

Nurses Knowledge toward Rotavirus Vaccine for Children at Primary Health Care Centers in Babylon Governorate

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Abstract

Background: Rotavirus is the most common cause of acute inflammation of the intestines and stomach in infants and young children in the US. The rotavirus worldwide one of the main causes of death among children. Most children develop at least one episode of infection with this virus until the age of 3 years.

Objectives: This study aims to assess nurses knowledge towards rotavirus vaccine for children at primary health care centers. And also, to determine the association between nurses knowledge towards rotavirus vaccine and their demographic characteristics.

Methodology: A descriptive study design using a systematic random sample of (N=112) nurse. This study is distributed according to the Babylon Health Directorate through three primary health care sectors. The total items that appear in the questionnaire are (42) objects. These objects are subdivided into sections of (5). Statistics was obtained by using the methodology of self-reporting by nurses and the questionnaire as a way of collecting data. Using the Description And Inferential Statistical Approach to analyze data.

Results: Recent findings indicate the knowledge of nurses toward rotavirus vaccine for children. Finding reveals that the majority of (60.7%) were poor knowledge of nurses at primary health care centers in Babylon Governorate. The nurses age, years of experience in the immunization unit and training course have been significant relationship with their knowledge at p-value ≤ 0.05 .

Conclusions: Rotavirus in terms of knowledge, nurses were poor knowledge. Nurses years of experience in the immunization unit and training course plays an important role in their knowledge. Its needs to be employed intensive training courses related to immunization program to improve knowledge.

Keywords: Knowledge, Nurses, Rotavirus Vaccine.

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INTRODUCTION

Today's children are citizens of tomorrow. According to the statistics of the world's population, more than 40% of the population consists of children. It should be noted common symptoms and signs of childhood diseases as well as the treatment of these diseases and their prevention. But children can also be exposed to serious infectious diseases, which can be prevented by immunization [1]. In the United States, Rotavirus is the most common acute infection of the intestines and stomach in young children and infants. Worldwide, one of the principal causes of death among children is Rotavirus. The extent of the spread of HIV disease is limited to HIV and diarrhea. Rotavirus is transmitted from person to person or through the members [3]. In 2008, the results were recorded in India to 98,621 deaths caused by diarrhea due to rotavirus, which accounts for about 22% of the world. Studies indicate that Pakistan (39,000) and Bangladesh (9,000) were among the most affected countries of the ten countries grappling with rotavirus infection. The study showed that 4,530 deaths occurred due to infection despite the availability of a vaccine. Nigeria recorded - the second most affected countries - about 41,000 deaths, or less than 50% of deaths compared with India [4]. In Queensland, Australia, there was a decrease of 45% in the virus tested positive for rotavirus in 2007, fell by 43% in 2008 after the introduction of the vaccine. Similar reductions were seen in the proportion of positive tests for rotavirus in Belgium and Brazil [5].

There is no independent study on the knowledge of nurses towards rotavirus vaccine carried out in Babylon governorate, this study therefore, aims to assess nurses' knowledge towards rotavirus vaccine for children at primary health care centers. And also, to determine the association between nurses' knowledge towards rotavirus vaccine and their demographic characteristics in Babylon, Iraq. The data was analyzed by inferential and descriptive statistical approaches.

METHODOLOGY

design Study

They $\chi^2_{obs.} < \chi^2_{crit.}$ = insignificantly.
They $\chi^2_{obs.} > \chi^2_{crit.}$ = significantly.

As compared with the D.f.

RESULTS

Table 1. Nurses' Demographic Characteristics

Demographic Variables		F.	%
Ages (years old)	20-29	57	50.9
	30-39	13	11.6
	40-49	22	19.6
	≥50	20	17.9
Gender	Males	34	30.4
	Females	78	69.6
Educational Attainment	Secondary nursing school	33	29.5
	Diploma of Nursing	50	44.6
	Bachelor of Nursing	29	25.9
Marital Status	Single	28	25.0

A study overview is conducted to examine nurses' understanding of the rotavirus vaccine for children in centers of PHC in Babylon Governorate for the period from January 7 to 30, 2020. Those centers are distributed around three industries. Such sectors are the AL-Mahaweel and Musayyib Primary Health Care Sectors within the Governorate of North Babylon, Hilla First and Second Sector PHC in center Babylon Governorate, and AL-Hashimya in Southern Babylon Governorate according to the Directorate of Babylon Health. Tables (3-1, 3-2 and 3-3) the complete primary health care centers are presented.

Study Sample

A systematic random sample of (112) nurses is picked by using the approach to probability sampling. As shown below, the research sample is spread through PHC.

