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A CROSS-SECTIONAL SURVEY ON AWARENESS, PRACTICE AND ATTITUDE ON IMMUNIZATION (POLIO CAMPAIGN) HELD UNDER MAYO HOSPITAL, LAHORE

[1]Dr. Hamza Shabbir, [2]Dr. Ayesha Azmat, [3]Dr. Saba Munir

[1]House Officer, Allied Hospital Faisalabad

[2]Woman Medical Officer, Basic Health Unit Gondal, Sialkot

[3]WMO, RHC Mandi Ahmadabad, Okara

Abstract:

Objective: *To identify the mothers' attitude, knowledge and practices while they carry out scheduled immunisation and to determine the factors responsible for unsatisfied campaign of Polio.*

Methods: *The place of this cross-sectional study was the carried out at Mayo Hospital, Lahore (Paediatrics Department) from April 16, 2016 – 18th May, 2017. Non-probability convenience was the sampling used to conduct it. 210 was its sample size. Mothers who were on a scheduled immunization and were accompanying with children under the age of 05 years were the part of this study. Women having linguistics issues, other than local region, the ones with critically sick child were dropped from the study.*

Results: *The most rampant reason (95 percent) for completion of vaccination was "Mandatory for child health". The most prevailing reason for incomplete vaccination was missing of the card of vaccination (33 percent). Misconception about the polio campaigns was the most common reason to refuse the vaccination (22 percent). 96 percent (202) of the respondents expressed the view that major killer diseases can be protected by the scheduled vaccination. 94 percent (190) of the cases favoured the scheduled immunization. 99 percent (208) of the cases presented their children for scheduled immunization on regular basis. 99.58 percent was the coverage of scheduled vaccination of polio.*

Conclusion: *A large number of respondents expressed the view that major killer diseases can be protected by the scheduled vaccination. They also thought that campaigns of polio are part and parcel to root out the disease. Since most of them had favoured the scheduled vaccination, as a result, they kept on bringing their children for vaccination. Ambiguities about the polio disease are the greatest impediment to eliminate the disease. This is the reason behind unproductive NID Polio coverage.*

Keywords: *Oral Polio virus vaccine, routine immunization, Polio, vaccination*

*** Corresponding author:**

Dr. Hamza Shabbir,

House Officer, Allied Hospital, Faisalabad

QR code

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INTRODUCTION:

The process in which resistance against disease is attained is termed as Immunization [1]. This process can either be active or passive. Individual establishes immunity after immunization or infection [2]. In passive immunity, the produced antibodies in animals or humans or carried to another organism for the sake of safety against the diseases [3]. Resistance level by a group of people to a disease is known as herd community [4]. WHO extended its program of immunization in 1978. By administering active immunization in children, they can be protected against Measles, Tuberculosis, Pneumonia/Meningitis, Polio, influenza infection, Diphtheria, Hepatitis B, Tetanus, and Pertussis. WHO has conducted mobile vaccination programs, fixed centres and outreach teams [5].

Children who are aged five years or younger than this are prone to 27 percent of deaths caused by vaccine preventable diseases [6]. 50 percent of overall mortality is enhanced by 15 percent under five years aged children's death in Pakistan, which is ten percent in advanced nations [7]. Recent rate of mortality is 86/1000 live births amongst the children under the age of 05 years [8]. By and large, 86 percent is the coverage of immunization [9, 10].

Polio cases are of poignant significance. In Pakistan, reporting of 198 cases was confirmed in the year 2014, which are significantly higher than in any other part of this earth planet [11]. The threat of embargo is looming resultantly. This study was aimed to identify the existing challenges of Polio and suggest the measures to be taken in order to root out Polio cases in children.

SUBJECTS AND METHODS:

The place of this cross-sectional study was the carried out at Mayo Hospital, Lahore (Paediatrics Department) from April 16, 2016 – 18th May, 2017. Non-probability convenience was the sampling used to conduct it. WHO sample size software required the least size of sample i.e. 196. By and large, 86 percent is the coverage of scheduled immunization [9, 10]. 95 percent was the confidence interval. 0.05 was the requirement of absolute precision. Mothers who were on a scheduled immunization and were accompanying with children under the age of 05 years were the part of this study. Women having linguistics issues, other than local region, the ones with critically sick child were dropped from the study.

