

Educational Program of Nurses Practices Towards to Phototherapy at Neonatal Care Units

LAITH NAWFAL BURA'A¹, NASIR MUWFAQ YOUNIS²¹Ministry of health and environment / Nineveh Health Department.²PhD.CHN. University of Mosul_College of Nursing_Iraq.Corresponding author: Nasir M. Younis, Email: nasir.mufaq@uomosul.edu.iq

ABSTRACT

Objective: The aim of the study to identify the educational program of nurses Practices towards to phototherapy at neonatal care units.

Material: Purposive sampling with no probability. Between the beginning of January 2023 and the beginning of February 2023, a sample was taken. The nurses working in Mosul's neonatal units were the ones who provided the sample. There were a total of (62) participants in the study, including (50) men and (12) women. The performance was divided into two sections: The first section dealt with the demographics of nurses. The second section dealt with the use of phototherapy by nurses in neonatal units.

Results: The discovery revealed a substantial majority of them were males within the range of (80.65%), while women were (19.35%), and the average gender was (1.21), indicating that they were predominately male. The sample included in the study had the following ages: (30.43).

Conclusion: This study concluded through the program that the nurses in the study sample before starting the program did not have any information related to the practical aspect of phototherapy, but when giving the program and after the second test, the results were clearly shown, there are very significant significant differences

Keywords: Educational Program, Practices, Phototherapy, Neonatal Care Units.

INTRODUCTION

The term phototherapy literally means the use of light, especially ultraviolet light, to treat medical condition. Natural sunlight has been known to be beneficial in certain skin disorders for thousands of Years, and it is the ultraviolet part of the radiation produced by the sun that is used in phototherapy. Indian medical literature dating to 1500 BC describes a treatment combining herbs with natural sunlight to treat non-pigmented skin areas. It was in the 19th century that the use of artificial light source of phototherapy happened Prof. Niels Ryberg Finsen is known as the father of phototherapy ⁽¹⁾. Studies have shown that when phototherapy was withheld, 36% of infants with birth weights of less than 1500 g required an exchange transfusion. When phototherapy was used, only 2 of 833 such infants (0.24%) received exchange transfusions. Between January 1988 and October 2007, no exchange transfusions were needed in the neonatal intensive care unit at William Beaumont Hospital, in Royal Oak, Michigan, for 2425 infants who weighed less than 1500 g at birth ⁽²⁾. Wash hands before and after any nursing procedure, Ensure that the premature body is exposed to light, Covering the eyes and genitals of the premature infant so as not to allow the passage of light, The distance of the light from the premature body is 10-30 cm, Turn off the lighting device when the baby is breast-feeding (breastfeeding) and when examining to protect the eyes of the baby, mother, and workers in neonatal care units from the influence of light ⁽³⁾. Remove the eye cover when feeding, Giving intravenous fluids

according to the doctor's instructions, and avoiding exposure of the newborn to dehydration, Changing the newborn's position in the incubator to ensure that the rest of the body is exposed to light and to avoid skin ulcers, Explaining the importance of phototherapy and breastfeeding to the newborn's parents to help them accept the treatment and nursing documentation after any nursing procedure and intervention ⁽⁴⁾.

METHOD AND MATERIALS

Non_ probability, purposive sampling methods. The sample was collected from the beginning of January, 2023, to the beginning of February 2023,. The method of collecting the sample was from nurses working in neonatal units in the city of Mosul. The number of participants in the study were (62) among (50) males, (12) female .A performance was built for the purpose of conducting the questionnaire and the study on the nurses' knowledge about phototherapy for newborns. The performance consisted of two main parts: The first part was related to demographic information such as (gender, age, cultural level, years of service, length of service in the neonatal care unit, their participation in Courses related to phototherapy for newborns). The second part was related to the nurses' practices of phototherapy in neonatal units.). The second instrument (constructed checklist) for nurses practice regarding phototherapy in neonatal care units, this axis contain (16) points .A questionnaire was utilized to gather the data, and SPSS version 25 was used for the analysis.

