



VACCINATION; AWARENESS OF MOTHERS ABOUT THE EXPANDED PROGRAM FOR IMMUNIZATION

Dr. Usman Ali Faisal¹, Dr. Alia Rubab², Dr. Shahzadi Asma Tahseen³

1. MBBS
2. MBBS
3. MBBS, FCPS (Pediatric Medicine)
Senior Registrar
Department of Pediatrics,
The Civil Hospital, Bahawalpur

Correspondence Address:
Dr. Shahzadi Asma Tahseen
Senior Registrar
Department of Pediatrics,
The Civil Hospital Bahawalpur
asmatahseen013@gmail.com

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ABSTRACT... Introduction: The Expanded Program on Immunization (EPI) is meant for the control of common infectious microorganism. **Objectives:** To know the awareness among the mothers and its relation with their education. **Study Design:** Cross-sectional study. **Setting:** Pediatric unit, Civil Hospital Bahawalpur. **Period:** June 15, 2015 to August 31, 2015. **Methods and Material:** The mothers were interviewed by the researchers using a structured questionnaire. **Results:** There were 100 mothers included in this study. Their mean age \pm SD was 28.02 ± 7.468 years. Among the studied mothers 20 (20%) were having at least secondary school certificate. There were 88 (88%) mothers who were house wives. Only 3 (3%) mothers answered the correct number of vaccines used in EPI program. The awareness about individual vaccine was in the range of 28%-33% except in polio it was 76% and in measles it was 61%. The 40 (40%) mothers answered that EPI vaccines are safe and 37(37%) replied that these are effective. The mother's high education status was associated with better awareness about EPI. **Conclusion:** There is lack of knowledge among mothers about EPI vaccination and the mother's high education status is associated with better awareness about EPI.

Key words: Expanded Program on Immunization, awareness, vaccination, education.

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INTRODUCTION

The Expanded Program on Immunization (EPI) was launched in Pakistan in 1976 with the support of World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF). Recently this program, in Pakistan, is involved in the vaccination of children for the prevention of tuberculosis, diphtheria, pertussis, tetanus, polio, hepatitis B, pneumococcal infections, H influenza and measles in children while tetanus in the mother and in newborns. The overall vaccination against above mentioned diseases is not high and varies from 63%-85% coverage.¹ The WHO set goals for the eradication of polio, elimination of the neonatal and maternal tetanus, elimination of measles and 90% immunization coverage against diphtheria, tetanus and whooping cough have not been achieved yet.²

The causes of low vaccination rate in Pakistan include shortage of vaccine, transport problems and lack of awareness among parents especially

among mothers. For improvement in vaccination public awareness especially among mothers are needed.^{3,4,5,6,7}

The objective of this study was to know the awareness among the mothers and its relation with their education. This will help us in planning for awareness program among mothers.

MATERIAL & METHODS

This is a cross-sectional study conducted on mothers whose child was admitted in Pediatric unit, Civil Hospital Bahawalpur from June 15, 2015 to August 31, 2015. Bahawalpur due to some illness. After explaining the study purpose and details thereof, those who agreed to participate in the study were interviewed by the researchers using a structured questionnaire including the demographic data. The interview was conducted in English, Urdu or in local languages according to the understanding of mother. The Performa was filled by one of the researchers. The mothers who refused for the interview, or whose child was

admitted in intensive care unit were excluded from the study.

The data collected were entered and analyzed by using SPSS version 20. Data were expressed as percentages or proportions. The qualitative data was compared with Chi-square wherever deemed necessary and a p value less than 0.05 was considered as statistically significant.

RESULTS

There were 100 mothers included in this study. Their mean age \pm SD was 28.02 ± 7.468 years.

Among the studied mothers 20 (20%) were having at least secondary school certificate. The education status of the mothers are shown in Table-I. There were 88 (88%) mothers who were house wives, 7(7%) were teachers, 3(3%) housemaid, 1 (1%) tailor and 1(1%) banker. The awareness of mothers about the various aspects of EPI is shown in Table-II. The Comparison of the awareness about EPI between the two groups based of level of education, i.e. one group having at least secondary school certificate while other group not having secondary school certificate/ uneducated, are shown in Table-III.

