A Study to Assess the Effectiveness of Information, Education and communication on Knowledge and Practice regarding MR Vaccination among the Mothers in Selected Slum Areas of Pune City

Shaikh Salim Karim[1], Jasneet Kaur[2], Mangesh Jabade[3]

[1]M.Sc. Nursing, [2]Assistant Professor, [3]Nursing Tutor, Department of Community Health Nursing, Symbiosis College of Nursing, Symbiosis International (Deemed university), Pune, Maharashtra, India

Abstract

Measles is a very contagious disease which continues to become the killer disease for most of the children and infants. On the other side Rubella Infection also is deadly dangerous especially in the vulnerable population of pregnant women where it disables a child for life with congenital rubella syndrome[1]. This may leads blindness, deafness, and other congenital cardiac defects. Bothe the diseases, however, can be prevented with a safe and effective vaccination of the long term immunity[2]. This immunization directly contributes to the reduction of under-five child deaths across the country population, thereby reducing the disabilities. The present study title: "A Study to Assess the Effectiveness of Information, Education and communication on Knowledge and Practice regarding MR Vaccination among the Mothers in Selected Slum Areas of Pune City." The main purpose of the study was to assess the knowledge, practice and to evaluate the effectiveness of IEC regarding MR vaccination among mothers of selected slum areas of Pune city and to determine associations of the findings with socio demographic variable. **Material and Methods**: A Pre experimental, one group-Pre- test post-test design was adopted for study . Study carried out on 80 samples as below 15yrs. children in selected slum area. The non-probability convenience sampling technique was used to collect the data through structured questionnaire and observational checklist. Ethical clearance was Obtained from Institutional ethics committee. Data analysis was done mainly using descriptive and infrantial statistics. **Result**: The mean post test score 14.27(SD=1.64) was higher than the mean pretest score 8.48(SD=2.9) .The computed t-test statistic value is 15.124733, Corresponding p-value was 0.000, which is small (less than 0.05)and for the practice mean post test score 38.5(SD=7.63)was higher than the mean pretest 26.36(SD=4.25). As the calculated t-value is 12.725452 and p- value was 0.00, which small(less than 0.05.**Conclusion:**Study conclude that the knowledge and practice of mothers was inadequate in pre-test but then after the administration of IEC there was an increase in the knowledge and practices about MR vaccination, so IEC was effective in increasing the knowledge and practice of mothers regarding MR vaccination**.Recommendation:** A similar study can be conducted in pediatric hospital settings, in PHS and CHC center in rural areas, and carried out to evaluate the efficiency of various teaching strategies like self-instruction module, pamphlets, leaflets, on measles and Immunization.

Keywords:*(Assess, Effectiveness, Measles Rubella Vaccine, Mother, Knowledge, Practice, Information, Education, Communication)*

Corresponding Author:
Jasneet Kaur
Assistant Professor, Symbiosis college of Nursing, Symbiosis International (Deemed university), Pune, Maharashtra, India

Introduction

Measles is a very contagious disease which continues to become the killer disease for most of the children and infants. On the other side Rubella Infection also is deadly dangerous especially in the vulnerable population

of pregnant women where it disables a child for life with congenital rubella syndrome.[1] This may leads blindness, deafness, and other congenital cardiac defects. Both the diseases, however, can be prevented with a safe and effective vaccination of the long term immunity[2]. This immunization directly contributes to the reduction of under-five child deaths across the country population, thereby reducing the disabilities.[3] Indian Government has already inculcated measles vaccine in the Universal Immunization Programme.[1] Ever Since the vaccine has been introduced the burden of the measles in India has reduced considerably. The further drop was accelerated by giving a second chance for measles vaccination a mass round happened in the year 2010 in the country.[4] On the basis of the expert committee recommendations, the measles-rubella vaccine is being introduced in our country through a phased MR vaccination campaign in all the states covering 9 month to 15 yr year old children and consecutively introduction of MR vaccine in the national immunization schedule.[5]

