Assessing the Nursing Knowledge and Practices in Premature Feeding in Premature Units

BaydaaA. Yahya.*
Mohammed. A. Jasim **

الخلاصة

الهدف تقييم المعارف والممارسات التمريضية لدى الملاك التمريضي.
المنهجية: : دراسة وصفية أجريت في وحدة الخدج في مستشفى الخنساء والبتول للولادة والأطفال في مدينة الموصل. تم جمع المعلومات باستخدام أداةتقييم المعارف وقياس الممارسات قرامتسا) إستبيانية(.
النتائج: أظهرت نتائج الدراسة أن معظم الملاك التمريضي العامل في الوحدات المذكورة هم من الأعمار الفتية, تم جمع المعلومات باستخدام أداة تقييم المعارف وقياس الممارسات قرامتسا) إستبيانية(. أظهرت نتائج الدراسة أن معظم الملاك التمريضي العامل في الوحدات المذكورة هم من الأعمار الفتية. وبلغت04%. وأن نسبة الإناث كانت أعلى من الذكور إذ بلغت 1:2 في هذه الوحدات. وجدت فروق معنوية كبيرة بقياس المتوسط الحسابي للمعارف والمهارات بشكل عام مقارنة بالمتوسط الغرضي.كذلك أظهرت الدراسة أن هناك فروق معنوية عند مستوى)م- value) 0.001> بين المعارف والمهارات ومتغيرات المستوى التعليمي والدورات التدريبية والفترة الحقيقية للعمل بوحدات الأطفال0كما أظهرت الدراسة أيضا فروقات معنوية عند مستوى 0.001>) في مجال تغذية الأطفال بواسطة القنينة ومتغير المستوى الدراسي للممرض وتبين أن لديهم قصور في هذا المجال0ولم تظهر أية فروقات معنوية بين المعارف والمهارات للملاك التمريضي بالنسبة لمتغيرات ,سنجلا) العمر و الحالة الاجتماعية(.

Abstract

Objectives: ٨ descriptive study has been conducted in the premature baby unit in Al-Khansaa' and Al-Batool hospitals for maternity and children in Mosul city to assess knowledge and practice of the nursing staff in the caring of premature infants. A descriptive study has been conducted in the premature baby unit in Al-Khansaa' and Al-Batool hospitals for maternity and children in Mosul city to assess knowledge and practice of the nursing staff in the caring of premature infants.

Methodology: the data were collected by using knowledge assessment and practice measurement tool.

Results: the results of the study show that high percentages (about 40%) of the staff who work in the premature baby units are of the young age group. It has also been found that the ratio of 2/1 of female workers is higher than male workers in such units. Highly significant differences have been found by measuring the average of knowledge and practice in general with regard to theoretical Mean. The study shows that there are significant differences (<0.001 at P- value) in knowledge, practice and the variables of the educational level, training courses and the real period of working in the baby units. There are also significant differences regarding baby feeding (O.OOlat p-value) through feeding bottle and the variables of educational level since the study shows that the nurses have shortcomings in this field. There are no significant differences between knowledge and practice scores of nursing staff with regard to their sex, age and social status.

Key words: Premature feeding, premature units

Introduction

The average term infant weighs 3500 grams at birth, 95 percent are between 2500 grams and 4250 grams. Those of 2500 grams or less are classified as low birth weight babies and just under half of these are pre-term with a gestational period of less than 37 weeks. Most premature infant have weight less than 1500 grams at birth, they are unable to suck effectively, or to coordinate sucking, swallowing and breathing as a well child (').

Infant bom prematurely with or without congenital or acquired medical condition have extended stay in the Neonatal Intensive Care Unit (NICU) for a long period so they are at higher risk of feeding and nutritional problems than other full-term healthy newborn (2). Nursing intervention strategies in managing of premature baby is to promote stability that leads to successful feeding and keep newborn baby in a good nutritional status <3).

