



## A study to assess the knowledge on causes and complications of tetanus among adults in Kamakshi Nagar at Nellore



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**Abstract: Background:** Tetanus is an acute, life -threatening disease caused by toxins produced by the bacterium clostridium tetani. Tetanus spores in the environment and transmission occurs when spores are introduced in to the body, usually through a puncture - type wound. Tetanus does not spread between people spores of the clostridium tetani bacteria are found in soil, animal feces, and dust. The signs and symptoms of tetanus often begin with mild spasm in the jaw muscles also known as lock jaw or trismus. Back muscle spasms often cause aching called opisthotonos. In severe cases of tetanus, life-threatening respiratory and cardiovascular complications can present with true one half of mortality associated with tetanus. According to WHO in 2016 estimated that the international tourism exceeds 1.2 billion persons in each year, with more than 20% of travelers reporting some type of illness. Worldwide all countries are committed to elimination of adults tetanus incidence to below one case per 1000 live births per year in every district. Males are more affected than the females. In males 2038 cases are affected, in females are 1,344 cases are affected. **Aim:** The aim of the study was to assess the knowledge on causes and complications of tetanus among adults **Objectives:** 1. To assess the knowledge on causes and complications of Tetanus among adults. 2. To find out the association between the causes and complications of Tetanus with their selected socio demographic variables **Results:** The Research was carried out in Kamakshi Nagar area Nellore. The data reveals that the knowledge on causes and complications of tetanus among 50 adults, 1(2%) had B+ grade, 5(10%) are had B grade knowledge (more than 55%), 9(18%) are had C grade knowledge (more than 50%) and 35(70%) are had D grade knowledge (less than 50%). The findings related to mean and standard deviation of knowledge on causes and complications of tetanus among adults. the mean score is 13.22, standard deviation 2.83.

### Introduction:

Tetanus is an acute, life -threatening disease caused by toxins produced by the bacterium clostridium tetani. Tetanus spores in the environment and transmission occurs when spores are introduced in to the body, usually through a puncture - type wound.

It occurs in all parts of the world but is most frequent in hot and wet climates where the soil

contains a lot of organic matter. In 2015 there were about 209,000 infections and about 59,000 deaths globally. This is down from 356,000 deaths in 1990. Description of the disease exists form at least as far back as the 5th century BC.

The incubation period of tetanus may be 41 to several months, but is usually about 10 period that causes the more severe symptoms. In neonatal tetanus,



symptoms days. In general, the further injury site is from central nervous system, the longer incubation usually appear from 4 to 14 days after birth, averaging about 7 days.

In severe cases of tetanus, life-threatening respiratory and cardiovascular complications can present with true one half of mortality associated with tetanus can be attributed to the respiratory complication of the disease. Respiratory failure may occur as a result of muscle rigidity and reflex muscle spasm that characterizes the disease or secondary to hypoxia following atelectasis and pneumonia. cardiovascular complications are myocarditis, myocardial depression.

Adults living in the endemic areas need to have sufficient information, there for sufficient knowledge of tetanus regarding its representation, causes and complications further work up is essential for than to effectively.

#### **Need for the study:**

According to WHO in 2016 estimated that the international tourism exceeds 1.2 billion persons in each year, with more than 20% of travelers reporting some type of illness. Worldwide all countries are committed to elimination of adults tetanus incidence to below one case per 1000 live births per year in every district. Males are more affected than the females. In males 2038 cases are affected, in females are 1,344 cases are affected.

India Estimated In the 2015, a total of 29 tetanus cases and 2 deaths were reported through the National Notifiable Diseases Surveillance System . The effectiveness of tetanus toxoid-containing vaccines is very high, although not 100%. Vaccination status was known for 49 (25%) of 197 tetanus cases reported from 2009 through 2015. In only 10 (20%) was receipt of 3 or more doses of tetanus toxoid reported. The remaining patients were either unvaccinated or had received fewer than 3 doses of tetanus. From 2009 through 2015, a total of 197 cases and 16 deaths from

tetanus were reported in the United States. Forty-nine (25%) cases were in persons 65 years of age or older, 124 (63%) were in persons 20 through 64 years of age, and 24 (12%) were in persons younger than 20 years, including 2 cases of neonatal tetanus. All tetanus - related deaths occurred among patients >55 years of age.