Principal of the Medical College and the Medical Superintendent of the Hospital granted the permission. Mothers of the children gave informed consent. Mothers and children were remained anonymous and confidential throughout the study. All the rights such as negation to reply to any question or willing discontinuation from the study by the participants were also granted. Preparation of a questionnaire was ensured to be in an easy, local and understandable writing. Faculty members and trained students interviewed the respondents. Solution of necessary queries was ensured on the spot.

SPSS was used to analyse the data. Security of data was maintained and access was only granted to the respective researchers. Measurement of frequencies was carried out for independent and categorical variables such as details of vaccination, occupation, socioeconomic status, and education of parents. Dependent variable includes practice of mothers on routine immunization, knowledge and attitude. These were manifested in terms of percentage and frequencies.

RESULTS:

For BCG, Children's vaccination was carried out by 209 mothers (99 percent). For measles, 86 percent (172 cases) vaccination was done as shown in Figure.1. The most rampant reason (95 percent) for completion of vaccination was "Mandatory for child health". The most prevailing reason for incomplete vaccination was missing of the card of vaccination (33 percent) as in Table 3. Misconception about the polio campaigns was the most common reason to refuse the polio teams (22 percent) as shown in Figure.2.99. Fifty eight percent was the coverage of scheduled vaccination of polio. National Immunization Day polio vaccination was recorded as 87 percent. Drop out percentage of children from scheduled immunization was noted as 17.7 percent.

96 percent (202) of the respondents expressed the view that major killer diseases can be protected by the scheduled vaccination. Elimination of polio was mandatory according to 201 respondents (96 percent). It was suggested by 181 respondents (86 percent) that vaccine effectiveness can be maintained by cold chain. 94 percent (190) of the cases favoured the scheduled immunization. 99 percent (208) of the cases presented their children for scheduled immunization on regular basis. Child immunization was executed by 199 (95 percent) cases since birth. Detailed outcomes can be analysed in Table I, II, III, IV and V.

Table – I: Basic demographic profile (210)

Characteristic		Number	Percentage
Socioeconomic status (206)	< Rs. 10,000/m	2	0.9
	Rs. 10,001 to 20,000/m	23	11.17
	>Rs. 20,000/m	181	88
Education of father (208)	No education	6	
	Middle	2	
	High School	1	99
	Graduation	181	87
Education of mother (208)	No education	1	36
	Middle	8	4
	High School	49	23
	Graduation	138	66
Occupation of father (207)	Self-employed	23	11
	Job	175	85
	Other	9	4
Occupation of mother (209)	House wife	190	91
	Self employed	3	
	Job	16	8

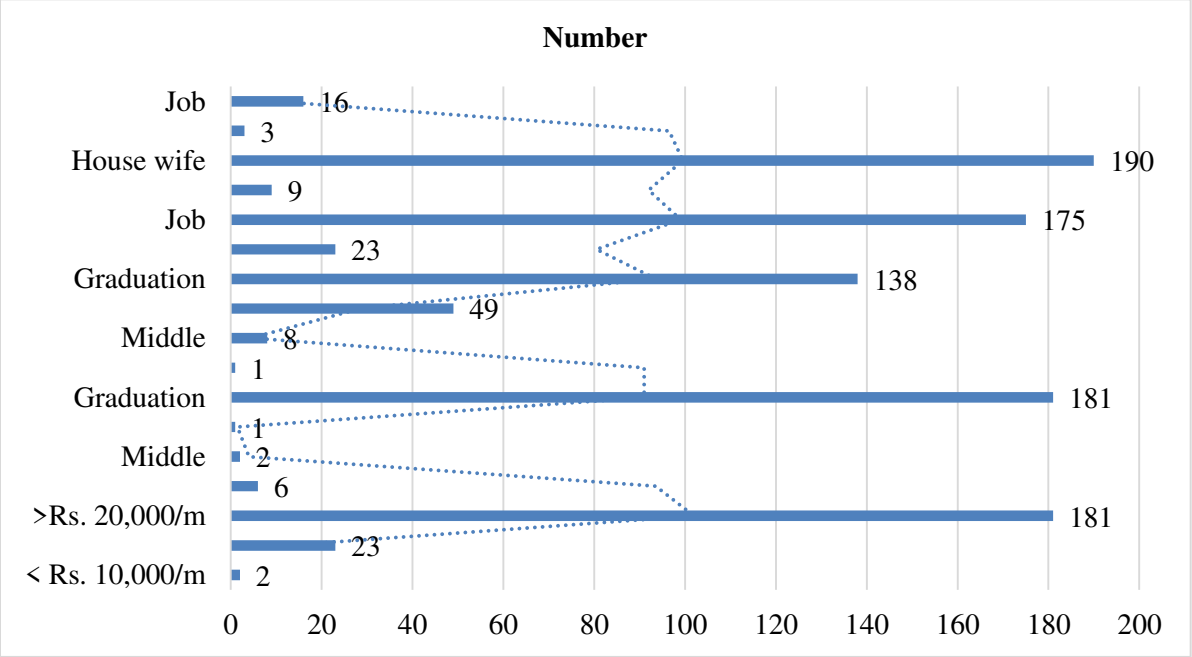


Table – II: KAP of mothers on routine immunization (210)