Need For The Study

Ministry of Health and Family Welfare, Government of India introduced Immunization schedule and program in India and furher modified as 'Universal Immunization Programme.[2]It initiated in phased manner to cover all districts in the country . It is considered as one of largest health programme in the world.[5] Ministry provides several vaccines to infants, children and pregnant women through that Programme. There are many vaccine included in Immunization Programme to prevent children from many killing diseases.[6]

The researcher felt need of this study is because of poor knowledge and practices of mothers about immunization especially in slum or rural areas of India. Poor knowledge and care less attitude can leads to incomplete vaccination and that can leads to many diseases in children which are preventable. Vaccination is the responsibility of a family or parent however mother is always considered primary person to play role in child care starting from birth of child to growing up in a favorable environment.[7,8] It's because of attitude of society towards role and responsibility of male & female. Indian society still thinks that women are the primary responder to look after everything in family like child care, growth, schooling, handling of old age family members etc. weather they are working or house wife[8] . However Indian societies not digest the role of male in all activities where women look after. That's by father do not aware much about immunization of children as they think not a part of this.

Objectives of This Study

1. To assess the knowledge regarding MR vaccination among mothers of selected slum areas of Pune city.

2. To determine the practice regarding MR vaccination among mothers of selected slum areas of Pune city.

3. To evaluate the effectiveness of IEC regarding MR vaccination among mothers of selected slum areas of Pune city.

4. To determine associations of the findings with socio demographic variable regarding MR vaccination among mothers of selected slum areas of Pune city

Material and Method

In present study, researcher adopted pre experimental one group-Pre- test post-test design. Study carried out on 80 samples as 15yr children in selected slum area. The non-probability convenience sampling technique was used to data was collected using the structured questionnaire and observational checklist. Data was analyzed statistically. Ethical clearance was taken from Institutional ethics committee. Data analysis was done mainly using descriptive statistics

Description of Tool:

The tool includes three sections:

Section A: Part I:- Demographic variables such as age, area of residence, educational status, occupation, family income, religion, type of family and source of information.

Section B: A Self Structured Questionnaire to assess the Structured questionnaire (knowledge assessment).

Section C: Observational checklist (practice assessment) Plan for Data Analysis:

Data analysis was done by using descriptive and

inferential statistics based on objectives of study.

Result and Discussion

SECTION I: Analysis and interpretation of the data are based on data collected from 80samples.

The above table shows that maximum mothers 46.25% are from the age group 28-38 years, majority 35% of the mothers have studied from 8th -10th standard, maximum 41.25% of mothers have family income of 5000-10000. 56.25% gender of the child are male with maximum 42.5% age group from 1-5 years of age. Majority 53.75% of the children have been administered with MR vaccine at school.

Table1: Effectiveness of IEC on Knowledge

SECTION II: FINDINGS RELATED TO EFFECTIVENESS OF IEC ON KNOWLEDGE OF MOTHERS REGARDING MR VACCINATION.

n=80

Knowledge level	**Pre-test**		**Post-test**		**Calculated t-value**	**p-value**
	Frequency	Percentage	Frequency	Percentage		
Good (12-17)	15	18.75	76	95	15.124733	<0.00001
Average (6-11)	49	61.25	4	5		
Poor (1-5)	16	20	0	0		
Mean	8.48		14.27			
SD	2.9		1.64			

The above table provides data about the effectiveness of Information Education Communication (IEC) on knowledge regarding MR vaccination among mothers. There is increase in the mean knowledge of the nursing officers from 8.48(pre-test) to 14.27 (post-test), and standard deviations from 2.9 (pre-test) to 1.64 (post-test). As the calculated t-value is 15.124733 and p-value= <0.00001, where $p<0.05$, Significant at 0.05 level of significance. Hence, statistically there is effectiveness of Information Education Communication (IEC) on knowledge MR vaccination among mothers in selected slum area of Pune city.

