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## KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING IMMUNIZATION AMONG FAMILY PRACTICE PATIENTS

Waris Qidwai, Syed Sohail Ali\*, Semi Ayub\*\*, Salma Ayub\*\*\*

### ABSTRACT

**Objective:** To determine the knowledge, attitude and practices about immunization among family practice patients.

**Design:** A questionnaire based survey.

**Patients and Method:** A questionnaire was developed in line with the study objectives. It was administered to patients visiting family physicians, after they were administered, informed consent and assurance with regards to confidentiality was provided. Epi-info and SPSS software was used for data management.

**Results:** A total of 97 patients were surveyed. The majority were men (59.8%) with a mean age of 29.69 years. Majority was unmarried (51.5%), with graduate and post-graduate education (73%), and in government and private service (48%). Vaccination was believed to prevent disease by 94%. Majority was informed about immunization by doctors and parents (94%). Media provided information about immunization to 62% of the patients. A 58% would recommend vaccination to others. Source about harmful effects of immunization was provided by friends and parents (80%). Hurdles against immunization were lack of education and lack of funds according to 43 (45%) and 29 (30%) respondents respectively. Education of population and mothers were ways to promote immunization according to 23 (24%) and 19 (20%) respondents respectively. Immunization exists against Hepatitis "C" and Malaria according to 35 (36%) and 10 (10%) respondents respectively. Immunization were received against polio, measles and hepatitis "B" by 86 (89%), 51 (53%) and 26 (27%) respondents respectively.

**Conclusion:** The study results have identified a strong need for education program for the masses about immunization, since major deficiencies have been identified. Further studies are strongly recommended along with debate on this important public health issue.

**Key words:** Immunization, Prevention, Communicable diseases, Infectious diseases, knowledge.

## INTRODUCTION

Prevention of diseases is the need of the day. The morbidity and mortality caused by diseases and rising costs of treating them requires us to focus more on their prevention. Immunization is among the most successful components of preventive medicine.

In the United States, where accurate recording of immunization and reporting of diseases is in place, most vaccine-preventable diseases are at or near record lows<sup>1</sup>.

Despite successes in control of vaccine preventable diseases in the developed world, diseases such as measles still require better control particularly in developing countries with limited resources<sup>2</sup>.

The immunization coverage in Pakistan needs improvement<sup>3,4</sup>. The reasons for inadequate immunization coverage in Pakistan are several. The issues of vaccine procurement is its storage, transport and administration are already known to contribute to inefficiency of the immunization program<sup>5</sup>. Factors such as knowledge, attitude and practices of parents and patients are also known to contribute to success or failure of immunization program<sup>6,7</sup>. Information about knowledge, attitude and practices about immunization is lacking in Pakistan.

Given this background, it was decided to conduct a pilot

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study among the family practice patients visiting a teaching hospital about knowledge, attitude and practices regarding immunization. It will help us identify the gaps which can later be confirmed by more elaborated community based studies. The ultimate aim would be to improve immunization coverage through education of our communities in areas found deficient.

## PATIENTS AND METHOD

After extensive literature search and input from colleagues, a questionnaire was developed that included demographic profile of the study population and questions in keeping with the study objectives. It was pre-tested prior to start of the final study.

The study was carried out at the Family Practice Center of Aga Khan University hospital in March 2004. Around twelve Family Physicians see over 150 out- patients at the Family Practice Center during a typical day.

Patients in the waiting area just prior to seeing a Family Physician were requested to participate in the study. They were informed about the details and the purpose of the study. Those who agreed to participate were asked to sign a written informed consent form after assurance with regards to confidentiality was provided to them.

The questionnaire was administered by the study investigators, following an understanding reached among them in order to ensure uniformity in data collection. The survey was conducted . After data were collected, it was entered into computer software. Epi-info and SPSS software were used for data management.

## RESULTS

A total of 97 patients were surveyed. The majority were men (59.8%) with a mean age of 29.69 years. Majority was single (51.5%) and with graduate and post-graduate education (73%). Majority was in government and private service (48%, Table I).

A majority believed that vaccination prevents disease (94%). Ninety seven percent respondents were in favor of vaccination. Among those having knowledge about immunization, a majority was informed by doctors and parents (94%).

