

# Evaluation of Nurses' Practices towards Care of the newly born Infant Immediately after Birth in Delivery Rooms in Baghdad City Hospitals

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## Summary:

**Background:** Every hospital with delivery services should have skilled nurses immediately available for neonatal care, and appropriate equipments should be present at all deliveries. The first hour after birth has a major influence on the survival, future health, and well being of a newly born infant. The nurses have an important role at this time, the care they give during this period is critical in helping to prevent complication.

**Objectives:** The study aims to evaluate nurses' practices toward care of the newborn infant immediately after birth in delivery rooms and finds the relationship between the nurses' practices and their demographic characteristics.

**Methodology:** A descriptive study was carried out in 3 teaching hospitals (Al-Yarmouk Teaching Hospital, Al-Karama General Teaching Hospital, and Al-karkh Maternity Teaching Hospital) in Baghdad City, Iraq, from the 22th May 2013 to 30 July 2013. A purposive (non probability) sample of 40 nurses who are working in the delivery room in these hospital. The data was collected through using constructed questionnaire which comprises 44 items and filled by using interview technique. The reliability of the questionnaire was determined through a pilot study and validity through a panel of experts. The data were analyzed through the application of descriptive statistic frequency, percentage, and the application of inferential statistical procedures, which include Pearson correlation coefficient and chi-square.

**Results:** The study results shows that (30.0 %) of the study sample were 36-40 years old, (40.0 %) graduated from medical institute, (75.0%) were married, (32.5%) have more than 16 years of employment in nursing, (30.0 %) have more than 16 years of practices in maternal delivery room,(55%) of them have training session and (72.5%) participate in training session inside of Iraq. The Percentages for total nurses' practices scores toward care of the newly born immediately after birth includes 25% for physical examination, 30% for neonatal supplies and equipment, 25% for providing warmth and 20% for preventing injury, infection and provide feeding. The study demonstrated that there was poor nurses' practice about care of the newborn infant immediately after birth in delivery rooms

**Conclusions:** The nurses had poor practices in caring for the newborn babies immediately after birth in delivery rooms.

**Key words:** Evaluation, Nurses' Practices, Newly born Infant Care, delivery room.

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## Introduction:

The most critical period in a newborn is the first 24 hours after birth. It entails the highest mortality in life and a high mortality rate is a characteristic of the whole neonatal period. The most important need for the newborn immediately after birth is a clear airway to enable the newborn to breathe effectively since the placenta has ceased to function as an organ of gas exchange. It is in the maintenance of adequate oxygen supply through effective respiration that the survival of the newborn greatly depends [1].

In the United States, more than 3.1 million newborn deaths

that occurred in 2010, a quarter to half of them occurred within the first 24 hours after birth. Many of these deaths occurred in babies born with of lack care immediately after birth, or babies with asphyxiated around the time of delivery, or babies with infections, and too early and too small. The immediate postnatal periods are the most critical for newborn and maternal survival. Unfortunately, the majority of mothers and newborns in low- and middle-income countries do not receive optimal care during these periods. According to the World Health Organization, (2010) the majority of all neonatal deaths (75%) occur during the first week of life. Of those deaths, between 25% and 45% occur within the first 24hours. Further, the neonatal period accounts for 37% of all deaths among children

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under five [2].

Every hospital with delivery services should have skilled nurses immediately available for neonatal care, and appropriate equipment should be present at all deliveries. The first hour after birth has a major influence on the survival, future health, and wellbeing of a newly born infant. The nurses have an important role at this time, the care they give during this period is critical in helping to prevent complications [3].

Many newborn lives can be saved by the use of interventions that require simple technology. The majority of these interventions can be effectively provided by a single skilled birth attendant caring for the mother and the newborn. The basic needs of newborns at birth are: warmth thorough drying, immediate skin-to-skin contact of mothers and babies to promote bonding and breastfeeding, normal breathing, protection from infections, cord clamping and cutting after the first minutes after birth, and exclusive breastfeeding [4].

