

Qualitative Assessment of Acceptability of Kangaroo Mother Care in a Tribal Block in Maharashtra, India

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Abstract

Background and Aim: Majority of the studies on Kangaroo Mother Care (KMC) have been conducted in hospital settings with a very few community-based studies on KMC in India. We conducted a community-based study in a tribal block of Karjat in Raigad district of Maharashtra, India. The objective was to study the acceptability of KMC by the mothers and their families at the household level in tribal areas.

Materials and Methods: Focus group discussions (FGDs) were conducted with pregnant women and mothers, mothers-in-law, auxiliary nurse midwives (ANMs), and anganwadi workers (AWWs) before and after information education and communication on KMC. In-depth interviews were also conducted with mothers providing KMC.

Results: Findings from preintervention and postintervention FGDs were analyzed and the facilitating factors and barriers for KMC provision were identified.

Conclusion: The qualitative data from preintervention and postintervention FGDs suggest that KMC was accepted by mothers, family members, ANMs, and AWWs in the community.

Key Words: Focus group discussion, low birth weight, neonatal mortality, auxiliary nurse midwives, anganwadi workers, in-depth interviews

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Introduction

The United Nations Millennium Development Goal 4 states that under-5 mortality rate should be reduced

by two-thirds between 1990 and 2015. But, an assessment indicates that the progress regarding mortality reduction has been disappointing in some countries.^{1,2}

Low birth weight (LBW) continues to be a major cause for neonatal mortality in India; these neonates require specialist medical care, which is difficult to be provided in tribal areas where neonatal intensive care units are unavailable. In such settings, kangaroo mother care (KMC) would prove to be a useful technique for newborn care. KMC technique was pioneered by Rey and Martinez in Columbia and involves prolonged, continuous skin-to-skin contact between mothers and their LBW neonates.³ KMC has been shown to significantly reduce the incidence of life-threatening morbidities in stabilized neonates.⁴⁻⁶ In LBW neonates weighing 2000 g or less, who are unable to regulate their temperature, KMC is as safe and effective as traditional care with incubators.⁷

Although the greatest benefits of KMC are applicable at the community level, very few community-based studies have been conducted on KMC. Considering this, the present study was conducted in a tribal area of Karjat block (Raigad, Maharashtra, India). This study is a part of the community-based multicentric study conducted by the Indian Council of Medical Research (ICMR) in rural, urban, and tribal areas to study the acceptability of KMC among mothers.

Aim

To study the neonatal care practices and care-seeking behavior of mothers who have preterm/LBW neonates; awareness and knowledge about KMC; facilitating factors and barriers for KMC provision among various groups such as pregnant women and mothers, mothers-in-law (MIL), and other relatives; and perceptions of the service providers (auxiliary nurse midwives [ANMs] and anganwadi workers [AWWs]) about KMC

Materials and Methods

The study was conducted in 2 tribal primary health centers (Kalamb and Ambivali) in Karjat block of Raigad district (Maharashtra, India) from January 2010 to December 2011.

The tribal block of Karjat has a hilly terrain, and hot and humid climate, especially during summer. The population is scattered within hamlets (padas in

Marathi), each comprising about 25 to 30 houses. The tribal population comprises communities such as Thakurs (60%), Mahadev Kolis (30%), and Katkaris (10%). Thakurs and Mahadev Kolis own lands and practice agriculture but Katkaris are relatively poor as they are landless and work as bonded laborers in brick-making enterprises.

Focus group discussions (FGDs) were conducted in the preparatory phase before information education and communication on KMC was given to various groups such as pregnant women, MIL, ANMs, and AWWs. Counseling, health education, and information about KMC was provided to pregnant women and other family members by the AWWs and the project staff. Thirty-one mothers and their LBW neonates (1500–2000 kg) were enrolled in the study. Quantitative data was collected by project staff at the household level to study the acceptance of KMC by the mothers. FGDs were also conducted with various groups such as mothers providing KMC, MIL, ANMs, and AWWs after provision of KMC by the mothers. In-depth interviews were conducted with mothers providing KMC for short (up to 72 h) and long (≥ 72 h) durations to understand the facilitating factors and barriers for the provision of KMC. This article pertains to the qualitative data collected from FGDs and in-depth interviews during the study period.

Before initiation of the study, approval was taken from institutional ethics committee for clinical studies. Principal investigator of the study conducted the FGDs, while the other research investigators recorded the information. The discussion was also tape recorded after informing the participants regarding the same. Written informed consent was obtained from each participant before initiation of the FGD. The discussions noted by the research investigators and the information obtained from the tape recorder in local language (Marathi) were translated to English and transcripts were prepared. Textual and contextual analysis was done manually with the help of the prepared FGD guide, separately for each group. For each theme in the FGD guide, responses from each group were compiled separately for preintervention and postintervention FGDs. Findings of in-depth interviews were also analyzed manually.

