



ISSN 2278 – 0211 (Online)

Effectiveness of Child to Child Concept on Knowledge of Prevention of Helminthic Infestation

Ansu Maliyakal

Assistant Professor, Sree Sudheendra College of Nursing, Amblamedu, Ernakulam, Kerala, India

Abstract:

In India about 30-50% of rural school children suffer from much morbidity like anemia, worm infestation etc.. The vast population in the rural area could be approached through child to child programme, for giving health education to protect against common illnesses like diarrhea, anemia, malnutrition etc¹. Objectives of the study is to assess the knowledge on prevention of helminthic infestation among primary school students of rural area, to assess the effectiveness of child to child concept on prevention of helminthic infestation and to find out the association between the knowledge and selected demographic variables. 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 proforma, 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 class mates 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 't' value =29.78 is greater than the $t_{tab}(98)=1.982$, $p<0.05$. There was significant association between knowledge of children and education of the mother (fishers exact value =0.00, $p<0.05$).. Key words: knowledge, children, primary school children, child to child programme.

1. Introduction

Children can be highly effective agents for social change if they utilize their creativity and powers of persuasion in a concentrated and directed way. All children have the ability to do so with the proper guidance and tools. Children often communicate and share more than adults, and in some cases are more literate than their parentsⁱⁱ. The 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 childrenⁱⁱⁱ. The goal was to improve health and reduce infant mortality by engendering positive health practices among children. Based on activity-oriented learning methods, the approach is now used in programs in over 90 different countries. These range from structured programs in schools to the participation of children in community health programs in urban slums. India adopted the national policy for children in August 1974 and recognized children as a national supreme asset. 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.

1.1. Statement of the Problem

A study on effectiveness of Child to Child concept on knowledge of prevention of helminthic infestation among primary school students of rural area in Mangalore.

1.2. Objectives of the Study

- i. To assess the knowledge on prevention of helminthic infestation among primary school students of rural area.
- ii. To assess the effectiveness of child to child concept on prevention of helminthic infestation.
- iii. To find out the association between the knowledge and selected demographic variables.

HYPOTHESIS To achieve the stated objectives, the following hypotheses were formulated at 0.05 level of significance. H1: There will be significant improvement in the knowledge regarding prevention of worm infestation among children following child to child concept. H2: There will be significant association between knowledge regarding prevention of worm infestation and selected demographic variables

1.3. Conceptual Framework

The conceptual framework of the study is based on system model (WHO SEARO technical publications n0.6(1985)^{iv}

