

Knowledge of Vaccination in the Community: A Contributing Factor for Vaccination in Children

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ABSTRACT

Aim: To determine the knowledge of vaccines in the community; this is an important contributing factor for vaccination in children.

Study design: Cross-Sectional analytical study

Place and duration of study: Children ward and OPD, Sheikh Zayed Medical College & Hospital, Rahim Yar Khan from April 2011 to July 2011.

Methods: 787 peoples were inquired about, strictly following the inclusion and exclusion criteria.

Results: Out of 787 peoples, 28% were completely aware of vaccination while 60% had partial knowledge. Remaining 12% had no idea about vaccination.

Conclusion: Majority of people (72%) having partial or poor knowledge of vaccination. We suggest local and provincial government should improve the knowledge of the people

Keywords: Knowledge, Immunization, Vaccines

INTRODUCTION

The Expanded Program on Immunization is a World Health Organization programme with the goal to make vaccines available to all children throughout the world.

A Modified Cluster Sampling Survey Method developed by the World Health Organization is being used for evaluation of community based surveys. Vaccine coverage is evaluated using a two-stage sampling approach in which 30 clusters and seven children are selected in each cluster. Healthcare workers with no or limited background in statistics and sampling can collect data after getting minimal training¹. Such implementations provide a way to get information from areas where there is no reliable source of data collection. It is also used to validate reported vaccine coverage (for example, from administrative reports) and helps to estimate vaccine coverage within 10 percent. Surveys or questionnaires can provide more detailed information than administrative reports². Implementation of such survey in Thailand has provided an effective expanded programme of immunization³.

Expanded Programme on Immunization (EPI) in Pakistan: The Expanded Programme 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 programme 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-Hep B-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 programme. This new vaccine will protect children from pneumonia and meningitis due to pneumococcal infection. It was planned to introduce Rota virus vaccine in 2013, which will prevent children from diarrhea due to rotavirus. 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.

New technology was adopted for making immunization safer and accommodating more clients. To prevent the risk of blood borne diseases, the programme has been using auto-disable syringes for all immunization injections and safety boxes for proper disposal of sharps waste since 2002⁴.

Despite significant efforts of government and its partners, Pakistan's immunization indicators have yet to reach the expected benchmarks. The key goals of polio eradication, and measles and neo-natal tetanus elimination, have not been achieved due to lack of awareness and vaccination facilities in remote areas of the country^{5,6}.

Our purpose of study is to access the knowledge of people regarding vaccination. On that basis we

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can give some suggestions to improve the knowledge and implementation of vaccination schedule in community.

MATERIAL & METHODS

This is a Cross-Sectional analytical study. Data was collected by taking interview of mothers whether the child was admitted in Pediatric unit due to some illness or visited paediatric OPD. The Performa was filled according to the provided parameter. Their mothers were asked about the EPI status of the child i.e.; BCG, polio, pentavalent (DPT, HiB, Hep B) and measles. Child's mother was interviewed by using a structured pre-tested questionnaire, regarding the EPI coverage of her child and other demographic and potential risk factors for low vaccination coverage. EPI cards were checked where ever available and if not, the subjects were inquired verbally and BCG scars were checked in children. We gathered information on characteristics such as basic demographics, socio-economic status, reproductive history, and health services utilization, immunization coverage of mother and child and reasons for non-compliance with the EPI schedule. The baseline interview concerning mother's knowledge and beliefs about vaccines was recorded.

The mothers of the children admitted in Pediatric unit due to some illness or visited paediatric OPD were included in the study.

RESULTS

Out of 787 peoples, 28% were completely aware about vaccination while 60% had partial knowledge. Remaining 12% had no idea about programme. We can divide the people in three groups
 Group 1 (Good knowledge): 221 (28%)
 Group 2 (Partial knowledge): 472 (60%)
 Group 3 (Poor knowledge): 94 (12%)

Fig.1: Knowledge about vaccination

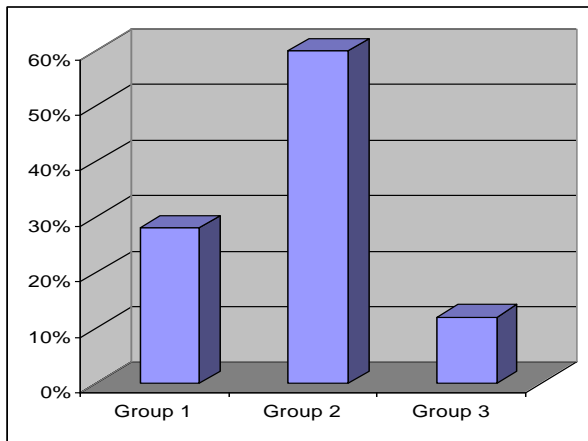


Table1. Demographic information of the families surveyed to determine the knowledge of EPI (n = 787)

