

Awareness about Vaccination During Pregnancy

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Abstract

Introduction: Vaccination during pregnancy is a simple and effective way to protect the mother and child from infections. Immunization can protect the mother from vaccine-preventable diseases and also immunization can protect the fetus and infant directly via transferred antibodies. This is why the awareness, knowledge and attitude towards vaccination during pregnancy in women is very important.

Objective: The purpose of the study was to assess the awareness, knowledge and attitudes towards vaccination during pregnancy in women of reproductive age. To raise awareness about the vaccines like Tdap, flu shot (influenza) which is mostly given to women during pregnancy.

Methodology: A cross sectional questionnaire-based interview was conducted among 112 pregnant women, who attended outpatient department of obstetrics and gynecology department of Saveetha medical college, Chennai. Data were collected after informed consent and ethical clearance and it was analyzed.

Results: Among the 112 reproductive women involved in the study, 20% of the participants had good awareness and knowledge about vaccination during pregnancy, 42% had satisfactory awareness and knowledge and the remaining 38% had poor awareness and knowledge. According to the results the participants between the age of 30 and 35 years had high percentage (41%) of awareness about vaccination during

pregnancy and it was also observed the participants with poor education and low socioeconomic status had poor awareness and knowledge about vaccination during pregnancy.

Conclusion: The awareness, knowledge and uptake of the vaccine among women are low, according to the study. Hence the women should be educated about vaccination given during pregnancy in order to promote awareness and emphasize the importance of vaccination during pregnancy.

Keywords: Vaccination; Pregnancy; Immunization.

Introduction

Immunization during pregnancy is a simple and effective way to protect the mother and child from certain infections. Vaccine-preventable diseases are infectious and it can be prevented by vaccinating individuals for example, deaths from invasive pneumococcal disease, hepatitis A and B, and varicella have dramatically declined over the last decade pregnant women.

Vaccination during pregnancy likely provides direct fetal and infant benefit through passive immunity. Hence vaccination in pregnant women plays a significant role in both the maternal and fetal life.

Globally, in 2013, approximately 6.3 million children did not reach the age of 5, and child mortality of 51.8% was associated with infectious diseases. The child mortality rate can be decreased significantly through immunization during pregnancy of the mother. National immunization recommendations currently target 17 vaccine-preventable diseases across the lifespan. However, adult coverage for most routinely recommended vaccines is suboptimal and well below Healthy People 2020 goals. In United States approximately 32000 obstetrics and gynecology¹ offices were insisted to integrate adult immunization along with the routine obstetrics and gynecology practice, which was one of the ways to achieve vaccination in pregnant women. Hence to achieve the above goals it is necessary to educate and make the people aware about the importance of vaccination and considerable increases in vaccination coverage are needed to significantly reduce or eradicate the incidence of vaccine-preventable diseases in women during pregnancy.

Objective

To assess the knowledge in vaccination during pregnancy. To find out the awareness among reproductive women about vaccination. To find their attitude towards vaccination during pregnancy. To analyze the awareness and knowledge about the vaccines like Tdap, flu shot (influenza).

Materials and Methods

A prospective cross-sectional study was done among 112 pregnant women, attending the outpatient department of Obstetrics and Gynecology, department of Saveetha Medical College, Chennai through questionnaire with informed consent and ethical clearance. Then, the data were analyzed to find the knowledge, attitude and awareness in vaccination (TT, influenza) during pregnancy among 112 pregnant women.

Inclusion criteria: 112 pregnant women of child bearing age.

Exclusion criteria: Pregnant women with serious illness and women who had difficulty in communicating were excluded. Women who are know case of hypertension, diabetes and other conditions were excluded. After obtaining the data, it was entered in excel spread sheet and was analyzed using SPSS software and frequencies and percentages were obtained analyzed by SPSS software.

Results

Marital status: A total of 112 women participated of which 94% were married and pregnant, and 6% were unmarried and non-pregnant (Fig. 1).

