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Original Article

Assessment of Knowledge of Nurses and Midwives regarding Immediate Newborn Care

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ABSTRACT

Knowledge is the fundamental aspect of every health care organization. to devotion to necessary of immediate newborn care. At hospital-based level resuscitation is the first step for the prevention of complication in newborn. **Objective:** To assess the knowledge of nurses and midwives regarding immediate newborn care. **Methods:** Data was collected from 200 nurses and midwives from two maternity hospitals (Lady Willingdon hospital and Lady Aitchison hospital) Lahore using structured based questionnaire. A hospital based descriptive study design was conducted in labor rooms of two maternity hospitals of Lahore. **Results:** The result showed that, study population had a fair knowledge level in spite of this; their performance level of practices was poor towards immediate care of the newborn. **Conclusions:** The study showed that nurses and midwives performed well below the expertise levels of knowledge and skills regarding immediate care of the newborn This assessment highlighted that there is very extreme need of training and education for nurses and midwives and episodic assessment to tackle gaps and develop overwhelmed continuing modules for education.

INTRODUCTION

Knowledge plays a crucial role in the healthcare system, especially when it comes to providing immediate care for newborns [1]. The first 28 days of a baby's life, known as the neonatal period, are critical for their growth and survival. During this period, newborns are vulnerable and dependent on others for their breathing, organ functions, and overall life processes. Nurses and midwives are the first point of contact for newborn care, providing guidance to mothers during pregnancy, labor, and post-partum periods [2]. However, the non-availability of skilled birth attendants in many areas can lead to a high number of infant deaths. Developing effective behavior and communication strategies is vital to reducing neonatal mortality rates in countries like Pakistan, where the current infant mortality rate is 66/1000 live births, the third highest globally [3]. Poor knowledge, attitudes, and hazardous delivery practices towards immediate newborn care contribute to this high rate. Pakistan also has the highest rate of first-day deaths and stillbirths. Newborn care starts during pregnancy, with regular antenatal visits, blood screening, proper diet, and rest helping to minimize the risk of infection for the fetus [4]. After birth, immediate newborn care begins in the delivery room, with nurses and midwives conducting a quick physical assessment of the baby's condition [5]. The APGAR assessment is a scoring system used to evaluate a newborn's condition within the first minute of birth,

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assessing Appearance, Pulse, Grimace, Activity, and Respiration [6, 7]. Nurses and midwives must have appropriate knowledge to provide the best care for newborns, including adequate heat protection, airway clearance, and physical assessments [8, 9]. Proper clamping and cutting of the umbilical cord, cleaning the airway, skin-to-skin contact, and identification banding are crucial components of newborn care. Hence, improving knowledge and implementing proper protocols for immediate newborn care can significantly reduce infant mortality rates, particularly in developing countries [10]. The first few hours after birth are critical for the baby's survival, and the availability of skilled birth attendants and their knowledge of best practices are essential for ensuring the health of newborns [11, 12]. This study explored the information about the knowledge of nurses and midwives regarding immediate care of the newborn. On the bases of this research work policy maker or stakeholder can take sufficient measure for the deficiencies in the knowledge of nurses' and midwives about how to perform immediate care of the newborn efficiently and effectively and how to improve the clinical performance regarding immediate newborn care.

METHODS

The study was a quantitative one and aimed to assess nurses' and midwives' knowledge towards immediate newborn care. The specific objectives were to evaluate their knowledge towards immediate care of the newborn, as well as their self-perception of their abilities to care for a newborn. The study was conducted at four government health sectors in Lahore, and the target population was all nurses and midwives. A descriptive study was carried out, and a sample of 200 nurses and midwives was taken using convenient sampling. The sample size was determined using Slovin's formula, where n is the sample size, N is the population size, and E is the margin of error. The main tool for this study was a self-reported adapted questionnaire consisting of twenty questions, and data was collected using a five-point Likert scale (strongly disagree to strongly agree). The participants were instructed through a cover letter to complete the questionnaire, and data was analyzed using Statistical Package of Social Sciences (SPSS). The collected data was computed using a frequency table chart. Before conducting the research work, permission was obtained, and participants were provided with enough information and assured that their information would be kept confidential. The participants were informed that their participation in the study was voluntary, and the study was free from harm for every participant. Each participant was observed on a single occasion. The study setting was the labor rooms of the hospitals, and the inclusion criteria were all nurses and midwives above 21 years of age who had completed the general nursing and midwifery training course and had at least one year of experience working in labor rooms of the selected hospitals in Lahore and were willing to participate in the research. The exclusion criteria were all nurses and midwives below 21 years of age, having no experience in labor room and performing duty outside the labor rooms of the selected hospitals of Lahore, and those who were not willing to participate in this research.

