

Study of knowledge, attitude and practices of immunization among parents

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Abstract: *Objective:* To assess 'knowledge, attitude and practice about immunization of parents having children of age group 6weeks to 5years. *Methods:* This is observational study conducted in a medical college hospital in South India. Parents were interviewed with a structured questionnaire. Twenty single choice questions were asked out of which 6 were knowledge,7 attitude and 7 practice based questions. Each correct answer was awarded with a score of 1 and 0 for wrong/no answer. Score of >9 was taken as adequate and of <9 was taken as inadequate knowledge, attitude and practices. Data was analyzed by percentage, mean and unpaired t test. *Results:* A total of 135 parents were included in this study.67.4% of parents had adequate (score of >9) and 32.6% of parents (score <9) had inadequate knowledge, attitude and practices of immunization. 71.9% of children had complete immunization status. A significant association of immunization completeness with knowledge, attitude and practice (p value < 0.001) was noticed. *Conclusion:* Majority of parents knew the importance of immunization, had positive attitude and good practices and had complete immunization status for their age, which reflected the good knowledge, attitude and practice of parents regarding immunization

Keywords: Attitude, Immunization status, Knowledge.

Introduction

Immunization is the most cost- effective and the highest impact health intervention which reduces hospitalization, treatment expenditure and mortality. Despite the success with immunization program, many vaccine preventable diseases are prevalent in developing countries like India [1]. According to WHO, over 1.5 million children die from vaccine preventable diseases globally and current immunization program saves more than 3.2 million lives each year and additional 1.7 million lives a year can be saved by full utilization of existing vaccines [2].

Acceptance of any immunization program is largely dependent on knowledge and attitude of parent [3]. To improve parents awareness and knowledge, health care providers should provide parents with correct information about risks and benefits of vaccines [4]. By knowing the gaps in parents knowledge, attitude and practice, our health education can be modified. Hence this study was taken up with the objective of assessing parents knowledge, attitude and Practice (KAP) about immunization.

Material and Methods

The study was an observational cross-sectional study conducted in a medical college hospital in south India. Parents having children of age group 6 weeks to 5 years were included. After explaining the study purpose and details of, those who agreed to participate in the study were interviewed by the investigators using a structured questionnaire.

The questionnaire was prepared based on available literature and validated by a senior pediatrician. 20 single choice questions were asked of which, 6 questions were on knowledge, 7 were on attitude and 7 questions were on practice. One point each was given for correct answer and zero for wrong/no answer. Total score of >9 was taken as adequate knowledge, attitude and practice and score of <9 was taken as inadequate knowledge, attitude and practice. Data was analyzed by percentage, mean, standard deviation and unpaired t test.

Results

135 parents were included in the study. This study included almost equal number of male and female babies. Almost all the participants were invariably mothers, in some assisted by father or grandmothers. 32% of mothers had received secondary and higher education, only 3% were uneducated (Table 1).

Gender of the child	Sex	Percentage
Female	68	50.4
Male	67	49.6
Total	135	100
Education		
Uneducated	4	3
Primary	31	23
Secondary and higher education	44	32.6
Graduate	41	30.4
Postgraduate	15	11.1
Total	135	100
Occupation		
Housewife	101	30.4
Employed	34	11.1
Total	135	100

77% of parents considered fever as about the most common adverse effect of immunization. Significant number of parents (64%) knew next due date of vaccination (Table 2).

Questions on knowledge	wrong answer	correct answer
1. Which vaccine is given soon after birth?	49(36.3)	86(63.7)
2. What diseases do vaccine protect against?	60(44.4)	75(55.6)
3. Which of the following is not a vaccine preventable disease ?	115(85.2)	20(14.8)
4. Which diseases does DPT vaccine prevent ?	128(94.8)	7(5.2)
5. What is the most common adverse effect of immunization?	31(23)	104(77)
6. After birth, next vaccination to be received at?	48(35.6)	87(64.4)

Questions on attitude	No answer	Yes answer
1. Do you share responsibility for making decision, about your child's immunization ?	52(38.5)	83(61.5)
2. Are you confident that vaccination are beneficial in preventing diseases in your child ?	62(45.9)	73(54.1)
3. Are you concerned that your child could still contract disease for which he has been vaccinated?	58(43)	77(57)
4. Would it be helpful to have information about benefits and risks of vaccination ?	33(24.4)	102(75.6)
5. Are you aware that you should vaccinate your child in Pulse Polio campaigns additional to normal immunization schedule ?	40(29.6)	95(70.4)
6. Do you promote vaccinations in relatives / community children ?	44(32.6)	91(67.4)
7. Are you aware about the government initiative steps in providing free vaccines to children?	93(68.9)	42(31.1)

Majority had positive attitude towards immunisation. 54% of parents felt immunisation is beneficial in preventing disease in their children. 67% promoted vaccination in family and relatives (Table 3). 68% of parents were maintaining vaccination records. 55% said that they always give antipyretics after DPT vaccination (Table 4).

