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EFFECTIVENES OF CHILD TO CHILD APPROACH ON PREVENTION AND MANAGEMENT OF WORM INFESTATION AMONG SCHOOL CHILDREN IN CHENGELPET

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ABSTRACT

Intestinal worm infestations are widely prevalent in tropical and subtropical countries and occur where there is poverty and poor sanitation. The child to child approach is an educational process that links children learning with fusion action to promote the health wellbeing and developing of themselves their families and their communities. The objective of the present study to evaluate the effectiveness of child to child approach on prevention and management of worm infestation among school children in chengelpet, Kancheepuram district, Tamilnadu. Quantitative approach and pre experimental one group pretest, post test design were adopted based on the inclusion and exclusion criteria. The total number of 100 children were selected by the non – probability convenient sampling technique. The tool used for the study comprises of two sections section A and Section B. Section A comprised of demographic data which includes age, sex siblings. Occupation of mothers, Toilet facilities, Water facilities. Section B comprises of structured questionnaire which was developed by researcher to assess the knowledge on Prevention and management of worm infestation among school students which includes forty questions to answer the questionnaire. The results of the study is before giving child to child approach in the value of which is pretest level of knowledge showed that 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 in adequate 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).

KEY WORDS

Prevention and management of worm infestation, child to child approach, school children.

INTRODUCTION

WHO (2012) reported that Globally there are 1221–1472 million cases of Ascariasis, 750–1050 million cases of Trichuriasis and 740–1300 million cases of hookworm infestation.

Stephenson L.S (2000) explained that Intestinal worm infestation is a global health problem and is a matter of serious concern for the third world countries. The burden of disease due to these intestinal parasites is an estimated 22.1 million disability-adjusted life-years (DALYS) lost for hookworm, 10.5 million for Ascaris; and 6.4 million for Trichuris.

Awasthi S (2008) described the Helminthes infections are more prevalent among school children aged 5-14 years. More than 610 million children of school age are at risk of morbidity due to schistosomiasis or soil-transmitted helminthiases. Overall they constitute 12 percent of total disease burden in children.

Crompton (2002) reported heavy hookworm burden is the major etiology for iron deficiency anemia in young children.

Bhardwaj AK (1992) suggested that Child-to-Child approach was developed for the International Year of the Child (1979) by a group of health and education professionals. The founder being Huge Hawes, a senior educationalist and dr. David Morley a senior pediatrician. They introduced child to child as a new way of providing health education to

school aged children. The goal was to improve health and reduce infant mortality by engendering positive health practices among children. The child has the power to spread the health messages. Children have very important role to play in the health of the community, not merely by keeping healthy by care of adults but also by passing on health messages to younger brothers and sisters, friends and thus jointly cooperating to become a positive force for health.

Rupa ashoka varma (2015) explained that health education to school children is the most effective method for protection and promotion of their health. School children are more open minded and are likely to receptive to changes in ideas and agreeable to modifications of their habits. Innovative approaches to education for health are essential to gains the interest, support involvement and commit.

The investigator came across the problems of environmental sanitation and poor hygiene in communities during the field experience. It was identified that children and their families do not possess basic knowledge on worm infestation, though it is a preventable condition. However they knew that the worms live in the gastro-intestinal tract. Hence the investigator felt that there was a strong need to educate children and their families with minimum costs, within a short time with maximum effectiveness regarding worm infestation and its prevention.

MATERIALS AND METHODS

Quantitative approach and pre experimental one group pretest, post test design were, adopted for the present study. The variables are study variables and demographic variables. The study variable was level of knowledge on Prevention and management of worm infestation among school students which includes forty questions. Whereas the demographic variables include age, sex siblings, Occupation of mothers, Toilet facilities, Water facilities. The study was conducted in panchayat union middle school, Chengalpet. It is a panchayat union middle school with 1000 students. The setting was chosen on the basis of feasibility in the terms of availability of adequate samples and co-operation extended by the management. The sample size for the present study is 100. Non-probability convenient sampling technique was adopted to select the sample for the study. To provide child to child approach to the 5th standard students, 10 top scores of 7th standard students were selected pre test was conducted for the 7th standard students by using structured questionnaire. The investigator had given training for the 10 top scores of 7th standard students on the seventh day post test was conducted for the 10 top scores of 7th standard students by using same questionnaire pretest was conducted for the 5th standard students on the same day. These changing agents on 10 top scores were allowed to teach to the 5th standard students through child to child approach by using flash card and booklets. After 7th day interval the same questionnaire was administered and post test was conducted for the 5th standard school children. Each child took 30 minutes to answer the questionnaire.

INSTRUMENTS:

SECTION A – Structured questionnaires to elicit demographic data of knowledge on prevention and management of Worm Infestation among school children.

