Immediate Newborn Care Practices among Nurses Working At Selected Tertiary Hospitals, Bharatpur

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Abstract:
Immediate newborn care is the necessary care given soon after birth up to one hour of life. The objective was to find out immediate newborn care practices among nurses working at selected tertiary hospitals, Bharatpur. Descriptive cross-sectional research design was adopted and a total 94 nurses were selected by consecutive sampling technique from Bharatpur Government Hospital and Chitwan Medical College Teaching Hospital, Chitwan in between 11 August to 6 September, 2019. Structured self-administered questionnaire and observational checklist were used to collect data. Descriptive (Frequency, percentage, mean, median, standard deviation & quartile) and inferential statistics (Chi-square, Fisher's exact test) were used to analyze data. Only 26.6% of nurses had good level of immediate newborn practices and 73.4% had poor. The significant influencing variables for level of immediate newborn care practice were total professional experience (p=0.021) and participated in continuous nursing education (p=0.011). The nurses performed almost all the steps including critical steps but majority of nurses (72.3%) did not practice skin to skin contact with mother and nearly one fourth of nurses (24.5%) did not observed for readiness of breast feeding within 1ˢᵗ hour of delivery. It is strongly recommended to follow protocol of immediate newborn care by all nursing staff, regular keen supervision and availability of continuous nursing education on immediate newborn care is needed for better performance of quality of care on immediate newborn care.
Keywords: *Practices, Immediate newborn care, Nurses*

I.   Introduction

Immediate newborn care is the necessary care given soon after birth up to one hour of life. The main components of immediate newborn care includes immediate and thorough drying of body, wiping of eyes, observing APGAR score, cord clamping and cutting after the first minutes after birth, early initiation of breastfeeding and skin to skin contact with the mother.[1]

There is a higher risk of dying of children in the first 28 days of life during the neonatal period. The main cause of neonatal deaths are due to preterm birth, intra-partum related complications such as birth asphyxia or lack of breathing at birth, infections and birth defects.[2] Hypothermia is a major complication of newborn care. Heat loss in neonates is due to exposure to external environment results in heat loss through evaporation, conduction, convection and radiation. Step by step drying, direct skin-to-skin contact immediately upon delivery and covering with a blanket (prior to cord clamping) reduce this threat. Drying stimulates breathing, skin-to-skin contact initiates establishment of the newborn with maternal flora and facilitates olfactory learning, successful intake colostrum and sustained breastfeeding.[3]

The health care professionals play a vital role to ensure that the new born has best possible beginning of life. The nurse must be aware of the potential problems and be alert to the newborns extra uterine transition and to intervene appropriately when needed. The nurse is the first health care provider who has direct contact with the neonate during birth. Nurses require the knowledge and skill to take care of the newborn babies applying basic principles so that complications can be prevented.[4]

The care of the newborn includes observation of neonates, breast feeding, thermoregulation, elimination and surveillance for neonatal problems.[5] There is a strong relationship between quality of care and performance of care providers in the delivery room and several hours later on neonatal unit. Therefore, it is important to have good practice of health care providers regarding immediate newborn care to reduce neonatal mortality and morbidity.

II.   Material and Methods

Descriptive cross sectional research design was conducted to find out the immediate newborn care practices among nurses working at selected tertiary hospitals, Bharatpur. Consecutive sampling technique was used to select 94 nurses (Bharatpur government hospital: 42, Chitwan medical college teaching hospital: 52) with having at least one month of work experience. Data was collected from 11 August to 6 September, 2019. In a day, approximately 3-4 nurses were observed through non-concealed participatory appear during immediate newborn care, and then distributed self-administer structured questions for socio demographic & professional related questions. About 60- 75 minutes was taken to collect data from each respondent. Ethical approval from Institutional Review Committee, Chitwan Medical College Bharatpur, Chitwan (CMC-IRC/076/077-055) was taken for the study. Written informed consent was obtained from each respondent before data collection. Confidentiality was assured and maintained. Data was entered in statistical package for social science (SPSS) version 20 and analyzed and interpreted in terms of descriptive (Frequency, percentage, mean, median, standard deviation & quartile) and inferential statistics (Chi-square and Fisher's exact test).