KAP		Frequency	Percentage
Who gave knowledge on immunization? (205)	Family Member	158	56
	Neighbor	5	2
	Health Worker	16	6
	News Paper	30	10
	TV	30	2
	Radio	8	3
Routine immunization protects child from Major killer diseases? (206)	Yes	202	96
	No	4	2
Polio campaigns necessary for polio Eradication? (205)	Yes	181	86
	No	21	10
Proper cold chain necessary for vaccines? (202)	Yes	70	30
	No	136	65
Vitamin given during routine immunization? (206)	Yes	190	90
	No	12	6

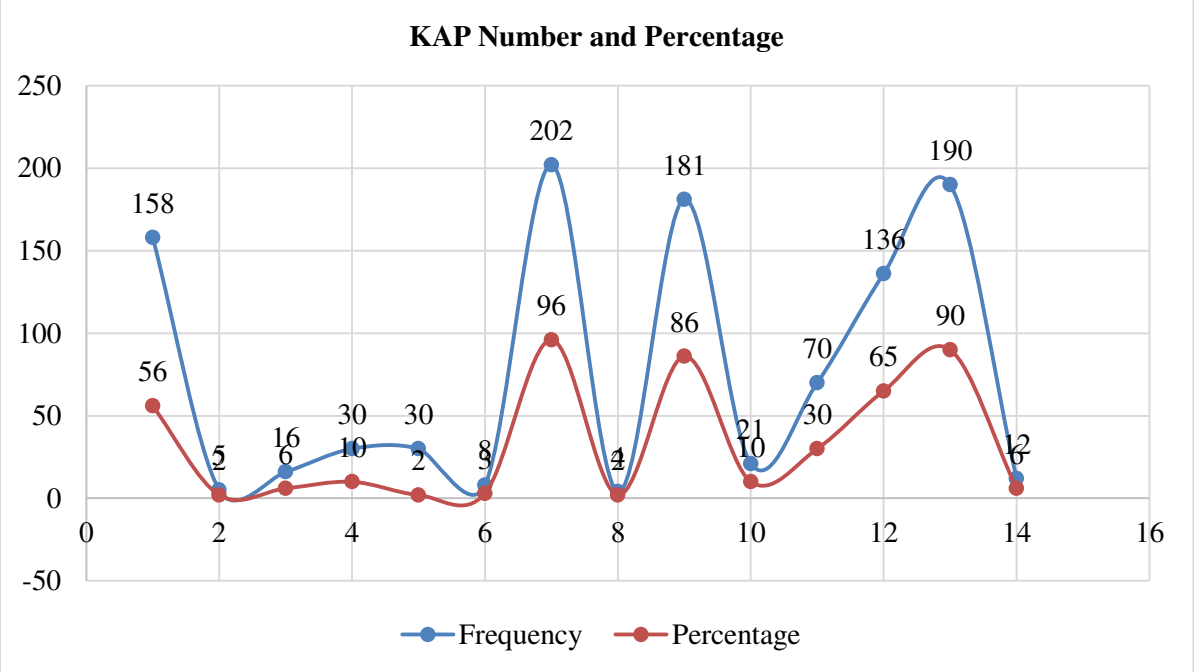


Table – III: Reasons for complete/ incomplete vaccination (210)

Reasons		Number	Percent
Complete vaccination, (201)	Mandatory for child health	199	99
	Mandatory for school registration	35	17
	Mandatory for international travel	4	2
Incomplete vaccination, (9)	Lack of information	2	22
	Missing vaccination card	3	33
	Fever	1	11
	Unclear immunization schedule	2	22
	Other	2	22

