Nurses' Knowledge Regarding Pneumonia in Children Under Five Years of Age at Pediatric Wards in Kirkuk Teaching Hospitals

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Abstract

The Objective: to identify the nurses' knowledge regarding pneumonia in children under five years of age at pediatric wards in Kirkuk teaching hospitals.

The Methodology: A descriptive study was carried out at pediatric ward of Teaching Hospitals in Kirkuk City to Assessment of Nurses' knowledge regarding pneumonia in children under five years of age at pediatric wards from 20 of February till 3ed of June 2019. A non- probability (purposive) sample was chosen for the current study. The sample consisted of (40) nurses working in the pediatric medical ward of selected hospital.

The Result: The socio-demographic characteristic of the study presents that 62.5% of them females, 60.0 % at age (20 – 25) years old, 40.0 % graduated from college of nursing (Bachelor of Nursing) , 80.0% of them have (1-5) years of general experience. The results of the study sample presents (50.0 %) the majority of the nurses have poor knowledge in total knowledge score of pneumonia in Children under age five years. Also the mean of total knowledge score nurses in concern to protein energy malnutrition was (1.55) with standard deviation (0.714) . Shows that there were significant differences between the age and the service in the field of nursing with nurse's knowledge but there were no significant differences between other parts of socio- demographic characteristics with nurse's knowledge about pneumonia in children under age five years at $p \geq 0.05$ value.

The Recommendations: A continuous extensive special programs, training course and workshops regarding pneumonia in children under age five years should be design and implement in hospital's departments to enhance the nurse's knowledge in regard to this major issue.

Keywords: *Assessment, Nurse's knowledge, Pneumonia in children.*

Introduction

Nursing education and training is progressing remarkably and requires a high level of attention in assessment methods, such as problem solving and critical thinking.(1) Pneumonia is a major cause of childhood morbidity and mortality especially in developing countries, particularly in developing countries; many studies have been conducted using population-based or hospital-based surveillance to estimate the disease burden of pneumonia(2). However, globally there is substantial variability in access to hospital treatment of childhood respiratory diseases including pneumonia at national and regional levels and within the healthcare systems[3]. It is estimated that about 0.9 million deaths happened due to pneumonia out of the total 6.3 million under-5 deaths in this population

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in 2013.[4,5].The pneumonia in high-income countries is different than in low-income countries, including more viral and atypical organisms causes[6,7]. Pneumonia is a common serious infection that afflicts children less than five years throughout the world and is considered the most important global cause of death among them. It is an acute illness caused by infection. The lungs become inflamed, congested leading to cough and breathlessness. Nurse plays an important role in providing nursing care and health education for children and their families especially if they are skilled and well cultured.

Objectives of the Study

1. To assess the nurses' knowledge level regarded pneumonia in children under five years of age at pediatric wards in Kirkuk teaching hospitals.

2. To find out the relationships between the socio-demographic variables and the nurses' knowledge level regarded pneumonia in children under five years of age at pediatric wards in Kirkuk teaching hospitals

Material and Method

Design of the study: A descriptive study was carried out at pediatric ward of Kirkuk Teaching Hospitals to assess of nurses' knowledge regarded pneumonia in children under five years of age from 20ed of February till 3ed of June 2019.

Sample of the study: A non- probability (purposive) sample was chosen for the current study. The sample consisted of (40) nurses working in the pediatric medical ward of selected hospital. This is due to shortage of nursing staff and high number of children patients in the ward**.**

Study tool: The questionnaire was constructed and provided for nurses to assess the knowledge which consists of four parts. The first part concerns the social and demographic information, while the second part was related to the nurses' knowledge in concern to pneumonia in children less than five years of age in general. The third part of the questionnaire dealt with nurse's knowledge in about risk factors and medical management of pneumonia in children under five years of age , while the part four put emphasis on the nurse's knowledge about nursing care management of pneumonia in children under five years of age.

Validity of the study: The validity of the questionnaire tool was established through a panel of experts whom specified the content clarity, relevancy, and adequacy.

Reliability of the study: To evaluate statistically the reliability of instruments, a pilot study was carried out during the period from 17 till 25 of March / 2019. Randomly (5) nurses were selected from Children's Teaching Hospital (this sample was excluded from the original study sample).The Pearson's coefficient of correlation result are ($r= 0.671$) and are significant at $p \leq 0.000$ level was used to estimate the scale (test – retest) by using SPSS version 20.

Data collection:

The data were collected from the selected hospitals in Kirkuk City. The study connected at the pediatric medical ward that available in the Kirkuk General Teaching Hospital and Children's Teaching Hospital, at the period from 1st till 22 of April / 2019.

