

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Revised Immunization Schedule among Mothers of underfive Children in Morgiri Village, Patan

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ABSTRACT

Introduction: The physical health of a child is important because it is associated with the mental and social development of children. Mothers are the first care providers of their children. One of the ways to achieve reduction of underfive mortality is to educate the mothers on matters pertaining to child care. Study objectives were to assess the knowledge of Revised Immunization Schedule among mothers of underfive children, to assess the effectiveness of structured teaching programme on knowledge regarding Revised Immunization Schedule among mothers of underfive children and to find the association between pre-test knowledge score of mother of underfive children regarding revised immunization schedule and selected demographic variables.

Material and Methods: The research approach used for the study was evaluative approach. The study was conducted in primary health centre, Morgiri, at Patan, Maharashtra, India. Using one group pre-test post-test design. Non-probability Purposive sampling technique was used for selecting 30 mothers of underfive children. On the 1st day Structured knowledge questionnaire was used for collecting data and planned teaching programme on child abuse and neglect was conducted and followed by post test on the 7th day. The data collected, tabulated and analyzed in terms of objectives of the study using descriptive and inferential statistics.

Result: Results shows that Out of 30 mothers in pre test 18(60%) had average knowledge, and 12 (40%) of mothers had poor knowledge where as in post test 25 (83%) had good and 5 (17%) mothers had average level of knowledge. Pre test mean knowledge score and standard deviation was 17.4 ± 3.54 which increased in post test to 29.5 ± 2.77 and paired 't' test value was 26.404 and p value is < 0.01 . The result shows that there was a significant association between knowledge of mothers and Age ($\chi^2 = 4$) $p (< 0.005)$ level.

Conclusion: The study concludes that structured teaching programme on revised Immunization schedule was Effective in Improving the Level of knowledge among the mothers of underfive children.

Keywords: Revised, National, Immunization, Schedule, Mothers, Underfive Children, Structured Teaching Programme, Knowledge.

like tuberculosis, tetanus, diphtheria, whooping cough and poliomyelitis and is estimated to avert between 2 and 3 million deaths each year. It is one of the most cost effective health investments with proven strategies that makes it accessible to own the most hard to reach and vulnerable population.¹

There are several reasons to aim for universal coverage of immunization. The Indian culture promotes safe nurturing of children. Hardly do we find parents who risk their children to life-threatening diseases, unless they being unaware or misinformed. All vaccines under the routine immunization programme are provided free-of-charge. However, the figures for the coverage of routine immunization (RI) are lagging. The current level of coverage of 'fully-immunized' children under the national immunization programme is quite low, as pointed out by several studies.²

According to UNICEF immunization is currently preventing an estimated two million deaths among children underfive every year.³

India has one of the highest underfive mortality rates in the world with an estimate of 64/1000 live births in 2010, the underfive mortality rate in the Maharashtra state was 56/1000 live births in 2010. One of the factors contributing to underfive mortality is the ignorance of child care. Global immunization coverage has greatly increased since WHO's expanded programme on immunization began in 1974. In India expanded programme on immunization was launched in January 1978. UNICEF renamed the expanded programme on immunization as Universal Immunization Programme (UIP) and it was launched in India in November, 1985.⁴

In 2010, global DPT3 (three doses of the diphtheria,

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INTRODUCTION

"Children are the wealth of tomorrow; take care of them if you wish to have a strong India, ever ready to meet various challenges." - Pandit Nehru.

Immunization is a tool for controlling and eliminating life threatening six infectious and vaccine preventable diseases

pertussis, tetanus combination vaccine) coverage was 68% up from 50% in 2005. However, 27 million children world wide were not reached by DPT3 in 2010, including 9.9million on south Asia and 9.6 million in sub-Saharan Africa.⁵

Each child has basic human needs like adults to fulfill the essentials of life and to promote growth and development. Immunization is one of the needs of the children. The responsibilities of the nursing personnel is to help the parents to emphasize on promotion of health, prevention of illness, maintenance of health and restoration of health.⁶ Immunization is one of the most effective public health interventions to reduce childhood mortality due to vaccine preventable diseases. The underfive children can be saved from deaths by immunizing them at the right age and right time and by completing the full course of immunization. The responsibilities of the nursing personnel is to help and educate the parents to emphasize on promotion of health, prevention of illness, maintenance of health and restoration of health. So structured teaching programme is effective to educate the parents about revised national immunization schedule. The reason behind selection of Morgiri village is that it is hilly and triable area and the health facilities are not adequate, and not reachable, so the health needs are not fulfilling properly.

