



**ORIGINAL RESEARCH PAPER**

**Community Medicine**

**IMMUNIZATION PRACTICES OF MOTHERS HAVING CHILDREN BETWEEN 12 TO 23 MONTHS OF AGE IN URBAN SLUMS OF SILCHAR, CACHAR DISTRICT.**

**KEY WORDS:**

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**ABSTRACT**

**Background-** Vaccination is Universal for mankind as it protects thousands of children from infectious diseases. The impact of immunization on child mortality and morbidity has achieved significant level. Immunisation coverage of infants has improved significantly during the last few years in our country. The access to immunization in urban slums is nearly 100 Percent. The grass root level workers are working towards the progress of maternal and child health through effective vaccination. Routine monitoring and supervision and timely vaccination has improved a lot and target has been reached as found in household survey or Cachar district of Assam. **T Aim** To determine the immunization practices of mothers having children between 12 -23 months. The study has been done to know the reasons or delay in vaccination. The study also will give insight about regular vaccination done in Cachar district. **Results-** There is immunization coverage of 99 % among the children in urban slums. 45 % of the children were primary immunised and 51 % were fully immunised: Majority of the children (92%) were vaccinated regularly whereas only few (8%) were not vaccinated regularly. The education of mother or caregivers played a significant role in immunisation coverage and awareness generation by grassroot level workers added to achieve a high rate of immunisation.

**INTRODUCTION**

The most effective weapon against any disease is immunisation. Every country in the world dreams of a future where its goals for development have been fulfilled. Creating a environment and setting the right standard of health and is therefore the Primary necessity of every developing nation. India is the second most populous country in the world and therefore health of the children has historically been of vital importance to all societies because children are the basic resources of the future mankind. Health is both responsibility and right of those with power and without it. (1). WHO has defined immunization as a process whereby a person is made immune or resistant to an infectious disease typically by the administration of a vaccine. (2)

Immunisation service in the country has touched 90 percent of the children. This is because of high literacy rate of the mothers and reach out approach of the health services, Vaccination was first carried out by Sir Edward Jenner in 1796 for small pox. Dhanvantari, the father of Indian Medicine spoke of preventing infectious diseases through immunization and organize immunization programme at global level and it was first declared by WHO in 1978 named Expanded Programme Of Immunization (EPI) against the six common preventable childhood diseases, focused on children below 5 years of age and pregnant women. (3,4). The Government of India launched EPI in 1978 with the objective of reducing morbidity and mortality resulting from vaccine preventable diseases and to achieve self sufficiency in the production of vaccines. (5). On November 19, 1985 the Universal Immunisation Programme was introduced in India with the objective to cover atleast 85% of all infants by 1990. Further a national socio demographic goal was set up in National Population Policy (NPP) 2000 to achieve universal immunization of children against all vaccine preventable disease by 2010. (6)

Immunization has emerged as the most successful and cost effective public health intervention. It is one of the best indicators to evaluate the health outcomes and services distributed across social and economic groups as well as one of the best interventions to prevent a series of major illness in environments where children are under nourished and die from preventable diseases (7). Immunity can be induced either passively through administration of antibody containing preparation or actively administering a vaccine as toxoid to stimulate the immune system to produce a prolonged humoral or cellular response. Immunizing agents are either antigenic preparation (which induce active

