



Original Article

Postnatal mothers' perceptions and experiences of kangaroo care: A qualitative study in a low-resource setting

Ganga Sanjeevani de Silva¹, Male Rajage Sunethra Jayathilake^{2*}¹District General Hospital, Kalutara, Sri Lanka²University of Sri Jayewardenepura, Nugegoda, Sri Lanka

ARTICLE INFO

Received 08 July 2025
Accepted 11 November 2025Available online at:
<http://npt.tums.ac.ir>

Keywords:

kangaroo-mother care method;
premature birth;
newborn;
Sri Lanka

Corresponding Author:

Male Rajage Sunethra Jayathilake, University
of Sri Jayewardenepura, Nugegoda, Sri Lanka.
E-mail: sjayathilake@sjp.ac.lk

DOI: 10.18502/npt.v13i1.20597

ABSTRACT

Background & Aim: Prematurity is the leading cause of death among children under five years of age globally. Alarming, in low-income countries, more than 90% of extremely preterm-born babies die within the first few days of life. Kangaroo care is an effective method in the management of preterm babies. The study aimed to explore perceptions and experiences of postnatal mothers on Kangaroo care at a selected hospital in Sri Lanka.**Methods & Materials:** This exploratory descriptive qualitative study was carried out with seventeen purposively selected postnatal mothers who were practicing Kangaroo care in the Neonatal Care Unit at District General Hospital in Kalutara, Sri Lanka. Data collection was done through in-depth interviews using an interview guide between the period of July 2021 and November 2021. The interviews were recorded and transcribed verbatim. The inductive content analysis method described by Graneheim and Lundman was employed for data analysis.**Results:** Participants were mainly Sinhalese, married, and aged between 20-40 years. The analysis revealed one overarching theme: 'Despite the obstacles, Kangaroo care is a blessing,' which was further characterized by two main categories: positive perceptions and experiences, and negative perceptions and experiences. Positive perceptions and experiences are described under good practice, supportive role, and benefits. Negative perceptions and experiences are described under separation and obstacles.**Conclusion:** The participating mothers' perceptions and experiences of Kangaroo care blended with both positive and negative dimensions, which were shaped by contextual factors; hence, addressing these factors is imperative for the successful implementation of Kangaroo care.

Introduction

According to the World Health Organization (WHO), prematurity is the leading cause of death among children under five years of age globally (1). Fifteen million babies are born prematurely every year, which is more than one in ten (2). In even developed countries, premature infants represent a significant portion of the delivered infant population (3). In low and middle-income countries, the burden is higher (4). In Sri Lanka, a low-income country, approximately 24,500 premature babies are born annually, which contributes one-third of neonatal mortality in Sri Lanka (5). Alarming, in low-income countries, more than 90% of extremely preterm born babies (less than 28 weeks) die within the first few days of

life (2). However, a significant proportion of deaths among preterm and low birth weight infants is preventable. The WHO has introduced Kangaroo care (KC) as an effective method in managing preterm babies (1).

Kangaroo Care is described as skin-to-skin contact between a mother and her newborn baby where the baby is kept upright, skin-to-skin on the mother's bare chest (6,7), thereby maternal body heat helps control the baby's body temperature (6). This concept was introduced and developed by Rey and Martinez in 1978 in Colombia as an alternative to conventional methods of care for low-birth-weight infants and in response to problems caused by serious



overcrowding in neonatal intensive care units (NICUs) (7,8). In KC, the mother is used as a natural incubator (8,9).

The birth of an infant requiring admission to the NICU can represent a considerable source of stress for postnatal mothers (10). They may feel insecure in the situation that has suddenly appeared. The separation between postnatal mothers and their preterm infants occurs daily in NICUs as the infant is usually placed in an incubator, leading to an interruption in the attachment and bonding processes (11). Mothers in the NICU have to go through a lot of unfamiliar experiences whilst staying there taking care of the infant; therefore, this in turn could make it more difficult for them to cope with taking care of themselves, their family, and the infant (12). Thus, postnatal mothers experience a range of emotions, including fear regarding the survival of the baby, disappointment about not having a full-term baby, anxiety related to separation, and decreased interaction with their newborn (13). Most parents have difficulties in coping with a critically ill premature baby or a more complicated infant, or an unexpected infant death.

Kangaroo care plays a crucial role in infant survival by preserving their body temperature as well as other vital signs, which are key elements of essential newborn care (8). It contributes to reducing the likelihood of infection and severe illness, thereby helping to decrease infant mortality and morbidity. In addition, it provides numerous benefits for both mother and infant. Essentially, the KC enhances mother-infant interaction. It promotes maternal-infant feelings of closeness, builds maternal confidence, improves breastfeeding success, and gives a stress-reducing experience for both mother and infant (14). Previous literature has revealed mothers' satisfaction, relieving pain, feelings of empowerment, self-confidence in the role of the mother, a sense of deep connectedness with the infant, and greater resolution of the negative feelings associated with the preterm birth as benefits of KC (15).

