



## Evaluation of Immunization Coverage among Children between 12 - 23 Months of Age, Attending Immunization Centre at Rims, Ranchi: A Cross Sectional Study

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### ABSTRACT:

**Introduction:** Immunization is one of the well known and most effective method of preventing childhood diseases.

**Aims And Objectives:** 1) To describe socio-demographic profile of children between 12-23 months of age attending immunization centre, RIMS, Ranchi. 2) To Evaluate the factors affecting immunization status among children between 12-23 months of age attending immunization centre, RIMS, Ranchi.

**Materials and Methods:** The study was cross-sectional and descriptive type. Place of study was immunization centre, RIMS, Ranchi. Study duration was from 1 September to 30 November 2016.

**Results:** In the present study 110 Children were studied in which maximum number were 19 months of age. Majority were hindu (79.9%) male(63.6%) of Urban locality(92.7%). Education of the parents was found to be significantly associated with the immunization status of children.

**Conclusion:** Increasing the literacy status of the parents can alone can bring a major difference in immunization coverage among Children.

**Keywords:** Immunization coverage, Immunization, Immunization Centre.

### I. INTRODUCTION

The Expanded Programme on Immunisation (EPI) was created with the purpose to control Vaccine Preventable Diseases (VPDs).<sup>1</sup> The WHA 30.53 resolution of the World Health Assembly put forth the EPI goal of providing immunisation services for all children, with the target of 90% coverage for all antigens by the year 2000.<sup>2</sup> When it became clear in the late 1990s that this goal would not be achieved globally, some supportive initiatives arose, including the Global Alliance for Vaccines and Immunisation (GAVI), which contributes to an impressive increase in new funding for immunisation. GAVI is a public-private partnership committed to improving access to routine vaccines and to introducing new vaccines for children in low-income countries.<sup>3,4</sup> Since resources are not indefinitely extendable, efforts to enhance immunisation coverage should be based on evidence. Moreover, even when a vaccine has been proven to be safe and protective, questions regarding feasibility, acceptability and local practices should also be addressed.<sup>5</sup> Clearly, immunising an eligible child requires that the mother is herself well mentally, physically and socially. Mothers in a depressed mood have a debilitated parenting ability. Conversely, mothers receiving support, for example marital support, exhibit greater childrearing competence.<sup>6</sup> Prislina et al<sup>7</sup> and Flynn and Ogden<sup>8</sup> studied the beliefs, attitudes and perceived control of parents and concluded that a mother who believes that immunisation protects is likely to have her child immunised. The World Health Organisation rates immunisation as one of the interventions with a large potential impact on health outcomes.<sup>9</sup> However, its impact is not even throughout countries and its performance has different correlates, depending on the population studied. Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease (WHO). It is one of the well known and most effective method of preventing childhood diseases. With the implementation of Universal Immunization Programme (UIP), significant achievements have been made in preventing and controlling the Vaccine Preventable Diseases (VPDs) namely Tuberculosis, Diphtheria, Tetanus, Pertussis, Polio, Measles, Hep-B, Hib and Rotavirus. But still, the coverage of vaccination in India is far from complete

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despite the commitment for universal coverage. According to the National Family Health Survey (NFHS-III), only 43.5% of children in India aged 12-23 months were fully immunized- 57.5% in urban areas and 38.6% in rural areas. In Jharkhand, according to AHS-2011, the immunization coverage for BCG vaccine was 92%, for DPT vaccine 72% and for Measles vaccine it was 79%. Overall 64% of the children were found to be fully immunized in Jharkhand.

## II. AIMS AND OBJECTIVES

- 1) To describe socio-demographic profile of children between 12-23 months of age attending immunization centre, RIMS, Ranchi.
- 2) To Evaluate the factors affecting immunization status among children between 12-23 months of age attending immunization centre, RIMS, Ranchi.

