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Effectiveness of structured teaching programme on knowledge regarding rubella vaccine among parents of children, 1-12 year

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ABSTRACT

Background: Rubella also known as German measles is a mild viral disease characterized by mild fever and maculopapular rash. During 2000-2018, measles vaccination prevented an estimated 23.2 million deaths. Routine measles vaccination for children combined with mass immunization campaigns in countries with high case and death rates, are key public health strategies to reduce global measles deaths. The aim of the study is to assess the effectiveness of structured teaching programme on knowledge regarding rubella vaccine among parents of children (1-12 year).

Methods: Pre experimental one group pre-test post-test design. Total 60 parents were taken who have children (1-12 years); purposive sampling technique was used to select the parents. A structured knowledge questionnaire was prepared by the investigator. Informed consent was taken from each participant prior to data collection and Descriptive and inferential statistics i.e., frequency, percentage, paired' test, chi-square test was used for analysis.

Results: Pre-test knowledge score of parents regarding rubella vaccine revealed that 53.33% parents had inadequate knowledge, and 46.66% parents had moderately knowledge. After structured teaching programme, the posttest knowledge scores of parents shows that 13.33% parents had adequate knowledge, 83.33% parents had moderately adequate knowledge and 3.33% have inadequate knowledge.

Conclusions: The structured teaching programme (STP) through flash cards, charts and roller board etc. found to be very effective in improving the knowledge among parents who have children (1-12 year) on rubella vaccine.

Keywords: STP, Parents, Children, Rubella vaccine

INTRODUCTION

Measles is one of the world's most contagious diseases. Measles is a serious disease caused by a virus in the paramyxovirus family. Paramyxovirus normally passed through direct contact and through the air. The virus infects the respiratory tract, then spreads throughout the body. It is spread by coughing and sneezing, close personal contact or direct contact with infected nasal or throat secretions. Rubella infection of the fetus may lead to deafness, blindness, heart defects, mental retardation,

and other birth defects referred to collectively as congenital rubella syndrome (CRS).¹

The virus remains active and contagious in the air or on infected surfaces for up to 2 hours. It can be transmitted by an infected person from 4 days prior to the onset of the rash to 4 days after the rash erupts. During 2000-2018, measles vaccination prevented an estimated 23.2 million deaths. Global measles deaths have decreased by 73% from an estimated 536,000 in 2000 to 142,000 in 2018-mostly children under the age of 5 years.²

Routine measles vaccination for children combined with mass immunization campaigns in countries with high case and death rates, are key public health strategies to reduce global measles deaths. The measles vaccine has been in use for nearly 60 years. It is safe, effective and inexpensive. Accelerated immunization activities have had a major impact on reducing measles deaths.

In 2018, about 86% of the world's children received 1 dose of measles vaccine by their first birthday through routine health services-up from 72% in 2000.² Two doses of the vaccine are recommended to ensure immunity and prevent outbreaks, as about 15% of vaccinated children fail to develop immunity from the first dose. In 2018, 69% of children received the second dose of the measles vaccine.^{2,3}

A total of 1.2 million children did not receive the first dose of measles-containing-vaccine (MCV1) in 2019 in India, accounting for nearly half of the world's total along with the remaining five countries. These alarming figures with act as a warning that. the COVID-19 pandemic occupying health systems across the world, we cannot afford to take our eye off the ball when it comes to other deadly diseases. Measles is entirely preventable; in a time in which we have a powerful, safe and cost-effective vaccine nobody should still be dying of this disease. COVID-19 has resulted in dangerous declines in immunization coverage, leading to increased risk of measles outbreaks. This is why countries urgently need to prioritize measles catch-up immunization. 4-6 Therefore this study was structured to estimate rubella vaccine knowledge in mothers of child bearing age and its association with their knowledge, awareness, reasons for not receiving vaccine and the outlook of unvaccinated subjects for future vaccination against rubella.

METHODS

A pre-experimental one group pre-test post-test research design is used. Study is conducted at villages of Udaipur district, Rajasthan. This study consists of 60 parents of children (1-12 years) living in rural community area at Udaipur and parents who can read and understand the Hindi and English language. Purposive sampling technique was used to select the sample. Data were collected by interview using a data sheet for recording personal variables details of parents of children regarding their age, religion, source of information. Knowledge was assessed by a structured questionnaire on rubella vaccine. One mark will be given for each correct answer and zero for each incorrect or the unanswered item. Scores of knowledges are categorized into three levels: inadequate, moderate and adequate knowledge. Out of a total score of 20, a score of 7 or below is considered as an inadequate knowledge, 08 to 14 is considered as moderate knowledge, and 15 or greater is considered as adequate knowledge. Data were analyzed using SPSS 21 version descriptive statistics and inferential statistic were employed. The plan of data analysis was developed as

frequency and percentage, mean, standard deviation, chisquare test and paired 't' test was used to evaluate the effectiveness of structured teaching programme on rubella vaccine.

RESULTS

Data analysis in order determine the effectiveness of structured teaching programme regarding the knowledge on rubella vaccine among parents of children (1-12 years).