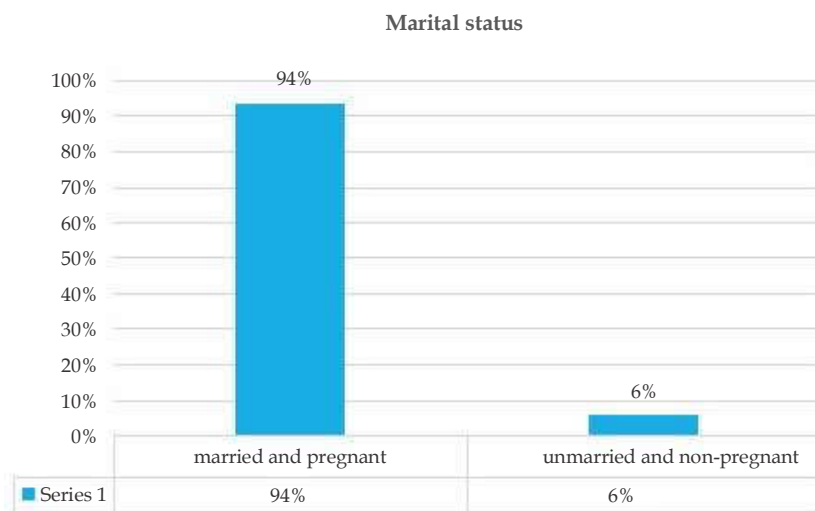


Fig. 1: Marital Status.

Age

The respondents were in the 18–35 age group (child-bearing age). 35% participants were between

the ages of 20 and 25; 36% participants were between the ages of 25 and 30; 41% participants were between the ages of 30 and 35 (Fig. 2).

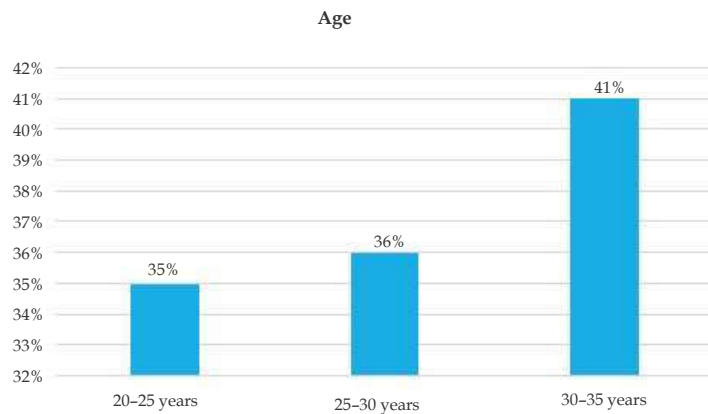


Fig. 2: Age

Gravida Distribution

Out of 112 participants the gravida distribution for 46 participants it was found to be one; for 53

participants it was found to be 2; for 13 it was found to be gravida 3 (Table 1).

Table 1: Gravida Distribution

Gravida distribution	Percentage
Gravida 1	46
Gravida 2	53
Gravida 3	13

Educational Status.

Out of 112 participants 38 participants did not have formal education; 45 participants had completed

their primary schooling (1-8 class); 19 participants had completed their higher secondary schooling (11-12 class); 10 participants had completed their college (Fig. 3).

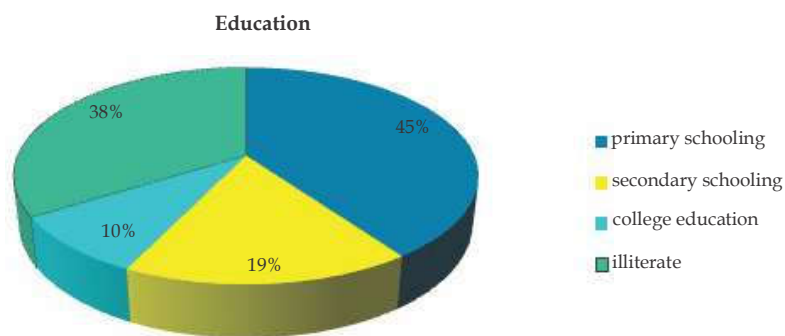


Fig. 3: Educational status

Socioeconomic Analysis

Out of 112 participants, 28% of women belonged to

lower socioeconomic class, 67% belonged to middle class and the remaining 5% of women belonged to upper class (Table 2).