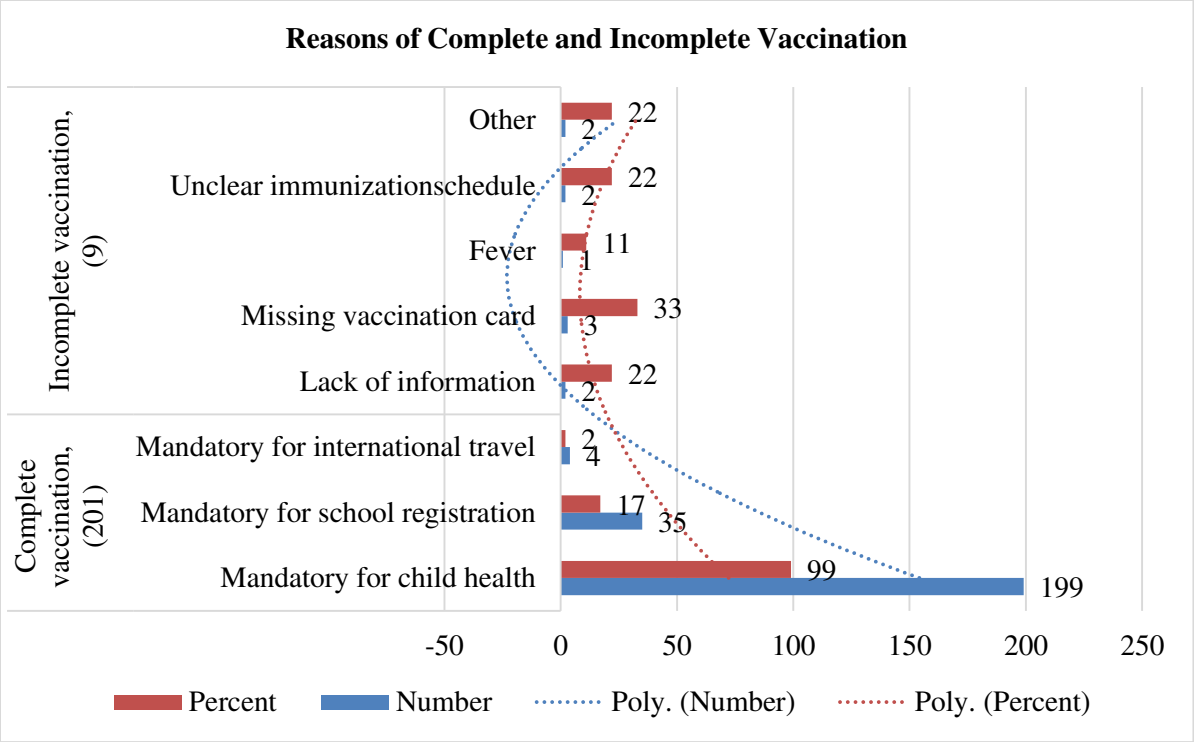


Table – IV: Vaccination status of children (210)

Vaccination Status	Number	Vaccinated Number	Percentage
BCG Vaccination	210	209	99
Routine Polio Vaccination	209	208	99
Routine Pentavalent	205	198	97
VACC Pneumococcal	202	194	96
VACC Measles	199	172	86
VACC NID Polio	203	178	88

