

Newborn Care Practices in Pakistan – A Study in Community

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ABSTRACT

Objective: We conducted this study to investigate the types of newborn care practices followed by our population in a non-teaching healthcare facility in Lahore.

Study Design: Questionnaire-based cross-sectional study

Place and Duration of Study: This study was conducted at the Amir Medical Centre, a non-teaching hospital Lahore, from July 2022 to December 2022.

Methods: Interviewees were selected by non-probability convenient sampling.

Results: A total of 364 mothers were interviewed during the 6-month study period, with a mean age of 27.6 ± 7.2 years, as depicted in Table 1. The majority of these women were married (332 out of 364), and among them, 56% had one or more children. This implies that the remaining 44% (comprising unmarried individuals, married individuals without children, and those with their first child) lacked prior experience in newborn care. It's noteworthy that nearly all participants hailed from Lahore city, making this essentially an urban-based study. Only 11.5% of the participants had either no education or had completed only primary school level education. Furthermore, a significant majority of the women (72%) identified as housewives.

Conclusion: There is a pressing need for the dissemination of evidence-based guidelines regarding newborn care, to both women and medical personnel.

Key Words: Newborn, Population, Healthcare Facility

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INTRODUCTION

The neonatal period, which refers to the first 28 days of life, is crucial for a newborn's survival. According to the World Health Organization (WHO), approximately 6,700 newborns die every day, resulting in 2.4 million deaths within the first 28 days of life in 2020⁽¹⁾. Over the past two decades, the neonatal mortality rate has decreased by 51%, dropping from 37 deaths per 1,000 live births in 1990 to 18 deaths per 1,000 live births in 2021 in developed countries⁽²⁾. However, in Pakistan, the neonatal mortality rate remains high, third highest globally, with 42 deaths per 1,000 live births, accounting for 7% of all newborn deaths worldwide⁽³⁾. Appropriate newborn care practices alone can significantly reduce the neonatal mortality rate.

Kangaroo care, a method that involves holding the baby in skin-to-skin contact, is an essential newborn care practice.

It helps regulate the child's heartbeat and breathing, maintain body temperature, and improve oxygen saturation levels. Kangaroo care is particularly important for premature babies as it reduces the risk of mortality.

Using clean instruments to cut the cord and later antiseptic cleaning of the umbilical cord is another vital newborn care practice. It is important to keep the umbilical cord dry and clean to ensure natural detachment within 5-15 days. Inadequate care can lead to an infection called omphalitis.

Early and exclusive breastfeeding is another crucial practice that significantly reduces neonatal mortality. Breast milk contains essential nutrients and antibodies necessary for a baby's growth. The American Academy of Pediatrics (AAP) recommends exclusive breastfeeding for the first six months⁽⁴⁾. Colostrum, the first milk produced by a mother's body, is watery and yellowish-white, and it should be given to neonate as it is rich in protein, immunoglobulin A (IgA), and several other antibodies that strengthen the baby's immune system.

Studies on newborn care practices have been conducted in several teaching hospitals in Lahore and Pakistan. However, research in non-teaching hospitals located in peripheral regions of cities has been lacking. Therefore, we conducted this study to investigate the types of newborn care practices followed by our population in a non-teaching healthcare facility in Lahore.

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METHODS

The questionnaire-based cross-sectional study was done in Amir Medical Centre, a non-teaching hospital located close to the walled city of Lahore, Pakistan, with a well-established, busy Outpatient Department and obstetric units. The study was carried out over a period of 6 months, from July 2022 to December 2022. Interviewees were selected by non-probability convenient sampling. The sample size was calculated using the website ⁽⁵⁾. A previous study done in Lahore showed an assumed prevalence of poor care practices at 60% ⁽⁶⁾. Using the confidence interval of 95% and an error margin of 5%, the calculated sample size was 364. Mothers and female relatives (above the age of 18 years) of babies and children were interviewed during their visits to the outpatient clinic.

All the females below 18 years of age and those who were unwilling to be interviewed were excluded.

