

PARENTS' KNOWLEDGE, ATTITUDE, AND PRACTICE ON CHILDHOOD IMMUNIZATION

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ABSTRACT

Introduction: Vaccination has been proven as one of the successful methods to prevent numerous infectious diseases. However, vaccination hesitancy had become one of the major setbacks due to the socio-demographic, knowledge, attitude and practice of parents on childhood immunization.

Methods: A cross-sectional survey was conducted in Klinik Kesihatan Bandar Maharani by using simple random method. Data was collected from 250 parents using structured questionnaire consisting of several close ended questions to assess parents' socio-demography, knowledge, attitude, and practice on childhood immunization.

Results: Out of 250 parents who answered the questionnaire, most of the parents 226 (89.6%) knew that it is important to remember their child's vaccination schedule while 26 (10.4%) did not know, this answered our specific objective one which is to assess the knowledge of parents with regards to childhood immunization. Secondly, 223 (89.2%) of parents were in favor of vaccination while 27 (10.8%) were not, this portrayed our second specific objective which is to determine the attitude of parents with regards to childhood immunization. Besides, our research also showed that 223 (89.2%) parents have immunized their children while only 27 (10.8%) parents did not, which proves our third specific objective which is to describe the practice of parents with regards to childhood immunization.

Conclusion: Although majority of the parents preferred childhood immunization, there were a number of parents who did not have adequate access to information regarding childhood immunization. Hence, various approach on improving accessibility of parents towards information regarding childhood immunization should be the prime concern for a better awareness.

Keywords: Immunization, knowledge, attitude, practice and vaccine hesitancy.

INTRODUCTION

The evolution of safe and efficacious immunizations is one of the enormous triumphs in the history of public health contributing to reduction in hospitalization, treatment expenditure and mortality rate due to infectious diseases such as measles and rubella. According to the WHO at year 2013, over 1.5 million children die from vaccine-preventable diseases globally and current immunization programs save more than 3.2 million lives each year and additional 1.7 million lives a year can be saved by full utilization of the existing vaccines. By increasing immunization coverage to above 80%, disease transmission can be interrupted, whereby unimmunized children are also protected because of the herd immunity. (Joseph J et al 2015). However, vaccination hesitancy had become a controversial issue worldwide. Parental practices like unawareness of adverse effects and contraindications of vaccination, negative perceptions about vaccination in mild illness, negative

attitude, for instance mother's fear of vaccination was considered as one of the major barriers to childhood vaccination. Vaccination hesitancy has led to outbreak of various invasive diseases resulting in unnecessary suffering of young children and waste of limited public health resources. Literature, has shown acceptance of any vaccination among parents or guardians is largely dependent on their knowledge and attitude of the mothers, provision of the services, density of health workers and opportunity costs, (such as lost earnings or time) incurred by parent.

OBJECTIVES

1. To assess the knowledge of parents with regards to childhood immunization.
2. To determine the attitude of parents with regards to childhood immunization.
3. To describe the practice of parents with regards to childhood immunization.

METHODOLOGY

Study Design

A cross sectional prospective survey was conducted in Klinik Kesehatan Bandar Maharani from 14th to 28th of October 2019. The survey was carried with 250 parents that were randomly selected.

Study Participants

They were 250 different parents responded to a questionnaire survey at Klinik Kesehatan Maharani.

Study tools

The survey includes an interview for the parents in which they were asked to answer a questionnaire consisting of four different parts which are socio-demographic (age, sex, education level), parents knowledge towards immunization, attitude of parents towards vaccination, and their practice on immunization of their children.

Data Collection

Questionnaires consisting of questions to assess parents with variables such as socio demographic factor, knowledge, practice, and their attitude about immunization. The questionnaire prepared was broken down into four parts, starting with socio demographic factor, knowledge, attitude and practice in childhood immunization. The questionnaire consists of several multiple-choice questions and close ended questions related to immunization. As soon as the research proposal and the questionnaire were approved by the supervisor of the research team and the permission to carry out the research is obtained, 250 sets of questionnaires were randomly handed out to parents who came to Klinik Kesehatan Bandar Maharani.