Instrumentation of the Study

data collection tool that included the following:

Class I

Which composed of demographic characteristics.

Class II

That portion is (42) elements and classified into (6) sections. They also have: Nurses' knowledge related to general information about rotavirus which composed of (5) items. Nurses' knowledge related to spread of rotavirus which composed of (6) items. Nurses' knowledge related to signs and symptoms of rotavirus infection which composed of (8) items. Nurses' knowledge related to how to deal with rotavirus vaccine which composed of (12) items. Nurses' knowledge related to warnings in administering the rotavirus vaccine that consist of (11) elements.

Data Collection the Methods

Upon completion of the requisite approvals, data was collected using a constructed "self-administrative" questionnaire (Arabic version) for nurses. The researcher introduced himself to the participants and explained the purpose of the study in order to get oral agreement.

Statistical analysis

The results of this study were statistically analyzed and analyzed by applying the descriptive statistical analysis approach which includes "frequency & percentage"; and Inferential statistical data analysis approach used the Chi-square test.

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	Married	84	75.0
Years of Experience in the immunization unit(years)	<5	64	57.1
	5-10	24	21.4
	>10	24	21.4
Training Course	One session /year	45	40.2
	Two sessions /year	31	27.7
	More than two sessions /year	36	32.1
Participate in administering the vaccine	Yes	83	74.1
	No	29	25.9

This table represents the descriptive statistics of socio-demographic information of the primary health care nurses in term of frequencies and percentage. Out of (112) subject who participated in this study their age ranged from (20-29) years old and constituted (50.9%) the study of sample. Concerning gender, most of research sample (69.6%) were female and diploma of nursing graduated

which composed of (44.6%). A seventy-five percent were married and most of them work less than five years in immunization unit with one session of training and have participated in administering the vaccine to children with rotavirus, it composed (57.1%, 40.2 and 74.1%) respectively.

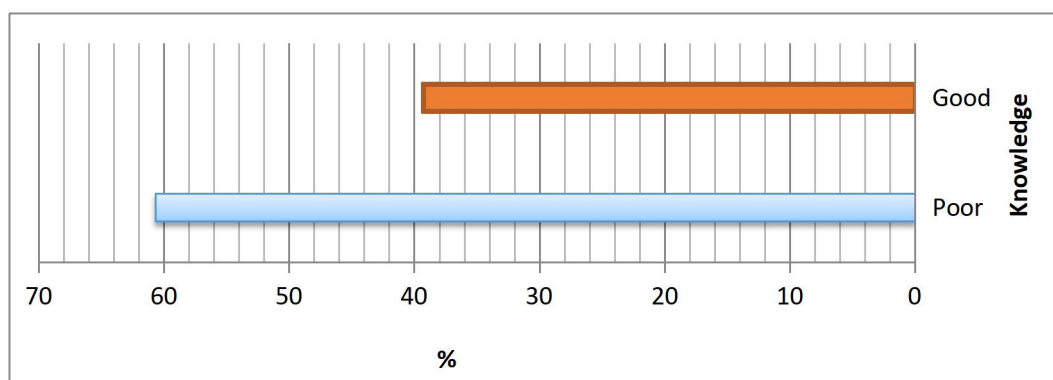


Figure 1. Nurses Knowledge to Rotavirus Vaccine

Finding reveals that the majority of (60.7%) were poor knowledge of nurses at primary health care centers in Babylon Governorate.

Table 2. Statistical Relationship between Overall Nurses' Knowledge towards Rotavirus Vaccine and their Demographic Characteristics

Demographic data	Rating	Overall Knowledge		Total	d.f	Sig.	
		Poor	Good				
Ages(years old)	20-29	41	16	57	3	χ^2 obs.= 6.393 χ^2 crit.= 7.815 P-value=0.094	NS
	30-39	7	6	13			
	40-49	11	11	22			
	≥50	9	11	20			
	Total	68	44	112			
Gender	Males	17	17	34	1	χ^2 obs.= 2.350 χ^2 crit.= 3.841 P-value=0.125	NS
	Females	51	27	78			
	Total	68	44	112			
Education	Preparatory Nursing	20	13	33	2	χ^2 obs.=0.088 χ^2 crit.= 5.991 P-value=0.957	NS
	Diploma of Nursing	31	19	50			
	Bachelor of Nursing	17	12	29			
	Total	68	44	112			
Marital Status	Single	15	13	28	1	χ^2 obs.=0.799 χ^2 crit.= 3.841 P-value=0.372	NS
	Married	53	31	84			
	Total	68	44	112			
Experience in the immunization unit (years)	<5	45	19	64	2	χ^2 obs.= 10.048 χ^2 crit.= 5.991 P-value=0.007	S
	5-10	15	9	24			
	>10	8	16	24			
	Total	68	44	112			
Training Course	One session /year	29	16	45	2	χ^2 obs.= 6.637 χ^2 crit.= 5.991 P-value=0.048	S
	Two sessions /year	21	10	31			
	More than two.	18	18	36			
	Total	68	44	112			

