



AN EVALUATION OF COVERAGE OF TETANUS TOXOID VACCINE AMONG WOMEN OF CHILD BEARING AGE (15-45) YEARS: A COMMUNITY BASED SURVEY.

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ABSTRACT

BACKGROUND: Vaccination is one of the best general wellbeing drives in current period. It is in this manner, stressing to become familiar with the degree of under-immunization in Pakistan. Vaccine preventable sicknesses that have been effectively disposed of through the organization of antibodies increased nations lockjaw infection while Pakistan is as yet battling to builds inclusion of Lockjaw Pathogen inoculation among under 2 years and ladies of childbearing age. **OBJECTIVE:** This research study was intended to measure level of coverage for Tetanus toxoid vaccination among women of child bearing age of sindh. **MATERIALS AND METHODS:** The Cross-Sectional study was conducted among females in many Districts of sindh including urban and rural area through 4th year medical students of PUMHSW during one month. All females who were willing to participate in study were included in the study as respondent. Data collected on pre-designed structured questionnaire. **DESIGN OF STUDY:** Cross-Sectional. **PLACE & DURATION:** Various district of sindh, from August 2022 -to-November 2022. **RESULTS:** Total 300 females were studied regarding use of Tetanus Toxoid vaccine among women of child-bearing age, out of then most of the females 70.7% were young with age group of 25-35 years and out of all, 73 % have heard about TT vaccination, majority of females were not aware about inclusion of TT vaccine in childhood and percentage was 59.7%. 65% female of child bearing age does not have knowledge about tetanus toxoid vaccine schedule during their reproductive years, related to significance of TT vaccination most of females were aware (57%). According to the assessment of use of vaccine 55.3% women are willing to get vaccination during childbearing age while 75% had not gotten single dose of TT vaccination during childbearing age. **CONCLUSION:** It is revealed that the majority of female (child bearing age) were not vaccinated against Tetanus diseases and their attitude was found to be good toward tetanus vaccination and they prefer to get vaccination during pregnancy. Tetanus Toxoid vaccination is useful vaccine in preventing tetanus for adult female if she completed all doses of vaccination she will be protected for 20 years and she don't need TT vaccination during their pregnancy through this approach we can prevent and control material and neonatal tetanus at grass root level

KEYWORDS: Tetanus Toxoid Vaccination, Tetanus, immunization, Vaccine preventable diseases

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INTRODUCTION

Vaccination is one of the most winning general wellbeing drives lately. It is subsequently, stressing to get familiar with the degree of under-immunization in Pakistan. Sickesses that have been effectively wiped out through the guide of immunization in different nations have not been dispensed with in Pakistan. The "Extended Program of Vaccination" (EPI) is the principal program through which routine inoculation is given to the general population. Inside Pakistan, it has experienced numerous issues since its initiation. This incorporates calculated hindrances, wasteful wellbeing laborer mentalities, parental and female mindfulness, and schooling, the impact of strict local area pioneers and the inconveniences that go with struggle. When contrasted with all around the world normalized focuses for vaccination. Immunization preventable illnesses are a significant reason for death among youngsters, particularly inside non-industrial nations, representing more than 1,000,000 passings yearly¹. These examinations have been directed over quite a while back in different regions of Pakistan, which underlines that the issue of maternal and neonatal lockjaw (MNT) security has not been tackled at this point. Customary antenatal consideration is a pivotal method for further developing TT inoculation and the executives of obstetric difficulties during pregnancy and conveyance.² Government of Pakistan set focus to kill MNT by year 2015 and for this the Pakistan Public Arrangement for vaccination was sent off which depended on high gamble approach, but still Pakistan neglected to dispose of MNT.³ Similarly, the absence of mindfulness about the significance of TT immunization was accounted for as the most widely recognized justification for low inoculation status⁴. The accomplishment and disappointments of the EPI in Pakistan have been molded by the social, political