Data Analysis Procedures

The collected data was filled and interpreted using IBM SPSS Statistics Student Version 23. Data analysis including descriptive statistics was to describe participants' socio-demographic characteristics and tables, frequencies and percentages was used to present the results. Content validity was done by the lecturers of Faculty of Medicine of Asia Metropolitan University. The Content Validity Index (CVI) was 0.916. Furthermore, the face validity revealed easy to answer (93.6%), appearance layout (94.3%) and clarity of words (96.5%). Internal consistency reliability was done by computing the Cronbach's alpha and was 0.83(>0.70) therefore it was reliable.

ETHICAL CONSIDERATIONS

The study was approved by the Medical Research Ethics Committee (MREC) of Asia Metropolitan University, Selangor, Malaysia.

Only those, who were willing to join the research were included. Participant's Informed consent was taken from the individual and written consent was obtained. The participant's signature indicates that they had read and understood the information regarding this research study and consent to allow us to conduct this study. All the information they had provided is kept confidential.

RESULTS AND DISCUSSION

Table.1-Sociodemographic characteristics of the respondents

Items	Frequency (N)	Percentage (%)
<i>Gender</i>		
- Male	112	55.2
- Female	138	44.8
<i>Age (Years old)</i>		
- <20	3	1.2
- 20-29	74	29.6
- 30-39	88	35.2
- 40-49	31	12.4
- >50	54	21.6
<i>Level of education</i>		
- None	10	4
- Primary	4	1.6
- Secondary	116	46.4
- Tertiary	120	48.0
<i>Employment Status</i>		
- Employed	175	70
- Unemployed	58	23.2
- Retired	17	6.8
<i>Marital Status</i>		
- Single	2	0.8
- Married	237	94.8
- Divorced	11	4.4
<i>Religion</i>		
- Islam	151	60.4
- Hinduism	50	20
- Buddhism	40	16
- Others	9	3.6

Based on our study, the level of education of the parents are mostly among parents with secondary (46.4%) and tertiary (48%) education background (Table 1.) Similar results are also shown by a study which showed that respondents in Malaysia are also mostly among secondary (58.2%) and tertiary (22.4%) education background. Nazmi et al.(2015). They also stated that many other researchers agree that education level was one of the predictors of parental knowledge regarding immunization. They also stated that parents' tertiary education background are more likely to acquire higher knowledge scores than those with lower education level.

Table.2-Knowledge assessment of respondents on immunization

Items	Frequency (N)	Percentage (%)
1) <i>Do you think that you have enough access to the information of immunization ?</i> - Yes - No	148 102	59.2 40.8
2) <i>Do you know the immunization schedule of your child?</i> - Yes - No	188 62	75.2 24.8
3) <i>Is it important to follow the immunization schedule?</i> - Yes - No	224 26	89.6 10.4
4) <i>Do you watch or hear any information on childhood immunization?</i> - Yes - No	180 70	72 28
5) <i>Healthy children do not need immunization.</i> - Yes - No	77 173	30.8 69.3
6) <i>More than one dose of vaccine may be required for complete protection.</i> - Yes - No	180 70	72 28
7) <i>If the child receives extra immunization, it is more effective and safer.</i> - Yes - No	183 67	73.2 26.8
8) <i>Vaccination can be harmful and risking.</i> - Yes - No	34 216	13.6 86.4

As shown in table 2, more than 50% of respondents who watch or hear any information on childhood immunization (59.2%) compared to respondents who do not get adequate information (40.8%). Another study done however obtained more than 50% mothers (68.5%) who have not seen in TV or newspaper regarding vaccination. (Ramalingam R, Ajay, Chetty S,2017) . This study did not support our result of the research study conducted. On the other hand, in a study by Nazmi et al. 2015, (58.2%) of parents believed that they had enough access to information on vaccination while (41.8%) did not get enough access to information regarding vaccination. This supported our research as our study obtained (59.2%) of parents having enough access of information on immunization while (40.8%) did not.

