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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1479224>Available online at: <http://www.iajps.com>**Research Article****ASSESSMENT OF KNOWLEDGE OF MOTHERS, ATTENDING
PAEDIATRICS OPD OF A TERTIARY CARE HOSPITAL DERA
GHAZI KHAN REGARDING EPI****Dr. Muhammad Shafique, Dr. Muhammad Kaleem Ullah, Dr. Muhammad Hassan Shahid
DG Khan Medical College Dera Ghazi Khan****Abstract:**

Objective: To assess the awareness of mothers about EPI, to promote importance of vaccination and motivating mothers to follow EPI schedule. Study Design:

Study design: Observational descriptive, cross sectional study.

Place and duration of study: Paediatric OPD, teaching hospital Dera Ghazi Khan from May 2017 to August 2017

Methodology: 100 mothers visiting paediatric OPD of teaching hospital D.G. Khan were interviewed. All mothers were approached and knowledge was collected by pretested questionnaire which was filled up by researchers.

Results: 86% of mothers have awareness about importance of vaccination. 76% of mothers have completed the vaccination schedule according to EPI card. 94% of mothers had knowledge that they should be vaccinated during pregnancy.

Conclusion: The analyzed data reveals good awareness regarding EPI among mothers. Level of completion of EPI is satisfactory. Further knowledge regarding details of vaccination programme, detailed schedule and their storage is poor.

Key words: EPI, expanded programme on immunization. GAVI, Global Alliance for Vaccine and Immunization.

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INTRODUCTION:

The expended programme on immunization is a disease prevention activity aiming at reducing illness, disability and mortality from childhood diseases preventable by immunization [1]. This programme has significantly progressed in terms of immunization coverage and disease reduction and has developed its own surveillance system, cold chains system, field supervision mechanism, regular monitoring system and evaluation strategy [2].

Main objectives of EPI are to reduce the morbidity and mortality from diphtheria, pertussis, tetanus, poliomyelitis, tuberculosis and measles to a negligible level and promoting the delivery of immunization through local comprehensive health services. The EPI was launched in Pakistan in 1978³. Initially programme was very successful but later on its coverage was decreased because of withdrawal of international support in mid-90's. In 2002, Hepatitis B vaccine was added. Later on Hemophilic Influenza type b (Hib), Pneumococcal vaccine (PCV 10) and inactivated polio vaccines were added in 2009, 2012 and 2015 respectively. Plan is also to introduce Rota virus vaccine in 2017 [3]. 3073204 children have been vaccinated according to EPI in Punjab up till august 2017 and number of vaccinators was 3768 [4].

Standard guidance of EPI in Punjab are [5]:

AGE	Vaccines to be given
At birth	BCG, OPV-0
At 6 weeks	Pentavalent-I, Pneumococcal-I, OPV-I.
At 10 weeks	Pentavalent-II, Pneumococcal-II, OPV-II.
At 14 weeks	Pentavalent-III, Pneumococcal-III, OPV-III and IPV.
At 9 months	Measles-I
At 15 months	Measles-II

Pentavalent includes Diphtheria, Tetanus, Pertussis, Hepatitis B and Hib.

GAVI Alliance launched in 2000 is currently funding to make sure that immunization runs smoothly in Pakistan⁶.

METHODOLOGY:

Table 1: Degree of Knowledge of mothers relating vaccines given at birth.

Degree of Knowledge	No of mothers	Angle of circle	Cumulative Angle
Good Knowledge	1	$1/100 \times 360 = 3.6^{\circ}$	3.6°
Poor Knowledge	3	$3/100 \times 360 = 10.8^{\circ}$	14.4°
No Knowledge	96	$96/100 \times 360 = 345.6^{\circ}$	360°
Total	100	360°	360°

