

A Study to Evaluate the Effectiveness of Self Instructional Module Regarding Vaccine Preventable Diseases Among Mothers of Under-Five Children at Selected Areas in Tarn Taran.

Priya Rani, Ramesh Kumari, Jicy Shahji, Manpreet Garcha, Samuel P.*

Mai Bhago College of Nursing Tarn Taran Punjab, India

Abstract

Immunization is the one of the most important and cost effective strategies for the prevention of childhood sicknesses and disabilities and it is a basic need for all children. Seven killer diseases causes a major threat to children and this decreases the health status and making them more vulnerable to infectious disease. The major cause for death is vaccine preventable diseases such as neonatal tetanus, measles, tuberculosis, diphtheria, pertussis, polio and Hepatitis B. Infectious diseases are now the world's biggest killer of children and young adults. They account for more than 13 million deaths a year- one in two deaths in developing countries. The present study objective was "to evaluate the effectiveness of self instructional module." The Pre-experimental one group pre-test and post-test design was adopted. The sample of 100 mothers of under-five children selected by convenient sampling technique. A structured knowledge questionnaire was adopted to collect the data from the samples. Descriptive and inferential statistics was used in data analysis. The result of study shown that there was significant difference in the mean post-test score. The findings reveals that pre test and post test mean knowledge of mothers of under-five children regarding vaccine preventable diseases is 8.5(SD ± 3.95) and 16.33(SD ± 4.79) respectively. Post test mean knowledge score higher than pre test mean score. The 't' test value was 12.54 which was significant at 0.05 level. Hence it is concluded that the self instructional module was effective to increase the knowledge of mothers of under five children. This study recommends that similar study can be undertaken on large sample to generalize the findings. Study can be done to assess the knowledge, attitude and practice of nurses regarding vaccine preventable diseases.

Keywords: *Self-instructional module, knowledge, vaccine preventable diseases, mothers of under-five children*

***Author for Correspondence:** *E-mail: jicyshaji@gmail.com*

INTRODUCTION

Children are fortunately being recognized as people in their own right with their special requirements. Quality survival of the human race depends on provision of adopt care to his vulnerable population in their formative and developmental life years. Therefore Health services for children should be aimed at improving the future quality of human resources of the nation by enabling as many children as

possible to reach adulthood with their potential uncompromised by illness, environmental hazards, or unhealthy lifestyle^[1]. According to WHO "Health is a state of complete physical, mental, and social wellbeing and not merely absence of disease or infirmity In India diseases like guinea worm, small pox has been eradicated since 1947 and now poliomyelitis is near to eradicate. In developed countries like in India 68 out of

1000 under-five children were dying each year and another 5 million were disabled by infectious diseases^[2]. The vaccination of children against infectious diseases (tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, measles and hepatitis B) has been a cornerstone of the child health care system in India. As a part of the National Health Policy, the National Immunization Programme is has been implemented on a priority basis^[3]. Awareness building about immunization of children, who are under five years of age, provides a sense of responsibility towards the need of the children and their protection. The involvement of mothers in immunization programme help in reduces seven killer diseases. Those mothers who are living in tribal and rural areas mainly ignore the immunization and they do not vaccinate their children. Some mothers have misconception about immunization and they believe their children can catch diseases if they immunize their children. To prevent seven killer diseases it is necessary to screen every child for immunization, coverage opportunities; otherwise full immunization coverage may not be possible. Delayed immunization is associated with low socio-economic status, female illiteracy, lack of knowledge on Vaccine Preventable Diseases as recommended by Universal Programme Immunization (UPI)^[4].

REVIEW OF LITERATURE

A comparative study was conducted to estimate the vaccination coverage level of children aged between 19–35 months living in rural and urban area in Kolar District of Bangalore. The result of study revealed that Statistically significant differences in vaccination coverage levels between the rural population and their urban counterparts were determined for individual vaccines and vaccine series as evidenced by 28% of the children were covered by immunization residing in rural areas whereas 46% were covered in Urban

area. The study recommended that health care personnel need to execute the awareness among the needy population of the Kolar District^[5].