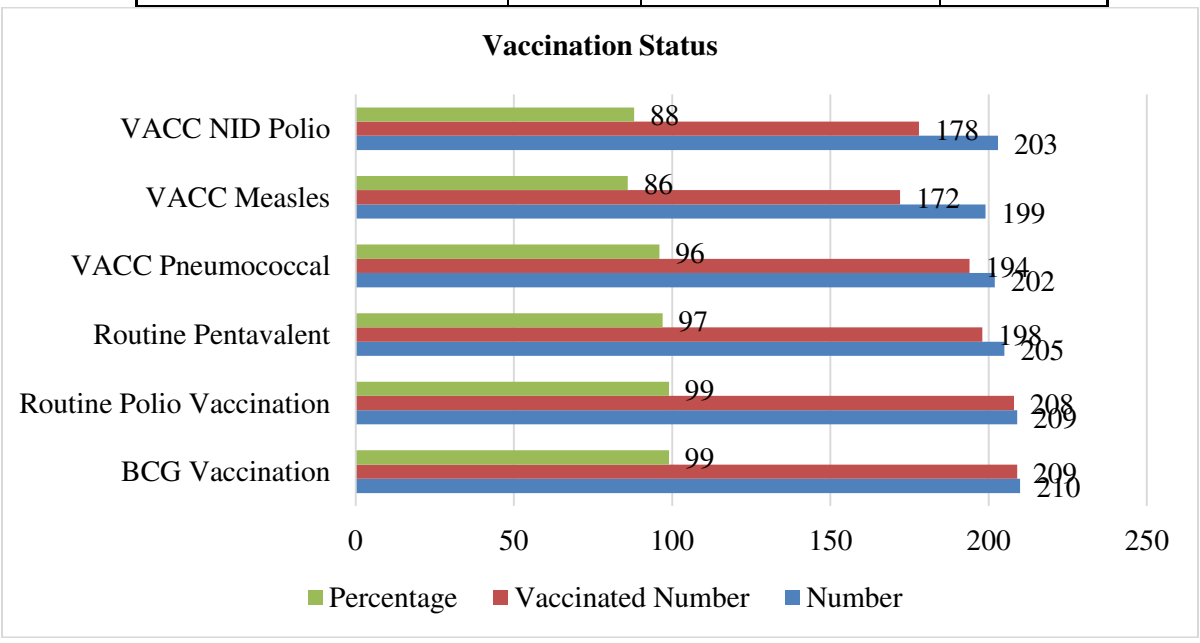
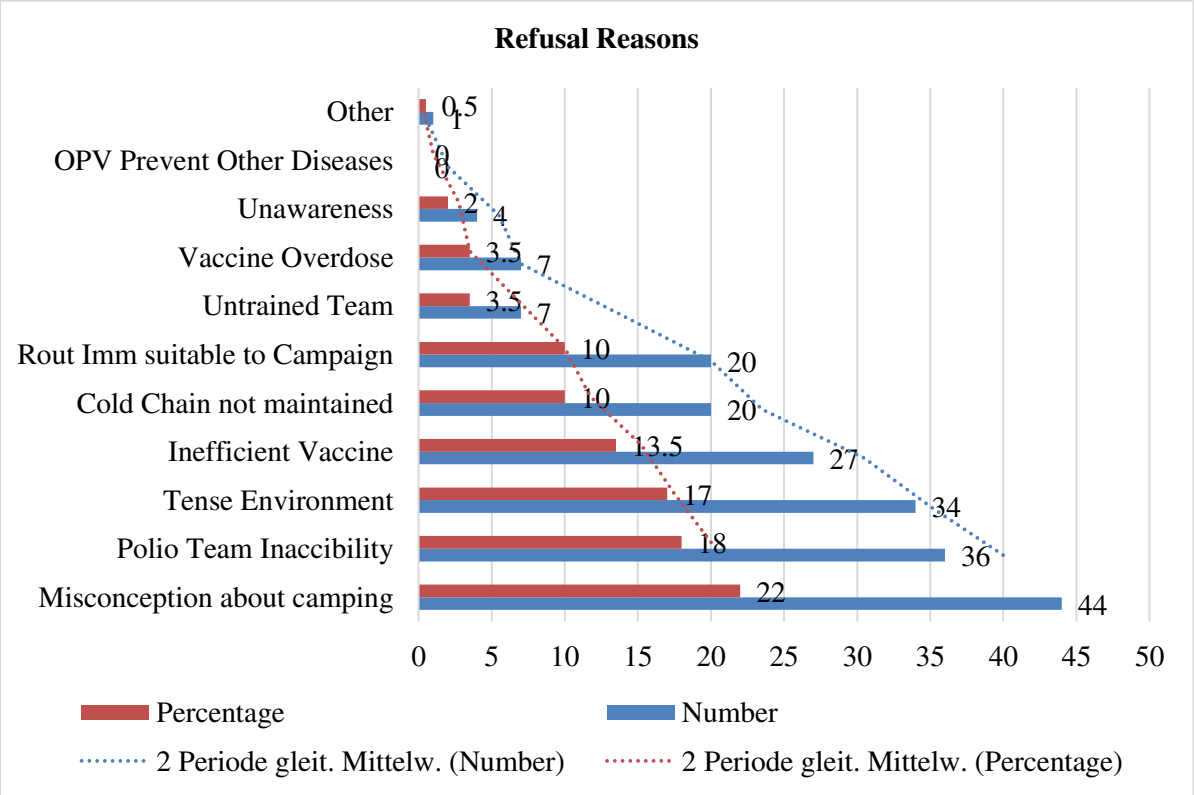


Table – V: Refusal to polio teams (210)

Refusal Reason	Number	Percentage
Misconception about camping	44	22
Polio Team Inaccessibility	36	18
Tense Environment	34	17
Inefficient Vaccine	27	13.5
Cold Chain not maintained	20	10
Rout Imm suitable to Campaign	20	10
Untrained Team	7	3.5
Vaccine Overdose	7	3.5
Unawareness	4	2
OPV Prevent Other Diseases	0	0
Other	1	0.5



