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A study to assess reasons for partial immunization and non-immunization among under five aged children of Pune

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Abstract

The present cross-sectional study, carried out among 80 children in the age group for 0-5 yrs from selected areas of Pune. Objectives of the study were to assess immunization coverage among under five age children and to assess the reasons for partial immunization and non-immunization. 71.25% had fully immunized, 21.25% were partially immunized, 7.5% were non-immunized. The main reason cited for partial and non-immunization was unawareness of need for immunization.

Keywords: Immunization status, under five age children.

1. Introduction

One of the most cost-effective and easy methods for the healthy well-being a child is immunization. It protects entire population, preventing the diseases to spread. Mass vaccination has not only eliminated incidence of diphtheria and tetanus from most of the developed world, it has actually eradicated small pox from the world. This remarkable achievement saves much suffering worldwide and saves money.

2. Objectives of the study

1. To assess immunization coverage among under five age children.
2. To assess the reasons for partial immunization and non-immunization.

3. Methodology

The study was conducted in selected areas of Pune on 80 selected under five age children. The samples were divided in 40 urban and 40 rural areas of Pune. Source of data collection was from parents. Systematic random sampling method was used. The survey design was adopted. Structure interview technique is used for data collection. The nature & purpose of the study was explained to the subjects & informed consent was obtained. All 80 children in the age group 18 mtrs to 36 mtrs were included in the study. A child was classified as fully immunized if he had received one dose of BCG, three doses of DPT and OPV and one dose of Measles vaccine. Parents of the children were interviewed using pre-structured and pre-tested oral-questionnaire to elicit the required information. In case of non-availability of the immunization card BCG scar was looked for the history of immunization elicited.

4. Results

The collected data were coded and entered in computer. Appropriate statistical analyses were done using SPSS 16. Descriptive statistics such as mean, SD frequency, percentage and inferential statistics.

The above table 1 shows that majority (52.5%) from urban area mothers age is between 23-26 yrs, 60% has up to higher education, 77.5% Father has service, 60% had two children, 67.5% had male child. Whereas in rural area majority (55%) mothers age is 18-22 yrs, 75% has education up to primary, 80% mothers are housewives, 67.5% have joint family, 65% have two children, 62.5% had male gender, 65% had second birth order.

Table 1: Demographic Description of Parent by frequency and percentage. N=40,40

S. No.	Demographic Characteristic	Urban		Rural	
		Frequency	Percentage	Frequency	Percentage
1.	Mother's Age				
a)	18-22 years	07	17.5	22	55
b)	23-27 years	21	52.5	16	40
c)	28-32 years	10	25	02	05
d)	33 years and above	02	5	--	--
2.	Education Status				
a)	Illiterate	03	7.5	04	10
b)	Up to Primary	12	30	30	75
c)	Up to Higher Secondary	24	60	04	10
d)	Up to Graduation	01	2.5	02	05
e)	Post Graduation and above	--	--	--	--
3. A.	Mother's occupation				
a)	Housewives	22	55	32	80
b)	Business	02	05	01	2.5
c)	Service	16	40	05	12.5
d)	Farming	--	--	--	--
3. B.	Father's occupation				
a)	Service	31	77.5	21	52.5
b)	Business	05	12.5	02	05
c)	Laborer	04	10	07	17.5
d)	Farmer	--	--	10	25
4.	Monthly income of the family				
a)	Below 1000 rupees	05	05	04	10
b)	1,001-5,000 rupees	12	30	13	32.5
c)	5,001-10,000 rupees	18	45	20	50
d)	More than 10,001 rupees	08	20	03	7.5
5.	Types of the family				
a)	Nuclear family	26	65	12	30
b)	Joint family	14	35	27	67.5
c)	Extended family	--	--	01	2.5
d)	Single parent family	--	--	--	--
6)	No. of children.				
a)	1	03	7.5	04	10
b)	2	24	60	26	65
c)	3	12	30	06	15
d)	4 and above	01	2.5	04	10
7.	Gender of Index child				
a)	Female	13	32.5	15	37.5
b)	Male	27	67.5	25	62.5
8.	Place of delivery of the index child				
a)	Institutional	29	72.5	26	65
b)	Home	11	27.5	14	35
9.	Birth order of the index child				
a)	1	03	7.5	04	10
b)	2	24	60	26	65
c)	3	12	30	06	15
d)	4 and above	01	2.5	04	10