Study objectives were to assess the knowledge of Revised Immunization Schedule among mothers of underfive children, to assess the effectiveness of structured teaching programme on knowledge regarding Revised Immunization Schedule among mothers of underfive children and to find the association between pre-test knowledge score of mother of underfive children regarding revised immunization schedule and selected demographic variables.

Research Approach

Hypothesis:

H₀: There will be no significant difference between pre test and post test knowledge scores of mothers of underfive children on revised immunization schedule.

H₁: There will be significant difference between pre test and post test knowledge scores of mothers of underfive children on revised immunization schedule.

H₂: There will be a significant association of knowledge scores of mothers of underfive children on revised immunization schedule with selected demographic variables.

MATERIAL AND METHODS

In view of the nature of the problem selected for the study and objective to be accomplished evaluative research approach was considered. The research design adapted for the study was one group pre test, post test design. Independent Variable of the study was planned teaching programme for mothers of underfive children regarding revised national immunization schedule and Knowledge Scores as measured by structured questionnaires was dependent Variable. The study was conducted among underfive mothers of Morgiri village, at Patan, Maharashtra, India. 30 mothers of underfive children were selected as sample of the study by non-probability

Purposive sampling technique. After extensive review of literature and the with the help of experts structured knowledge questionnaire were prepared to assess the level of knowledge of mothers of underfive children regarding revised national immunization schedule.

The tool consists of two sections:

Section 1) Demographic variables of the mothers of underfive children.

Section 2) Structured knowledge questionnaire

It consists of 35 items in multiple choice questions form and is divided into two part.

Part 1: General aspects of immunization – 8 questions.

Part 2: Knowledge of mothers regarding revised immunization schedule – 27 questions.

Method of data collection

Formal permission to conduct the study was obtained from the concerned authority. On the day of pre-test, at the very beginning, the client where explained purpose of the study and informed written consent was obtained from each mothers of underfive children. Pre test was conducted on 1st Dec 2017 to assess the existing level of knowledge of underfive children regarding revised national immunization schedule followed by planned teaching programme on revised national immunization schedule was conducted with the help of lesson plan and A.V. aids (charts and posters). Post test was conducted on 7th Dec 2017 by administering the same knowledge questionnaire. The mothers actively participated and co-operated during data collection.

STATISTICAL ANALYSIS

The data obtained was analyzed in terms of the objective of the study using descriptive and inferential statistics. The plan of data analysis was developed under the excellent direction of experts in the field nursing and statistics.

The plan of data analysis was as follows:

1. Organization of data in a master sheet.
2. Tabulation of data in terms of frequency, percentage, mean, SD, median and range to describe the data.
3. Classifying knowledge source using mean and median and SD as follows:
(SD+X)=Good
(SD+X)-(SD-X)=Average
(SD-X)=Poor

A score of 1 was awarded to all correct answers while score of 0 was awarded to all incorrect answers of structured questionnaire.

Inferential statistics were used to draw the following conclusions:

Paired “T” test was used for testing effectiveness of STP and Chi-square test was used to find association.

RESULTS

The data presented in the Table 1 reveals classification of mothers by age, religion, educational status, occupation, type of family, per capita monthly income, source of information

Sr. No.	Demographic Variable	F	%
1	Age in years		
	18 to 24 years	18	60%
	25 to 30 years	9	30%
	31 to 35 years	3	10%
2	Religion		
	Hindu	23	77%
	Muslim	5	17%
	Others	2	7%
3	Education		
	No formal Education	7	23%
	Primary	6	20%
	Secondary	12	40%
	Higher Secondary	4	13%
	Graduated	1	3%
4	Occupation		
	House wife	27	90%
	Private	1	3%
	Business	2	7%
5	Type of Family		
	Joint	18	60%
	Nuclear	12	40%
6	Family Income (Monthly) in Rs.		
	Below 5000	12	40%
	6000 to 10000	13	44%
	11000 to 15000	4	13%
	Above 15000	1	3%
7	Source of Information regarding revised immunization schedule		
	Family members	4	13%
	Friends	0	0%
	Media like TV, Radio, News Paper, Magazine etc.	2	7%
	Health personnel like Doctors and Nurse	24	80%

Table-1: Frequency and percentage distribution of demographic variables of subjects N=30

Group	Mean	SD	t value	P value
Pre test	17.4	3.54	t = 26.404	P= 0.0279
Post test	29.5	2.77		

Significance at $p < 0.05$ level

Table-2: Comparison of knowledge score of the subject of the pretest and post test

regarding revised immunization schedule programme etc. Maximum number 18 (60%) mothers belong to the age group of 18 to 24 years, Majority of mothers 12(40%) studied up to secondary education, 27(90%) mothers were housewife, 23(77%) were Hindu, 18(60%) belongs to joint family, 13(44%) of mothers had monthly income of Rs 6000 to 10000 and 24(80%) received information from health professional like doctors and Nurses.