The participating doctors were trained in the questionnaire. They interviewed mothers and their female attendants in OPD clinics after their verbal consent. The answers given were recorded on the form and captured data about socio-demographics, the knowledge, attitude, and practiced newborn care.

An analysis, both descriptive and inferential, was conducted using SPSS version 26. The chi-square test was used to determine any significant associations of neonatal care practices with socio-demographic factors like age, education, and occupation. The patients were not given any financial incentives to take part in answering the research questions.

RESULTS

A total of 364 mothers were interviewed during the 6-month study period, with a mean age of 27.6 ± 7.2 years, as depicted in Table 1. The majority of these women were married (332 out of 364), and among them, 56% had one or more children. This implies that the remaining 44% (comprising unmarried individuals, married individuals without children, and those with their first child) lacked prior experience in newborn care. It's noteworthy that nearly all participants hailed from Lahore city, making this essentially an urban-based study. Only 11.5% of the participants had either no education or had completed only primary school level education. Furthermore, a significant majority of the women (72%) identified as housewives.

Table No. 1: Demographic Categories (Total 364)

Class	Category	Number	Percent
Age	18-25 Years	184	50.5
	26-35 years	130	35.7
	More than 35 years	50	13.7
Education	Nil	24	6.6
	1-5 class (primary)	18	4.9

	6-10 class (Matric)	82	22.5
	11-12 years (college)	110	30.2
	More than 12 years	130	35.7
Marital status	Unmarried	32	8.8
	Married but no kid	6	1.6
	Married with 1 st kid	122	33.5
	Married with >1 kid	204	56
Occupation	Housewife	262	72
	Professional career	102	28

Inquiring about newborn care, we questioned the participants regarding the source of their information (see Table 2). The majority (81.9%) reported receiving advice from medical personnel, with doctors accounting for 67.6% and nurses/midwives for 14.3%.

Table No. 2: Newborn Care Practices (total 364)

Class	Categories	Number	Percent
Source of knowledge about newborn practices	Doctor	246	67.6
	Nurse/Midwife	52	14.3
	Family	32	8.8
	Other	34	9.3
Timing of first bath	Immediately (within 1 st hour)	18	4.9
	Within 4 hours	30	8.2
	4-24 hours	115	31.3
	After 24 hours	202	55.5
Use of bath	Baby Bath/ Shampoo with water	172	47.3
	Soap and water	164	45.1
	Water only	28	7.7
How to take care of cord?	With spirit	270	74.2
	With alcohol wipes	40	11
	With water only and dry	36	9.9
	Other	18	4.9
Should ghutti be given?	No	56	15.4
	Yes- honey	216	59.3
	Yes- milk	82	22.5
	Yes- dates	10	2.7
When should first feed be given?	Within 1 st hour	222	61
	1-4 hours	126	34.6
	5-12 hours	8	2.2
	After 12 hours	8	2.2
What should be the first feed?	Mother Feed	330	90.7
	Formula Milk	32	8.8
	Other	2	0.5
Knowledge about kangaroo care	Yes	104	28.6
	No	150	41.2
	Don't know	110	30.2
Should colostrum be given?	Yes	222	61
	No	18	4.9
	Don't know	124	34.1

Regarding the first bath, only 13.1% of the participants advocated giving a bath within the first 4 hours of life, while the majority preferred to do so after 24 hours. Approximately half (56.1%) intended to use either soap or shampoo for the bath. Only one-fourth (28.6%) of the participants possessed knowledge about kangaroo care.

The use of ghutti was advocated by most participants (62%), with honey being the most popular choice. However, a substantial 90.7% expressed a desire to initiate breastfeeding as the first type of feed, and 61% aimed to start within the baby's first hour of life. Spirit was the most commonly used substance (74.2%) to clean the umbilical cord after birth.

Regarding feeding practices, the majority wished to provide the first feed within the first hour of life (61%), using mother's milk (90.7%). Approximately 60% intended to offer colostrum to the baby. Notably, there was no significant correlation between demographics and these practices.