SECTION B – Self Structured questionnaires which consists of 40

The content of the tools were established on the basis of opinion of nursing faculties. Suggestions were incorporated in the tool. Assessment of level of knowledge on prevention and management of Worm Infestation among school children. Participants were briefed on the study and oral consent was obtained. Participants were given approximately 30 minutes to complete the questionnaire. The questionnaire consists of two sections. Section A & B After obtaining formal approval from administration, panchayat union middle school. The investigator explained the objectives and methods of data collection. Data collection was done within the given period the data collection was done during the day time. Self introduction about the researcher and details about the study was explained to the samples and their

consent was obtained. The confidentiality about the data and finding were assured to the participants. The participants took 30 minutes to complete the tool and their co-operation was imperative. Descriptive statistics such as frequency and percentage distribution was used to analyze the data collected. Inferential statistics- chi square was used to find out the association.

RESULTS

Table I: Demographic variables of level of knowledge on prevention and management of Worm Infestation among School children; N =100.

Demographic variables		Frequency	Percentage
Sex	Male	60	60
	Female	40	40
Siblings	1	24	24
	2	48	48
	>2	28	28
Occupation of Mothers	HW	48	48
	Business	14	14
	Agriculture	14	14
	Cooley	24	24
Toilet Facilities	Open type	30	30
	Common toilet	12	12
	Own toilet	58	58
Water Facilities	Panchayat	38	38
	Street water	48	48
	Well	14	14

Table 1 shows the demographic data of considering the gender of60 (60%) are males. Regarding siblings48 (48%) students belong to sibling 2. Considering the occupation of mothers of students, 48 (48%) mothers are House wives. Regarding toilet facilities, among families have common type of toilet and 58 (58%) families have own toilet. Regarding water facilities, among; 48 (48%) families have street connection..

Table 2: Frequency and percentage distribution of pre test level of knowledge on prevention and management of Worm Infestation among school children before teaching; N = 100.

Pre test Level of knowledge	Frequency	Percentage
Inadequate	50	50
Moderately adequate	50	50
Adequate	0	0

Table 2 represents frequency and percentage distribution of pre test level of knowledge on prevention and management of Worm Infestation among children that 50 (50%) students have inadequate knowledge and 50 (50%) students have moderately adequate knowledge. None of them have adequate knowledge.

Table 3: Frequency and percentage distribution of post test level of knowledge on prevention and management of Worm Infestation among school children after teaching; N = 100.

Post test level of knowledge	Frequency	Percentage
Inadequate	0	0
Moderately adequate	22	22
Adequate	78	78

The above table shows that 22 (22%) students have moderately adequate knowledge and 78 (78%) students have adequate knowledge. None of them have in adequate knowledge.

TABLE 4: Comparison of pre test and post test level of knowledge on prevention and management of worm infestation among school children; N = 100.

Comparison of pre test and post test level of knowledge	Mean	SD	Paired t test
Pre test	13.78	2.96	t = 31.15
Post test	29.56	3.29	P = 0.000 **Significant**

The analysis reveals that the mean value of 13.78 with SD 2.96 of pre test and the mean value of 29.56 with SD 3.29 of post test projects 't' value 31.15 which is statistically significant at P=0.000 level.

Table 5: Association of post test level of knowledge on prevention and management of worm infestation among school children with respect to selected demographic variables; N=100.

Demographic variables	Post test Level of knowledge						Chi square test
		Inadequate		Moderately Adequate		Adequate		
		N	%	N	%	N	%	
Age	9-10	0	0.0	22	100	58	100	--
Sex	Male	0	0.0	12	54.5	48	61.5	$X^2 = 0.17$ P =0.676 NS
	Female	0	0.0	10	45.5	30	38.5	
Siblings	1	0	0.0	8	36.3	16	20.5	$X^2 = 2.51$ P =0.285 NS
	2	0	0.0	6	27.3	42	53.8	
	>2	0	0.0	8	36.3	20	25.6	
Occupation of mothers	HW	0	0.0	10	45.5	38	48.7	$X^2 = 7.23$ P=0.05 **Significant**
	Business	0	0.0	0	0.0	14	17.9	
	Agriculture	0	0.0	8	36.3	6	7.7	
	Cooley	0	0.0	4	18.2	20	25.6	
Toilet facility	Open type	0	0.0	4	18.2	26	33.3	$X^2 = 1.28$ P =0.53 NS
	Common toilet	0	0.0	2	9.1	10	12.8	
	Own toilet	0	0.0	16	72.6	42	53.8	
Water facility	Panchayat water	0	0.0	0	0.0	38	48.7	$X^2 = 11.12$ P =0.004 **Significant**
	Street connection	0	0.0	14	63.6	34	43.6	
	Well water	0	0.0	8	36.4	6	7.7	

Table 5 reveals that there is significant association between knowledge on prevention and management of worm infestation students and the demographic variables of occupation of mothers and water facilities. There is no significant association among other demographic variables.

DISCUSSION

Johnson (2003*)* said the Worm infestation is a major public health problem. It has been estimated that more than 25% of the world's population are infected with worms, with the major incidence occurring in developing countries. It is one of the main health concerns especially among children.

Broke (2010) reported that Approximately 10,500 deaths each year are due to complications of Ascariasis and 65,000 deaths per year are due to anemia caused by hookworm infection.

WHO (2012**)** explained the recommends periodic administration of albendazole 400 mg or mebendazole 500 mg for control of STH The global target is to eliminate morbidity due to STH in children by 2020.

