



Assessing Knowledge and Practices Regarding Kangaroo Mother Care among Healthcare Professionals in Lahore General Hospital, Lahore

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Authors' Contribution

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ABSTRACT

Background: Kangaroo mother care is skin-to-skin contact between the mother's chest and her baby providing enough breastfeeding for preterm and low birth weight babies. This technique is cost-effective and alternative to an incubator. **Aim:** The study aimed to examine the knowledge and practice regarding kangaroo mother care among healthcare professionals at Lahore General Hospital, Lahore. **Materials and Methods:** A descriptive, cross-sectional study was conducted at pediatric units, obstetrics units, emergency operation theater for C section and labor room of Lahore General Hospital, Lahore. Sample size was 150. Participants were selected by purposive sampling technique. Data was collected using a pretested questionnaire and analyzed with statistical package for social sciences version 27. **Result:** Results indicated that 70% of participants had poor knowledge and 63% of participants had poor practice regarding Kangaroo Mother Care. A significant portion of participants 57.3% knew that Kangaroo Mother Care can be given by the mothers. More interestingly, more than half of participants 62% talked about Kangaroo Mother Care to mothers daily. **Conclusion:** Participants generally had poor knowledge and practice regarding kangaroo mother care. However, continuous education and training are crucial to address identified gaps and ensure competency. Addressing the gaps found in the current study is indispensable to bridge this gap.

INTRODUCTION

Skin-to-skin contact between a mother and her infant during breastfeeding is known as "Kangaroo Mother Care." Both preterm and full-term babies benefit from kangaroo care in preventing hypothermia. According to certain research, KMC practice lowers LBW newborns' morbidity and mortality (Khan et al., 2023). This technique is cost-effective and alternative to an incubator and needs proper counseling of the mother and family members (Tahir & Fatmi, 2019).

Kangaroo mother care (KMC) is a mediation that empowers the mother to play a focal job in her own and her infant's care, accordingly guaranteeing the power stays with the mother, and well-being laborers support and answer the mother's and infant's requirements (Organization, 2023). It is a simple technique that helps the newborn to survive in the outside environment. Kangaroo mother care improves neonatal physiologic conditions such as breathing, heart rate, temperature and sleeping patterns. It also improves the mother's psychological condition after delivery by decreasing stress levels. It has both short-term and long-term effects which are beneficial for infants (Utami & Huang, 2019).

KMC is an economical, instant, and beneficial technique to save lives of low birth weight and premature

babies especially those in those countries who are poor or have fewer resources. It is also an alternative option to incubatory care to protect infants from hypothermia. KMC is an important therapeutic technique that reduces neonatal mortality and morbidity. It is also revealed that by doing kangaroo mother care, the practice of breastfeeding also increases after discharge from the hospital (Khan et al., 2023).

Few hospitals have adopted this method as standard practice in place of numerous forms of research. The newborn's temperature is more easily regulated by the parent's steady body temperature than by an incubator, and breastfeeding is made more convenient. In neonatal intensive care units (NICUs), overcrowding and a lack of resources prompted the first development of KMC (Olawuyi et al., 2021).

Kangaroo Mother Care (KMC) is a well-known, scientifically supported strategy for enhancing the outcomes for preterm and low birth weight babies and its application is still not at its best in many healthcare settings, despite its demonstrated benefits. The knowledge and practice of frontline healthcare personnel, notably doctors and nurses, are crucial to the successful implementation of KMC practices in Pakistan, especially in high volume public facilities like Lahore General Hospital,

Lahore. On the other hand, nothing is known about these experts' actual clinical practice and level of KMC understanding. To find gaps, create focused training initiatives, and advance reliable, superior newborn care, it is crucial to comprehend their present knowledge levels and practice patterns. In order to guide strategies for enhancing neonatal health outcomes, this study intends to evaluate healthcare providers' knowledge and practice of Kangaroo Mother Care at Lahore General Hospital in Lahore.

MATERIALS AND METHODS

A descriptive, cross-sectional study was conducted in Pediatric Wards, Obstetrics Wards, Emergency Operation Theater for C Section and the Labor room of Lahore General Hospital. The study population comprised the healthcare professionals including doctors and nurses. A non-probability, purposive sampling technique was used to collect data. Using $n=N/1+N^*e^2$ formula, sample size was calculated as 150 where total population $N=240$ & Margin of error "e" was 0.05. The total study duration was 9 months. Both male and female doctors and nurses were included in the study.

A structured pretested questionnaire by Sylvia Phaphali Adzitey (Adzitey et al., 2017) was used to collect data after getting permission from the author. The total questions are 26. 1st section is demographic Data, the 2nd section includes questions about the Knowledge and 3rd section includes practice of healthcare professionals towards KMC.

After taking approval from medical superintendent of the selected hospital, data was collected from participants. Written Informed consent was taken from participants. Anonymity and confidentiality was ensured during data collection, analysis and interpretation. The separate codes were given to individual response for data analysis. All collected data was entered in laptop and analysis was done by using statistical packages of social sciences (SPSS) version 27. Frequency and percentage were used for data analysis using descriptive statistics. After analysis, data was presented in the form of tables, figures, frequencies and percentages.