Cont... **Table1: Effectiveness of IEC on Knowledge**

Section Iii: Findings Related to Effectiveness of Iec on Practice of Mothers Regarding Mr Vaccination

Practice Score	Pre-test		Post-test		Calculated t-value	p-value
	Frequency	Percentage	Frequency	Percentage		
Good (12-17)	0	0	39	48.75	12.725452	<0.00001
Average (6-11)	74	92.5	41	51.25		
Poor (1-5)	6	7.5	0	0		
Mean	26.36		38.5			
SD	4.27		7.63			

n=80

Table 2: Effectiveness of IEC on Practices

The above table provides data about the effectiveness of Information Education Communication (IEC) on practice regarding MR vaccination among mothers. There is increase in the mean knowledge of the nursing officers from 26.36 (pre-test) to 38.5 (post-test), and standard deviations from 4.27 (pre-test) to 7.63 (post-test). As the calculated t-value is 12.725452 and p-value= <0.00001, where $p<0.05$, Significant at 0.05 level of significance. Hence, statistically there is effectiveness of Information Education Communication (IEC) on practice of MR vaccination among mothers in selected slum area of Pune city.

SECTION IV: FINDINGS RELATED TO CORRELATION BETWEEN KNOWLEDGE AND PRACTICE OF MR VACCINATION AMONG MOTHERS

n=80

Table 3: Correlation between Knowledge and practices

Research Variables	Knowledge Post-test	Practice Post-test	r- value	Remark
Mean	14.27	38.5	-0.0685	Negative correlation
SD	1.64	8.63		

The above table shows the correlation between knowledge and practice of MR vaccination among mothers. The value of r is -0.0685. Although technically a negative correlation, the relationship between the variables is only weak (nearer the value is to zero, the weaker the relationship). Therefore there is no any correlation between knowledge and practice of MR vaccination among mothers in selected slum are of Pune city.

SECTION V: Findings on Association of knowledge and demographic variables.

The result shows the association of obtained scores on knowledge regarding MR vaccination with selected demographic variables of the mothers. The chi square calculated values of the demographic variables are less than the table values and value of $p<0.05$, at 0.05 level of significance. So, statistically there is no association between the selected demographic variables with the knowledge regarding MR vaccination among mothers in selected slum area of Pune city.

n=80

Sr.No	DEMOGRAPHIC	POOR	AVERAGE	GOOD	P Value
1	AGE OF THE MOTHER				
a	18-28	8	21	7	0.956
b	28-38	6	23	8	0.987
c	38-48	2	5	0	
d	48 and above	0	0	0	
2	EDUCATION OF THE MOTHER				
a	Illerate	1	3	0	
b	1st std -7th std.	2	11	5	8.423
c	8th std – 10th std	4	21	3	0.588
d	11th std- 12th std	6	7	5	
e	Graduation	3	6	2	
f	Post graduation	0	1	0	
3	MONTHLY FAMILY INCOME				
a	Less then 5000.	5	5	5	10.198
b	5000 -10000	8	19	6	0.117
c	10000-15000	2	19	2	
d	15000-20000	1	6	2	
4	GENDER OF THE CHILD				2.821
a	Male	7	27	11	0.244
b	Female	9	22	4	
5	AGE GROUP OF A CHILD				
a	9 months – 1 year	4	10	5	3.688
b	1 year – 5 years	8	21	5	0.719
c	6 years- 12 years	4	13	2	
d	15 year and below	0	5	3	
6	Whether MR vaccine is administered in school?				
a	Yes	5	31	7	5.346
b	No	11	18	8	0.069

Table 4: Asociation of knowledge with demographic variables

SECTION VI: FINDINGS ON ASSOCIATION OF OBTAINED SCORES ON EFFECTIVENESS OF IEC ON PRACTICE REGARDING MR VACCINATION AMONG MOTHERS

