



RESEARCH ARTICLE

KNOWLEDGE REGARDING IMMUNIZATION AMONG MOTHERS OF UNDER-FIVE CHILDREN

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ABSTRACT

Immunizations is one of the most successful and core effective public health investigation to bring healthy future generation. Though India had implemented the universal immunization schedule, the magnitude of its coverage is yet poor. The predominant reason for non-immunization is lack of knowledge and awareness among caretakers.

Aim: The study aimed to assess the level of knowledge regarding immunization among mothers of under five children in OPD, Primary Health Centre, Abhishegapakkam, Puducherry.

Methods: A descriptive design was utilized for the study. A sample of 75 mothers of underfive children were selected using convenient sampling technique.

Result: The majority of mothers of under five children 40(53%) were found to have moderate knowledge, and 28(37.34%) of them had inadequate knowledge and only 7(9.34%) of them had adequate knowledge regarding immunization. However, there was no significant ($P>0.05$) relationship between age, education, religion, occupation, number of children to immunization.

Conclusion: The study called for public oriented awareness programme on immunisation and its importance which helps to achieve the target.

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INTRODUCTION

Immunizations is one of the most successful and core effective public health investigation to bring healthy future generation. Immunization is defined as the process of inducing the immunity in an individual against an infections organism or agent. They are important for both adults and children in that they can protect themselves from many diseases. Immunization not only protects the child against deadly diseases but also helps in developing child's immune system. Through the use of immunization, some infections and diseases were almost completely eradicated throughout the world. Active immunization has been named as one of the "Great health achievements" in the 20th century". The world health organization launched the first Global programme on immunization known as Expanded Programme on Immunization meant to cover pregnant women and children up to the age of five year. It includes vaccines such as Bacillus Calmatte-Guerin (BCG), Diphtheria Pertusis-Tetanus (DPT), Oral Polio Vaccine (OPV), Measles and Tetanus Toxoid (TT). Vaccines keep children alive and healthy by protecting them against disease. Vaccination against microorganisms that cause diseases can prepare the body's immune system, thus helping to fight or prevent an infection.

Though India had implemented the universal immunization schedule, the magnitude of its coverage is yet poor. The reasons may be lack of knowledge, awareness, migration and the non availability of facilities. Among these, the predominant reason for non-immunization is lack of knowledge and awareness among caretakers. Thus the study was undertaken to explore the knowledge regarding immunization among mothers of under five children.

Review of literature

The study done by Marskole P., Rawa R., Chouhan P., Sahu P and Choudary R, revealed that 123(82%) mothers know the benefit and 27(18%) of them not known the benefit of vaccination. Also showed that 86 % (129) had completed their immunization on time and 14 (21%) had delayed immunization. Similarly, Naik J.D., Jain S., Babar S.D., Radhey B.K., Kamble G. and Gajbhijiye. R in their cross – sectional study showed that out of 219 mothers, 115(52.51%) were having good knowledge about measles. Predominant source of knowledge was Television in 71(32.42%) mothers and the other common source of knowledge being health worker in 42(19.18%). Significant association was observed with educational status and knowledge about measles among mothers. Among various reasons for delay in immunization of under-five children, sickness of child was observed in 81% children while 25% of mothers could not enlist any cause of

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delayed immunization. In a descriptive study by Birhanu S., Anteneh A., Kibie A. and Jejaw A. 55.0% of mothers had good knowledge, 53.8% mothers had positive attitude and 84% of mothers showed good practice towards immunization of infants respectively. Moreover maternal education, respondents who had infants aged from 3-9 months, 9-12 months and mothers who gave births greater or equal to two times were significantly associated with knowledge of mothers regarding immunization of infants. Also the mother's education and mothers who had infant's aged from 2-3 months were significantly associated with favourable attitude towards immunization of infants.

MATERIALS AND METHODS

The research approach adopted for the present study was quantitative approach. A descriptive design was used to explore the knowledge regarding immunization among mothers of under five children. The study was conducted in Paediatric Out Patient Department of Primary Health Centre, Abishegapakkam, Puducherry. Mother with under five children who fulfilled inclusive criteria were included in the study. Convenient sampling technique was used to select the sample for the present study. The sample size for the present study was 75 mothers of under-5 children.

Description of the tool

The Structured Questionnaire was formulated and it consists of two parts. Part-I consists of demographic variables such as age, education, religion, occupation, number of children, area of residence. Part-II consists of 30 multiple choice questions on Immunization. Each item has 4 options. Among the 4 one correct answer & remaining three as wrong. Each correct answer was given a score of '1' and wrong answer was given 'zero' score. The maximum score was 30 & minimum score '0'. The knowledge score was arbitrarily interpreted as Adequate knowledge (76-100%), Moderate knowledge (50-75%), inadequate knowledge (<50%).