DISCUSSION:

The knowledge, the practices and the attitudes of parents of children determine the successful completion of vaccination programs. The decisions of parents in terms of their compliance with immunization campaigns are of significant value in minimizing the anomalies in immunization process. In our study findings, we observed 23 percent of the mothers were high school graduated; complete graduation was recorded in 66 percent of the mothers. Formal education was not acquired by six percent of the mothers. Yousif et al in Saudi Arabia [12] observed in his study that 30 percent of the mothers were high school graduated, graduation of mothers was observed in 56 percent of the cases. Formal education was not acquired by 4.5 percent of the mothers.

Our study demonstrated that 88 percent of the participants have more than Rs.20, 000 household incomes per month. Rs.10, 000 -20,000/month as household income was reported by 11 percent and Rs.10, 000 per month was reported by 0.9 percent of the respondents. However, a Karachi based study reported some contrasting results in this regard [13]. According to this study, household income less than

Rs.4, 000/m was reported by 67 percent of the cases. Rs.4,000 – 10,000 /per month was seen in 28 percent of the respondents and more than Rs.10, 000 per month was reported by only 5 percent of the cases. This massive gap between these two Karachi based studies indicates numerous socioeconomic factors responsible for it.

In our study, housewife's mothers were 91 percent of the total while 8 percent were working mothers. In a Bangladeshi study on the mothers who had completed immunization, housewife's mothers were 98 percent of the total while 2 percent were working mothers [14]. These two studies in two Muslims countries have almost similar results.

In case of our study, 99 percent (208) of the cases presented their children for scheduled immunization on regular basis. Ninety nine percent of the mothers were of the view that immunization was mandatory for the health of child. Seventeen percent thought its necessity for the registration of school while two percent considered its importance for international visits. A Nigerian study reported that ninety percent of the mothers thought that vaccine prevents from major diseases. Awareness about the advantages of vaccine was seen in 78 percent of the mothers.
In the study at hand, 99 percent was EPI vaccination coverage for BCG, 99 percent scheduled polio, 97 percent Pentavalent, 86 percent measles, 96 percent Pneumococcal and 88 percent was NID Polio. However, a Nigerian study displayed 44 percent oral polio, 93 percent BCG coverage, 86 percent measles and 80-88 percent Pentavalent [16]. An Iraqi study reported 56 percent complete immunization coverage [17].

Prominent causes for childhood morbidity and mortality are EPI target diseases in the third world countries [18]. Reported EPI coverage in Pakistan is less than herd immunity threshold [18-20]. Knowledge and beliefs of parents are reported to have impacted the intake of immunization [21, 22]. In this study, 88 percent was oral Polio coverage on NID which was below than scheduled polio coverage i.e. 99.58 percent. In Nigerian study, 75 percent was the National immunization Polio coverage [23].

In our study, four percent of the cases did not comply with complete vaccination. Missing card was the cause the reason in 33 percent cases, lack of information were 22 percent cases, undefined vaccination schedule was in 22 percent of the cases, 11 percent have fever reason and miscellaneous reasons were found in 22 percent of the cases. In a Sudanese study, unvaccinated cases were due to factors such as children were too young in 38 percent of the cases, lack of awareness about the value of vaccination cases was 17 percent, child sickness in 17 percent, shortage of vaccination services was recorded in 13 percent of the cases [24].

An Indian study [25] has displayed numerous obstacles behind the cause of unvaccinated cases such as in 39 percent cases were of misconception, 25 percent cases thought unsuitability of immunization in the fever affected child. 08 percent were of the view that the child was unavailable due to sickness. Lack of information was reported in ten percent of the cases. 19 percent claimed certain reasons such as losing card, forgetfulness, parents' laziness etc [25].
In the study at hand, family members informed 56 percent of the mothers. 15 percent were kept informed by media, health workers informed in six percent of the cases. Only two percent were informed by neighbours. In a Saudi Arabian study, 78 percent were informed by doctors, 38 percent by TV, 22 percent by internet and 13 percent through newspapers [26].

Owing to religious beliefs, refusal was seen in 46 percent of the mothers. The harm of the vaccination was considered as an impediment in 38 percent cases. 16 percent were irritated by redundant campaigns. In an American study, 69 percent considered harmful effects of the immunization, 49 percent thought that it would overload the immune system [27].

