



Assessment of Knowledge about Immunization among Mothers of Under Five Children Attending Immunization in Tertiary Care Hospital in Udaipur

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ABSTRACT

Background: Immunization is one of the most effective, safest and efficient Public Health Intervention. While the impact of Immunization on childhood morbidity & mortality has been great, it's full potential has yet to be reached. The knowledge of mothers is an important factor for better immunization coverage.

Methodology: A hospital based cross sectional study with pre-designed semi structured questionnaire was done among mothers of under five children attending the immunization center at RNT medical college, Udaipur. The sample comprised of 320 mothers.

Results: 98.4% mothers knew that immunization is beneficial for their children. 37.2% were aware about the side effects of vaccines. 69.2% mothers acquired knowledge regarding immunization from antenatal clinics. 28% mothers have good knowledge about immunization.

Conclusion: Ample health education should be given to mothers residing in rural areas to raise their knowledge regarding immunization. In rural areas Anganwadi workers, ASHA etc should play a significant role in bringing awareness about vaccinations and their benefits.

Keywords: Antenatal clinics, Immunization, Knowledge, Mothers.

INTRODUCTION

The encouragement of health is public as well as personal responsibility. It has been found that approximately 5 million children were dying annually and another 5 million were incapacitated by infectious diseases.¹ The key to accomplish the goal of health for all primary health care underlines on the preventive rationales. Vaccines is one of the most cost effective health treatments for all infectious disease.²

There is no magnification to affirm that vaccination is one of the biggest scientific breakthroughs ever made. It defends many children from getting infected and dead from awful diseases, thereby cutting the suffering of many parents. So, there is requisite for the parents to formulate unambiguous

cognition and perceptions about vaccinations. It helps to reduce the burden of awful infectious diseases, which can be controlled by immunization.³⁻⁴ A positive correlation between parental knowledge, practice and vaccination rates of children was reported by many studies.⁵⁻⁸ Similarly many studies reported positive correlation between mother's knowledge, attitudes and practice and children's immunization.⁹

Immunization is established tool for checking and eradicating dangerous infectious diseases and is estimated to avoid between 2 and 3 million deaths annually.¹⁰ In case of infants and children immunization is a high priority area as it has wiped out many infectious diseases which used to decimate sizeable of the population.

The elaborated program of immunization started by the WHO in 1974 and has amended coverage for BCG, DPT, polio and measles to about 80% of children in developing countries.¹¹ In developing countries mortality rate is high, because of low immunity of these children against infection. Still the people are unaware of the immunization schedule and its grandness. Hence the study plays a crucial role in disseminating the knowingness on immunization among the mothers of under five years children.¹² Evaluating immunization coverage helps to assess advance in attaining program objectives and in improving service deliver.

The mother plays a crucial role in encouraging the wellness of children. Various ignorance, misconception and insufficiency of knowledge in relation to vaccination are dominant among mothers. Thus present study aimed to evaluate the mothers' awareness and knowledge of immunization.

METHODOLOGY

A hospital based cross sectional study with pre-designed semi structured questionnaire was done among mothers of under five children attending the immunization center at RNT medical college, Udaipur. The sample comprised of 320 mothers who came for immunizing their under 5 children after taking verbal consent. The study was conducted after taking approval from Ethical Committee of the institute. Mothers who are had under five children and attending the routine immunization clinic of selected centers and are willing to participate in the study. Mothers who are not willing to participate in the study or caretakers who brought children other than his/her mother were excluded from the study.

Questionnaire contains demographic data like child's age, mother's age, location, and educational status, mother's occupation, etc. Pretested, structured questionnaire consisting of 12 questions related to vaccination were used to assess women knowledge regarding immunization. A scoring system was developed for each question. Correct response was given score 1 and incorrect response given score zero. Those who scored more than or equal to 60% were labeled as having good knowledge while those scoring less than 60% were having poor knowledge.