Statistic says that Andhra Pradesh. Tetanus is a concern among adults, especially farm laborers and workers from rural areas. At the Epidemic Diseases Hospital, another State-run facility, doctors are seeing an average of five adult tetanus cases a month. Medical Superintendent of the hospital Ansar Ahmed, who had seen six cases of tetanus in October of which two died, said almost all the patients were either farmers or agricultural laborers from the neighboring villages in and around Sira, Tumakuru, Rayadurg, and even Kurnool and Hindupur in Andhra Pradesh. The doctor attributed this to the general attitude among people to ignore micro injuries or apply cow dung or mud to the injury. "Minor injuries suffered by farmers while harvesting or working in the fields are the entry point for the tetanus bacteria to get into the body. The problem statement is suitable for the researcher.

**Problem statement:** A study to assess the knowledge on causes and complications of tetanus among adults in Kamakshi Nagar at Nellore.

#### **Objectives:**

- ❖ To assess the knowledge on causes and complications of tetanus among adults.
- ❖ To find out the association between the causes and complications of tetanus with their selected socio demographic variables.

#### **Operational Definitions:**

**Assess:** A critical analysis and judgment of the adults (or) quality of particular causes and complications of tetanus.

**Knowledge:** Information known about a particular causes and complications as measured by knowledge questionnaires.



**Tetanus:** Tetanus is an infectious disease caused by clostridium tetani.

**Adults:** One who has reached maturity with the age group of 20-60 years.

**Assumptions:** Adults may have some knowledge regarding causes and complications of tetanus among adults.

**Delimitations:**

*The study is delimited to:*

- ❖ Sample size of 50 adults.
- ❖ The data collection period of 2 weeks.

**Projected Out Comes:**

The study would help to determine the level of knowledge regarding causes and complications of tetanus among adults.

**Materials and Methods**

**Research Approach:**

Quantitative research approach was utilized to assess the knowledge on causes and complications of tetanus among adults in Kamakshi Nagar, Nellore. **Research design:** Descriptive research design was adopted to conduct a study to assess the knowledge on causes and complications of tetanus among adults in Kamakshi Nagar, Nellore.

**Data Collection Procedure:** After obtaining formal permission from the principal Sree Narayana College of Nursing, Medical officer of primary health centre, Kamakshi Nagar, Nellore. Informed consent was obtained from adults in Kamakshi Nagar Nellore. The study was conducted from 23/3/2018 to 29/3/2018. 50 adults were selected by using non probability convenience sampling technique. Nature and purpose of the study was explained. Confidentiality of information was assured by taking informed consent from the adults. Minimum of 10 samples per day from 9-12 pm. The duration of data took 10 minutes to complete the questionnaire for each sample. The questionnaire was administered to assess knowledge regarding causes and complications of tetanus among adults in Kamakshi Nagar. The collected data was

organized and analyzed based on objectives of the study. The analyzed data was presented in the form of tables and figures.

**Plan for Data Analysis:** The data was analyzed in terms of objectives of the study by using descriptive and the inferential statistics.

**Results and Discussion:**

- ❖ Depicts to age of the adults, 25(50%) were 31-30 years of age.
- ❖ Narrates to gender of the adults, 41(82%) are female.
- ❖ Pertaining to religion of the adults, 29(58%) were Hindu.
- ❖ Relation to educational qualification of adults 21(42%) were studied school education.
- ❖ In view to occupation of the adults, 27(54%) are coolie.
- ❖ Association to family income of adults, 19(38%) earn Rs. 7001- 9000.
- ❖ Association to source of information of the adults, 30(60%) received from TV and radio.
- ❖ Relation to type of family, 25(50%) were nuclear family.
- ❖ There was significant association between level of knowledge on causes and complications of tetanus among adults with selected socio demographic variable like occupation at the level of 0.001.
- ❖ There was Non-significant association between level of knowledge on causes and complications of tetanus among adults with selected socio demographic variable like age, gender, religion, educational qualification, income, source of information, type of family.