Method of data collection

The formal written permission was obtained from the Medical Officer, Rural Primary Health Center, Abishegapakkam, Puducherry, to conduct the study among mothers of under five children. Prior to data collection, information was given to the mother's about the study and written consent was obtained from them. Assurance was given regarding confidentiality of information. The data was collected using interview schedule & structured knowledge questionnaire on the immunization from the mothers of under-five children who attends the OPD. Mother's took 30 minutes to fill the questionnaire. The completed datasheets were collected and the data was analysed using descriptive and inferential statistics.

RESULTS

Table 1 shows that majority of 41(54.66%) mothers were between 20-25 years of age and 24(32%) mothers had primary school education. Out of 75, most of them 62(82.66%) were Hindus and 52(69.33%) of mothers were home makers. Regarding number of children, majority 34(45.33%) of mothers had one child, and all of them were from rural area. In table 2 and 3, with regard to knowledge on BCG vaccine, majority 43(57.33%) mothers had adequate knowledge with a

mean value of 4.61 (SD 1.17), for OPV 34(45.33%) mothers had inadequate knowledge with mean of 2.17 (SD 1.37), for Hepatitis B vaccine, majority 38(50.66%) of mothers had inadequate knowledge with mean value 2.55 (SD 1.19), for DPT vaccine, 38(50.66%) of mothers had inadequate knowledge with mean of 1.28 (SD 0.86), for MMR vaccine, majority 61(81.33%) of mothers had inadequate knowledge with mean of 1.81 (SD 0.85) and none of them possess adequate knowledge, and 58(81.33%) of mothers had inadequate knowledge regarding optional vaccine with mean value of 2.43 (SD 1.38).

Table 1. Frequency and percentage distribution of demographic variables like age, education, religion, occupation, number of children, residence area and source of knowledge about immunization

S. No	Demographic Variable	Frequency	
		No	%
(N=75)			
1.	Age		
	20-25 years	41	54.66
	26-30 years	24	32
	31-35 years	8	10.67
	36-40 years	2	2.67
2.	Education Status		
	No formal education	16	21.33
	Primary school	24	32
	Secondary & Higher secondary	17	22.67
	Graduate	17	22.67
	Post graduate	1	1.33
3.	Religion		
	Hindu	62	82.66
	Muslim	9	12
	Christian	4	5.33
4.	Occupation		
	Home maker	52	69.33
	Private employee	18	24
	Self-employee	3	4
	Government	2	2.66
5.	Number of Children		
	1	34	45.33
	2	32	42.66
	3	9	12
6.	Residential area		
	Rural	75	100

Table 2. Frequency and percentage distribution of level of knowledge regarding immunization among mothers of under-five children

Variables	Level of knowledge					
	Inadequate (<50%)		Moderate adequate (50-75%)		Adequate (75-100%)	
	No	%	No	%	No	%
BCG vaccine	23	30.67	9	12	43	57.33
OPV vaccine	34	45.33	21	28	20	26.67
Heb-B vaccine	38	50.66	20	26.67	17	22.67
DPT vaccine	38	50.66	19	25.33	18	24
MMR vaccine	61	81.33	14	18.67	0	0
Optional vaccine	58	77.33	11	14.67	6	8

In figure 1, the overall knowledge regarding immunization, majority 40(53%) of mothers had moderately adequate knowledge, 7(9.34%) of them had inadequate knowledge and only 28(37.34%) of them had adequate knowledge. The mean for overall knowledge was 15.40 with the standard deviation of 4.30 which infers that the mother were not completely aware about the immunisation and about the vaccines for the diseases. Similar findings were reported by Jose et al (2013) that 30% of mothers had poor knowledge, 43.4% had average knowledge and 23.4% had good knowledge whereas 3.33% showed excellent knowledge.

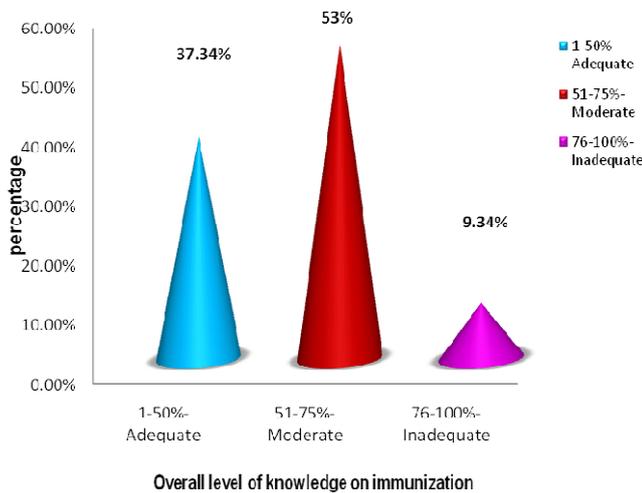


Fig. 1. Distribution of overall level of knowledge on immunization among mother’s of under-five children

