



1. MBBS
Demonstrator,
Department of Community Medicine
Shalamar Medical and Dental
College Lahore.
2. MBBS
Demonstrator,
Department of Anatomy
Shalamar Medical and Dental
College Lahore.
3. MBBS, MSc (Medical
Administration)
Senior Demonstrator,
Department of Community Medicine
Shalamar Medical and Dental
College Lahore.
4. MBBS
Demonstrator,
Department of Community Medicine
Shalamar Medical and Dental
College Lahore.
5. MBBS, MSc (Environmental
Sciences), FCPS
Associate Professor,
Department of Community Medicine
Shalamar Medical and Dental
College Lahore.
6. Professor, Head
Department of Community Medicine
Shalamar Medical and Dental
College Lahore.

Correspondence Address:

Dr. Ali Ahmad
MBBS
Demonstrator,
Department of Community Medicine
Shalamar Medical and Dental College
Lahore.
dr.ali.ahmad29@gamil.com

Article received on:

07/10/2017

Accepted for publication:

15/01/2018

Received after proof reading:

05/04/2018

INTRODUCTION

Vaccination is a procedure through which a man is made insusceptible or impervious to a specific irresistible infection, regularly by giving him/her an immunization, regardless of whether orally or through infusions at certain logically entrenched time period(s) of life. Antibody is a natural arrangement for use to considerably expand the invulnerability of a person to a specific irresistible malady. An immunization contains the operator taking after an ailment causing organism, and produced using either a lessened or a slaughtered types of contaminating microorganism or its poisons or even one of its surface proteins. Immunizations, truth be told, act to empower insusceptible arrangement of the body with a

IMMUNIZATION OF CHILDREN; ASSESSING CURRENT AWARENESS AND BASIC UNDERSTANDING ABOUT ROUTINE IMMUNIZATION OF CHILDREN AMONG MOTHERS VISITING SHALAMAR HOSPITAL LAHORE FROM ADJOINING URBAN SLUM AREA.

Ali Ahmad¹, Noor UI Ain², Jamal Abdul Nasir³, Waleed Ahmed Mir⁴, Sumair Anwar⁵,
Syed Tahseen Haider⁶

ABSTRACT... Objectives: To ascertain the level of awareness and the preliminary understanding about the importance and the practice of immunization of children among the mothers hailing from an adjoining slum area while visiting a nearby tertiary care hospital at Lahore. **Study Design:** Cross-sectional study. **Setting:** The respondents of this study were the mothers coming from an urban slum area and visiting the pediatrics outpatient department of a nearby tertiary care hospital in Lahore city. **Period:** May 2016 to July 2016. **Methods:** 60 mothers of reproductive age and all having children in the ages needing routine immunization coverage through expanded programme on immunization. Convenient sampling technique was adopted to select the respondents. Data was collected through a questionnaire which was filled during face-to-face interview of each voluntary participant. **Results:** 34.3% respondents had general awareness about immunization of children, and out of them, only 6% mothers had additional understanding of the rationale for the immunization. 45% mothers had only partial awareness about immunization with no understanding of its rationale. 20% respondents had no significant awareness. Overall 10% of all the respondents had the knowledge about the need of booster doses of certain vaccines administered in expanded programme on immunization. The awareness about the names of diseases prevented through the routine and free vaccination programme was associated with the literacy level and socio-economic status of the responding mothers. **Conclusion:** Inadequate awareness and basic understanding about immunization was found by this small study conducted among the mothers coming from an adjoining slum area of a tertiary care hospital in Lahore city.

Key words: Expanded Programme on Immunization, Immunization, Vaccination.

Article Citation: Ahmad A, Noor ul Ain, Nasir JB, Mir WA, Anwar S, Haider ST. Immunization of children; assessing current awareness and basic understanding about routine immunization of children among mothers visiting Shalamar hospital Lahore from adjoining urban slum area. Professional Med J 2018; 25(4):551-556. DOI:10.29309/TPMJ/18.4393

specific end goal to shield the individual from consequent sickness. Immunizations convey the viability to spare lives as well as giving the youngsters to become solid, empowering them to consistently go to schools for training and play well for diversion. Inoculation through immunization has the all around recognized target populace in view of age factors. Inoculations are helped out through effort exercises in the group territories without requiring any real way of life changes. Essential avoidance of certain regular youth ailments through immunization remains the prime approach to ensure their wellbeing as the future age. Vaccination is a demonstrated instrument for controlling and dispensing with dangerous irresistible sicknesses. World