Result

The results shows that the demographic characteristics of the study sample, **60.0** % at age (20 – 25) years old, **62.5**% of them females , **40.0** % graduated from college of nursing (*Bachelor of Nursing*) , **80.0**% of them have (1-5) years of general experience, **97.5**% of them have (1-5) years of experience inside the medical pediatric ward , and lastly **57.5** not have any participation in training courses at the pneumonia in children under five years of age. Table (1) presents the results of Nurses' Knowledge that **50.0**% of them have not acceptable knowledge about pneumonia in children under five years of age in general, **40.0** % of them have Failure knowledge in relation risk factors and medical management of pneumonia in children under five years of age, **45.0** % of them have acceptable knowledge about to nursing care management of pneumonia in children under five years of age , and at lastly **50.0%** of them have not acceptable knowledge in total knowledge score for all domains. **Table (2)**: Shows that there were no significant differences between the most of social and demographic characteristics result with nurse's knowledge regarding pneumonia in children under five years of age. except the age with nurses knowledge level about pneumonia in children under five years of age in general, and nurses knowledge level about nursing care management of pneumonia in children under five years of age. also the service in the field of nursing with nurses knowledge level about risk factors and medical management of pneumonia in children under five years

of age and nurses knowledge level about nursing care management of pneumonia in children under five years of age that there were significant differences at $p \geq 0.05$ value.

Table (1): Nurse's Responses Results in Concerning The Pneumonia in Children under Five Years of Age Knowledge.

No	Nurses Knowledge Level		Freq.	%
1.	Nurses Knowledge Level about pneumonia in children under five years of age in general	Failure	4	10.0
		Not acceptable	20	50.0
		Acceptable	13	32.5
		Good	3	7.5
		Excellent	0	0.00
2.	Nurses Knowledge Level about risk factors and medical management of pneumonia in children under five years of age	Failure	16	40.0
		Not acceptable	15	37.5
		Acceptable	4	10.0
		Good	4	10.0
		Excellent	1	2.5
3.	Nurses Knowledge Level about nursing care management of pneumonia in children under five years of age	Failure	9	22.5
		Not acceptable	9	22.5
		Acceptable	18	45.0
		Good	4	10.0
		Excellent	0	0.00
4.	Total Nurses' Knowledge Score for all domains regarding pneumonia in children under five years of age	Failure	1	2.5
		Not acceptable	20	50.0
		Acceptable	15	37.5
		Good	4	10.0
		Excellent	0	0.00
	Total		40	100.0

Table (2): Statistical Differences of Social and Demographic Characteristics Result of Nurses Knowledge Level about Pneumonia in Children under Five Years of Age.

Domains	Nurses Knowledge Level about pneumonia in children under five years of age in general		Nurses Knowledge Level about risk factors and medical management of pneumonia in children under five years of age		Nurses Knowledge Level about nursing care management of pneumonia in children under five years of age	
	T	Sig.	T	Sig.	T	Sig.
Age	1.309	0.079	0.805	0.426	1.749	0.089
Gender	0.588	0.560	0.725	0.473	0.646	0.522
Education Level	0.982	0.333	0.162	0.872	0.753	0.456
The service in the field of nursing	0.080	0.937	2.544	0.016	3.235	0.003
The duration of active duty in the unit esoteric	0.326	0.747	0.313	0.756	1.555	0.129
The participation in training courses	0.644	0.524	2.508	0.017	1.603	0.118

Discussion

The demographic characteristics of the study of total sample number (40)N, presents that 60.0 % at age (20 – 25) years old, 62.5% of them females, 40.0 % graduated from college of nursing (Bachelor of Nursing) , 80.0% of them have (1-5) years of general experience, 97.5% of them have (1-5) years of experience inside the medical pediatric ward , and lastly 57.5 not have any participation in training courses at the pneumonia in children under five years of age. This result agree with Eiman M. ; Oshak S., (2016) They presented that the nurses' ages ranged between 20 - 30 years. Their education levels were varied with bachelor level (76%) and the diploma (24%) and post graduate level (0%). So there was an increase in knowledge about pneumonia with an increase educational level. also revealed that nurse's years of experience >2 year (54%) and 2-3 year (20%) and> 4 year (26%) was not related to the quality of care. Therefore, the common worker in this hospital was less experienced as they were practicing only for 2 years[8]. Nurse's Responses Results in concerning the pneumonia in children under five years of age Knowledge. The results of nurses' knowledge level presents that 50.0% of them have not acceptable knowledge about pneumonia in children under five years of age in general, 40.0 % of them have Failure knowledge in relation risk factors and medical management of pneumonia in children under five years of age, 45.0 % of them have acceptable knowledge about to nursing care management of pneumonia in children under five years of age , and at lastly 50.0% of them have not acceptable knowledge in total knowledge score for all domains Table (1). These results agree with Mogahed, (2011) his result showed that: (25.0%) was poor, (57 .0%) fair, (17 .0%) had good knowledge of participants' regarding prevention of pneumonia. Therefore, factors such as level of qualification, and experience years, does not significantly affect level of knowledge[9]. Statistical differences of social and demographic characteristics result of nurses' knowledge level about pneumonia in

