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Impact of Educational Intervention for Improving Malaysian Parents' Knowledge towards Their Children Immunization

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Background:

Parents are the primary health decision-maker for their children. This fact makes parents' knowledge regarding immunization has great impact on their children immunization status. Lack of parents' knowledge regarding immunization timing is a major obstacle to immunization (Lannon et al., 1995). Studies have shown that improving parents' knowledge regarding vaccines improve immunization status and to have effect on the success of the immunization program (Anjum et al., 2004, Suarez et al., 1997). Thus, there is a vital need to assess parents' knowledge regarding their children immunization in order to improve and increase vaccination coverage and completeness.

Amis:

The aims of this study were to assess the knowledge of parents in Malaysia towards their children immunization and to evaluate the effectiveness of an educational seminar for improving parents' knowledge towards their children immunization.

Methods:

A cross-sectional study using pre- and post- intervention design was conducted with a sample of 73 parents. Changes in knowledge scores before and after the educational seminar were measured. Ethical approval for the study was obtained from the Medical Research Ethic Committee (MREC). A covering letter including an information sheet describing the study objectives and time needed to fill the questionnaire was given to parents with an attached consent form.

Both descriptive and inferential statistics were used whenever appropriate. Frequencies and percentages were used to describe the respondents' demographic information. Wilcoxon Signed ranks test and The McNemar $\chi 2$ test were applied to compare the differences in knowledge before and after the seminar whenever appropriate.

Results:

Seventy three parents agreed to participate in this educational seminar, majority of them were mothers (n= 64; 87.7%) as shown in Table 1.

Table 1 socio-demographic characteristics of parents

Characteristics	Frequency	(%)
Gender		
Male	9	(12.3)
Female	64	(87.7)
Age		
20-30	35	(47.9)
30-40	35	(47.9)
>40	3	(4.1)
Marital Status		
Married	63	(86.3)
Single	10	(13.7)
No. of Preschool Children		
1-2	58	(79.5)
3-4	15	(20.5)
Family Size		
<4	42	(57.5)
4-6	28	(38.4)
>6	3	(4.1)
Race		
Malay	72	(98.6)
Chinese	1	(1.4)
Religion		
Islam	72	(98.6)
Buddhism	1	(1.4)
Place of Living		
Rural	7	(9.6)
Urban	66	(90.4)
Employment Status		
Employed	59	(80.8)
Unemployed	14	(19.2)
Education Level		
Primary	4	(5.5)
Secondary	22	(30.1)
Tertiary Edu	47	(64.4)
Family Income		
< RM 1000	1	(1.4)
RM 1001-2000	20	(27.4)
RM 2001-3000	15	(20.5)
RM 3001-4000	16	(21.9)

Results *(Continue)*:

A comparison of parents' knowledge before and immediately after the implementation of the educational seminar showed significant differences. The mean ± standard deviation (SD) of the Knowledge scores of immunization significantly increased compared to the baseline following the intervention 12.60±2.69 to 16.03±1.87 ($p<0.001$), the possible score in knowledge domain ranged from zero to 20 (Table 2).

Table 2 Total Knowledge score pre and post intervention

Scale	Mean	SD	Minimum	Maximum	*P* Value
Knowledge					<0.001*
Pre	12.6	2.7	4.0	17.0	
Post	16.0	1.9	10.0	19.0	

*Significant, P-value<0.05

Limitations:

The sample of parents in this study was obtained from a single state. A national study including larger sample would provide more generalizable results. The actual effectiveness of the educational intervention on the immunization status warrants further investigation.

Conclusion

Parents' knowledge towards immunization improved significantly after the educational intervention. Therefore, introducing educational programs for parents to improve their knowledge about immunization is needed.

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