

Study on TT Vaccination Status of Female Students of Khulna

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Abstract

Introduction: The purpose of giving the TT vaccine to women of childbearing age and to pregnant women is to protect them from tetanus and to protect their newborn infants against neonatal tetanus. **Materials and Methods:** A descriptive cross-sectional study was done on January, 2017 to find out the TT vaccination status of students of Khulna Government Pioneer Girls College, Khulna. During scheduled time period. Data were collected from 100 respondents selected by purposive type of convenient sampling by face to face interview using a prepared mixed type of questionnaire. **Results:** Among total respondent's majority 36(36%) were belonged to 17-19 years of age group. People of our country nowadays more aware of TT vaccination as 97 (97%) of our total respondents had knowledge about TT vaccination. Achievement in TT vaccination coverage has been impressive throughout the country in recent years. It has also been reflected in our study, we had 84(84%) coverage and 55 (42%) of our respondents had completed their vaccination (5doses). Establishment and improvement of infrastructure of government health organizations 70(83.33%) of our study population received vaccination in government organization. Acceptance of TT vaccination has increased to a satisfactory level. In our study TT vaccination coverage was maximum (85.51%) in upper class and only (71.43%) in lower class respondents. **Conclusion:** Despite high knowledge, completion of recommended doses of TT vaccine was not guaranteed due to stock-outs coupled with detrimental cultural and religious beliefs. That is why large scale study is needed to find out TT coverage among women of reproductive age group (15-49 years) of Bangladesh which can ensure the real scenario as well as factors related to this.

Keywords: Tetanus toxoid, Vaccination, Knowledge.

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Introduction

Tetanus Toxoid (TT) is administered to women of reproductive age (15-44 years) to protect them from tetanus and their newborn babies from neonatal tetanus. Neonatal tetanus is a grave disease caused by a bacterial pathogen

transmitted during the childbirth usually in an unhygienic condition^{1,2}. A woman needs a total of 5 TT doses for lifelong protection from tetanus and all the doses should be administered according to the WHO-recommended schedule. Since only one TT dose does not offer any protection, a woman needs at least two doses TT vaccine (TT1 and TT2), to get some protection^{3,4}. Females are more exposed to the risk of tetanus, especially during unsafe home delivery or abortion by untrained birth attendance and suffer from "puerperal tetanus". Neonates typically contact the disease during birth, when delivered in unhygienic conditions, especially when the umbilical cord is managed by unclean instruments and substances like ashes, soil or cow dung^{5,6}. In Bangladesh two major vulnerable groups for tetanus; pregnant women and neonates reside in rural part of the country. Tetanus Toxoid is an ongoing vaccination program under EPI in Bangladesh and the target population of this program is women of reproductive age. Success of the program results decrease in mortality of bother and newborn from tetanus⁷. Since it is difficult to ensure clean deliveries in the developing countries like Bangladesh, immunization of mother against tetanus has been a more reliable method to prevent neonatal tetanus and postpartum tetanus. The Government of Bangladesh launched EPI programme on 7th April, 1979 with special global agenda to immunize all the women of reproductive age^{8,9}.

Materials & Methods

A descriptive type of cross sectional study was carried out on TT vaccination status of students of Khulna Government Pioneer Girls College, Khulna from June 2017 to October 2017. A total number of 100 respondents of adolescent girls were included. A pretested mixed type of questionnaire was used to collect and record the necessary information. After collection data were verified, edited for its

consistency. The data were compiled, tabulated and processed in the computer according to the key variables. Data was processed and analyzed manually and by Computer. Data were presented by bar diagram and pie chart.

Results

This table shows that mean age of the respondents was 19.79 (SD±2.42) years. Among 100 respondents 36 (36%) belonged to 17-19 years age group.

Table-I: Distribution of respondents according to their ages.

| Age (Year) | Number | Percentage % |
|--------------|------------|--------------|
| 17-19 | 36 | 36 |
| 20-22 | 35 | 35 |
| 23-25 | 29 | 29 |
| Total | 100 | 100 |

The diagram (figure-1) shows that 69 (69%) of the respondents belonged to middle class family, 24 (24%) upper and only 7 (7%) belonged to lower class family.

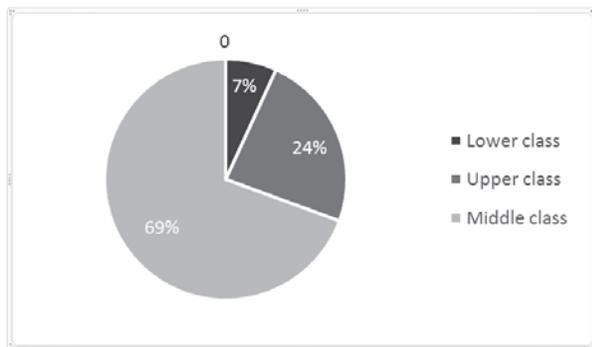


Figure-1: Socioeconomic status of the respondents.

