Title	**Assessment of vaccination status of reproductive women aged 15-45 years concerning tetanus toxoid in Al-Shatrah primary health care centre.**
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Abstract:

The present study aims to assessment vaccination status of reproductive women aged (15-45) years concerning tetanus toxoid in Al- Shatrah primary health care center& find out any association between demographic characteristics and vaccination status of women.

A descriptive cross- sectional study design was carried out on 150 women aged 15-45 years, was conducted by direct interview using of special questionnaire format in primary health care centers in Al- Shatrha district through the period from Nov. 2013 to Jan. 2014.The format included (residence, education level of both women& her husband, income, family size& availability of vaccination centers etc.

The results revealed that,(24%) of women were not vaccinated ,while (73.3%) of study sample was vaccinated, with significant association at P≤o.o5 was marital status, educational level of husband& occupation of women with immunization coverage of tetanus toxoid. Non-significant association P value≥0.05 of (age of women, residence, education level of women & occupation of husbands) with immunization status. The study recommend that increase awareness and instruction regarding timely completion of immunization according to schedule should be stressed by health care provider.

Keywords: vaccination status, reproductive women, tetanus toxoid.

Introduction:

Reproductive health is the ability of women to live through the reproductive years and beyond with reproductive choice, dignity and successful childbearing and to be free of gynecological disease and risk. The international conference on population defined reproductive health in generic terms but stressed the importance of women's reproductive health [1]. Tetanus result from infection with Clostridium Tetani commensally in the gut of human and domestic animals which is found in soil [2]. Spores in soil may germinate when introduced in to the wound. Tetanus is the only vaccine preventable bacteria disease that is infectious [3].

Tetanus can be prevented through immunization with tetanus toxoid containing vaccine neonatal tetanus can be prevent by immunizing women of childbearing age and during pregnancy or outside of pregnancy[4]. Tetanus is highly fatal disease with a mortality rate as high as 35% and represent about annual total of (309000) death particular concern is maternal and neonatal tetanus(MNT) which represent a triple failure of public health in terms of routine vaccination, antenatal care and clean delivery umbilical cord care service it is particularly common in rural area[5].

Tetanus that strikes women during pregnancy or with 6 weeks of the termination of pregnancy is called maternal tetanus. A significant number of women die due to maternal tetanus every year. Maternal tetanus responsible for at least 5% of maternal death and about 30.000 females killed by this disease each year. Estimated true global incidence of tetanus is 700.000 to 1.000.000 cases per years. Even with treatment, the total number of death 2002 case fatality rate can be as high as 80- 90% caused by tetanus worldwide was estimated at 213.000 which neonates tetanus about 15.000- 30.000[6]. In 2004 an estimated 40 million pregnant women were still in need of immunization against birth associated tetanus and about 27 million children didn't complete their primary tetanus immunization series [7]. There has been dramatic decline in tetanus in recent years following important in tetanus vaccination coverage. Most recent reports from WHO demonstrate the impact of vaccination tetanus notification to WHO have declined from more than 30.000 cases in years ago 2002 to just under 10.000 case report in 2010[8].

The objectives of this study:

To assessment vaccination status of reproductive women aged (15-45) years concerning tetanus toxoid in Al- Shatrha primary health care center& find out any association between some demographic characteristics and vaccinated status of women.

Methodology:

- Study design and Sampling size: A descriptive cross- sectional study. Sampling size is a convenient sample of 150 women.

- Study population and Setting of study: Reproductive women aged (15-45) years who attend to the primary health care centers in Al- Shatrha district. Study was conducted in Al-Shatrha primary health care center.

- Data collection and duration: Sample collection by non-probability sample of reproductive age sampling by direct interview with women age (15-45) years who visited to primary health care center by use of special questionnaire. Data collection continued for a period 3 months start from Nov. 2013 to Jan. 2014.

- Questionnaire format : Special Questionnaire form was used to collect information from reproductive women aged (15-45) years which contain special items such as age, residence, educational level, income, family size, marital status , occupation of women and husband, number of children, vaccinated status with tetanus toxoid, dose of vaccine taken…etc.

- Statistical analysis: 1- Descriptive: Frequency, percentage. 2- Inferential: Chi- square.