immunity) or antibody preparation (which induce passive immunity) (8). Vaccine is an immunological substance designed to produce passive protection against a given disease which stimulates the production of protective antibody and other immune mechanisms. Vaccine consist of whole inactivated micro organism, polysaccharide capsule + protein carrier, live attenuated organism and toxoid. (9) Immunizing agents contains variety of constituents besides antigen such as suspending fluids, preservatives, stabilizers, antimicrobial agents and adjuvant. Immunization is provided for the safety of people in other countries where people visit from outside (10). Government has certified ASHA and ANGANDWADI workers to organize special session and gather all the target children for vaccination. In spite of all the effort of government there were wide variation within program coverage as per NFHS three data ranging from 21% in Nagaland to 80% in Tamil Nadu. Average immunisation coverage in India was 44% and in Andhra Pradesh it was 46%. (11). India's immunisation programme is the largest in the world with annual cohorts of around 26.7 million infants in 30 million pregnant women. An estimating 38% of children failed to receive all basic vaccines in the first year of life in 2016 owing to low childhood vaccination coverage, India's ministry of health and family welfare launched, Mission Indradranush (MI) in 2014 to target undesirable vulnerable resistant and inaccessible population (12). Children are considered fully immunized if they receive one dose of BCG, 3 doses of DPT, polio each and one measles vaccine. In India only 44% of children aged 12-23 months are fully immunized and above 50% have not received any vaccination at all (13). Coverage of BCG, DPT and polio (except at birth polio dose) is much higher than all other vaccines. BCG, DPT1 and polio 1,2,3 dose has been received by atleast 76% of children while only 55% of children have received all 3 doses of DPT. (14). The success of the National Immunization Programme is highly depended on the supply for delivery of vaccines and equipments with functional system that needs 6 rights of supply chain the right vaccine in the right quantity in the right place in the right time in the right condition and at right course. Therefore the government introduced the cold chain (15). Molecular biology and modern technologies are combining to devise noble approaches to vaccine development. Many of these approaches avoid the incorporation of viral nucleic acid in the final product improving vaccine safety. (16)

**AIM-**

To find out the Immunisation practices of mothers having children between 12 months to 24 months

**OBJECTIVES**

- i. To assess the knowledge of mothers on immunization.
- ii. To know the practices by mothers on immunization.
- iii. To create awareness on immunization and vaccine preventable diseases.

**DEFINITIONS**

**Immunization –**

According to WHO, immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine.

**Primary Immunization –**

A child who has received three doses of OPV, three doses of Rotavirus(where applicable), three doses of Pentavalent, 2 doses of fractional IPV, three doses of Pneumococcal vaccine(where applicable), MR vaccine-1<sup>st</sup> dose, JE 1<sup>st</sup> dose(where applicable) before the age of 1 year is said to have primary immunization.

**Fully Immunized –**

A child who has received MR vaccine-2<sup>nd</sup> dose, DPT booster, Polio booster and JE 2<sup>nd</sup> dose(where applicable) before the age of 2 years, is said to be fully immunized.

**Unimmunized –**

A child who has not received any vaccine at any time is said to be unimmunized.

**Left Outs –**

Those beneficiaries who have not been identified or listed and are not receiving any vaccination.

**Drop Outs –**

Those beneficiaries who have been identified and have been receiving vaccines but do not complete the vaccinations as per schedule.

**Study Limitations:**

The scope of the study is vast but could not cover the large sample size to reflect the actual situation in the community due to limitation of time and there is no provision of funding for the purpose.

**MATERIALS AND METHODS**

1. Study Area:Urban Slums of Cachar: Malini beel,Tarapur New Colony,Tarapur TV Centre,Kalabarichar
2. Study Design:Community based Cross-Sectional study.
3. Study Population:Children aged 12-23 months.
4. Study Tool:Pre-designed, Pre-tested, structured questionnaire having both open and closed ended questions.
5. Sample Size:100 numbers of children.
6. Data Collection technique:Direct interview method.
7. Sampling Design:Systemic random sampling.
5. Consent:Informed consent of the parent/guardian taken.

**Methodology-**

The list of all the villages was collected from of the Adl Cm &HO. Office Four urban slums were office selected in Cachar as per our convenience. The urban slums are-Malini Beel, Kalibarichar, Tarapur New Colony, Tarapur TV Centre.The ASHA of the selected urban slums were contacted and a sampling frame was obtained.Information was collected on the socio-demographic variables, immunization status, and the reasons for partial immunization of the children.The mothers of the children were interviewed by a pre-tested, pre-scheduled questionnaire after obtaining their informed consent.The MCP cards were tracked to know about the details of immunization status.The socio-economic status was ascertained by Modified B.G.Prasad Classification(2018).The data collected were put in a MS Excel worksheet and were presented in tables and diagrams. Bar diagrams and pie charts were used for diagrammatic representation.



