



IMMUNIZATION STATUS;

MOTHER'S AWARENESS AND FACTORS AFFECTING CHILDREN IMMUNIZATION STATUS IN PESHAWAR, PAKISTAN

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ABSTRACT... Objectives: The overarching aim of this study was to determine mother's knowledge regarding children immunization status in Peshawar, Pakistan. **Study Design:** A cross sectional study. **Setting:** Tertiary care hospitals in Peshawar. **Method:** A sample of 150 mothers were recruited through convenience sampling. A self-administered questionnaire was used to collect the required data. Descriptive statistics were used to analyze and present the data in the form of figures, frequencies and percentages. **Results:** 20% of the mothers were completely unaware about the immunization status of their children. 38 % of the mothers had no proper knowledge regarding to administer the first dose of vaccination, 48% were ignorant the measles vaccination while 40% of them were ignorant to the side effects of immunization and 26 % didn't know about these effects. The mean knowledge score was calculated as 65.6 % while the remaining 34.4 % indicated the unawareness regarding immunization among mothers. **Conclusion:** The findings (34.4%) of the study show that awareness of the mothers regarding immunization is an important issue that needs to be addressed. There are certain factors that need to be worked out to get the maximum benefits and exposure of immunization status among children in Pakistan. Mother's knowledge and awareness about this matter should be taken in consideration at every level for better health outcomes of children.

Key words: Mothers, Awareness, Perception, Immunization Status, Factors, Children.

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INTRODUCTION

Immunization is a plucky mechanism to stamp out the overpowering preventable diseases and is projected to prevent around 2 to 3 million deaths every year. It is one of the most sensible health savings, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable people.¹ According to a demographic survey conducted in Pakistan, the children having age less than five years of age has the mortality rate of 89 per 1000 live birth. It gives a depiction that every 11th children born in Pakistan died before reaching their 5th birthday. These deaths are due to diseases which are preventable & treatable through simple, affordable intervention like vaccination.² Another literature shows that around 64% of deaths in children under age five are caused by infectious diseases which could be easily prevented by immunization.³

Every year more than 11 million children die under five years of age due to the preventable diseases across the sphere. Mostly deaths are reported in the developing countries. In Pakistan, the mortality rate which was 100 per 1000 live birth in 2010, decreased to the level of 89 per 1000 live birth till 2014⁴ expanded program of immunization was initiated by World Health Organization in 1974 in North America later on expanded to the entire world in 1977. It was formally started in 1978 in Pakistan, which was funded by World Health Organization till 2002. Afterwards it was given in the government control to run the Program by itself. Although this matter was taken sternly many times by the state yet some of societal problems and financial constraints affected the program to a larger extent.

The Government is taking some strong initiatives these days to immunize the children. Besides

routine immunization the government also running aggressive campaigns' of Polio days. During these campaigns some factors have been identified which affect the immunization. The Factors included are socio-economical factors, socio cultural factors, education level, access to health care facility and services, lack of antenatal care, physical status of mother and child, and environmental factors. All these factors have their own effects yet the most important factor that has been observed is the the parent involvement and their knowledge level that affect the immunization in all almost all the spheres⁵ Education is one of the obligatory instruments to augment the realization level of the parents specifically mothers towards immunization. It have been obvious of the literature that awareness movements and campaigns have a constructive impact on the practices and knowledge of mothers regarding the schedule and plan of immunization of their children.⁶

METHOD

A cross sectional study design was carried out to conduct the current study. A sample of 150 mothers was taken from tertiary care hospitals in Peshawar for the purpose to assess mothers' knowledge regarding immunization and the factors affecting the immunization status among children less than five years of age by following the non-probability convenience sampling. A self structured questionnaire was used to collect the required data. The questionnaire was developed exactly in English language and then it was translated in Urdu version. The data was analyzed and presented in the form of figures, frequencies and percentages. All the ethical principles and considerations were taken care during data collection and presentation. Participants were informed and Informed consent was taken for voluntary contribution. Non probability convenience sampling technique was followed for the reason. Data was analyzed and presented in the form of tables, frequencies and percentages. The following scale was used to summarize and interpret the percentages of the mean knowledge score.⁷