RESULTS

Figure 1 shows age of participants. 30% were in range 21-25 years, 41.5% were in range 26-30 years, 27% were in range 31-35 years and 1.5% were in range 36-40 years.

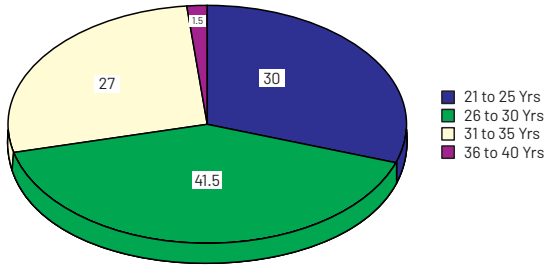

Figure 1: Age of Participants

Figure 2 shows qualification of participants. 66.5% of participants were in nursing + midwifery category. 24% were in BSN/Post RN category. 2% were in MSN category and 7.5% were in other categories.

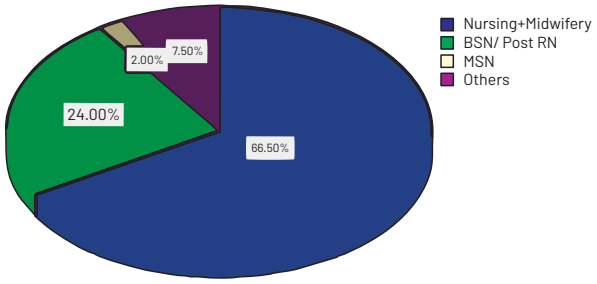

Figure 2: Qualification of Participants

Figure 3 shows experience of the participants. 26.5% were in range 1-5 years. 46.5% were in range 6-10years. 25.5% were in 11-15 years. 1.5% were above 15 years.

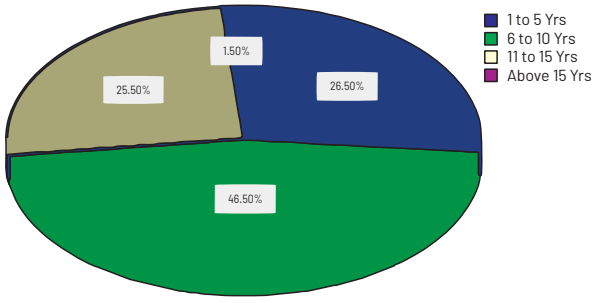

Figure 3: Experience of Participants

Table 1 shows response of participants regarding

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questions about immediate newborn care.

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
The immediate care of newborn start during birth	0%	0.5%	4%	52%	43.5%
The immediate care of newborn included five steps	0%	0%	7.5%	44%	48.5%
About the identification band there is three identification bands	0%	5%	6%	43.5%	50%
Type of identification band (infant footprints and code number).	0%	0%	0%	50%	50%
The identification band should include (the mother's full name, hospital admission, sex of infant, date and time of delivery)	0%	1.5%	3%	43.5%	52%
During the delivery of the head, we wipe the face and eye, suction of the mouth and nares if needed.	47.5%	30%	18%	2.5%	2%
Suctioning the mouth before the nares	38.5%	22%	22.5%	7.5%	9.5%
Dry the newborn by using two sterile towels	0%	6.5%	21%	48%	24%
Placed the newborn immediately after delivery on the mother's abdomen	5%	2.5%	28.5%	29%	39%
If the baby not crying or breathing well within 30 seconds of birth, call for help clamp and cut the cord and take the baby to resuscitation table.	5%	8.5%	22.5%	37%	31%
Tie the cord the cord 3-4 cm from the baby's abdomen and tie away 1 cm from the tie	7%	21.5%	24.5%	26.5%	20%
To cut and tie the cord we used sterile (gauze, scissors and artery fo rceps)	0.5%	4.5%	19.5%	46%	29.5%
Cutting the cord immediately after cessation of cord pulsation (2-3 min after birth)	1.005%	7.538%	27.64%	36.18%	27.64%
Use separate sterile scissors during cutting the cord	0.5%	10.5%	23.5%	42.5%	23%
Wearing sterile gloves during delivery	0.5%	15%	28%	28.5%	28%
Willing to deliver the same care for newborn whose mother have (HIV or HCVs)	4.5%	14.5%	20.5%	32%	28.5%
Wearing sterile gown, clean mask and glasses	2%	18%	24.5%	28.5%	27%