Neonatal intensive care unit nurse has a very critical role in dealing with newborn premature baby in assessing, giving care and follow up (4).

*College Of Nursing, University of Mosul

Nursing care for premature baby at the first hours of birth, alters birth often determines, especially for premature babies or those with low birth weight in relation to the gestation period, their survival possibilities. These babies need warmth, physical care, careful feeding, and protection against infection a long with intensive care during gestation period [5].

The aim of the present study is to assess the knowledge and practice of nursing staff in the Premature Baby Units (PBUs).

Methodology:

Λ descriptive study has been conducted in the premature baby unit in Al-Khansaa' and Al-Batool hospitals for maternity and children in Mosul city to assess knowledge and practice of the nursing staff in the caring of premature infants.

The sample of the study consisted of 20 nurses working in the premature units in the two hospitals above from the Ist of June 2005 to 31st of August 2005.

The data was collected by using knowledge assessment and practice measurement tool. The tool consists of three main aspects.

!-Socio-demographic characteristics: sex, age, martial status, Level of education, actual period of nursing service, actual period of pediatric unit service, training courses on pediatric nutrition, and number of training course.

2-Assessing the knowledge of nursing staff about pediatric nutrition in premature baby unit which consists of 28 items, each item had three sub items two of them are wrong and one of them is true, scaled as (1) for true and (0) for a wrong answer.

3- Assessing the practice of nursing staff about pediatric nutrition which includes two parts:

-Λ practicing of nasogastric tube for premature feeding which consists of 20 items, each item had 2 options: Yes or No, Yes land No = 0

B- Practicing of artificial premature feeding which consists of 20 items, each item had also 2 options: Yes or No, Yes = 1 and No = 0

The validity and reliability of the tools of the study have been done through a Pilot study and through exposing the tools of the study to seven experts in different fields of knowledge. (94%) of them agreed on the suitability of the items of the tool.

The validity and reliability of the tools instrument refers to the degree of consistency at which the instrument measures the attribute that it is supposed to be measuring. [6].

Λ pilot study was conducted on a sample of 6 nurses' work in the PBU in AL-Batool Teaching Hospital during the period 10th May to 30th May 2005 and the test was repeated on the same 6 nurses after a gap period of twenty days. Person's Coefficient Correlation was used]),0.83-[illegible]0.001

After gathering data from nurses, the investigator observed the work and procedure of each nurse during the shift without record or gives them any express that may interfere with their work, these measures takes for each nurse between 8 A .m to 3 P.m. for one day.

The investigator used the following statistical methods for the analysis of data, the statistical package SPSS for windows was used to analyze the data. [7]

Results

Table (1) Distribution of (20) Nurse according to socio-demographic characteristics of the nurses.

Item		Mean 810	No.	0/
Age (year)	≤25	32.50 ±8.8	6	30.0
	26-35		8	40.0
	>35		6	30.0
Total			20	100.0
Duration of work (year)	<10	11.33+9.7	8	40.0
	10-20		7	35.0
	>20		5	25.0
Total			20	100.0
Duration of work in pediatrics (year)	<10	10.20 ±9.4	11	55.0
	10-20		4	20.0
	>20		5	25.0
Total			20	100.0
Sex	Male		6	30.0
	Female		14	70.0
Total			20	100.0
Social status	Single		13	65.0
	Married		7	35.0
Level of Education	Primary school		6	30.0
	Secondary school		8	40.0
	Institute and college		6	30.0
Total			20	100.0
Training courses	0		5	25.0
	1-3		11	55.0
	>3		4	20.0
Total			20	100.0

Table (1) shows that 30% of the nurses were males and 70% were females. The mean age is 32.5 ± 8.8 year and the highest age percentage is (40%) for the age group from 26 to 35 years.65% of the nurses were single, further more the mean duration of nursing work was 11.33+9.7 year, and 40% of the nurse has less than 10 years working time in nursing. Regarding the nursing work in pediatrics words, 55% of the nurses has less than 10 years working time in nursing with a mean of 10.20+9.4 year.