Excellent Knowledge = More than 85 %

Good Knowledge = 70%-85%
 Fair Knowledge = 60-70 %
 Poor Knowledge = Less than 60 %

RESULTS

Table-I summarizes all the demographic variables including age, number of children, education level, income level and marital status in terms of frequencies and percentages. Majority (84 %) of the mothers were house wives and around 32 % of these mothers were illiterate only 10 % of the mothers were educated till intermediate or with bachelor degree.

Age Distribution			
S. No	Age in Years	Frequency	Percentage
1	21-25	51	34 %
2	26-30	78	52 %
3	31-35	15	10 %
4	Above 35	06	04 %
Marital Status of the Mothers			
1	Married	147	98 %
2	Widow	03	02 %
Total Number of Children			
1	Single Child	27	18 %
2	2-3 Children	81	54 %
3	4-6 Children	36	24 %
4	7-10 Children	06	04 %
Mothers Have Children Less Than Five Years of Age			
1	One	36	24 %
2	Two	108	72 %
3	Three	06	04 %
Level of Education of Mothers			
1	Illiterate	48	32 %
2	Primary	39	26 %
3	Middle	33	22 %
4	Metric	15	10 %
5	Intermediate	09	06 %
6	Bachelor	06	04 %
Profession/Occupation of Mothers			
1	Housewives	126	84 %
2	School teachers	15	10 %
3	Tailors	09	06 %
Monthly Income of the Family in PKR			
1	1000-20000	15	10 %
2	21000-40000	102	68 %
3	41000 or Above	33	22 %

Table-I. Demographic Profile of the Mothers has children less than five years of age

Table-II highlights parents' knowledge regarding the immunization. 20 % of the mothers were having no awareness or any information about the immunization process. Apart from that majority of the mothers were having partial awareness about the proper schedule of administration. Around 40 % of the mothers were having inadequate knowledge about the side effects of immunization. All this statistics show that with the immunization campaigns it should be made compulsory to teach the mothers at the time of vaccine administration.

Do you have any information regarding immunization?		
Option	Frequency	Percentage
Yes	120	80 %
No	30	20 %
When does a child receive first vaccine soon after birth?		
On first day of child birth	93	62 %
At the age of first week	45	30 %
After one year	12	08 %
When a measles vaccine could be administered?		
At the age of 6 months	03	02 %
At the age of 8 months	24	16 %
At the age of nine months	78	52 %
At the age of 13 month	12	08 %
Don't know	33	21 %
Do you know about the abnormal or side effects of immunization?		
Yes	90	60 %
No	60	40 %
What are the usual side effects of immunization?		
Pain	81	54 %
Fever	30	20 %
Don't Know	39	26 %

Table-II. Mothers' Knowledge Regarding Immunization.

It has been shown in Table-III that maximum proportion of study population (60%) shows that they are living in joint family. To live in a joint could also be one of the reasons that the mothers don't give proper attention to the immunization status as of having many children in the family and they couldn't afford as all of the family members are dependent on one or two members of the whole family. Secondly 32% mothers can't decide by their own to immunize their children and they

must need to take permission from their husband. All the mother responded towards that they were having the health care facility as stated in table 3 named as BHUs, THQs, DHQ Hospitals, MNCH Centers and Private Health Care Centers.

Prime Decision Maker in Family		
Option	Frequency	Percentage
The Mother Herself	87	58 %
Husband	63	42 %
Family Structure		
Single	60	40 %
Joint	90	60 %
Facility Available Nearby Home		
Yes	141	94 %
No	09	06 %
Nearby Health Care Facility		
Basic Health Unit	42	28 %
Tehsil Head Quarter	51	34 %
District Head Quarter	06	04 %
MNCH Center	12	08 %
Private Health Care Facility	39	26 %
Distance of Health Care Facility from Home		
1-3 km	99	66 %
4-6 km	51	34 %
Means of Transportation		
At walk distance	09	06 %
Own convince	18	12 %
Public Transport	123	82 %
Permission from Home		
Yes	102	68 %
No	48	32 %
Religious Leader Permission for Child immunization		
Yes	132	88 %
No	18	12 %
Money Constraints		
Yes	120	80 %
No	30	20 %
Time Constraints/Not on Time		
Yes	117	78 %
No	33	22 %

Table-III. Attributable factors affecting the immunization status among children <5yrs.

