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"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON PREVENTION OF RHEUMATIC FEVER AMONG MOTHERS OF CHILDREN IN SELECTED URBAN COMMUNITY AT JAIPUR."

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ABSTRACT

Many diseases affecting children are preventable in nature. Acute rheumatic fever (RF), usually presenting in childhood, is considered to be the beginning of a preventable chronic disease causing a considerable adult disease burden. Morbidity from acute rheumatic fever (ARF) is directly proportional to the rate of streptococcal infections. Statistically, if someone in the home is infected, one out of every four other household members may get strep throat within two to seven days. Untreated strep throat can cause rheumatic fever but mothers are having lack of knowledge regarding rheumatic fever. The aim of study was to (1) To assess the Pre-test knowledge on prevention of rheumatic fever among mothers of children. (2) To assess the effectiveness of Structured Teaching Programme on prevention of rheumatic fever among mothers of children. (3) To find out the association between Post-test knowledge on prevention of rheumatic fever among mothers of children and their selected demographic variables.

Methods: A pre experimental pre-test-post-test research design was adopted. Non-probability convenient sampling technique was used with sample size of 80 mothers of children. Demographic scale and structured interview schedule were formulated to assess the effectiveness of structure teaching programme.

Results: The overall scores in pre-test shows that 47(58.8%) had got inadequate knowledge (< 50%), 14 (17.4%) had moderate knowledge (50%-75%) and 19(23.8%) got adequate knowledge (>75%). In Post-test 19(23.8%) had moderate knowledge, 41(51.2%) got adequate knowledge and 20(25.0%) had inadequate knowledge. Pre and Post-test Mean percentages are 55.92 and 80.52 respectively. The Pre and Post-test Mean are 13.98,20.13 with SD 3.142, 2.812 respectively, with the Mean difference 6.150. The obtained 't' value is 14.066. As the calculated value for all the aspects are greater than the table value 2.00 required fot t-ratio to be significant at .05 level of confidence. Indicating that the structured teaching programme is effective in increasing the knowledge of mothers regarding rheumatic fever .

Conclusion: The study revealed with the assumption of the study that the knowledge of mothers regarding rheumatic fever.

Keyword: Rheumatic fever, knowledge, structured teaching programme, mothers of children.

INTRODUCTION

The birth of a child is the most precious of experiences in one's life. The ultimate gift one can be blessed with, not all are so fortunate to receive such a blessing. Therefore, we must protect and cherish each and every one. In contrast the loss of a child is the most heart wrenching tragic experience one can suffer through. What's worse is when it comes as the result of severe neglect or abuse. This is certainly unforgivable. These are our babies, so delicate, pure, innocent and helplessly dependent upon us as parents. They are vulnerable and defenceless, which makes them such easy prey for the many evil minds roaming this great planet that we call home.40% of India's population is below the age of 18 years which at 400 million is the world's largest child population. One in every 100 children in India between age group of 0-14 years suffers from acute respiratory infection.

In India, children's vulnerabilities and exposure to violations of their protection rights remain spread and multiple in nature. Despite health improvements over the last thirty years, lives continue to be lost to early childhood diseases, inadequate new-born care and childbirth-related causes. More than two million children die every year from preventable infections. Providing physical and mental health is the most important role of human beings. One of the major goals in health science is to prevent diseases and to promote public health. Since children are future treasures of a nation, prevention of rheumatic fever is essential. One-third of patients with rheumatic fever develop cardiovascular valve disorders.

Rheumatic fever and rheumatic heart disease continue to ravage millions of people around the world. Children and adolescents of the developing countries are especially susceptible to this disease. Overcrowding, poor socioeconomic status and illiteracy contribute to the high prevalence. The epidemiology of ARF is linked with that of Group A beta-haemolytic streptococcal pharyngitis; both have a maximum incidence in the age group of 5 - 15 years. In contrast, in third world countries such as India, the middle-east, sub- Saharan Africa, ARF remains the leading cause of heart disease in children and young adults. According to the WHO, at least 15.6 million people have RHD. Of the 5,00,000 individuals who acquire ARF every year, 3,00,000 go on to develop RHD; and 2,33,000 deaths annually are attributable to ARF or RHD.