RESULTS

Table 1: The demographic variables of the study sample (N=62)

Demographic Characteristics	N	Mean	SD	Std. Error	F	P-value
Age	62	30.43	0.32	0.1548	1.832	0.532
Gender	62	1.21	2.97	0.1876	1.981	0.551
Level of Education	62	2.23	1.24	0.1298	0.000	1.000
Experience	62	7.33	0.87	0.1622	1.331	0.312

Table 2: Results of comparison between each sample according to checklist in three observations as a (pre-test, post-test1 and post test2)

Practice	Score	Pre-test		Post-test 1		Post-test 2	
		N	%	N	%	N	%
1: Hand sterilization before and after each procedure with a newborn baby .	0	19	63%	0	0%	0	0%
	1	10	33%	0	0%	4	13%
	2-3	1	4%	30	100%	26	87%
2: Wear a mask and wear medical gloves.	0	15	50%	0	0%	0	0%
	1	15	50%	0	0%	4	14%
	2-3	0	0%	30	100%	26	86%
3: Cleaning and sterilizing the incubator before each entry for newborns.	0	12	40%	0	0%	0	0%
	1	17	57%	0	0%	4	13%

	2-3	1	3%	30	100%	26	87%
	0	30	100%	0	0%	0	0%
4: The baby's weight when entering the neonatal care unit.	1	0	0%	12	40%	15	50%
	2-3	0	0%	18	60%	15	50%
	0	6	20%	0	0%	0	0%
5: Observe and measure the vital signs of each child and record them in the drum.	1	20	67%	3	10%	5	17%
	2-3	4	13%	27	90%	25	83%
	0	24	80%	0	0%	0	0%
6: Observe and measure the percentage of bilirubin in the blood for each child and write it down in the tympanum.	1	4	13%	3	10%	8	27%
	2-3	2	7%	27	90%	22	73%
	0	30	100%	0	0%	0	0%
7: Observe skin color and signs of fluid loss in a newborn baby.	1	0	0%	2	7%	7	23%
	2-3	0	0%	28	93%	23	77%
	0	30	100%	0	0%	0	0%
8: Caring for the skin of a newborn baby by washing with lukewarm water, applying appropriate ointments and creams, and turning it constantly.	1	0	0%	11	37%	15	50%
	2-3	0	0%	19	63%	15	50%
	0	30	100%	0	0%	0	0%
9: Eye care for a newborn baby by washing with lukewarm water and applying appropriate ointments.	1	0	0%	6	20%	15	50%
	2-3	0	0%	24	80%	15	50%
	0	2	7%	0	0%	0	0%
10: Covering eyes when using light therapy.	1	22	73%	0	0%	0	0%
	2-3	6	20%	30	100%	30	100%
	0	0	0%	0	0%	0	0%
11: Stripping a newborn baby when using phototherapy.	1	24	80%	0	0%	0	0%
	2-3	6	20%	30	100%	30	100%
	0	28	93%	0	0%	0	0%
12: Raising the head slightly for a newborn baby in the incubator to avoid gastric vomiting after feeding.	1	2	7%	3	10%	8	27%
	2-3	0	0%	27	90%	22	73%
	0	21	70%	0	0%	0	0%
13: Sterilization of the navel using medical alcohol for a newborn baby.	1	5	17%	7	23%	12	40%
	2-3	4	13%	23	77%	18	60%
	0	30	100%	0	0%	0	0%
14: Applying a distance (10-30) cm between the newborn baby and the light therapy source.	1	0	0%	0	0%	3	10%
	2-3	0	0%	30	100%	27	90%
	0	15	50%	0	0%	0	0%
15: Giving intravenous fluids using the inserted vial (Micro-Drip).	1	12	40%	0	0%	0	0%
	2-3	3	10%	30	100%	30	100%
	0	21	70%	0	0%	0	0%
16: Nursing documentation of each procedure performed on a newborn child in the tympanic cavity.	1	6	20%	0	0%	0	0%
	2-3	3	10%	30	100%	30	100%

