

STUDY OF ASSOCIATION BETWEEN KNOWLEDGE, ATTITUDE AND PRACTICE WITH IMMUNIZATION STATUS

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Abstract

Background: Protection from diseases is one of the uttermost benefits that any country can offer to its people. It is certain that vaccines are an essential part of a health system, an effective tool for controlling diseases in many countries around the world, and the most cost-effective mechanism for morbidity and mortality prevention that permits people to better protect themselves from particular bacteria and viruses. In order to have the greatest protection against diseases, children should receive all their vaccinations within recommended intervals and at the appropriate age. Study of association between knowledge, attitude and practice with immunization status, to assess the knowledge of mothers regarding childhood vaccination during the first five years of life, to assess the attitude of mothers regarding childhood vaccination during the first five years of life, to assess the practice of mothers regarding childhood vaccination during the first five years of life. **Materials and Methods:** Study design- a cross sectional study. Study setting- department of Community medicine at tertiary care centre. Study population- the study population included all mothers who have one child or more. Sample size- 262. **Result:** The majority of the participants were aged 25–31 years (57%), 61% held a bachelor's degree, and 60.3% had children aged 2–5 years. The knowledge score was 86%, 2492 out of a total score of 2893; the attitude score was 89.1%, 973 out of a total score of 1052; the practice score was 80.5%, 1059 out of a total score of 1315. There was no evidence of an association ($p > 0.05$) between the knowledge, attitudes, and practice of mothers regarding vaccination and their sociodemographic aspects. **Conclusion:** Mothers in our sample were knowledgeable, with positive attitudes regarding vaccination, and they demonstrated good practices. This might be explained by the higher educational level of our sample.

INTRODUCTION

Protection from diseases is one of the uttermost benefits that any country can offer to its people.^[1] It is certain that vaccines are an essential part of a health system,^[2] an effective tool for controlling diseases in many countries around the world,^[3] and the most cost-effective mechanism for morbidity and mortality prevention that permits people to better protect themselves from particular bacteria and viruses.^[4,5,6,7,8]

In order to have the greatest protection against diseases, children should receive all their vaccinations within recommended intervals and at the appropriate age.^[9,10] Vaccinating a child with appropriate vaccines would significantly reduce the

costs of disease treatment and rates of disease and, therefore, improve the quality of the child's life.^[11]

The level of knowledge parents have regarding child vaccination and their attitudes towards vaccination may influence their practice.^[12] Major obstacles towards the high coverage of children include a lack of knowledge or information on vaccination, low levels of awareness or negative attitudes regarding vaccination, and misperceptions or rumors regarding the safety of vaccination.^[13,14,15]

The common factors associated with higher knowledge and attitude were the mother's age, occupation, level of education,^[5] and nature of the family.^[5] The most common sources of knowledge about immunization were institutions (49.5%) and internet sources (21.3%).^[1,16] Therefore, the knowledge, attitude, and practice of mothers concerning child vaccination involve a

multidimensional relation that is surrounded by many variables.

Aim and Objectives

- To assess the knowledge of mothers regarding childhood vaccination during the first five years of life;
- To assess the attitude of mothers regarding childhood vaccination during the first five years of life;
- To assess the practice of mothers regarding childhood vaccination during the first five years of life.

MATERIALS AND METHODS

Study Design

Cross Sectional study

Study Setting

Department of Community Medicine at tertiary care centre

Study Population

The study population included all mother with one or more child.

Inclusion Criteria

- mothers who have one child or more
- Children aged from birth to five years old.

Exclusion Criteria

- Not willing to participate in study
- Incomplete Questioners

Approval for the Study

Written approval from Institutional Ethics committee was obtained beforehand. Written

approval of Community medicine department and related department was obtained. After obtaining informed verbal consent from all mothers such study participants were included in the study.

Sample Size: 425

Sampling Technique

Using purposive sampling technique a total of 262 mothers included in the study.

Methods of Data Collection and Questionnaire

Predesigned and pretested questionnaire was used to record the necessary information. Questionnaires included general information, such as age, sex, residential address, Education, occupation, immunization status etc.

Study Procedure

This study was conducted in Community Medicine Department of tertiary care center, in mothers who satisfied the above said inclusion and exclusion criteria and this study conducted from

Data Entry and Analysis

The data were entered in Microsoft Excel and data analysis was done by using SPSS demo version no 21 for windows. The analysis was performed by using percentages in frequency tables, Correlation of with various variable $p < 0.05$ was considered as level of significance using the Chi-square test.

RESULTS

The present Cross-sectional study was done among 262 mothers.

Table 1: Distributions according to the sociodemographic characteristics of the study's participants.

Variables	Frequency	Percentage
From 18 to 25	56	21.4%
From 25 to less than 31	57	21.8%
From 31 to less than 35	50	19.1%
35 or older	99	37.8%
Mother's educational level	Literate 5	1.9%
	Primary school 3	1.1%
	Secondary school 4	1.5%
	High school 88	33.6%
	Bachelor or higher 162	61.8%
Job status	Student 42	16.0%
	Employee 72	27.5%
	Housewife 148	56.5%
No of children	One 85	32.4%
	Two to three 90	34.4%
	More than three 87	33.2%

A total of 262 participants (mothers) were included in this study. The majority of the participants (149; 56.9%) were 31 years or older. Approximately 61.8% (162 mothers) had a bachelor's degree or a higher academic qualification; 56.5% (148) of the mothers were housewives. Most of the mothers (90; 34.4%) had 2–3 children, 33.2% had more than three children, and 32.4% had only one child.

