

Assessing Mothers Vaccination Practices Attitudes and Knowledge: A Cross-Sectional Study

Mothers
Vaccination
Practices
Attitudes and
Knowledge

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ABSTRACT

Objective: To access the knowledge, attitude, and practices regarding childhood vaccinations among mothers will be evaluated, as well as factors that determine vaccination compliance and skepticism.

Study Design: A Cross-sectional Study

Place and Duration of Study: This study was conducted at the Department of Pediatrics, Peoples university of Medical Health Sciences NawabShah from February 2023 to July 2023.

Methods: A quantitative approach of descriptive cross-sectional design was used to sample 150 mothers with children less than five years of age. To assess the levels of vaccination knowledge, attitudes and practices an interviewer administered structured questionnaire was used. Quantitative data was described by basic descriptive statistics, and associations were tested with the chi square test. The findings were described using standard deviation (SD) and p values.

Results: Out of 150 participants, 120 received vaccines strictly according to the schedule while 30 patients claimed that they received their vaccines later or fewer doses. Knowledge score of mothers was 7.8 (\pm 1.2). A general positive attitude towards vaccination was depicted in 85% of the respondents. A very close relationship was established between knowledge scores and vaccination compliance ($p = 0.02$). Lower scores were significantly done by those reporting hesitancy ($p < 0.05$).

Conclusion: This study shows that although the majority of mothers' adhere to vaccination schedules there is still a lack of knowledge. Awareness campaign, learning through knowledge or health interventions could help remove the ignorance and help people follow the immunization programs.

Key Words: Vaccination, mothers, attitudes, immunizations, immunization practices.

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INTRODUCTION

Immunization is an important and cheap health measure that has led to a decline of many communicable diseases for example measles, diphtheria and poliomyelitis across the globe. According to an approximate calculation, vaccinating helps save between 2 and 3 million children's lives every year, which proves the significance of the activity for Children's health worldwide^[1].

However, concerning low optimal vaccine coverage rate is still an incongruity; moreover, it is still a concern

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even in the current face of vaccine manufacturing and accessibility improvements as well as vaccines' efficiency that has been proven^[2]. These gaps lead to outbreaks of certain diseases which are immunity preventable provided immunization has been availed in right prophylactic measure^[3]. First of all, parents and especially mothers can greatly influence the vaccination of their children as the latter largely rely on their mother to take them to the medical facility. Maternal KAP is determined as a reasonable predictor of vaccine acceptance and compliance with immunization timetables^[4]. The choice to vaccinate a child can be influenced by; knowledge and perception about vaccines, cultural beliefs, access to health services and attitudes towards doctors^[5]. Higher educated mothers protect their children better by fully vaccinating them, whereas minority groups or women with misconception about vaccines. oracle cite:^[6]The reluctance or refusal to accept vaccines where they are available is known as vaccine hesitancy and has gained importance in recent years^[4]. There are some unfounded information especially through social media influencing people's attitude toward taking the vaccines, safety and possible side effects of vaccines have remained a cause for

hesitancy across several groups of people^[7]. This study aims at establishing the level of knowledge of mothers, and their attitudes towards immunization with the view to enhancing compliance and reducing vaccine refusal. The study seeks to establish the level of knowledge, attitude and practice among mothers on childhood vaccination. In their study, the authors aim at understanding what may cause hesitancy or adherence to vaccination with a view of informing the healthcare stakeholders on some essential considerations towards the augmentation of vaccination compliance and reduction of vaccination-preventable diseases.

METHODS

This cross sectional study was carried out for 6 months in the pediatric outpatient clinic of a tertiary care hospital. To do this, 150 mothers who had at least one child under five years of age were consented into the study. In the present study, the population sample was recruited through convenience sampling. A pilot tested, formally structured questionnaire was used to elicit information regarding vaccination practices, beliefs and information. All participants completed the research survey voluntarily and available evidence was used to gain their informed consent.