Education level	Number of mothers	Percentage
Having at least secondary school certificate	20	20%
- having secondary school certificate	14	14%
- having graduation	5	5%
- having post-graduation	1	1%
Do not having at secondary school certificate/ uneducated	80	80%
- Uneducated/primary fail	40	40%
- Primary Pass	27	27%
- Middle pass	13	13%

Table-I. Education status of mothers (Total mothers 100)

DISCUSSION

Childhood immunizations have a massive impact in prevention of many serious childhood infections. We tried to explore the awareness about vaccination used in EPI among the mothers.

There were 20% mothers in this study who were having at least secondary school certificate. Siddiqi et al 2010⁸ also showed that same results. The study done by Nisar et al 2010⁹ at Karachi showed that only 12% mothers were having at least secondary school certificate while conducted by Anwer et al 2013¹⁰ showed that 41% mothers were having at least secondary school certificate.

There were 88% mothers who were house wives in this study. Adil et al 2009¹¹ showed similar results. The study conducted by Anwer et al 2013¹⁰ showed 67% mothers while it was 94.3% in the study by Siddiqi et al 2010⁸

There were only 3% mothers who knew exact number of vaccine used in EPI in this study. The study done by Nisar et al 2010⁹ showed that 54%

of women reported exact number of diseases against which EPI is scheduled.

The awareness about individual vaccine was in the range of 28%-33% except in polio it was 76% and in measles it was 61%. The study conducted by Anwer et al 2013¹⁰ showed that only 28% mothers were completely aware of vaccination. The study done by Shahab et al 2013¹² in Peshawar showed that the knowledge of EPI vaccination was only 22% except for polio vaccine the knowledge, like our study, was high. Siddiqi et al 2010⁸ showed the knowledge about EPI vaccines was 27%-43% while the knowledge about polio and measles vaccine, unlike our study, was poor i.e. 43.3% and 40.5% respectively. Nisar et al 2010⁹ showed that 75.6% mothers had knowledge about polio, 33.5% mothers had knowledge about measles while 15.4%-40.4% mothers have knowledge about other EPI vaccines. Adil et al 2009¹¹ showed that only 11% mothers can name the EPI vaccines. The study done by Joseph et al 2015¹³ in India showed that 3% of parents were able to correctly match each vaccine against the diseases that

Question	Number of mothers	Percentage
Which vaccine is given in pregnancy?		
Tetanus	29	29%
Do not know	71	71%
Is tetanus toxoid vaccination important in pregnancy?		
Yes	39	39%
Do not know	56	56%
No	5	5%
How many vaccines used in expanded program for immunization		
Tell correct number	3	3%
Do not know	73	73%
Does not tell correct number	24	24%
Can name tuberculosis vaccine used in expanded program for immunization		
Yes	30	30%
No	70	70%
Can name diphtheria vaccine used in expanded program for immunization		
Yes	28	28%
No	72	72%
Can name pertussis vaccine used in expanded program for immunization		
Yes	29	29%
No	71	71%
Can name tetanus vaccine used in expanded program for immunization		
Yes	32	32%
No	68	68%
Can name polio vaccine used in expanded program for immunization		
Yes	76	76%
No	24	24%
Can name hepatitis B vaccine used in expanded program for immunization		
Yes	32	32%
No	68	68%
Can name pneumococcal vaccine used in expanded program for immunization		
Yes	33	33%
No	67	67%
Can name H influenza vaccine used in expanded program for immunization		
Yes	32	32%
No	68	68%
Can name measles vaccine used in expanded program for immunization		
Yes	61	61%
No	39	39%
Belief about the safety of vaccine		
Safe	40	40%
Does not know	45	45%
Unsafe	15	15%
Belief about effectiveness of vaccination		
Effective	37	37%
Does not know	43	43%
Ineffective	20	20%

Table-II. Knowledge of mothers about EPI (Total cases 100)

