

A Study to Evaluate the Effectiveness of Self Instructional Module on Knowledge of Mothers Regarding Prevention of Worm Infestation in Children (2- 10) Years in Selected Area

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Abstract: Children are major consumers of health care as studies revealed the formative years of childhood have greater risk for morbidity and mortality. Awareness among the people is the most effective weapon to prevent and control illness, most common includes parasitic infestations. **Objective:** To assess the effectiveness of self-instructional module on knowledge of mothers regarding prevention of worm infestation in children. **Method:** Design-Pre-experimental design was used. The tool used for this study consists of demographic data and structured knowledge questionnaires. **Sample and sampling technique:** The population for this study were 100 mothers of children (2- 10) years selected through purposive sampling technique. **Conceptual framework based on modified Kings Goal Attainment Theory (1981).** **Results:** The findings of the present study revealed that the computed post-test 't' value in over all area was highly significant ($t= 52.25$, p value < 0.05). **Conclusion:** Self instructional module was easy method of health education, cost effective, noninvasive, and highly feasible. It can be used as an effective intervention to improve the knowledge among mothers regarding prevention of worm infestation in children (2-10 years).

Keywords: Knowledge, Mothers, children, effectiveness, Self-instructional module

1. Introduction

Children well-being is the basic concern of every nation. A healthy child brings happiness to the family, eternal joy to the parent and thrill to the society and hoe to the nation. Awareness promotes health, prevents and reduces suffering, prolongs life with quality with less cost. Timely health education provided at frequent intervals help all individuals to achieve good health by their own action and effort.¹

The formative years of childhood has greater risk for morbidity and mortality. In most cases, the manifold childhood problems are interrelated and affect the growth and development of children, the most common ones being infections, parasitic infestations and malnutrition. The magnitude of parasitic infestations among children constitutes a major public health problem in many parts of the world. In India, the infestation is particularly heavy in the areas with warm, damp climates with heavy rain fall, as in the west coast.²

Worm infestation, refers to the invasion of worm. Worms are parasites which infest to keep living with the host with minimal or even without any symptoms or complaints. Worm infestation is common in children all over the world. Worms may be of many sizes and shapes from microscopic Pin worm to Tape worm that are several feet long. These worms live in the intestine.³

Worm infestations have a close relationship with the socio demographic and ecological factors like poverty, illiteracy,

poor personal and environmental hygiene. Children are at special risk due to their activities like play and lack of importance to personal hygiene. From the children, the entire family may eventually get worms and suffer.³

The common types of worms include: **Round worms (Ascariasis):** They are round, thin, white/pink worm about 10-20 inches long. **Pinworms (Thread worms):** They are white, small and thin, just like finethreads. **Hookworms:** They are tiny dark-pink in color, not visible in stools. **Tape worms (Tanicasaginata/solium):** They are flat and extremely long about 2-3 meters.

Many mass de-worming programs also combine their efforts with a public health education. These health education programs often stress important preventative techniques such as: washing your hands before eating, and staying away from water/areas contaminated by human feces. These programs may also stress that shoes must be worn; however these come with their own health risks and may not be effective. Shoe wearing patterns in towns and villages across the globe are determined by cultural beliefs, and the levels of education within that society. The wearing of shoes will prevent the entry of hookworm infections from the surrounding soils into tender skin regions; such as areas between the toes.⁴

2. Material & Method

Research design: Pre-experimental (Pre test – Post test) research design was used to evaluate the effectiveness of self-instructional module on knowledge of mothers

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regarding prevention of worm infestation in children (2-10 years) at selected community area of district Patiala.

Research setting: The study was conducted at GajjuKhera village of district Patiala, Punjab.

Target Population: 100 mothers of GajjuKhera village of distt. Patiala, Punjab.

Sample and sampling Technique:

- 1) The sample comprised of 100 Mothers from GajjuKhera village of Distt.Patiala, Punjab.
- 2) Purposive sampling technique was used to select sample.