RESULTS

Present study deals with the analysis of data collected from 320 mothers of under five children attending the immunization center at RNT medical college, Udaipur.

Here, there were 17.5% women were below 20 yrs,

70.6% were in age group 31-30 years and 11.8% were in age group above 30 years. Mostly women were housewives (80%) and rests were working (20%). Similarly, Mostly women didn't complete their senior secondary education (75.9%).

Table: 1 Demographic profile of subjects

Demographic Characteristics	Mothers (%)
Age group in year	
<20 years	56 (17.5)
21-30 years	226 (70.6)
>30 years	38 (11.8)
Occupation	
Housewives	256 (80)
Working	64 (20)
Education level	
<12 th standard	243 (75.9)
>12 th standard	77 (24.09)
Residential status	
Urban	214 (66.87)
Rural	106 (33.12)

Table 2: sources of information regarding immunization among mothers of under five children

Source of information	Frequency (%)
ANC Clinic	221 (69.2)
Media	170 (53.1)
ASHA/AWW	188 (58.7)
Hospital	124 (38.7)
Others (friends etc)	112 (35)

Table 3: Mothers knowledge regarding various components of immunization (n=320)

Knowledge about	Correct answer (%)
Are vaccines beneficial	315 (98.4)
Right age to start vaccination	269 (84)
Vitamin A	233 (72.8)
Rota virus vaccine	89 (27.8)
Side-effects of vaccine	119 (37.2)
Pentavalent components	72 (22.5)
Diseases prevented by vaccines.	136 (42.5)
Should child with mild fever be vaccinated	145 (45.3)
Should child with diarrhea be vaccinated	112 (35)
Sh'd child with common cold be Vaccinated	164 (51.2)

Table: 4 Calculation of Chi square value for testing relationship between variables.

Variables	Adequate	Inadequate	P-value
Knowledge verses occupation			
Housewives (n=256)	222 (86.7)	34 (13.3)	0.1805
Working (n=64)	60 (93.7)	4 (6.3)	
Knowledge verses Education			
<12 th (n=243)	62 (25.5)	181 (74.5)	0.0001
>12 th (n=77)	47 (61.0)	30 (39.0)	
Knowledge verses Residence			
Urban (n=214)	164 (76.6)	50 (23.4)	0.0038
Rural (n=106)	64 (60.4)	42 (39.6)	

Figures in parenthesis are percentage.

Only 24.09% women had education greater than senior secondary. 66.87% residing in urban areas & 33.12% women belong to rural areas.

The sources of information regarding immunization amongst majority of the respondents were ANC clinic (69.20%), followed by health workers such as ASHA/AWW (58.60%) and media (53.10%). Only 38.70% of the mothers whose sources of information were hospital based staff, doctors and nurses etc (Table 2).

Majority of mothers 98.4% stated vaccines to be beneficial. Most of them know the right age to start vaccination 84% and about vitamin A. Only 27.8% know about Rota virus vaccine and 22.5% know about five components of pentavalent vaccine.

After assessing scores, only 28% mothers were well aware about immunization and their children were immunized completely. In contrast with this 72% i.e. three fourth of the mothers didn't know or a very less information about immunization.

Majority of 222 (86.7%) housewives and 60 (93.7%) working mothers were well aware about immunization. Here, we calculate Chi square test for evaluation of relationship between variables. We found occupation of women did not affect knowledge among women. The p-value is 0.1805 which is statistically non-significant.

When mothers were divided according to their education status, 25.5% mothers having education below senior secondary had adequate knowledge about immunization and rest 74.5% mother had partial or no knowledge about immunization. Similarly, only 39.0% mothers having education higher than senior secondary had inadequate knowledge about immunization and rest 61.0% mother adequate knowledge about immunization. 77% in urban and 60.4% in rural mothers had adequate information about immunization. The association between knowledge and educational status is highly significant ($p < .001$).