Diagram (figure-2) shows that 84 (84%) respondents had received TT vaccine.

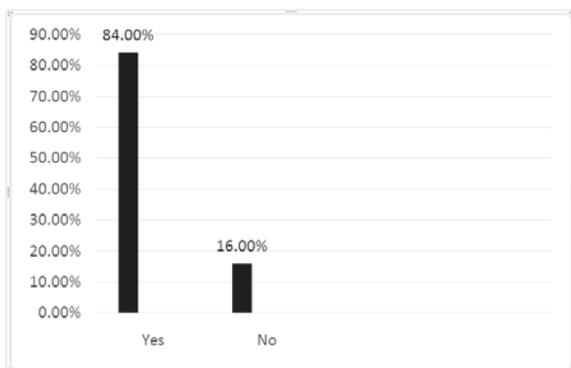


Figure-2: TT vaccination coverage of respondents.

Diagram (figure-3) shows that only 55 (55%) respondents were completely immunized, whereas 16 (16%) of the respondents were unimmunized.

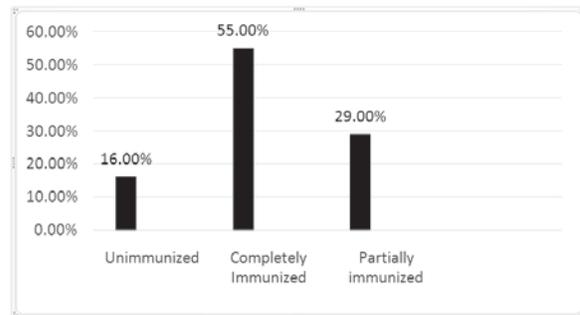


Figure-3: Distribution of respondents according to Immunization status.

Discussion

A descriptive type of cross sectional study was conducted on "TT vaccination status of students of Khulna Government Pioneer Girls College, Khulna with a view to evaluate the level of knowledge about TT vaccination and immunization status among respondents. There were 100 study population selected conveniently and the data were collected with a prepared mixed type questionnaire by face to face interview and then were analyzed manually according to the objectives of the study. Among the total 100 respondent's majority 36 (36%) were in the age group of 19-21 years [Table I], 27(27%) were degree 1st year student and only 8 (8%) were degree 2nd year student [Table II]. 69 (69%) respondents belonged to middle class family [Figure 1]. 97(97%) of the respondents heard about TT vaccine. 84 (84%) of respondents had received TT vaccine [Figure 2]. All these findings represented the findings of the survey conducted by Farzana Sobhanet al¹². Among 100 respondents, 29 (29%) were partially and 55 (55%) were completely immunized [Figure 3]. So, we see that a good percentage of respondents had already got themselves vaccinated despite of living in rural area. These findings were very close to the findings of Bangladesh Maternal Mortality and Health Care Survey in 2010, which found 90.0% women received TT1 vaccine followed by 37.0% crude vaccination coverage and 31.0% valid vaccination coverage among the women of Chittagong hill tracts¹⁰. Among the vaccinated respondents, 55 (42%), 12(14%), 6(7%), 6 (7%) and 5 (6%) 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, which found among the respondents 85% had received one or more TT vaccination. Only 11% of women of reproductive age had obtained the complete series of five TT vaccinations¹¹. Almost all 70 (83.33%) of the respondents received vaccination from government hospitals whereas only 4(4.767%) from private practitioners. Maximum respondents 74 (88%) had no adverse events following immunization. Among 10 respondents 4 (40%) of the

respondents suffered from fever, 3 (30%) suffered from allergic reaction. The survey reveals that 59 (85.51%) the respondents coming from, middle class family received TT vaccination. This percentage in upper class was satisfactory 20 (83.33%) and lower class was 5 (71.43%) [Table II]. So, we see that respondents from middle class family are much more conscious regarding TT vaccination. Among 16 non immunized respondents 14 (87.5%) mention the reason of not taking vaccine as lack of awareness, though at of this 4 (100%) were HSC 2nd year students, 2 (12.5%) of the respondents mentioned the cause as cultural barrier who can only put signature [Table III].

Conclusion

Eradication of tetanus, there is no alternative to TT vaccination. From our survey, we have got a satisfactory TT vaccination status. But still there is a group of people those are totally ignorant about it and some have idea about it though they do not conscious about the vaccination. Some of the respondents start vaccination at their early reproductive period or during pregnancy but they do not continue dose schedule which is very frustrating. For appraisal of a wide range of coverage of vaccination, our government should more concerned about the health care delivery system and other non-government organizations, donor agencies and most importantly mass media can play a great role in this respect.

Conflict of Interests: None.

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