After the first hour of life, newborns should receive eye care, vitamin K, and recommended immunizations (birth dose of OPV and Hepatitis B vaccine). They should be assessed for birth weight, gestational age, congenital defects and signs of newborn illness. Special care should be provided for sick newborns, those who are preterm and/or low birth weight, and those who are exposed or infected by HIV or have congenital syphilis [5].

This study aimed to evaluate nurses' practices toward care of the newborn infant immediately after birth in delivery rooms of 3 hospitals in Baghdad city and finds the relationship between the nurses' practices and their demographic characteristics

#### **Subjects and Methods:**

A Descriptive study was conducted on purposive (non probability) sample of 40 nurses who work in delivery room of 3 teaching hospitals (Al-Yarmouk Teaching Hospital, Al-Karama General Teaching Hospital, and Al-karkh Maternity Teaching Hospital) in Baghdad City, during the period from the 22th May 2013 to 26 July 2013. The data was collected through using specially constructed questionnaire, which comprises two parts: Part I: The demographic Characteristics for the nurses include nurses' age, level of education, marital status, number of years of employment in nursing, years of experience in the delivery room and training courses. Part II: Nurses' Practices is concerned with data related to the nurses' practices and comprised of 44 items, each item consist of 3 sub items, the items were rated according to 3 point rating scale as (always, sometimes, never) the level of the scale were scored as (3 for always, 2 for sometimes, 1 for never). The investigator held a direct interview to obtain data from nurses and used constructed questionnaire format that was answered by interview. The validity of the questionnaire is determined through a panel of 10 experts. The reliability of the

questionnaire was determined through a pilot study. The data was analyzed through the application of descriptive statistic frequency, percentage, and the application of inferential statistical procedures, which include Pearson correlation coefficient and chi-square.

#### **Results:**

Table 1 shows that (30.0 %) of the study sample were 36-40 years old, (40.0 %) graduated from medical institute, (75.0%) were married, (32.5%) have more than 16 years of employment in nursing, (30.0 %) have more than 16 years of practices in maternal delivery room, (55%) of them have training session and (72.5%) participate in training session inside of Iraq. The Percentages for total nurses' practices scores toward care of the newly born immediately after birth includes 25% for physical examination, 30% for neonatal supplies and equipment, 25% for providing warmth and 20% for preventing injury, infection and provide feeding.

The level of nurses' practices by 3 levels scales for care of the newly born immediately after birth is shown in table 2.

The Percentages for nurses' practices scores toward physical examination of the newborn, provide neonatal supplies and equipment, provide warmth and prevent hypothermia and ensure safety, prevent injury, infection and provide feeding for newborn immediately after birth are shown in table 3.

There was no significant association between nurse's practices with their age, level of education, marital status, years of employment in nursing, years of employment in delivery room, training session, and location of training session. The Chi-square statistic is significant  $P < 0.05$  level.

Table 4

**Table (1): Demographic characteristic of study sample**

Demographic characteristic	Frequency	Percentage %	
Nurses' age in years	>20	4	10.0
	21-25 year	6	15.0
	26-30	8	20.0
	31-35	10	25.0
	36-40	12	30.0
	Total	40	100
Nurses' education Level	Secondary nursing school graduate	14	35.0
	Medical institute graduate	16	40.0
	Nursing college graduate	10	25.0
Marital status	Total	40	100
	Single	6	15.0
	Married	30	75.0
Years of employment in nursing	Divorced	4	10.0
	Total	40	100
	< 1	3	7.5
	2 - 6	7	17.5
	7- 11	8	20.0
	12- 15	9	22.5
Experience years in delivery room	>16	13	32.0
	Total	40	100
	< 1	3	7.5
	2-6	7	17.5
	7 -11	8	20.0
Total	12 - 15	10	25.0
	> 16	12	30.0
	Total	40	100

**Cont. table (1).**

Demographic characteristic	Frequency	Percentage %	
Training session	Training session	22	55.0
	No training session	18	45.0
	Total	40	100
Location of training session	Inside Iraq	16	72.5
	Outside Iraq	6	27.5
	Total	22	100