Inclusion criteria:

- 1) Mothers who were available at the time of data collection.
- 2) Mothers who could read and write Punjabi.

Exclusion criteria:

- 1) Illiterate mothers were excluded.
- 2) Mothers who were not willing to participate in the study.

Selection and development of tool:

The tool was developed after extensive review of literature i.e. books, journals on relevant topic and after discussion with experts and guides.

Selection of tool

- 1) Demographic variables
- 2) Self-structured knowledge questionnaire was prepared to assess the knowledge of mothers regarding prevention of worm infestation children.
- 3) Self- instructional module was prepared to improve the knowledge of mothers regarding prevention of worm infestation in children.

Validity: Eleven Experts were requested to give their opinion and suggestions regarding prepared data collection tool and SIM along with problem statement, objectives, and operational definition. Suggestions of the experts were incorporated in the tool after discussion with the research guide and co guide. A language expert translated the modified tool into Punjabi.

Reliability:

Split half method was used find the reliability of tool among 10 mothers. The reliability of whole tool was then estimated by Pearson Brown Prophecy formula. Tool was found reliable ($r = 0.82$) was preferably used.

Pilot study:

It was conducted to find the feasibility of the study by evaluating 10 subjects selected by using purposive sampling method.

Pre-test was taken followed by Post-test, conducted on 7th day of intervention. Analysis was done by descriptive and inferential statistics. The study was found feasible.

From the data, it is clear that mean (+ SD) of post- test (19.0 + 2.16) is greater than pre- test (12.0 + 1.88) with mean

difference of 7. Analysis revealed that there was an increase in knowledge of mothers regarding prevention of worm infestation in children (2-10) years which indicated that the self-instructional module on knowledge of mothers regarding prevention of worm infestation in children is effective.

Data collection procedure

A written permission was obtained from the concerned authority prior to the study. 100 samples were selected during pre-test and post-test by purposive sampling technique. The Purpose of the study was explained to mothers regarding prevention of worm infestation in children (aged 2-10 yrs.) and consent was taken from them. After obtaining consent and demographic data, knowledge was checked by self-structured questionnaire followed by distribution of booklet containing information regarding prevention of worm infestation in children. On 7th day, post- test was conducted. Data was analyzed by descriptive (Mean, Range, SD and MD) and inferential statistics.

Ethical consideration

Ethical clearance was obtained from ethical committee of Gian Sagar Medical College and Hospital. Written permission was taken to conduct study from Sarpanch of the village and from mothers of children. Mothers were ensured that study would not affect the participants in any way.

Plan for data collection:

It was based on statistical analysis includes descriptive and inferential statistics.

Table 1: Frequency and Percentage distribution of mothers according to their demographic profile, N-100

S.no.	Sample characteristic	Mothers	
		f	%
1.	Age(in years)		
	<20	3	3
	21-30	48	48
	31-40	49	49
	>40	0	0
2.	Educational status		
	No formal education	3	3
	Primary Education	24	24
	Secondary education	61	61
	Graduate or above	12	12
3.	Occupation		
	Regular job	1	1
	Self employed	19	19
	Home- Maker	80	80
4.	Type of family		
	Joint	50	50
	Nuclear	42	42
	Extended	8	8
5.	Type of house		
	Kucha	1	1
	Pucca	83	83
	Semi- Pucca	16	16
6.	Family Income per year (in Rs)		
	<10000	0	0
	10001- 20000	1	1
	20001- 30000	0	0
	>30000	99	99
7.	Sanitary defecation		

	Open defecation	0	0
	Sanitary latrine	100	100
8.	Children ever have worm infestation earlier		
	Yes	21	21
	No	79	79

Table 1 Illustrates that majority of the subjects i.e.(49 %) of the mothers fall in the age group of 31-40 yrs. (61%) of the mothers were educated up-to secondary level. Majority of the mothers that is (80%) were homemakers and (19%) were self-employed and only 1% on regular job. 50% of mothers belongs to joint family and (42%) belongs to nuclear family and rest that is (8%) belongs to extended family. According to finding (83%) of mothers were residing in pucca house while 16 % were residing in semi-pucca house. Majority of the mothers that is 99% were having family income more than 30,000. All of the mothers were using sanitary latrines. Majority of the mother's i.e. 79% children were not having worm infestation earlier.