Data Collection: Information was obtained through individual interviews with/by health care professionals who were provided with standard training. The questionnaire comprised three sections: knowledge about vaccination, their perceptions of vaccines and general beliefs of people, especially the scientific community regarding vaccines. Questions posed to mothers included: Which shots have been given?, Was the child given on time as scheduled?, If not, why?, What do you know about the risks and benefits of giving shots at the right time?.

Statistical Analysis: Data were entered into and analysed using Statistical Package for the Social Scientists version 24.0. Quantitative measures of central tendency were computed for descriptive purposes with demographic data and responses. To establish whether there is correlation in knowledge, attitude and practice of vaccination among these mothers, chi-square tests were conducted. Statistical analysis used depended on study design, and significance level was set at alpha=0.05.

RESULTS

Among the 150 mothers interviewed, 80% stated that they strictly followed the recommended vaccination programmes for their children while the rest, a 20% had either delayed or not vaccinated their children at all. The mean knowledge score with regard to HIV/AIDS was 7.8 out of 10 (SD ± 1.2) among the mothers. We found a correlation between increased knowledge scores and compliance with vaccination schedules (X² = 6.278, p = 0.02). All the perceived risks and benefits

did not significantly affect the level of vaccination, except perceived susceptibility and attitudes where women with positive attitudes toward vaccination had a significantly higher probability of taking their children for the vaccine at the rightful time (p < 0.05).

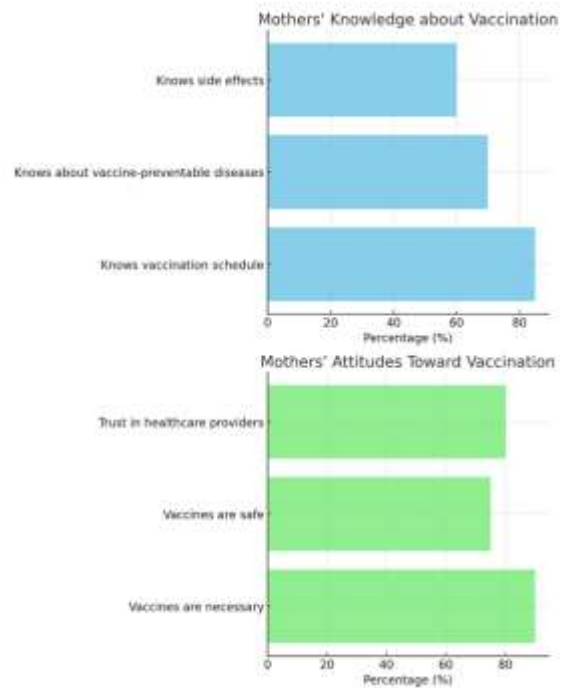


Figure No. 1: Knowledge about vaccination with percentage

Table No. 1: Demographic Characteristics of Participants

| Characteristics | Category | Frequency | % |
|----------------------|----------|-----------|------|
| Age (years) | 18-25 | 35 | 23.3 |
| Education Level | Primary | 60 | 40.0 |
| Socioeconomic Status | Low | 45 | 30.0 |

Table No. 2: Mothers' Knowledge about Vaccination

| Knowledge Items | Yes (%) | No (%) |
|--|---------|--------|
| Knows vaccination schedule | 85 | 15 |
| Knows about vaccine-preventable diseases | 70 | 30 |
| Knows side effects | 60 | 40 |

Table No. 3: Mothers' Attitudes Toward Vaccination

| Attitude Items | Agree (%) | Disagree (%) |
|-------------------------------|-----------|--------------|
| Vaccines are necessary | 90 | 10 |
| Vaccines are safe | 75 | 25 |
| Trust in healthcare providers | 80 | 20 |

Table No. 4: Mothers' Practices on Vaccination

| Practice Items | Yes (%) | No (%) |
|-------------------------------|---------|--------|
| Complete vaccination schedule | 80 | 20 |
| Delayed vaccination | 20 | 80 |
| Missed doses | 15 | 85 |

