

## KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) OF RUBELLA VACCINATION IN ADOLESCENT GIRLS ATTENDING GYNAECOLOGY OPD AT BRD MEDICAL COLLEGE, GORAKHPUR

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### ABSTRACT

#### BACKGROUND

Rubella, also called German measles, is a disease of childhood. In the absence of pregnancy, it is usually clinically manifested as a mild self-limited infection. But a woman infected with the Rubella virus during the early stage of pregnancy has a 90% chance of transmitting it to the foetus. The virus can cause hearing impairments, eye and heart defects and brain damage in newborns, and even spontaneous abortion and foetal deaths. Of the 1,10,000 children born with CRS every year globally, an estimated 40,000 cases occur in India alone. A single dose of Rubella vaccine gives more than 95% long-lasting immunity.

**Aims and Objectives-** To study about Knowledge, Attitude & Practice (KAP) on Rubella vaccine among adolescent girls attending GYN OPD of BRD Medical College, Gorakhpur and the factors influencing KAP towards Rubella vaccination among adolescent girls.

#### MATERIALS AND METHODS

This descriptive study was done in the Department of Obstetrics and Gynaecological OPD at BRD Medical College, Gorakhpur, among adolescent girls. Among these adolescent girls, those who gave informed consent to participate in the study were interviewed by using a pre-structured questionnaire.

#### RESULTS

There were 40.10% of participants who had heard of Rubella previously. Of these, the most common source of information was books and television. The Rubella vaccine was known to 13.02% of the participants. Nobody in the study was Rubella immune.

#### CONCLUSION

Some lacunae in knowledge of the participants were seen in this study. Information to young women and our whole society should be improved and our aim should be to increase the motivation towards use of prevention methods such as taking the Rubella vaccine.

#### KEYWORDS

Knowledge, Attitude and Practice (KAP) Study; Rubella Vaccine; Congenital Rubella Syndrome (CRS).

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#### BACKGROUND

According to the World Health Organisation (WHO), "a single dose of Rubella vaccine gives more than 95% long-lasting immunity." All children aged nine months and 15 years will be administered a single dose of the combination vaccine. India has set an ambitious target of eliminating measles and controlling congenital Rubella syndrome (CRS), caused by the Rubella virus, by 2020.<sup>1</sup> Rubella, also called German measles, is a disease of childhood that has markedly declined in incidence in North America since the introduction of routine childhood Rubella vaccination.

In the absence of pregnancy, it is usually clinically manifested as a mild self-limited infection. But a woman infected with the Rubella virus during the early stage of pregnancy has a 90% chance of transmitting it to the foetus. The virus can cause hearing impairments, eye and heart defects and brain damage in newborns, and even spontaneous abortion and foetal deaths. Of the 1,10,000 children born with CRS every year globally, an estimated 40,000 cases occur in India alone.<sup>2,3,4</sup>

Rubella Vaccine Live, attenuated (R-VAC) (Lyophilised) is prepared using Wistar RA 27/3 strain Rubella vaccine virus. This vaccine virus is propagated on human diploid cells (HDC). The vaccine is lyophilised and is provided with diluent. Each single human dose when reconstituted in a volume of 0.5 mL contains not less than 1000 CCID50 of live virus particles. Stability data has shown that the vaccine retains the potency of 1000 CCID50 per dose after 1 week at 37°C.<sup>5,6,7</sup>

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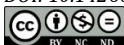
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**Justification**

In spite of availability of very effective vaccine against Rubella, acceptance of Rubella vaccination is very low in our setup.

The purpose of this study was to explore factors influencing acceptance of Rubella vaccine.

**Aims and Objectives**

To study Knowledge, Attitude & Practices on Rubella vaccine among adolescent girls attending GYN OPD of BRD Medical College, Gorakhpur and the factors influencing knowledge, attitude, practices towards rubella vaccination among adolescent girls.

**MATERIALS AND METHODS**

**Study Setting**

Department of Obstetrics & Gynaecology, BRD Medical College, Gorakhpur.

**Study Unit**

Adolescent girls attending GYN OPD of BRD Medical College, Gorakhpur.

**Study Design**

Descriptive study.

**Sample Size**

$n = 4 pq/l2 = 384$ , Assuming 10% non-responders, final sample come out to be  $384 + 39 = 423$ .

