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A Cross Sectional Descriptive Study to Assess Awareness about Childhood Immunization amongst Pregnant Women Residing In Field Practice Area of a Primary Health Center in Maharashtra

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Abstract **Original Research Article**

Introduction: Immunization is one of the most successful and cost-effective public health interventions for reducing childhood morbidity and mortality. One third of the deaths among under-fives are preventable by vaccines. All countries in the world have an immunization programme to deliver selected vaccines to targeted beneficiaries specially focusing on pregnant women, infants and children who are at high risk of diseases preventable by vaccines. In India still there are large numbers of children who are not immunized which are being vaccinated through Intensified Mission Indradhanush Programme. This underlines the need for further improvement in immunization programme implementation**.** ***Objectives:*** To assess the knowledge, attitude and practices of pregnant women about childhood immunization & to educate them regarding the immunization schedules and importance of immunization. ***Material and Methods:*** It is A Cross-sectional descriptive study conducted in a field practice area of a Primary Health Centre (PHC) of a rural area. All pregnant mothers registered with PHC during study period were identified and interviewed using pre designed and pre tested questionnaire by house to house survey**.** ***Statistical analysis:*** Mean, Percentages and SD are calculated. ***Results:*** Majority of pregnant mothers are in age group of 21 to 30 years & literate. Still they heard only about polio, measles, rubella and hepatitis vaccine. None of them have heard about mumps and influenza. 37.9% women are primigravida and 48.4% are second gravida. Main source of information is ASHA (62.1%) followed by AWW (15.8%). Majority of them prefer to immunize their children in government hospitals. Knowledge of women regarding the use of vaccines to prevent particular diseases is poor. Most of women (96.8%) believed that there are no side effects of vaccination. But they consider that their child should not get vaccinated in conditions like cold and fever. Attitude towards vaccination is satisfactory. Only 62 percent of mothers who already have first child had followed immunization schedule. ***Conclusion:*** Study reflects that, pregnant women had less knowledge regarding immunization. Attitude towards vaccination is satisfactory but practice is poor. Antenatal period needs to be utilized to inculcate importance of complete immunization as per schedule.

Keywords: Immunization, Vaccination, pregnant mother.

INTRODUCTION

Immunization is the lifeline of children. It can be life-threatening for children if immunization is missed or deliberately not provided. It is now beyond doubt had been proven that Immunization is the best preventive measure to protect children's lives and futures. More than half of the world's most vulnerable children still miss out on the essential vaccines they need to survive and live healthy lives. Globally, 1.5 million deaths could be avoided if children were vaccinated [1].

In the last two decades India has made significant progress in improving health indicators, particularly those related to child health. The country was certified polio-free in 2014 and eliminated maternal and neonatal tetanus in 2015. Immunization acts as a protective shield, keeping families and communities safe. By vaccinating our children, we are also protecting the most vulnerable members of our community, including new-born babies [1].

Government of India launched a programme called Mission Indradhanush, the largest immunization programme in the world in terms of the number of beneficiaries, geographical coverage and quantities of vaccine used. In this program nearly 27 million newborns targeted for immunization annually to

accelerate full immunization and to reach the unreached [2].

Though we have made progress in development of vaccines, infectious diseases continue to responsible for vast majority of child mortality and morbidity in India. Nearly one million children die before their fifth birthday in India. About one of every four of these deaths are caused by pneumonia and diarrhoea - two leading infectious causes of child deaths worldwide, even though many of them can be saved by interventions such as breastfeeding, immunization and access to treatment [1].

As per NFHS 4, 2015-16, in India the national average for full immunization is 62 per cent, DPT-3 coverage - 78.4 per cent and for measles first dose - 81.1 per cent. Some of the newer challenges in achieving full immunization coverage include limited capacities of staff, particularly in poor-performing states and at the field level, and gaps in key areas such as predicting demand, logistics and cold chain management, which result in high wastage rates. India also lacks a robust system to track vaccine-preventable diseases [3].

Many studies have been conducted in mothers after 1 to 2 years of birth of baby. Very few studies are seen in antenatal mothers. ANC period is very crucial period where mother is receptive for all the knowledge beneficial for her baby. If mothers are imparted with knowledge of immunization and its importance for her child can make a definite change in proportion of children receiving complete immunization. Hence present study was conducted with the objectives- to assess the knowledge, attitude, and practices of pregnant women about childhood immunization & to educate them regarding the immunization schedules and importance of it.