Health Organization (WHO) and United Nations International Children Educational Fund (UNICEF) propelled Expanded Program on Immunization (EPI) in 1976 with the point of controlling six youth maladies: Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio and Measles. Be that as it may, antibodies against Haemophilus flu sort b, Hepatitis B and Pneumococcal Pneumonia have additionally been included EPI. Boundaries in achieving inoculation objectives are absence of parent's acknowledgment, absence of parent's mindfulness and information about advantages of immunization, financial imbalance and absence of security for vaccinators.¹

Inoculation scope is a key pointer for observing wellbeing division execution and advance towards Millennium Development Goal (MDG) 4 (i.e. reducing child mortality).² The dismalness and mortality because of preventable infections and unacceptable inoculation among youngsters is still high in creating nations. Data could assume a critical part in deciding the wellbeing conduct of a person. We found that absence of access to data among moms improves the probability of deficient vaccination for their kids. In Pakistan for the most part, open mindfulness about inoculation particularly among moms from poor financial strata is exceptionally low.³ In the U.S., antibodies have diminished or disposed of numerous irresistible sicknesses that once routinely executed or hurt numerous babies, kids, and grown-ups. Be that as it may, the infections and microorganisms that reason antibody preventable ailment demise still exist and can be passed on to individuals who are not ensured by immunizations. Antibody preventable infections have numerous social and financial costs: wiped out youngsters miss school and can make guardians lose time from work. These sicknesses likewise result in specialist's visits, hospitalizations, and even untimely deaths.⁴ Inoculation is extremely financially savvy and demonstrated wellbeing speculation and mediation imagining the procedures to profit the far flung and powerless people groups. Internationally, vaccination administrations have been the focal point of recharged enthusiasm with expanded financing to enhance administrations, speeding up of presentation of

new immunizations, and advancement of the wellbeing frameworks way to deal with enhance antibody delivery.⁵ EPI was started from the very beginning the world with expressed mission to kill, dispose of or limit certain regular irresistible infections by the managed vaccination of every single helpless populace. The program was influenced an indispensable segment of the essential wellbeing to mind administrations. In any case, EPI has not accomplished the targets following 20 years. The insufficiently shared enthusiasm of exceptional group gatherings and even a couple of those situated in certain geological parts of the nation has likewise been recognized as a contributing component in such manner. The nature of vaccination administrations is traded off at the beneficiary level basically because of absence of inspiration and winning questions about the significance of inoculation in view of unsound convictions and myths.

The recent outbreak of measles during current summer season in the city and the potential presence of certain urban localities having unsatisfactory vaccination coverage prompted the need for a baseline survey among the mothers, living in a local slum to assess their knowledge about childhood immunization. This study aspect is essential to augment public health initiatives to increase the coverage of routine immunization in the less privileged communities.

METHODS

A Cross-sectional study was carried out in the outpatients department of pediatrics at the tertiary care Shalamar Hospital Lahore with 60 volunteer participants during May 2016 to July 2016. Only the volunteer mothers of reproductive age (15-45 years) having one child or more children less than 5 years age, and hailing too from a neighboring urban slum were selected after seeking informal verbal consent and explaining them the academic purpose of the study with assurance about the confidentiality of their data. The relevant verbal inquiries of the respondents were also addressed to their satisfaction in simple and plain terms. Married women accompanying as the attendants and having children of those ages when EPI was not recommended were excluded. Structured

questionnaire was filled by researchers through face-to-face interviews. The common variables studied included awareness about immunization of children, sources of related information, the relevant knowledge, beliefs and practices. The collected data was analyzed by using SPSS 17. The outcome of interest was the presence of current awareness and basic understanding about the routine immunization of children among the less privileged mothers, belonging to an urban slum area. The variables of the study outcome were quantified in percentage of the relevant respondents.

