ORIGINAL ARTICLE

Assessment of Parents' Attitude toward EPI (Expanded Program on Immunization) in Tertiary Care Hospitals of Karachi

Abdul Qadir[1], Khola Noreen[2], Tahira Zamir[3], Muhammad Sajid Abbas Jaffri[4], Nazish Fatima[5], Rehana Khan[6], Sadia Atta[7]

ABSTRACT:
Objective: To assess parents' attitude toward EPI(Expanded program on Immunization) in three Tertiary Care Hospitals of Karachi
Materials and Methods: This cross sectional hospital based study was conducted at three tertiary care hospitals of Karachi, PNS SHIFA Hospital, Jinnah Postgraduate Medical Center (JPMC) and Liaquat National Hospital (LNH) from a period of 20th July to 20th September, 2015. A structured questionnaire based interview was conducted on150 parents of children less than 5 year of age visiting for vaccination at these three tertiary care hospitals.Data was analyzed using SPSS version 23.
Results:A total of 150 parents were interviewed, out of which 93 (62.0%) parents vaccinated their child immediately after birth, 148(98.7%) parents considered EPI as beneficial for their child's health, 113 (75.3%) parents were found to be aware of the complete vaccination schedule, 56(37.3%)parents had appropriate knowledge regarding vaccines and diseases enlisted on the EPI card, 139 (92.7%) parents kept the record of vaccination schedule, 143(95.3 %) parents didn't ignored vaccination due to increased number of children and 21(14%)parents had fear regarding vaccination program.
Conclusion: Parent's attitude toward EPI was positive. However, knowledge about vaccines and diseases and vaccines enlisted on EPI card was low.
Key Words: Parents, Tertiary Care Hospitals, EPI, Vaccination

INTRODUCTION:

The Expanded Program on Immunization (EPI) was launched in Pakistan in 1976 by WHO and UNICEF to protect children from tuberculosis, poliomyelitis, diphtheria, pertussis, tetanus and measles. In 2002, the program of Hepatitis-B vaccination was introduced with the help of Global Alliance for Vaccine and Immunization (now called the GAVI Alliance). In 2006, a tetravalent combination vaccine was introduced which replaced the vaccines of diphtheria, tetanus and pertussis (DTP) and hepatitis-B separately. In 2008, pentavalent (DTP-HepB-HIB) vaccine with the addition of the new HIB vaccine was commenced. Now a child needs only five visits during the first year and one visit during the second year of his/her life to complete the vaccination with four antigens against eight dreadful diseases. From mid 2012, pneumococcal conjugate vaccine was added in immunization program. This new vaccine will protect children from pneumonia and meningitis due to pneumococcal infection. The new vaccines may jointly avert 17% of childhood mortality in Pakistan and thus help in achieving Millennium Development Goal 4, after reducing child mortality.However, despite the success of this program, none of the targets have been achieved yet and Pakistan is still ranked in the top 3 countries worldwide where polio is endemic and among the 9 Asian countries where neonatal tetanus is one of the main causes of infant mortality.[1]

EPI target diseases are one of the leading causes of high childhood morbidity and mortality, as evidenced by high Infant Mortality Rates (IMR) in developing countries.[2] Immunization is considered by WHO as the most cost-effective intervention to prevent a series of major preventable diseases.It prevents 2 million deaths per year worldwide. However, still 2.5 million deaths a year continue to be caused by vaccine-preventable diseases, mainly in Africa and Asia among children less than 5 years old.In the past few decades,immunization coverage rates have improved sufficiently in developed countries, thereby conferring herd immunity, whereas most of the developing countries are still struggling with faltering rates.[3,4]