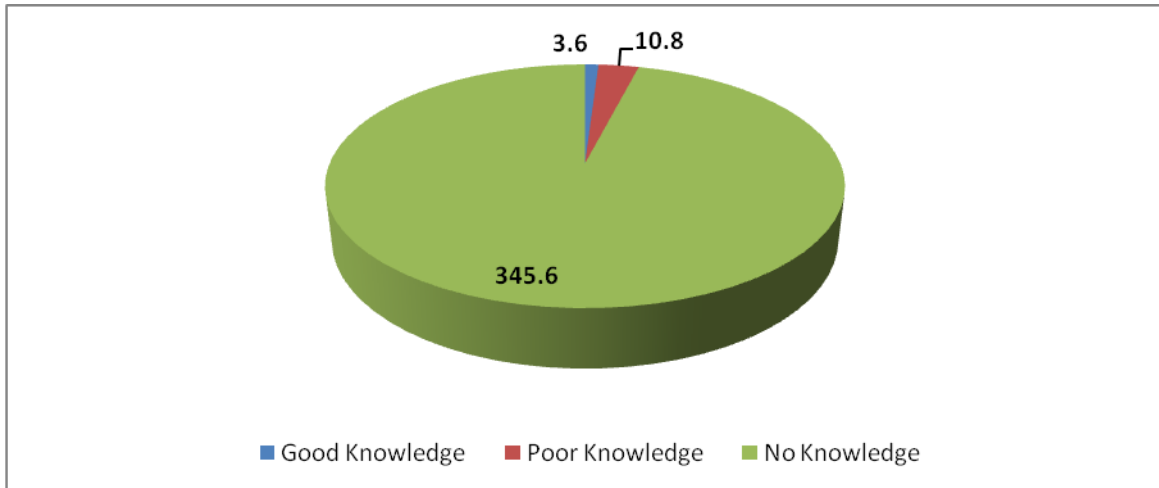
Observational descriptive, cross sectional study was performed in the paediatrics OPD of teaching hospital D.G Khan. Ethical approval from the Head of paediatric department, teaching hospital D.G Khan was obtained. 100 mothers visiting the paediatrics OPD were interviewed from May 2017 to August 2017. Mothers were resident of main city as well as from periphery. Mothers with at least one child were considered eligible.

After obtaining verbal consent, the mothers were interviewed to assess their knowledge and attitudes towards EPI vaccination. Each mother was interviewed for about 15-20 minutes. The data was collected with the help of pre-made questionnaire by researchers themselves. Mothers were selected randomly. Initial data was organized properly, variables were made and related percentages were calculated. A knowledge score was developed and significance of results was assessed.

RESULTS:

Data was collected over a period of three months at paediatrics OPD, teaching hospital D.G Khan. 86% of mothers knew about the purpose of vaccination. 96% of mothers knew about the EPI. 68% of mothers prefer hospital for vaccination because hospital is a reliable source according to 48.52% (33/62), no facility of vaccination team in their region according to 20.58% (14/62), 16.17% (11/62) have no idea about any other source of vaccination, 10% (7/62) have easy accessibility to hospital and 4.41% (3/62) do not trust the vaccination teams.

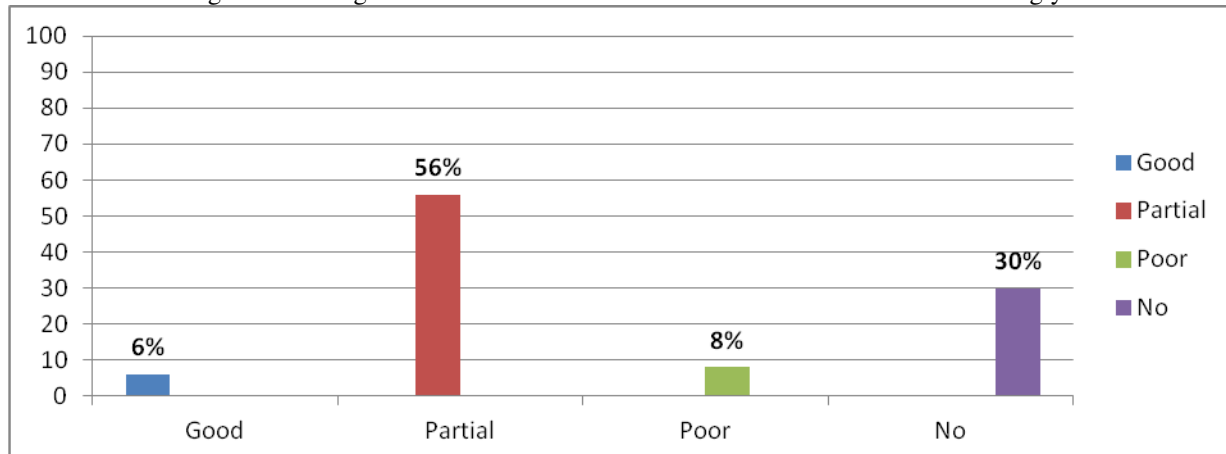
About 32 % mothers prefer vaccination teams for the vaccination. Reason for preference was mostly easy accessibility 81.25% (26/32) as vaccination is available at doorsteps and trust worthy staff members of vaccination teams according to 18.75% (6/32) mothers. 94% of mothers knew that they should be vaccinated during their pregnancy, out of these 95% (90/94) don't know which vaccines are given. Majority of mothers that is 82% visited the EPI vaccination center after the birth of child and got Vaccination card. Most of the mothers that is 96% have no idea which vaccines are given at birth, 3% have wrong knowledge and only 1% knew which vaccines are given at birth.