Table 2: Socioeconomic status

Socioeconomic status	Number of participants
Lower class	28%
Middle class	67%
Upper class	5%

Awareness

Out of 112 participants, 20% had good awareness, 42% had satisfactory awareness and the remaining

38% had poor awareness about vaccination given during pregnancy (Fig. 4).



Fig. 4: Awareness

Knowledge

Out of 112 participants, 20% had good knowledge about receiving vaccination during pregnancy; 42%

of the participants had satisfactory knowledge and the remaining 38% of the participants had poor knowledge about receiving vaccination during pregnancy (Fig. 5).

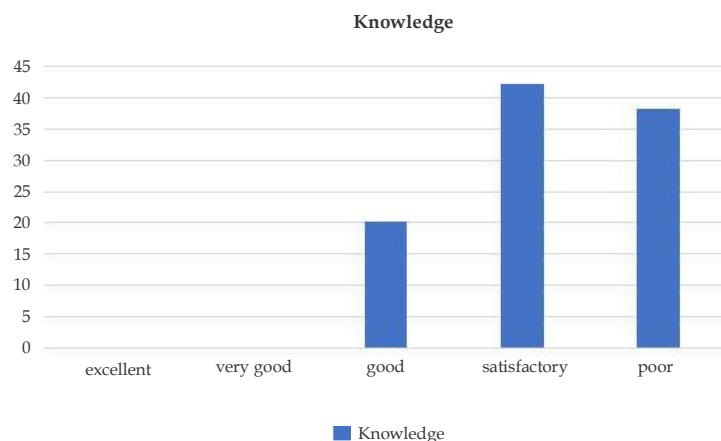


Fig. 5: Knowledge

Practice

Out of 112 participants, 89% of the participants had good attitude towards vaccination and the remaining 11% had poor practice towards vaccination. The awareness, knowledge and attitude of the participants had a primary association with their education and socioeconomic status. 64% of the respondents had knowledge about the vaccination plans provided by the government and 26% had no knowledge about the vaccination plans. From the responses of the participants it was found that 73 of the individuals were interested to attend to activities conducted regarding awareness of vaccination during pregnancy.

Correlate Awareness and Knowledge with Socioeconomic Status

Out of 38% of the participants who had poor awareness about vaccination during pregnancy, 24% belonged lower socioeconomic class and the remaining 14% belonged to middle class.

Out of 42% of the participants who had satisfactory awareness about vaccination during pregnancy, 4% belonged to lower socioeconomic class and the remaining 36% belonged to middle class and the remaining 2% belonged to upper class

Out of 20% of the participants who had good awareness about vaccination during pregnancy, 17% belonged to middle socioeconomic class and the remaining 3% belonged to upperclass (Table 3).

Table 3: Correlate Awareness and Knowledge with Socioeconomic Status

Socioeconomic status	good	satisfactory	Poor
Lower class	Nil	4%	24%
Middle class	17%	36%	14%
Upper class	3%	2%	Nil

Correlate Awareness and Knowledge with Education

Out of 38% of the participants who had poor knowledge about vaccination during pregnancy, 25% were illiterate and the remaining 13% had done their primary schooling. Out of 42% of the participants who had satisfactory awareness about vaccination during pregnancy, 7% were illiterate, 22% had done their primary schooling and the remaining 13% had done their secondary education.