Based on table 2, most of the parents support that vaccination is not harmful and risky (86.4%). A previous study supported that majority of the parents agreed that vaccines benefit their children and their children may be at risk for contracting diseases if unvaccinated. It also stated that most parents (80.9%) were confident (41.0%) and very confident (39.9%) in safety of childhood vaccination. (Gust DA, Woodruff R, Kennedy A, Brown C, Sheedy K, Hibbs B ,2003). However another study contradict with the results that we obtained from this research study in which the study revealed that many participants had a range of misconceptions about vaccines such as side effects, unclean content and pharmaceutical conspiracy. Their report also stated that Muslim-majority countries was

the concern among participants of the vaccines containing ‘non-halal’ substances. This was despite the vaccines receiving ‘halal’ status by local religious authorities. (Jolyn R, Haireen A, Yew-Kong L, 2019)

Table.3 Assessment of attitude of respondents towards immunization

Items	Frequency (N)	Percentage (%)
1 <i>Are you in favor of vaccination?</i> - Yes - No	223 27	89.2 10.8
2 <i>Do you think vaccination prevents disease?</i> - Yes - No	228 22	91.2 8.8
3 <i>Will you advice your family and relatives to have immunization for their children?</i> - Yes - No	223 27	89.2 10.8
4 <i>If your child is to be immuned by the doctor, will you refuse?</i> - Yes - No	39 211	15.6 84.4

Based on the data in table 3, majority of the parents (89.2%) were aware of childhood immunization. This data is supported with a study by Joseph et al. (2015) as in her study stated that (96%) of subject were aware that all children should be vaccinated and (96%) of subject believed that compliance to immunization schedule is important. Besides, based on our study ,more than half of parents practice toward vaccination was good among most of them as all of them followed the obligatory vaccination programs. (84.4%) of the parents agreed that their children should be vaccinated and will not refuse if their child is to be immunized. Our research study is supported by Fatin et al. in which she stated mostly (90%) of our participants had never delayed or refused vaccination for their children. Meanwhile, there is a report stated otherwise in which although most of the participants reported that they have heard about the importance of vaccines interestingly, they did not get their children vaccinated(58.8%) (Nurazura et al. , 2019).

Table.4 -Assessment of respondents practice on childhood immunization

Items	Frequency (N)	Percentage (%)
1) <i>Do you feel that all children should be vaccinated?</i>		
- Yes	220	88
- No	30	12
2) <i>Have your immunized your children?</i>		
- Yes	223	89.2
- No	27	10.8
3) <i>Is your child vaccinated immediately after birth?</i>		
- Yes	219	87.6
- No	31	12.4
4) <i>Do you have a documentation on your children vaccination schedule?</i>		
- Yes	203	81.2
- No	47	18.8
5) <i>Do you keep the immunization card for your previous child?</i>		
- Yes	193	77.2
- No	57	22.8
6) <i>Do you know the next vaccination date for your child?</i>		
- Yes	195	78
- No	55	22

Referring to table 4, 81.2% of parents have a documentation on their childrens vaccination schedule whereas, 18.8% of parents do not. A research have reported that if parents could maintain a vaccination card, the child is more likely to get fully vaccinated. (Odusanya OO, Alufohai EF, Maurice FP, Ahonkhai VI. Determinants of vaccination coverage in rural Nigeria. BMC Public Health. 2008;8:381.). This supports our research study stating most parents have immunized their children (89.2%).

CONCLUSION

Majority of parents were in favour of childhood immunization as they had understood its significance, and had made sure their child was immunized immediately after birth. However, a small number of parents were having contradicting thoughts against vaccination, which is due to lack of access to information regarding childhood immunization.

To overcome this problem, more activities such as awareness campaign regarding importance of childhood immunization should be conducted, especially at maternal child health clinics. Doctors should explain and educate the pregnant ladies regarding the significance and consequence of childhood immunization to gain their acknowledgement.

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