

# PREGNANT WOMEN'S KNOWLEDGE TOWARD TETANUS TOXOID VACCINATION IN AL –HILLA CITY

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## ABSTRACT:

**Background:** The mortality of tetanus, in general, be likely to be high in the lack of curative management where circumstance death approaches 100%; this percentage decreases to 10–60% in the attendance of health care, depending on the obtainability of intensive care services. The aim of this study to assess knowledge of the study sample about tetanus toxoid vaccination.

**Methods:** non-probability , descriptive .analytic was conducted on (convenience type of sample) of (220) pregnant attending to health centers in AL-Hilla city. verbal consents were gained prior to interviewing A question.aire used for information collected.

**Results:** Overall assessment were not sure or has moderate knowledge about "Tetanus , disease and its vaccine& the knowledge of sample study with (age,occupation ,residency ;economicstatus, were highly significant with all ( P = 0.000 )& highly significant with all reproductive information ( P = 0.000 )but were significant at.p=.018,p=.032 respectively)with gravida &abortion .

**Conclusions:** High proportion of mothers had completed their tetanus vaccination. The overall assessment of mothers have moderate knowledge about tetanus and vaccine .

**Key words:** Assessment , Pregnant Women's, Knowledge. Tetanus Toxoid, Vaccination (TTV)

## I. INTRODUCTION

In many developing states still the main reason and basis of neonatal and infant mortality <sup>(1)</sup>.Tetanus infection has persisted a chief health problem in the third world countries in spite of the readiness & accessibility of effective antibodies as tetanus vaccines<sup>(2)</sup> .The mortality of tetanus, in general, be likely to be high in the lack of curative management where circumstance death approaches 100%; this percentage decreases to 10–60% in the attendance of health care,depending on the obtainability of intensive care services. In the latest year for which estimates are available), nearly (30,848) newborns died of neonatal tetanus <sup>(3)</sup>.

" Tetanus is; a avoidable, non-communicable bacterial disease. The causes of it spores of clostridium tetanus bacteria that are dominant in the air and can be spread into the body without intact skin but trough injury by infected substances <sup>(4)</sup>.

Internationally each year "309,000" deceases happen due to tetanus disease . it is predictable that each year globally( 5 percent )of parental deceases arise due infection by contaminated & 14% of all newborn die due to maternal neonatal tetanus <sup>(5)</sup>.

Tatana's toxoid disease affects people in varied age, but neonates through umbilical stump who acquire it , and their mothers are mainly at risk, especially after normal vaginal delivery under contamination equipment's and septic conditions. This occurs in women with suboptimal or no immunisation to protect them and their newborn<sup>(6)</sup>.

Delivery in contamination or an unclean surface, with unclean hands and instruments increases the chances of the spread of infection to both mother and baby during the birthing process. In addition, the traditional birth attendant or family may recommend application of harmful traditional substances (ghee, ashes, earth, and animal

ding) to stop the bleeding of the umbilical cord and to promote quick drying which further increases the risk of contracting tetanus <sup>(7)</sup>.

Inappropriate knowledge may put patients at risk of developing tetanus or on the other end unnecessary adverse effects of hyper immunization. Knowledge is a factor that greatly affects pregnant women to receive tetanus toxoid vaccination during pregnancy. The success of vaccination programs relies sufficiently on high coverage to maintain herd immunity, the coverage rates in Iraq are different by the types of vaccines, for example, the coverage rate reported in 2010 regarding the tetanus toxoid for pregnant and non-pregnant women, was very low, only 0.1% of the targeted women <sup>(8)</sup>.

## II. METHODOLOGY:

Study was "descriptive-analytic" non-probability, design "(convenient type selected of sample) of (220) of pregnant women; who attending primary health care centers(HCCs) in h illa city. The study was carried out from (1st October 2020-April 2021) ;Information was collected by using interviewing techniques after verbal consents for participating in the study, a questionnaire constructed for the purpose of this study, consists of three parts include;(5)items related to socio-demographic include(age,educational level,residency ,economic status,occupation ); 5 items interrelated to reproductive data include(gravida,para, abortion ,visiting health centers, doses of vaccine) &"10" items interrelated to the knowledge of sample toward tetanus disease, its vaccineinclude(do you know disease called "Tetanus, There is bacteria causes Tetanus, there is vaccine to prevent tetanus, the causes of tetanus is lived in soil-saliva of animal& dust; , do you know patient suffer muscle spasm in the jaw &neck; unhealthy practices during cutting umbilical cord causes disease; tetanus disease is not transmitted from one to another person,the purpose of vaccine to protect mother & child, contaminate the wounds cause disease, do you knowfive doses of vaccine must be taken during reproductive age); Validity has been carried out by (8) a panel of experts; these items are rated according to "Likert scale" :- (I don't know, I'm not sure, I know ) scored (3,2,1) , "cut off Point of score=0.66". \*Descriptive statistical &\* Inferential analyses are used to analysis using the ("SPSS version 19).