Background of FGD participants

A total of 12 FGDs were conducted—7 FGDs in the phase before KMC provision by the mothers and 5 after KMC provision by the mothers (Table).

Table. Details of FGDs Conducted Before and After KMC Provision by the Mothers

Participants	Number of FGDs		Total
	Before KMC Provision by Mothers	After KMC Provision by Mothers	
Pregnant Women and Mothers Providing KMC	2	1	3
Mothers-in-law and Other Relatives	2	1	3
ANMs	1	1	2
AWWs	2	2	4
Total	7	5	12

ANM, auxiliary nurse midwives; AWW, anganwadi workers; FGD, focus group discussion; KMC, kangaroo mother care.

Preintervention FGDs

The themes covered in preintervention FGDs were care of preterm neonates, awareness regarding KMC, family members support for providing KMC, problems anticipated for provision of KMC.

Two FGDs were conducted with pregnant women and mothers, in the age group of 17 to 30 years; majority of them had either primary-level or secondary-level education and were mostly homemakers. Two FGDs were conducted with a group of MIL. All of them were illiterates; 50% of them were homemakers and 50% were laborers. Two FGDs were conducted with AWWs in the age group of 19 to 55 years. Most AWWs were educated up to the secondary level. Only 1 FGD was conducted with ANMs, in the age group of 22 to 53 years. Majority of ANMs were educated up to junior college.

Postintervention FGDs

In postintervention FGDs the themes covered were initiation, duration, and use of KMC; problems faced during KMC provision; support from family members

for KMC provision; benefits and future use of KMC; and the need for KMC training for the health workers.

One FGD each was conducted with a group of mothers providing KMC and their MIL. Mothers providing KMC were in the age group of 19 to 31 years and majority of them were educated up to the primary or secondary level. Almost all MIL were illiterate; 50% of them were homemakers and 50% were laborers.

One FGD each was conducted with AWWs and ANMs. Majority of the AWWs were in the age group of 25 to 62 years and were educated up to the secondary level. ANMs were in the age group of 23 to 62 years and majority of them were educated up to junior college.

Results

Outcome of preintervention FGDs

Care of preterm neonates

Majority of the mothers reported that they exclusively breastfed and wrapped their infants in a cloth to keep them warm. Few of them said that they placed the infants in a separate room under the light of an electric bulb. Regarding newborn care they said that they bathed the neonates immediately after birth irrespective of the birth weight (whether normal weight or LBW). They also rubbed out the vernix (pandhari lav in Marathi) on the neonate's skin. One woman responded that after birth they receive the neonate wrapped in a newspaper, which is then rubbed on the skin for cleaning the vernix. The responses of MIL and other relatives were similar to that of the pregnant women and mothers. ANMs and AWWs reported that they suggested the mothers to avoid bathing and oil massaging their neonates for 7 days.

Awareness regarding KMC

Almost all the participants in the 2 groups (pregnant women and mothers, MIL, and other relatives) were not aware of KMC. ANMs and AWWs were aware of KMC; however, had not received any training on it.

Support of family members for KMC provision

Majority of the pregnant women and mothers expressed that they were willing to provide KMC to their infants

but would need assistance from family members. Almost all participants in the MIL group also expressed similar views. ANMs and AWWs opined that it was difficult to receive family support for providing KMC.

Problems anticipated for practicing KMC

Although majority of the participants in the 2 groups (pregnant women and mothers, MIL groups) anticipated problems for KMC provision while performing household activities, they felt that mothers could practice KMC for at least 4 to 5 hours in a day. Some of the ANMs felt that mothers may face problems in handling LBW neonates and would be unable to provide KMC for long hours daily, as many women start working within a week after delivery. Majority of the AWWs also had the same opinion.

Findings of postintervention FGDs

Initiation and duration of KMC

Mothers who provided KMC to their neonates informed that they initiated KMC between the second and fifth day after delivery. ANMs and AWWs also reported the same. Majority of the mothers reported that they provided KMC approximately for 2 to 3 hours every day for 1 month. Two mothers reported providing KMC for only 15 days as they observed improvement in the neonate's weight and also felt uncomfortable with the heat generated during the provision of KMC. All MIL mentioned that their daughters-in-law provided KMC to their neonates. ANMs and AWWs also said that the mothers provided KMC approximately 2 to 3 times a day, for 2 hours at a time.

Problems faced during KMC provision

Majority of the mothers reported facing difficulty in placing the neonate in the KMC bag initially, but later got accustomed to it. All mothers expressed that keeping their neonates in the KMC position made them feel good. Majority of the ANMs reported that mothers could provide KMC only for short durations because they stay in nuclear families and are always busy with household work and sometimes even outdoor work. All ANMs and AWWs said that mothers found it difficult to perform household work while carrying their neonates in the KMC bag alone.

