Knowledge and Practice of Nurses and Midwives Regarding Immediate Care after Birth at Two Tertiary Centers in the Kurdistan Region

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ABSTRACT

Background and objectives: The first two hours following birth are considered the immediate postpartum period, which starts as soon as the placenta is delivered. During the first few days after giving birth, the mother and child should be seen as a unit, supported by their family and/or friends. The first two hours following the baby's birth correspond to the fourth stage of labor. Irregularly, deadlines are separated into three categories: urgent (within 24 hours), early (7 days), and late (6 weeks). The purpose of this study is to ascertain the nurses' and midwives' practices and knowledge of immediate postpartum care and its associated factor between socio-demographical characteristics of nurses and midwives' knowledge and our practice regarding immediate care after birth.

Methods: A descriptive study was conducted in the Kurdistan region. The study was conducted at two hospitals, Maternity Teaching Hospital and Soran Maternity Hospital. The hospitals had several departments, such as the Neonatal Intensive Care Unit, Delivery Unit, Postpartum Unit, and Postoperative Unit. A purposive non-probability sample of fifty nurses and midwives from the delivery and postpartum unit was used. Version 23 of the Statistical Package for the Social Sciences was used to analyze the data.

Results: more than half (51.9%) of the study samples' level of education was institute nursing, while MSc holders made up the highest percentage (1.9%). Most of the samples (71.2%) had trained less than 5 years. More than one-third (36.5%) of nurses-midwives have 15 years of experience. Almost all of the samples (94.2%) had high knowledge about immediate care after birth, and the highest percentage (71.2%) of samples had a good practice in caring for babies after birth.

Conclusion: Midwives have a high level of practice in drying and wrapping babies immediately after birth, it can be concluded that most of the midwfe-nurses who participated in the study have a high level of knowledge regarding immediate care after delivery.

Keywords: Nurses; Knowledge; Attitude; Newborn; Labor; Midwives.

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INTRODUCTION

The first two hours following birth are considered the immediate postpartum period, which starts as soon as the placenta is delivered. During the first few days after giving birth, the mother and child should be seen as a unit, supported by their family and/or friends. The first two hours following the baby's birth are considered the fourth stage of labor [1]. The postpartum phase follows childbirth and is characterized by the anatomical and physiological restoration of body tissues, particularly the pelvic organs, to their pre-pregnancy state. Within 24 hours, early up to 7 days, and late up to 6 weeks are the arbitrary categories into which deadlines are separated [2]. The process of the placenta, membranes, and fetus being expelled through the birth canal is called labor [3]. The birth process and the first few hours of life are critical times in a child's development. The newborn is viewed as a tiny, defenseless being that depends entirely on other people to survive. A typical newborn transitions from a dependent fetal state to an independent existence in less than a minute after birth [4]. Health care providers need to be aware of and supportive of the baby's early adaptations and the transition to the extrauterine stage, as these are crucial to the infant's long-term health. By Offering Essential Care for Newborns (ENC). According to the World Health Organization, 75 percent of neonatal deaths take place during the initial week of life. Between 25% and 45% of these deaths happen within the first 24 hours [5]. The care was as given by medical professionals at birth is essential for avoiding complications and guaranteeing survival. For nurses and other health professionals to give mothers and newborns the critical medical care they need, they must possess the necessary knowledge and abilities, following delivery, care should be given [6]. The World Health Organization (WHO) states that such attention is an integral part of vaginal birth care. Immediate care includes: dry the baby with a towel or warm cloth, ensuring the airway is clear, removing mucus and other substances from the mouth, nose, and throat with a suction pump, mesuring to maintain body temperature, clamping and cutting the umbilical cord with a suction pump and sterile instruments, a few drops of silver nitrate solution or antibiotics are often placed in the eye to prevent infection by any harmful organisms the baby may be exposed to during birth (e.g. mother, sexually transmitted disease). Vitamin K is also used to prevent hemorrhagic disease in newborns. The child's general condition is recorded 1 minute and 5 minutes after birth using the APGAR scale. Breastfeed the child as soon as possible. Breastfeeding/early breastfeeding should be encouraged within the first hour after birth [7]. In addition to maternal vaccinations, such as postpartum measles or RH prophylaxis if necessary, breastfeeding and newborn care are also important [8].To get baseline rates of knowledge and practices for nurses, it is helpful to know information about the assessment of nurses' and midwives' knowledge and practice for immediate care after birth. Planning and evaluating nurses for any necessary training on providing emergency care following childbirth can be facilitated by this information. Since a nurse or midwife is the first healthcare professional to have direct contact Since a nurse or midwife is the first healthcare professional to have direct contact with a newborn during delivery, they are the first to know the quality of care they provide until it is evaluated. As a result, researchers believed that carrying out the current study was crucial to evaluating the nurse's performance in the delivery room in light of the care standards established by the World Health Organization.