The data presented in table No. 2 indicate that calculated paired "t" value (26.404) and this indicate that gain in knowledge score is statistical significant at $p < 0.05$ levels, hence H_1 is acceptable. Therefore the planned teaching programme regarding revised national immunization schedule programme was effective in improving the knowledge of underfive mothers in Morgiri village, Patan.

Table No. 3 shows the association of knowledge level of mothers of underfive children residing at Morgiri village,

Patan regarding revised national immunization schedule programme before administering the structured teaching programme with their selected demographic variables, using chi- square test. The analysis revealed that there was no any significant association found between the knowledge of mothers regarding revised national immunization schedule programme with selected sociodemographic variables.

Table No. 4 shows the association of knowledge level of mothers of underfive children residing at Morgiri village, Patan regarding revised national immunization schedule programme after administering the structured teaching programme with their selected demographic variables, using chi- square test.

The analysis revealed that there was an association found between the knowledge of mothers regarding revised national immunization schedule programme with Age (0.0455) and no any significant association found between the knowledge of mothers regarding revised national immunization

Sr. No.	Socio demographic variables	No.	%	Pre test				Chi Square	P value
				Average		Poor			
				No	%	No	%		
1	Age								
	18 to 24 years	18	60%	13	72%	05	42%	2.801	0.0942 NS
	25 to 30 years	09	30%	03	17%	06	50%		
	31 to 35 years	03	10%	02	11%	01	8%		
2	Religion								
	Hindu	23	76.66%	12	67%	11	92%	2.516	0.1127 NS
	Muslim	05	16.66%	04	22%	01	8%		
	Others	02	6.66%	02	11%	00	0		
3	Education								
	No formal Education	07	23.33%	03	17%	04	33%	0.3620	0.5474 NS
	Primary	06	20%	04	22%	02	17%		
	Secondary	12	40%	08	44%	04	33%		
	Higher Secondary	04	13.33%	02	11%	02	17%		
	Graduate	01	3.33%	01	6%	0	0		
Occupation									
4	House wife	27	90%	16	89%	11	92%	0.06173	0.8038 NS
	Private	01	3.33%	0	0	01	8%		
	Business	02	6.66%	02	11%	0	0		
	Type of Family								
5	Joint	18	60%	10	56%	08	67%	0.3704	0.5428 NS
	Nuclear	12	40%	08	44%	04	33%		
	Family income monthly Rs.								
6	Below Rs.5000	12	40%	06	33%	06	50%	0.000	1.0000 NS
	Rs. 6000 to 10000	13	43.33%	09	50%	04	33%		
	Rs. 11000 to 15000	04	13.33%	02	11%	02	17%		
	Above Rs. 15000	01	3.33%	01	6%	0	0		
	Source of information								
7	Family members	04	13.33%	01	6%	03	25%	0.3125	0.5762 NS
	Friends	0	0	0	0	0	0		
	Media	02	6.66%	02	11%	0	0		
	Health personnel	24	80%	15	83%	09	75%		

Table-3: Association between demographic variables and pre test knowledge level of mothers of underfive children residing at Morgiri Village, Patan on revised national immunization schedule programme. (N=30)

Sr. No.	Socio demographic variables	No.	%	Post test				Chi Square	P value
				Average		Good			
				No	%	No	%		
1	Age								
	18 to 24 years	18	60%	1	20%	17	68%	4	0.0455 S
	25 to 30 years	09	30%	03	60%	06	24%		
	31 to 35 years	03	10%	01	20%	02	8		
2	Religion								
	Hindu	23	76.66%	05	100%	18	72%	1.826	0.1766 NS
	Muslim	05	16.66%	0	0	05	20%		
	Others	02	6.66%	0	0	02	8%		
3	Education								
	No formal Education	07	23.33%	03	60%	04	16%	3.285	0.0699 NS
	Primary	06	20%	01	20%	05	20%		
	Secondary	12	40%	0	0	12	48%		
	Higher Secondary	04	13.33%	01	20%	03	12%		
	Graduate	01	3.33%	0	0	01	4%		
Occupation									
4	House wife	27	90%	05	100%	22	88%	0.6667	0.4142 NS
	Private	01	3.33%	0	0	01	4%		
	Business	02	6.66%	0	0	02	8%		

