Original Research Article

Awareness of parents regarding immunization of their children in slum areas of Nanded city

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Abstract

Background: Immunization significantly lowers the morbidity and mortality rates in children by protecting them from Vaccine Preventable Diseases (VPDs). Inadequate levels of immunization against childhood diseases remain a significant public health problem in resource-poor areas of the globe. **Objective:** To assess the awareness of parents regarding immunization of their children. **Results:** out of 210 study subjects, 184 (87.6%) said that vaccines are given to prevent diseases. 207 (98.6%) don't have awareness about the cold chain in case of immunization. 119 (56.7%) don't know about the name of vaccines that has to be given to their children up to 1 year. 187 (89.0%) parents don't know about the name of vaccine preventable diseases of childhood as per National Immunization Schedule. 204 (97.1%) told that Health staff was the most common source of information about recommended vaccination of their children. **Conclusion:** The overall awareness of parents regarding immunization of their children was found to be non-satisfactory except purpose of vaccination of their children.

Key words: Awareness, Immunization, Vaccine Preventable Diseases (VPDs).

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INTRODUCTION

Survival is an enormous challenge for children especially for those under one year.[1,2] Infectious diseases are major cause of morbidity and mortality in children.[3,4] Immunization perhaps is one of the most effective and efficient ways of protecting the health of children against some most lethal and debilitating diseases in modern times.[3] Vaccination has been regarded as one of the 10 most important achievement of public health in the 20th century.[5] Vaccine-preventable diseases are responsible for about 25% of the 10 million deaths occurring annually among children under 5 years of age globally.[6] According to the Global Routine Vaccination Coverage 2010, about 19.3 million children were not fully vaccinated and remained at risk for diphtheria, tetanus and pertussis, and other vaccine-preventable causes of morbidity and mortality, and about 50% of these children are from India, Nigeria, and Congo.[7] In India, Vaccine preventable diseases are responsible for over 5 lakh deaths annually. There are number of reasons why India lags behind its many less developed neighbours in vaccination rates. They include huge population with relatively high growth rate, geographical diversity and some hard to reach populations, lack of awareness regarding vaccination, inadequate delivery of health services, inadequate surveillance and monitoring, lack of micro-planning and general lack of inter-sectoral coordination and weak VPD surveillance system.[8]

Thus, the present cross sectional study was carried out to study one of the important factor which is having a major role in immunization of child i.e. Awareness of parents regarding immunization of their Children.

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MATERIALS AND METHODS

Study area: Municipal Corporation area of Nanded city. **Study duration**: December 2017 to March 2018. **Study design:** Community based cross sectional study, exploratory study. **Sample size:** The sample size calculated for the present study was 210. For assessment of awareness of the parents regarding vaccination of their children a questionnaire was prepared. Questions regarding awareness of immunization were both open ended and close ended. Questions like purpose of giving vaccines to their children, name of vaccine preventable diseases, name and number of doses of vaccines given up to 1 year, site of giving Inj. BCG, name of vaccine given in the form of oral drops, importance of cold chain, sources of information of child vaccination, adverse events after vaccination and how to minimize them, importance of timing of vaccination, negligence of female child vaccination, place of vaccination etc. were included in the questionnaire. Time required to complete one interview was approximately 25 – 30 Minutes. When information of 7 children was collected in that cluster, then the next cluster was chosen. In this way we had covered all the 30 clusters. After data collection, IEC activities like health education were arranged in the community with the help of anganwadi workers in every village. Not only the women whose children were involved in the study were given health education but other women from the same village who were in the reproductive age group (15 – 45 years) were also informed about the importance of timely immunization and its schedule.

Phase of analysis:

The collected data was numerically coded and entered in Microsoft Excel 2007, and analysed by using SPSS (Statistical Package for Social Sciences) version 16.0 statistical software by maintaining anonymity and privacy of respondents.

Operational Definitions –

1] **Age:** Age of child was taken as recorded in the birth certificate, immunization card which was taken as actual completed age in months. If the exact age was not recalled, then probing questions were asked and age was calculated on the basis of an event which they remember using local calendar of events.

2] **Immunization status:**

*Fully Immunized: A child who has received Inj. BCG, 3 doses each of DPT, Hep - B and OPV (excluding zero dose of OPV) and one dose of measles vaccine.

*Partially Immunized: A child who has received some doses of above mentioned vaccines but was not fully immunized.*Unimmunized: A child who has not received even a single dose of above mentioned vaccines.