Characteristics	=n
Father's education	
Primary	362 (46%)
Matric	236 (30%)
Inter and above	189 (24%)
Mother's education	
Primary	464 (59%)
Matric	189 (24%)
Inter and above	134 (17%)
Knowledge about vaccination	
Poor	417 (53%)
Good	370 (47%)
Father's occupation	
Unskilled labor	150 (19%)
Government service	47 (6%)
Private service	331 (42%)
Business	118 (15%)
Skilled labor	23 (3%)
Unemployed	16 (2%)
Farming	71 (9%)
Landlord	31 (4%)
Fathers' ethnicity	
Punjabi	220 (28%)
Saraiki	323 (41%)
Urdu speaking	110 (14%)
Balochi	55 (7%)
Sindhi	47(6%)
Pathan	16(2%)
Others	16(2%)
Mothers' occupation	
House wives	527 (67%)
Skilled labor	213(27%)
Government service	47(6%)

Out of 787, 362(46%) fathers and 464(59%) mothers were not educated. 72.82% of patients belonged to low socioeconomic status. Regarding fathers' ethnicity most of the patients i.e., 325(41.30%) were Saraiki speaking natives.

DISCUSSION

Based on the findings of the study we found that Majority of the caregivers, mothers and other opinion leaders do not believe that immunization has negative effects except for a few who believe it may cause infertility, paralysis, abscess, and infections like HIV/AIDS. Rumors surrounding OPV and ignorance about the disease poliomyelitis contribute significantly to the lack of acceptance of the vaccine in the study conducted area. There are certain groups that are known for rejecting polio and other vaccines. These include the rural Fulanis, some Islamic religious leaders and the uneducated or illiterate. Most respondents are not aware of contraindications to immunization except for fever and age.

Henok Tadesse, Amare Deribew found that knowledge regarding vaccination, its benefits and side effects and the help of health professionals at immunization sites are closely related to child vaccination behaviors in women or immediate care takers in a rural district of Ethiopia⁸. D.A. Adeyinka, O. Oladimeji, F.E. Adeyinka concluded that the role of antenatal clinic as a source of awareness should further be strengthened by training more health workers to work since majority of the respondents got informed about immunization in the antenatal clinics⁹. Anna Pearce, Catherine Law, David Elliman Although MMR uptake in this cohort is high, a substantial proportion of children remain susceptible to avoidable infection, largely because parents consciously decide not to immunise. Social differentials in uptake could be used to inform targeted interventions to promote uptake¹⁰. FMB Shuaib, D Kimbrough and M Roofe Policy-makers and programme managers need to use established educational and communication channels to increase awareness of childhood immunization especially among families with lower educational levels in the parish¹¹. AN Onyiriuka found that immunization default is a common factor¹². In Brazil Glória Lúcia Alves Figueiredo; Juliana Coelho Pinafound that the bond between health care professionals and families needs to be strengthened to increase the participation in child health protection and promotion measures¹³. Michael Favin, Robert Steinglass, Rebecca Fields et al concluded that the main reason for under vaccination were related to immunization services and to parental knowledge and attitude¹⁴. Doren D.Fredrickson, Terry C. Davis, Connie L. Arnold et al found that strategies for efficient provider - patient communication are needed to address parental concerns about vaccines¹⁵. Bhola Nath, JV Singh, Vidya Bhushan The status of complete immunization is about half of what was proposed to be achieved under the Universal Immunization Program. This emphasizes the imperative need for urgent intervention to address the issues¹⁶. Phukan RK, Barman MP, Mahanta J found that lack of knowledge was one of the factor associated with poor immunization coverage of children in Assam, India¹⁷. Aatekah Owais, Beenish Hanif, Amna Siddiqui concluded that a simple educational intervention designed for low-literate populations, improved DPT-3/Hepatitis B vaccine completion rates by 39%. These findings have important implications for improving routine immunization rates in Pakistan¹⁸. Nazish Siddiqi, Altaf Khan, Nighat Nisar and Azfar-e-Alam Siddiqi that the EPI coverage of Gadap town, Karachi is quite low. Education of both parents plays a significant role in child's immunization coverage. Improving the educational status of parents can potentially improve

the immunization coverage¹⁹. In Karachi, Waris Qidwai, Syed Sohail Ali, Semi Ayub, Salma Ayub identified a strong need for education program for the masses about immunization²⁰.

CONCLUSION

In our study, we have found that people living in peripheries and remote areas were especially not properly perusing the EPI programme. EPI evolution was very poor in low socioeconomic and illiterate population especially in far flung areas of rivers. We suggest local and provincial government should improve the knowledge of the people by repeating awareness campaign programme. When the people will be properly motivated, the vaccination status will be improved. Based on these findings, we therefore deemed it necessary to make the following recommendations:

The role of antenatal clinic as a source of awareness should further be strengthened by training more healthcare workers so that majority of the respondents get informed about immunization in the antenatal clinic.

The training of more healthcare workers will also ease the burden of long waiting hours spend at immunization centers especially in the far flung areas along the rivers.

It is the need of the hours that more immunization centers should be established to solve the problems of traveling long distances to immunization centers.

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