The aim of the study is to determine the nurses' and midwives' knowledge and practice regarding immediate care after birth in Erbil governorate. The specific objectives are to determine the socio-demographic characteristics of nurses and midwives in the delivery room and postpartum area, to identify the knowledge and practice regarding critical care for mothers and babies for nurses and midwives in the delivery and postpartum unit in Kurdistan Region, and to find out the association between socio-demographical characteristics of nurses and midwives' knowledge and practice regarding critical care for both mother and baby in the Kurdistan Region.

Methods

The research design was a descriptive study. Maternity Teaching Hospital and Soran Hospital, two hospitals in the Kurdistan Region, served as the study's sites. Midwives and nurses who worked in the delivery and postpartum areas were the target demographic. It was divided into several departments, such as the Neonatal Intensive Care Unit (NICU), Delivery Unit, Postpartum Unit, and Postoperative Unit**.** The study was conducted during the period from the 1st of March to the 1st of December 2023. A convenient sample size of 52 participants was included in the study in the delivery and postpartum unit and would be asked respectfully to participate in the study. 32 nurses and midwives were in the delivery room and postpartum in the maternity teaching hospital in Erbil city and 20 nurses and midwives were in the delivery room and postpartum area in Soran maternity hospital. The Participants included in the study should have had working experience in delivery and postpartum units and they accepted to participate in the study, but the cases did not fulfill the inclusion criteria and refused to participate in the study were excluded. Data was collected by using a questionnaire by the investigator and through direct (face-to-face) interviews and observational checklist methods with all nurses and midwives in the delivery and postpartum room, who kindly agreed to participate in the study. The cases that fulfill the inclusion criteria were selected. The interviews were conducted at the delivery and postpartum units of the Maternity Hospital. The data collection started from the period 1st of June to 1st of July in the delivery room and 1st of July to 1st of August 2023 in the postpartum unit, and each interview session took approximately 15-30 minutes. The investigator delete created the format for the questionnaire. The following sections are included in the questionnaire: First Section: The socio demographic attributes of nurses and midwives, including years of experience, years of education, and age. Second section: A nurse's understanding of postpartum care for mothers and newborns. It was put together using option (2), type (correct, incorrect). It covered (the psychological and local physiological changes, the general physiological changes, nurses' knowledge of postpartum care, and the instructions given to mothers regarding the care of their newborns and hospital discharge). Third Section: A nurse's approach to provide a newborn with an immediate care following delivery using three types of options (2 for always, 1 for occasionally, and 0 for never). It included providing immediate care for the newborn, including monitoring their body temperature and airway, taking their Apgar score one and five minutes after delivery, tending to their umbilical cord, looking for any abnormalities , and identifying and stopping bleeding by giving them vitamin K. After constructing the questionnaire, it was sent to several experts in the fields of medicine, nursing, and biostatistics. The comments

of experts were taken into consideration regarding clarity, relevancy, and adequacy to achieve the objectives. Prior to data collection, formal permission was obtained from the ethical approval of the ethical committee at the College of Nursing and official permission was obtained from the Erbil Directorate of Health. A primary approval was obtained from the research ethics committee, at Soran University/Nursing. Hawler Medical University/College of Nursing with number 10 in 11 April 2023 approved. Oral informed consent was obtained from nurses and midwives before data collection, after the explanation of the purpose of the study, benefits, rights to privacy, and rights to withdraw at any time. The investigator was promised to keep the information for confidentiality and anonymity. Data was collected, coded ,analyzed and then organized into tables using the statistical package for social science (SPSS 23), through frequency, percentage, P-values and the Chi-square test to identify the association between the variables.

RESULTS

3.1- Socio-demographic characteristics of the study sample Table 3-1 focuses on the socio demographic characteristics of the study sample; they had been estimated according to their age, level of education, work place, level of education, marital status, previous training and courses regarding immediate care after birth, years' experience in nursing or midwifery, and place of the previous training courses. The highest percentage (28.9%) of the study sample aged between 30-39 years old, while the lowest percentage (17.3%) aged between 40-49 years old. According to the nurse and midwifery level of education, it shows that the institute nursing level was the highest percentage (51.9%) while Master holders 1.9% were the lowest. The highest percentage marital status of the nurses in the study sample (67.3%) nurses and midwives who had married and the lowest percentage (1.9%) who had divorce Also, according to their work place, the highest percentage (65.4%) of the study sample was in the delivery room and the lowest percentage (34.6%) in the postpartum unit. According to previous training courses, regarding immediate care after birth, nurses, and midwives had the highest percentage (71.2%) in less than 5 years and the lowest percentage (9.6%) in five or more. Also, about the years of experience in nursing or midwifery, the highest percentage (36.5%), had more than 15 years of experience and the lowest percentage (5.8%) had 10-15 years of experience.