Our study suggests that Polio immunization rate in NIDs was present less than that of scheduled Polio immunization. 99.58 percent was scheduled Polio immunization in comparison to 87 percent of NID polio vaccination. 22 percent of the mothers' refusal came because of campaigns related misconception. 18 percent complained about inaccessibility to Polio teams. The threat of tense environment came in 17 percent of the cases. Ineffectiveness of vaccination was seen in 13 percent cases. Ten percent mentioned that cold chain was not ensured. Ten percent were of the view that Polio campaigns and scheduled immunization were similar things. Untrained staff was the reason in three percent of the cases. In Nigerian village conducted study revealed that during NIDs, forty percent were not gone for vaccination, 56 percent considered the immunization cost too high to meet it [28]. Vaccination was thought to be unsafe in 39 percent cases [29]. Side effects of immunization were a concern for 98 percent cases. Vaccinators' attitude was the hindrance in 61 percent of the cases. A study by Olawepo revealed that 72 percent cases

refused vaccination due to cultural and religious issues [30]. Two percent cases narrated that vaccination is disallowed in their religion.

In our study, drop out percentage was 17.70. These figures can be reduced further by giving incentives to the vaccinators, by providing transport facilities to the remote areas children and by clearing the doubts amongst the people by reputed scholars, muftis and doctors.

CONCLUSION:

A large number of respondents expressed the view that major killer diseases can be protected by the scheduled vaccination. They also thought that campaigns of polio are part and parcel to root out the disease. Since most of them had favoured the scheduled vaccination, as a result, they kept on bringing their children for vaccination. Ambiguities about the polio disease are the greatest impediment to eliminate the disease. This is the reason behind unproductive NID Polio coverage. Electronic and print media should come up to clear the hazy and illogical concepts from the minds of the people.

REFERENCES:

1. Zahrani JA. KAP of mothers toward childhood vaccination. MAJMAAH J Health Sc 2013;1: 29-38.
2. Salmon DA, Moulton LH, Omer SB, DeHart MP, Stokley S, Halsey NA. Factors associated with refusal of childhood vaccines among parents of school-aged children: a case-control study. Arch Pediatr Adolesc Med 2005; 159:470-6.
3. Ekure EN, Esezobor CI, Mukhtar YM, Ojo OO, Bamiwuye OS, Adejuyigbe EA, et al. Community knowledge, attitude and practice of childhood immunization in Southwest Nigeria: Data from a Paediatric Association of Nigeria town hall meeting. Niger J Paed 2013;40: 106-111. Available from: http://www.mcser.org/journal/index.php/mjss/article/viewFile/5914/5690. Accessed on August,2015
4. Abdulraheem IS, Onajole AT, Jimoh AA, Oladipo AR. Reasons for incomplete vaccinations and factors for missed opportunities among rural Nigerian children. J Public Health Epidemiol 2011; 3:194-203. Available from: http://www.academicjournals.org/journal/JPHE/articlefull-text-pdf/31E14641343. Accessed on August,2015.
5. Olawepo RA, Fashagba I. Rural women and child immunization in west senatorial district of kogi state Nigeria. J Geography Earth Sci 2014; 2:79-96. Available from: http://jgesnet.com/journals/jges/Vol_2_No_1_June_2014/4.pdf. Accessed on August, 2015.
6. Rehman A. expanded program on immunization and its deterioration in Pakistan. Pak Paed J 2012; 36:51-2. Available from: http://www.pakmedinet.com/18722. Accessed on August,2015.
7. Pakistan Institute of Legislative Development and Transparency. Immunization in Pakistan. Pakistan: Pakistan Institute of Legislative Development and Transparency; 2010. Available from:http://www.pildat.org/publications/publication/publichealth/Immunizationinpakistan.pdf. Accessed on August, 2015.
8. Ahmad T. At 8.6%, Pakistan is amongst countries with highest infant mortality: UNICEF report. Pakistan: The Express Tribune; 2014. Available from:http://tribune.com.pk/story/665437/at-8-6-pakistanis-among-countries-with-highest-infant-mortalityunicef-report/. Accessed on August, 2015.
9. Loevinsohn B, Hong R, Gauri V. Will more inputs improve the delivering of health services? Analysis of district vaccination coverage in Pakistan. Int J Health Plann Manage 2006; 21:45-54.
10. Hong R, Banta JE. Effects of extra immunization efforts on routine immunization at district level in Pakistan. East Mediterr Health J 2005; 11:745-52.
11. Islam F. Resurgence of polio virus in Pakistan is a national emergency. Jinnah Institute. Available from: http://jinnah-institute.org/resurgence-of-polio-virus-in-pakistan-is-a-national-emergency/. Accessed on August, 2015.
12. Yousif MA, Albarraq AA, Abdallah MA, Elbur AI. Parents' knowledge and attitudes on childhood immunization, Taif, Saudi Arabia. J Vaccines Vaccin 2013; 5:215. Available from: http://www.omicsonline.org/open-access/parents-knowledge-and-attitudes-on-childhood-immunizationtaif-saudi-arabia-2157-7560.1000215.php?aid=24212.Accessed on August, 2015.
13. Nisar N, Mirza M, Qadri MH. Knowledge, attitude and practices of mothers regarding immunization of one-year old child at mawatch goth, kemari town, Karachi. Pak J Med Sci 2010; 26:183-6. Available from: http://www.pjms.com.pk/issues/janmar2010/abstract/article38.html. Accessed on August, 2015.
14. Adhikary M, Haque R, Tanira S. Determinants of child immunization under EPI in a rural setting of Bangladesh. J Dhaka Med Col 2013; 22:201-6. Available from: http://www.banglajol.info/index.php/JDMC/artic