Table 1: Response of participants regarding questions about immediate newborn care

DISCUSSION

In present study, the age of the participants were 26-30 years old which is consider young age. Mostly nurses midwives had general nursing plus one year midwifery specialization and some others were BSN/ Post RN (24%). Experience of the mostly participant were 5-10 years. According to demographic characteristics, results showed that mostly participants were young, educated and experienced. Similar research was conducted in Ethiopia in 2019 which showed that only 21.2% of the participants were educated up to above 12 or college level of education. 35.5% of participants had no proper education, so the level of education among women plays a major role in their understanding of the importance of correct ways immediate newborn care [13]. The quality care depends upon the qualification and experience related to care. Mostly participants agreed (52%) and 43.5% were strongly agree that the immediate care of the newborn start during the birth. The immediate care of newborn included five steps, strongly agree were 48.5 % and agree were 44%. A research was conducted in the Khartoum and Khartoum North Teaching Hospital (Labor Room) in 2015, the results showed 40% of participants believed that immediate newborn care start during birth. Steps about the immediate newborn care were known by 45% which is close to present research i.e., 48.5% [14]. Majority of the participants were strongly agree (50%) and agree (43.5%) about the identification bands and all knew about the identification band of infant foot prints and code number. Majority of the participants knew that the identification band should include mother full name, hospital admission date, sex of the infant, date and time of delivery. Knowledge about identification bands is better in present research as compared to a study which was conducted in Uganda [15]. But present study result shows that about question of identification band putting immediately before cutting the cord, the response from the participants were very poor. Knowledge about wiping the face, eye, suction of the mouth and nares was intermediate level, 47.5% were disagree, 30% were disagree. A research was conducted in Ethiopia in 2016, 77.5% were do the suction of mouth and nose first than suction of the eye and 67% identify the newborn immediately before cutting the cord and 32.5% after cutting the cord. The response was poor from the participants (37% agree) if the baby not crying or breathing well within the 30 seconds of birth, call for clamp and cut the cord to take the baby resuscitation [16]. There was mixture of poor response from the participants related to time of cutting the cord, tie the cord 3-4 cm from the baby's abdomen and tie away 1cm from the tie and poor infection control like wearing the sterile gloves during the delivery, use separate sterile scissor during cutting the cord (40.5%) which was close with a study that was conducted by de Graft-Johnson *et al.*, [17]. Results showed that the

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application of universal precaution was very poor (wearing of sterile gloves was 37.5%, wearing sterile gown was 25% and wearing mask was 60%). Placing the newborn on the mother's abdomen after delivery for sensation, response of the participants was poor 39.5% and undecided level of the participants were 28.5%. Similar results were shown by some other studies that provides evidence for importance of knowledge of nurses and midwifes regarding immediate newborn care [18-20].

CONCLUSIONS

According to the results of the study the researcher concluded that knowledge of nurses' midwives regarding immediate care of the newborn in the labor room of two mentioned hospital was reasonable (53%) but performance of the participants was poor. There were omitted some steps regarding immediate care of the newborn care in labor room. Worldwide precautions are not followed properly in these two mentioned hospitals. There is mixture of attitude towards wearing disposable gloves, during delivery, to cut and tie the cord with sterile gauze Scissors and artery forceps regarding immediate care immediate of newborn in the labor room.

Conflicts of Interest

The authors declare no conflict of interest.

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