## III. MATERIALS AND METHODS

The study was cross-sectional and descriptive type. Place of study was immunization centre, RIMS, Ranchi. Study duration was from 1 September to 30 November 2016. A Total of 115 parents coming to immunization centre were contacted during our study period. Five of the Parents did not give consent to participate. So actual sample size came out to be 110. The following variables were measured to assess the socio-demographic characteristics of the mother and the father: age, occupation, education and Socio-economic status. Information was collected by interviewing the parents using Pre-tested semi structured questionnaire. Children who received birth dose of BCG, Hep- B-0, OPV-0,3 dose of Pentavalent, 3 dose of rotavirus and one dose of JE in one year are considered as fully immunized while children who missed any of these dose of vaccine were considered as partially immunized. The children who had not received any vaccine upto 1 year were considered as non immunized. Template was generated in excel sheet and analysis in SPSS software 20. Chi square test and Fisher Exact test was used for assessing statistical significance.

## IV. RESULTS

In the present study 110 Children were studied in which maximum number were 19 months of age. Majority were Hindu 79.9% male 63.6% of Urban locality 92.7% (**Table no-1**).

Out of 110 children 96 were fully immunized 14 were partially immunized and no children were found to be non immunized (**Figure-1**). 92.8% male were fully immunized and 77.5% female were found to be fully immunized.

There was no any significant association between sex and immunization status of children (P Value=.763) (**Table-2**). Education of the parents were found to be significantly associated with the immunization status of children (P Value = .001) (**Table-3**). There was no any significant association between immunization status with Locality (**Table-4**).

**Table1: Socio-demographic Profile**

Variables	Category	Frequency	Percentage (%)	Total (%)
<b>Gender</b>	Male	70	63.6%	110(100%)
	Female	40	36.4%	
<b>Age of Children</b>	>17months	05	4.5%	110(100%)
	<17 months	105	95.5%	
<b>Religion</b>	Hindu	87	79.99%	110(100%)
	Muslim	16	14.5%	
	Christian	05	4.6%	
	Sarna	01	0.91%	
<b>Ethnicity</b>	Tribal	06	5.54%	110(100%)
	Non –tribal	104	94.46%	
<b>Locality</b>	Urban	102	92.7%	110(100%)
	Rural	08	7.3%	
<b>Education of the Parents</b>	Illiterate	19	17.3%	110(100%)
	Primary	22	20%	
	Secondary	33	30%	
	College and above	36	32.7%	
<b>Occupation of the Parents</b>	Job	40	36.4%	110(100%)
	Business	42	38.2%	
	Daily wages	12	10.9%	

<b>Socio-Economic Status</b>	Agriculture	16	14.5%	110(100%)
	Class I	19	17.3%	
	Class II	23	20.9%	
	Class III	19	17.3%	
	Class IV	25	22.7%	
	Class V	24	21.8%	