A study was conducted upon improving status of underfive children through awareness and knowledge of mothers regarding vaccine preventable diseases through health education messages and compare them with those without intervention. An increase of 19 to 22% increase was seen in the utilization of vaccination. The mother's knowledge increased in the follow up from 60% to 76.5% and the immunization status increased significantly from 46.5% to 75% after the intervention. The surveys show that the health education messages significantly increased the vaccination status of children of under five years^[6].

A study was conducted to assess the knowledge of caretakers of underfive children in a pulse polio immunization booth in the Delhi. A semi–open-ended questionnaire was used. Study results showed that only 252 (37.0%) respondent correctly answered, 176 (25.8%) gave a wrong answer while the remaining 37.2% gave no answer. While 268 (39.3%) knew at least of four diseases covered by universal immunization programme, only 23.9% knew all four diseases. The researcher concluded that immunization status needs to be improved by educating mothers and caregivers regarding immunization^[7].

A quasi experimental study was conducted to evaluate the effectiveness of structured teaching programme (STP) among 50 mothers of underfive children in selected paediatric hospital, Pondicherry. A closed ended questionnaire was used to collect the data followed by intervention of STP. The study finding shows that the post-test knowledge score (22.73) was higher than the pre-test knowledge score (12.78). The

study claimed that STP is effective to enhance mother's mother knowledge regarding importance of immunization. The study recommended that nursing personnel should continue in health teaching approach especially to the health problems which can be prevented^[8].

PURPOSE OF THE STUDY

The purpose of the study was to evaluate the effectiveness of self instructional module regarding vaccine preventable diseases among the mothers of under-five children; this is achieved by one group pre and post test knowledge score obtained by the subjects under the study. This study also obtaining answer to research hypothesis.

METHODOLOGY

A Pre-experimental research design with one group pre test and post test design, to measure the effectiveness of self instructional module. The study was conducted at selected areas in Tarn Taran. Subjects were selected by convenient sampling technique. Structured knowledge questionnaire was used to collect data. Part-I is Socio demographic variables. This part is consist of variables such as age, educational status of mothers, type of family, occupation, religion, family monthly income, no. of children and source of information. Part-II is structured knowledge questionnaire. It consists 36 items of objective type questions related to knowledge on vaccine preventable diseases. Each item contains four alternative responses. The knowledge questions are chosen from seven common vaccine preventable diseases likely, Tuberculosis, Diphtheria, Measles, Polio, Tetanus, Whooping cough and Hepatitis B. All the items were given equal score. Each correct answer was given a score of 1 and wrong answers a score of 0. Thus maximum score was 36 and minimum score was zero. The questionnaire was prepared in English and Punjabi

languages. Reliability of an instrument is the degree of consistency with which it measures the attribute it is designed to measure. The reliability of the tool was assessed by collecting data from 10 mothers of under-five children from selected areas in Tarn Taran. The reliability of structured knowledge questionnaire was computed by Split half method i.e. by calculating co-efficient correlation first and then by applying Spearman Brown prophecy formula. The reliability of structured knowledge questionnaire was 0.96 and thus found to be highly reliable. Ethical clearance had been obtained from ethical committee, prior permission for conducting the research was obtained from Municipal Corporation of District Tarn Taran and informed consent was taken from mothers of under-five children. The data was analysed by using descriptive and inferential statistics.