Table 5 : Association between Practices and demographic variables n=80

Sr.No	DEMOGRAPHIC	POOR	AVERAGE	GOOD	P Value
1	AGE OF THE MOTHER				
a	18-28	4	32	0	0.953
b	28-38	2	35	0	0.987
c	38-48	0	7	0	
d	48 and above	0	0	0	
2	EDUCATION OF THE MOTHER				
a	Illerate	0	4	0	
b	1st std -7th std.	1	17	0	0.512
c	8th std – 10th std	2	26	0	1.000
d	11th std- 12th std	2	16	0	
e	Graduation	1	10	0	
f	Post graduation	0	1	0	
3	MONTHLY FAMILY INCOME				
a	Less then 5000.	1	14	0	0.634
b	5000 -10000	3	30	0	0.996
c	10000-15000	1	22	0	
d	15000-20000	1	8	0	
4	GENDER OF THE CHILD				1.933
a	male	5	40	0	0.380
b	female	1	34	0	
5	AGE GROUP OF A CHILD				
a	9 months – 1 year	2	17	0	0.741
b	1 year – 5 years	3	31	0	0.994
c	6 years- 12 years	0	19	0	
d	15 year and below	1	7	0	
6	Whether MR vaccine is administered in school?				
a	Yes	3	40	0	0.037
b	No	3	34	0	0.982

The result shows the association of obtained scores on practice regarding MR vaccination with selected demographic variables of the mothers. The chi square calculated values of the demographic variables are less than the table values and value of $p<0.05$, at 0.05 level of significance. So, statistically there is no association between the selected demographic variables with the practice regarding MR vaccination among mothers in selected slum area of Pune city.

Discussion

This study was a quasi-experimental study, pretest-posttest design without control group approach was used to assess the to assess the effectiveness of IEC on knowledge and practice on MR vaccination among the mothers of selected slum area of Pune city. The mean post test score 14.27(SD=1.64) was higher than the mean pretest score 8.48(SD=2.9) .The computed t-test statistic value is 15.124733, Corresponding p-value was 0.000, which is small (less than 0.05)and for the practice mean post test score 38.5(SD=7.63)was higher than the mean pretest 26.36(SD=4.25). As the calculated t-value is 12.725452 and p- value was 0.00, which small(less than 0.05). It shows that the IEC was effective method for improving the knowledge and practice of mothers regarding MR vaccination.

Ethical Clearance: Institutional Ethics Committee

Source of Funding: Self

Conflict of Interest: Nil

References

1. http://wwwsearowhoint/india/topics/measles/measles_rubella_vaccine_guidelinespdf?ua=1. [Online]. Available and Accessed 11 August 2020].
2. Universal immunisation program, National health portal. [Online]. Available from: https://www.nhp.gov.in/universal-immunisation-programme_pg [Accessed 11 August 2020]
3. Kaur , K, Sharma, C.P. Assess the Level of Knowledge Regarding Measles Rubella Vaccine Among Mothers of under 15 years Children in Rural Area. IOSR Journal of Nursing and Health Science . 2019; 8(1): 1-5.
4. Sharma P, Sharma K and Sharma H. Assessment of Knowledge Regarding Rubella Infection amongst the Medical Students in a Government Medical College of Southern Rajasthan. Journal of Research in Medical and Dental Science (JRMDS). 2017; 5(4): 30-34.
5. Mereena, Sujatha R. A Study on Knowledge and Attitude Regarding Vaccines among Mothers of Under Five Children attending Pediatric OPD in a Selected Hospital at Mangalore. IOSR Journal of Nursing and Health Science. 2014; 3(5) 39-46.
6. Joe P., Majgi S. M., Vadiraja N., Khan M.A. Influence of socio demographic factors in measles-rubella campaign compared with routine immunization at Mysore City. Indian J Community Med. 2019; 44 (3): 209-212.
7. Palanisamy B., Gopichandran V. and Kosalram K. Social capital, trust in health information, and acceptance of Measles–Rubella vaccination campaign in Tamil Nadu: A case–control study. J Postgrad Med. 2018; 64(4): 212–21
8. *Sawane K, Barde S.* Mother's knowledge on nutrition and incidence of malnutrition. *Indian Journal of Public Health Research and Development* .2019;10 (1): 32-34.