Variables;**Good Knowledge:** Mothers having right Knowledge about vaccine given at birth.**Poor Knowledge:** Mothers having wrong knowledge about vaccine given at birth.**No Knowledge:** Mothers having no knowledge about vaccine given at birth.**Fig1:** Knowledge of mother about vaccine given at birth.

Majority of mothers that is 56% have partial knowledge about the vaccination schedule of EPI, 30% having no knowledge, 8% have poor knowledge while 6% have good knowledge regarding vaccination schedule.

Table 2: Knowledge of mothers regarding vaccination schedule of EPI.

Knowledge	No of Mother	% age
Good	6	6%
Partial	56	56%
Poor	8	8%
No	30	30%
Total	100	100%

Variables;**Good:** Mothers having knowledge about at least 2 doses of vaccination schedule.**Partial:** Mothers having knowledge of only 1 dose of vaccination schedule.**Poor:** Mothers having wrong knowledge about vaccination schedule.**No:** Mothers having no knowledge or those who follow the vaccination cards schedule accordingly.**Fig: 2:** Knowledge of mother about schedule of EPI.

Majority of mothers i.e. 76% have completed vaccination schedule according to EPI vaccination card while 24% have not completed their children vaccination according to EPI.

Table 3: Assessment of completion of EPI schedule.

Completion of Schedule	No of Mothers	Percentage`
Yes	76	76%
No	24	24%
Total	100	100%

Variables;

Yes: Mothers who have successfully completed their children vaccination according to the EPI card and also those who have successfully completed that card up till now.

No: Mothers who have not successfully completed their children vaccination according to the EPI card.

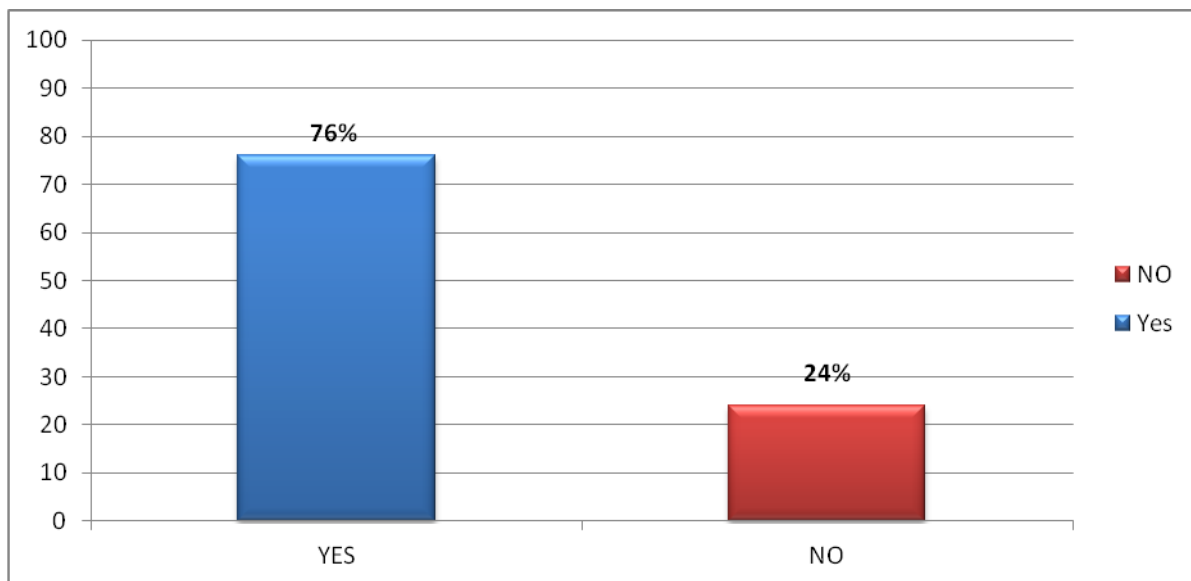


Fig 3: Assessment of completion of EPI schedule.