**Study Duration-** 12 months.

**Methodology**

- Adolescent girls attending OPD were asked to participate in the study. Among these adolescent girls, those who gave informed consent to participate in the study were interviewed by using a pre-structured questionnaire.
- Sampling technique is purposive sampling. Adolescent patients with unstable vitals not included in the study.

**RESULTS**

Age (Years)	Number (N)	Percentage (%)
10-13	58	15.10
14—16	135	35.16
17-19	191	49.74
Background		
Rural	314	81.78
Urban	70	18.22
Religion		
Hindu	265	69.01%
Muslim	79	20.58%
Sikh	28	07.29%
Christian	12	03.12%
Education (Subjects)		
5 <sup>th</sup>	59	15.37
8 <sup>th</sup>	62	16.14
10 <sup>th</sup>	80	20.84
12 <sup>th</sup>	100	26.04

Graduation	83	21.69
Education (Father)		
Illiterate	36	09.37
5 <sup>th</sup>	57	14.84
10 <sup>th</sup>	77	20.05
12 <sup>th</sup>	158	41.15
Graduate	56	14.54
Education (Mother)		
Illiterate	134	34.90
5 <sup>th</sup>	58	15.10
10 <sup>th</sup>	133	34.64
12 <sup>th</sup>	38	9.89
Graduate	21	5.49
Socioeconomic Status		
Upper Class	8	02.83
Upper Middle Class	80	20.83
Middle Class	131	34.11
Lower Middle Class	126	32.81
Lower Class	39	9.42

**Table 1. Sociodemographic Profile of Subjects Interviewed for KAP Study of Rubella Vaccination**

Rubella Infection	Number (N)	Percentage (%)
Yes	154	40.10
No	230	59.90
<b>Total</b>	<b>384</b>	<b>100</b>

**Table 2. Status of Knowledge of Rubella Infection among Subjects Interviewed for KAP Study of Rubella Vaccination**

Rubella Vaccine	Number (N)	Percentage (%)
Yes	50	13.02
No	334	86.98
<b>Total</b>	<b>384</b>	<b>100</b>

**Table 3. Status of Knowledge of Rubella Vaccine among Subjects Interviewed for KAP Study of Rubella Vaccination**

Source of Knowledge	Rubella
Newspaper	20 (12.99%)
Radio	10 (6.49%)
TV	50 (32.47%)
Internet	0 (0.0%)
Books	64 (41.55%)
Health Worker	10 (6.49%)
Friends	0 (0.0%)
Relatives	0 (0.0%)
Magazine	0 (0.0%)
Total	154

**Table 4. Source of Knowledge of Rubella Vaccine among Subjects Interviewed for KAP Study of Rubella Vaccination**

Sl. No	Question	Yes N (%)	No N (%)
1	Is Rubella an infectious disease?	80 (20.83%)	304 (79.17%)
2	Do you know that Rubella infection during pregnancy causes adverse effect on foetus?	50 (13.02%)	334 (86.98%)
3	During pregnancy Rubella infection causes heart disease, deafness, cataract.	50 (13.02%)	334 (86.98%)
4	Is Rubella prevented by vaccine?	50 (13.02%)	334 (86.98%)
5	Is Rubella diagnosed by investigation?	45 (11.71%)	339 (88.28%)

**Table 5. Knowledge of Sequelae of Rubella Infection among Subjects Interviewed for KAP Study of Rubella Vaccination**

Item	Strongly Disagree	Disagree	Can't say	Agree	Strongly Agree
1. I think my guardians could pay for the vaccine	20 (5.2%)	76 (19.79%)	150 (39.06%)	98 (25.52%)	40 (10.41%)
2. I would get the vaccine if it were for free	10 (2.6%)	10 (2.60%)	20 (5.20%)	144 (37.51%)	200 (52.08%)
3. It is not necessary for me to get vaccinated	200 (52.08%)	104 (27.08%)	50 (13.02%)	10 (2.6%)	20 (5.2%)
4. Only sexually active women should receive the vaccine	70 (18%)	36 (9.38%)	150 (39.06%)	62 (16.14%)	62 (16.14%)
5. My parents would not allow me to get the vaccine	200 (52.08%)	100 (26.04%)	54 (14.06%)	15 (3.90%)	15 (3.90%)
6. I wish to get more information about Rubella infection and Rubella vaccination	20 (5.2%)	20 (5.2%)	40 (10.91%)	104 (27.08%)	200 (52.08%)