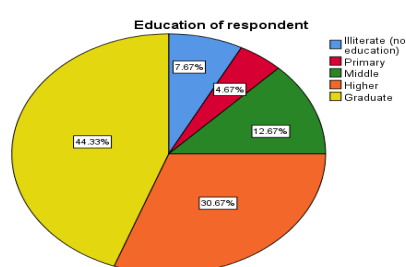
and ecological scene. The fundamental point of the program when it was set up in 1978 was to forestall passings, and after beginning achievement, set to kill polio by 2000.⁵ According to WHO gauges for the year 2017, there were 2,266 instances of neonatal lockjaw. Detailed worldwide and the most elevated weight of it was contributed by Africa and EMRO district. Inside the EMRO locale, Pakistan detailed 478 out of 557 all out instances of neonatal lockjaw for the year 2017. Subsequently, this shows what is going on and a significant general wellbeing challenge for Pakistan⁶. Neonatal lockjaw happens because of unhygienic birth practices, for example, cutting or dressing of umbilical string stump by utilization of unsterilized instruments, unhygienic or conventional line care rehearses, and deficient vaccination of mother with TT. The brooding time frame is somewhere in the range of third and 28th days after birth⁷. Notwithstanding unfortunate consideration looking for antenatal visits during pregnancy, the lower immunization status is likewise impacted by deficient immunization related information, family construction, and dynamic in the neighborhood networks of Pakistan. Sufficient information and a superior comprehension of TT immunization at the individual, local area, and public levels may essentially assist with further developing TT inclusion in Pakistan⁸. Lockjaw can happen during pregnancy or in somewhere around a month and a half after end of pregnancy. Ladies who convey under unhygienic circumstances and with low Lockjaw Pathogen (TT) inoculation are in danger of creating lockjaw. Of main pressing issue is Maternal and Neonatal Lockjaw (MNT). Around the world, it is assessed that consistently 5% maternal passings result from lockjaw and 14% of all youngsters bite the dust because of MNT⁹. In Pakistan 28,882 cases were assessed and for certain 21,619 assessed

passings. Assessed MNT death rate was 4.08 (per 1,000 live births)¹⁰. Furthermore, measles and neonatal lockjaw by 2015. Neonatal lockjaw, a non-transferable and preventable reason for mortality and horribleness has been a significant general wellbeing challenge overall¹¹. It is brought about by the *Clostridium tetani* microbes spores which are ubiquitous in the climate and can be brought into the body through no unblemished skin, ordinarily by means of wounds from debased objects. Globally consistently 309,000 passings happen because of lockjaw. It is assessed that consistently overall 5% of maternal passings happen because of lockjaw and 14% of all children kick the bucket because of maternal neonatal lockjaw^{12,13}.

MATERIALS AND METHODS

The cross-sectional study was conducted among females in many Districts of Sindh including urban and rural area through 4th year medical students of PUMHSW. All females who were willing to participate in study was included in the study as respondent. Data were collected on structured questionnaire. The variables related with study objectives and demographic variables were asked. The verbal consent was obtained from all the participants before participating in the study. The facts were analyzing by using SPSS version 26.0 and p-value < 0.05 was considered significant.

Figure-1 Martial Status of Target Popoulation (n=300)



Majority of females were married that is 75 percentage while 25% are single

A investigation discovered that being presented to the broad communications expanded ladies' interest for sufficient dosages of TT vaccination. Subsequently, ladies who generally pay attention to the radio, sit in front of the television and who were ready of a cell phone, had higher chances of getting the satisfactory portions of TT vaccination contrasted with those with no admittance to the broad communications¹⁴. All Territory of Pakistan has distinction in TT inclusion; e.g.in Sindh Karachi has half to 70% WRA, got two portions of TT, while in Lahore 87% inclusion of 2 TT doses. Two past Pakistani examinations, showing the association of inoculation status with the antenatal consideration visits during pregnancy¹⁵.

STATISTICAL DATA ANALYSIS

Analysis of data was done by using software that is SPSS version-25. Demographic data were summarized by descriptive statistics, which was presented by using frequency tables and expressed as mean± SD, percentages.

RESULTS

The study designed to inspect the coverage for TT immunization among females of reproductive age of Sindh The analysis of the data revealed several significant results, which are summarized below: The results of this study shows that Out of 300 participants in the current study.

Figure :2 57% Females belong urban area and while 43 perecentage belong to rural area

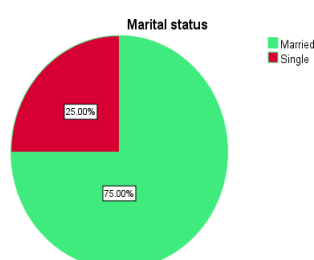


Figure -3 : It was observe that most of the female are higher school and graduate followed by middle,primary and no education. (n=300)

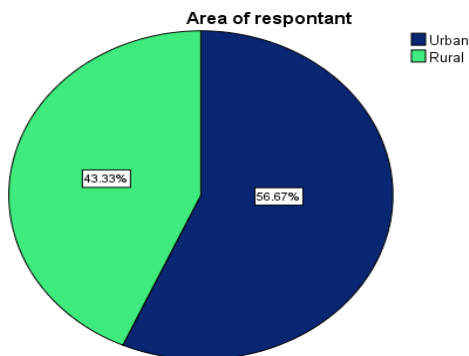
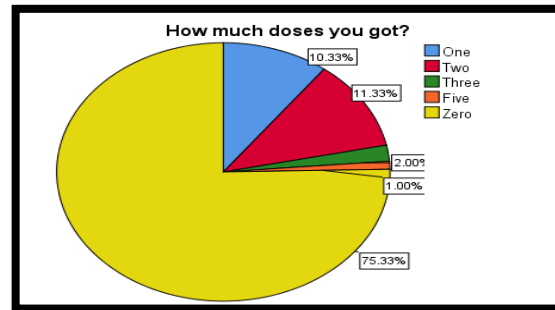


Figure 4: Majority of females were not vaccinated against TT vaccination during childbearing age its due to lack of awareness and difficult to follow long sechedule of TT vaccination.