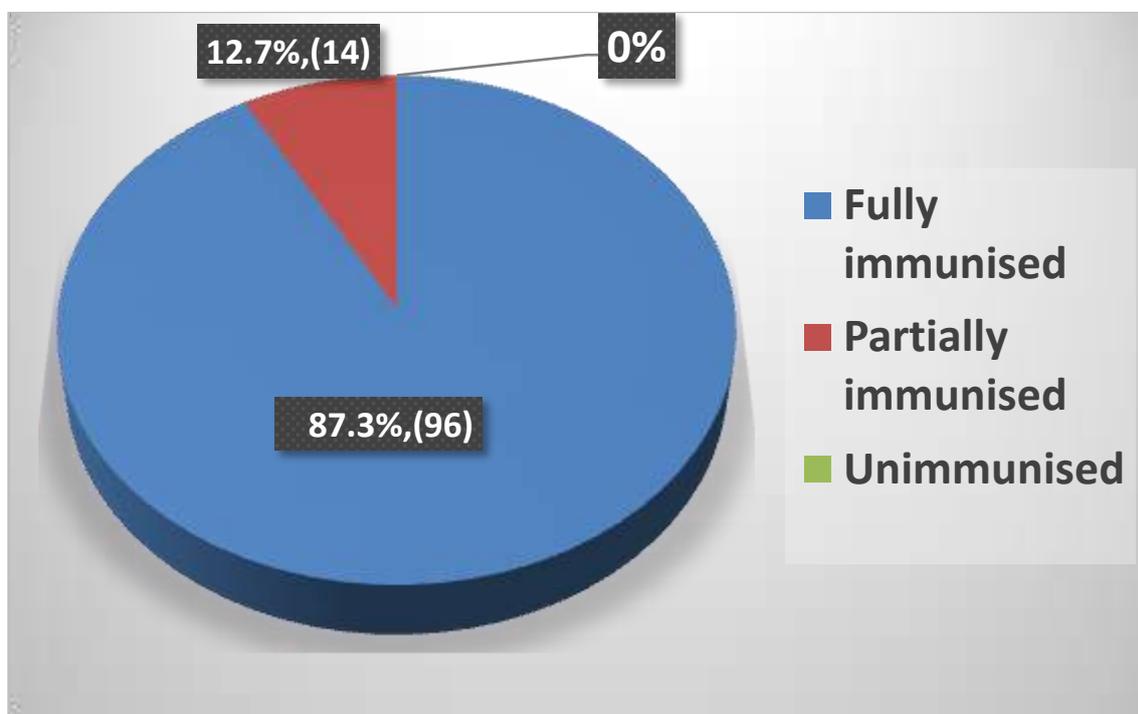


Figure -1: Showing Status of Immunization

Table-2: Showing Association of immunization status with gender

Sex	Fully immunized	Partially immunized	Total
Male	65 (92.8%)	5 (7.2%)	70 (100%)
Female	31 (77.5%)	9 (22.5%)	40 (100%)
<b>Total</b>	<b>96(87.3%)</b>	<b>14 (12.7%)</b>	<b>110 (100%)</b>

Chi square=.091      df=1      p-value=.763

Table-3: Showing Association of immunization status with Education of the Parents

Education of the Parents	Fully Immunized	Partially Immunized	Total
Illiterate	13(68.4%)	06(31.6%)	19(100%)
Primary	17(77.3%)	05(22.7%)	22(100%)
Secondary	31(93.9%)	02(6.1%)	33(100%)
College and above	35(97.2%)	01(2.8%)	36(100%)
<b>Total</b>	<b>100(90.9%)</b>	<b>10(9.1%)</b>	<b>110(100%)</b>

Fischer Exact P value= .001

Table-4: Showing Association of immunization status with Locality

Locality	Fully immunized	Partially immunized	Total
Urban	93 (91.9%)	09 (8.1%)	102 (100%)
Rural	3 (3.75%)	5(%)	8(100%)
<b>Total</b>	<b>96 (78.5%)</b>	<b>14 (21.5%)</b>	<b>112 (100%)</b>

Fischer's exact p-value=.646

## V. DISCUSSION

Immunization is an easier way to become immune to a particular disease itself. In present study male to female ratio was found to be 1.75. As per data released by Govt. of India for census 2011 male to female ratio was 1.05<sup>11</sup>. The male to female ratio in the present study was similar to the result found by Govani KJ<sup>12</sup>. Overall immunization status was found to be 87.3% in this study which is a matter of concern while 12.7% were found to be Partially immunized and none were found non immunized. Similar study was found by Govani KJ<sup>12</sup>, where 74% were fully immunized and 26% were partially immunized. Similar Study was found in the study done by Mahyavanshi DK which showed that nearly 70% of subjects were fully immunized and the remaining 26% were partially immunized and about 4% of the subjects were non immunized<sup>13</sup>. Education of the parents plays a vital role in the status of immunization of children. As coverage of immunization was found to be much more better among the children of parents who have got at least secondary level of education than the parents having lower education.

## VI. CONCLUSION

Increasing the literacy status of the parents can alone can bring a major difference in immunization coverage among Children.

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