Majority of mothers 164 (76.4%) in urban and 64 (60.4%) mothers in rural mothers had adequate information about immunization. The association between knowledge and residential status is highly significant ($p < .001$).

DISCUSSION

Immunization is an obligatory program. In spite of all attempt taken by the Government and international authorities still there persists some component of incomplete immunization of the children observed in this study.

In our study highest respondent got information regarding immunization from ANC clinics, fol-

lowed by from Anganwadi workers, media and hospitals. In line with this, a study conducted by Kapoor & Vyas, source of knowledge about vaccine preventable diseases was Anganwadi workers in 47 % of subjects & T.V. in 35 % of subjects¹³, while in the study conducted by D. Adeyinka et al, 65.7 % of the respondents got information about Vaccine Preventable Diseases from Antenatal clinics & role of media was only 4.8%.¹⁴

Here, very high proportion of women or mothers had partial or no knowledge about immunization. In line with this, study conducted by Angadi et al also found partial or non-immunization among children under five. The possible reason they found to be lack of information, lack of motivation. Many respondents blamed it on the lack of knowledge regarding the schedule, while some respondents said they did not know the place and /or time of immunization. Some administered respondents declined from bringing their children for immunization for the fear of side effects and few respondents were unaware of the importance of immunization. Many respondents cited feasibility problems as the reason for partial or non-immunization. Few respondents complained that the immunization centre was too far, while others said that the time of immunization was inconvenient.¹⁵ Similar findings were seen in the study conducted by Manjunath et al., who concluded that though many were aware of the importance of vaccination in general, specific information on importance of completing the schedule and knowledge on vaccine preventable diseases other than poliomyelitis were very limited.¹⁶

In our study we found a correlation between education status and knowledge regarding immunization. A significant proportion of mother having education below senior secondary had partial or no knowledge. In contrast with mothers having education higher than senior secondary had adequate knowledge regarding immunization. A study conducted by Angadi et al found that immunization status was not significantly associated with other factors such maternal education and socio-economic status.¹⁵ In line with our findings, study done by Bholanath et al., found that maternal education and socioeconomic status were independent predictors of immunization status.¹⁷ This change has probably occurred due to improved access to immunization and improved social mobilization of the health workers, that have helped us tackle previous barriers to immunization, such as illiteracy and low socio-economic status.

There was no significant relation between immunization status and mothers' employment status in the present study in comparison to other studies.

The study conducted by Bofarraj et al also found that mother's job or as housewives did not affect the child's immunization.¹⁸

Here, mothers have better knowledge about Vitamin-A immunization and very low or inadequate information about S/E and Rota virus vaccination. In contrast to our study, Kapoor and Vyas found that 80% of mothers had no knowledge about vitamin-A.¹⁵ A study by Muppudathi et al found that only 34% women knew about Rota virus vaccine.¹⁹

In our study nearly 60-70 % mothers from both urban and rural areas have adequate knowledge about immunization. In line with this study conducted by Bofarraj et al also found that residence did not affect significantly the immunization status as 79.38% of children from urban and 86.9% from rural areas were completely immunized ($p > 0.05$).¹⁸ Also the place of residence was not associated with the attitude and knowledge of the mothers regarding complete immunization and this is in accordance with other studies.²⁰⁻²¹

In our study we found occupation of women did not affect knowledge among women. But education and residential status of women affects the knowledge among women regarding immunization. In line with this Bofarraj et al also found that residence and occupation did not affect significantly the immunization status but in his study occupation of subjects also did not affect significantly the immunization status.¹⁸

CONCLUSION

Vaccination completeness is importantly linked with knowledge and practice of mothers/parents. The mothers' educational and residential status and their knowledge regarding immunization were significantly associated which indicate importance of improving female literacy and women empowerment to improve the immunization coverage and to reduce infant mortality rate. Healthcare workers should play a contributing part in bringing awareness about vaccination in rural areas by conducting awareness campaigns, by distributing leaflets which depicts importance of immunization.

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