Despite the proven benefits of KC, some literature revealed a low uptake of KC in countries with limited resources (6). In Sri

Lanka, another resource-constrained country, KC was established in 2010 (16), where neonatal care units have a lack of facilities. KC is a safe and easy method that does not need expensive and sophisticated equipment or expertise, and it can be applied even in peripheral maternity units. Therefore, KC may be a good solution for every low-income country across the world in the management of preterm and Low Birth Weight (LBW) babies (15). In order to arrive at a definite conclusion with regard to the effectiveness of KC, it is important to look at KC in the Sri Lankan context. In Sri Lanka, maternal-infant care practices are shaped by close family involvement, cultural beliefs surrounding infant care, unique contextual challenges of public health care settings such as hierarchical hospital structures, resource constraints of public hospitals, and attitudes of health care professionals.

Therefore, this study contributes to the existing body of knowledge by exploring the context-specific constraints and cultural beliefs that affect KC implementation in Sri Lankan neonatal care units, thereby extending global understanding of KC practices in low- and middle-income settings. Therefore, this study aimed to explore the lived experiences and perceptions of postnatal mothers practicing KC at a low-resource hospital setting in Sri Lanka. The findings of the study illuminate how postnatal mothers perceived KC and the challenges they faced in initiating it. These insights could be instrumental in guiding further investigations on a larger scale to gain a more comprehensive understanding. Ultimately, this may help increase the uptake of KC, contributing to improved essential newborn care and a reduction in neonatal mortality and morbidity in the country.

Methods

This exploratory descriptive qualitative study employing content analysis was conducted between July and November 2021. This design was appropriate for obtaining a clear and practical description of participants' perceptions and experiences of KC, identifying barriers to its practice, and exploring mothers' willingness to engage in KC. The approach was chosen to

provide insights that could inform strategies to enhance its uptake and address related challenges. An inductive qualitative approach using in-depth interviews (IDIs) was adopted to derive concepts and gain comprehensive insights into the phenomenon. The study setting was the Neonatal Intensive Care Unit (NICU) at District General Hospital, Kalutara (DGHK), Sri Lanka. The neonatal care unit consists of an aseptic neonatal care unit, a septic neonatal care unit, an NICU, a premature baby unit, and a lactation unit. It provides all emergency and supportive care of the newborn, health education to the postnatal mothers regarding KC and breastfeeding, and also care of the newborn after discharge from the neonatal care unit.

The study population was postnatal mothers who were actively involved in KC for premature babies in the neonatal care unit at DGHK during the data collection period. The purposive sampling method was employed to select participants for the study. Qualitative researchers often use the purposive sampling method as it enhances information richness and provides a lot of benefits to the study (17).

The sample size in qualitative research depends on information requirements and data saturation, which is the point at which participants do not present new or relevant information (20). As per the previous literature, many studies focusing on mothers' experience in KC had selected ten to twenty-five participants for their studies (18,14). In the current study, the point of data saturation was met at the seventeenth interview, as no new codes were identified in the last two transcripts; hence, data collection was limited to seventeen interviews.

A semi-structured interview guide was used as the study instrument for collection of data, which facilitates to cover predetermined key areas according to the study objectives, at the same time it allows flexibility to explore more in-depth data through probing. The interview guide, consisting of two parts, was developed based on the previous literature. It was helpful to get an idea of the development of the interview guide: what type of questions are more suitable, probing questions, and the flow of the questions, and which type of questions should come first. The first part focused on

participants' personal information, and the second part focused on research questions related to postnatal mothers' perceptions and experiences of KC. The content was evaluated by the experts in the field (two senior academic experts in qualitative research, and a nurse manager who has experience in neonatal care for more than ten years) for relevance, adequacy, and accuracy. Prior to data collection, the interview guide was pretested using two participants. Based on the findings of the pretested interviews, a few modifications were made. This facilitated the assessment of the clarity of the questions, organized the flow of the questions, and provided an idea about the approximate time for the interview. Apart from that Principal Investigator (PI) could develop some more confidence in interviewing the participants.

Data collection was carried out after obtaining ethical approval from the relevant authorities. The participants were identified with the help of the nursing staff in the study setting. The researcher went to the NICU, introduced himself individually to postnatal mothers, and built a good rapport with them. The postnatal mothers who were willing to participate in the study and able to converse in Sinhalese or English were enrolled in the study. The appointment for the postnatal mother to take part in the IDI was made according to their convenience. The participants were informed regarding the objectives of the study, the way of data collection, voluntary participation, and their right to withdraw from the study at any time, using the information sheet. They were given time to read and understand the information. Then, prior to data collection, informed consent was obtained from each participant.