**Table 6. Attitude towards Rubella Vaccination among Subjects Interviewed for KAP Study of Rubella Vaccination**

Vaccination Status	Number (N)	Percentage (%)
Yes	0	0
No	58	37.66
Don't Know	96	62.34
<b>Total</b>	<b>154</b>	<b>100</b>

**Table 7. Practice towards Rubella Vaccination among Subjects and their Family Members Interviewed for KAP Study of Rubella Vaccination**

**DISCUSSION**

The aim of the study was to collect baseline data on knowledge on Rubella vaccine and also acceptability for vaccination in adolescent girls. There were 40.10% of participants that had heard of Rubella previously. Of these, the most common source of information was books and television. The Rubella vaccine was known to 13.02% of the participants. Over 85% of the participants had no knowledge of Rubella. In total, most of the participants in the sample were found to have a positive level of attitude towards the vaccine. Almost all participants wanted to know more about Rubella infection and its vaccines. In contrast to present study, in a study conducted by Juliana Costa Vieir et al (2011), although 69.9% of respondents said they knew what Rubella is, but actual knowledge of the disease was limited, with only 29.9% answering affirmatively when asked if they would recognise symptoms of Rubella infection.<sup>8</sup>

The knowledge regarding Rubella infection is maximum among age group of 17-19 years that is 73.29%, followed by age group of 14-16 years that is 10.37%. There was no knowledge of Rubella infection among early adolescents (10-13 years).

The knowledge regarding Rubella vaccine is maximum among age group of 17-19 years that is 25.69% followed by age group of 14-16 years that is 0.74%. There was no knowledge of Rubella infection among early adolescents (10-13 years).

Individual participants who were educated up to 8<sup>th</sup> class had no knowledge of Rubella infection. The knowledge regarding Rubella infection was maximum among patients who were educated up to graduation level (Rubella 93.98%) followed by patients educated up to 12<sup>th</sup> standard (70.0%).

Individual participants who were educated up to 8<sup>th</sup> class had no knowledge of Rubella vaccine. The knowledge regarding Rubella vaccine was maximum among patients who were educated up to graduation level (Rubella 36.14%) followed by patients educated up to 12<sup>th</sup> standard (Rubella 18.0%).

Individual participants who belonged to lower class had no knowledge regarding Rubella infection. The knowledge regarding Rubella infection was maximum among participants who belonged to upper class socioeconomic status (Rubella 75%) followed by participants who belonged to upper middle class and lower middle class socioeconomic status.

There was maximum knowledge regarding Rubella infection in urban background that is 71.43%, followed by rural background that is 29.94%.

Most common source of information in the present study was from books (80.64%) and television (16.12%). There is minimal role of health professional in the present study.

In the present study, only 13.02% of the participants had knowledge of Rubella vaccine.

Despite poor knowledge in this study, the attitude towards the vaccine was overall positive and a majority believed it was necessary for them to receive the vaccine.

In the present study, 35.95% participants agreed that their parents pay for vaccine and 79.17% participants agreed for vaccination if it would be free of cost.

There was nobody in the study immunised against Rubella. Most of the participants wanted to immunise but due to lack of proper knowledge and financial problem they did not agree. In contrast to present study, in a study conducted by Juliana Costa Vieira et al (2011), a total of 94.5% of the respondents expressed willingness to be vaccinated for Rubella elimination. Rajagopal Rao Kodali et al (2015) in their study found attitude among college students was more towards child immunisation (77.6%) followed by vaccination (63%) and less about knowing of immunisation status (58.6%). Attitude towards child immunisation, vaccination, knowing of immunisation status were 84.4%, 73.2%, and 70% among medical students in comparison to 70.8%, 52.8% and 47.2% among non-medical students.

In the present study, after assessing knowledge, attitude and practice of the participants, I was able to immunise 30 (7.8%) participants against Rubella.

#### CONCLUSION

A majority of the participants in this study had a poor knowledge of Rubella, even if most had a positive level of attitude towards the Rubella vaccine. There is a need to improve the poor knowledge in order to change behaviour so that they will take the Rubella vaccine. Prescription of Rubella vaccine was hindered by the perceived parental concerns and was mostly relied on Government recommendations. Educational initiatives should be targeted towards both physician and parents and the Government should consider full subsidy to enhance vaccine uptake rate.

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