RESULTS

A total of 60 mothers were contacted for interview and the response rate was 98.3%. According to their demographic and socio-economic profiles, they all belonged to a surrounding urban slum area, their ages ranged between 18 year to 45 year (mean age: 29.7 years), married with at least one alive child (mean number of their children: 2.21). Half of the respondents (51.7%) had under-matric education (Figure-1). 98.3% of mothers were of the opinion that vaccination prevented diseases in children while only one mother considered vaccination ‘haram’ in Islam.

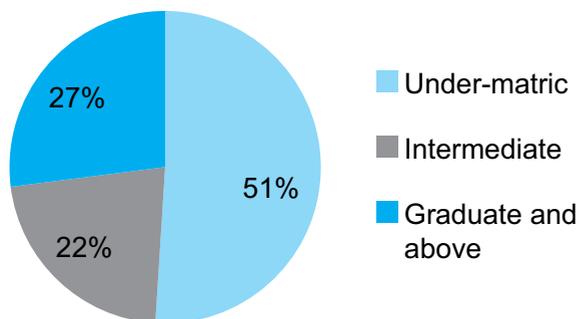


Figure-1. Educational status of mothers

Approximately 60.6% of the mothers had varying degree of awareness about EPI for children. However, 95% mothers followed the given vaccination schedules according to the issued vaccination cards. Only 23.3% mothers were aware of additional locations of free government facilities for immunization of children. Only 6 respondents (10%) were aware of the booster doses of vaccines (Figure-2). 29 mothers (48.3%) had come to know about vaccination through

local doctors and staff of antenatal clinics. 18 respondents (30%) got information regarding vaccination from local health workers (Figure-3). Relatives, media and schools did not show any significant role in creating such awareness among the sample respondents.

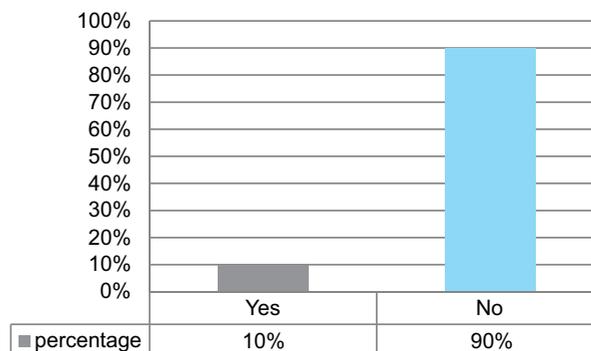


Figure-1. Educational status of mothers

When asked about detailed EPI vaccinations (Table-I), 21.7% of the mothers had awareness about tuberculosis vaccination while 78.3% were aware of polio vaccination. 38% respondents had awareness about measles vaccine. The awareness regarding vaccines for diphtheria, Pertussis and tetanus was 23.3%, 40% and 10% respectively among these mothers. 23.3% respondents were aware of hepatitis B vaccine. The awareness about pneumonia and H. influenza type b vaccines was 8.3% and 15% respectively.

All the interviewed mothers, including those having relatively better awareness and understanding of the prevented diseases through immunization as well as those aware of booster doses of vaccines, had no specific knowledge about the particular EPI vaccine(s) being administered at the ages of 6 weeks, 10 weeks, 14 weeks, 9 months, 15 months to neonates, infants and children.

DISCUSSION

According to the survey of Pakistan Social and Living Standards Measurement (2010–2011), Pakistan’s routine immunization coverage does not meet the optimal routine immunization rate of more than 80%. Pakistan’s routine immunization coverage is close to 65% with only some important cities of Punjab recording a better performance.⁶

Disease	n %
Aware of TB vaccine?	
Yes	13 (22%)
No	47 (78%)
Aware of Polio vaccine?	
Yes	47 (78%)
No	13 (22%)
Aware of Hepatitis B vaccine?	
Yes	14 (23%)
No	46 (77%)
Aware of Diphtheria vaccine?	
Yes	14 (23%)
No	46 (77%)
Aware of Pertussis vaccine?	
Yes	24 (40%)
No	36 (60%)
Aware of Tetanus vaccine?	
Yes	6 (10%)
No	54 (90%)
Aware of Measles vaccine?	
Yes	38 (63.3%)
No	22 (36.7%)
Aware of H. Influenza type b?	
Yes	9 (15%)
No	51 (85%)
Aware of Pneumonia vaccine?	
Yes	5 (8.3%)
No	55 (91.7%)