None of the mothers have knowledge about storage of vaccines in different Compartments of refrigerator. 56% of mothers were of view that child should be vaccinated against diseases not included in the EPI. Out of these majority 49% (29/56) have no knowledge about type of vaccination, 37% (22/56) gave wrong answers showing their poor knowledge while 8% have good knowledge i.e. they knew about various diseases against which vaccination can be done and are not included in EPI. 54 % of mothers have opinion that vaccination programme should be continued during any ailment (like URTI, diarrhea), while 46% have opinion that it should be discontinued during ailment.

DISCUSSION:

Studies all over the world have shown that success of immunization of children depends highly on mother's positive attitude and knowledge [7,8]. A wide range of factors from individual to family, social and systemic factors are involved [9-12]. In childhood

immunization mother's education is far more important than socioeconomic status [13]. A study conducted in 2016 in Pakistan showed that 81.57% pregnant ladies were self-aware of the program and importance of childhood immunization¹⁴. Our studies strongly support this view showing that 82% correspondents visited EPI centers soon after their child birth. According to a another study conducted in Bijapur city, Karnataka, India showed that 65.16% respondents had opinion that disease could be prevented by immunization where 11.16% could name two or more diseases that could be prevented by immunization schedule¹⁵. Our studies showed that 86% mothers were aware of importance of vaccination but only 6% could name 2 vaccines included in EPI schedule.

Most mothers valued the benefits of protecting their children and majority of mothers knew about importance of vaccination but they had no knowledge about various aspects of vaccines included in EPI.

This may be due to low literacy rate among respondents in our study area. In rural areas, distance beyond 7 kilometers from immunization centers is one of the leading cause of non immunization [16]. Many other researches also show similar results [17-19]. According to study conducted in KPK Pakistan, 92% respondents preferred immunization services to be provided at home, of these 63.3% did receive vaccination at home, 33% had to go to facility and 3-7% had not received vaccination at all [20]. Our results showed 68% mothers prefer to get their children vaccinated from hospitals and 32% preferred that children should be vaccinated by vaccination teams at doorsteps. Hence we can say that lady health workers and other health workers can play an important role in improving immunization status among children. Various other studies also show same results [21,22].

Misconceptions regarding immunization are also found in people especially mothers of rural areas [23,24]. Our studies also pointed out various misconceptions e.g. discontinuing vaccination program in case of any ailment. These types of misconceptions can lead to significant decrease in immunization level of children. Various other studies also show same result [25,16]. In view of data various steps can be made to improve the EPI program e.g. regular and consistent supply of vaccine and development of more EPI centers in each area. Local staff members can be appointed in their respective areas as they can deal with their own community effectively. Various awareness programs can also be launched to improve knowledge of mothers regarding EPI. Transport facilities can be improved from peripheral areas to the city or to the nearest health care facility.

CONCLUSION:

The analyzed data reveals good awareness regarding EPI among mothers. Level of completion of EPI is satisfactory. Further knowledge regarding various details of vaccination programme, detailed schedule and their storage is poor. Various misconceptions are found among mothers regarding vaccination programme.

REFERENCES:

1. www.pshealth.punjab.gov.pk/VerticalProgram-Immunization.aspx
2. Pakistan: Ministry of health: Expanded Program on Immunization 2010. ww.health.gov.pk.
3. www.emro.who.int/pak/programmes/expanded-programme-on-immunization.
4. open.punjab.gov.pk/evaccs/

