



Copyright © The Author(s). 2022 This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Citation:

Batool SF, Saleem Y. Awareness about Essential Newborn Care among Nurses and Midwives: A Cross-Sectional Study. JNMP. 2022; 2(2): 52-56.

Corresponding Author Email:

s.faiza.batool@outlook.com

Funding:

The author(s) received no specific funding for this work.

Conflicts of Interests:

The authors have declared that no competing interests exist.

Received 20/09/2022

Accepted 27/10/2022

First Published 31/12/2022

ORIGINAL STUDY

Awareness about Essential Newborn Care among Nurses and Midwives: A Cross-Sectional Study

Syeda Faiza Batool¹ & Yusra Saleem²

¹Department of Physiology, University of Karachi, Karachi-Pakistan

²Advance Educational Institute & Research Centre, Karachi-Pakistan

Abstract

Background: A newborn's survival, future health, and well-being are significantly influenced by the time of birth and the first hour after birth. Medical personnel plays a significant role during childbirth, and care is essential to prevent difficulties and death.

Methodology: A cross-sectional study was conducted from October 2022 to November 2022 at Koochi Goth Women's Hospital Karachi. Interviewers administered standardized, pretested questionnaires to gather data.

Results: The participants' average age was 21.195 years. The vast majority of participants were familiar with neonatal care guidelines. The study volunteers, however, needed to fully comprehend the danger indications. The hygienic procedures used during childbirth were also deemed to be satisfactory.

Conclusion: In conclusion, the concerned bodies should consider providing on-the-job refresher training, raising the standards for health professionals, and providing incentives and mandates to increase enthusiasm for working in the delivery room. Essential and professional mentoring, emergency neonatal care (ENC) resources and academic background were the factors linked with a strong knowledge of ENC, working experience, and the availability of on-the-job training. These were the aspects related to good practice of primary baby care.

Keywords

Newborn Care, Nurses, Midwives, Awareness, Essential Care



Introduction

The move from intrauterine to extrauterine life is abrupt, and the infant must undergo significant and successful physiological adjustments to ensure survival¹. A newborn's survival, future health, and well-being are significantly influenced by the time of birth and the first hour after birth. Medical personnel plays a significant role during childbirth, and care is essential to prevent difficulties and death. Only skilled acute care combined with prompt crisis management can save 50% of newborn death and 45% of intrapartum stillborns².

The antenatal protocol is a set of time-bound and sequentially ordered care an infant acquires at birth. It has structured, efficient phases to ensure the survival of the infant and the mother³. In 2017, there were 2.5 million infant deaths worldwide, with an average of 18 fatalities for every 1,000 live births⁴. Every day, nearly 7,000 newborns pass away, making up about 47% of all fatalities among children. Neonatal fatalities decreased globally from 5 million in 1990 to 2.5 million in 2017⁵. One technique for enhancing neonatal health outcomes is to promote ENC, but this practice is not always followed according to protocol^{6,7}.

Essential newborn care techniques are required to promote knowledge and reduce infant mortality. The baby's adaptability to extrauterine life and first steps depend on the baby's future health, which healthcare practitioners should recognize and support at the time of delivery and far beyond by providing essential infant care^{1,8}.

As part of sustainable development target 3, the United Nations intended to reduce avoidable neonatal deaths from 22 per 1,000 live births to 12 per 1,000 live births by 2030⁹. Even with many

tactics to lower the neonatal death rate, in Pakistan, the infant mortality rate in 2022 fell by 1.91% from 2021 to 56.888 deaths per 1000 live births. In Pakistan, the infant mortality rate in 2021 was 57.998 deaths per 1000 live births, a decrease of 1.88% from 2020^{10,11}.

Research on baby care could be much better in Pakistan. Essential newborn care preventative actions could ease the burden of baby illness and mortality¹². This study will evaluate nurses and midwives on their expertise in neonatal care. Also, this study will aid nurses in developing their knowledge of newborn care procedures through instructional courses.

Methodology

It was a cross-sectional study conducted from October 2022 to November 2022 at Koohi Goth Women's Hospital Karachi. Interviewers administered standardized, pretested questionnaires to gather data. The questionnaires were divided into multiple sections: socio-demographic variables, neonatal car knowledge, and practice critical newborn care. The participants were given instructions on how to fill out the open-ended questions on the questionnaires on their own. 50 nurses were recruited in this study who were found eligible for this study. The inclusion criteria for the study were that participants at least understand Urdu or English.

Result

The mean age of the participants was 21±1.95 years. The majority of the participants were aware of the newborn care standards; however, the danger signs were not clearly understood by the study subjects. The hygienic practices during birth were also found satisfactory. (Table 1)

Table 1: Demographic Information of the Study Participants.