DISCUSSION

The purpose of the current study is to educational program of nurses practices towards to phototherapy at neonatal care units. The study included 62 male and female nurses working in the field of neonatal care in hospitals in the city of Mosul and it turns out that a large proportion of them were males within the limits of (80.65%), while women were (19.35%), and the average gender was (1.21), that is, they were dominated by the proportion of males. As for the ages of the sample participating in the study, it was (30.43), that is, they are the youth category and there was a clear effect regarding the educational level, This study similar with others study in Iraq⁽⁵⁻¹¹⁾, who found this male more than female and mean age between (28-31 years). Comparison between (Pre test study) and (Pre test control), comparison between (Post1 test study) and (Post1 test control) and comparison between (Post2 test study) and (Post2 test control). There are no significant differences between (Pre test study) and (Pre test control), there are significant differences between (Post1 test study) and (Post1 test control) and there are significant differences between (Pos2 test study) and (Pos2 test control). The study sample before starting the program did not have any information related to the practical aspect of phototherapy, but when giving the program and after the second test, the results were clearly shown, there are very significant significant differences¹².

CONCLUSIONS

This study concluded through the program that the nurses in the study sample before starting the program did not have any information related to the practical aspect of phototherapy, but when giving the program and after the second test, the results were clearly shown, there are very significant significant differences, and these differences continued until the third test, that is, after two months The nurses retained information related to

the practical side, unlike the control sample, there were no differences.

REFERENCE

- 1 El-Shahat HT. Assessment of Nurses' Knowledge and Practice about Care Needed for Newborn Under Phototherapy in Neonatal Intensive Care Unit (NICU) in Ismailia City. Unpublished Master thesis, Pediatric Nursing, Faculty of Nursing, Suez Canal University. 2014:78.
- 2 Ibrahim MM, Ouda WE, Ismail SS, Abdal A. Assessment of nursing care provided to neonates undergoing phototherapy. Egyptian Journal of Health Care. 2019;10(1):1-2.
- 3 Verma VL, Sharma MK. A Descriptive Study To Assess The Knowledge Regarding Care Of New Born Under Phototherapy Among Staff Nurses With The View To Develop Information Pamphlets In Muskan Hospital, Unnao, UP. Journal of Nursing and Health Science. 2020;9(3):65-71.
- 4 Gamal El Said Elsaleih A, Al-Moneim A, Ibrahim I, Morsy Abou Khalaa MA. Assessment of Neonatal Nurses' Performance Regarding Early Detection of Neurological Dysfunction among Neonates Having Hyperbilirubinemia. Egyptian Journal of Health Care. 2020 Mar 1;11(1):142-60.
- 5 Jarding L, Hogden LA, Messier SE, Kozmenko V, Simanton E, Bjornson K, Brockmueller CO. Development and validation of simulation-based procedural checklists for evaluation of neonatal nurse practitioner performance. *Advances in Neonatal Care*. 2018 Oct 1;18(5):386-92.
- 6 Andreatta PB, Klotz JJ, Dooley-Hash SL, Hauptman JG, Biddinger B, House JB, Ahern K. Performance-based comparison of neonatal intubation training outcomes. *Advances in Neonatal Care*. 2015 Feb 1;15(1):56-64.
- 7 Younis N. Assessment of healthy lifestyle habits among Mosul university students. *Int J Adv Nurs Stud*. 2014 Jul 1;3(2).
- 8 Shao YN, Sun HM, Huang JW, Li ML, Huang RR, Li N. Simulation-based empathy training improves the communication skills of neonatal nurses. *Clinical Simulation in Nursing*. 2018 Sep 1;22:32-42.
- 9 Younis NM, Ahmed MM, Dahir NM. Knowledge and Attitude toward older adults among Nursing Students. 2021. *PJM HS*:15(3).
- 10 Haubner LY, Barry JS, Johnston LC, Soghier L, Tatum PM, Kessler D, Downes K, Auerbach M. Neonatal intubation performance: room for improvement in tertiary neonatal intensive care units. *Resuscitation*. 2013 Oct 1;84(10):1359-64.
- 11 Abbas AS, Younis NM. Assessing the effect Pender's Model in changing employees' Eating Behaviors suffer hypertension at Mosul University Iraq. *Pakistan Journal of Medical & Health Sciences*. 2022 Jul 29;16(06):476-.
- 12 Zebreski L, Bloodgood K, Wylie K. Preparing Neonatal Nurses for Improved Performance, Professional Development, and National Certification Through Simulation. *Advances in Neonatal Care*. 2022 Aug 1;22(4):E131-6.