5. epi.gov.pk/?page-id=139
6. epi.gov.pk/?page-id=43
7. Luman E.T: McCauley M.M Shefer A: Chu S.Y. Maternal characteristics associated with vaccination of young children *Pediatrics* 2003;111:1215:18
8. Qidwaiw, Ali SS, Ayub S, Ayub S. Knowledge, attitude and practice regarding immunization among family practice patients *J Dow Uni Health Sci* 2007;1:15-9
9. Ahmad N, Akhtar T, Roghani MT, Ilyas HM, Ahmad M. Immunization coverage in three districts of North-West Frontier Province (NWFP). *J Pak Med Assoc* 1999;49(12):301-5.
10. Fotso JC. Child health inequities in developing countries: differences across urban and rural areas. *Int J Equity Health* 2006;5:9.
11. Rahman M, Islam MA, Mahalanabis D. Mothers' knowledge about vaccine preventable diseases and immunization coverage in a population with high rate of illiteracy. *J Trop Pediatr* 1995;41:376-8.
12. Phukan RK, Barman MP, Mahanta J. Factors associated with immunization coverage of children in Assam, India: over the first year of life. *J Trop Pediatr* 2009;55(4):249-52.
13. Javaid BK, Bari A, Naz S, Ahmad U. Immunization rates in children in relation to maternal education, *Pak Pead J* 2009;33:79-85
14. Jafri SAM, Aamir IS, Abid M, Hanif M. Childhood Immunization; awareness among pregnant women in Pakistan. *Professional Med J* 2016;23(1):071-075. DOI: 10.17957/TPMJ/16.3137
15. M.M. Angadi, Arun Pulikkottil Jose, Rekha Udgeri, K.A. Masali, and Vijaya Sorghanvi. A Study of Knowledge, Attitude and Practices on Immunization of Children in Urban Slums of Bijapur City, Karnataka, India. *J Clin Diagn Res.* 2013 Dec; 7(12): 2803-2806.
16. Muhammad Naeem, Muhammad Zia Ul Islam Khan, Muhammad Adil, Syed Hussain Abbas, Muhammad Usman Khan, Ayasha Khan, Syeda Maria Naz. Inequity in childhood immunization between urban and rural areas of Peshawar. *J Ayub Med Coll Abbottabad* 2011;23(3).
17. Mitchell S, Andersson N, Ansari NM, Omer K, Soberanis JL, Cockcroft A. Equity and vaccine uptake: a cross-sectional study of measles vaccination in Lasbela District, Pakistan. *BMC Int Health Hum Rights* 2009;9(Suppl 1):S7.
18. Toikilik S, Tuges G, Lagani J, Wafiware E, Posanai E, Coghlan B, *et al*. Are hard-to-reach populations being reached with immunization services? Findings from the 2005 Papua New

- Guinea national immunization coverage survey. *Vaccine* 2010;28:4673–9.
19. Ghei K, Agarwal S, Subramanyam MA, Subramanian SV. Association between child immunization and availability of health infrastructure in slums in India. *Arch Pediatr Adolesc Med* 2010;164:243–9.
 20. Rima Ahmad, Sebina Subul Alvi, Minhal Hassan, Matiullah Kamin, Mariam Malik, Lailumah Sarwar, Hassan Sohail, Hussein Wahab, Maria Zafar, Saima Iqbal (Community Health Sciences, Shifa College of Medicine, Islamabad.) Availability of Expanded Programme of Immunization services provided to children in a rural Pkistani village. *Journal of Pakistan Medical Association* April, 2011
 21. Patel AR, Nowalk MP. Expanding immunization coverage in rural India: a review of evidence for the role of community health workers. *Vaccine* 2010;28:604–13.
 22. Datar A, Mukherji A, Sood N. Health infrastructure & immunization coverage in rural India. *Indian J Med Res* 2007;125(1):31–42.
 23. Anjum Q, Omair A, Inam SNB, Ahmed Y, Usman Y, Shaikh S. Improving Vaccination Status of children under five through Health Education. *J Pak Med Assoc* 2004;54:610–3.
 24. Jajoo UN, Chhabra S, Gupta OP, Jain AP. Annual cluster (pulse) immunization experience in villages near Sevagram, India. *J Trop Med Hyg* 1985;88:277–80.
 25. Prislun R, Dyer JA, Blakely CH, Johnson CD. Immunization status and sociodemographic characteristics: the mediating role of beliefs, attitudes and perceived control. *Am J Pub Health* 1998;88:1821–6.
 26. Manjunath U, Pareek RP. Maternal knowledge and perceptions about the routine immunization programme—a study in a semiurban area in Rajasthan. *Indian J Med Sci* 2003;57:158–63.