Table-I. Awareness about EPI vaccines

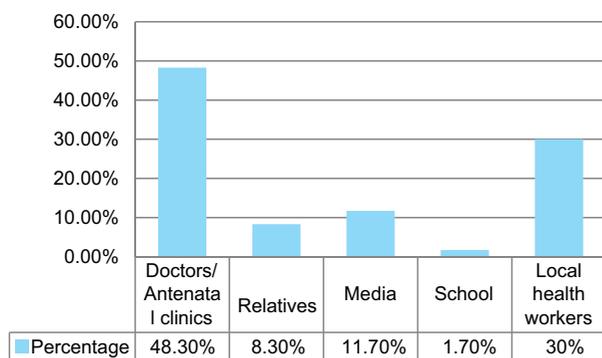


Figure-3. Sources of information about vaccines

The mortality rate of children under-five year age is 72 per 1000 live birth as compared to 58 per 1000 live births of the region. 98.7% mothers expressed their belief that vaccination prevented certain diseases in children, though without completely knowing all their names, and so they were following immunization of their children. Their common sources of information regarding vaccines administered to children were mostly

local doctors/antenatal clinics and health workers (Figure-3). The survey results show some insight into the awareness and understanding about the immunization among the mothers, residing in the marginalized urban slum, located at the backyard of Shalamar Hospital, Mughalpura, Lahore.

It is noteworthy that local doctors and health workers played their role to a certain extent in the primary prevention of childhood diseases in the urban slum area. The media, though genuinely considered as one of the important sources of public information, did not get the expected rating it deserved among these urban slum dwellers for creating awareness about immunization (11.7%). The possible lack of access to print and electronic media in slum households may be the possible factor in view of poverty and illiteracy.

The service providers thought that problem of incomplete vaccination in rural or remote areas is because of improper vehicles, unavailability of local vaccinators particularly for females and misplacement of cards.⁷ Pakistan remains one of only three countries in the world with endemic polio and the situation needs continuous strengthening of the indigenous approach to make the homeland a polio-free country. Polio vaccination during National Immunization Days 2010 was a partial success because some pockets of poor children and afghan refugees were poorly vaccinated. In order to eradicate polio, they must be vaccinated. Polio has not been eradicated from Pakistan.⁸ Furthermore, challenges remain for routine immunization access and coverage in both urban and rural settings, as evidenced by 2012 measles outbreak that affected thousands and killed hundreds.⁹ Measles is difficult to control and eliminate and more than 90% of the population must be immune to interrupt transmission and prevent outbreaks.

Our data analysis revealed that majority of the sample population was well aware of polio vaccine. However, the respondents clearly lacked the basic understanding of the routine EPI vaccines for the preventing the given diseases as well as the required booster doses. Most of the mothers could not mention the names of diseases

prevented through routine EPI, possibly due to lack of education and resources constraints in the slum area. The repeated media coverage regarding the unabated armed violence against polio vaccination teams e.g. many incidents of murders of polio vaccination staff (female and male) and deaths of the accompanying security personnel by extremist elements in certain parts of country, and the negative propaganda made against immunization based on misplaced religious concepts might have contributed towards the increased awareness about polio vaccination.

Parents' refusal to get vaccinated or to vaccinate their children can cause collective harm by incrementing the pool of unprotected, susceptible individuals in a community. With herd immunity compromised, devastating disease outbreaks can occur. In these settings, individuals are morally obligated to accept vaccination to prevent harm to others.¹⁰

The preliminary results showed that EPI cards played an important role for these slum dwellers in following the given schedules of immunization (95%) but the utility of paper card cannot be over-relied due to its weak physical durability, unreliable safe custody and illiteracy of slum dwellers. Our study has reflected the inadequacy of current health education programme in primary prevention of childhood diseases among the urban marginalized community.

The limitations of our study included small sample size, limited availability of respondents in the pediatrics outpatient department of a private tertiary care hospital coming from a neighboring urban slum, short duration of study and reliance on the verbal response of persons without any other or documentary evidence of their claimed practice. The results of this study necessitate initiation of focused health programme in adjacent urban slum.

CONCLUSION

Inadequate awareness and basic understanding about immunization of children was found among the respondent mothers coming from adjoining

an urban slum area next to a teaching hospital of Lahore in our limited and small study. However, solving the problems of the providers at all levels combined with media campaigns to give necessary awareness to modify the unreasonable behavior of the dwellers of certain identified localities and a few of socio-religious sub-groups can significantly improve the immunization coverage in Pakistan.