**Table I:** Demographic profile of the respondents (n=97).

Parameter	Frequency (%)
<b>Gender:</b>	
Males	58 (59.8)
Females	39 (40.2)
<b>Mean age in years (Standard Deviation)</b>	
	29.69 (7.73)
<b>Marital Status</b>	
Single	50 (51.5)
Married	45 (46.4)
Divorced	01 (01)
Widow	01 (01)
<b>Educational Status</b>	
Primary	03 (3.1)
Secondary	05 (5.2)
Intermediate	18 (18.6)
Graduate	50 (51.5)
Post Graduate	21 (21.6)
<b>Occupation</b>	
Student	18 (18.6)
Unemployed	18 (18.6)
Self employed	14 (14.4)
Government Service	34 (35.1)
Private Service	13 (13.3)

**Table II-A:** Responses of study subjects about immunization (n=97).

Question	Number (Percent)
<b>Vaccination prevents disease?</b>	
Yes	91 (93.8)
No	03 (3.1)
Don't know	03 (3.1)
<b>Are you in favor of vaccination?</b>	
Yes	94 (96.9)
No	01 (1.0)
Don't know	02 (2.1)
<b>Is Vaccination harmful?</b>	
Yes	01 (1.0)
No	88 (90.8)
Don't know	08 (8.2)
<b>Can vaccination be harmful?</b>	
Yes	35 (36.1)
No	42 (43.3)
Don't know	20 (20.6)
<b>Vaccination is for all ages</b>	
Yes	70 (72.2)
No	23 (23.7)
Don't know	04 (4.1)
<b>Informed about vaccination : (51 subjects)</b>	
Yes	32 (62.7)
No	16 (31.4)
Don't know	03 (5.9)
<b>Read about vaccination in media: (97 subjects)</b>	
Yes	60 (61.9)
No	34 (35.1)
Don't know	03 (3.0)
<b>Seen television program about vaccination:</b>	
Yes	52 (53.6)
No	31 (32)
Don't know	14 (14.4)
<b>Will recommend vaccination to others:</b>	
Yes	56 (57.7)
No	10 (10.3)
Don't know	31 (32)

Media provided information about immunization to 62% of the patients. A 58% would recommend vaccination to others (Table II-A).

Source about harmful effects of immunization was provided by friends and parents to 80%. Fever and pain were harmful effects of immunization according to 23 (66%) and 16 (46%) respondents respectively. Hurdles against immunization were lack of education and lack of funds according to 43 (45%) and 29 (30%) respondents, respectively. Education of population and mothers were ways to promote immunization according to 23 (24%) and 19 (20%) respondents, respectively. Immunization exists against tuberculosis, polio and tetanus according to 92 (95%), 96 (99%) and 92 (95%) respondents, respectively. Immunization exists against hepatitis "C" and malaria were about 35 (36%) and 10 (10%) respondents, respectively (Table II-B).

**Table II-B:** Responses of study subjects about immunization (n=97).

S.No.	Question	Number (Percent)
1.	<b>Source about harmful effects of immunization:</b>	
	Friends	17 (49%)
	Parents	11 (31)
	Neighbours	07 (20)
2.	<b>Harmful effects of Immunization:</b>	
	Fever	23 (66)
	Pain	16 (46)
	Dianhea	13 (37)
	Rash	10 (29)
	Headache	07 (20)
3.	<b>Hurdles against Immunization:</b>	
	Lack of education	43 (45)
	Lack of funds	29 (30)
	Lack of awareness	11 (11)
	Lack of facilities	11 (11)
	Fear	01 (01)
	Don't know	02 (02)
4.	<b>How to promote Immunization:</b>	
	Education of population	23 (24)
	Education of mother	19 (20)
	Promotion through media	13 (19)
	Increasing literacy	17 (17)
	Increased funding	14 (14)
5.	<b>Immunization exists against:</b>	
	Tuberculosis	92 (95)
	Polio	96 (99)
	Tetanus	92 (95)
	Measles	90 (93)
	Mumps	22 (23)
	Rubella	20 (21)
	Hepatitis A	42 (43)
	Hepatitis B	53 (55)
	Hepatitis C	35 (36)
	Meningitis	13 (13)
	Typhoid	18 (19)
	Malaria	10 (10)

