ORIGINAL ARTICLE

Knowledge of EPI Vaccination among Primigravida Mothers

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ABSTRACT

Background: To reduce childhood morbidity and mortality, vaccination is the most cost effective public health intervention.
Aim: To assess the knowledge of EPI vaccination among primigravida mothers
Methods: This cross sectional survey was conducted in the department of Paediatrics, King Edward Medical University/Mayo Hospital, Lahore from April to September 2017. A validated questionnaire was used. By non-probability convenient sampling technique, a total of 100 primigravida mothers were interviewed. SPSS 22 was used for statistical analysis.
Results: The study participants were 100 primigravida mothers. Most of the mothers (57%) were ≤ 25 years. Out of 100, 28% mothers were illiterate, 73% were house wives while 38% belong to middle socioeconomic status. Most of the primigravida mothers had good knowledge about BCG, Polio, Measles but some of the mothers were uncertain regarding vaccination of diphtheria, pertussis, tetanus, Hepatitis B, HiB and rotavirus. However, the educational status was statistically significantly related for mother's knowledge of diphtheria, pertussis, tetanus, Hepatitis B, Pneumococcus and rotavirus.
Conclusion: Although primigravida mothers had good knowledge about BCG, Polio, Measles but some of the mothers were uncertain regarding vaccination of diphtheria, pertussis, tetanus, Hepatitis B, HiB and rotavirus in EPI. Higher educational level had positive relation with mother's knowledge of vaccination.
Keywords: Knowledge, Expanded Program on Immunization, EPI, Primigravida, Mothers

INTRODUCTION

The Expanded Program on Immunization (EPI) was launched in Pakistan in 1978 to protect children by immunizing them against childhood tuberculosis, poliomyelitis, diphtheria, pertussis, tetanus and measles. Later, with the support of development partners, hepatitis B in 2002, haemophilus influenzae type B (Hib) in 2009 and pneumococcal vaccine (PCV10) in 2012 and inactivated polio vaccine in 2015 were introduced[1].

Immunization is considered as the most cost effective and safest public health intervention to reduce childhood morbidity and mortality although its full potential is not reached yet. Still under five children die from vaccine preventable diseases each year. The burden of infectious diseases has been reduced primary due to immunization. Immunization prevents diseases like diphtheria, measles, pertussis, pneumonia, polio, rotavirus diarrhoea, rubella, tetanus and other infectious diseases[2].

An important factor to strengthen immunization coverage is the knowledge of mothers. Studies report misconceptions on mothers' knowledge towards EPI immunization. Mother's educational status and knowledge was clearly associated with coverage of immunization[3]. Less knowledge among mothers bring negative attitude and fear which leads to affect immunization status of their children.[4] Mothers' knowledge can help them to take proper decision regarding immunization of her child. Therefore, based upon this review, we conducted this study with the objective to assess the knowledge of EPI vaccination among primigravida mothers.

MATERIAL & METHODS

This cross sectional survey was conducted in the department of Paediatrics, King Edward Medical University/Mayo Hospital, Lahore from April to September 2017. This study was approved by institutional review board. A validated questionnaire was used. By non-probability convenient sampling technique, a total of 100 primigravida mothers were included in the study. The study instrument used was the questionnaire for knowledge survey. The participants were briefed about study and were interviewed. SPSS 22 was used for statistical analysis. Chi square test was applied to see the difference between responses. A p value of <0.005 was considered to be significant.

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RESULTS

The study participants were 100 primigravida mothers. Most of the mothers (57%) were ≤ 25 years. Out of 100, 28% mothers were illiterate, 73% were house wives while 38% belong to middle socioeconomic status (Table I). Most of the primigravida mothers had good knowledge about BCG, Polio, Measles but some of the mothers were uncertain regarding vaccination of diphtheria, pertussis, tetanus, Hepatitis B, HiB and rotavirus. However, the educational status was statistically significantly related for mother's knowledge of diphtheria, pertussis, tetanus, Hepatitis B, Pneumococcus and rotavirus (Table II).

Table 1: Socio-demographic characters of the study population (n=100)

Particulars	Frequency%
Age group (years)	
≤ 25	57(57)
26-30	29(29)
31-35	9(9)
≥ 36	5(5)
Education	
Illiterate	28(28)
Primary	12(12)
Secondary	9(9)
Higher Secondary	5(5)
Bachelor	14(14)
Masters	13(13)
Professional degree	19 (19)
Employment status of mothers	
Housewife	73(73)
Working	27(27)
Socioeconomic status	
Lower (Monthly income <PKR 25K)	33(33)
Middle (Monthly income <PKR 25-75K)	38(38)
Upper (Monthly income <PKR >75K)	29(29)

Table II: Knowledge of mothers regarding mandatory EPI vaccinations (n=100)

EPI Vaccines	Agree (%)	Disagree (%)	Uncertain (%)	p-value of knowledge in comparison with educational status of mother (Chi-square applied)
Tuberculosis/BCG	85	1	14	0.201
Poilo	88	1	11	0.273
Diphtheria	56	19	25	0.001
Pertussis	58	18	24	0.001
Tetanus	65	14	21	0.002
Hepatitis B	50	19	31	0.001
Pnemococcus	31	35	34	0.003
H.Influenza type B	37	27	36	0.010
Measles	83	11	6	0.022
Rotavirus	29	39	32	0.001

DISCUSSION

In present study, most of the primigravida mothers had good knowledge about BCG, Polio, Measles but some of the mothers were uncertain regarding vaccination of diphtheria, pertussis, tetanus, Hepatitis B, HiB and rotavirus. Similar results were reported in studies done in different parts of the world[5,6,7,8]. A study done in rural West Bengal showed that 62% named polio, 61% measles, 53% TB but very few named diphtheria, pertussis and tetanus[9]. A study by Kapoor et al found that 85% of mothers had knowledge about polio although only 15% knew about Hepatitis B.[10] A study done in Mangalore showed that 30% of mothers had poor knowledge while 44% had average knowledge regarding immunization[11].

In present study, the educational status and mother's knowledge was significantly related for diphtheria, pertussis, tetanus, Hepatitis B, Pneumococcus and rotavirus. Higher educational level helps the parents to understand the important educational messages well and they have better chances to understand about immunization[12].

This study has certain limitations. The study has limited sample size. This study was limited to mothers coming in OPD of one tertiary medical college, so we cannot generalize it to the mother of whole province. This study addressed only EPI vaccines. More multicenter studies are needed to address this very important issues to make some better recommendations for policy makers to strengthen the immunization coverage.

CONCLUSION

Although primigravida mothers had good knowledge about BCG, Polio, Measles but some of the mothers were uncertain regarding vaccination of diphtheria, pertussis, tetanus, Hepatitis B, HiB and rotavirus in EPI. Higher educational level had positive relation with mother's knowledge of vaccination.

Funding/Support: The study was self-supported financially.

Conflict of interest: The authors declare that there is no conflict of interests.

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