demographic variables such as age, sex, religion, basic education, diet etc. Section B consist, structured questionnaire on knowledge regarding prevention of worm infestation. Total questions and score was 24. Interpretation -0-8 (Poor Score), 9-16 (Average score), 17-24(Good score). Structured teaching program was administered at end of pretest. The post test was conducted after 14 days using the same structured knowledge questionnaire. Data collected, tabulated and analyzed in term of objective of study using descriptive and inferential statistics. 1. Paired t test and computation of p value to test the effectiveness of STP. 2. Chi-Square test was used to find the association between pretest knowledge and selected variables.

RESULTS

- The obtained data were categorized and analyzed in terms of the objectives and hypothesis of the study by using descriptive and inferential statistics.
- Data were analyzed using statistical software SPSS version 17.
- Demographic variables were analyzed using frequency and percentage distribution.
- Pretest and posttest knowledge score were analyzed using frequency, percentage and mean.
- The effectiveness of structured teaching program was analysed by using paired 't' test.
- Association between the pretest knowledge score and selected demographic variables were analyzed by using Chi-square test.

Section1: Frequency and percentage distribution of socio-demographic variables of selected high school students

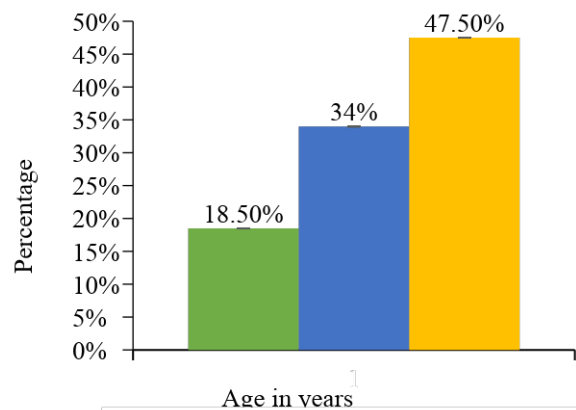


Table 1: Distribution of socio-demographic variables of selected high school students including class of study, sex, and religion. N=200

Socio-demographic Characteristics	Frequency (f)	Percentage (%)
Class		
8 th standard	42	21
9 th standard	59	29.5
10 th standard	99	49.5
Sex		
Male	47	23.5
Female	153	76.5
Religion		
Hindu	156	78
Islam	43	21.5
Christian	1	0.5

The sample characteristics depicted in the above table indicates that 99 (49.5%) were

10th standard students, 153 (76.5%) were female and 156 (78%) belongs to Hindu religion.

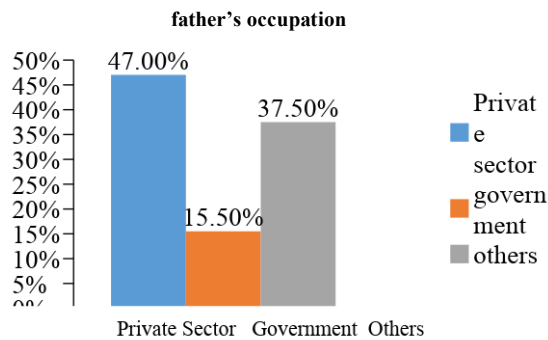


Figure 2: Bar diagram showing percentage distribution of sample characteristics based on father's occupation.

The sample characteristics depicted in the above bar diagram shows that 47% of student's fathers were working in private sector, 37.5% in others and 15.5% in Government sector.

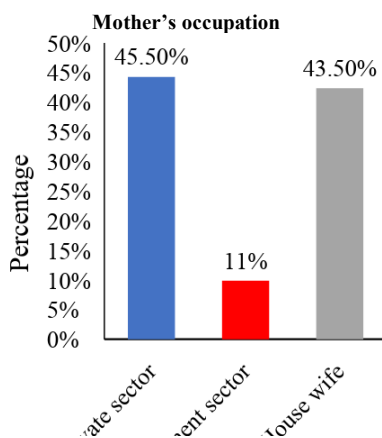


Figure 3: Bar diagram showing percentage distribution of sample characteristics based on student's mothers occupation

The sample characteristics depicted in the above bar diagram shows that 45.5% of student's mothers were working in private

sector, 11% in Government sector, 43.5% are house wives.