Acute rheumatic fever (ARF) is a major problem in the high-risk areas of the tropics, in countries with limited resources, and in communities with minority indigenous populations. Although older literature estimates that 25-40% of cases worldwide appear in those nations, a recent paper suggests the figure may be closer to 95%. As regards the age group, 60% children were between 9 - 12 years, 31.4% were between 5 - 9 years and only 7.9% were below 5 years. We have also reported prevalence of RHD in 378 children below 19 years (mean age 15.1 ± 4.4 years). The male to female ratio was 4:1.7. Its prevalence in low

income developing countries as compared to affluent nations also gives credence to it. The incidence of RF fell steeply in USA from 1970 onwards with extensive use of penicillin for prevention. In India, however, primary prevention has hardly been used. Decline in the incidence, severity and mortality of ARF has been reported in the Western countries over the period of last century. This decline has been attributed to improved nutrition of children and diminished exposure to the infecting organism. The reason for decline of RF in western countries has been due to improved socio-economic status of the community. RF is considered as a social disease i.e. alteration in socio-economic state of a community will adversely or favourably affect the incidence of this disease.

It is now 100 years that we have encountered RF/RHD and this period is a long time for a disease of infectious origin to continue. Although RF has almost disappeared from western countries but it may recur again as it occurred in USA in 1987. It still continues to be a problem in Asia, Africa and South America. Whether in the new millennium, the disease will vanish because of less virulence of streptococci and the possibility of RF vaccine in the near future is yet to be seen. The main question is whether RF and RHD in India have declined significantly that we can ignore this problem. The answer is no. Since the coronary artery disease, hypertension have come to India in epidemic proportion, the hospitals (private, public) and cardiologists are concentrating on management of these diseases. Hence RHD is receiving less publicity and attention. The bottom line is that we should detect RHD early and should carry out secondary prophylaxis. If a safe RF vaccine becomes available, it will be a boon for control of the disease. In a study conducted to explore the extent to which current practices for the secondary prevention of rheumatic fever it was fond that patient knowledge on the disease was almost non-existent. Hence the investigator had an intense interest to carry out a research to assess the mothers' knowledge on prevention of rheumatic fever.

NEED OF THE STUDY

We are all busy in our own lives, some with many problems of our own to deal with; Children of the world are counting on you to help them to grow and become happy, healthy productive leaders of tomorrow. Each and every year that passes, millions of children around the globe are victimized by severe abuse and neglect. Some not so easily spotted to the untrained eye, others are as plain as the nose on our face. However, as individuals we have become self-blinded as to the abusive situations going on around us. As a society we have become equally as blind and extremely ineffective when it comes to taking preventative measures, recognizing and reporting such abuse. Many diseases affecting children are preventable in nature. Acute rheumatic fever (RF), usually presenting in childhood, is considered to be the beginning of a preventable chronic disease causing a considerable adult disease burden.

Parents should be involved with their children at all times, whether in structured or unstructured activities. Involvement needs to be continuous from birth until the child leaves home as a young adult. Parental contact with children is the crucial factor, because children gain security by knowing parents are always there. This is as important for teens as it is for younger children. Considering an educational programme might be of good use to the mothers in prevention of rheumatic fever, the investigator aimed to evaluate the effectiveness of the teaching programme among mothers of children. And as concerned citizens do

something about it; something meaningful, something concrete, something urgently. No more do we have the luxury of blaming the system or postponing our actions. The time to take collective as well as individual responsibility to remedy the present situation is here. Right now! And also, we need many more Smiles to cater to the vast (increasing) number of children in our country's population.

Recent data from India suggest that a large number of cases of ARF/RHD are still seen frequently in young children under the age of 10 years. 191 children below 12 years of age were examined with definitive clinical features of ARF. Morbidity from acute rheumatic fever (ARF) is directly proportional to the rate of streptococcal infections. Statistically, if someone in the home is infected, one out of every four other household members may get strep throat within two to seven days. Untreated strep throat can cause rheumatic fever. Although once considered a rarity in the Indian subcontinent, the prevalence of rheumatic heart disease (RHD) is now recognised to be very high, particularly among children and young adults. Indeed, such was the severity of the problem in developing countries that in 1982 the WHO/International Society and Federation of Cardiology established a committee to combat the disease over a phased period. The prevalence of ARF in school children of Kanpur District in Uttar Pradesh was 0.75/1,000 (rural 1.20 and urban 0.42).15 In the largest school survey conducted at Vellore during 2001 - 2002, a total of 2,29,829 children between 6 - 18 years of age were screened as part of a school health programme. The prevalence of RHD was 0.68/1,000 school children, which showed a declining prevalence of RHD in rural children in India. A course of antibiotics started within nine days of the onset of sore throat prevents most cases of ARF. There is an undeniable relationship between the incidence of RF and living standards. ARF and RHD have declined in many parts of the world, however, it continues unabated in other areas. Even in India, the prevalence of RHD has shown much decline in the state of Tamilnadu, but not in Orissa. According to recent hospital surveys, the prevalence of RHD in Tamilnadu has declined to 0.68/ 1000 school children, but hospital admission statistics did not show a decline in Orissa. It is important to recognize however, that data from these highly selected regions are not representative of the country as a whole. The parts of the country with the highest prevalence today are also those regions with the poorest healthcare infrastructure.

