

Assessment of immunization coverage among children of 12-23 months age group in the field practice area of Andhra Medical College, Visakhapatnam, Andhra Pradesh

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Abstract :

Introduction: Immunization is one of the eight elements of primary health care. Government of India is providing immunization services through Universal Immunization Programme to protect children from some important diseases of childhood. Knowledge of mothers of beneficial children regarding immunization will influence the utilization of services.

Objectives: The present study was conducted 1) To assess the immunization coverage in the children of 12-23 months of age. 2) To assess the knowledge of mothers of these children regarding immunization.

Methods: It is a cross sectional descriptive study conducted in RHTC Simhachalam, the field practice area of department of community medicine, Andhra Medical College, during the period July-August 2014. One hundred and eight children in the age group of 12-23 months selected randomly and the mothers of these children were considered. A pretested semi structured questionnaire was applied. Relevant statistical tests were used.

Results: Among study children 42% were male & 58% were female. All the children were fully immunized. All the mothers getting their children vaccinated in government institutions only. ASHA was the key informant (65.7%) about the immunization sessions followed by Anganwadi worker (26.9%). Among all the mothers of these children, 38% had education below primary school & 62% had more than that. Regarding knowledge, 59.3% of mothers knew the number of required visits as per schedule & but only 5.6% mothers knew about the scheduled timings of vaccine doses & diseases for which their children received immunization. Mothers with education above primary school had significantly more knowledge on number of required visits & vaccine preventable diseases than others.

Conclusion: Immunization coverage and services were satisfactory. But, the mothers were getting immunized their children without adequate knowledge. This gap suggests a need for health education to mothers regarding immunization which may pave the way for future expansion of the programme.

Keywords – Children of 12-23 months age, Immunization, Vaccine preventable diseases, Universal Immunization programme

I. Introduction

Immunization is one of the most important functions of Primary health centres (PHC). It is a most powerful and cost effective weapon against vaccine preventable diseases. WHO started Expanded programme on Immunization (EPI) in 1974, against six most common child hood preventable diseases viz., Child hood tuberculosis, polio, diphtheria, pertussis, tetanus, & measles. Alma Ata conference in 1978 also stressed the importance of immunization and included it in the eight elements of Primary Health care. As a signatory of Alma Ata treaty, Government of India launched Universal immunization programme (UIP) in the year 1985. The program was started to reduce the morbidity and mortality of children by providing immunization. The primary Health centre prepares an action plan covering all villages within its jurisdiction to provide immunization at fixed sites. MPHW (F) conducts the immunization session on the prefixed day as per action plan. ASHAs inform about the session and gather all the target children with coordination of Anganwadi worker. In spite of best efforts of the government, there was wide variation within programme coverage as per NFHS-3 data ranging from 21% in Nagaland to 80.9% in Tamilnadu. Average immunization coverage in India was 44% and in Andhra Pradesh it was 46%^[1] To improve the immunization coverage, Government of India introduced some innovative measures like Mother and Child tracking system (MCTS) and Mother and Child Protection (MCP) cards.^[2] Recently vaccines for other diseases such as Hepatitis B vaccine, Japanese encephalitis vaccine, pentavalent vaccine and second dose of measles vaccine were also included in UIP in

phased manner^[3]. In the current scenario, utilization of the services is influenced by many factors such as availability and accessibility of services, socio economic status and cultural practices of family, education of mother etc. In fact knowledge of the mothers of children is the important factor to improve immunization coverage and also for successful introduction of new vaccines in the programme.

Based on this background the present study was conducted in RHTC Simhachalam, the field practice area of Department of Community medicine, Andhra medical college, Visakhapatnam. The main objective of the study were 1) To assess the immunization coverage in the children of 12-23 months of age 2) To assess the knowledge of mothers of these children regarding immunization.

II. Methodology

It is a cross sectional descriptive study. The present study was conducted among 12-23 months age group children and their mothers living in the field practice area of RHTC Simhachalam during July to August 2014. Children born in the period July 2012 to June 2013 were included in the study. Children who had migrated or died in mean time as per health workers records were excluded from study. According to a study conducted by Department of Health, Medical & Family welfare Andhra Pradesh and PATH in 2006 immunization coverage in Andhra Pradesh was 80%^[4]. Based on this proportion, sample size was calculated using the formula $4pq/l^2$ and sample size was estimated as 100 considering 10% allowable error. There are 12 sub-centres in the field practice area of Simhachalam, among them 3 sub centres were choosen randomly and one village other than head quarter village was chosen by Simple random sampling technique. List of beneficial children was collected from the field register of the MPHWF and 108 children were selected randomly among them and visited their houses to collect the information. As a part of training to Compulsory Rotatory Internees (CRI) in research activities, pre tested semi structured questionnaires given to CRIs posted in RHTC Simhachalam and data was collected from 108 children and their mothers. Information was gathered after taking informed prior consent. Data was analysed with SPSS 21 trail version, and chi-square test was used to test the significance of the results.

III. Results

Out of 108 study children 46 were male and 62 were female. Among the study children 78% belongs to Backward class and 12% belong to SC&ST classes. Majority of study participants were Hindus (95.4%) and the remaining were Christians (4.6%). All the study children born in the government institutions. All the children were fully immunized, and there was no specific delay. All the children received immunization in Government institutions only, no dose of vaccines were missed. Most of the children (85%) had Mother and child protection cards along with them. One fourth of MCP cards were incompletely filled. Fourteen percent of mothers were not carrying MCP cards while they went for immunization of their children. ASHA was the key informant (65.7%) about the immunization sessions followed by Anganwadi worker (26.9%) and ANM (7.4%).

