Original Article

Nurses' Practices of Caring Toward Premature Infants at Neonatal Intensive Care Unit: Descriptive Study Research

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ABSTRACT

Objective: To assess of demographic features and practices of nurses providing about the premature baby needs at neonatal intensive care unit.

Study Design: Descriptive cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Pediatric Nursing, College of Nursing, Thi-Qar University, Iraq from 20th November 2024 to 10th April 2025.

Methods: A total 50 nurses in the neonatal intensive care units of teaching hospitals (Bent Al-Huda Hospital and Al-Mousawi Hospital) were enrolled.

Results: The nurses between 20-30 years have the largest. Bachelor's degrees in nursing were the majority of the educational level. 20% nurses have 6-10 years of experience and majority were 1-5 years experience in the neonatal intensive care unit. Skin care was assessed by 60% of the nurses, skin color, signs of skin infection and skin irritation were assessed. In contrast, 28% of the nurses studied did not assess the quality of care.

Conclusion: There was a significant relationship between nurses' practice score and age, the level of education, years of experience and experience in the neonatal intensive care unit.

Key Words: Nurse practices, Premature, Neonatal intensive care unit

Citation of article: Aneed SH, Kamel HF. Nurses' Practices of Caring Toward Premature Infants at Neonatal Intensive Care Unit: Descriptive Study Research. Med Forum 2026;37(5):31-34. doi:10.60110/medforum.370506.

INTRODUCTION

Babies born prematurely are unique patients; they are subjected to rigorous and intrusive medical treatment in the highly mechanized setting of a neonatal intensive care unit (NICU). Their gestational age (GA) at birth has a significant impact on how their hospital stay turns out; the more immature the baby is at birth, the more difficult and intrusive the critical care he needs. In addition to the loss of their secure and dependable prenatal environment, preterm infants must deal with deprivation, stress, and overstimulation. Because they are unsure of their child's chances of life and how the early birth may affect their development, caregivers of premature babies also experience trauma. In addition, witnessing the invasive care their child needs can be very upsetting to parents.[1]

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Received: January, 2026
Reviewed: February-March, 2026
Accepted: April, 2026

A high-risk baby is one who has a higher likelihood of morbidity due to disorders that arise during the embryo's growth, the mother's gestation, or issues that may arise during labor and delivery. Neonates born before the complete 37th week of pregnancy.[2]

Certain neonatal health issues, such as hypothermia, breathing difficulties, malnutrition, infection, hyperbilirubinemia, and even mortality, are more likely to occur in premature babies. A neonatal intensive care unit, which has specialized medical personnel and equipment to handle the various issues preterm neonates confront, is necessary for the care of many of these patients.[3]

Providing breathing assistance is part of the nursing role (see drug chart).Do the following evaluations. Check for murmurs in the heart sounds. Evaluate the perfusion and pulse. Keep an eye on your pulse pressure, heart rate, and blood pressure. Make sure you are getting enough calories, electrolytes, and hydration. Avoid infection and keep the environment at a neutral temperature.[4]

When it comes to helping premature babies who are in discomfort, pediatric nurses are essential, pain evaluation, treatment of pain, advocacy for mothers and newborns, and instruction for parents are all under the purview of nurses. Although nursing expertise is limited when it comes to caring for babies, the synthesis of nurses' experiences and viewpoints regarding the care of newborns in pain may help bring new insights to improve evaluation and treatment of pain for those who are at risk.[5]

METHODS

In the neonatal intensive care unit of pediatrics teaching organizations in Nasiriya city, nurses' practices in caring for premature infants were assessed using a descriptive (cross-sectional) research methodology. 50 nurses from Thi-Qar for the AI Moosawi Hospital and Bint AIhuda Teaching Hospital comprised the non-probability sample from from 20th November 2024 to 10th April 2025 vide letter No. 4 dated 10-11-2024. The data was collected through face to face interview. Each interview took approximately 15-20 minutes to complete questionnaire form. The interviewing is carried out with each study sample who participated in the study. The device that the researcher created and built is based on prior research and the clinical context of the literature. Part I: Sociodemographic information includes seven items pertaining to the nurse's age, period of experience, and educational attainment, NICU experience, have you ever taken part in a training session on the requirements of premature babies? Course duration Part ll: Nurses' practices regarding the needs of premature babies in the neonatal intensive care unit consists of (14) items. The Statistical Package of Social Science version-25 was used. Alpha Cronbach for the questionnaire's internal reliability and consistency was used. The Chi-Square test is used to determine if the noticed frequencies' random distribution matches the anticipated multiple category nominal scale.