children under five years of age. The result of study shows that there were no significant differences between the most of social and demographic characteristics result with nurse's knowledge regarding pneumonia in children under five years of age. Except the age with nurses knowledge level about pneumonia in children under five years of age in general, and nurses knowledge level about nursing care management of pneumonia in children under five years of age. Also the service in the field of nursing with nurses knowledge level about risk factors and medical management of pneumonia in children under five years of age and nurses knowledge level about nursing care management of pneumonia in children under five years of age that there were significant differences at $P \geq 0.05$ value Table (2). This result agree with Tahseen A. (2015) was a significant association between nurses' knowledge and their age and years of employment. This means that nurses' ages and years of employment have great impact on their knowledge[10]. But This result disagree with AL-Sa'idi, B.: (2006) and Shuq, A. H (2008) they showed that was a significant association between nurses' knowledge and demographic characteristics[11,12].

Conclusion and Recommendations

According to the results of the present study, the researcher concludes the nurses do not have appropriate and adequate knowledge about the pneumonia in children less than five years of age. There is significance relationship between the nurse's knowledge and age and the service in the field of nursing toward the pneumonia in children under five years of age only. But there is no significance relationship between the nurse's knowledge and other socio-demographic characteristics toward the pneumonia in children under five years of age. According to the results and conclusion of the present study, the researchers recommend the Kirkuk Health Directorate has to conduct statistics of certified prevalence about pneumonia in children under five years of age at all pediatric hospitals at Kirkuk City on the web site. Also special programs, training course and workshops about child pneumonia in general, risk factors, medical management, nursing care management can be designed and implemented in hospital's departments to enhance the nurse's knowledge in regard to this major issue. Increasing the number of nurses especially those who hold Bachelor degree in nursing to work at the pediatric medical wards for their ability and background

Ethical Consideration: Prior to data collection, official permission was obtained from the Ministry of Health/ Department of Planning and Health Research committee and Written approval of participants was obtained prior to the start of data collection.

Conflicts of Interest :Nil

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References

1. Mohammad S A, Mohanned KA, Radhwan H I and Rezgar KA. Nursing Students' Attitudes Toward Simulation Technology in Nursing Education. iJET ,(2019), 14,(14),31-45.
2. Capeding MR, Santos J BL, Kilgore PE, et al. Prospective surveillance study of invasive pneumococcal disease among urban children in the Philippines. Pediatr Infect Dis J 2013; 32: e383-9.
3. Dongre AR, Deshmukh PR, Garg BS. Health expenditure and care seeking on acute child morbidities in peri-urban Wardha: a prospective study. Indian J Pediatr 2010; 77: 503-7.
4. Naghavi M, Wang H, Lozano R, et al; GBD 2013 Mortality and Causes of Death Collaborators. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015;385:117-171.
5. Mamata J . Effectiveness of Information Booklet on Knowledge & Practice about Prevention of Pneumonia among Mothers of Under Five Children,Journal of Nursing and Health Science (IOSR-JNHS), Jan. 2014: Volume 3, Issue 1.
6. Kabra, S. K., R. Lodha, et al. "Antibiotics for community-acquired pneumonia in children." Cochrane Database: (2010). Syst Rev(3): CD004874.
7. Källander K, Nsungwa-Sabiiti J, Balyeku A, Pariyo G, Tomson G, Peterson S. Home and community management of acute respiratory infections in children in eight Ugandan districts. Ann Trop

Paediatr 2005; 25: 283-91 .

8. Eiman M. ; Oshak S. : Assessment of nurses' knowledge and practice regarding pneumonia in children at Almack Nimer University hospital hendi· sudan, Malaysian Journal of Nursing, 2009 volume-7, issue-2, 2016, pages 21 – 26.
9. Mogahed, M. M. To Use ornotto Use Translation in Language Teaching. Translation Journal ; 2011 : 15(4).
10. Tahseen A. , Impact of Nurses' Knowledge Upon The Infection Control in Primary Health Care Centers at AL-Amara Cit. KUFA JOURNAL FOR NURSING SCIENCES ; June through August 2015 : Vol.5 No. 2.
11. AL-Sa'idi, B.: "Assessment of nurses' knowledge toward child with bacterial meningitis at pediatric teaching hospitals in Baghdad city", master thesis, pediatric nursing, College of Nursing, Baghdad university, 2006:60.
12. Shuq, A. H.: "Assessment of nurses' knowledge about the nosocomial infection in neonatal in intensive care unit in pediatric teaching hospital of Baghdad, master thesis, pediatric nursing", College of Nursing, Baghdad university, 2008:65