METHODOLOGY

This is a cross-sectional descriptive study carried out in a randomly selected village in field practice area of one of the Primary Health Centre in Maharashtra. All pregnant women from the village constituted the study population. Thus at the time of study period there were total 95 pregnant women in the village. Study was carried out in the month of December 2019. Pretested questionnaire was used to obtain information about socio-demographic variables like age, education, income, occupation, family size, type of family of pregnant mothers etc. Their knowledge about childhood immunization was assessed. Data was collected by giving house to house visit. The collected data was analyzed and percentages and means and SD are calculated. Ethical approval and permission was taken from institutional Ethics Committee.

RESULTS

Table-1: Socio-demographic Profile of Pregnant women

Parameters	Responses	Frequency (95)	Percentage (%)
Age (in years)	15 – 20	21	22.1
	21 – 25	41	43.2
	26 – 30	27	28.4
	31 – 35	06	6.3
		Mean = 24.2 SD = 3.519	
Education	Illiterate	03	3.2
	Primary Education	03	3.2
	SSC	35	36.8
	HSC	36	37.9
	Graduation	09	9.5
	Post-Graduation	09	9.5
Occupation	Working	03	3.2
	Housewife	92	96.8
Decision Makers	Herself	03	3.2
	Husband	77	81.1
	Both	15	15.8
Residential Area	Urban	03	3.2
	Rural	92	96.8
Gravida	1	36	37.9
	2	46	48.4
	3	10	10.5
	4	03	3.2
Informer	ASHA	59	62.1
	AWW	15	15.8
	HWF	09	9.5
	Doctor	12	12.6

From above table, it is seen that, majority of pregnant women are in age group of 21 to 30 years .Majority of women are literate. Working mothers are very few. 3.2 percent of mothers who stay in urban area and came for delivery to their mothers home. Almost half percentage of mothers was second gravida. Main source of information about vaccination was ASHA workers (62.1%) followed by AWW (15.8%).

Table-2: Proportion of pregnant women knows about available Vaccine

Vaccines	YES (Frequency/%)	NO (Frequency/%)
Polio	86 (90.5)	09 (905)
Diphtheria	03 (3.2)	92 (96.8)
Pertussis	06 (6.3)	89 (93.7)
Tetanus	09 (9.5)	86 (90.5)
Measles	47 (49.5)	48 (50.5)
Mumps	00(00)	95 (100)
Rubella	27 (28.4)	68 (71.6)
Tuberculosis	06 (6.3)	89 (93.7)
Hepatitis B	50 (52.6)	45 (47.4)
Influenza	00(00)	95 (100)

Table 2 showed that ninety Percent pregnant mothers were aware of polio, 50% of measles, 53% of hepatitis and 28% of rubella vaccine. None of them have ever heard of mumps and influenza vaccine. Very few mothers were aware of DPT vaccine too. Awareness about BCG is also low (Only 6.3%).

Table-3: Knowledge of Pregnant women regarding Immunization

Parameters	Responses	Frequency	Percentage
Reasons for Immunization	To Prevent Diseases	53	55.8
	Don't Know	42	44.2
Immunization Places	Sub center	06	6.3
	PHC	89	93.7
Are there any side effects of immunization	Yes	03	3.2
	No	92	96.8
If fever present, can child be vaccinated?	Yes	06	6.3
	No	86	90.5
	Don't Know	03	3.2
If Cold present, can child be vaccinated?	Yes	06	6.3
	No	86	90.5
	Don't Know	03	3.2

Table 3 highlighted that most of women (96.8%) believed that there are no side effects of immunization. Ninety percent of women believed that their child should not get vaccinated in conditions like cold and fever. Forty four percent of mothers were unable to explain actual reason for use of vaccines that is prevention of diseases.