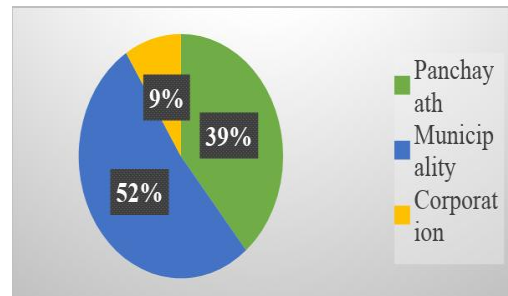


Figure 4: Pie diagram showing percentage distribution of sample characteristics based on residential area

The sample characteristics depicted in the above pie diagram shows that 52% of the samples were residing in Municipality area, 39% in Panchayat, and 9% in corporation area.

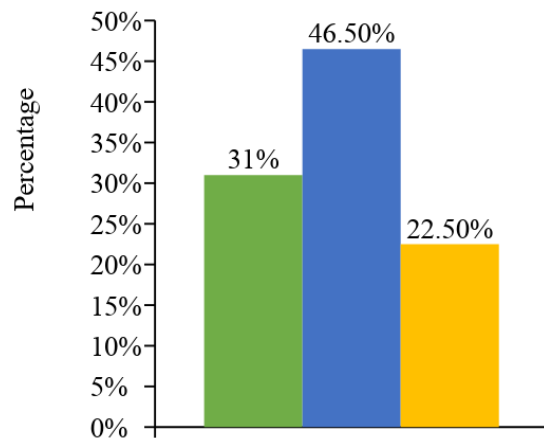


Figure 5: Bar diagram showing percentage distribution of sample characteristic based on family type.

The sample characteristics depicted in the above bar diagram reveals that most of the sample 46.5% belongs to nuclear family, 31% belongs to joint family, and 22.5% belongs to extended family.

Table 2: Knowledge score Frequency and percentage distribution based on knowledge level of high school students on worm infestation. N=200

Category	Percentage	Range of score	Pre-test score		Post test score	
			Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor		0-8	44	22%	0	0
Average		9-16	156	78%	103	51.5%
Good		17-24	0	0	97	48.5%

Table 2 shows pre- test and post -test knowledge score of high school students. In

pretest knowledge score, majority 156 (78%) samples scored average, 44(22%)

samples scored poor and no samples scored good score. In post-test knowledge score, 103 (51.5%) samples scored average, 97(48.5%) scored good, and no sample were fall in the poor score level.

Section 3: Analysis of effectiveness of structured teaching program on knowledge regarding prevention of worm infestation among high school students.

H₀₁: There will be no significant difference between pre-test and post-test scores.

Table 3: Mean, Standard deviation, and t value of pretest and posttest score of knowledge in selected high school students N=200

Assessment	Mean	Mean difference	Standard deviation	't' value	df	'p' value
Pre-test	11.33	7.105	2.751	20.68	199	0.0001
Post-test	18.44		4.128			

(* significant at p< 0.05)

Table 3 shows that pre-test mean score is 11.33 with SD±2.751 whereas the mean post-test score is 18.44 with SD± 4.128. Hence the mean difference or gain i.e. the knowledge score improved in post-test after the administration of structured teaching program is 7.105. Above table 5 reveals that t=20.68 and p value=0.0001 which is significant at 0.05 level of significance. Thus the structured teaching program is effective among high school children in improving knowledge regarding the prevention of worm infestation. Hence we are rejecting the null hypothesis and accepting the research hypothesis.

Section 4: Association of knowledge score on prevention of worm infestation with demographic variables.

H₀₂– There will be no significant association between mean knowledge score and selected demographic variables.

Table 4 : Association of knowledge score on prevention of worm infestation with demographic variables of selected high school students. N=200

Demographic Variables	Chi-square (χ^2)	df	'p' value
Age	0.315	2	0.854
Class	0.244	2	0.885
Sex	1.351	1	0.245
Religion	0.730	1	0.383
Education of father	2.94	3	0.400
Education of mother	0.530	3	0.912
Occupation of father	0.252	2	0.881
Occupation of mother	0.583	2	0.747
Place of residence	4.48	2	0.093
Type of family	0.324	2	0.850
Monthly income	2.408	3	0.492

Table 4 shows that there is no significant association of pre-test knowledge score with selected demographic variables (p >0.05). Thus it is revealed that there is no

significant association of pretest knowledge score with selected demographic variables.

Hence the researcher accepts the null hypothesis and rejects the research hypothesis.