**Table 2: Level of nurses' practices by 3 levels scales for care of the newborn after birth**

Items	Frequency	Percentage	
Physical examination of the newborn in the delivery room: 12 items	Poor	14	35.0
	Acceptable	16	40.0
	Good	10	25.0
Total	40	100	
Provide neonatal supplies and equipment:8 items	Poor	16	40.0
	Acceptable	12	30.0
	Good	12	30.0
Total	40	100	
Provide warmth and prevent hypothermia: 10 items	Poor	18	45.0
	Acceptable	12	30.0
	Good	10	25.0
Total	40	100	
Ensure safety, prevent injury, infection and provide feeding : 14 items	Poor	20	50.0
	Acceptable	12	30.0
	Good	8	20.0
Total	40	100	

**Table 3: The percentages for nurses' practices scores toward variables**

The Percentages for nurses' practices scores toward variables	poor Score	Score Acceptable	Score good
Variables	Percent	percent	percent
Physical examination of the newborn immediately after birth	35	40	25
provide neonatal supplies and equipment	40	30	30
Provide warmth and prevent hypothermia for newborn	45	30	25
Ensure safety, prevent injury, infection and provide feeding for newborn	50	30	20

**Table 4. Mean and standard deviation of scores of nurses' demographic characteristics**

No.	Demographic characteristics	Mean ± SD
1.	I.Nurses' age	
	<20	230.00 ± 9.64
	21---25	230.14 ±10.22
	26---30	232.83 ± 9.75
	31---35	231.40 ± 10.38
	36 – 40	231.00 ±8.33
	P value	0.876
2.	Education Level	
	Secondary nursing school graduate	228.22 ± 9.56
	Medical institute graduate	232.63 ± 9.13
	Nursing college graduate	232.07 ± 9.47
	P value	0.892
3.	Marital status	
	Single	229.38 ± 8.16
	Married	231.85 ±10.43
	Divorced	236.33 ± 3.51
	P value	0.672
4.	Years of employment in nursing	
	< 1	232.00 ± 11.36
	2 – 6	230.47 ± 9.13
	7 -11	233.70 ± 7.06
	12 - 15	230.33 ± 13.68
	16 and more	230.83 ± 9.72
	P value	0.936
5.	Experience years in delivery room	
	<1	230.00± 8.73
	2-6	233.92 ± 8.76
	7 – 10	224.20 ± 9.23
	11 - 15	233.50 ± 9.71
	More than 16	235.37 ± 6.97
	P value	0.191
6.	Training session	
	yes training session	5± 9.20 234.7
	No training session	230.00 ± 9.10
	P value	0.140
7.	Location of training session	
	Inside Iraq	233.50 ± 13.92
	Outside Iraq	234.75 ± 9.20
	P value	0.756