A consolidated effort is necessary to improve the socio-economic condition of the poorer strata in society to stem the tide of ARF and RHD epidemic. A recent review of RF suggested that ‘new approaches to primary prevention are needed given the limitations of primary prophylaxis as a population-based strategy’.5 Currently, the most promising medical areas look to be improving access to health care and introducing community and school-based sore throat interventions. In a study conducted to determine mothers' knowledge about different aspects of rheumatic fever. 500 mothers referred to healthcare centers in Guilan province were sought for the study which used a questionnaire to evaluate their knowledge about five different aspects of rheumatic fever. Among the 443 respondents, good knowledge about treatment was high. Fewer mothers had a good level of knowledge about other aspects of treatment: epidemiology 34%, symptoms 4%, route of infection 27% and complications 10.5%. More educated women had significantly better knowledge about rheumatic fever. The study concluded that expanded health education is required to improve knowledge about this condition among the population. With the above views in

mind, the investigator intended to assess the knowledge of the mothers on prevention of rheumatic fever. The National Department of Health of South Africa declared the week of 3-7 August 2009 as Rheumatic Fever Week. ProCor ran daily briefings on various aspects of the worldwide campaign to prevent and eventually eradicate rheumatic fever 'in our own lifetime.

statement of the problem:

"A study to evaluate the effectiveness of structured teaching programme on prevention of rheumatic fever among mothers of children in selected urban community at Jaipur."

OBJECTIVES:

• To assess the Pre-test knowledge on prevention of rheumatic fever among mothers of children.

• To assess the effectiveness of Structured Teaching Programme on prevention of rheumatic fever among mothers of children.

•To find out the association between Post-test knowledge on prevention of rheumatic fever among mothers of children and their selected demographic variables.

HYPOTHESIS

H1: There is a significant difference in Pre and Post-test knowledge of mothers of children regarding prevention of rheumatic fever.

H2: There is a significant association between Post-test knowledge on prevention of rheumatic fever among mothers of children and their selected demographic variables**.**

ASSUMPTIONS

The study assumes that- 1. Mothers of children may have some knowledge regarding prevention of rheumatic fever.

2.Structured Teaching Programme may enhance the knowledge of mothers of children regarding prevention of rheumatic fever.

DELIMITATION

The study is delimited to 80 Mothers of children who are residing in the selected urban community, Jaipur.

RESEARCH METHODOLOGY: -

Quantitative approach was used to achieve the objectives of the study. The research design used for the study was pre-experimental one group pre-test and post- test design. The setting of present study was urban community at Jaipur. In this study sample consists of 80 mothers of children. Non-probability convenient sampling technique was used in the age group between <25 to >35 years was done with an inclusion criterion - (1) Who are willing to participate in the study? (2) Who are available at the time data collection and exclusion criteria-(1) Who are not willing to participate? A formal written permission was obtained from the Principal of Institute of medical technology and nursing education Sitapura Jaipur. In view of nature of the problem and to accomplish the objectives of the study a structured interview schedule was prepared and thirty questions were formulated to assess the effectiveness of structured teaching programme

on prevention of rheumatic fever among mothers of children in selected urban community at Jaipur. Reliability and validity of the tool was ensured in consultation with guide and experts in the related field. The data was collected and analysed by using descriptive and inferential statistics according to objectives and hypothesis of the study. Data was collected within 6 weeks.

ANALYSIS AND INTERPRETATION

Table 1: Frequency and Percentage description of demography profile of respondent

N=80.