5	Type of Family								
	Joint	18	60%	03	60%	15	60%	0.000	1.0000 NS
	Nuclear	12	40%	02	40%	10	40%		
Extended	0	0	0	0	0	0			
6	Family income monthly Rs.							0.04800	0.8266 NS
	Below Rs.5000	12	40%	04	80%	08	32%		
	Rs. 6000 to 10000	13	43.33%	0	0	13	52%		
	Rs. 11000 to 15000	04	13.33%	01	20%	03	12%		
	Above Rs. 15000	01	3.33%	0	0	01	4%		
7	Source of information							0.000	1.0000 NS
	Family members	04	13.33%	01	20%	03	12%		
	Friends	0	0	0	0	0	0		
	Media	02	6.66%	0	0	02	8%		
	Health personnel	24	80%	04	80%	20	80%		

NS=Not Significant, S= Significant at $p < 0.05$ level

Table-4: Association between demographic variables and post test knowledge level of mothers of underfive children residing at Morgiri Village, Patan on revised national immunization schedule programme. (N=30)

schedule programme with any other selected demographic variables.

DISCUSSION

The study was conducted to assess the effectiveness of a planned teaching programme regarding revised national immunization schedule. It was aimed to improve the knowledge of mothers of underfive children regarding revised immunization schedule. The mean post-test score 29.5(SD=2.77) was higher than the mean pre-test score 17.4 (SD=3.74) these scores indicate that the planned teaching programme was effective. The significant difference between the 2 tests were tested by using paired 't' test the level of significance was set at the computed 't' value ($p < 0.001$) indicated that there was a significant difference in the knowledge of mothers of underfive children on revised immunization schedule.

A similar study was conducted to assess the effectiveness of STP regarding revised immunization schedule. It was aimed to improve the knowledge of underfive mother regarding revised immunization schedule. The mean posttest score 29.5 (SD 2.77) was higher than the mean pretest score 17.4 (3.54) these score indicate that the STP was effective. The significant difference between the two tests was tested using paired t test the level of significant was set at the computed t value ($p < 0.001$) indicated that there was a significant difference between the knowledge of underfive mother regarding revised immunization schedule.⁷

Result of present study were similar to my study was conducted regarding immunization status among one hundred and thirty mothers in the age group (15-44) years and 142 children aged (12-59) months were selected in Wardha district. Out of this 100 mothers and 122 children could be contacted for evaluation of immunization coverage and assessing maternal knowledge and practice regarding immunization 52.5% children were fully immunized and 45.1% were partially immunized. Vaccine coverage for B.C.G. and primary doses of DPT/OPV was 95.9% and above 85% respectively. It was 57.4% for measles and 63.04% for booster dose was 36.96%. Mothers had a knowledge regarding need for immunization

but a poor knowledge regarding the diseases prevented and doses of the vaccines. The study recommended that mothers need to improve their knowledge regarding immunization thereby preventing disease which can be prevented by vaccine.⁸

A similar study was conducted in Udipi District, Karnataka to determine the knowledge of mothers on immunization of children and to the effectiveness of structured teaching programme (STP) in selected pediatric wards. One group pre test post test design and non probability convenience sampling was used. Data were collected from 50 samples by structured knowledge questionnaire and STP was administered. Data were analyzed by descriptive and inferential statistics. The t – test showed that post test knowledge means score (29.74%) were significantly higher than that of pre – test mean score. This indicated that the STP was effective in improving the knowledge level of mothers regarding immunization.⁹

Result of present study were similar to the study conducted among 50 mothers of underfive children in selected pediatric hospital, Pondicherry. The aim of the study was to evaluate the effectiveness of structured teaching programme (STP) regarding immunization. A closed ended questionnaire with 30 items related to immunization 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 was effective to enhance mothers' knowledge regarding the importance of immunization. The study recommended that nursing personnel should continue in health teaching approach especially to the health problems which can be prevented.¹⁰

CONCLUSION

Results of the study conclude that knowledge of mothers of underfive children on revised national immunization schedule was inadequate in pretest after administration of STP there was again in knowledge, so STP was effective in increasing the knowledge of mother of underfive children regarding revised national immunization schedule.

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