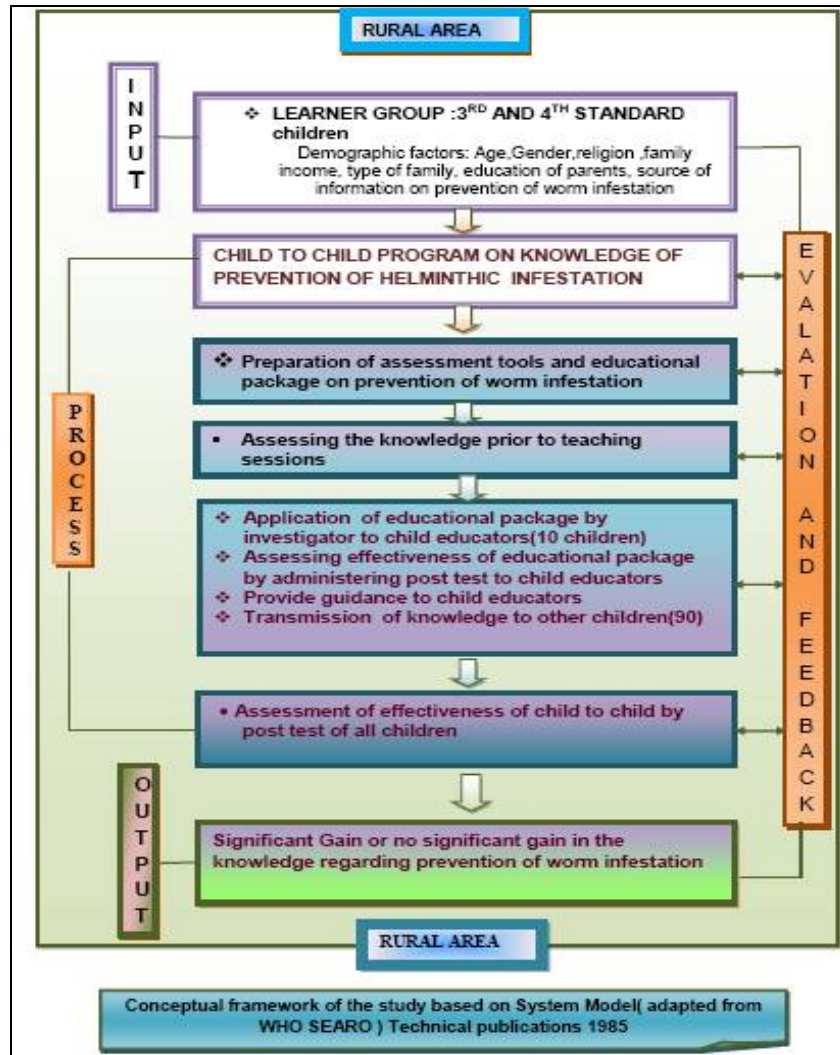


Figure 1: Conceptual Framework

2. Material and Methods

A quasi experimental with one group pretest post test design was used to conduct study It is composed of two phases. Phase I was focused on the 3rd and 4th standard children. A random sampling technique was used to select the children. The existing knowledge level of the children (n=100) was assessed by administering the structured knowledge questionnaire on prevention of helminthic infestation. Following this, 10 students were randomly selected out of 100 and educational package was administered through a forty five minutes teaching session related to prevention of worm infestation by the investigator. Educational package consisted of a power point presentation on story of Meena "Safety from worms". Videos shown was on topic open field defecation, hand washing techniques, safe drinking water, constructing latrines, etc Flash cards covered areas like definition, types, causes, clinical features, diagnosis and prevention of worm infestation

A post test was administered to the 10 children on the same day. A content, flash cards and CD containing PPT slides and videos on prevention of worm infestation was given to each of the ten children after the teaching session. The teaching session was held to the 10 children as a group in 3rd standard classroom where content was displayed with help of LCD and speaker facility. The Phase II of the study focused on the effectiveness of child to child approach of education. In this phase child to child programme was conducted in 1:9 ratios. It was a no formal teaching (not supervised by the investigator) to the other children by the selected and previously taught children. The selected ten children used content flashcards of the content to disseminate the knowledge to other children. Each

one taught to 9 children as a group. Number of days the 10 children took to teach the rest of children were 5 days. Post test was given to the rest of 90 children using the same set of structured knowledge questionnaire on the 7th day (ie after 6 days of child to child programme).

3. Result

3.1. Description of Sample Characteristics

Majority of the children 89% were in the age group of 8-9 years and 61 % were male. A majority of them (58%) were belonged to Hindu religion. A majority (67%) of the mothers were qualified less than PUC, among the father 55% had PUC qualification and 8% had degree qualification. Among the mothers 69% were home makers and 3% were unemployed. Majority of the fathers were self employed and 22% were professionals Majority (43%) of them had a monthly income of 5001 -10000, 38% had 10001-15000, and 2 % had less than 3000. Majority of the children (73%) wore chappals while going outside and a majority of them (83%) practiced hand washing before and after defecation. A majority of children 85% had no previous knowledge regarding worm infestation, 15% had previous knowledge with the source of information being television and teachers.