**Setting of the study:**

Setting of the study in Kamakshi Nagar, Nellore. Kamakshi Nagar is a small village in Thotapalli Gudur, Mandal in Nellore district Andhra Pradesh. It is located 3 km to wards. North district head quarters Nellore and 13 km from Thotapalli Gudur, the total population is 1295 males are 660



and females are 635 living in 365 houses. The total area in detail of Kamakshi Nagar, 299 hecters.

**Sample:**

The sample includes adults in Kamakshi Nagar village.

**Sample size:**

The sample size for the present study was 50 adults

**Sampling technique:**

Probability simple random sampling technique was used to select the samples of the study.

**Criteria for sample collection:**

**Inclusion criteria:** The adults who are,

- ❖ Willing to participate in the study.
- ❖ Age group above 20 years
- ❖ Who are available at the time of data collection?

**Exclusion criteria:** The adults who are,

Who are not willing to participate in the study?

**Description of the tool:** With the help of intensive from various text book, journals, internet and curriculum. The structured questionnaire was developed to assess the knowledge on causes and complications of tetanus among adults in Kamakshi Nagar, Nellore.

**The tool was divided in to 2 parts**

**Part - I:** It deals with the socio demographic variables

**Part - II:** It deals with structured questionnaire on to assess the knowledge on causes and complications of tetanus among adults.

**Scoring Key:** Scoring system was developed by ‘1’ mark was given to each correct answer and ‘0’ mark was given to wrong answer. The total number of questions 30 questions.

**Score Interpretation:**

Grade	Marks	Percentage
A+	25 - 30	More than 85%
A	20 - 24	More than 75%
B+	15 - 19	More than 65%
B	10 - 14	More than 55%
C	05 - 09	More than 50%
D	00 - 04	Less than 50%

**Table No : 1 the level of knowledge regarding causes and complications among of tetanus among adults (N=50)**

Level of Knowledge	Fre (F)	Per (%)
B+	1	2
B	5	10
C	9	18
D	35	70
Total	50	100

**Table No - 1** Shows the data pertaining to level of knowledge were 1(2%) of adults are “B+”, 5(10%) of adults have “B” Grade 9(18%) of adults are “C grade” and 35(70%) of adults have “D” grade knowledge.

There is significant association between occupation and causes, education, and no significant association between age, gender, type of family, family income, religion, source of information.

**Results and discussion**

- ❖ Depicts to age 16(32%) adults were between 20-30 years , 25(50%) were between 31-40year , 7(14%) were between 41-50 years, 2(4%)were between 51-60 years.
- ❖ Narrates to gender of adults 9(18%) are males, 41(82%) are females.
- ❖ pertaining the religion of adults 29(58%) are hindus, 4(8%) are muslims, 17(34%) are christians.
- ❖ Relation to educational qualification of adults 14(28%) are illiterates, 21(42%) are having school education, 15(30%) are having college education.
- ❖ In view to occupation of adults are farmers 15(30%), 27(54%) are cooli, 7(14%) are govt. employoes, 3(6%) are doing business.
- ❖ Association to family income per month among adults, 14(28%) earns 5001-7001/-, 19(38%) earns 7001-9000/- , 6(12%) earns 9001-11,000/- ,11(22%) earns > 11000/-.
- ❖ Association to source of information of adults from 30(60%) are from TV and radio, 13(26%) are from news paper, 3(6%) are from internet, 4(8%) are from journals.





❖ Relation to type of family of adults 25(50%) are residing nuclear family, 18(36%) are residing joint family, 7(14%) are residing extended family. The context of adults level of knowledge, 1(2%) is have B+ grade knowledge, 5(10%) are have B grade knowledge, 9(18%) is have C grade knowledge, 35(70%) are have D grade knowledge.

**Conclusion:** The present study result shows that with context to knowledge level of 35(70%) have D grade knowledge on causes and complications of tetanus the study concluded as most of adults have poor knowledge regarding causes and complications of tetanus . there is a need to conduct role play on cause, mode of transmission, prevention and complications of tetanus and its treatment at Kamakshi Nagar, Nellore.

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