Have you ever TT vaccinated during childbearing age?

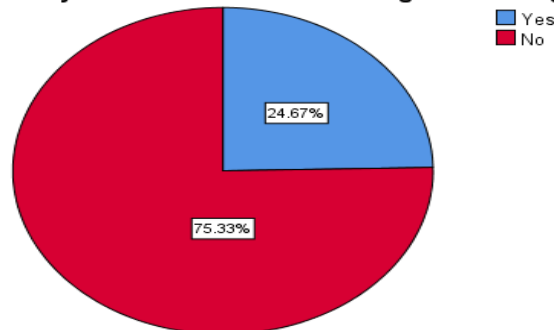


Figure 5: Majority of female during childerning age were not vaccinated for 5 doses (n300)

DISCUSSION

The reason for this study was to decide the degree of mindfulness and inclusion for Lockjaw Pathogen inoculation during the childbearing age and their segment factors among ladies of sindh,our research concentrates on shows in reults that among the female of sindh,71 rate have a place with 24-35 age bunch, it was great that larger part of females had heard about that there is TT immunization while greater part of female didn't know that TT inoculation is remembered for Extended program on vaccination in Pakistan that is 60%. 65%female of sindh doest not know about lockjaw pathogen immunization secdule during their regenerative years and their importance, our finding with respect to utilization of antibody that 55.3% ladies will get inoculation while 75% females had not gotten single portion of TT

immunization during childbearing age. One of study was condcuated by adeel ahmed khan on Lockjaw pathogen immunization plays significant part in forestalling neonatal lockjaw article distributed in BMC general wellbeing on proper mediation in regards to counteraction of neonatal lockjaw in Pakistan that is precise audit lilterature and found that immunization of ladies of youngster bearing age (wedded and unmarried both) that ought to be local area based intercession for all mother , spotless and gifted care at conveyance, infant revival; exlsuve breastfeeding, umbilical rope care and the board of diseases in infant in writer reasoned that inoculation of TT inoculation for pregnant ladies is compulsory anticipation of tetatnus pathogen vaccination.¹⁶ One exploration article that is like our discoveries was

distributed by EC nursing and medical services in 2017 and it portrays that there is low coverage of Lockjaw Pathogen vaccination during and out of pregnancy in regions of Ethiopia. It was a local area based study that was conducted to figure out that there is a need of wellbeing schooling to ladies of child bearing age for upgrade of inclusion of lockjaw pathogen immunization. It was viewed that as the vast majority of the ladies got three portions of TT immunization, 20% had finished the immunization schedule.¹⁷ One more unmistakable review results that was executed in Nigeria it was like our review that is on mindfulness, discernment and inclusion of lockjaw of ladies of child bearing age in metropolitan areas of Lagos, Nigeria observed that elevated degree of consciousness of TT immunization among respondent was 89 percent (89%) and as technique for anticipation of lockjaw 76%, there is affiliation that is positive between the degree of mindfulness and respondents schooling level and occupation that p esteem under 0.05 anyway there is low degree of awareness in regards to the numbers of dosages of immunization expect in pregnancy (14.4%) and for life security (19.5%) the people who got the antibody, got it post injury (84.9%) and in pregnancy (45.2%). Age, occupation and equality were positively connected with getting the immunization (P -value less 0.05) while equality and conjugal status were decidedly connected with number of portion of antibody got (p under 0.05) just around 20% of the respondents had received at least 2 dosages of the antibody.