3.2. Knowledge of Children Regarding Helminthic Infestation

Sl. No	Areas	Maximum possible score	Pre Test		Pretest mean \pm SD
			Obtained mean score	Mean percentage score	
1.	Concept of worm infestation	4	2.85	71.25%	2.8500 \pm 1.09521
2.	Clinical features	7	3.58	51.14%	3.5800 \pm 1.45074
3.	Diagnosis and treatment	7	2.89	41.28%	2.8900 \pm 1.46263
4.	Prevention of worm infestation	12	4.86	40.5%	4.8600 \pm 1.95412

Table 1: Pretest Mean knowledge score, Mean knowledge percentage score and standard deviation in four areas of worm infestation $n=100$

The data showed in the Table 1 shows that among the four areas, the highest pretest mean knowledge percentage score was in the area of concept of worm infestation (71%) and least in the area of diagnosis and treatment of worm infestation indicating that children had more knowledge regarding concept of worm infestation where as less knowledge regarding the diagnosis and treatment of worm infestation.

Sl No.	Areas	Mean percentage scores		Gain scores		
		Pretest	Post-test	Actual Gain	Possible gain	Modified gain
1.	Concept of worm infestation	71.25%	94.75%	23.5	28.5	0.824
2.	Clinical features	51.14%	87%	35.86	48.86	0.73
3.	Diagnosis and treatment	41.28%	87.57%	46.29	58.72	0.78
4.	Prevention of worm infestation	40.5%	88.33%	47.83	59.5	0.80

Table 2: Area Wise Percentage of Pretest and Post Test Knowledge Scores and Gain Scores of Children $n = 100$

The data presented in Table 2 indicate that the post test mean percentage knowledge scores in all content areas were higher than the pretest mean percentage knowledge scores. The maximum post-test mean percentage score was in the area of concept of worm infestation (94.75%). The data also shows that the maximum modified gain was in the area of concept of worm infestation (0.82) and the least modified gain was seen in the area of clinical features (0.73)..

3.3. Effectiveness of Child to Child Programme

n = 100

Sl. No	Areas	Maximum possible score	Pre Test		Post test	
			Obtained mean score	Mean percentage score	Obtained mean score	Mean percentage score
1.	Concept of worm infestation	4	2.85	71.25%	3.79	94.75%
2.	Clinical features	7	3.58	51.14%	6.09	87%
3.	Diagnosis and treatment	7	2.89	41.28%	6.13	87.57%
4.	Prevention of worm infestation	12	4.86	40.5%	10.6	88.33%
5.	Total	30	14.27	47.56%	26.61	88.70

Table 3: Comparison between Pretest and post test Mean knowledge score, Mean knowledge percentage score in four areas of helminthic infestation
n = 100

The data showed in the Table 3 shows that the mean pre test knowledge for the area of concept of worm infestation, clinical features, diagnosis and treatment, prevention of worm infestation were 71%, 51.14%, 41.28%, 40.5% respectively which increased in post test as 94%, 87%, 87.57%, and 88.33% respectively.

	Mean	Mean Difference	SE _D	t' value	L.O.S
Pre-test	14.27	12.34	.41736	29.782	0.00 P<0.05 H.S
Post-test	26.61				

Table 4: Mean, Mean Difference, Standard error of Difference, and 't' value of pre-test and post -test knowledge scores of children
n = 100

$$t'_{(tab)100} = 1.98$$

H.S-Highly significant

The data in Table 4 shows that the mean post-test knowledge scores of subjects were significantly higher than their mean pretest knowledge scores. 't' calculated value =29.78 is greater than the $t_{tab}(100) = 1.982$, $p < 0.05$. Hence the research hypothesis was accepted. Hence child to child programme has been an effective method in increasing the knowledge of the children.