Table 2: Immunization coverage of the children (N=80)

S. No.	Vaccine	Coverage	
		Frequency	%
1	BCG, OPV	74	92.5
2.	DPT-1, OPV-1	71	88.25
3.	DPT-2, OPV-2	71	88.25
4.	DPT-3, OPV-3	68	85
5.	Measles	57	71.25
6.	Booster does of DPT & OPV	49	61.25

The above table shows immunization coverage individual BCG & OPV coverage was highest 74 (92.5%) and lowest for measles 57 (71.25%). It also showed that coverage further reduced for booster dose of DTP & OPV 49 (61.25%). This shows that 71.25% had fully immunized, 21.25% were partially immunized, 7.5% were non-immunized.

Table 3: Reasons for partially and non-immunization of children. (N=23)

S. No.	Demographic Characteristic	Urban		Rural	
		Freq	%	Freq	%
1.	Reasons for partial immunization and non-immunization				
A	Sickness	01	4.34	03	13
B	Non-availability	--	--	--	--
C	Financial problem	01	4.34	02	8.71
D	Unawareness of need for immunization	05	21.73	07	30.48
E	Mother too busy	--	--	--	--
F	Place & time not known	02	8.68	--	--
G	Place for immunization too far	--	--	01	4.34
H	Unaware of need to return for subsequent doses	--	--	--	--
I	Fear of side reaction	--	--	01	4.34
J	Vaccinator's absence	--	--	--	--
K	Any other (specify)	--	--	--	--

The table shows that majority could not complete schedule due to unawareness of need for immunization in urban & rural area.

5. Discussion

In immunization coverage individual BCG & OPV coverage was highest 74 (92.5%) and lowest for measles 57 (71.25%). It also showed that coverage further reduced for booster dose of DPT & OPV 49 (61.25%). This shows that 71.25% had fully immunized, 21.25% were partially immunized, 7.5% were non-immunized.

Similarly other studies findings shows that, study was conducted to assess the child immunization coverage and availability of safe motherhood intervention services for expecting mother under RCH programmed in Alwar district in Rajasthan. WHO-30 cluster sampling method was used and 28 rural and 4 urban clusters were surveyed. Fully immunized children were more in urban area (82.1%) as compared to rural (45.1%) areas. The immunization coverage was more or less similar in both sexes. BCG and Measles coverage was also higher i.e. 89.3% and 85.7% in urban areas than 69.61%, and 52.2% in rural respectively. (Gupta *et al.*, 2006)^[2]

In case of India there is large regional variation in full immunization and a clear north-south differential was observed. the coverage of polio vaccine is higher than that of BCG and measles vaccine in India and the states and there is slow improvement over time of period (Kumar and Mohanty, 2011)^[3].

The main reason cited for partial and non-immunization was unawareness of need for immunization.

Similarly a study was conducted on 500 children under the age 5 years belonging to a low income group. All were attending the pediatric outpatient department of a large teaching hospital in New Delhi, India. The major reasons for non-immunization of the children were: migration to a native village (26.4%); domestic problems (9.6%) the immunization center was located too far from their home (9.6%) and the child was unwell when the vaccination was due (9%) Twelve per cent of mothers could not give any reason for non-immunization. The lack of awareness and fear of side effects constituted a small minority of reason for non-immunization (Mathew J.L. *et al.*, 2002)^[4]

6. Reference

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