Questions on practices	No answer	Yes answer
1. Was your child vaccinated immediately after birth?	30(22.2)	105(77.8)
2. Are you maintaining vaccination record ?	42(31.1)	93(68.9)
3. Have you ever skipped vaccination? if yes reason_____	55(40.7)	80(59.3)
4. Do you know next date of vaccination of your child ?	58(43)	77(57)
5. Did you ever recommend vaccine to others ?	46(34.1)	89(65.9)
6. Do you always give antipyretics after DPT vaccination ?	60(44.4)	75(55.6)
7. Do you inform paediatricians, regarding history of allergy to egg in your child?	41(30.4)	94(69.6)

Total score of > 9 was taken as adequate knowledge, attitude and practice score and < 9 was taken as inadequate. 67.4% parents had adequate knowledge, attitude and practice score. 46% of parents had adequate knowledge, 59% has good attitude and 64% had good practice 71.9% of children had complete immunization status according to their chronological age as per National Immunisation schedule.

Comparison of the knowledge score between the two groups shows that knowledge score is higher in immunization complete group with a t value of 4.985 and is statistically significant. Comparison of the Attitude score between the two groups shows that Attitude score is higher in complete group with a t value of 5.122 and is statistically significant. Comparison of the Practice score between the two groups shows that Practice score is higher in complete group with a t value of 5.776 and is statistically significant. The study found a significant association of immunization completeness with knowledge, attitude and practice scores (p = <0.001)(Table 5).

	Immunization Completeness	N	Mean	Std. Deviation	t	df	P Value
Adequate Knowledge score (>9)	Complete	97	3.120	1.148	4.985	133	<0.001
	Incomplete	38	2.000	1.252			
Adequate Attitude score (>9)	Complete	97	4.520	1.182	5.122	133	<0.001
	Incomplete	38	3.290	1.412			
Adequate Practice score (>9)	Complete	97	4.890	1.059	5.776	133	<0.001
	Incomplete	38	3.660	1.236			

Discussion

Childhood immunization have a massive impact in prevention of many serious childhood infections [5]. Despite having the world’s largest immunization program, the incidence of under-five mortality in India is very high [6]. Diseases like pneumonia, measles and pertussis that can be prevented by vaccination, continue to be the major contributors. Knowledge, attitude and practices of parents can influence the immunization status of children [7]. In this study we have tried to assess the knowledge, attitude and practices of immunization in parents.

In our study majority of the parents had a good knowledge about immunization and thought vaccines can prevent and protect from infectious diseases, as shown in table 2 regarding knowledge based questionnaire. 63.7% people knew BCG was given soon after birth, 75% of parents knew vaccine protects against disease like tuberculosis and polio [8]. 77% of study population knew fever was the common adverse effect following immunization, similar to study done by Dharmalingam et al [9]. and 87% to receive age of child to receive next vaccine. This

findings was similar to studies done by Joseph et al, in which majority of the parents had good knowledge regarding immunization, adverse effects of immunization and immunization schedule [10]. The high prevalence of vaccine-preventable diseases in a developing country like India highlights the need of effectively communicate essential information on immunization to parents. This findings of our study suggests huge responsibility of doctors not only prescribing vaccines but also in educating parents towards good health care practices.

In our study, second set of questionnaire (table 3) were asked to know the attitude of parents regarding immunization. Parents attitude has significant impact on vaccination status of children Majority of parents have shown a positive attitude regarding immunization. 61.5% people in the study thought they are responsible for making decisions about their child's immunization, similar to the studies done by Kumar et al [11]. 75.6% people thought it would be helpful to have information about benefits and risks of vaccination. A systematic review done by Dyda et al showed confidence of parents on vaccination preventing disease and to have information about benefits of vaccination [12]. 70.4% were aware of pulse polio campaigns and believed that their children should receive vaccination in pulse polio campaigns, However 68.9 % were not aware of government initiative steps in providing most of the vaccines free to children in government setups. Same finding was noted in the study done by Qutaiba B et al in Iraq [13].

Good parental practice of immunization will reduce the incidence of infectious diseases. In our study, about questionnaire regarding practices (table 4) we noticed parents had good practices regarding immunization. No anti-immunization group is seen in this part of community. 77.8% of parents vaccinated their child immediately after birth. 68.9% were maintaining vaccination record. The vaccination card is a very important document for the parents to determine which is due for their child and it was noted in the study that if parents could maintain vaccination card, the child is more likely to get fully vaccinated.

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These findings were consistent with study done by Joseph et al [10] 57% of parents knew next vaccination date, same finding was seen in study done by Kumar et al [11]. Only 55.6% had knowledge of giving antipyretics after immunization was seen in study done by Gellin et al [14].

In our study, we found 59% of parents delayed vaccination, the reason for not vaccinating children or not completing the vaccination schedule was because of minor illness like cold, coryza and fever was similar to findings seen in study done by Awadh et al [15]. Other reasons for missing doses of the vaccines were inconvenience during lockdown and unawareness. These findings suggest that greatest hindrance to get the child vaccinated is child being sick, which can be overcome by educating the parents that mild illness is not a reason to miss vaccinations. Child may still be vaccinated if they have low-grade fever, cold, running nose or at the earliest, so they are protected against serious disease

The levels of knowledge attitude and practices were positively associated with their children's immunization in this study which was similar to study done in by Joseph et al and Mcwha et al [10, 16]. 71.9% of children had complete immunization status and only 28.1% of children had incomplete immunization status. Our study also showed a significant association of immunization completeness with knowledge scores, attitude scores and practice scores [13] which were statistically significant with a p value of <0.001.

Conclusion

In conclusion majority of parents knew the importance of immunization, had positive attitude towards immunization and good practices. Majority of the children had complete immunization status for their age, which reflected the good knowledge attitude and practice of parents regarding immunization.

Conflicts of interest: There are no conflicts of interest.

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