**Table III:** Immunization received by respondents and their children (n=97).

Immunization received against	Self Number (%)	Children Number (%)
Polio	86 (89)	41 (42)
Diphtheria	47 (48)	24 (25)
Measles	51 (53)	24 (25)
Tetanus	54 (56)	24 (25)
Whooping cough	24 (25)	13 (13)
Tuberculosis	76 (78)	31 (32)
Hepatitis B	26 (27)	12 (12)

Immunization were received against polio, measles and hepatitis "B" by 86 (89%), 51 (53%) and 26 (27%) respondents, respectively. The figures were 41 (42%), 24 (25%) and 12 (12%) respectively in terms of immunization of respondent's children against these diseases. (Table III).

## DISCUSSION

The results of the survey offer insight into the knowledge, attitude and practices with regards to immunization among the patients and the information and can be utilized to conduct larger community based survey in order to intervene and improve vaccination status of the population.

Over 90% of respondents were in favor of vaccination and believed that it prevents disease. This finding is in line with those reported earlier in the country in which a majority of respondents acknowledged the importance of immunization'. Despite this positive finding, it is disappointing when one notes that only about half the respondents were confident enough to recommend immunization to others.

It is particularly important to note that only a single respondent believes immunization is harmful while a significant 36% feel it can be so. This shows that the

respondents have a good understanding about potential side effects that can be caused by immunization. Concerns about immunization safety are widely prevalent<sup>10</sup>.

Concerns are prevalent regarding adult immunization<sup>10</sup>. In line with these concerns, it was disappointing to note that 24% respondents do not know about adult immunization. A need therefore exists to educate the population in this regard.

It is heartening to note that doctors are responsible for informing a majority of respondents about immunization but a need exists to work further in this area. There is a need to educate doctors in this area since they are found to be deficient in knowledge about immunization<sup>11</sup>. Parents are noted to be another source for providing information regarding immunization. This area also requires further strengthening.

The media is noted to be a very strong source for providing awareness among the respondents about immunization. There again exists a need for further improvement in this area. Television can be a good source to promote immunization and results of our study point out a need to further utilize this source for this purpose. The important role that media can play in promotion of immunization has been highlighted by earlier reports<sup>12</sup>.

Respondents were noted to be well informed about possible side effects of immunization that include fever and rash. It is to be noted that friends and parents, rather than physicians, are a source about side effects of immunization for these patients. Concerns regarding possible side effects from immunization and its adverse impact on immunization coverage have been reported earlier<sup>13</sup>.

Among the hurdles pointed out about immunization by the respondents include those such as lack of funds which are difficult to overcome in the near future but also those which can be successfully controlled such as lack of awareness and education about immunization. Such barriers have also been reported earlier<sup>14</sup>.

It should not be a surprise that the factors reported for promotion of immunization coverage by respondents include improving awareness and educating the masses and mothers and the provision of facilities for immunization.

These factors are already known to positively impact immunization coverage and therefore it is important to work on these lines in order to improve immunization coverage to a more satisfactory level among our population. The role of physician is also very important in promotion of immunization among the population<sup>15</sup>.

It was noted that a substantial number of respondents believed a vaccine existing for hepatitis "C" and for "malaria". There were also a small number of respondents who did not know about the existence of vaccines against tetanus and hepatitis "B". This highlights the need to have education program for the masses about immunization.

The immunization coverage against diseases such as tetanus and hepatitis "B" were reported by respondents to be very low for themselves and for their children. This highlights an alarming situation that requires urgent control measures. The cohort interviewed was well educated and better placed patients seeking medical care from a teaching hospital. The sample size was small and convenience sampling method was used for patient survey. It is because of these reasons that results of this survey cannot be generalized to the rest of the population.

Despite these short comings, it must be appreciated that a whole spectrum of patients from various backgrounds was included even though it was a biased sample.

## CONCLUSION

The study results have identified a strong need for education program for the masses about immunization, since major deficiencies have been identified. Further studies among the community are strongly recommended along with debate on this important public health issue.

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