Table 3-1: Socio - demographic characteristics of the study sample (n=52).

Variables Age group	F.	(%)
20-29	13	(25.0)
30-39	15	(28.8)
40-49	9	(17.4)
≥ 50	15	(28.8)
Level of Education		
Marital status of nurse		
Single	16	(30.8)
Married	35	(67.3)
Divorce	1	(1.9)
Work place		
Delivery room	34	(65.4)
Postpartum	18	(34.6)
Prior instruction and training in relation to		
The immediate care after birth		
No	10	(19.2)
Less than 5 years	37	(71.2)
5 Or More	5	(9.6)
Years of experience in nursing or midwifery		
Less than 5 years	17	(32.7)
5-10 years	13	(25.0)
10-15 years	3	(5.8)
More than 15 years	19	(36.5)
Place of the previous training courses		
None	11	(21.1)
Ministry of Health	27	(51.9)
University	7	(13.5)
Other	7	(13.5)

3.2- Nurse and midwifery level of knowledge regarding immediate care after birth Table 3-2 indicates the total of nurse and midwifery knowledge, the highest percentage (94.2%) had high knowledge, while the lowest percentage (5.8%) had poor knowledge' regarding the benefits of breastfeeding. Regarding the item's knowledge for the mother and baby, the breastfeeding increases the immunity of newborn; it shows that the highest percentage (100.0%) were "Each newborn baby needs suction with a bubble syringe, while the lowest percentage (42.4%).

Table 3-2: Nurse and midwifery knowledge regarding immediate care after birth

No.	Items	Correct (%)	Incorrect (%)
1.	The care was given to a parturient woman and her newborn in the first two hours after the placenta fully exits the body after the baby is born is referred to as the immediate postpartum period.	(78.8)	(21.2)
2.	Relaxed uterus causes loss of blood rapidly.	(82.7)	(17.3)
3.	Involution is the process whereby the reproductive organs return to their no pregnant state.	(92.3)	(7.7)
4.	The fundus of the uterus may be palpated through the abdominal wall hallway between the umbilicus and the symphysis pubis within a few minutes after birth.	(86.5)	(13.5)
5.	Uterus massage after delivery of placenta helps the uterus to contract.	(88.5)	(11.5)
6.	Oxytocin is given to the mother to prevent bleeding.	(94.2)	(5.8)
7.	Vaginal blood contains small clots and mucus after birth.	(92.3)	(7.7)
8.	Bladder empty after birth decreases the occurrence of bleeding.	(94.2)	(5.8)
9.	Promote rest in the early postpartum period.	(96.2)	(3.8)
10.	Breastfeeding initiates after 2 hours after birth.	(84.6)	(15.4)
11.	All mother are encouraged to breastfeed after birth.	(98.1)	(1.9)
12.	Breastfeeding increases the immunity of newborn.	(100)	(0)
13.	Breastfeeding is the best way to maintain body temp.	(92.3)	(7.7)
14.	Skin-to-skin contact between mother and newborn occurs after 1hr after birth.	(78.8)	(21.2)
15.	Skin-to-skin contact is important for newborn breastfeeding.	(92.3)	(7.7)
16.	Skin-to-skin contact is important to prevent newborn eat lose.	(88.5)	(11.5)
17.	Holding th newborn head down helps to drain the fluid from the infant's chest.	(88.5)	(11.5)
18.	Each newborn baby needs suction with bubble syringe.	(42.3)	(57.7)
19.	Identification band put immediately before cutting the cord.	(57.7)	(42.3)
20.	The band should include only the mother's name	(59.6)	(40.4)

Total level of nurse and midwifery knowledge regarding (ICAB)	F.	(%)
Good knowledge	49	(94.2)
Poor knowledge	3	(5.8)
Total	52	(100)

Table 3- 3: Nurses and midwifery level of practice of the study sample for immediate care after birth. Table 3-3 indicated to the total level of practice to immediate care after birth nurses and midwifery the highest percentage (71.2%) were high practice and the lowest percentage had been (5.8%) poor practice

Table 3-3: Nurses and midwifery level of practice of the study sample for immediate care after birth.