Table-4: Attitude of pregnant women towards Immunization

Parameters	Responses	Frequency (95)	Percentage (%)
Is immunization important for your child?	Yes	95	100
	No	0	0
Is it imp to vaccinate as per schedule?	Yes	91	95.8
	No	04	4.2
Where do you like to vaccinate Child?	Govt. Hospital	92	96.8
	Private Hospital	03	3.1

Table 4 depicts that hundred percent mothers were agreed for absolute necessity of immunization to children. Four percent of mothers were not aware of schedule has to be followed for complete immunization. Majority of them prefer to give vaccines to their children in government hospitals because vaccines are available free of cost.

Table-5: Practice of Immunization (N=55)

Parameters	Responses	Frequency (55)	Percentage (%)
Have you done immunization of your Child as per Schedule?	Yes	34	62
	No	21	38
Have you completed primary immunization of your Child? (till 1yr of age)	Yes	39	71
	No	16	29
Have you consulted your doctor for side effects of Immunization (fever, swelling, pain etc.(out of 5)	Yes	02	40
	No	03	60

Out of 95 pregnant women, 55 women had one or more children. Their practice about immunization is depicted in the table 5. 62% women vaccinated their children as per the immunization schedule. 71% completed primary immunization of their children till 1 year of age. Only 5 mother's complaint about side effect of immunization. Of this only 2 mother consulted their doctor for side effects of Immunization (fever, swelling, pain etc.)

DISCUSSION

Expanding access to immunization is crucial to achieving the Sustainable Development Goals (SDGs). Diseases such as polio and smallpox that once killed thousands of children have been eliminated and others are close to extinction– primarily due to safe and effective vaccines [1].

In present study majority of pregnant women are in age group of 21 to 30 years and literate. A study by Mc Neil et al. presented that 97% pregnant mother participants were above the age of 25 years [4], contradicts to our study where 65% were less than 25 yrs. of age. Early Marriage and conception is predominantly seen in rural part of India.

In similar study complete immunization coverage was 80.9%. In our study primary immunization coverage was 71% in mothers who already have one or two children (n=55). It may be attributed to early age of marriage and less awareness about childhood immunization.

All the mothers (100%) had the knowledge that immunization is important and beneficial for the child. All the mothers knew that immunization is to be started at birth, 39% of mothers knew that OPV protects against polio, 20% mothers knew the disease prevented by DPT immunization, while 99% mothers were ignorant about the disease for which BCG is used [5].

In present study Ninety Percent pregnant mothers were aware of polio, 50% of measles, 53% of hepatitis and 28% of rubella vaccine. None of them have ever heard of mumps and influenza vaccine. Very few mothers were aware of DPT vaccine. Awareness about BCG is also low (only 63%). It may be due to single dose of BCG is given at birth in hospital itself. There are also no booster doses of BCG. Abidoye et al. showed that awareness on various childhood immunizations was quite high in majority of the respondents. Out of the mothers interviewed, 89.5%, 85.5%, 78.5%, 71.0%, 73.5%, 42.0% and 6.5% of them knew about Bacillus Calmette Guerin (BCG), oral polio, diphtheria, pertussis and tetanus (DPT), Yellow fever, measles, hepatitis B virus (HBV), and meningococcal immunization respectively [6].

Study by kabir et al. highlighted that majority (68%) of mothers had poor knowledge of schedules of childhood immunization as well as knowledge of which diseases are preventable by vaccines used which is similar to present study [7].

In present study, Ninety four percent of mothers are educated till SSC or more and more than 50% are second gravida. Still knowledge of immunization is poor compared to other study. Main source of information for immunization was ASHA (62.1%) and AWW (15.8%). Various IEC measures are needed to be implemented in this village. We should not rely on ASHA and AWWs only for creating awareness. We need to involve self-help groups, various mandals (group of young people) in village, old age group and school children too.

In present study most of women (96.8%) believed that there are no side effects of immunization. Ninety percent of women believed that their child should not get vaccinated in conditions like cold and fever. Forty four percent of mothers were unable to explain actual reason for use of vaccines that is prevention of diseases.

All the mothers considered that side-effects of vaccination are not dangerous [5]. In present study too none of the pregnant mothers is worried about side effects of vaccines, they don't think it's as dangerous.

Kabir et al. presented that One hundred and six (54%) of the mothers were against their children being immunized but up to 59.5% believed vaccines offer protection against diseases while 48.05 of respondents believed vaccines were safe [7].