Findings of the present study reveal that, considering the gender of60 (60%) are males. Regarding siblings48 (48%) students belong to sibling 2. Considering the occupation of mothers of students, 48 (48%) mothers are House wives. Regarding toilet facilities, among families have common type of toilet and 58 (58%) families have own toilet. Regarding water facilities, among; 48 (48%) families have street connection. the objective show that the result of the study is before giving child to child approach in the pretest level of knowledge showed that 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 in adequate knowledge .The investigator found that child to child approach had better results in improving the level of knowledge on prevention and management of worm infestation. (t=31.15; p=0.0001)Association of level of knowledge regarding prevention and management of worm infestation among the school children with their demographic variable like occupation of mother and water facilities were highly significant.

The similar Study Was Conducted by Leena D'Souza in 2014 conducted the study of effectiveness of child to child approach to health education on prevention of worm infestation among children of selected primary schools. An evaluative study using quasi experimental research design was used to determine the effectiveness of traditional and child to child approach of health education among 100 primary school children selected through cluster sampling technique. Health education was provided to a group of children using traditional methods. To another group health education was provided through peers trained and motivated by the investigator to carry out peer interaction. The study found the mean difference in the knowledge scores of children significant in traditional health education group ($t=5.61$, $p<0.05$), child to child group ($t=6.42$, $p<0.05$) The study concludes that through proper training of peers and motivation the child to child approach to health education improves the knowledge level of children on common issues concerning children in an effective way.

Ansu Maliyakal in 2015 conducted a similar study on study of to assess the effectiveness of child to child concept on prevention of worm infestation An evaluative research approach and one group Pre and post test design which is pre experimental in nature was adopted for the study.100 primary school children in 3rd and 4th standard constituting of both boys and girls were selected through random sampling technique. The instruments used were demographic preformed, knowledge questionnaire on knowledge of prevention of worm infestation. The data collection was in 2 phases, in the first phase demographic details were collected and the knowledge of children regarding worm infestation was assessed. In the second phase 10 children were selected from the study participant group, by simple random sampling method and were given health education regarding prevention of worm infestation using educational package. These children were encouraged to disseminate their knowledge about worm infestation to their classmates of 3rd and 4th standard using the flash cards and videos. A post test was conducted after 7 days using same structured questionnaire and

knowledge of 100 study participants were assessed. The mean pre test knowledge was 47.56%, and mean post test knowledge was 88.7% and calculated' value =29.78 is greater than the tab (98) =1.982, p<0.05. There was significant association between knowledge of children and education of the mother (fishers exact value =0.00, p<0.05.

CONCLUSION

Worm infestation is one of an easily preventable disease. Simply educating the children at grass root level can help to develop awareness among school children and subsequently they become more conscious about their health. The child to child is right based approach to the children participation in health promotion and development grounded in the United Nations convection on the rights of the child. The ultimate goal of these child to child approaches is to reach out of the entire family and community to make it a healthier environment for all who like there. Child to child approach improves the health and nutrition awareness of the children, change their attitude and help them to implement basic health principles in practice. The results of the study is before giving child to child approach in the pretest level of knowledge showed that 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 in adequate knowledge. The findings were consistent with the literature and it was concluded that child to child approach was effective in improving the level of knowledge.

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CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

REFERENCES

1. World Health Organization; (2012). Technical Report Series-972. Research Priorities for Helminthes Infections. Technical Report of the TDR Disease Reference Group on Helminthes Infections Strategic Plan 2011–2020; 3–4.
2. Stephenson L.S.(2000) Malnutrition and parasitic helminthes Infections. Parasitological.; (121 supply l) ;23–S 38
3. Awasthi S, et al. (2008) Prevalence and risk factors associated with worm infestation in pre-school children (6-23 months) in selected blocks of Uttar Pradesh and Jharkhand, India. Indian Journal Med Sciences. 62:484-91.
4. Crompton DW, (2002) Nutritional impact of intestinal helminthiasis during the human lifecycle Ann Rev Nutr; 22:35-59.
5. Bhardwaj AK. (1992) Child to child communication: A gainful experience Indian journal of Public Health. 36(2):58-60
6. Rupa Ashoka varma(2015) International journal of pediatric nursing volume I June 15 ; 31-33
7. Johnson M. (2003) Frequency and distribution of intestinal worms among school age children. Advances in nursing Sciences.;7(6):1031-5
8. Brooker S. (2010) Estimating the global distribution and disease burden of intestinal nematode infections: adding up the numbers – a review. Int J Parasite. Aug 15; 40(10):1137–1144.
9. World Health Organization; Geneva: 2012. Soil-transmitted Helminthiases. Eliminating Soil-transmitted Helminthiasis as a Public Health Problem in Children: Progress Report 2001–2010 and Strategic Plan 2011–2020;. 3–4.
10. Leena 2014 Journal of Health Science .march Vol. 4 Issue 1,113-115. 3Nittle University
11. Ansu Maliyakal 2015 international journal of innovative research & development August, vol4issue 9; 243.

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