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Administer the rotavirus vaccine	Yes	50	33	83	1	χ^2 obs.=0.030 χ^2 crit.= 3.841 0.862 =P-value	NS
	No	18	11	29			
	Total	68	44	112			

" χ^2 obs. = Chi-square observer, χ^2 crit. = Chi-square critical, Df= Degree of freedom, S= significant, NS= non significant, HS= high significant"

Findings show the relationship between nurses knowledge towards rotavirus vaccine and its demographic characteristics. The relationship is a no significant relationship between them at *p-value* >0.05 except, there is significant relationship between years of experience in the immunization unit and training course at *p-value* ≤ 0.05.

DISCUSSION

Part I: The demographic characteristics discussion

Our findings represents the descriptive statistics of socio-demographic information of the primary health care nurses in term of frequencies and percentage. Out of (112) subject who participated in this study their age ranged from (20-29) years old and constituted (50.9%) of the study sample, due to nurses who work in immunization units need to be young to cover all duties in this units. Concerning gender, most of study sample (69.6%) were female, results come because some nurses hate working in the hospital depending on the culture of their families. With regards to their educational achievement, most nurses (44.6%) received a nursing diploma, as the diploma was perceived to be the highest proportion of staff nurses in a health system due to the large number of institutions graduating from such degrees. This result is also due to the fact that primary health care centers are mostly dependent on nurses who have graduated from nursing and secondary school while nurses who have graduated from academic nursing are assigned to special units in hospitals and are only in limited numbers compared to other nurses.

A seventy-five percent were married, this result come because most of these age groups are the age of marriage, especially after the completion of the study and appointment in the field of nursing. Where the Iraqi young after graduating from the study and the presence of employment opportunity take the side of marriage.

Concerning job variables, most of nurses work less than five years in immunization unit with one session of training and have participated in administering the vaccine to children with rotavirus, it composed (57.1%, 40.2 and 74.1%) respectively. The few years of nursing experience in primary health care centers could be explained by the fact that have a frequent rotating from one unit to another in-out the primary health care centers. The participation in a training sessions in Iraq is reduced due to the economic and political constraints, and this is regulated by Iraq's health ministry's policy.

Above findings consisting study conducted in Erbil City, in order to assess the primary health care providers their knowledge about rotavirus vaccine at selected primary healthcare centers used questionnaire and self-report data collection. Findings reveals that most of the providers of health care in the category aged between (33 and 42) years (31%) and 51% of males and 80% were married and 56% have graduate from the institution with half of them working in the vaccination room between 2-11 years and (29 per cent). Fifty-four of health care providers and the level of knowledge about rotavirus [6].

Part II: Discussion the nurses knowledge

Our finding reveals that the majority of (60.7%) were

poor knowledge of nurses at primary health care centers in Babylon Governorate due to the lack of training courses. This result come along with study conducted in Yogyakarta Indonesia regarding knowledge of rotavirus. The outcome depicts that health care provider with very little knowledge about rotavirus [7].

When the investigate among caregivers knowledge towards rotavirus vaccine in Thailand, the Philippines, Indonesia, Turkey, Poland and Germany. Survey participants (n = 1500). The outcome of findings were unaware rotavirus vaccine [8].

In line with our research, they also reported that rotavirus awareness was very small in all five settings in Indonesia, and their participants also ranked the disease as not a high priority [9].

Part III: Discussion the relationship between overall nurses' knowledge towards rotavirus vaccine and their demographic characteristics

Findings indicate the relationship between nurses knowledge related towards rotavirus vaccine and their demographic characteristics. The relationship is a no significant relationship between them at *p-value* >0.05 except, the relationship is significant relationship between years of experience in the immunization unit and training course at *p-value* ≤ 0.05. This result is match with the study of result conducted in Cairo Governorate deals with expanded program of immunization. Findings depicts that knowledge score was significantly higher among nurses, trained workers and who have experience [10].

CONCLUSIONS

Rotavirus in terms of knowledge, nurses were poor knowledge. Nurses years of experience in the immunization unit and training course plays an important role in their knowledge. Its needs to be employed intensive training courses related to immunization program to improve knowledge.

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