As for the level of education, (40%) of the nurses have completed secondary school of nursing. Concerning the training courses, a high percentage of nurses (55%) received from 1 to 3 courses, while 25% had not received any training course.

Table (2) Comparison between the knowledge and practice of (20) nurse about neonate Nutrition with regard to Theoretical Mean.

		Mean ± SD	Theoretical mean	t-value	p-value
Knowledge		**18.55+3.62**	**14.0**	**5.62**	**<0.001**
Practice	**Nasogastric**	**9.05-1.61**	**10.0**	**2.65**	**<0.05**
	Artificial feeding	**12.10 ±1.97**	**10.0**	*4.77*	**<0.001**

This table shows that there are highly significant differences at (كط 0.001) between the knowledge and practice of nurses in the area of nasogastric practices at 160.05 in the area of artificial feeding, with t- value of knowledge, nasogastric practices and artificial feeding were 5.62,2.65 and 4.77, respectively.

Table (3) Comparison between knowledge and practice of (20) nurse about neonate Nutrition with regard to their sex.

Sex		Mean ± SD		t-value	p-value
		Male (n=6)	Female (n14)		
Knowledge		70.83 ±16.04	64.29 ±11.47	1.04	NS
Practice	Nasogastric	47.50+10.84	44.29 ±6.75	0.81	NS
	Artificial feeding	60.83 ±10.21	60.36 ±10.09	0.09	NS

Table (3) shows no significant differences between males and females in the knowledge and practice using unpaired t-test with t- values .The t- values of knowledge, nasogastric practices and artificial feeding were 1.04, 0.81 and 0.09, respectively.

Table (4) Analysis of variance for (20) nurses' knowledge and practices a bout Neonate Nutrition with regard to their socio-demographic characteristics by using ANOVA test

Characteristics	Source of Variation		
	Knowledge	Practice Nasogastric	Practice Artificial feeding
	F-Value	F-Value	F-Value
Age (year)	0.379	0.314	0.702
Level of education	12.547 *	7.401 *ج	3.401
Duration of work (year)	0.528	0.026	0.694
Duration of work in pediatric units (years)	0.193	0.026	0.594
Training courses	1.384	0.470	1.932

*Significant differences (< 0.001 at P-Value)
** Significant differences (< 0. 01 at P-Value)

Table (4) shows a highly significant differences of the effect of educational level in their knowledge at ($p<0.001$). They also show significant results at (ح.!) in nasogastric practice of feeding.

Table (5) Relationship between the Practices of nurses in nasogastric nutrition and Variables of sex, age, social status, level of education, actual duration, pediatric Duration, training courses.

Parameters	Coefficient	t-value	p-value
Sex	1.147	0.462	NS
Age	-5.846	-2.541	<0.05
Social status	0.437	0.198	NS
Level of education	14.218	12.929	<0.001
Actual duration	11.616	3.297	<0.01
Pediatric duration	4.893	1.648	NS
Training courses	-1.418	-4.753	<0.001

Table (5) shows significant differences in nasogastric practices with the variables age, level of education, duration of nursing and training courses, with t- values 2.541, 12.929, 3.297 and 4.753, respectively, while it shows no differences in the other variables.

Table (6) Relationship between the practices of nurses in artificial feeding and variables of sex, age, social status, level of education, actual duration, pediatric duration, Training courses.

Parameters	Coefficient	t-value	p-value
Sex	**4.032**	**0.738**	**٢5**
Age	**3.364**	**0.664**	**٢5**
Social status	**4.640**	**0.957**	**NS**
Level of education	**13.710**	**5.660**	**<0.001**
Actual duration	**7.738**	**0.997**	**NS**
Pediatric duration	**0.858**	**0.131**	**NS**
Training courses	**-1.033**	**-1.573**	**NS**

Table (6) shows significant differences in artificial feeding practices of the nurses with the level of education at t- value = (5.660), using multiple regression analysis, while other variables show no significant differences.