DATA ANALYSIS

Analysis of Socio-Demographic Characteristics of the Samples

Table 1 indicates the Majority of subjects 37% are in the age group of 21–25 years; about 25% were in the age group of < 21 years while 22% were in the age group of 26–30 and minimum number of subjects 16% are in the age group of > 30 years. About 36% mothers were secondary educated, 24% were primary educated and minimum no. 20% were Graduate and another 20% respondents were of post-Graduate. Majority of subjects 30% were house wife, 26% were non-government employee, 24% were government and 20% mothers were self-employee. About half of respondents were 47% belong to Sikh religion, 32% were of Hindu, 14% mothers were Christian and 7% were belong to other religion. Majority of mothers 60% were belong to nuclear family and other 40% belong to joint family. 38% subjects were in the family income group of > ₹ 15000. 26%

were in the group of ₹ 10000–15000, 20% were comes under the group of ₹ 5000–10000 and minimum number of subjects 16% belongs < ₹ 5000 group. Majority of mothers 63% have more than two children, less than 25% of mothers have two children, and least number of 12% has

one child. Most of sample 41% taken information from health personnel, 30% were from TV/radio/internet, 20% respondents were acquired from informal group discussion and minimum number of the mothers 9% obtained information from Newspaper/Magazine.

Table 1: Frequency and Percentage Distribution of Demographic Variables.

S. No.	Demographic variables	Frequency	Percentage
1	Age in years		
	<21	25	25%
	21–25	37	37%
	26–30	22	22%
	>30	16	16%
2	Educational status		
	Primary	24	24%
	Secondary	36	36%
	Graduate	20	20%
	Above Graduate	20	20%
3	Occupation		
	House wife	30	30%
	Self-employee	20	20%
	Non-government	26	26%
	Government	24	24%
4	Religion		
	Sikh	47	47%
	Hindu	32	32%
	Christian	14	14%
	Others	7	7%
5	Family		
	Nuclear	60	60%
	Joint	40	40%
6	Family Monthly Income		
	< ₹ 5000	16	16%
	₹ 5000–10000	20	20%
	₹ 10000–15000	26	26%
	> ₹ 15000	38	38%
7	No. of children		
	One child	12	12%
	Two children	25	25%
	More than two	63	63%
8	Source of information		
	TV/Radio/Internet	30	30%
	Newspaper/Magazine	9	9%
	Health personnel	41	41%
	Informal group discussion	20	20%

To Assess the Level of Knowledge Regarding Vaccine Preventable Diseases Among the Mother of Under five Children Before and After Self-Instructional Module Administration.

Table 2(a): Grading the Knowledge of Samples Regarding Vaccine Preventable Diseases in Pre-Test. (N = 100).

S. No.	Level of knowledge	Frequency	Percentage
1	Adequate Knowledge	0	0%
2	Moderately adequate knowledge	24	24%
3	Inadequate knowledge	76	76%

The above table 2(a) shows that most of the samples 76% had inadequate knowledge, 24% of samples had moderately adequate knowledge regarding

vaccine preventable diseases and there was no adequate knowledge samples regarding vaccine preventable diseases.

Table 2(B): Grading of Knowledge Regarding Vaccine Preventable Diseases Among Mothers of Under-Five Children in Post Test . (N = 100).

S.No.	Level of knowledge	Frequency	Percentage
1	Adequate Knowledge	16	16%
2	Moderately adequate knowledge	67	67%
3.	Inadequate knowledge	17	17%

Table 2(b) shows that most of the samples i.e. 67% had moderately adequate knowledge, 16% of samples had adequate

knowledge and 17% of samples had inadequate knowledge regarding vaccine preventable diseases in post-test.

Table 3: Mean and Standard Deviation of Pre-Test and Post-Test Knowledge Regarding Vaccine Preventable Diseases Among Samples.

Variable	Mean	Standard Deviation	't' test value	Table value
Pre test	8.55	+3.95	12.54	1.98
Post test	16.33	+4.79		

Table 3 shows that mean score of pre test and post test of samples regarding vaccine preventable diseases is 8.55 (SD ± 3.95) and 16.33 (SD + 4.79) respectively. Post test mean score was higher than the pre-test mean scores the 't' test value is 12.54 which was significant at 0.05 level as (p>0.05).

socio-demographic variables such as education, occupation, no. of children and type of family of mothers of under-five children found significant as calculated values greater than table values at the level of (0.05). The association between knowledge score and the socio-demographic variables score of mothers, religion, family monthly income and source of information found non-significant as the calculated value is less than the tabulated value at 0.05 level of significance.