Table 2: Range, Mean and Standard deviation of pre- test knowledge scores of mothers regarding prevention of worm infestation in children, N-100

Overall Knowledge	Scores	Range	Mean	SD
Good	(19-26)	7-15	9.7	1.7
Average	(10-18)			
Poor	(0-9)			

Table 2 reveals the range, mean (+ SD) of knowledge of mothers regarding prevention of worm infestation in children. It was found that the mean knowledge score was (9.7± 1.7). Hence it was concluded that majority of mothers had poor knowledge regarding prevention of worm infestations in children.

Table 3: Frequency and percentage distribution of knowledge score of mothers regarding prevention of worm infestation in children, N-100

Knowledge level	Score	Frequency	%
Poor	0-9	48	48
Average	10-18	52	52
Good	19-26	0	0

Table 3 depicts that majority of the mothers i.e. 52% have average knowledge 48% have poor knowledge and no one have good knowledge score. It was concluded that mothers had average knowledge regarding prevention of worm infestation.

Table 4: Comparison of pre-test and post-test knowledge scores of mothers regarding prevention of worm infestation in children, N-100

Test	Mean±SD	MD	df	t-value
Pre-test	9.7±1.7	12.2	99	52.25*
Post- test	21.4±1.9			

*=Significant, (p <0.05)

Table 4 shows that mean(± SD) post- test knowledge score (21.4 ± 1.9) was greater than the mean (± SD) pre-test knowledge score (9.7 ± 1.7) of mothers regarding prevention of worm infestation in children with the mean difference of 12.2 Hence it shows effectiveness of self-instructional module on knowledge of mothers regarding prevention of

worm infestation in children. The computed' value (t=52.25) was greater than the table value (t(99) = 1.98) at 0.05 level of significance. Hence the null hypothesis (H0) was rejected and inferred that findings are statistically significant.

3. Discussion

The research finding shows that there was significant association of post -test knowledge of mothers with selected demographic variables i.e. age, education and type of family. H1 was accepted and H0 was rejected. No significant association was found of post test with occupation of mothers, family income, type of house, sanitary defecation and children ever have worm infestation with post-test knowledge scores. Hence H0 was accepted in them and H1 was rejected.

Swarajyam Y.2011 in his study 100 mothers of school age children, collected data was analysed by using descriptive and inferential statistics. Majority of the mothers had moderately adequate knowledge (65%) and moderate practices (72%) regarding worm infestations. There was statistically significant association found between level of knowledge and demographic variables such as age, education and monthly income of the family. Research hypotheses stated were accepted.⁵

It was concluded that there is a need to improve the knowledge and practices with regard to prevention of worm infestation. Hence, health education pamphlet was prepared.

The findings of the study are also congruent with **Dayanand G, Singh S, Pandit S** who conducted a study on Knowledge and practice of worm infection among mothers of school going children of Arba VDC, Kaski, Nepal. Questionnaires were distributed amongst the subjects by one of the study investigator. The participants were clearly instructed to put a tick in one response for each item in the printed version of the questionnaire. The scoring was graded as - poor, average and good knowledge. Majority of the mothers were in the age group of 26-30 years, followed by 31-35 years and <25 years. Among the age group <25 years had good and average types of knowledge and their practice score was also good. Among the 26-30 years age group mothers, knowledge score was relatively good. Among all the groups poor quality of knowledge was almost nil. Practice score was good amongst all age groups after administering questionnaires as a post test.⁶

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