Sr.no.	Demographicvariable	**Category**	**Frequency**	**Percentage**
1	**Age (in year)**	< 25 YEAR	36	45.0
		26-30 YEAR	20	25.0
		31-35YEAR	14	17.5
		> 35YEAR	10	12.5
2	Religion	Hindu	46	57.5
		Christian	1	1.3
		Muslim	31	38.8
		Others	2	2.5
3	Number of children	1	36	45.0
		2	20	25.0
		3	14	17.5
		>3	10	12.5
4	Education	Elementary education	29	36.2
		Secondary	32	40.0
		Higher Secondary	8	10.0

		Graduate/ Post graduate	11	13.8
5	Occupation	House Wife	33	41.3
		Self employee	10	12.5
		Private employee	27	33.8
		Govt employee	10	12.5
6	Monthly income ofthe family: (in Rupees)	Less 5000/-	28	35.0
		5000-10000/-	28	35.0
		10001-15000	7	8.8
		More than15,000	17	21.3
7	**Type of Family**	Nuclear	43	53.8
		Joint	37	46.2

8	Family history of rheumatic fever	Yes	8	10.0
		No	72	90.0
9	Source of knowledgeon Prevention of rheumatic fever.	Friends and Relatives	13	16.3
		Mass media	4	5.0
		Health care professional	3	3.8
		None	60	75.0

Table 2: Frequency and percentage distribution of pre-test knowledge score

LEVEL OF KNOWLEDGE	SCORES	N=80	
		FREQUENCY	PERCENTAGE
Inadequate knowledge	<50	47	58.8
Moderate knowledge	50-75	14	17.4
Adequate knowledge	>75	19	23.8
Total		**80**	**100.0**

Table 3: Frequency and percentage distribution of post test knowledge score

LEVEL OF KNOWLEDGE	SCORES	N=80	
		FREQUENCY	PERCENTAGE
Inadequate Knowledge	<50	20	25.0
Moderate Knowledge	50-75	19	23.8
Adequate Knowledge	>75	41	51.2
Total		**80**	**100.0**

Table: 4.: Area wise mean, standard deviation and mean% of knowledge score

Area of knowledge	PRE TEST				POST TEST			CORE RESULT		
	Max score	Mean (X)	Std. Deviation	M%	Mean (Y)	S.D	MeanY %	Mean (X-Y)	S.D	Mean %
Knowledge Rheumatic fever	25	13.98	3.142	55.92	20.13	2.812	80.52	6.150	0.333	24.6
Meaning, causes and risk factors of rheumatic fever (1-8)	8	4.98	1.378	62.25	6.30	1.195	78.75	1.325	0.183	16.5
Manifestations, diagnosis and management of rheumatic fever (9-14)	6	3.20	1.521	53.33	5.31	.894	88.5	2.113	0.627	33.17
Prevention (15-25)	11	5.80	2.046	52.72	8.51	2.135	77.36	2.713	0.089	24.64

Table-5: Mean, standard Deviation and 't' distribution of pre-test andpost-test level of knowledge

Area of knowledge	Group	Mean	Std. Deviation	M.D	T-test	Sig	Result of H_1
Knowledge of rheumatic fever	Pre	13.98	3.142	6.150	14.066	Sig	Accepted
	Post	20.13	2.812				
Meaning, causes and risk factors of rheumatic fever	Pre	4.98	1.378	1.325	7.383	Sig	Accepted
	Post	6.30	1.195				
Manifestations, diagnosis and management of rheumatic fever	Pre	3.20	1.521	2.113	11.427	Sig	Accepted
	Post	5.31	.894				
Prevention	Pre	5.80	2.046	2.713	10.138	Sig	Accepted
	Post	8.51	2.135				

Table-6 Association of Post-test knowledge of Mothers of children withtheir selected demographic variables.

Sr. No	Variable	Category	freq	inadequate	Moderate	adequate	Ch.sq	D.f	Sing /table	Results
1	Age	less than 25 years	36	23	8	5	16.179	6	12.591	Sig
		25-30 years	20	13	3	4				
		31-35 years	14	4	1	9				
		36 yrs and above	10	7	2	1				
2.	Relgion	Hindu	46	23	11	12	5.421	6	12.591	NS
		Christian	1	1	0	0				
		Muslim	31	21	3	7				
		Others	2	2	0	0				
3	No of children	1 child	36	23	8	5	16.179	6	12.591	Sig
		2 children	20	13	3	4				
		3 children	14	4	1	9				
		More than 3 children	10	7	2	1				
4	Education	Elementary education	29	17	8	4	12.658	6	12.591	Sig
		Secondary	32	17	3	12				
		Higher Secondary	8	5	0	3				
		Graduate/ Post	11	8	3	0				