RECOMMENDATIONS

The pervasive deficient mindfulness and absence of fundamental comprehension about vaccination among the slum dwellers demonstrate the requirement for more mindfulness endeavors through group wellbeing effort program including nearby essential medicinal services suppliers, group wellbeing laborers and the guardians in the under-advantaged territory. Elements influencing vaccination are puzzled by many elements including education levels, mindfulness about significance of inoculation, financial condition, negative promulgation by religious fanatics and activists. The improved parental learning about inoculation and its positive advantages with reliable undertakings to discredit 'myths' can diminish general dismalness and mortality of kids by expanding scope and collaboration of group.

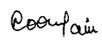
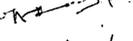
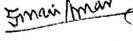
Additionally examines are needed more extensive understanding into the impossible to miss boundaries to routine vaccination at the beneficiary level in urban ghetto regions. In spite of longstanding endeavors to make essential mindfulness and increment interest for inoculation among group individuals, numerous groups still don't effectively look for vaccination administrations which are accessible free of cost. Low request of inoculation holds on among certain section of society due to poor comprehension about the advantages of antibodies, misinterpretations about antibody security, saw bother or trouble in getting to administrations, and low prioritization of vaccination – particularly among individuals who are scarcely surviving. Wellbeing training of individuals still needs more managed endeavors by the legislature and other related partners in the general public.

Copyright© 15 Jan, 2018.

REFERENCES

1. Wain ZN, Masood RA, Ali RW, Bashir I. **An overview of immunization practices in Pakistan.** International Current Pharmaceutical Journal. 2016 Oct 9; 5(11):94-6.
2. Sartorius B, Cohen C, Chirwa T, Ntshoe G, Puren A, Hofman K. **Identifying high-risk areas for sporadic measles outbreaks: Lessons from South Africa.** Bulletin of the World Health Organization. 2013 Mar; 91(3):174-83.
3. Bugvi AS, Rahat R, Zakar R, Zakar MZ, Fischer F, Nasrullah M, Manawar R. **Factors associated with non-utilization of child immunization in Pakistan: Evidence from the demographic and health survey 2006-07.** BMC Public Health. 2014 Mar6; 14(1):232.
4. Stevens M, Ruminski A, Goodpaster P. **Vaccination disease prevention.** 2017; *Introduction to Public Health Posters.* 20.
5. Ryman TK, Dietz V, Cairns KL. **Too little but not too late: results of a literature review to improve routine immunization programs in developing countries.** BMC Health Services Research. 2008 Jun 21; 8(1):134.
6. Furrukh M, Jalil A, Anwar S, Aslam Z, Javed T. **Measles-Demographics and vaccination status.** Journal of Rawalpindi Medical College Students Supplement; 2015:19(S-1):21-23.
7. Mansuri FA, Baig LA. **Assessment of immunization service in perspective of both the recipients and the providers: A reflection from focus group discussions.** J Ayub Med Coll Abbottabad. 2003; 15(1):14-8.
8. Naeem M, Adil M, Abbas SH, Khan A, Khan MU, Naz SM. **Coverage and causes of non-immunization in national immunization days for polio; A consumer and provider perspective study in Peshawar.** Journal of Postgraduate Medical Institute (Peshawar-Pakistan). 2011 Dec29; 26(1).
9. UNICEF. Pakistan annual report. **2012; maternal, newborn and child health care.** Islamabad. 2013 Sep; 5.
10. Moodley K, Hardie K, Selgelid MJ, Waldman RJ, Strebel P, Rees H, Durrheim DN. **Ethical considerations for vaccination programmes in acute humanitarian emergencies.** Bulletin of the World Health Organization. 2013 Apr; 91(4):290-7.

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Ali Ahmad	Study conception and design, data collection.	
2	Noor Ul Ain	Study planning, Data collection.	
3	Jamal Abdul Nasir	Manuscript writing and editign	
4	Waleed Ahmed Mir	Literature Search	
5	Sumair Anwar	Data analysis and interpretation.	
6	Syed Tahseen Haider	Critical review, giving expert research opinion.	