Results:

Table (1): Distribution of demographical characteristics according to the Study sample

Variables	Groups	F	%
Age of women	15_20	32	21.3
	21_30	68	45.3
	31_45	50	33.3
	Total	150	100.0
Residence	Rural	44	29.3
	Urban	106	70.7
Marital status	Single	8	5.3
	Married	137	91.3
	Other	5	3.3
Education level of women	Read and write	27	18.0
	Primary	49	32.7
	Secondary	36	24.0
	University	38	25.3
Education level of husband	Read and write	14	9.3
	Primary	39	26.0
	Secondary	50	33.3
	University	39	26.0
Occupation of women	Housewife	114	76.0
	Employed	36	24.0
Occupation of husband	Employed	66	44.0
	unemployed	75	50.0
Number of children	Non	23	15.3
	1-2	54	36.0
	3-4	54	36.0
	5	11	7.3
Income of family	Insufficient	54	36.0
	Barely sufficient	64	42.7
	Sufficient	32	21.3
Family size	<5 member	30	20.0
	5-10 member	75	50.0
	> 10member	45	30.0

F: Frequency, %: Percent.

Table (1): shows that (45.3%) of the study sample were within age group (21-30 years), (70.7%) lived in urban area, (91.3%) were married, (32.7%) had primary education relative to women and (33.3%) had secondary education, (76.0%) were housewives and (50.0%) were unemployed relative to husband, (36.0%) had (1-4) child, (42.7%) had barely sufficient family income. (50.0%) had a family of (5-10) members.

Table (2): Distribution of the observed frequencies and percentages for women regarding knowledge about vaccine

Items	Groups	F	%
Vaccination status	Vaccinated	110	73.3
	not vaccinated	36	24.0
	Unknown	4	2.7
	Total	150	100.0
Number of doses	Single	25	16.7
	Two	40	26.7
	three or more	56	37.3
	Unknown	22	14.7
Importance vaccine	to prevent women from tetanus	34	22.7
	to prevent women and her child from tetanus	115	76.7
Last dose	before one month	24	16.0
	before three month	30	20.0
	before six month	15	10.0
	before year or more	35	23.3
	Unknown	26	17.3
	now	13	8.7

F: Frequency, % : percent .

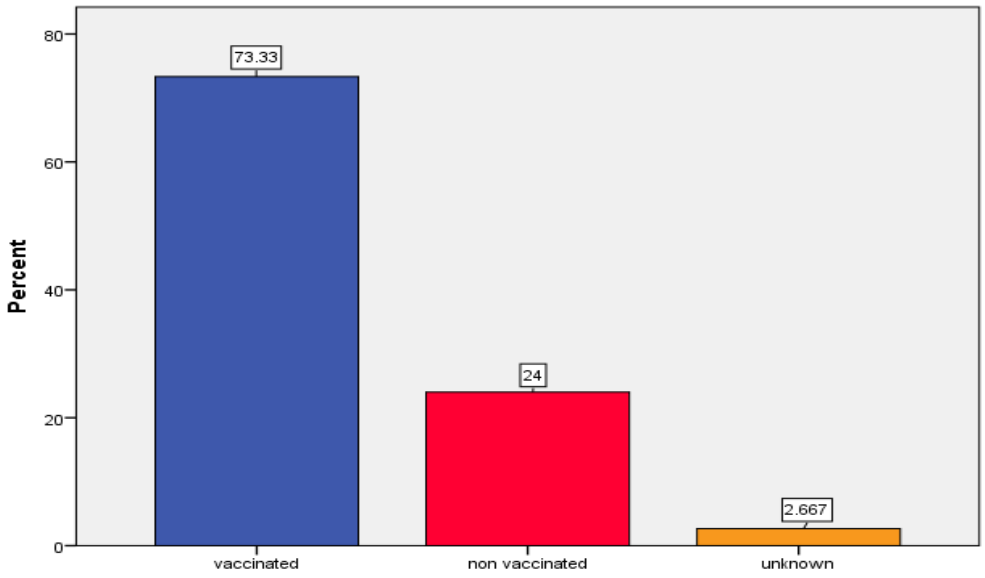

Figure (1): Bar chart for distribution of vaccinated statious of women with tetanus toxiod

Table (2) and figure (1) show that most of the study sample (73.3%) had taken vaccine, (37.3%) had three or more doses of vaccine, the higher proportion of women (76.7%) were vaccinated to prevent women and her child from tetanus, (23.3%) had taken last dose of vaccine before a year or more.