RESULT

Table 1: Distribution of study subjects according to sociodemographic profile

Indicators	Sex	
	Male No. (%)	Female No. (%)
Age in Months		
12 – 15	35(52.2)	32(47.8)
16 – 19	37(55.2)	30(44.8)
20 -23	44(57.8)	32(42.2)
Religion		
Hindu	141	67.1
Muslim	28	13.3
Buddha	39	18.6
Sikh	2	1.0
Education of parents		
Higher Secondary	75 (35.7)	84 (40.0)
Intermediate	51 (24.3)	42 (20.0)
Graduate	23 (11.0)	9 (4.3)
Professionals	4 (1.9)	1 (0.5)
Occupation of parents		
Unemployed	0 (0.0)	200 (95.2)
Unskilled	41 (19.5)	3 (1.4)
Semiskilled	69 (32.9)	4 (1.9)
Skilled	66 (31.4)	2 (1.0)
Semi professional	30 (14.3)	0 (0.0)
Professional	4 (1.9)	1 (0.5)
Type of family		
Nuclear	36	17.1
Joint	119	56.7
Three Generation	55	26.2
Socio – economic Class		
I	3	1.4
II	42	20.0
III	97	46.2
IV	63	30.0
V	5	2.4

Table 2: Awareness of parents regarding immunization of their Children

	Frequency(n=210)	%
Purpose of vaccination		
To prevent diseases	184	87.6
To enhance growth	14	6.7
Don't know	12	5.7
Timing of vaccination is important		
Yes	206	98.1
No	4	1.9
Aware about cold chain		
Yes	3	1.4
No	207	98.6
Vaccine given orally		
Polio vaccine	196	93.3
Don't know	14	6.7
Name of vaccines given up to 1 year *		
BCG	82	39.0
OPV	83	39.5
DPT	54	25.7
Hep B	19	9.0
Measles	71	33.8
Don't know	119	56.7
Name of vaccine preventable diseases*		
Poliomyelitis	17	8.1
Measles	17	8.1
Hepatitis B	12	5.7
Diphtheria	10	4.8
Tetanus	4	1.9
Tuberculosis	2	1.0
Pertussis	2	1.0
Don't know	187	89.0
Number of doses of vaccines*		
BCG	13	6.2
OPV	10	4.8
DPT	13	6.2
Hep B	10	4.8
Measles	12	5.7
Don't know	191	91.0
Source of information*		
Health Staff	204	97.1
Television	20	9.5
Radio	8	3.8
Posters	6	2.9
Newspaper	3	1.4
Others	0	0.0
Possible sufferings*		
Fever	56	26.7
Irritability	30	14.3
Not taking feed	4	1.9
Redness	7	3.3
Swelling	6	2.9
Nodule	2	1.0
$\geq$ 2 sufferings	105	50.0

***(Multiple Responses)**

Out of 210 study subjects, 76 (36.2%) were from age group between 20 – 23 months and 67 (31.9%) from age group between 12 – 15 months and 16 – 19 months each. Among study subjects, 116 (55.2%) were male children and 94 (44.8%) were female children. Most of the study subjects were from Hindu religion 141 (67.1%) followed by Buddhist 39 (18.6%), Muslim 28 (13.3%) and Sikh religion 2 (1.0%). Out of total, 75 (35.7%) father of children were educated up to higher secondary school whereas 11 (5.2%) were illiterate and 84 (40.0%) mother of children were educated up to higher secondary school whereas 17 (8.1%) were illiterate. 69 (32.9%) father of the children were semiskilled workers followed by skilled worker 66 (31.4%) and unskilled worker 41 (19.5%) and 200 (95.2%) mother of children were unemployed followed by semiskilled worker 4 (1.9%) and unskilled worker 3 (1.4%). Only 4 (1.9%) father and 1 (0.5%) mother was professional. Majority were belonging to joint families 119 (56.7%), followed by three generation families 55 (26.2%) and nuclear families 36 (17.1%). Most of study subjects were from socio - economic class III i.e. 97 (46.2%), followed by socio – economic class IV i.e. 63 (30.0%). After asking about purpose of vaccination, out of 210 study subjects, majority of parents 184 (87.6%) said that vaccines are given to prevent diseases, 14 (6.7%) of parents said that vaccines are given to enhance growth of their children and 12 (5.7%) were not aware about the purpose of giving vaccines their children. Most of the parents 206 (98.1%) said that timing of vaccination is important while 4 (1.9%) said that timing of vaccination is not important. 207 (98.6%) parents don't have awareness about the cold chain in case of immunization whereas 3 (1.4%) were aware about cold chain. Majority of the parents 196 (93.3%) had given the correct answer about which vaccine given in the form of oral drops i.e. Polio vaccine whereas 14 (6.7%) parents don't know about it. Out of total 119 (56.7%) parents don't know about the name of vaccines that has to be given to their children up to 1 year. 82 (39.0%) of parents were knowing about name of BCG vaccine followed by name of OPV vaccine 83 (39.5%), Measles vaccine 71 (33.8%), DPT vaccine 54 (25.7%) and Hepatitis B vaccine 19 (9.0%). Majority of parents 187 (89.0%) don't know about the name of vaccine preventable diseases of childhood as per National Immunization Schedule. 17 (8.1%) of parents were knowing the name of Poliomyelitis disease, followed by Measles 17 (8.1%), Hepatitis B 12 (5.7%), Diphtheria 10 (4.8%), Tetanus 4 (1.9%) and Tuberculosis 2 (1.0%). 191 (91.0%) parents didn't know about the correct number of doses of vaccines given to their children up to 1 year. 13 (6.2%) of parents were knowing about the correct number of doses of BCG vaccine and DPT vaccine followed by OPV and Hepatitis B each 10 (4.8%) and Measles 12 (5.7%). Most of the parents 204 (97.1%) told that Health staff was the most common source of information about recommended vaccination of their children followed by Television 20 (9.5%), Radio 8 (3.8%), Posters 6 (2.9%) and Newspaper 3 (1.4%). 105 (50.0%) parents told that their children were having 2 or more sufferings after receiving the vaccines. 56 (26.7%) of parents told that fever was the most common suffering to their children after receiving the vaccines followed by irritability 30 (14.3%), redness 7 (3.3%), swelling 6 (2.9%), not taking feed 4 (1.9%) and nodule 2 (1.0%).