DISCUSSION

Healthy newborn care practices have a significant impact on reducing neonatal mortality and morbidity, contributing to the healthy growth of infants. Essential newborn care practices include ensuring the provision of colostrum, early and exclusive breastfeeding, practicing kangaroo care, and hygienically cleaning the umbilical cord^(7,8).

In our study, 93.3% of the participants had received education beyond primary school. However, 72% of them were housewives, indicating limited exposure after completing their education. Furthermore, there are no lessons on newborn care in school or college curriculums. This suggests that the newborn care practices followed by women are influenced by traditions observed in their homes. Additionally, 43.9% of the participants were either unmarried, married with no children, or married with their first child, so no previous experience, indicating that their practices may be based on word-of-mouth traditions.

Our study revealed that 81.9% of the participants claimed to have obtained knowledge about newborn care practices from medical personnel. However, data related to factors affecting newborn care practices, such as the provision of "ghutti" (discussed later), contradicts the notion that participants received knowledge about neonatal care practices from medical personnel. This suggests that the women interviewed might be justifying their family traditions by claiming they received this knowledge from medical professionals. Another possibility is that the information conveyed by local doctors may be incomplete, misleading, or contrary to essential neonatal practices.

In our study, 61% of the participants agreed that colostrum should be given, which varies from another study in Pakistan⁽⁶⁾ where 91.6% of the participants

agreed to give colostrum. Results from our study indicate an encouraging response regarding giving colostrum. However, by promoting this during antenatal care education, this figure can approach 100%.

Regarding when the baby should be breastfed, 61% of the participants agreed that the first feed should be given immediately after birth, and 90.7% preferred maternal feeding. This is a promising aspect that should be promoted and emphasized during antenatal education. A UNICEF study shows that 78 million neonates worldwide are not breastfed within the first hour after birth⁽⁸⁾.

The use of prelacteals (ghutti) for neonates right after birth is widespread, especially in Pakistan, due to cultural beliefs. Among the participants, 84.6% agreed to give prelacteals, with honey being the most commonly used (59.3%), followed by milk (22.5%), and then dates (2.7%). A study in Ethiopia showed that the prevalence of prelacteal feeding was 46.4%, with similar results found in studies in Senegal, Sudan, and India⁽⁹⁾. Despite advice given by medical staff at the hospital, grandmothers and relatives often disregard this advice, highlighting the influence of tradition over medical guidelines.

Our study was conducted in a primary care hospital close to the walled city of Lahore. It's noteworthy that only 28.6% of the interviewees had knowledge about kangaroo care, which aligns with the assumption that the population in that area may be less educated about neonatal practices. This differs significantly from studies in other parts of the world where the prevalence of knowledge of kangaroo care is much higher⁽¹⁰⁾.

Cleaning the cord hygienically is another important neonatal care practice that must be followed. Surprisingly, only 9.9% of the participants cleaned the cord with water and kept it dry, which is the correct method. It's alarming that 90.1% of the participants used other methods, such as alcohol wipes or spirit, to clean the cord. Another study of Lahore shows that only 12.6% use nothing to clean the cord and keep it dry^(12,13). Public education should emphasize the importance of keeping the cord clean and the hazards associated with cleaning it with spirit or alcohol wipes⁽¹⁴⁾.

Regarding the timing of the first bath, 86.8% of the respondents believed it is preferable to give the first bath after 4 hours. Additionally, 47.3% of the participants used baby bath/shampoo, making it the most popular choice, followed by soap (45.1%). Based on our findings, kangaroo care is the least practiced among mothers, and a large number of the people had limited knowledge of or did not practice newborn care practices, which is concerning^(15,16). Kangaroo care and the provision of colostrum should be emphasized more during antenatal education⁽¹⁷⁾. Instead of contradicting the traditional belief that colostrum is 'dirty,' efforts should focus on making people more aware of its health

benefits, which may lead them to reconsider their traditional views on colostrum⁽¹⁸⁾.

CONCLUSION

There is a pressing need for the dissemination of evidence-based guidelines regarding newborn care, to both women and medical personnel.

Author's Contribution:

Concept & Design of Study: Ayan Amir
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 Revisiting Critically: Ayan Amir, Rameen Amir
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