Variables	Responses	
Sex	Male	0(0)
	Female	50(100)
Educational Degree	Primary	15(30)

	Secondary	20(20)
	Higher Secondary	05(10)
	Professional Degree/Diploma	10(20)
Marital status	Single	41(82)
	Married	09(18)
	Divorced/Widowed	0(0)
Working experience (in the year)	0-2	35(70)
	2-4	10(20)
	4-6	5(10)
	>6	0(0)

Knowledge of Nurses about Immediate neonatal care was assessed. The results are discussed in Table 2.

Table 2: Knowledge about Immediate Neonatal Care in Nurses

Knowledge Variable	Responses n(%)
When starting ENBC	
1. Before birth	15(30)
2. During birth	12(24)
3. Immediate after birth	23(46)
4. I don't know	
After birth newborn kept on	
1. Besides the mother	09(18)
2. With someone else	09(18)
3. On the mother's chest/ belly	30(60)
4. On newborn bed /table	02(4)
Method to prevent hypothermia	
1. Immediately drying	13(26)
2. Allowing the skin to skin contact	21(41)
3. Early bathing	13(26)
4. Other	03(6)
Action to prevent bleeding in the newborn	
1. Breastfeed the child	10(20)
2. Not necessary to give anything	20(40)
3. Give vitamin K	30(60)
4. Other	00(0)
The dose of Vitamin k for preterm babies	
1. 1 mg	20(40)
2. 0.5 mg	25(50)
3. Other	05(10)
Low birth weight	
1. < 3000 gm	27(54)
2. < 2500 gm	21(42)
3. < 1500 gm	02(4)
4. < 1000 gm	00(0)
Time of postnatal care appointment	
1. Within the first 24hr of delivery	20(40)
2. On the 3rd day of delivery	20(40)
3. On the 7th day of delivery	10(20)

Table 3 shows the hygienic practicing habits of nurses during the birth process.

Table 3: Hygienic practices of nurses during the birth process

Practicing Habits	Responses n(%)	
	Yes	No
Hand washing before the procedure	50(100)	0(0)
Put on the sterile glove	50(100)	0(0)
Wearing mask	41(82)	09(18)
Wipe the eye & face when the head is delivered	35(70)	15(30)
Check & sucks the airway after delivery	33(66)	17(35)
Counsel mother about newborn danger signs before discharge	27(54)	23(46)

Discussion

The crucial period for an infant's subsequent development and growth is the first few hours following delivery, which heavily depends on the care provided. It is more expensive than in Egypt, Uganda, and India, according to Ayele et al. Because nurses are the first line of treatment for mothers and children whose lives they are trying to save, there is a significant need to enhance practice through continual education and pertinent training¹². This is particularly crucial for nurse¹³. The overall newborn knowledge score in this study is consistent with the study done in the southern Ethiopian regions of Wolaita and Bahirdar, where the knowledge score of ENC was 57.9% and 56%, respectively. However, this result was higher than that of studies done in Masindi, Uganda¹⁴. However, our results are lower than those of the studies done in India and Tigray¹⁵. The variance may result from variations in in-service training, participant education levels, and research setting. These discrepancies may be attributable primarily to the participants' varying education levels and lack of access to crucial newborn care training for healthcare professionals¹⁶.

Participants had to identify a minimum of four of the standard warning flags in order to be considered informed. Fewer than two thirds of survey respondents list four or more neonatal danger indicators, compared to more than two thirds who do not^{17,18}. This is in line with the findings of studies conducted in Egypt, where the outcomes were better than those in Uganda but inferior to those in the Philippines¹⁹. Postponing

breastfeeding after delivery decreases the likelihood that women and babies will benefit from early initiation and raises the risk of hypothermia and hypoglycemia²⁰. According to 50 survey participants, nursing must commence within the first few hours after delivery, and much more than 3/4 of them were aware that colostrum is crucial to an infant's ability to fight infections.

Conclusion

Compared to other studies in Asia and Africa, the knowledge of basic newborn care among nurses and midwives was kind of average, but the conduct of fundamental newborn care was extremely little. Working experience and the availability of on-the-job training were the factors related with a good practice of basic infant care, whereas on-the-job coaching, the accessibility of emergency neonatal care (ENC) resources, and academic background were the factors associated with a good knowledge of ENC. In order to improve interest in working in the delivery room, concerned bodies should take into account offering refresher on-the-job training, improving the qualifications of health practitioners, and offering rewards and imperatives.

Acknowledge

We thank all the nursing staff for their active participation in the study.