✉ **Dr. Abdul Qadir**
Assistant Professor
Department of Community Health Sciences
Bahria University Medical and Dental College
Karachi
Email:dr_aqkhokhar@hotmail.com
✉ **Dr. Khola Noreen**
Lecturer
Department of Community Health Sciences
Bahria University Medical and Dental College
Karachi
✉ **Dr. Tahira Zamir**
Assistant Professor
Department of Pharmacology
Bahria University Medical and Dental College
Karachi
✉ **Dr.Muhammad Sajid Abbas Jaffri**
Professor
Department of Medicine
Bahria University Medical and Dental College
Karahi
✉ **Nazish Fatima, Rehana Khan, Sadia Atta**
4th Year MBBS Students
Bahria University Medical and Dental College
Karahi
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Rural communities constitute one of the high-risk areas for vaccine preventable diseases.[5]The delivery systems of the immunizations have many inherent problems to which an addition may be made by the people themselves, with their prejudices, conclusions and apathy.[6]

In Pakistan, the reported EPI coverage is still way below the herd immunity threshold.[7]The reasons for inadequate immunization coverage in Pakistan are several. The issues of vaccine procurement is its storage, transport and administration, are already known to contribute to inefficiency of the immunization program.[8]Reasons underlying poor coverage have been studied by researchers worldwide and besides other factors, parental knowledge and beliefs have been documented to influence immunization uptake.[9,10,11,12] The fundamental question is whether or not resources should be invested in improving parents' knowledge of and attitudes towards vaccination. Although the evidence is unclear, it is commonly believed, though some disagree[13]that strengthening advocacy, communication and social mobilization will enhance informed and willing participation in vaccination program and that vaccination strategies are likely to be more successful if they are based on an understanding of sociocultural behavior.[14,15] This study was especially designed to assess parent's attitude toward EPI visiting Tertiary Care Hospitals of Karachi.

MATERIALS AND METHODS:

This cross sectional survey was conducted at three Tertiary Care Hospitals that is PNS SHIFA Hospital, Jinnah Postgraduate Medical Center (JPMC) and Liaquat National Hospital (LNH) of Karachi from a period of 20th July to 20th September 2015.The sample was selected using random sampling technique. Parents of children below 5 years of age as well as parents visiting hospital for vaccination of their children were included.Parents of children above 5 years of age were excluded from the study. Verbal consent was taken and confidentiality was ensured. Data was collected using structured questionnaire by taking oral interview from 150 parents (N=150).Data analysis was done using SPSS version 23.

RESULTS:

A total of 150 parents of children less than 5 years of age visiting three Tertiary Care Hospitals of Karachi for vaccination purpose were interviewed. The demographic profile of parents including their educational status and occupation is shown in Table 1.A total of 148 (98.7%) parents considered EPI as beneficial for their child's health, 10 (6.7%) parents didnot considered EPI beneficial for their child's health while only one(0.7%) parent was unsure. A total of 113 (75.3%) parents were found to be aware of the complete vaccination schedule whereas 37(24.7%) were not aware.56 (37.3%) parents had knowledge regarding the vaccines and diseases enlisted on the EPI card whereas 93(62.7%) were unaware. When maintenance of vaccination records was asked from parents, 139 (92.7%) parents told that they keep the record of vaccination of their children, while 11(7.4%) parents reported that they donot keep the vaccination record. 143 (95.3%) parents told that they are not ignorant of vaccination due to increased number of children whereas 7(4.7%)were found to be ignorant of vaccination due to increased number of children, 21(14%) of parents told that they had fear regarding vaccination program whereas 129(86%) did not have any fear about vaccination. (Table 2)

When the time of vaccination from parents was asked, out of 150 parents, 93 (62.0%) parents vaccinated their child immediately after birth, 40 (26.7%) parents vaccinated their child after one day of their birth, 10(6.7%) parents vaccinated their child 7 days after birth. While remaining 7(4.7%) parents vaccinated their child after 7 days of birth.(Table 3)

Table: 1
Demographic Profile of the respondents
(N=150)

Parameter	Frequency(Percentage%)
Educational status	
Mother	
Primary	30 (20%)
Secondary	33 (22%)
Intermediate	46(30.66%)
Graduate	40 (26.66%
Post graduate	01(0.66%)
Father	
Primary	5(3.33%)
Secondary	15(10%)
Intermediate	32(21.33%)
Graduate	95(63.33%)
Post graduate	3(2%)
Occupation:	
Unemployed	none
Self employed	22(14.66%)
Government	31(20.66%)
Private Service	97(64.66%)