DISCUSSION

In the present study, 200 high school students were taken to assess the effect of structured teaching program on knowledge regarding prevention of worm infestation. The pre-test assessment of knowledge score, majority 156(78%) samples scored average, 44 (22%) samples scored poor, and no sample scored good. In post-test assessment of knowledge, majority 103(51.5%) sample scored average, 97 (48.5%) samples scored good and no samples scored poor. Above mentioned knowledge scores clearly shows that there is improvement in knowledge score after the structured teaching program.

A similar study was conducted to evaluate the effectiveness of child to child approach on prevention and management of worm infestation among school children in Kancheepuram district, Tamilnadu. The total numbers of 100 children were selected by convenient sampling technique. The results of the study showed that the pretest level of knowledge was 50(50%) students have inadequate knowledge and 50 (50%) students have moderately adequate knowledge none of them have adequate knowledge. After giving the child to child approach the level of knowledge showed that 22(22%) students have moderately adequate knowledge 78(78%), students have adequate knowledge none of them have

inadequate knowledge The investigator found that child to child approach in improving the level of knowledge on prevention and management of worm infestation. ($t=31.15$; $p=0.0001$). Thus, the result of the study is supporting the current study. [4]

The present study also revealed that there is no significant association between pre test knowledge score with age, class, sex, religion, education of father education of mother, occupation of father, occupation of mother, place of residence, and monthly family income.

A similar study conducted by Shirley, the sample included 133 peer group members of class VII selected by simple random sampling. The results showed that was no significant association between variable like religion, education of parents, exposure to television etc [5-7] which is supporting to the current study result. But there was a significant association with other variables-sex, income and academic influence of the peer group at 0.05 level of significance which is contradictory to the current study result.

CONCLUSION

Result of the study shows that structured teaching program is effective in improving the knowledge among high school students regarding worm infestation. So the study concluded that structured teaching program can be initiated among high school students on prevention of occurrence of worm infestation and knowledge should be imparted by considering demographic difference among the students.

NURSING IMPLICATIONS

Nursing research plays an important role in the field of nursing. The findings of the research study have implications to the nursing practice, nursing education, nursing administration and nursing research.

Nursing practice

During nursing practice nurse can impart knowledge on prevention of worm infestation among hospitalized patients and

people in the community. Nurses combine their scientific knowledge and evidenced based practice to provide optimal health care. Nurse practitioner can use the target counseling in clinical practice to provide health education regarding prevention of worm infestation.

Nursing education

Nursing curriculum addresses the issues of worm infestation. So more emphasis can be given to attain adequate knowledge regarding worm infestation and apply this knowledge in their day to day life with a positive attitude and share this knowledge with others.

Nursing administration

Nurse administrator incorporates new knowledge to initiate changes. Nurse administrator can use the findings of the present study in improving knowledge and organize health education program regarding the prevention of worm infestation. Also motivate the nurses to provide more education to hospitalized patients and in community regarding prevention of worm infestation.

Nursing research

The present study identifies the effect of structured teaching program on knowledge regarding prevention of worm infestation among high school students. More studies can be conducted on broad aspect and apply the findings leading to prevention of worm infestation.

REFERENCES

1. Begum SA. A Study on personal hygiene of Government primary school Children in Azadnager and Gouripalya(Doctoral dissertation)
2. Esrey SA, Potash JB, Roberts L, Shiff C. Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookworm infection, schistosomiasis, and trachoma. Bulletin of the World Health organization. 1991; 69(5):609.
3. Ulukanligil M, Seyrek A, Aslan G, Ozbilge H, Atay S. Environmental pollution with soil-transmitted helminths in Sanliurfa, Turkey. Memorias do Instituto Oswaldo Cruz. 2001 Oct; 96(7): 903-9.

4. World Health Organization. Prevention and control of schistosomiasis and soil-transmitted helminthiasis: report of a WHO expert committee.
5. Divya Lata. Organizations wishing to incorporate the child-to-child approach in their programs require training in activity based learning methods, Kancheepuram in Tamil Nadu: 2008.
6. Nebhinani MR. Research & Reviews: Journal of Nursing & Health Sciences.
7. Elkins DB, Haswell-Elkins M, Anderson RM. The epidemiology and control of intestinal helminths in the Pulicat Lake region of Southern India. I. Study design and pre-and post-treatment observations on *Ascaris lumbricoides* infection. Transactions of the Royal Society of Tropical Medicine and Hygiene. 1986 Jan 1;80(5):774-92.

How to cite this article: Babitha N, Abidfaheem TK, Beevi TMA. Effect of structured teaching program on knowledge regarding prevention of worm infestation among high school students. International Journal of Research and Review. 2018; 5(12):400-405.