Discussion:

Data analysis shows that high percentage (40%) is in the age group (26-35 years), this evidence has confirmed that most nursing staff work in premature baby unit are in the young group (table 1). It is very important that the nurse be in a good physical ability which makes her able to do much more for patient than other age groups. This result is in agreement with the result of [8] which showed that 70% of premature baby unit staff was in the age group (20-35 year).

Results from the same table show that 400 of nurses have worked for less than 10 years. This result indicates that most of the nurses have little experience due to the health policy which takes care of quantity rather than quality and experience of nurses.

The result is in agreement with the result of [9] which showed that most staff nurse members (35%) have a low work experience (less than 7 years). It is also clear that a high percentage (55%) of the nurses have work experience in the pediatric unit. This result is in contrast with the study of [10] which showed that the duration of the nursing staff in pediatric units were more than 14 years and they specialized in a verity of many sub pediatric unit (such as neonatologist nurse, skilled nurse with hematology disease and others.

The results indicate that the majority of nurses, work in premature baby unit are females (70%). The female nurses like to work in pediatric unit especially in premature baby unit because of their hornable and they give best care to the babies much more than the male. By reviewing the social status, the results indicate that most nursing staff who work in premature baby unit are single 65%. Regarding the level of education, high percentages of nurses (40%) are graduates of secondary nursing school. As for training courses, high percentage of nurses (55%) received 1-3 training courses.

This result is in contrast with the result of [11] which showed that most nursing staff received more than (10-20) training courses working in pediatric care unit. With regard to level of education it also contradicts the study of [12] who stated that the nursing staff in pediatric care unit is with high level nursing education.

Highly significant differences in comparison between knowledge and practices of nurses with regard to the theoretical mean (table 2). This difference in the nurse's knowledge may be due to the fact that the nurses working in neonate units have experiences in this field so that they increased their knowledge and practice by reading related literature to the neonate nutrition and the skills that help them in dealing with the neonate children.

The results show that there are no significant differences between males and females in the knowledge and practice using unpaired t-test. This result may be due to the fact that nurses are equal in their knowledge due to their graduation level and lack of information to care premature baby (table 3).

Highly significant differences of the effect of educational level in their knowledge at ($p<0.001$) (table 4). They also show significant results at ($p<0.01$) in nasogastric practice of feeding. There are no significant differences between the knowledge and practices of nurses who work in premature baby unit in the field of neonate nutrition with regard to the variables (duration of services in nursing, duration of work in pediatric unit, training courses and number of training courses) by using ANOVA test. These results show that most nursing staff doesn't receive enough training courses and a good educational program to manage and care with neonate, so that the duration of work in pediatric unit doesn't give nurses best knowledge about how to care for premature baby.

Significant differences in the variables (age, level of education, actual duration and training courses) (table 5). These differences show that the development in nurses ages lead to the development and progress in their skills, practices and experience with regard to the level of education, this is due to the fact that most of the nurses were graduates of secondary nursing school. The training and educational courses will lead to the improvement of the ability skills and practices of nurses. This will consequently lead to differences in the results.
There are no significant differences in the variables (sex, age, martial status, actual duration of the work, duration of work in pediatric unit and training courses) in the relationship in relation to the practice of nursing staff in the felid of artificial feeding except the variable (level of education) which shows that there are highly significant differences which may be due to the fact that nurses who are highly educated have appropriate knowledge in artificial feeding practice in neonate units (table 6). There is a shortage practice on the part of the nursing staff working in the premature baby units.

Recommendations:

The study recommends that specialized centers in taking care of premature baby units should be established. Intensive training courses and programs should be done to elevate the scientific level of nurses working in such units.

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