Among the mothers of the selected children, about half (38%) of mothers of children had education below primary school& remaining mothers (62%) had more than that. All the mothers knew the fixed immunization sites in their village. Except two mothers all knew the universal immunization programme schedule in their village. Very few mothers (5.6%) could mention all the seven vaccine preventable diseases against which their children received vaccines. Thirteen percent mothers mentioned at least one disease, 71.2% mothers mentioned 2-3 diseases and the remaining 15.8% mentioned more than three diseases for the vaccines their children received. Only 59.3% of mothers had knowledge regarding the total number of visits required as per immunization schedule. One fourth of mothers (24.4%) were completely unaware of scheduled time of vaccination of any vaccine, 70% mothers knew about it for some vaccines and only 5.6% mothers knew about for all vaccines.

All the mothers stated that immunization is necessary for prevention of diseases. All the mothers informed that, immunization programme timings were convenient, sites were accessible, service providers were cooperative and the services provided by them were satisfactory. No one had any objections towards Universal immunization programme. All mothers of the children stated that they will encourage others children for immunization.

Table no.1 shows that, there was a wide gap regarding the knowledge of vaccine preventable diseases between mothers with education above primary school and below primary school. (Chi- square test $X^2= 6.225$ $df=2$ $p<0.05$). Mothers with education above primary school had significantly more knowledge on total number of visits required for complete immunization in the first year of life as per UIP schedule than others (Chi square test $X^2=4.969$ $df=1$ $p<0.05$).

IV. Tables

Table no.1 Mothers education Vs Knowledge regarding immunization

Educational status of mothers	Knowledge about vaccine preventable diseases		
	At least 1 disease	2-3 diseases	>3 diseases
Below primary school n=41	9 (22%)	24 (58.5%)	8(19.5%)
Above primary school n=67	5(7.4%)	53(79.1%)	9(13.5%)
Educational status of mothers	Knowledge about total number of visits		
	Yes	No	
Below primary school n=41	14 (34.1%)	27 (65.9%)	
Above primary school n=67	39 (58.2%)	28 (41.8%)	

V. Discussion

According to NFHS-3 data (2005-06) immunization coverage in India was 44% while in Andhra Pradesh it was 74%.^[1] At the same time, the combined study of Department of Health, Medical & Family welfare Andhra Pradesh and PATH stated that immunization coverage in Andhra Pradesh in the year 2006 was 80%.^[4] The DLHS-4 survey conducted in the year 2012-13 reported that 65% of children among 12-23 months age group in Visakhapatnam district were fully immunized whereas in Andhra Pradesh 60.9% children were fully immunized^[5]. But in the present study all the children were fully immunized. It may be because of location of RHTC Simhachalam. It is very nearer to district headquarters and there were no hard to reach areas and had accessibility to the all villages in its covering area. Innovative interventions like MCTS, MCP cards may also increase the immunization coverage. Study Participants also expressed their satisfaction towards services and all were received immunization in Government institutions only. ASHAs and AWW workers were living within the village and were informing the mothers regarding immunization. Because of these factors, there was better immunization coverage in the present study. Greater immunization coverage among 12-23 months aged children was also reported by Shamila hamid et al., in Kashmir^[6] and Sutapa mandal et al., in west Bengal^[7] in their studies. Mabrouka A.M et al., also reported similar finding among the children in Libiya^[8]. In the current study ASHA is the key informant about the services. This finding was consistent with Maboruka A. M et al., study. They also reported that, the paramedical worker, was found to be the major source of information to the attendants of children followed by community leaders^[8].

The present study revealed that only a few mothers had knowledge regarding vaccine preventable diseases. Shamila hamid et al., also reported that most of the mothers were unaware of the diseases for which their children getting vaccinated.^[6] In the present study, it was observed that knowledge among the mothers was poor regarding total number of required visits as per immunization schedule. Sutapa mandal et al., also reported the similar finding.^[7] This poor knowledge among mothers can be improved by delivering the four key messages by the health worker to the mothers while vaccinating their children. In the present study only fourteen percent of mothers were carrying MCP cards along with them to immunization site. If mothers carry MCP card it would be made easy to educate them regarding the next visit and vaccine preventable diseases.

In the present study it was observed that, mothers education had significant association with the knowledge regarding immunization. This knowledge of mothers can influence the utilization of health services. Sutapa mandal et al., also reported that, there was statistically significant difference in the immunization status among literate and illiterate care givers^[7].

In the current study all the mothers expressed positive attitude towards health services and immunization which may have improved the utilization of health services. This finding was supported by the Mabrouka A.M et al., study result. They stated that positive attitude was significantly associated with better immunization status than negative attitude^[8].

VI. Conclusion

The 100% immunization coverage in the present study can be attributed to convenient timings& accessibility of immunization sessions and cooperative service providers. But, the mothers were immunizing their children without proper knowledge. It can be improved by providing health education regarding immunization since the time of antenatal period. It can remove the obstacles and unnecessary fears and pave the way for introducing new vaccines like JE vaccine, pentavalent vaccine, injectable polio vaccine etc. in UIP.

Acknowledgements

We are thankful to mothers of children and also to the medical officer and field staff of RHTC Simhachalam for giving their valuable support to conduct the study.

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