RESULTS

The age group 20–30 is the biggest, accounting for 40%. Majority of nurses have Bachelor's degrees. Six to ten years of experience accounted for 20% of the total years of experience. Majority have 26% had 1–5 years of NICU experience (Table 1).

Table No. 1: Sociodemographic characteristics of the nurses (N=50)

Demographic factor	No.	%
Age (years)		
<20	12	24.0
20 – 30	20	40.0
31 – 40 or more	18	36.0
Education Level		
Nursing high school graduate	10	20.0
Medical Institute of Nursing	19	38.0
Bachelor degree in nursing	20	40.0
Graduate	1	2.0
Years of experience (years)		
1-5	16	32.0
6-10	20	20.0
>10	14	28.0
Experience in NICU (years)		
1-5	32	64.0
6-10	13	26.0
11-15	5	10.0
>15	0	0.0
Have you participated in a training course related to the needs of a premature baby previously?		
Yes	10	20.0
No	40	80.0
Duration of course (week)		
< 1	2	4.0
≥ 2	8	16.0

Table No. 2: Distribution of study sample according to assess of nurses' practices in caring for premature infants (N=50)

Practices of nursing provided about the premature baby	Yes		No		I don't know	
	No.	%	No.	%	No.	%
Measuring Vital Signs	50	100.0	-	-	-	-
Bottle Feeding	50	100.0	-	-	-	-
Skin Care	30	60.0	14	28.0	6	12.0
Eye Care	40	80.0	6	12.0	4	8.0
Cord Care	42	84.0	6	12.0	2	4.0
Protection from Infection	24	48.0	18	36.0	8	16.0
Daily Care of Incubator	26	52.0	12	24.0	12	24.0
Assist in Laboratory Test	45	0.0	5	10.0	-	-
Administration of Medication	49	98.0	1	2.0	-	-
Keep Quite Environment	38	76.0	12	24.0	-	-
Maintain Parent-Neonate Bonding	10	20.0	34	68.0	6	12.0
Terminal Care of Incubator	26	52.0	12	24.0	12	24.0
Eyes and genitals should be covered when placing a premature baby under phototherapy	50	100.0	-	-	-	-
Hand hygiene is very important when caring for a premature baby, because the immune system in premature babies is immature so they are vulnerable to infection.	45	90.0	5	10.0	-	-

Table 2 showed that 60% of the nurses in the study evaluated skin care. Skin color, infection symptoms, and skin irritation were assessed. On the other hand, 28% of the nurses in the study did not evaluate. Eighty-four percent of the nurses in the study accurately provided cord care while under the influence of alcohol. However, 12% of them failed to offer care for the cord. In order to prevent infection, 48% of the nurses in the study donned gloves when they came into touch with bodily secretions and cleaned their hands both before and after tending to each newborn. The newborn cord stump was maintained dry and tidy by them. Additionally, isolate the infected baby, refrain from sharing neonatal equipment, and do not allow infected people to visit him. Every nurse in the study provides daily incubator care. Furthermore, 90% of nurses gave attention throughout laboratory tests. When administering medication, 98% of the nurses in the study made sure to follow aseptic technique, verify doctor's directions, and adhere to medication administration principles. On the other hand, 2% of them did not offer any assistance while taking medication.

Table No. 3: Correlations coefficient between socio demographic and nurses' practice score (N=50)

Sociodemographic	Nurses' Practice Score	
	X^2	P value
Age	22.0 56	0.06
Years of experience	16.776	0.001
level of education	36.702	0.000
Experience in NICU	35.072	0.001
Have you participated in a training course related to the needs of a premature baby previously?	27.678	0.004

Significant

The association between nurses' practice grade and demographic data was seen in table 3. For instance, the practice grade of nurses and age were significantly correlated. Additionally, there was a high correlation between years of experience, school level, and NICU experience.