3.4. Association between Knowledge Scores of Children and Selected Demographic Variables

Association between knowledge scores of children and selected demographic variables were analysed. There is a significant association between education of the mother and knowledge of children (fishers exact value =0.00, $p < 0.05$). There is no significant association between knowledge of children and age (χ^2 cal =0.303, $p > 0.05$), gender (χ^2 cal =0.236, $p > 0.05$), religion (χ^2 cal 0.347=, $p > 0.05$), education of father (χ^2 cal =, $p > 0.05$), occupation of mother (χ^2 cal =0.263, $p > 0.05$), occupation of father (χ^2 cal= 0.145, $p > 0.05$), and family income (χ^2 cal =0.108, $p > 0.05$), type of family (χ^2 cal =0.055, $p > 0.05$), number of siblings (χ^2 cal =0.333, $p > 0.05$).

4. Discussion

The data showed that maximum number, 73 % had average knowledge. This is consistent with the study by Helen M Patrica, Celina Mary, Chennai where in 81% showed inadequate knowledge in pretest score (<50%) and the mean pre test knowledge score was 14.27^{vii}. Among the four areas, highest mean knowledge percentage score was in the area of concept of helminthic infestation (71%) and least was in the area of prevention helminthic infestation (40%). The maximum modified gain was in the area of concept of helminthic infestation (0.82) and the least modified gain was seen in the area of clinical features (0.73). Findings in the study conducted by Leena K C showed a modified gain score was 0.3991^{ix}.

5. Conclusion

The study concluded that the children were very much interested and could successfully transmit transforming their knowledge to others. Health education to the primary school children is the most effective method for prevention of worm infestation
Nursing Practice: Nurses need to conduct school health programmes, health awareness programmes. Nurse can encourage the children to participate in spreading the health information. Child to child programme helps in building the team spirit and leadership qualities in health care setting. Nurses can organize and actively involved in such programmes in the schools which can help in achieving the aim of primary health care effectively in school children.

Nursing administration: Nurse administrators should organize health programme and in service education programmes for nurses and encourage them to participate in health activities. They should see that role of nurses can be broadened to include other setting like

home, industries and schools. They should explore their potentials and encourage innovative ideas in preparation of appropriate teaching material and if needed must train the personnel in preparing teaching material. The nurse administrators should make arrangements for all resources available to organize school health programmes on health problems, so that children can be made as mediators to spread the health messages in the community.

Nursing research Nurses being a major force in the health care delivery system must take initiative in conducting research on significant health problems of the community. Innovative approaches of health education, such as child to child, child to mother, child to family, child to peer can be encouraged to tackle the increasing health problems of the children. Therefore, special and continuous health education projects among school children like child to child programme in their formative years improves their knowledge and develop better health practices in community. This eventually would reduce the health problems among children as a whole.

Nursing education: Preventive health education for school children should be one of the major part of nursing curriculum. So the role of nurse is to be broadened and it is advisable to the educational authority to incorporate preventive health education to school children by involving nurses. The nursing curriculum should include content areas of various methods by which health information can be effectively disseminated.

6. References

- i. Biswas AB, Roy AK, Das KK. (2001) Impact on Nutrition Education on Rural school children of Burdwan, West Bengal, Indian Journal of Community Medicine,; 14:29-32.
- ii. Child to child a promising approach. www.unicef.org/evaluation/files/concept_paper
- iii. Child to child news letter 2008. http://www.child-tochild.org/newsletter/2008_newsletter.pdf
- iv. Self learning materials. 203.90.70.117/PDS_DOCS/B0069.pdf
- v. Kothari CR. Research Methodology (.2004.) Methods and techniques. 2nd edition. New Delhi: International (P) limited Publishers;
- vi. Burns N, Groove SK. (1995) Understanding Nursing Research. 2nd edition. Philadelphia: Harcourt Publisher;
- vii. Perdita HM, Mary C(2009). Effectiveness of child to child program on dental health upon primary school children. Nitte Nursing Journal..Jul ;2(1):5-6.
- viii. Polit D F, Hungler B P (2000). Nursing research principles and methods. Philadelphia: JB lippincott;
- ix. Leena KC. 2003. Effectiveness of child to child approach to health education regarding worm infestation and its prevention among children of selected primary schools in Mangalore. Unpublished thesis : Rajiv Gandhi University