III.   Results

The findings of the study are presented in following tables. Socio-demographic characteristics of the respondents (Table 1), Professional characteristics of the respondents (Table 2), Level of practice regarding immediate newborn care of the respondents (Table 3), Association of level of practice regarding immediate newborn care and socio-demographic characteristics of the respondents (Table 4), Association of level of practice regarding immediate newborn care and professional characteristics of the respondents (Table 5).

Table 1 Socio-demographic Characteristics of the Respondents

n=94

Variables	Number	Percentage
Age (years)		
<40	75	79.8
≥40	19	20.2
Median=24, IQR=Q_3-Q_1=27-22, Min.=19, Max.=54		
Residence		
Municipality	93	98.9
Rural Municipality	1	1.1
Ethnicity		
Brahmin	36	38.3
Chhetri	21	22.3
Janajati	31	33
Dalit	6	6.4
Religion		
Hinduism	79	84
Buddhism	9	9.6
Islam	1	1.1
Christanity	5	5.3
Marital status		
Married	40	42.6
Unmarried	54	57.4

Min.-Minimum   Max.-Maximum   IQR-Interquartile Range

Table 2 Professional Characteristics of the Respondents

n=94

Variables	Number	Percentage
Professional qualification		
Auxiliary Nurse Midwives (ANM)	6	6.4
Proficiency Certificate Level in Nursing	67	71.3
Bachelor in Nursing/Bachelor of Science in Nursing	20	21.2
Masters in Nursing	1	1.1
Professional designation		
ANM	6	6.3
Staff Nurse	78	83
Senior Staff Nurse	9	9.6
Supervisor	1	1.1
Professional experience (years)		
<5	61	64.9
5 to 9	20	21.3
≥10	13	13.8
Labor/OT experience (years)		
<5	77	81.9

≥5	17	18.1
Participated in continuous nursing education on immediate newborn care practice		
Yes	51	54.3
No	43	45.7
Sufficient resources to provide immediate newborn care in labor/OT		
Yes	77	81.9
No	17	18.1
Availability of protocol on immediate newborn care		
Yes	83	88.3
No	11	11.7
Regular supervision for practice of immediate newborn care		
Yes	67	71.3
No	27	28.7

Table 3 Level of Practice regarding Immediate Newborn Care of the Respondents

Level of Practice		Number	Percentage
Good Practice	(≥70%)	25	26.6
Poor Practice	(<70%)	69	73.4
Total		94	100

Table 4 Association of Level of Practice regarding Immediate Newborn Care and Socio-demographic Characteristics of the Respondents

n=94

Variables	Level of Practice		χ^2	p-value
	Good No. (%)	**Poor** No. (%)		
Age (In years)				
<40	17(19.9)	58(77.3)	2.934	0.87
≥40	8(42.1)	11(57.9)		
Place of residence				
Municipality	25(26.9)	68(73.1)	-	1.000 ${}^{\epsilon}$
Rural Municipality	0(.0)	1(100.0)		
Ethnicity				
Brahmin	11(30.0)	25(26.4)		
Chhetri	4(19.0)	17(81.0)	0.906	0.636
Others	10(27.0)	27(73.4)		
Religion				
Hinduism	22(27.8)	57(72.2)	-	0.752 ${}^{\epsilon}$
Non-Hinduism	3(20.0)	12(80.0)		
Marital status				
Married	10(25.0)	30(75.0)	0.091	0.763
Unmarried	15(27.8)	39(72.2)		

Significant Level at .05 ϵ= Fisher's Exact Test   Others=Janajati, Dalit

Table 5 Association of Level of Practice regarding Immediate Newborn Care and Professional Characteristics of the Respondents

n=94

Variables	Level of Practice		χ^2	p-value
	Good No. (%)	**Poor** No. (%)		
Total professional experience (years)				
<5	16(26.2)	45(73.8)		
5-9	2(10.0)	18(90.0)	7.771	**0.021**
≥ 10	7(53.8)	6(46.2)		
Experience in labor/OT (years)				
<5	17(22.1)	60(77.9)	-	0.065 ${}^{\epsilon}$
≥5	8(47.1)	9(52.9)		
Participated in continuous nursing education on immediate newborn care practices				
Yes	19(37.3)	32(62.7)	6.488	**0.011**
No	6(14.0)	37(86.0)		
Sufficient resources to provide immediate newborn care in labor/OT				
Yes	17(22.1)	60(77.9)	-	0.065 ${}^{\epsilon}$
No	8(47.1)	9(52.9)		
Availability of protocol on immediate newborn care				
Yes	21(25.3)	62(74.7)	-	0.475 ${}^{\epsilon}$
No	4(36.4)	7(63.6)		