Out of 20% of the participants who had good awareness about vaccination during pregnancy, 4% of the participants had done their primary schooling, 6% had done their secondary schooling and 10% had done their degree (graduates).

And majority of the patients were not aware about the complications of the vaccine-preventable disease in pregnancy, hence this factor also contributes to the reduced amount of vaccination in women with no formal education (Table 4).

Table 4: Correlate Awareness and Knowledge with Education

Education	good	satisfactory	poor
Illiterate	nil	7%	25%
Primary schooling	4%	22%	13%
Secondary schooling	6%	13%	Nil
Graduate	10%	Nil	Nil

Respondents Source of Knowledge about Vaccination Given During Pregnancy

From the acquired data it was found that less cost, television and doctor’s advise were major sources which influenced the participant to take the vaccine. Less cost of the vaccine-influenced

73% of the participant to take the vaccine during pregnancy. Doctor’s advise-influenced 34% of the participant to take the vaccine during pregnancy. Television-influenced 11% of the participant. Others-influenced 7% of the participant (Table 5).

Table 5: Respondents Source of Knowledge about Vaccination Given During Pregnancy

Source which influenced to get vaccination	
Television	11%
Doctor’s advise	34%
Less cost	48%
Others	7%

Discussion

Overall awareness of vaccination during pregnancy was found to be moderate but it did not reach the WHO recommended range.² However, the coverage was comparatively good among participants who were educated and socioeconomic status of middle and upper class. Poor knowledge about vaccines and complications were key elements for not getting vaccinated. Family-level decision-making was important factor against the uptake

of vaccination in our study. We believe that if a woman is empowered enough to make a decision about receiving vaccination and seeking healthcare, that would significantly improve the vaccination coverage.

The participants of our study group about 94% were married and pregnant which was in relation with the study by Yasir Shafiq *et al.*³ in which the largest proportion were married and pregnant. In our study with regarding the educational status about 38 participants had no formal education

which was similar to Jha S *et al.*⁴ study in which 87% of the participant had completed less than 12 years of school. In our study, main reasons for vaccine refusal were lack of awareness and considering not necessary, which was in relation with the study conducted by Tuells J⁵ in which 29.5% had lack of awareness and 25.6% were not considering it necessary. In our study the awareness about the vaccination had an association with the education, family background and their attitude, the similar result was also published in the study done by Amin *et al.*, 2013.⁶ About 90% of the married and pregnant women followed the vaccination schedule properly were few other participants had a false belief that single dose of a particular (for ex: tetanus toxoid) vaccine is sufficient, the similar results were also seen in the study conducted by Yasir Shafiq *et al.*³ in which 74% of the married and pregnant women vaccinated. In our study, questionnaire was used to collect the answers from the participants. Our study observed that the source of awareness of vaccination during pregnancy was maximum through the efficient cost of vaccine, doctor's advise and television. It was evident from our study that poor maternal knowledge not only affects woman's vaccination status, but also hinders vaccination for the infant, which was similar to the results of the study done by Nisar N *et al.*⁷

The study has several strengths to be reported. First, the study was performed by an interview method so it was ensured that the participants understood the questions well. Second, the sampling of the participants was truly random in nature.

There are also several limitations in this study which need to be considered. The vaccination information is predominantly subjective and based on recall. Only 43% of the participants reporting vaccination produced the vaccination card. There was a differential response rate in our participants, as some married women refused to participate in the study due to sociocultural factors.

Conclusion

Our study concludes that awareness in vaccination during pregnancy was maximum observed in participants who were married and had formal education. The lack of awareness about vaccination in the participants were mainly due

to low educational status, influence of family and sociocultural factors like decision making and lack of knowledge about free vaccination plans. Therefore, to improve the awareness about vaccination during pregnancy awareness programmes in rural areas, health education and other public awareness could be conducted, which may result in increased knowledge of vaccination during pregnancy.

Acknowledgment

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