Association Between the Post-Test Knowledge Sores and Selected Socio Demographic Variables

Table 4 shows that the association between post-test knowledge score and

Table 4: Analysis of Association Between the Post-Test Knowledge Scores and Selected Socio Demographic Variables.

S. No	Demographic Variables	Level of Knowledge						Total Samples	Chi ²	Table Value	Inference
		Adequate		Moderate		Inadequate					
1	Age in years	F	%	F	%	F	%				
	<21	4	4	17	17	4	4	25	0.81	12.59	NS
	21–25	5	5	25	25	7	7	37			
	26–30	4	4	15	15	3	3	22			
	>30	3	3	10	10	3	3	16			
2	Education status								21.91	12.59	S
	Primary	7	7	15	15	2	2	24			
	Secondary	4	4	29	29	3	3	36			
	Graduate	3	3	12	12	5	5	20			
	Graduate + above	2	2	11	11	7	7	20			
3.	Occupation								43.51	12.59	S
	House wife	3	3	19	19	8	8	30			
	Self-employee	3	3	13	13	4	4	20			
	Non-government	5	5	18	18	3	3	26			
	Government	5	5	17	17	2	2	24			
4.	Religion								4.08	12.59	NS
	Sikh	8	8	30	30	9	9	47			
	Hindu	6	6	20	20	6	6	32			
	Christian	2	2	10	10	2	2	14			
	Others	0	0	7	7	0	0	7			
5.	Family								10.24	5.99	S
	Nuclear	7	7	42	42	11	11	60			
	Joint	9	9	25	25	6	6	40			
6.	Family monthly Income								4.89	12.59	NS
	< ₹ 5000	5	5	8	8	3	3	16			
	₹ 5000–10000	4	4	13	13	3	3	20			
	₹ 10000–15000	3	3	19	19	4	4	26			
	>₹ 15000	4	4	27	27	7	7	38			
7.	No. of children										
	One child	3	3	5	5	4	4	12			
	Two children	6	6	49	49	8	8	63	10.2	9.49	S
	More than two	7	7	13	13	5	5	25	8		
8.	Source of information								6.35	12.59	NS
	TV/Radio/ Internet	6	6	16	16	8	8	30			
	Newspaper/Magazine	2	2	14	14	4	4	20			
	Health personnel	6	6	31	31	3	3	40			
	Informal group discussion	2	2	6	6	2	2	10			

LIMITATION AND RESEARCH NEEDED

The size of the sample was 100; hence it was difficult to make broad generalizations. No attempt was made to control extraneous variables.

This study recommends the following further research. The study can be replicated on large samples for wider generalization. Comparative study can be

done on knowledge among urban and rural mothers regarding vaccine preventable diseases. Study can be done on the knowledge of health personnel regarding vaccine preventable diseases.

A study can be done to assess the knowledge, attitude and practice of nurses regarding vaccine preventable diseases.

CONCLUSION

As good health is very important for each individual and knowledge regarding vaccine preventable diseases to restore the health and prevent from seven killer diseases. Knowledge regarding vaccine preventable diseases will improve the health status of the under-five children. Mothers must use this knowledge to maintain the optimal level of health and prevent infectious diseases. The result of study shows that there is a significant difference between the mean pre-test and post-test knowledge score and the pre-test mean knowledge score on knowledge regarding vaccine preventable diseases found to be 8.55, with SD = 3.95. The post-test mean knowledge score found to be 16.33, with SD = 4.79. From the result findings it is concluded that the distribution of Self Instructional Module have made significant changes in the results of post-test knowledge score.

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