**Table:1 Sociodemographic profile of the family**

GENDER	NO OF CHILDREN	PERCENTAGE
MALE	53	53
FEMALE	47	47
TYPES OF FAMILIES	NO OF FAMILIES	PERCENT
JOINT	11	11
NUCLEAR	89	89
TYPES OF HOUSES	NO OF HOUSES	PERCENT
PUCCA	4	4
KUTCHA	41	41
SEMIPUCCA	55	55
VENTILATION	NO OF HOUSES	PERCENT
WELL-VENTILATED	90	90
POORLY- VENTILATED	10	10
TYPES OF LIGHTING	NO OF FAMILIES	PERCENTAGE
POORLY LIGHTED	98	98
WELL LIGHTED	2	2
SOURCE	NO OF FAMILIES	PERCENTAGE
TUBEWELL	5	5
WELL	9	9
SUPPLY WATER	84	84
RIVER	2	2
SOURCE	NO OF FAMILIES	PERCENTAGE
FIREWOOD	25	25
COWDUNG	-	-
LPG	64	64%
KEROSENE	11	11%
SANITATION	NO OF FAMILIES	PERCENTAGE
SANITARY	36	36%
NON-SANITARY	64	64%
DISPOSAL	NO OF FAMILIES	PERCENTAGE
DUMPING	31	31
MANURE PIT	25	25
BURNING	6	6
OTHERS	38	38

**Comment:**

53 percent of the children are male, 89 % belong to nuclear family, 99 % of the houses are poorly ventilated and 98% poorly lighted.

Source of drinking water from supply is 84%, LPG as the source of cooking fuel is used in 64% of the families, Use of Insanitary latrine in 64% houses and garbage disposal through dumping in 31% of families.

**2.Distribution of Children According To The Literacy Status of The Parents**

LITERACY STATUS	MOTHER		FATHER	
	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
ILLITERATE	21	21	11	11
PRIMARY SCHOOL	19	19	20	20
MIDDLE SCHOOL	27	27	25	25
HIGH SCHOOL	22	22	31	31

HIGHERSECONDARY	10	10	11	11
GRADUATE	1	1	2	2
Total	100	100	100	100

**Comment:**  
27% of the mothers were educated up to middle school while 31% of the fathers were educated up to high school.

**Table 3. Distribution of Children According To The Occupation of The Father**

TYPE OF OCCUPATION	NO OF CHILDREN	PERCENTAGE
SKILLED	22	22
UNSKILLED	41	41
SEMISKILLED	37	37

**Comment:**  
22 percent of the fathers of children were skilled labourers.

**Table 4 Distribution of the Children according to the availability of MCP Card**

	NO OF CHILDREN	PERCENTAGE
YES(available)	89	89
NO	11	11

**Comment:**  
MCP card was available with 89 percent of the mothers

**2. Distribution of the children based on access to Immunisation**

Response	NO OF CHILDREN	PERCENTAGE
YES	99	99
NO	1	1

**Comment:**  
99 percentage of the children have access to Immunisation.

**3. Distribution of children having difficulty or obstacles In Immunisation**

	NO OF CHILDREN	PERCENTAGE
YES	0	0%
NO	100	100%

**Comment:**  
100% of the children did not have any difficulty/obstacles in immunization.

**Table 4: Status of children who completed primary immunisation**

	No. Of children	percentage
Primary immunisation	45	45%
Full immunisation	51	51%
MCP not with them	4	4%

**Comment:**  
45 % of the children were primary immunised and 51 % were fully immunised

**Table 5 : Reasons for missing out or delay in vaccination**

REASONS	No. OF CHILDREN	PERCENTAGE
Was out of station	4	4%
Mother forgot the date	4	4%
Mother was busy	8	8%
No vaccine missed	84	84%

**Comment-**  
majority of the mothers under this study did not miss the vaccination (84%) and 16% who missed the vaccine are due to the reason that either they were out of station (4%) or the mother was busy (8%) or some (4%) forgot the date.

**Table 6: Health worker visit for propose of immunisation**

	No. OF VISIT	Percentage
Regular	100	100%
irregular	0	0%

**Comment-**  
According to this study the health worker gave regular visit (100 %) to the house to inform the mothers about routine immunisation.