## III. RESULTS

Table(1):Information on Demographic Characteristics of Participants Women

Characteristics	Group	Frequen cy	Percent (%)	Cumulativ e Percent
Age	16-22	52	23.6	23.6
	23-29	108	49.1	72.7
	30-36	32	14.5	87.3
	37-43	28	12.7	100.0
	Mean ± SD	2.16 ± 0.932		
<u>Educational level</u>	Not read and write	45	20.5	20.5
	Read and write	107	48.6	69.1
	Primary& Secondary	32	14.5	83.6
	Institute &College	28	12.7	96.4
	Post-Graduate	8	3.6	100.0
Residency	Urban	114	51.8	51.8
	Rural	106	48.2	48.2

	Not Enough	37	16.8	16.8
Economic status	Just Enough	144	65.5	82.3
	Enough	39	17.7	100.0
Occupation	Student	16	7.2	7.2
	Employed	50	22.8	30.0
	Housewife	154	70.0	100.0

The result of this study shows that the highest percentage (49.1%,48.6%;51.4%;65.5%;70%) consecutively of sample were 23-29 years old; read &write, ,live in Urban with Just Enough &not working.

Table2: Distribution of the studied responding of reproductive data No.(220)

Items	Group	Frequency	Percent (%)
1-Number of pregnancy (Gravida)	1-2	72	32.7
	3-4	105	47.7
	5&more	43	19.5
	Total	220	100.0
2-Number of birth (Para)	1-2	81	36.8
	5&mor	43	19.5
	Total	220	100.0
3-Number of abortion	1-2	172	78.18
	3-4	40	18.18
	5 or more	8	3.64
	Total	220	100.0
4-Visits to the Centers health	Regular	159	72.27
	Irregular	61	27.73
	Total	220	100.0
5.Doses of vaccine	Complete	137	62.27
	In complete	73	33.18
	Not vaccinated	10	4.55
	Total	220	100.0

Table 2:;The result of this study found that(47.4%) gravida as well as No.of para were (3-4), regularly go to the MCHc ,. According vaccine, the highest percentages of sample completely their doses .

Table3: Distribution of Women's Knowledge Toward Tetanus Disease & vaccine

Knowledge	Group	Frequency	Percent (%)	M.S	Assesment
1- do you know disease called "Tetanus"	Idont Know	71	32.27	2.26	Moderate
	Iam not sure	20	9.09		
	Iknow	129	58.63		
2- There is bacteria causes Tetanus	Idont Know	153	69.54	1.50	Poor
	Iam not sure	23	10.45		
	Iknow	44	20		
3-There is vaccine to prevent tetanus	Idont Know	66	30	2.30	Moderate
	Iam not sure	20	9.09		
	Iknow	134	60.90		
	Idont Know	155	70.45		

4-The causes of tetanus is lived in soil, saliva of animal, dust.	Iam not sure	30	13.6	1.29	Poor
	Iknow	35	15.90		
	Idont Know	169	76.5		
5.do you know patient suffer muscle spasm in the jaw &neck	Iam not sure	41	18.6	1.96	Moderate
	Iknow	10	9.04		
	Idont Know	28	12.66		
6- Unhealthy practices during cutting umbilical cord causes disease	Iam not sure	172	78.28	1.50	Poor
	Iknow	20	9.04		
	Idont Know	149	67.4		
7- contaminate the wounds cause disease	Iam not sure	31	14.5	1.34	Poor
	Iknow	40	18.1		
	Idont Know	171	77.4		
8-Tetanus disease is not transmitted from one to another person	Iam not sure	23	10.4	2.37	Good
	Iknow	26	12.2		
	Idont Know	54	24.54		
9- Swollen &pain in the site of injection are complications of vaccine	Iam not sure	30	13.63	1.44	Poor
	Iknow	136	61.81		
	Idont Know	151	68.63		
10- Do you know ,five doses of vaccine must be taken during reproductive age	Iam not sure	40	18.18	1.74	Moderate
	Iknow	29	13.18		
	Idont Know	151	68.63		
Overall assessment		1.74			Moderate

.M.S.= Mean of score " Cut off point (0.66), Don't know (poor)=(mean of score 1-1.66), Not sure(moderate), (mean of score 1.67-2.33) , Know( good)=( mean of score 2.34 and more)".