66% of the mothers had to cover a distance of 1-3 kilometers and 34 % 4-6 kilometer from their home to health care facility to immunize their children. The maximum proportion (88%) of the mothers used public transport while only 4% of the population used their own convince to take their children to health care facility for immunization.

22 % of the mother responded as some time their children are getting deprivation of immunization by the money constraints and only 20% of the mother stated that some time they brought their children for immunization after the required time as mentioned on the cards.

Mostly mother were found to have positive perception regarding the immunization administration. Only a small proportion showed their concern towards pig fat in vaccine, conspiracy of the west, child paralysis and infertility among children as shown in Table-IV.

Pig Fat in Vaccine		
Option	Frequency	Percentage
Yes	09	06 %
No	141	94 %
Vaccination is a Running Conspiracy Program of West		
Yes	09	06 %
No	141	94 %
Vaccination as a Cause of Child Paralysis		
Yes	21	14 %
No	129	86 %
Vaccination Causes Infertility in Children		
Yes	24	16 %
No	126	84 %

Table-IV. Perceptions of mothers regarding Immunization

DISCUSSION

The findings of this study shows that mother’s visiting public sector tertiary care hospitals of Peshawar do not have adequate awareness regarding immunization. The findings of this study are consistent with previous studies from other countries such as Iraq, Libya and India which reported poor knowledge of parents as a barrier towards immunization.⁸⁻⁹ Similarly, another study reported by Bofarraj (2008) from Libya found mother knowledge and practices regarding immunization as incomplete and unsatisfactory.¹⁰ Similar results are reported by a study from Egypt.¹¹ Studies from Pakistan have also reported inadequate knowledge of mother as main barriers towards children immunization such as a study conducted by Gul & Khalil (2010) at Karachi, Pakistan which reported poor

knowledge of mother regarding immunization.¹² Likewise a study from Islamabad Pakistan also reported mother awareness as inadequate.¹³

The mothers wanted to be educated to immunize their children against the diseases that could be easily prevented. Many problems like permission from their home, low income status distance of the health care facility from their home and means of travel to the health care facility are the some of the factors to be worked on to make sure the 100 % immunization among children under five years of age. Furthermore, there were misperception in society regarding the running program of immunization like adulteration of Pig fat, a conspiracy network of west, cause of child paralysis and infertility. Therefore it is strongly suggested to clarify these misperceptions in order to make a clear way towards the maximum coverage of immunization. The literacy rate of Pakistan especially the females are not up to the mark as compare to the other developing countries of the subcontinent. Therefore it must be the prime focused to educate the females and to give healthy generation to the nation. The capacity building workshops and training of the community based health workers team should be encouraged on regular basis. Government and non-governments organization need to collaborate and remove the obstacles and misperception of people about immunization in response that which will directly enhance the immunization rate in children in country.

CONCLUSION




Overall findings suggest that almost 34.4 % of the mothers are unaware to immunize their children effectively. Female illiteracy and unawareness among mothers are the foremost factors that affect their children health extremely and significantly. Immunization program was initiated almost five decade ago but still the program is facing problems in Pakistan which directly or indirectly to some extent affect the immunization status of children in the country. Awareness and knowledge of mothers need to be updated in this regard to give a way to healthy generation and to overcome the ailments resulting in its dearth.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dildar Muhammad	Data collection, Data analysis drafting of the article and critical review.	
2	Sardar Ali	Data analysis and initial drafting.	
3	Ashfaq Ahmad	Data collection.	
4	Anum Fatima	Review of the article.	