References

1. World Health Organization, WHO Recommendations on Newborn Health: Guidelines Approved by the

- WHO Guidelines Review Committee, World Health Organization, Geneva. 2017.
2. Arba A, Zana Z. Knowledge of essential newborn care and associated factors among nurses and midwives: a cross-sectional study at public health facilities in Wolaita zone, southern Ethiopia, 2019. *International journal of pediatrics*. 2020 Mar 18;2020.
 3. Negussie BB, Hailu FB, Megenta AD. Knowledge and practice of essential newborn care and associated factors among nurses and midwives working at health centers in Jimma Zone, Ethiopia, 2016. *Journal of Nursing and Care*. 2018; 7(446):2167-8.
 4. Victora JD, Silveira MF, Tonial CT, Victora CG, Barros FC, Horta BL, et al., Prevalence, mortality and risk factors associated with very low birth weight preterm infants: an analysis of 33 years. *Jornal de Pediatria*. 2020; 96:327-32.
 5. Tasew H, Teshale T, Bahrey D, Mariye T, Teklay G. Immediate newborn care of knowledge, practice and associated factors among health care providers in Northwestern Zonal health facilities Tigray, Ethiopia, 2018. *BMC research notes*. 2019; 12(1):1-8.
 6. Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, et al., High-quality health systems in the Sustainable Development Goals era: time for a revolution. *The Lancet global health*. 2018; 6(11):e1196-252.
 7. Msemo G, Massawe A, Mmbando D, Rusibamayila N, Manji K, Kidanto HL, et al., Newborn mortality and fresh stillbirth rates in Tanzania after helping babies breathe training. *Pediatrics*. 2013; 131(2):e353-60.
 8. Arba A and Zana Z. Knowledge of essential newborn care and associated factors among nurses and midwives: a cross-sectional study at public health facilities in Wolaita zone, southern Ethiopia, 2019. *International journal of pediatrics*. 2020; 2020.
 9. World Health Organization. *Newborns: Reducing Mortality*, World Health Organization, 2018.
 10. W. V. M. A. Lerberghe, Z. Matthews, and C. Wolfheim. *Make Every Mother and Child Count*, WHO, Geneva, 2005.
 11. Malhotra S, Zodpey SP, Vidyasagan AL, Sharma K, Raj SS, Neogi SB, Pathak G, Saraf A. Assessment of essential newborn care services in secondary-level facilities from two districts of India. *Journal of health, population, and nutrition*. 2014;32(1):130.
 12. Ariff S, Soofi SB, Sadiq K, Feroze AB, Khan S, Jafarey SN, Ali N, Bhutta ZA. Evaluation of health workforce competence in maternal and neonatal issues in public health sector of Pakistan: an assessment of their training needs. *BMC health services research*. 2010;10(1):1-9.
 13. Harvey SA, Blandón YCW, McCaw-Binns A, Sandino I, Urbina L, Rodríguez C. the Nicaraguan maternal and neonatal health quality improvement group. Are skilled birth attendants really skilled? A measurement method, some disturbing results and a potential way forward. *Bull World Health Organ*. 2007;85:783–90.
 14. Pakistan Infant Mortality Rate 1950-2023. <https://www.macrotrends.net/countries/PAK/pakistan/infant-mortality-rate#:~:text=The%20infant%20mortality%20rate%20for,a%201.88%25%20decline%20from%202020>
 15. Stensgaard CN, Bech CM, Holm-Hansen C, Skytte TB, Ali SM, Mohd UA. Essential newborn care practices for healthy newborns at a district hospital in Pemba, Tanzania: a cross-sectional observational study utilizing video recordings. *Global Health Action*. 2022;15(1):2067398.
 16. Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, et al., High-quality health systems in the Sustainable Development Goals era: time for a revolution. *The Lancet global health*. 2018; 6(11):e1196-252.
 17. V. Paul, *Newborn Nursing for Facility Based Care. Learner's Guide*, Department of Pediatrics, AIIMS, New Delhi, 3rd edition. 2014.
 18. Waiswa P, Kallander K, Peterson S, Tomson G, Pariyo GW. Using the three delays model to understand why newborn babies die in eastern Uganda. *Tropical medicine & international health*. 2010;15(8):964-72.
 19. Acharya D, Paudel R, Gautam K, Gautam S, Upadhyaya T. Knowledge of maternal and newborn care among primary level health workers in Kapilvastu district of Nepal. *Annals of Medical and Health Sciences Research*. 2016;6(1):27-32.
 20. Bayisa D, Teklay B, Demissie M, Dina H. Assessment of Factors Associated With Practice and Knowledge of Essential Newborn Care Among Nurse and Midwives in Assosa Zone Governmental Health Facilities, Western Ethiopia, 2021.
 - 21.