**Table 7: Distribution according to the source of information about immunization**

	Number	Percentage
Relatives	0	0%
Neighbours	3	3%
Health workers	78	78%
Monthly meeting	19	19%
Mass media	0	0%

**Comment-**  
Majority of the mothers under study obtained information about immunization from health workers (78%)

**Table 8: Awareness of mother regarding immunization**

	Number	Percentage
Aware	100	100%
Not aware	0	0%

**Comment-**  
All the mothers under study (100%) are aware of immunization.

**Table 9: Satisfaction of mother regarding the information about immunization**

	Number	Percentage
satisfied	95	95%
Not satisfied	5	5%

**Comment-**  
Majority of the mothers (95%) under study are satisfied with the information given to them regarding immunization

**Table 10 :Vaccination done regularly or not**

	Number	Percentage
Yes	92	92
No	8	8

**Comment :**  
Majority of the children(92%) were vaccinated regularly whereas only few (8%) were not vaccinated regularly .

**Table 11: Age of initiation of vaccination**

	Number	Percentage
At birth	87	87
Delayed	13	13

**Comment :**  
87% of the children were vaccinated at birth and 13% of them had delayed vaccination .

**Figure 1: AEFI/ serious illness following immunisation**



**Annexure-I**  
Modified BG Prasad's Classification of Socio-Economic Status(2018)

	Grading	Per capita monthly income(range in rupees)
CLASS I	Upper class	More than 6574
CLASS II	Upper middle class	3287 to 6573

CLASS III	Middle class	1972 to 3286
CLASS IV	Lower middle class	986 to 1971
CLASS V	Lower class	Less than 985

**SUMMARY**

- i. 51% of the children belongs to age group of 12-23 months, among which majority are male.
- ii. 78% of the children belong to Hindu family and only 11% lives in joint family. · 55% the respondents live in semi pucca house, 90% of the houses are ill ventilated, 98% are inadequately lighted, 86% of them drinks water from community supply, 64% of the families use LPG as cooking fuel and on;y 38% of the family use dumping as waste disposal.
- iii. 64% of the respondents use insanitary latrines.
- iv. 21% of the respondents are illiterate, 37% are semi skilled workers, 51% belongs to class IV family.
- v. 89% have MCP card and 100% of the respondents have access to heath services for immunization.
- vi. 92% of the respondents visit health centre regularly for immunization, 87% are vaccinated from birth, 51% fully immunized, 84% did not miss any vaccine and no children faced any obstacles.
- vii. In 67% of the health workers visit the respondents once in two to three months. · 52% of the respondents obtained information from health workers. All are aware of immunization.
- viii. 95% of the respondents are satisfied with the information regarding immunization. · No AEFI reported.

**DISCUSSION -**

A cross-sectional study on immunisation coverage of children among urban and rural children in Shimla hills by D Dhadwal et al in 1997 showed that 84.37 percent of urban children and 57.59 percent of rural children were fully vaccinated. The current study revealed that participants had a high level of knowledge and practice regarding child vaccination. For eg Alsham mari et al who conducted a study in Saudi Arabia in 2018 concluded that most Saudi parents had good practice in a KAP study towards immunisation that was not associated with gender or education degree. This result is similar to my study but as years passed the immunisation coverage improved significantly throughout the country. Another study by Rup Kumar Phukan et al in 2009 where the study has been conducted to evaluate the factors affecting the immunisation coverage 62.2 percent of the children were fully immunised. In this study also mothers education level showed a significant role in immunisation coverage. In this study as health facility was easy to access therefore the immunisation coverage was high unlike another study from Ethopia distance to the health facility is a major challenge leading to less access to health services

**CONCLUSION**

From the community based cross sectional study of 100 children between 12-23 months of age in the urban slums of Cachar district, it can be concluded that most of the mothers who were interviewed are aware of the benefits of immunization. It has been found that 51% of the children are fully immunized while 49% are partially immunized. The most common reasons as mentioned by the mothers, is the workload on the mother. Other reasons are missing vaccination dates and being out of station. However, nine-tenth of the respondents didn't miss any vaccine. No respondent faced any obstacle or difficulty to immunization. Thus, it can be concluded that practices of immunization are quite common among the mothers in the urban slums of Cachar district. Also, they have knowledge of the fact that immunization can protect their children from vaccine preventable diseases and hence reduce the infant mortality rate.

Ethical committee permission -no ethical issues demonstrated.

**Conflict of interest- nil**

**Funding or support - No funding from any external source**

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I acknowledge those families who participated in my study and also the people who helped me in my study.

**ANNEXURE-II  
ANNEXURE-III**

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