DISCUSSION

This study reveals that there is a moderate level of concordance of mothers' KAP regarding childhood vaccination with those in comparable studies. On the level of knowledge, this study found that 85% of the mothers were aware of the national recommended vaccination schedule and 70% had knowledge in vaccine-preventable disease. These results correspond with the study done in Nigeria showing that 78% of mothers had positive knowledge on vaccination schedule and diseases that could be prevented by vaccines^[8]. We have seen a similar situation in India, where they established that over 80% of mothers had some understanding or were aware that vaccines are of importance in immunization and low numbers of children dying from diseases as a result of immunization^[9]. Such results indicate that, although most people have some conceptual understanding regarding vaccines, this may not translate to sufficient disease or individual vaccine understanding in specific population groups. However, survey done within the Bangladesh found that the 60% of the mothers possessed basic knowledge about the vaccination schedules, but the knowledge level of the present study was higher^[10]. This may be so due to variations in the level of education, healthcare and awareness or successful spread of a particular public health crusade between the two circles. Some of the areas in need of knowledge enhancement could be targeted through awareness creation campaigns in order to enhance chances of improved vaccination. Concerning attitudes 90% of the mothers in this study felt the need of vaccines in addressing the health of their children and 75% attributed the vaccines as safe. These results are similar to those of research conducted in Saudi Arabia and Turkey, and in both cases more than 85 percent of the mothers interviewed supported the opinion regarding the necessity of vaccination of children to protect them from diseases^[11,12]. Perceived benefits and perceived control have been pinpointed as significant factors that can predict vaccination compliance; the following experimental evidence is extracted from Ethiopia: maternal confidence in vaccines and health care providers also influenced the compliance to vaccination schedules^[13]. Still, only a quarter of the mothers in this study had safety concerns regarding the vaccine, but this was expected considering a study by Larson et al., that focused on global vaccine hesitancy where fear of safety effects was ranked as a major

factor towards vaccine rejection or delay. In the same way, the studies in the United States revealed that 7-30% of parents had concerns related to the safety of the vaccines, most of which would avoid or delay vaccination^[14-15]. Eliminating these factors through effective health literacy or better still, appropriate knowledge that is passed across to the population by health professionals, could go along way in addressing concerns raised and boost general vaccine uptake. The practices observed in this study are also coherent with those highlighted in other experiments. According to the survey, 80% of the mothers followed the vaccination schedule as advised; 20% received delayed or missed doses. These results are comparable with the study conducted in Pakistan in which 75% of mothers complied with the recommended vaccination schedule, and 25% responded that they delayed their child's vaccination because of misconceptions and concerns related to side effects. However, a study conducted on the mothers in Brazil revealed that majority of them 90% observed the immunization schedule while only 10% said they had delayed immunizations mainly due to transport difficulties^[17]. Peculiarly, the 20%, of response found wanting by this study is higher than the 15% identified in a study conducted in Japan where delays were chiefly a result of cultural values but not safety^[18].

CONCLUSION

This research also reveals that most mothers were knowledgeable and possessed positive attitudes towards vaccination thus high vaccination compliance. But safety concerns related to the vaccines and falsehood and fake information from the social media affect the delay and hesitancy in a significant percentage of the mother. Such problems need to be solved in order to increase the level of immunization.

Limitations: In the light of the above work, some considerations are the following: the use of self-administered questionnaires that can generate biased results, and the use of a single healthcare setting which restricts the generalization of the findings to other areas. Further, there are some limitations to the current study that is; the role of socio-economic status was not disaggregated in the current study and therefore gave general information only regarding vaccination.

Future Findings: The subsequent studies should concentrate on identifying perception of RCs professionals in combating misperception and the effect of specific enlightenment crusade. Further benefits for improving vaccination coverage will also be achieved by understanding how economically disadvantaged persons are affected by the availability, accessibility and usage of vaccines, and by tackling challenges of distribution and storage in areas where these services are scarce.

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