Table: 2
Responses of parents regarding Immunization
(N=150)

Question	Frequency(Percent)
Do you think EPI as beneficial for your child's health?	
Yes	148(98.71%)
No	10(6.7%)
Are you aware of the complete vaccination schedule?	
Yes	113(75.3%)
No	37(24.7%)
Do you have knowledge regarding vaccines and diseases enlisted on the EPI card?	
Yes	56(37.3%)
No	93(62.7%)
Do you maintain the vaccination record of your child?	
Yes	139 (92.7%)
No	11 (7.4%)
Do you ignore vaccination due to increased number of children?	
Yes	7 (4.7%)
No	21(95.3%)
Do you have any fear regarding vaccination program?	
Yes	21(14%)
No	129(86%)

Table: 3
Time of vaccination

	Frequency	Percentage %
Vaccinated child immediately after birth	93	(82.0%)
Vaccinated child after one day of birth	40	(26.7%)
Vaccinated child after 7 days of birth	120	(6.7%)
Vaccinated child afterwards	7	(4.7%)

DISCUSSION:

Parents, not doctors, are the primary gate keepers of their children's health. Parents make choices about the amount and quality of health care their children receive, the food they eat, the amount of physical activity they engage in, the amount of emotional support they are provided, and the quality of their environments both before and after birth. These choices are conditioned by parents' material resources, parents' knowledge of health practices and programs, their own health and health behavior, and the characteristics of the communities in which they live.[16]

The results of present survey have showed that overall attitude of parents visiting Tertiary Care Hospitals of Karachi towards EPI was quite positive. However, knowledge regarding vaccines and diseases enlisted on EPI card was low, as 62.7% of parents were found to have lack of knowledge.When compared with other authors, Shahab have reported that 50% of parents had lack of awareness about EPI at Khyber Teaching Hospital of Peshawar.[17] Whereas Sheikh has reported that 18.1% parents had lack of knowledge regarding EPI visiting Tertiary Care Centre.[18]

A KAP study conducted in an urban population of northern Pakistan has reported that 88% of parents were knowledgeable about the EPI program, 77% of mothers perceived vaccination to be beneficial, more than 90% had a positive attitude and were ready to pay for services but only 71% had immunized their children. Reasons for not immunizing the children were parents' laziness (72%), uncooperative husband and perceived poor quality of services.[19]In another study, mothers' knowledge about EPI vaccination in peri-urban area of Karachi was quite low and not associated with their children's EPI coverage.[20]Nisar also have reported in his study that parents were not aware of the name of diseases enlisted on the EPI card.[21]

Another emerging issue that threatens immunization coverage, especially in developed countries is 'Concerns about vaccine safety'. Parents feel more threatened by the side effects of vaccines, which are being observed and reported more frequently than the actual disease itself. A study in the United States looked at parental perceptions regarding vaccine safety and their relation with immunization status of the child. Children of parents who had specific concerns regarding side effects or who believed that their child was getting too many shots had significantly lower coverage than children of parents who had no such concern. This study concluded that in order to sustain adequate coverage in future, additional research about vaccine safety, as well as effective strategies to combat parental concerns are needed.[22]

In our study, 14 % of the parents were found to have fear regarding vaccination.The parents who did not vaccinate their children because of fear of side effects were 33% in the Pediatric and Gynecology wards of

POF Hospital Wah Cantt.[23] Kumar reported that 28.8% had a belief that vaccine has side effects.[24] Another study has reported that 21.4% had fear of side effects.[25] One of the limitations of this study was a briefly designed questionnaire but it has provided us a baseline to repeat this study with a detailed questionnaire in order to reach at a definite conclusion.

CONCLUSION:

Parent's attitude towards EPI was positive. Knowledge about vaccines and diseases enlisted on EPI card was quite low. Educational interventions and mass campaign should be organized to upgrade parents' knowledge about the diseases which can be prevented by vaccination.

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