Moreover, Naik *et al.* (2016) also reported that 115(52.51%) mothers were having good knowledge about measles and the Predominant source of knowledge was Television in about 71(32.42%) of mothers and the other common source of knowledge being health worker in 42(19.18%) mothers. From table 4, it was evident that none of the demographic variables were statistically significant with level of knowledge regarding immunization among mothers of under-five children and infers that knowledge was not influenced by the demographic variables. A study by Siddiqi, *et al.* (2010) showed similar findings that mother’s knowledge was not significantly associated with appropriate vaccination of their children ($p = 0.22$), whereas, mothers' education was found to be significant ($p < 0.001$). Also a study by Saraswathi and Lissa (2010) revealed that mothers of under five children regarding optional vaccines was not having any significant association with their selected personal variables viz. age, education, occupation, marital status, religion, type of family, family income, previous knowledge of optional vaccines and source of information.

Table 3. Mean and standard deviation of knowledge regarding immunization among mothers of under five children

N= 75		
Variable	Mean	Standard Deviation
BCG	4.61	1.17
OPV	2.71	1.37
HEB-B	2.55	1.19
DPT	1.28	0.86
MMR	1.81	0.85
Optional vaccine	2.43	1.38
Over all knowledge	15.40	4.30

Table 4. Association between selected demographic variables with level of knowledge regarding immunization among mothers under five children

N= 75			
S. No	Demographic variables	Chi square value	‘P’ value
3	Religion	1.7	0.79 (NS)
4	Occupation	6.27	0.18 (NS)
5	Number of children	5.38	0.25 (NS)

(NS- Not significant)

Recommendations

On the basis of findings of the present study it was recommended that,

- Effectiveness of awareness programme on immunisation can be conducted.
- A study can be done in multiple immunization clinics to assess the magnitude of non- immunisation status in Puducherry.

Conclusion

The findings of the present study revealed that most of the mothers showed inadequate knowledge regarding immunization and time schedule for vaccine administration. This situation gives call for appropriate health education to the mothers & other care takers. As the health of the children are one of the indicator of healthy nation, it is necessary to create awareness among the Public regarding importance of immunization and the immense need of practising it helps to achieve complete immunisation status of the nation.

REFERENCES

Angelillo I.F., Ricciardi G., Rossi P., Pantisano P., Langiano E. and Pavia M. 2012. Mothers and vaccination: knowledge, attitudes, and behaviour in Italy. *Bulletin of the World Health Organization*, 77. Pg no: 225-228

Birhanu, S., Anteneh, A., Kibie, A. and Jewaw, A. 2016. Knowledge, Attitude and Practice of Mothers Towards Immunization of Infants in Health Centres at Addis Ababa, Ethiopia. *American Journal of Health Research*, 4(1),Pg 6-17 .

Global Forum for Health Research 2010. *W.H.O.* www.pubmed.com

Immunization. Available from: <https://www.en.wikipedia.org/wiki/Immunization>. [Last accessed on 2016 Feb 16].

Marskole, P., Rawat, R., Chouhan, P., Sahu, P. and Choudary, R. 2016. Knowledge, Attitude, and Practices on Vaccination among Mothers of under-5 Children, Attending Immunization Out Patients Department atGwalior, Madhya Pradesh. *International Journal of Scientific Study*, 3(12), Pg no: 1-4

Naik, J.D., Jain, S., Babar, S.D., Radhey, B.K., Kamble, G. and Gajbhijiye, R. 2016. Awareness of Measles among mothers of under-five children Attending UHC Immunization Clinic of Government Medical College.

Otubor, C., Dangiwa, D.A., Lor, I.D. and Anukam, N.C. 2015. Assessmentof Knowledge, Attitudes and Practices of Mothers in Jos North Regarding Immunization. *IOSR Journal of Pharmacy*, 5(6), Pg no: 34-45

Park K. 2010. Park’s textbook of Preventive and Social Medicine.Edi.22.BanarsidasBhanot Publishers; Pg no: 114.

Saraswathi, K.N. and Lissa, J. 2010. A study to assess the knowledge on selected optional vaccine among mothers of under five children in selected immunization centers at Mysore with view to develop information booklet. *A and V Publications*, 54, Pg no: 12-15

World Health Organization, 2013. The Expanded Programme on Immunization (EPI) Survey. WHO/EPI/MLM/91.10 http://www.who.int/immunizationmonitoring/routine/EPI_coverage_survey.pdf