Table (3) shows the overall assessment were not sure or has moderate knowledge about "Tetanus , disease and its vaccine( M.S=1.81)

Table(4)Relationships of knowledge toward TTV with Demographicalal

Relationships of knowledge toward disease &signs with Demographical Characteristics	Knowledge women toward TTV		
	C.C.	Sig.	C.S.
Age Groups	.528	.000	HS
Educational level	.487	.062	NS
Occupation	.510	.000	HS
Residency	.510	.000	HS

Socio-Economic Status	.528	.000	HS
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"HS: Highly Sig. at P<0.01; S: Sig. at P<0.05; NS: Non Sig. at P>0.05"

Table( 5) Relationships of knowledge toward TTV& Reproductive Information

Relationships of knowledge toward disease & signs with Reproductive Information	Knowledge women toward Tetanus & vaccine		
	C.C.	Sig.	C.S.
1.Number of birth(para)	.464	.000	HS*
2-Number of pregnancy(Gravida)	.405	.018	S
3-Number of abortion	.337	.033	S
4-Visits to the Centers health	.406	.000	HS*
4-Visits to the Centers health	.406	.000	HS*
5.Does of vaccine	.499	.000	HS*

"HS: Highly Sig. at P<0.01; S: Sig. at P<0.05; NS: Non Sig. at P>0.05"

#### IV. DISCUSSIONS:

Highest percentage (48.9) were age range (23-29) years old ;this result is inconsistence with study done by <sup>(9)</sup> found that the highest percentage of study sample at age (20-29).The highest percentage of participants were read and write& live in urban as well as just enough economic status. This result is in the sameline with <sup>(8)</sup> found that **73** (18.25%) of participants were read and write& residency in **urban** with **194** (48.50%)were Middle income .The study found that (70%)of participants were house wife ,this result is in agreement with <sup>(10)</sup>found that (97.7%) of them were housewives.

**The result of this study found that(47.4%) were gravida & No.of para were (3-4)**, regularly go to the MCHc ,.this result in the same line with <sup>(10)</sup> found that the highest percentage of study sample were had (2-4) pregnancies as well as number of birth but in agreement with <sup>(10)</sup> results shows that the highest percentage visiting irregularly. According vaccine, the highest percentages of sample completely their doses . This result is in the same line with <sup>(6)</sup> their study found that (78%)completed their doses of vaccine.

**Discussion of the knowledge** :the study sample(58.63 %) know there is **disease called "Tetanus** but the highest percentage don't know the cause of "**Tetanus**",&not sure about **Unhealthy practices during cutting umbilical cord causes disease** ,this result is inconsistent with <sup>(11)</sup> study found the participants know there is disease called **Tetanus** but is disagreement with <sup>(11)</sup> knowledge toward the causes of disease.

The highest percentage of study sample (%) didn't know about symptoms (patient suffer muscle spasm in the jaw &neck).Study <sup>(6)</sup>indicated that symptoms of tetanus are severe muscle spasms that could result in bone fractures of the spine, opistotonus and neck stiffness .The result of study shows that 60.90% of pregnant women know there is **vaccine to prevent tetanus& protect mother & child** This result is in agreement with<sup>(6)</sup> found (97.2%)of study sample were heard about tetanus toxoid and prevent Tetanus infection in newborn through vaccine . **The result of this research shows that most of the women (78.28%) were not sure about unhealthy practices during cutting umbilical cord** ;study of (12) found neonatal tetanus is usually passed to the baby via unsterile instruments being used to cut the umbilical cord or other unclean practices at delivery.The overall assessment women's knowledge were poor This result were in the same line with<sup>(13)</sup> \*overall percentage score of knowledge,where the majority of women (83.6%) had poor knowledge of MNT and TTV.

This result present study found that highly significant age with were in the same line with<sup>(13)</sup> \*overall percentage score of knowledge, where the majority of women (83.6%) had poor knowledge of MNT and TTV. The sample (45%). of the them were knowledgeable ;! This result is in the same line with found that (59.8%) among respondents were knowledgeable about this complication of vaccine .

The result of present study found association between knowledge & age of sample study this result is in agreement with<sup>(10)</sup>; but there is association with occupation in present study this result in the same line with<sup>(11)</sup> found that statistical significant association between level of knowledge & occupation but disagreement with level of education and knowledge with probability value  $\leq 0.05$ . the study found significant association Between socio economic status and knowledge result is agreement with<sup>(13)</sup> study in Egypt & that found highly association with level of economic. In this study there was statistical significant relationship between level of knowledge and all reproductive information but this results not in same line with serge study in Kerbela were found no statistical significant relationship between level of knowledge and gravidity, parity.

**Conclusions:** Most pregnant mothers have completed their vaccination include five doses but mothers had moderate knowledge about antenatal tetanus vaccination.

**Recommendations:** Ministry of Health should be accessible Vaccines to every mother during pregnancy and child and provided in all primary health care centers & also health education & training program for all midwives on use sterile technique for normal vaginal delivery procedures.

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**Conflict of Interest:** None to declare.

**Ethical Clearance:** All experimental protocols were approved under the College Nursing, University of Babylon, Iraq and all experiments were carried out in accordance with approved guidelines

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