Table 2: Assessment of the mothers' knowledge of childhood vaccination

Variable	Frequency	Percentage
Has your child received the mandatory vaccines?	Yes 258	98.5%
	No 4	1.5%

Is vaccination important for children from the first day of birth?	Yes 258 No 4	98.5% 1.5%
Does vaccination prevent infectious diseases?	Yes 236 No 26	90.1% 9.9%
Does vaccination reduce death and disability?	Yes 246 No 16	93.9% 6.1%
Can vaccination keep children healthy?	Yes 255 No 7	97.3% 2.7%

A total of 98.5% of the mothers ensured that their children received the obligatory vaccines. Moreover, the majority of mothers (98.5%) deemed vaccination to be very important for children from birth. In addition, 90.1% of them stated that vaccinations prevent infectious disease; decrease the rate of mortality and disabilities (93.9%) and maintain child health (97.3%).

Table 3: Assessment of the mothers' attitudes towards childhood vaccination.

Variable	Frequency	Percentage
Do you think vaccinations are beneficial?	Yes 249 No 13	95% 5%
Do you feel that it is safe to have your child vaccinated?	Yes 218 No 44	83.2% 16.8%
Do you support the compulsory vaccination programs designed by the Ministry of Health?	Yes 245 No 17	93.5% 6.5%
Do you advise your relatives and family to vaccinate their children?	Yes 257 No 5	98.1% 1.9%

The participating mothers in the study showed positive attitudes towards childhood vaccination, as the score of the participants in the subscale of attitude was 973 (above 80%) of the total score (1052), which means that the participating mothers had a positive attitude towards childhood vaccination. In total, 95.0% of the participating mothers think that vaccinations are beneficial; 83.2% of the participating mothers feel that it is safe to have their child vaccinated; 93.5% of the participating mothers support the compulsory vaccination programs designed by the Ministry of Health; 98.1% of the participating mothers advise their relatives and family to vaccinate their children.

Table 4: Assessment of the mothers' practice in relation to childhood vaccination (N = 262).

Variable	Frequency	Percentage
Has your child received the mandatory childhood vaccines?	Yes 258 No 4	98.5% 1.5%
Do you follow the compulsory vaccination programs listed in the vaccination schedule?	Yes 245 No 17	93.5% 6.5%
Do you look for other vaccines available to your child?	Yes 217 No 45	82.8% 17.2%
Do you use pain relievers to relieve swelling and pain after having your child vaccinated?	Yes 231 No 31	88.3% 11.7%

The participating mothers in the study showed good practice in relation to childhood vaccination, as the score of the participants in the subscale of practice was 1059 (from 50% to 75%) of the total score (1315), which means that the participating mothers conducted good practice in relation to childhood vaccination.

Table 5: Association between KAP and the demographics of the participating mothers

Variables	KAP		P value
	Good	poor	
From 18 to 25	56	0	0.172
From 25 to less than 31	57	0	
From 31 to less than 35	50	0	
35 or older	95	3	
Mother's educational level	Literate 5 Primary school 3 Secondary school 4 High school 88 Bachelor or higher 162	0 0 0 1 2	0.997
Job status	Student 42 Employee 72 Housewife 148	0 2 1	0.291
No of children	One 85 Two to three 90 More than three 87	1 1 1	0.999

The p-value of the test was more than 0.05; thus, we accepted the null hypothesis and rejected the alternative one, denoting that there was not a significant difference between KAP and the demographics of the participating mothers with a level of confidence of 95%.

DISCUSSION

In current study The majority of the participants (149; 56.9%) were 31 years or older. Approximately 61.8% (162 mothers) had a bachelor's degree or a higher academic qualification; 56.5% (148) of the mothers were housewives. Most of the mothers (90; 34.4%) had 2–3 children, 33.2% had more than three children, and 32.4% had only one child. similar result reported by Joseph, J. et al.^[10]

In this study A total of 98.5% of the mothers ensured that their children received the obligatory vaccines. Moreover, the majority of mothers (98.5%) deemed vaccination to be very important for children from birth. In addition, 90.1% of them stated that vaccinations prevent infectious disease; decrease the rate of mortality and disabilities (93.9%) and maintain child health (97.3%) similar result reported by Joseph, J. et al.^[10]

In present study In total, 95.0% of the participating mothers think that vaccinations are beneficial; 83.2% of the participating mothers feel that it is safe to have their child vaccinated; 93.5% of the participating mothers support the compulsory vaccination programs designed by the Ministry of Health; 98.1% of the participating mothers advise their relatives and family to vaccinate their children. similar observation found in the study of Ramadan, H.A.^[14]

In current study The participating mothers in the study showed good practice in relation to childhood vaccination, as the score of the participants in the subscale of practice was 1059 (from 50% to 75%) of the total score (1315), which means that the participating mothers conducted good practice in relation to childhood vaccination. similar result found in the study of Mphaka, M. R. et al.^[7]

The p-value of the test was more than 0.05; thus, we accepted the null hypothesis and rejected the alternative one, denoting that there was not a significant difference between KAP and the demographics of the participating mothers with a level of confidence of 95%. Similar result reported by Joseph, J. et al.^[10]

CONCLUSION

Most mothers in the study had a positive attitude and conducted good practice regarding childhood vaccination. Moreover, the overall knowledge, attitudes, and practice were good among most of the mothers at 98.9%. The current study indicates that there was no association between the participating mothers' knowledge, attitudes, and practice regarding vaccination and their sociodemographic aspects.

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