SD = Standard Deviation

**Discussion:**

The birth of a baby is one of life's most wondrous moments. Few experiences can compare with this event. Newborn babies have amazing abilities, yet they are completely dependent on others for every aspect - feeding, warmth, and comfort. [6]. The age of most of nurses (30%) was between 36-40 years old, and this result agrees with Jabir M study (40%) [7]. The percent of medical institute graduates was (40%), this result agree with Alsultani [9] who mentioned that majority of his study sample were institute graduates working in intensive care unit and therefore the medical institute graduates should be trained because they have more information about caring and handling babies in delivery room. The nurses' years of employment in nursing included (32.5%) have more than 16 years, and (30.0%) have more than 16 years of practices in delivery room, this result agrees with AL-Saidi KB [10] who mentioned that more than one quarter of his sample have more than 15 years of experience at pediatric wards. Fifty-five percent of nurses have training session and (72.5%) participate in training session inside Iraq. The support of this finding is presented by Valman H B [11] who stated that the nurses should have frequent training in neonatal care immediately after birth which make them more eligible for talking care of newborn babies in delivery rooms, as such comprehensive and frequent training make the nurse more practical in detecting babies who are unwell or those getting worse insipid of prepare resuscitation which leads to less morbidity and mortality. Training sessions have a positive and important effect on nurses' practices for care newborn immediately after birth. The nurses' practices are poor level toward care of newly born immediately after birth. Table 2, which agree with Sobel H [12] and other study who mentioned that nurses have a poor quality of care in relation to birth preparation and care provided by the nursing personnel in the selected aspects of care to the newborn babies from birth to two hours of age in the labor room and up to discharge, adaptation of newborn baby to extra quality of care that he or she receives immediately after birth. Hengstermann [13] mentioned that the WHO has identified simple interventions that, if applied routinely by the nurse to the newborn immediately after birth to decrease the problems that threaten growth & development. These early interventions are to prevent hypothermia which can that threaten newborns, infection control practices because they reduce the risk of neonatal sepsis. The results indicated in table 3 the percentages for nurses' practices scores toward physical examination of the newborn immediately after birth was 40.0 %, for acceptable, the results supported by Velaphi S [14] who mentioned that the a physical examination is performed to check for obvious signs that the baby is healthy, and the nurse should learn the necessary procedures will be done over the next few minutes and hours after birth. These may be done in the delivery room; depending

on the hospital policy and the condition of the baby these procedures include the measurement of the temperature, heart rate, respiratory rate and measurement of weight, length, and head circumference and care of baby's umbilical cord stump. The percentages for nurses' practices scores toward provide neonatal supplies and equipment of the newborn immediately after birth was 40.0% was poor. The study supported by Datta [15] who mentioned that the nurse responsible to ensure that prepare the environment and equipment before delivery of the baby, all equipment must be checked frequently. When a birth takes place, the equipment includes warm dry towels and blankets, a sterile instrument for cutting the umbilical cord and clean gloves for the attendant and assistants. It may also be helpful to have a suction device with a suitably sized suction catheter and also [14] mentioned that the nurse should document any follow-up actions to ensure that the equipments are available and functional. The percentages for nurses' practices scores toward provide warmth and prevent hypothermia for newborn immediately after birth was 45% for poor level. [16] Kattwinkel who explained that the nurse should a adequate preparations, accurate evaluation of the newborn and prompt baby warm by place in a warm area, well-lit, draught free area with a flat surface placed below a radiant heater, and maintaining skin-to-skin contact with the mother and mentioned that at every delivery there should be at least one nurse whose primary responsibility for the newly born. Kenner C [5] who mentioned that the newborn baby is wet from the amniotic fluid and can easily become cold, drying the baby and using warm blankets and heat lamps can help prevent heat loss. Often a knitted hat is placed on the baby's head. Placing a baby skin-to-skin on the mother's chest or abdomen also helps to keep the baby warm. The percentages for nurses' practices scores toward ensure safety; prevent injury, infection and provide feeding for newborn immediately after birth was 50% for poor. Shauq [17] who stated that wherever babies are delivered there should responsible nurse with adequate skills and experience to provide proper environment to maintain safety and should prevent injury and mentioned that the nurse should learn how prevent the baby from infection immediately after birth. Bissinger [18] who mentioned that the initiation of breastfeeding should be encouraged as soon as possible after the birth. Table 4. This table shows that there is no significant association between nurse's practices and their age, level of education, marital status, years of employment in maternal delivery room, years of employment in nursing, training session, and location of training session. The Chi-square statistic is significant  $P < 0.05$  level.

**Conclusions:**

There is no statistical significant association between nurses' practice and their demographic characteristics. The study

demonstrated that there was poor nurses' practice at delivery room toward neonatal care. The study recommended prepare qualified nurses who can work in the delivery room and increase health education of the nurses working in the delivery room about neonatal care immediately after birth through regular training.

**Author's contributions:**

SHK participated in the design of the study, collection of data and performed the statistical analysis, sequence alignment and drafting and finalization of the manuscript. EGM participated in the study design, sequence alignment and drafting. NNH participated in the study design, sequence alignment and drafting and finalization of the manuscript. All authors read and approved the final manuscript

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