Total level of nurses and midwifery practice of (ICAB)	F.	(%)
Bad practice	12	(23.1)
Poor practice	3	(5.8)
High practice	37	(71.1)
Total	52	(100)

Table 4 it shows that there was no statistical significant association between nurse and midwifery knowledge regarding (ICAB) with all socio demographic data of the study sample. (P > 0.05).

Table: 3-4 Association between nurse and midwifery knowledge with socio-demographic data regarding (ICAB)

Items	Good knowledge	Poor knowledge	P-value
Age group (Years old)			
20-29	11(84.6)	2 (15.4)	
30-39	15 (100)	0 (0)	
40-49	8 (88.9)	1 (11.1)	**0.160 NS**
≥ 50	0(0)	15 (100)	
Workplace			
Delivery room	33 (67.3)	1(33.3)	
Postpartum room	16 (32.7)	2 (66.7)	**0.272 NS**
Level of Education			
Secondary nursing	21 (95.5)	1 (4.5)	
Institute nursing	25 (92.6)	2(7.4)	
College Nursing	2(100)	0(0)	**0.100 NS**
Master in Nursing	1(100)	0(0)	
Single	15 (93.8)	1(6.3)	
Married	33 (94.3)	2(5.7)	**0.1000NS**
Divorce	1 (100)	0(0)	
Years of experience			
Less than 5 years	15 (88.2)	2 (11.8)	
5-10 years	12 (92.3)	1(7.7)	**0.461NS**
10-15 years	3 (100)	0(0)	
More than 15 years	19(100)	0.(0)	
Previous training and courses			
No	9 (90.0)	1(10)	
Less than 5years	35 (94.6)	2 (5.4)	**0.648 NS**
5 Or More	5 (100)	0 (0)	
Fishers exact test			

Table 3-5 indicates that there was a highly statistically significant association between nurse and midwifery practice (ICAB) with age, but non-significant with the workplace, P-value 0.001. level of education, previous course, and training nurse and midwifery of the study sample P-value 0.045 and 0.030 respectively.

Table: 3-5 Association between nurse and midwifery practice with socio-demographic data regarding (ICAB)

Variables	Good practice	Poor practice	Bad practice	P- value
Age group				
20-29	2 (16.7)	9 (75.0)	1(8.3)	
30-39	9 (81.8)	1 (9.1)	1(9.1)	**0.001S**
40-49	4 (80)	0(0)	1(20)	
More than 50	10(90.9)	0 (0)	1(9.1)	
Delivery room	18(66.7)	2 (7.4)	7 (25.9)	
Postpartum	7 (58.3)	5 (41.7)	0 (0)	**0.5.5NS**
Level of Education				
Secondary nursing	12 (80)	3 (20)	0(0)	
Institute nursing	12 (54.5)	9 (40.9)	1 (4.5)	**0.605NS**
College of Nursing	1(100)	0 (0)	0 (0)	
Master in Nursing	1(100)	0 (0)	0(0)	
Previous training and courses				
No	4(40)	5(50)	1 (10)	
Less than 5years	19 (73.1)	6 (23.1)	1(3.8)	**0.306 NS**
5 Or More	2 (66.7)	1 (33.3)	0 (0)	

3-6 Association between knowledge with practice nurses and midwifery regarding (ICAB) Table 3-6 shows that there was no statical significant association between knowledge with practice nurses and midwifery regarding (ICAB).

Table: 3-6 Association between knowledge with practice nurses and midwifery regarding (ICAB)

	Bad practice	Poor practice	Good practice	P-value
Poor knowledge	0(0)	2 (100)	0(0)	
Good knowledge	10(27)	2 (5.4)	25 (67.6)	**0.190 NS**