DISCUSSION

In the present study, out of 210 study subjects, majority of parents 184(87.6%) said that vaccines are given to prevent diseases, 14(6.7%) of parents said that vaccines are given to enhance growth of their children and 12(5.7%) were not aware about the purpose of giving vaccines to their children. Similarly, Milteer RM *et al* (1991) [9] in their study on parental reasons for delayed immunizations in children observed that 95% of parents feel that immunizations are important in protecting their child from diseases while 3% don't feel like that and 2% don't know about it. In the present study, majority of the parents 206(98.1%) said that timing of vaccination is important while 4(1.9%) said that timing of vaccination is not important. Similarly, Adil MM *et al* (2003) [10] in their study on knowledge of mothers about children immunization status in the urban areas of Islamabad observed that majority of mothers (91%) regularly immunized their chid, 4.5% partially immunized their child and 4.5% don't immunize their child. Majority of parents 119(56.7%) don't know about the name of vaccines that has to be given to their children up to 1 year. 82(39.0%) of parents were knowing about name of BCG vaccine followed by name of OPV vaccine 83(39.5%), Measles vaccine 71(33.8%), DPT vaccine 54(25.7%) and Hepatitis B vaccine 19(9.0%) to be given to their children up to 1 year of age. Similarly, Adil MM *et al* (2003) [10] in their study on knowledge of mothers about children immunization status in the urban areas of Islamabad observed that 30% of mothers were not aware about name of vaccines, 56% were partially aware and 14% were completely aware. Most of parents 187(89.04%) don't know about the name of vaccine preventable diseases of childhood as per National Immunization Schedule. 17(8.0%) of parents were knowing the name of Poliomyelitis, followed by Measles 17(8.0%), Hepatitis B 12(5.7%), Diphtheria 10(4.8%), Tetanus 4(1.9%) and Tuberculosis 2(1.0%) as a vaccine preventable diseases. Similarly, Adil MM *et al* (2003) [10] in their study on knowledge of mothers about children

immunization status in the urban areas of Islamabad found that majority of mothers (64%) don't know the name of all the vaccine preventable diseases, only 3% were aware of all the vaccine preventable diseases. 204(97.1%) parents told that Health staff was the most common source of information about recommended vaccination of their children followed by Television 20(9.5%), Radio 8(3.8%), Posters 6(2.9%) and Newspaper 3(1.4%). Similarly, Coniglio MA *et al* (2008) [11] in their study on parents attitude and behaviours towards recommended vaccinations in Sicily, Italy observed that most common source of information about recommended vaccination was family paediatrician (74.4%) followed by leaflets / magazines (13.2%), television (8.5%), websites (3.3%) and other (0.6%).

CONCLUSION

The overall awareness of parents regarding immunization of their children was found to be non-satisfactory except purpose of vaccination of their children.

LIMITATION

1. The WHO recommended sample size for immunization coverage was 30 x 7= 210. This sample size might not be sufficient to determine association of different socio-demographic factors with immunization coverage.
2. Parents were asked questions regarding immunization history of the children. There may be recall bias in immunization history. This bias was minimized by verifying records from anganwadi centres.

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