		graduate								
5	Occupation	House Wife	33	25	6	2	24.661	6	12.591	Sig
		Self employee	10	6	2	2				
		Private employee	27	9	3	15				
		Govt employee	10	7	3	0				
6	Family income per month	Less 5000/-	28	20	4	4	24.241	6	.000	Sig
		5000-10000/-	28	17	8	3				
		10001-15000	7	6	0	1				
		More than 15,000	17	4	2	11				
7	**Type of Family**	Nuclear	43	27	6	10	.936	2	5.911	NS
		Joint	37	20	8	9				
8	Family history of rheumatic fever	Yes	8	6	1	1	1.000	2	5.911	NS
		No	72	41	13	18				
9	Source of knowledge on Preventionof rheumatic fever	Friends AndRelatives	13	1	3	9	38.897	6	12.591	Sig
		Mass media	4	0	1	3				
		Health care professional	3	0	2	1				
		None	60	46	8	6				

DISCUSSION

The result showed that majority of 36 (45.0%) of the Mothers of children were <25 years of age, 14(17.5%) were between the age group of 31 – 35 years, 20 (25.0%) of them were between the age group of 26 – 30 years and 10 (12.5%) were >35 years of age. Considering the religion, Majority 46 (57.5%) of the Mothers of children were Hindu, 1 (1.2%) of them were Christian, 31 (38.8%) of them were Muslim and 2(2.5%) belong to other religion. In relation to the number of children, majority 36(45.0%) of them have one child, 20 (25.0%) of them have two children,14(17.5) have three children and 10(12.5%) them have more than 3 children. With regard to the education, majority 32(40.0%) of them had their secondary education, 8 (10.0%) of them had their higher secondary education, 11(13.8%) were graduates and above and 29 (36.2%) had their elementary education. Considering the occupation, majority 33 (41.2%) of them were house wife, 10 (12.5%) are of them were self-employed,27(33.8%) of them are Private employees and 10(12.5%) are govt. employees. In relation to the monthly income of the family, 28 (35.0%) of the Mothers of children had a salary ranging between less than 5000 Rupees, 28(35.0%) of them had salary ranging between 5000 -10000 rupees, 7 (8.8%) of them had a salary 10001-15000 rupees and 17 (21.2%) of respondents had a salary more than 5000 rupees. Regarding the type of family, Majority 43 (53.8%) of respondents belong to nuclear family whereas 37 (46.2%) of them belong to joint family. Majority 72(90.0%) of them had no family history of rheumatic fever and only 8 (10.0%) had family history of rheumatic fever. Regarding the Source of knowledge, majority 60 (75.0%) of Mothers of children got no information on Prevention of rheumatic fever, 3(3.7%) had their knowledge from health personnel, 4 (5%) got information from Mass media and 13(16.3%) of them got information from friends and relatives.

The pre-test knowledge scores of Mothers of children shows that 47 (58.8%) had got inadequate knowledge (< 50%), 14 (17.4%) had moderate knowledge (50%-75%) and 19 (23.8%) got adequate knowledge (>75%). Statistical analysis shows that the Pre and Post-test Mean percentages are 55.92 and 80.52 respectively. The Pre and Post-test Mean are 13.98,20.13 with SD 3.142, 2.812 respectively, with the Mean difference 6.150. The obtained 't' value is 14.066. As the calculated value for all the aspects are greater than the table value 2.00 required fot t-ratio to be significant at .05 level of confidence, hence the research hypothesis H1 is accepted. Association of Post-test knowledge of Mothers of children with their selected demographic variables was done using chi square test. Partially significant association was found between the post-test knowledge of Mothers of children and their selected demographic variables as the obtained $\chi 2$ value is greater than the table value at $p > 0.05$. Hence the research hypothesis H2 stating that, there will be a significant association between the post-test knowledge of Mothers of children and their selected demographic variables is partially accepted.

CONCLUSION

On the basis of findings, the investigator concluded that the STP has improved the knowledge of the Mothers of children on Prevention of rheumatic fever. Every effort must be made to reduce the morbidity associated with the most severe cases. While using traditional health education as a means to reduce the incidence of health problems or to change parenting behaviours, especially among high-risk groups, new methodology particularly the use of motivational interviewing and the use of community development approaches for health promotion show promise or should be explored. Mothers, thus can contribute effectively in prevention of rheumatic fever. Being a good parent is one of the most important responsibilities that we incur in life, with the distinct possibility of truly satisfying rewards. By our godly example and positive teaching, we can influence the lives of our sons and daughters for the good.

The overall experience of conducting the study was satisfying and enriching. The study was a new learning experience for investigator. The study shows that there was a great need to educate the mothers and the public in order to enhance the knowledge of Mothers of children in preventing rheumatic fever.

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