DISCUSSION

In the present study, 40% nurses belonged the age group 20-30 (Table 1). The study's findings are consistent with the fact that a total of nursing employees were between the ages of 20 and 30. The majority of the study's nurses were female and in the under-30 age range.[6] A great deal of nurses who participated in this study had a bachelor's degree in nursing, according to the study's findings, which also showed that bachelor's degrees in nursing made up 40% of the sample compared to other educational levels.[7]

In terms of years of experience, the largest group (representing 20%) had six to ten years. The current research supports the findings of the study. In terms of years of experience, eight years accounted for 20% of the total.[8,9]

Since their percentage was anticipated to be 26% of the sample size, the majority had one to five years of experience in the NICU. According to the current study, the majority of nurses who worked in the preterm department had less than five years of experience. The study found that nurses knew a lot about complications and how to care for premature babies.[10,11]

Table 2 showed the practices of nursing provided about the premature baby that 60% of the nurses in the study evaluated skin care. Skin color, infection symptoms, and skin irritation were assessed. On the other hand, 28% of the nurses in the study did not evaluate. Eighty-four percent of the nurses in the study accurately provided cord care while under the influence of alcohol. However, 12% of them failed to offer care for the cord. In order to prevent infection, 48% of the nurses in the study donned gloves when they came into touch with bodily secretions and cleaned their hands both before and after tending to each newborn. The newborn cord stump was maintained dry and tidy by them. Additionally, isolate the infected baby, refrain from sharing neonatal equipment, and do not allow infected people to visit him. Every nurse under study looks after the incubator on a daily basis. Furthermore, 90% of nurses gave attention throughout laboratory tests. When administering medication, 98% of the nurses in the study made sure to follow clean methods, verify doctor's directions, and adhere to medication administration principles. On the other hand, 2% of them did not offer any assistance while taking medication. According to the current study's findings, the majority of nurses lack training or understanding on septic the washing of hands practices; less than 15% did not receive preterm care instruction.[12,13]

This study showed the connection between nurses' practice grade and demographic traits for instance, the practice level of nurses was significantly correlated with age, with a P-value of < 0.006 (Table 3). Additionally, there was a significant correlation between years of experience, level of schooling, NICU experience, and having previously completed a workshop on the needs of premature babies ($P<0.000$, $P\leq0.001$, $P\leq0.001$, and $P\leq0.004$, respectively). The current study's findings support that. Every healthcare professional tries to apply what they have learned to provide ongoing care, ease the transition, and enhance the baby's and the family's results. There are found relationship between the level of education, years of experience from nurses.[14,15]

CONCLUSION

The majority sample that the age group 20-30 is the largest age group, bachelor degrees in nursing were the

majority among the educational level, years of experience, 6–10 years were the most in this category and represented 20%. Regarding experience in the NICU, the majority was 1-5 years, as their percentage was estimates at 26% of the sample size. On the connection between nurses' practice level and demographic traits for example, nurses' practice score and age were significantly correlated, while their level of learning, years of experience, NICU experience, and prior participation in a training course on the needs of premature babies were all strongly correlated.

Recommendations: Phototherapy is effective in treating all cases of jaundice in the neonatal intensive care unit. Booklets on key procedures for premature neonates should be available at the unit. In-service training programs focused on all areas of care offered for newborns should be conducted. The study suggests the establishment of dedicated facilities for the care of premature infant units. The scientific level of nurses working in such units should be raised through rigorous training programs and courses. Pre-service training will assist newly hired nurses in modernizing and enhancing their job.

Author's Contribution:

Concept & Design or acquisition of analysis or interpretation of data:	Suror Hameed Aneed, Hussein Fakher Kamel
Drafting or Revising Critically:	Suror Hameed Aneed, Hussein Fakher Kamel
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Conflict of Interest: The study has no conflict of interest to declare by any author.

Source of Funding: None

Ethical Approval: No. 4 Dated 10.11.2024

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