In present study in 77% cases decision makers were husband. In a study by Awosan et al. the main reasons given by the respondents whose children were never vaccinated were husbands' disapproval (52.6%) and lack of information on the immunization schedule (26.3%) [8].

Hundred percent mothers in present study were agreed for absolute necessity of immunization to children. Four percent of mothers were not aware about the immunisation schedule that has to be followed for complete immunization. Majority of them prefer to immunize their children in government hospitals because vaccines are available free of cost. Similar finding are seen in a study conducted by Hamid et al. that All the mothers considered immunization is important and should be completed as per schedule, as per the instructions of the health workers. All (100%) mothers believed that immunization should be done in Govt. health facility [6]. Awosan et al. also mentioned similar findings that ninety five respondents consider immunization are safe for their children. Most of them also showed positive attitude towards childhood immunization, as they consider it necessary to fully immunize their children (93.2%), would like to fully immunize their new baby after delivery (96.4%), recommend full immunization of children to their friends, relatives and other women, and even pay for the vaccines should the free vaccines become unavailable (90.9%) [8].

CONCLUSION

It can be summarized as mothers are willing to immunize their children though they are not aware of various vaccines available, diseases they prevent and its schedules. Factors which prevent them from immunizing children as per schedule such as loss of wages, decision making by senior members in the family, religious rituals and health system lacunae need to be addressed in same population in future research.

UNICEF highlighted that only 65 per cent of children in India receive full immunization during the first year of their life. Despite clear evidence around the power of vaccines to save lives and control disease, millions of young children around the world are missing out, putting them and their communities at risk of disease and deadly outbreaks. This is unacceptable in a world where affordable, lifesaving vaccines exist [1].

LIMITATIONS

1. More than 50 percent of mothers were second gravida; they may have made aware regarding childhood immunization during their first pregnancy.
2. Shorter duration of study. Extrapolating results to general population is limited. Similar study needs to be conducted with large sample size representing various strata of population for long duration.

RECOMMENDATION

Adequate health education should be given to the rural women during their antenatal care visits to increase their knowledge regarding immunization. We need to involve self-help groups, various mandals (group of young people) in village, old age group, school teachers and children too. Continuous Training activities of ASHA and AWWs related to immunization should be conducted regularly. Adequate remuneration for their hardships and valuable work should also be addressed.

REFERENCES

1. Immunization | UNICEF India [Internet]. [Cited 2020 Aug 30]. Available from: https://www.unicef.org/india/what-we-do/immunization
2. Mission Indradhanush | National Health Portal of India [Internet]. [Cited 2020 Aug 30]. Available from: https://www.nhp.gov.in/mission-indradhanush1_pg
3. National Family Health Survey [Internet]. [Cited 2020 Aug 30]. Available from: http://rchiips.org/NFHS/factsheet_NFHS-4.shtml
4. McNeil DA, Mueller M, MacDonald S, McDonald S, Saini V, Kellner JD, et al. Maternal perceptions of childhood vaccination: Explanations of reasons for and against vaccination. BMC Public Health. 2019; 19(1):1–12.
5. Hamid S, Andrabi SAH, Fazli A, Jabeen R. Immunization of children in a rural area of North Kashmir, India: A KAP Study. Online J Heal Allied Sci. 2012; 11(1):1–4.
6. Abidoye AO, Odeyemi KA. Knowledge, Attitude and Practice of Mothers to Childhood Immunization in Kosofe Local Government Area of Lagos State. Ijbair. 2013;2(4):66–72.
7. Kabir M, Iliyasu Z, Abubakar I, Gajida A. Knowledge, perception and beliefs of mothers on routine childhood immunization in a Northern Nigerian Village [Internet]. Vol.1, Annals of Nigerian Medicine. 2006 [cited 2020 Aug 30]. 21-6. Available from: http://www.ajol.info/index.php/anmed/article/view/38319
8. Awosan KJ, Ibrahim MTO, Yunusa EU, Isah BA, Raji MO, Abubakar N. Knowledge, Attitude and Compliance with Full Immunization of Children Against Vaccine Preventable Diseases among Pregnant Mothers in Sokoto, Nigeria. Int J Contemp Med Res [IJCMR]. 2018; 5(6).