RESULTS

The study illustrated that a clear majority of the participants were nurses, comprising 90.7% of total sample, muslim (51.3%) and unmarried/single (60%). From nurses, 46% of participants were holding a BSN degree while 44.7% of participants were holding diploma in nursing. Most of the participants (53.3%) were in 21-30 years of age group, indicating a younger demographic and only 4.7% of participants were above 50 years, showing a declining trend with age. A substantial number of participants (59.3%) were having 1-5 years of work experience which indicated that most participants were relatively early in their careers.

The study results illustrated that a notable size of participants (57.3%) had heard about Kangaroo Mother Care. Half of participants (50%) identified preterm babies as requiring KMC and low birth weight (LBW) babies were identified by 32%, while 10% believed overweight babies need KMC and only 8% recognized that sick babies may

also require KMC. A substantial number of participants (47.3%) believed that preterm babies are born between 1 to 28 weeks of gestation, followed by 28% participants that considered 37 weeks as preterm, and 24.7% participants that classified 40 weeks as preterm.

The study findings found that more than half of participants (57.3%) believed that Kangaroo Mother Care can only be given by the mother, while 42.7% recognized that fathers can also provide KMC. Moreover, a considerable number of participants (63.3%) understood that KMC helps to prevent hypothermia in newborns, sixty two percent participants believed it can be given at home and fifty nine percent participants believed HIV-positive mothers can safely provide Kangaroo Mother Care. Furthermore, 63.3% of participants believed training on KMC is essential. A major portion of participants (52.7%) thought KMC benefits only babies, followed by 26.7% believed it benefits only mothers and only 20.7% recognized that KMC benefits both the baby and the mother.

A sizable percentage of participants (59.3%) agreed that KMC can be initiated immediately after birth, while 22.7% were unsure and 18% disagreed regarding immediate initiation of KMC. A major portion of participants (62%) agreed that KMC increases bonding between mother and baby, while 23.3% were unsure and 14.7% disagreed. Similarly, more than half of participants (59.3%) agreed that KMC enhances breastfeeding, while 22.7% are unsure and 18% disagreed. Likewise, 59.3% of participants agreed that family members should support a mother in providing KMC, while 20.7% were unsure and 20% disagreed.

The study also showed that a significant portion of participants (62%) agreed that KMC increases a mother's self-confidence. However, 23.3% were unsure 14.7% disagreed. A major portion of participants (59.3%) agreed that Kangaroo Mother Care promotes the growth and development of the baby, forty percent participants agreed that it reduces infection rates in newborns, while fifty nine percent participants agreed that it leads to early discharge and reduces hospital stay and costs and sixty two percent participants talked to new mothers about Kangaroo Mother Care.

Overall, the results showed that a notable portion of participants (70%) had poor knowledge and only 30% had good knowledge regarding Kangaroo Mother Care. Likewise, a clear majority of participants (63%) had poor practice regarding Kangaroo Mother Care, while only 37% demonstrate good practice.

DISCUSSION

The current study was conducted to explore the knowledge and practice of kangaroo mother care (KMC) among health care professionals. The study findings explored that a sizable percentage of participants (57.3%) believed that Kangaroo Mother Care can only be given by mothers as well as 59.3% participants agreed that KMC can be initiated immediately after birth. These results are relatively lower than the earlier investigation that reported that 95% participants indicated that KMC can be given by anyone as well as all participants believed that KMC should be initiated as soon as possible after birth for

low birth weight babies (Rajput, Nistane, Kale, & Rathod, 2025). The study findings also illustrated that a major portion of participants (62%) agreed that KMC increases bonding between mother and baby, more than half of participants (59.3%) agreed that KMC enhances breastfeeding and a significant portion of participants (62%) agreed that KMC increases a mother's self-confidence, supported by the findings of a previous studies (Al-Shehri & Binmanee, 2021; El-Sayed Mohammed, Al Furaikh, Abellar, & Abouelfetoh, 2023).

Overall, the results showed that a notable portion of participants (70%) had poor knowledge and only 30% participants had good knowledge regarding Kangaroo Mother Care. These results are congruent with earlier investigation that reported poor knowledge expressed by participants (Bell, Luke, Akhigbe, & Kamara, 2024; Bhattacharai & Thapaliya, 2025; Rajput et al., 2025) and not congruent with the previous studies in which good knowledge expressed by majority of the participants (El-Sayed Mohammed et al., 2023; Fauziyah, Pratomo, & Samaria, 2021). Likewise, a clear majority of participants (63%) had poor practice and only 37% demonstrate good practice regarding Kangaroo Mother Care, supporting the previous studies of (El-Sayed Mohammed et al., 2023; Fauziyah et al., 2021) that reported low level of practice demonstrated by the majority of participants. These findings are not consistent with the literature of (Bell et al., 2024; Rajput et al., 2025) that reported good practice of KMC by participants.

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The current study is cross sectional and restricted to only one public sector hospital in Lahore. So, a longitudinal study and more public and private sectors hospitals with large sample size is recommended to generalize the study findings into large population.

CONCLUSION

The current study explored the knowledge and practice of Kangaroo Mother Care among health care professionals. The study explored that most of the participants had poor knowledge and poor practice. The study highlighted the significant knowledge and practice gap among health care professionals. These deficiencies have significant effects on the health of newborns, especially those who are born prematurely or with low birth weight. The study underlines the need for specific interventions, such as better education and hands-on training programs, policy reinforcement, and improved resource allocation to support KMC practice. By resolving these issues, healthcare institutions can assure the successful incorporation of KMC into normal neonatal care, ultimately improving infant survival rates and encouraging family-centered care.

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