

**ORIGINAL ARTICLE**DOI: <https://doi.org/10.3329/mediscope.v8i1.52203>**Tetanus Toxoid Vaccination Status of Women of child bearing age in Rangamati Pourashava****N Nazneen¹, MN Alam², MD Akhter³, MS Rahman⁴, M Parveen⁵, A Begum⁶****Abstract**

Tetanus Toxoid (TT) is a routine vaccination activity under Expanded Program on Immunization (EPI) in Bangladesh. This was a descriptive type of cross-sectional study with a sample size of 110, selected purposively by non-probability sampling technique. Data were collected through a pretested questionnaire. The aim of this study was to assess TT vaccination coverage among the women of child bearing age, Rangamati Pourashava. As per survey, among 110 respondents, 29 (26.4%) were of 15-25 years, 52 (47.3%) were of 26-35 years, 25(22.7%) were of 36-45 years & only 4(3.6%) were of >45years. In this study, the major group, 86(78.2%) were married, 17(15.4%) were unmarried & only 7 (6.4%) were widow. Most of the respondents considered vaccination as the way of disease prevention, so that the coverage being 92 (83.6%) in case of TT vaccination. It was found that 70% women received TT vaccine from Government EPI centers followed by 23.6% from NGO facilities and only 6.4% from private clinics. Among the respondents, 56.3% respondents had completed their dose schedule of TT vaccine respectively. Most of the respondents had their vaccination card. The percentage was 70 for TT respectively. Among others, 20% failed to follow it because of forgetfulness of doses and 3.34% because of losing their card. So, TT vaccination coverage among the women of child bearing age was satisfactory but it also suggests that more awareness campaign for vaccination is sensational among the mass people of our country. This study TT vaccination status among women of child bearing age will help to get idea about the woman of our country regarding the situation.

Key words:

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Introduction

EPI Vaccination has brought about a revolutionary change in the field of preventing childhood diseases. It has greatly reduced the burden of infectious diseases. Vaccination is the administration of antigenic material to stimulate an individual immune system to develop adaptive immunity against a pathogen. The active agent of a vaccine may be an intact but inactivated or attempted form of the causative pathogens. Tetanus is a vaccine preventable disease caused by a bacterial spore of clostridium tetani which can be found in the intestines of animals and in the soil. Tetanus is an important cause of neonatal death in Bangladesh. It is a fatal disease caused by unhygienic conditions during childbirth. It is vaccine preventable disease and given to mother during pregnancy or before pregnancy for prevention of neonatal tetanus among newborn.¹ Bangladesh, on the way to middle income group of developed countries; over 80% of women gave birth without any help of a skilled birth attendant. Most deliveries take place at home often in conditions of very poor hygienic placing the lives of both mother and child at risk.² In the mid-1980s, Bangladesh had one of the highest rates of neonatal tetanus in the world that is 41 cases for every 1000 live births.³ The immunization program of Bangladesh aims to immunize the women of child bearing age by administering tetanus toxoid vaccine before the age of 18 years. A period of 2 years and 7 month is required to complete all the 5 doses of TT vaccines. If a woman starts TT vaccination at the age of 15 years and maintains the exact interval she would be able to complete all the doses before she reaches the age of marriage. Ensuring protection for her entire reproductive life.⁴ Even when the elimination target has been reached in Bangladesh, routine

immunization and disease surveillance will have to be continue, together with efforts to promote safe births.. Females are more exposed to the risk of tetanus, especially during unsafe home delivery or abortion by untrained birth attendant and suffer from "puerperal tetanus". Neonates typically affected by the disease during birth, when delivered in unhygienic conditions, especially when the umbilical cord is managed by unclean instruments and substances are added like ashes, soil or cow dung.^{5,6} The Government of Bangladesh had launched EPI programme on 7th April, 1979 with special global agenda to immunize all the women of reproductive age.¹⁰

Thus, research that addresses tetanus toxoid vaccination coverage in Bangladesh is seen to be as essential. This article investigates the scenario of tetanus vaccination coverage in a specific region of Bangladesh. The results of this study are expected to provide recommendations for program and policy makers that will help to ensure the success of complete tetanus vaccination coverage of mothers in Bangladesh both at the individual and community levels.

Materials & methods

A descriptive type of cross sectional study was performed on the women of child bearing age of Rangamati Pouroshava from Feb 2015 to April 2015. A pretested mixed type of questionnaire was used to collect and record the necessary information. Compilation of data was performed after data collection. Compiled data were presented with tables and figures. Results were calculated according to study objectives with the help of scientific calculator and data analysis program in computer. Data were presented by bar diagram and pie chart.

Females of 15 to 49 years were interviewed for study purpose, those who were available at that time of data collection. Informed written consent was taken from respondents in this study and participation was ensured by them that it did not do any physical, mental, social and economical harm to them. Information was dealt with confidentiality and was used for this study only.

Results

Table 01: Showing distribution of respondents according to their Socio demographic characteristics:

Attribute	Number/ Frequency
Age group(in years)	26.4%, 15-25 47.3%, 26-35 22.7%, 36-45 3.6% >45
Education	Illiterate=27.3%, Primary=47.3%, Secondary=19% >Secondary=6.4%
Marital status	Married=78.2%, Unmarried=15.4%, Widow= 6.4%
Occupation	Housewife= 71%, Student= 13.6%, Business= 9% Service=6.4%
Family type	Nuclear family= 21.8% Joint family=78.2%

Majority of the respondents belonged to the age group of (26-35) years, the mean age and SD of the respondents was 20.36±2.54years.