Table (3): Distribution of the observed frequencies and percentages for women regarding visiting P.H.C.C

Items	Groups	F	%
Time spending to reach to P.H.C.C	10min	52	34.7
	20min	65	43.3
	More	33	22.0
The reason for visiting P.H.C.C	take vaccine	53	35.3
	follow up visit	26	17.3
	to treat of disease	29	19.3
	to treat her child	19	12.7
	to vaccinated her child	22	14.7
Relation of P.H.C.C workers	Good	147	98.0
	Not good	3	2.0
Give advice about importance of vaccine	Yes	130	86.7
	No	20	13.3
Do the vaccine found in P.H.C.C	found daily	136	90.7
	Not found	6	4.0
	found some day	2	1.3
	Unknown	3	2.0
Husband encourage about visit to P.H.C.C	Yes	108	72.0
	No	32	21.3

Frequency, %: Percent.

Table (3) shows that (43.3%) were within 20 minutes relative to time spending to reach to the primary health care center, (35.3%) take vaccine, higher proportion of women (98.0%) stated that the relation of primary health care center workers is good, (86.7%) of workers gave advice about the importance of vaccine, (90.7%) found that the vaccine was available daily in the primary health care center, (72.0%) of husbands encouraged their wives to visit primary health care center and take the vaccine.

Table (4): Association between some demographical characteristics and Vaccination status according to study sample

Demographical characteristics		Vaccination status of women with tetanus toxoid			P-value
		Vaccinated	not vaccinated	unknown	
Age of women	15- 20	22	9	1	0.835*
	21-30	50	17	1	
	31-45	38	10	2	
Residence	Rural	31	12	1	0.949*
	Urban	79	24	3	
Marital status	Single	2	6	0	0.010**
	Married	105	28	4	
	Other	3	2	0	
Education level of women	Read and write	17	9	1	0.915*
	Primary	37	11	1	
	Secondary	28	7	1	
	University	28	9	1	
Education level of husband	Read and write	10	2	2	0.035**
	Primary	25	13	1	
	Secondary	39	10	1	
	University	34	5	0	
Occupation of women	Housewife	84	29	1	0.047**
	Employed	26	7	3	
Occupation of husband	Employed	50	15	1	0.590*
	Unemployed	58	14	3	

(*) Non-Significant difference P>0.05, (**) Significant difference P<0.05

Table (4) demonstrated that association between some demographical characteristic and vaccination status was as follows: non-significant difference at P>0.05 between age groups, residence, education level of women, occupation of husband and vaccination status, while there was significant difference at P<0.05 between marital status, education level of husband, occupation of women and vaccination status.

Discussion:

The present study showed that (73.3%) of women were vaccinated while (24%) were not vaccinated compared with study conducted in AL- Mousel city the women of the whole subjects constituted 24%. Another study reported that 49% of women in Yemen who didn't receive tetanus toxoid vaccine at all in their life. The difference may be due to the variable circumstances of both countries [9].

In developing countries it has been shown that improving women and mothers knowledge of complete immunization has to be potential to increase immunization of women and children and their health care usage [10]. This dissimilar with result in present study there is non-statistically significant difference between tetanus toxoid coverage and education level of women and also not in agreement with result of the study in Peshawar which show clearly significant difference between them[11,12].

A study conducted in Pakistan showed that 60% of vaccinated women are in rural area while 65% in urban area and there is statistically significant association between residence variable and immunization coverage of tetanus toxoid[13,14] while this is not in agreement with result of present study which revealed that there is not statistically significant association at p ≥0.949.

There is no statistically significant association between tetanus toxoid and occupation of husband and this is not in agreement with results of study conducted in Peshawar [15-16].

Study conducted in Khyber- Pakhtunkhwa& Peshawar the income of family and immunization status is in agreement with present study 42.7% of vaccinated women, those with barely sufficient family income [17].

Relationship between education level of husband and tetanus toxoid coverage in present study is significantly at P- value0.035 this is similar to study in Peshawar and other countries which revealed significantly association between education level of both men and women with tetanus toxoid coverage also [11].

In Bangladesh showed that low immunization coverage among females whose husbands had lower education status. It was also noted that women having knowledge about immunization and its importance had much greater immunization status [14].

Conclusions:

-The study revealed that the vast majority of women were vaccinated with tetanus toxoid and know the importance of vaccine to prevent women and her child from tetanus.
-There is no significant difference between age group, residence, education level of women, occupation of husband and immunization status, while significant difference between marital status, education level of husband, occupation of women and immunization status.

Recommendation:

-Awareness and instruction regarding timely completion of immunization according to schedule should be stressed by health care provider.
-Home visits and effective role of health workers is very important and play important role in increasing immunization coverage with tetanus toxoid among women aged 15-45 years.
-Health care providers can play a vital role in imparting knowledge regarding immunization.

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