It was presumed that in spite of the increment level of mindfulness about lockjaw illness and lockjaw immunization there is a low inclusion rate of lockjaw vaccination among ladies of youngster bearing age around of Nigeria. Women of child bearing age ought to likewise be focused on at the local area level in lockjaw inoculation crusade programme.¹⁸ Kachimba in 2014 had distributed their

postulation about low Lockjaw Pathogen vaccination inclusion connected with many elements she had given in her review which were conducted in Region Lunashya consequences of her review showed relationship among staffing and low vaccination among ladies of child bearing age with a p -worth of 0.002, therefore invalid speculation was dismissed and different things likewise made sense of in this concentrate other than the staffing there are other many variables contributing low inclusion for TT vaccination like information, distance, conviction and myths in local area for better inclusion study recommend to conduct studies, class for nurses so refinement of staff ought to be finished.¹⁹ Muluken Dubalae Mamoro had been done original research on lockjaw pathogen vaccination and their variables among moms in area of Ethiopia and he presumed that close to $\frac{3}{4}$ of the moms were against lockjaw in last birth with was extremely low as to suggested for pregnant mother is hundred percent, investigation additionally discovered that there is link between status of TT vaccination and following elements, for example, mother age, mother instructive status, spouse instructive status, utilization of present day family arranging strategy, number of antenatal consideration visit, time to come to the nearest wellbeing office and wellbeing expansion home visit. Extra research finding or by creator that on the off chance that couple took choice for wellbeing looking for care mutually, inclusion for TT inoculation will be expanded and through the assistance of wellbeing laborer she can wellbeing taught to target populace at their homes and availability of TT vaccination that could likewise raise the inclusion for TT Inoculation among ladies of child bearing age. Moreover it is suggested that we can go concentrate past the pervasiveness and associated variables can go for titer level.²⁰ Moreover research was finished on Lockjaw Pathogen Immunization inclusion there was deliberate audit and meta-

examination done as neonatal and maternal lockjaw is significant public medical issue especially in non-industrial nations which can be handily forestalled by immunization of youngster bearing ladies with something like two doses of TT immunization. Based on orderly survey furthermore, metanalysis was executed to show the inclusion of at least two portions of lockjaw pathogen immunization and related factors in Ethiopia considering results, the inclusion somewhere around two dosage of TT vaccination was 52.4% (95.%CI: 42.69-61.03, 12=98:4%) this finding was continuously with a report of studies implemeneted in Kenya (52.0%) and Pakistan (55.6%) It was less contrasted with studies conducated in other low pay countries. such as Ghana 71%, india 68% and sierra leaone 82% The clarification for this different geogropahical differeince, social variety and maternal wellbeing administrations use between the countries.²¹

One of article on lockjaw pathogen inoculation inclusion among ladies of conceptive age found comparable outcomes like in our review, in Bangladesh TT immunization inclusion can be worked on through Extended Program on vaccination (EPI) and other part is the ladies of regenerative age (15-49 years) are the objective populace for 5 dosages of TT Antibody to shield them from lockjaw and found following outcomes were examined through distinct and inferential statistics mean age of the ladies was 27.22+-6.87.years and significant part (30.4%) was uneducated. The greater part of ladies was hitched 87.6% and housewives (81.3%). Based on review history and immunization card, 83.5% ladies got first portion of TT (TT1), while 16.5% didn't have any TT antibody. Among the ladies got 5 dosages of TT, unrefined immunization rate was 37%.0 and Substantial inoculation rate was 33% via card, these rates were 18.5% and 14.2% separately. The immunization coverge was altogether higher among the ladies matured 25-29 years (91.0%) and

having HSC level of schooling (92.3%) (X2 test, p under 0.050) Increddiable section of rurual ladies didn't have any portion of TT 5 antibody and drop out rate was fundamentally higher among poor and unskilled ladies. Remarkable endeavors or mediation and methodologies ought to be taken to build TT 5 immunization inclusion among the provincial ladies to shield them from tetanus.²²

The best of conceivable data it is one the main review which decides the recurrence of and TT inoculation inclusion among metropolitan and rustic females of different sindh. It is suggested that future investigations ought to incorporate huge scope test size from different settings. Suitable preventive and measure and revealing techniques at local area are expected to be set up.

CONCLUSION

This study offers valuable insight into the TT Vaccination coverage level among femals of sindh and their complex relationship with different factors which create obstacles for coverage. It emphasizes the importance of understanding and addressing the impact of TT vaccination coverage on the lives of mothers and suggests potential avenues for further resreach and intervention.

ETHICAL APPROVAL: The ERC gave Ethical Review approval. **NO: PUMHSW/SBA/CHS/101**

CONSENT TO PARTICIPATE: Verbal Consent was taken from subject.

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AUTHOR'S CONTRIBUTION: All persons who meet authorship criteria are listed as authors, and all authors certify that they participated in work to take public responsibility of this manuscript. All author's read and approved the final manuscript.

RECOMMENDATION: The study's findings will provide insights into the prevalence of TT coverage among young

female of sindh. This knowledge will be curcial for evidence-based recommendations to enhance the

prevention of Tetanus Diseases through awareness about TT vaccination and hygiene birth practices.

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