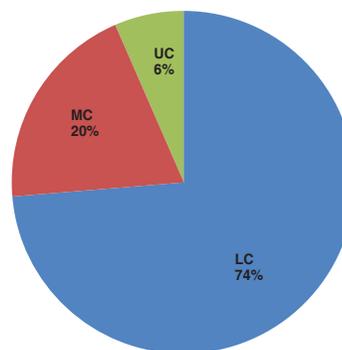


Figure 01: Socio-economic status of the respondents

Among the respondents 74% were lower class, the 20% middle class & the remaining 6% were of upper class.

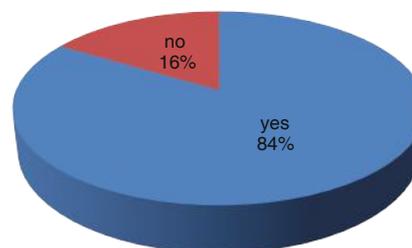


Figure 02: Distribution of the respondents by taking TT vaccination

It was revealed from the study that, 84% respondents took their TT vaccination.

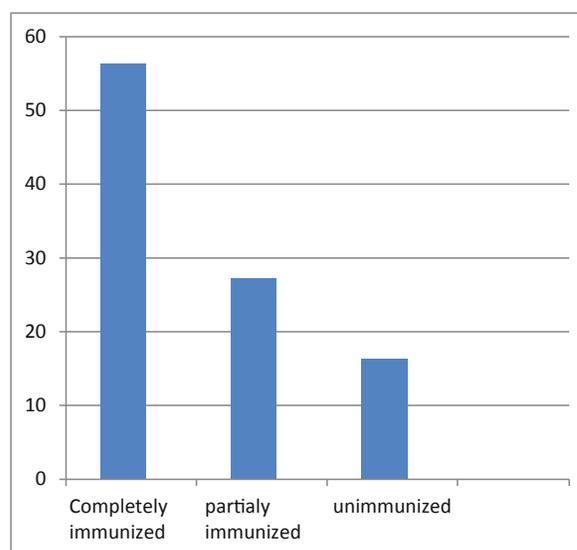


Figure 03: Distribution of respondents according to Immunization status.

Above figures shows that only 62(56.3%) respondents were completely immunized, whereas 18(16.4%) of the respondents were unimmunized.

Table 02: Distribution of the respondents by the number of doses completed.

Sl	Number of Doses	Number	Percentage (%)
1	1 st dose	5	4.5%
2	2 nd dose	6	5.5%
3	3 rd dose	6	5.5%
4.	4 th dose	13	11.8%
5.	5 th dose	62	56.3%

It was revealed from the survey that majority 62(56.3%) had complete their dose & only 13 (11.8%) had 4 doses.

Discussion

This was a cross sectional type of descriptive study performed on the women of child bearing age of Rangamati Pouroshava. This study helped us to know about present status of vaccination coverage among the respondent and their awareness and complication of TT vaccine. Regarding socio-demographic characteristics, majority of the women (around 47.3%) was 26-35 years. Forty seven percent had primary education (47.3%), married (78.2%) and house wives (71%). All these findings were similar to the represented findings of the survey conducted by NielsenCompany⁷ and IOCH.⁸ It was found that 70% women received TT vaccine from government EPI centers followed by 23.6% from NGO facilities and only 6.4% from private clinics. The study finding was consistent with the findings of the study conducted by IOCH in

tea garden where most of the women received TT vaccine from GOB (Government of Bangladesh) outreach centers.⁸

Regarding the vaccination coverage, TT vaccine coverage among the respondents was 84%. Regarding the about completion of dose of TT vaccine, among the 110 respondents only 62 (56.3%) had completed the dosage under the Tetanus Toxoid(TT) vaccination coverage.

Among the vaccinated respondents, 62 (56.3%), 13 (11.8%), 6 (5.5%), 6 (5.5%) and 5 (4.5%) completed 5, 4,3,2,1 dose respectively. These findings were much better than the findings of survey of the Perry H. Weierdach R, Hossain, Islam R 1995, who found among the respondents 85% had received one or more TT vaccination. This survey shows that only 11% of women of reproductive age had obtained the complete series of five TT vaccines.⁹

Regarding reasons for never vaccination, the women addressed 'fear of TT' (5.5%), 'don't think it necessary' (7.3%), and 'don't know the need of vaccination' (3.6%), which resembled the findings of Neilson study.⁷

Conclusion

Findings From this study suggest the need for creation of awareness regarding TT vaccination. Though it was revealed from the study that a good and satisfactory proportion of respondents were vaccinated but we hope to see that 100% of the respondents come under the coverage of vaccination and exclude the risks of Tetanus.

Health care providers in interpersonal communication should be trained. Improve the monitoring and supervision of vaccination activities especially in the rural area. Provide the equipment required for delivery of vaccination services to all Primary Health Care

Centers. The data from our survey provide baseline information that can be used by policy makers and health administration in implementing new strategies as well as strengthening the existing services to counteract the TT vaccine related problem in Bangladesh.

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