Regular supervision				
Yes		19(28.4)	48(71.6)	0.371	0.542
No		6(22.2)	21(77.8)		

Significant Level at .05 　　　　　　 ϵ= *Fisher's Exact Test*

IV.　　Discussion

In the study, 26.6% of nurses had good practice on immediate newborn care and remaining 73.4% had poor practice. Inconsistent with the findings of Gebru, Murugan, Abrha & Goyteom (2019) showed 52.4% had good practice on immediate newborn care among midwives and remaining had poor practice.[6] The study was also contrary with other study conducted by Berhe, Tinsae & Gebreegziabhe (2017) revealed that good practice of immediate newborn care among health care providers was 72.77%.[7] This might be due to variation in setting and rapid turnover of nursing staff.

Regarding skin to skin contact, only 26% nurses had good practice of skin to skin contact with mother within first hour of life. This study was contrast to other studies conducted by Yemaneh & Dagnachew (2017) and Berhe et al. (2017) reported 61.9% of health professionals and 86.4% of health care providers had good practice of skin to skin contact with mother within first hour of life respectively.[8, 7] This might be due to mismatched between nurse patient ratios and inadequate trained of skin to skin contact.

In regards to initiation of breast feeding, 75.5% of nurses had helped the mother to begin breast feeding within one hour of birth. Similarly study conducted by Keitany, Magutah & Getanda (2018) showed 70.5% of health care workers had helped the mother to begin breast feeding within one hour of birth.[9]

In the present study, almost (95.7%) nurses had given injection Vitamin K to newborn. Likewise, a study conducted by Yamaneh & Dagnachew (2017) revealed 97.8% of health professionals had given injection Vitamin K.[8]

In the current study 100% of nurses applied Chlorhexidine ointment in umbilical stump after cutting the cord whereas the study is inconsistent with the findings of Berhe et al. (2017) showed only 8.5% health care providers applied Chlorhexidine ointment.[7] This might be due to not mandatory in national guidelines and shortage of materials.

Likewise in regards to the identification tag, 96.8% nurses had put the identification tag to baby after delivery, which contradict with the study of Gebru et al. (2019) that 99.3% midwives had not put identification tag to baby after delivery.[6] Likewise, by Yamaneh & Dagnachew (2017) concluded that only 23.1% health professionals had put the identification tag to baby after delivery.[8] This might be due to not following neonatal guidelines during immediate newborn care practice.

The present study revealed that 100% of nurses had weighted the baby after delivery whereas; only 88.3% nurses had weighted the baby in the study conducted by Tasew, Teshal, Bahrey, Mariye & Teklay (2018).[10]

Regarding respond to mother's queries positively, 100% nurses respond positively towards mother queries. The study result is higher than the study conducted by Yamaneh & Dagnachew (2017) that 90.3% respond to mother queries positively.[8]

The present study findings showed that there was statistically significant association between level of practice on immediate newborn care and total professional experience (p=0.021). In contrast to the findings of the study conducted by Jamsheer & Shaker (2018) showed there was no statistically significant association between nurses' professional working experience and quality of immediate newborn care.[11] This might be due to different setting and sample size included in the study.

The findings of the study revealed that there was statistically significant association between level of practice of immediate newborn care and participated in continuous nursing education (p=0.011). The result is nearly similar to the study conducted by Tasew et al. (2019) reported that trained nurses had higher level of good practice than not trained. Likewise, study conducted by Negussie, Hailu & Megenta (2018) that there was significant difference between trained and not trained nurses & midwives, that trained had more good practice (p=0.004) than not trained.[12]

V.　　Conclusion

Majority of nurses had poor level of immediate newborn care practices which indicate that nurses have to overrate their practice. This might be due to lower professional experience, lack of in-service education, rapid turnover of nurses and inadequate nurse-patient ratio. There is significant association between level of practice of immediate newborn care with total professional experience and participated in continuous nursing education.

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