Question	Number of subjects with at least secondary school certificate (percentage) Total 20	Number of subjects with no education or do not have secondary school certificate (percentage) Total 80	P value
Which vaccine is given in pregnancy?			
Tetanus	18 (90%)	11 (13.75%)	< .00001
Do not know	2 (10%)	69 (86.25%)	
Is tetanus toxoid vaccination important in pregnancy?			
Yes	19 (95%)	20 (25%)	< 0.00001
Do not know	1 (5%)	55 (68.75%)	
No	0 (0%)	5 (6.25%)	
How many vaccines used in expanded program for immunization			
Tell correct number	2 (10%)	1 (1.25%)	0.115734
Do not know	13 (65%)	60 (75%)	
Does not tell correct number	5 (25%)	19 (23.75%)	
Can name tuberculosis vaccine used in expanded program for immunization			
Yes	15 (75%)	15 (18.75%)	< .00001
No	5 (25%)	65 (81.25%)	
Can name diphtheria vaccine used in expanded program for immunization			
Yes	12 (60%)	16 (20%)	.000366
No	8 (40%)	64 (80%)	
Can name pertussis vaccine used in expanded program for immunization			
Yes	13 (65%)	16 (20%)	.000073
No	7 (35%)	64 (80%)	
Can name tetanus vaccine used in expanded program for immunization			
Yes	13 (65%)	19 (23.75%)	.000404
No	7 (35%)	61 (76.25%)	
Can name polio vaccine used in expanded program for immunization			
Yes	20 (100%)	56 (70%)	.004958
No	0 (0%)	24 (30%)	
Can name hepatitis B vaccine used in expanded program for immunization			
Yes	18 (90%)	14 (17.5%)	< .00001
No	2 (10%)	66 (82.5%)	
Can name pneumococcal vaccine used in expanded program for immunization			
Yes	17 (85%)	16 (20%)	< .00001
No	3 (15%)	64 (80%)	
Can name H influenza vaccine used in expanded program for immunization			
Yes	16 (80%)	16 (20%)	< .00001
No	4 (20%)	64 (80%)	
Can name measles vaccine used in expanded program for immunization			
Yes	20 (100%)	41 (51.25%)	.000031
No	0 (0%)	39 (48.75%)	
Belief about the safety of vaccine			
Safe	19 (95%)	21 (26.25%)	< 0.00001
Does not know	0 (0%)	45 (56.25%)	
Unsafe	1 (5%)	14 (17.5%)	
Belief about effectiveness of vaccination			
Effective	18 (90%)	19 (23.75%)	< 0.00001
Does not know	1 (5%)	42 (52.5%)	
Ineffective	1 (5%)	19 (23.75%)	

Table-III. The level of education of mothers and EPI awareness

prevented. 22% of parents responded correctly that OPV is given to prevent polio. Knowledge about other vaccines was still lower, measles 16%, BCG 6%, and DPT 6%. The study done was Caingles et al 2011¹⁴ in Philippines showed that the knowledge of mothers on specific vaccines was 81%-93% while Masadeh et al 2014⁷ showed that in Jordan vaccination rate was high due to increased awareness of the mother about vaccination (87%-95%).

The 40% mothers answered that EPI vaccines are safe and 37% replied that these are effective in our study. Nisar et al 2010⁹ showed that 72.7% mothers told that EPI vaccines are effective while 11.5% mothers told these vaccines are harmful.

The mother's high education status was associated with better awareness about EPI. The similar results were found in the study by Siddiqi et al 2010⁸ Subhani et al 2015¹⁵ also showed that higher level of education was associated with better education.

The studies done in various parts of Pakistan and other developing countries showed poor knowledge about EPI among mothers. The improvement of education improves the level of awareness among mothers.

CONCLUSION

There is lack of knowledge among mothers about EPI vaccination and the mother's high education status is associated with better awareness about EPI.

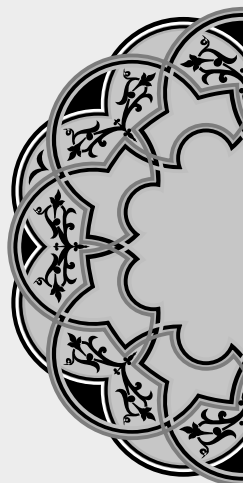
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“You are confined only by the walls you build yourself.”

Unknown

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Usman Ali Faisal	Data collection, data analysis, Search of references and paper writing	
2	Dr. Alia Rubab	Data collection, data analysis, Search of references and paper writing	
3	Dr. Shahzadi Asma Tahseen	Data collection, data analysis, Search of references and paper writing	