DISCUSSION

The present study was done in the maternity teaching hospital and Soran maternity hospital-Erbil City Iraqi Kurdistan to determine the knowledge and practice of nurses and midwives regarding immediate care after birth in the delivery and postpartum units. According to experts and highly professional Midwives, it is quite important for midwife-nurses to have awareness regarding labor and delivery processes to decline the mortality rate and morbidity rate because during this time both mother and fetus face more health problems like a virus infections, bacterial infections, mothers' psychological and physiological changes. Analysis of demographic characteristics revealed that the highest percentage of midwife-nurses (28.9%) of the study sample were aged between 30-39 years old, while the lowest percentage (17.3%) aged between 40-49 years old. The study had a similar finding by Ali and Ghafel in 2022 in Karbala [9], and the study conducted in Kirkuk revealed the highest percentage of midwives aged between (30-39 years) and constituted (40%) [10].According to the education level of nurses and midwives, more than half a percent (51.9%) of study samples had an institute nursing level, while MSc holders made up the lowest percentage (1.9%). It is disagreed with a study done by Darya in Kirkuk that most of the participants had secondary nursing level [10]. Regarding the other variable in sociodemographic characteristics, the participated midwife-nurse marital status of the study sample (67.3%) nurses and midwives who had married and the lowest percentage (1.9%) who had divorced. A similar finding was found in a study on Northeast Ethiopia by Hawa Abdu et-al in 2018) [11].

Concerning previous training and courses about the immediate care after birth, nurses and midwives had the highest percentage (71.2%) in less than 5 and the lowest percentage (9.6%) in five or more. The finding disagreed with a study in northeast Ethiopia by Hawa Abdul in 2019 [11].The current study findings illustrate that the highest percentage (36.5%) have more than 15 years of experience; they will affect the process positively by supporting and educating mothers to have information regarding diseases affecting both of them. The finding was in contrast with the study in Tigray, Ethiopia, by Berhe in 2016, in which 52.1% of respondents have 1-5 years of experience [12]. Regarding nurses and midwives' knowledge about immediate care after delivery: The study revealed a total of nurse and midwifery knowledge; the highest percentage (94.2%) had high knowledge, while the lowest percentage (5.8%) had poor knowledge regarding the benefits of breastfeeding. The study in Masindi, Uganda by Richard in 2014 [13], found a generally low level of knowledge among health workers (nurses and midwives) regarding immediate newborn care, whereby fewer than 60% of health workers were considered to have adequate knowledge in prenatal care, regarding reastfeeding and hygienic care. Regarding the item's knowledge for the mother and baby, breastfeeding increases the immunity of newborns; it shows that all of them (100.0%) were "Each newborn baby needs suction with a bubble syringe, while the lowest percentage (42.3%). A study in Australia by Ruth in 2003 found that 90% of midwives reported being confident and effective in meeting the needs of breastfeeding women in immediate care after delivery [14].According to the same study, 94.2 percent of midwife nurses have correct responses about oxytocin given to mothers to prevent bleeding, the same finding was seen in São Paulo, Brazil by Masip in 2017, where 88% have

correct responses to giving oxytocin to control uterine bleeding immediately after birth [15].Overall knowledge and practice of respondents toward immediate newborn care. This study was 94.2% and 71.1% respectively, which is higher than what was found in the study done in Bahir Dar City by Yemaneh in 2016 which is 56% and 59.7% respectively [16]. Also, midwives have a high level of practice of drying and wrapping babies immediately after birth (97.2%) and keeping the baby on the mother's abdomen or chest immediately after birth. And for others practicing in the labor room. Concerning the association between socio demographic data and level of knowledge of nurses and midwives in the delivery room and postpartum, there will be a non-significant association statistically between their age group and level of knowledge. The same finding for the level of education and years of experience the relation will be non-significant [17].Regarding the association between the practice of nurses-midwives in the delivery room and socio demographic characteristics, the data shows a statistically non-significant association between midwives' age group and practice which is similar to the study in the University of York in 2003 [18]. This might be attributed to low nurses' information. On the other hand, the study shows a highly significant association between the place of work from the delivery room and postpartum. Also, this relation was similar to a study done by Heydari in Iran, which showed there will be A statistically significant with the level of education and previous training and courses [19].

CONCLUSION

Based on the findings of the present study, it can be concluded that most of the midwife-nurses who participated in the study have a high level of knowledge regarding immediate care after delivery. The association of midwife knowledge with some socio demographic characteristics will be non-significant statistically. Also, midwives have a high level of practice in drying and wrapping babies immediately after birth, keeping the baby on the mother's abdomen or chest immediately after birth. And for others practicing in the labor room. Highly significant association with the place of work from the delivery room and postpartum. Also, the relation will be statistically significant with the level of education and previous training and courses.

Recommendation:

The study recommends that it should be providing regular training courses, especially outside the country, on the importance of nursing care and enhancing their practices, experiences, and abilities in women's postpartum care. Continuous educational programs are necessary to improve the nurses' and midwives' ability to provide care and deal with any problem occurring immediately after birth., It also suggests that frequent training courses on the value of nursing should be offered, especially outside of Kurdistan and Iraq. Attention and level of nursing services offered soon after birth for both the mother and the baby.

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