Table 1: Frequency and percentage distribution of samples on rural demographic variable, n=60.

Demographic variables	Frequency	Percentage (%)
Age (years)		
20-30	6	10
31-40	30	50
41-50	24	40
51 and above		
Religion		
Hindu	55	92
Muslim	05	8
Family income		
Below 5,000	16	27
5,001-10,000	18	30
10,001-15,000	10	17
Above 15,000	16	27
Type of family		
Nuclear	8	13
Joint	52	87
Source of information		
Family members	10	17
Health personnel	16	27
Mass media T.V.		
radio, news-paper,	12	20
magazines etc		
All of above	22	37

The data presented in the Table 1 shows, the number of samples was 10% in the age group of 20-30 years, majority of were in the age group of 31-40 years and 10% parents were in the age group of 41-50 years. Regarding the source of information, 17% parents got information through Family members, 27% parents got information through health personnel, 20% parents got information through mass media-T.V. radio, newspaper, magazines etc and 37% parents got information through all of above sources.

The data in the Table 2 shows that the pre-test knowledge score of parents revealed that 53.33% parents had inadequate knowledge, and 46.66% parents had moderately adequate knowledge about rubella vaccine. After structured teaching programme, the posttest knowledge scores of parents shows that 13.33% parents had adequate knowledge, 83.33% parents had moderately

adequate knowledge and 3.33% have Inadequate knowledge.

Table 2: Distribution of samples according to the pre and post-test knowledge scores of parents regarding rubella vaccine.

Level of knowledge	Post-test		Pre-test	
	Freq.	%	Freq.	%
Adequate knowledge (15-20)	8	13.3	0	0
Moderate knowledge (08-14)	50	83.3	28	46.6
Inadequate knowledge (0-7)	2	3.3	32	53.3

Table 3: Mean and standard deviation of pre and post-test knowledge score of the parents.

Knowledge score	Mean	Mean (%)	SD	'T' test
Pre-test	11.16	55.80	3.42	7.65*
Post-test	14.2	71.20	3.37	7.65*

^{*}P=0.05 significant levels

The data in the Table 3 shows that the mean post-test knowledge score of the parents regarding rubella vaccine are significantly higher than their mean pre-test knowledge scores.

In order to find out the significant difference between the mean score of pre and post-test knowledge score of the parents regarding rubella vaccine paired 't' test was computed. The calculated value is higher than the table value. Hence the researcher concluded that gain in knowledge by structured teaching programme on rubella vaccine.

DISCUSSION

In this study, the pre-test knowledge score of parents revealed that 53.33% parents had inadequate knowledge, and 46.66% parents had moderately adequate knowledge about rubella vaccine. After structured teaching programme, the posttest knowledge scores of parents shows that 13.33% parents had adequate knowledge, 83.33% parents had moderately adequate knowledge. The present study is supported by the findings of a similar evaluative research study by Raghu et al shows that 60% of the mothers had inadequate knowledge and 40% of mothers had moderate knowledge level in the pretest. Further, none of them had adequate knowledge on Measles and its vaccination in the pretest. The post test result showed that 64% of the mothers had adequate knowledge and 36% of mothers had moderate knowledge level in the post test.⁷ Another related study conducted on health survey regarding immunization status among 130 mothers in the age group (15-44) years and 142 children aged (12-59) months were rural in Wardha district. In this assessing maternal knowledge and practice regarding

immunization and result shows that 52.5% children were fully immunized and 45.1% were partially immunized.⁸

CONCLUSION

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.

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REFERENCES

- 1. Ghai OP, Essential pediatrics, Seventh Edition, CBS Publishers and distributors PVT. Ltd. 2010;185-6.
- 2. WHO. Measles-Global Situation'. Available at: http://www.who.int/csr/don/26-november-2019-measles-global_situation/en/. Accessed 5 Jan. 2021.
- 3. Measles. Available at: https://www.who.int/news-room/fact-sheets/detail/measles. Accessed on 5 January 2021.
- 4. India among 6 Countries with Highest Tally of Infants Who Didn't Get Measles Vaccine: Report. The Indian Express, 16 Nov. 2020, https://indianexpress.com/article/cities/pune/india-among-6-countries-with-highest-tally-of-infants-who-didnt-get-measles-vaccine-report/. Accessed on 5 January 2021.
- Worldwide Measles Deaths Climb 50% from 2016 to 2019 Claiming over 207 500 Lives in 2019. https://www.who.int/news/item/12-11-2020worldwide-measles-deaths-climb-50-from-2016-to-2019-claiming-over-207-500-lives-in-2019. Accessed on 5 January 2021.
- 6. Vaidya SR. Commitment of Measles Elimination by 2020: Challenges in India. Indian Pediatrics. 2015;52:103-6.
- 7. Raghu VA, Mahantesh D. Effectiveness of structured teaching programme on knowledge regarding Measles and its vaccination among mothers of under five children at selected rural area. Singhgad College of Nursing. 2017;7(1):45-50.
- 8. Singh MC. Immunization Coverage and the Knowledge and Practice of Mothers Regarding Immunization in Rural Area. Indian J Public Health. 1994;38(3):103-7.

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