le/viewFile/21543/14793. Accessed on August, 2015.
15. Dalhatu S, Ghani NB, Veysel B. A systematic review of factors affecting community participation towards Polio immunization in Nigeria. Mediterranean J Soc Sci 2015; 6:407-15. Available from:http://www.mcser.org/journal/index.php/mjss/article/viewFile /5914/5690/. Accessed on August,2015.
16. Odusanya OO, Alufohai EF, Meurice FP, Ahonkhai VI. Determinants of vaccination coverage in rural Nigeria. BMC Public Health 2008; 8:381. Available from: http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-8-381. Accessed on August, 2015.
17. Al-lela OQ, Bahari MB, Al-Qazaz HK, Salih MR, Jamshed SQ, El Kalmi RM. Are parent's knowledge and practice regarding immunization related to paediatrics immunization compliance. BMC Pediatr 2014; 14:20.
18. Encyclopaedia of the Nations. Pakistan Health. Available from: http://www.nationsencyclopedia.com/Asia-and-Oceania/Pakistan-HEALTH.html.Accessed on August, 2015.
19. World Health Organization. Making a Difference. Geneva: World Health Organization; 1999. Available from: http://www.who.int/whr/1999/en/. Accessed on September, 2015.
20. Bellamy C. The state of the world's Children. New York: United Nations Children's Fund; 2004. Available from: http://www.unicef.org/sowc04/files/SOWC_O4_eng.pdf. Accessed on August, 2015.
21. Rahman M, Islam MA, Mahalanabis D. Mothers' knowledge about vaccine preventable diseases
22. and immunization coverage in a population with high rate of illiteracy. J Trop Pediatr 1995; 41:376-8.
23. Wang YY, Wang Y, Zhang JX, Kang CY, Duan P. Status of mother's KAP on child immunization in minority areas, Guizhou Province. Beijing Da Xue Xue Bao 2007;39: 136-9.
24. Tabgo RN, Uleanya ND, Nwokoye IC, Eze JC, Omolowo IB. mother's Knowledge, perception and practice of childhood immunization in Enugu. Nigerian J Paed 2012; 39: 90-6.
25. Ibnouf AH, Borne HW, Maarse J. Factors influencing immunization coverage among children under five years of age in Khartoum State, Sudan. SA Fam Pract 2007; 49:14-9.
26. Manjunath U, Pareek RP. Maternal knowledge and perceptions about the routine immunization programme--a study in semi urban area in Rajasthan. Indian J Med Sci 2003; 57:158-63.
27. Stedman's Medical Dictionary. 23rd ed. Baltimore: Williams and Wilkins Company. p. 692.
28. Beneson AS. Control of communicable diseases in man. 13th ed. New York: American PH Association; 1981.
29. Park K. Park's textbook of Preventive and social medicine. 20th ed. Abalpur: Banarsidas bhanot; 2009. p. 97. Critchley M. Butterworth Medical Dictionary. 2nd ed. London: Butterworth; 2978. p. 870.
30. Government of Punjab. Expanded program on immunization. Lahore: Health Department; 2016. Available from: http://health.punjab.gov.pk/epi. Accessed on August, 2015. Routine Immunization in Children and Unsatisfactory Polio Campaigns.