Support of family members for KMC provision

Very few mothers received family support because family members feared handling LBW neonates or were busy with household work. One of the mothers said, "My husband tried to position the baby in the KMC bag 2 times but he couldn't due to the fear of handling the baby." Mothers expressed that as they had many tasks to be performed such as household work and farming activities (seed sowing) they could not provide KMC to their neonates for a long time. ANMs and AWWs also stated that very few mothers received family support. They expressed that most males and other family members feared handling LBW neonates.

Conclusion

Facilitating factors and barriers for KMC provision

Facilitating factors for KMC provision, identified from FGDs, were support from family members and support from ANMs and AWWs to train the mothers in positioning the infants appropriately for KMC provision.

Facilitating factors for KMC provision, identified from the findings of in-depth interviews, include the acceptance of KMC by the mothers, the willingness of ANMs and AWWs to train and support mothers for KMC provision, and support from family members.

Barriers identified for KMC provision were lack of privacy because of small houses, hot and humid climate during summer months, household responsibilities, and inability to perform household work while providing KMC. Majority of the women reported that their husbands feared handling the LBW neonates and hence could not support them.

Benefits and future use of KMC

Majority of the mothers said that with the provision of KMC their infants received warmth naturally, their weight improved, and their capacity to suck breast milk also improved. Majority of them said that they would prefer practicing KMC for all their neonates, especially for LBW, in future. AWWs and MIL also had similar

views as most mothers. All ANMs expressed that KMC is beneficial for infants as it provides warmth and improves weight gain and suckling capacity. They said that the method was acceptable to the mothers. If bags would not be available, they would demonstrate how to provide KMC by wrapping the infants and holding them in an appropriate position for KMC using a cloth or sari.

Need for KMC training and other aspects of newborn care

All ANMs and AWWs said they were confident of teaching the mothers the appropriate KMC position. AWWs felt that they need more training on recording temperature of infants using a thermometer. They expressed that they required a good quality weighing machine and thermometer for better monitoring of infants.

Discussion

This qualitative assessment helped fill some of the knowledge gaps with respect to newborn care practices for preterms and provide awareness and knowledge about KMC practices. The study identified facilitating factors and barriers for the provision of KMC at the community level.

Regarding newborn care practices for preterms, most women who participated in this study were aware of exclusive breastfeeding and providing warmth to the neonates. However, they reported bathing the LBW neonates immediately after birth. A study conducted in rural western Uttar Pradesh showed that nearly all newborns were left wet and naked on the floor until the placenta was delivered and then bathed immediately after birth.⁸ Mrisho et al⁹ in their study in rural Tanzania reported that the newborn care practices there included delay in providing warmth after delivery and bathing newborns soon after birth. Findings from this study also indicate that there is still a need to impart health education to community dwellers to delay bathing of newborns to prevent hypothermia.

In this study, none of the women who participated in preintervention FGDs were aware of KMC and almost all expressed that they would need assistance from family members to provide KMC. After women started practicing KMC, only a few of them reported having received assistance from family members, and most women reported of not receiving any support from their husbands as they feared handling the neonates. In a study conducted in low-income communities in Gujarat to explore barriers in providing KMC at the household level, lack of cooperation from family members was one of the main barriers.¹⁰ However, some studies report that when fathers were included in efforts to promote KMC, they were not only supportive but were also willing to provide KMC.¹¹⁻¹³

In a study conducted in Uttar Pradesh, India, one of the perceived barriers for providing KMC was discomfort while providing KMC during summer.¹⁴ A similar finding is observed in the present study. One of the reasons for early discontinuation of KMC, as reported by mothers, was improvement in infants' weight, making it difficult to hold them in the KMC bag for long. Other studies also report similar findings that as infants grow bigger it is difficult to keep them under skin-to-skin contact for a long time.^{10,15}

In this study, the postintervention FGDs with mothers, ANMs, and AWWs indicated that fathers were not willing to provide KMC to their infants. However, concerns such as mothers getting back to perform household activities immediately after delivery were not observed in this study. Postintervention FGDs indicated that mothers initiated KMC within 2 to 5 days of delivery, and majority of them provided KMC for about a month. Most mothers reported that they were unable to do household work while providing KMC. The ANMs and AWWs were confident that they would help mothers practice KMC for all LBW neonates born in their community, which is a very good indication.

Conclusions

The qualitative data from the study suggest that all the tribal women enrolled in the study accepted and provided KMC. The study identified facilitating factors

and barriers for provision of KMC in a community setting in a tribal area. KMC can be implemented at household level and will be beneficial for LBW neonates, especially in tribal areas where access to neonatal healthcare is still a concern in our country.

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