All interviews were conducted in Sinhalese (local language) by the PI since all participants were able to converse in it. After the baby was examined by a pediatrician, the PI interviewed the postnatal mothers in the observation room at the Neonatal Care Unit without any external interference, which did not affect any routines of the unit. A calm and quiet environment with good ventilation was created, ensuring the privacy of the participants. One interview was conducted per day. The interview

was initiated with introductory questions to establish rapport and make the postnatal mother comfortable. This was followed by open-ended questions and probing questions to elicit more information. Each interview lasted between 45 minutes and one hour. No compensation or reimbursement was given to the participants except for a small snack. All interviews were audio recorded with the permission of the participants. The PI kept a field note and documented all the narrative accounts of the conversation, thoughts, and questions for later use to ensure the credibility and consistency of the study.

The collected data were analyzed using the inductive qualitative content analysis method described by Graneheim and Lundman (19), which aligns with an exploratory descriptive qualitative design since this method facilitates a clear approach, step by step, to uncover both explicit and underlying meanings in participants' narratives reflecting how they perceived and experienced KC. Data analysis was done simultaneously with the data collection. During the analysis, the researcher listened to the audio recordings several times to gain a clear understanding and make sense of the data. After that, the data were transcribed verbatim. The Sinhalese transcripts were translated into English with assistance from two bilingual nursing academics, including the supervisor, who are fluent in both languages and familiar with the study context. The researcher then read the data extensively for self-explanation with it and reread it to find the meaning of the data compared to the notes obtained in the interviews. The researcher read each line of the narrative carefully to see if the relevant text and highlights were directly related to the identified objectives. Thus, firstly meaning-bearing units were identified, then condensed, and coded. Up to this stage, the researcher and the supervisor worked independently. After coding, the researcher and supervisor worked together. Code differences and similarities were compared and classified into subcategories and categories. The process consisted of discussion and agreement on how to classify the code and how to have clear content. Finally, the underlying meanings, codes, subcategories, and categories were grouped into a

theme. The process was done manually by the researcher and the supervisor, and several discussions were held until a compromise was reached.

Trustworthiness

Trustworthiness in this study pertains to the extent of confidence in the data, interpretation, and methodologies employed to maintain the quality of the research. As outlined by Lincoln and Guba (20), trustworthiness is assessed through criteria such as credibility, transferability, dependability, and conformability (17). To ensure the trustworthiness of the data, a range of strategies and steps were implemented in this study. Member checking and prolonged engagement with participants were used to ensure the credibility of the study. The PI met some participants and showed the transcripts to them for verification. Transferability was addressed by providing a thick description of the context and participants. For ensuring dependability and confirmability, the study employed stepwise replication and peer examination. Coding process and consistency of interpretation were evaluated by two senior qualitative academics, thereby minimizing researcher bias.

However, in qualitative research, researcher bias must be acknowledged. The principal investigator's dual role as both interviewer and healthcare professional in the same study setting may have influenced participant responses and data interpretation. To minimize this potential bias, the researcher engaged in peer debriefing, held prolonged discussions with the supervisor throughout the study, and ensured that analytic decisions were grounded in participants' narratives (direct quotes) rather than the investigator's own perspectives. This reflexive approach enhanced the credibility and confirmability of the findings.

Ethical considerations

Ethical approval was obtained from the ERC, Kaatsu International University (Re. No-KIU/ERC/21/44). Subsequently, permission was granted by the director of the District General Hospital, Kalutara, for conducting the study. After a comprehensive explanation, the written informed consent was obtained from all

participants before commencing the data collection. The researcher ensured the privacy and confidentiality of the participants throughout the process. Participants were called by letters instead of their names.

The collected data were used only for research purposes and were secured under lock and key. The data will be kept secure with the principal investigator, who will ensure that the information will not be released to anyone except for research purposes. After a period of five years, all the collected data will be securely destroyed.

Results

The study included seventeen postnatal mothers who gave birth to preterm babies and were providing Kangaroo Care.

Sociodemographic and obstetric characteristics of the participants

The participant's profile included the age, nationality, marital status, level of education, and parity. The majority of participants were Sinhalese (88%), aged between 20-40 years (71%), married (88%), and educated up to A/Ls (54%). Nearly 53% participants are multiparous (Table 1).

Table 1. Socio-demographic and obstetric characteristics of the participants (n=17)

Characteristics	N	%
Nationality		
Sinhala	15	88
Tamil	1	6
Muslim	1	6
Level of education		
Up to Grade 8	2	11
Up to O/L	3	18
Up to A/L	9	53
Graduate	3	18
Age (years)		
< 20	3	18
20-30	7	41
31-40	5	29
> 40	2	12
Marital status		
Single	2	12
Married	15	88
Parity		
P1	8	47
P2-P3	8	47
≥P4	1	6

Theme, categories, and subcategories

The analysis comprised one overarching theme, two categories, and five subcategories illustrating "Experiences and perceptions of postnatal mothers related to Kangaroo Care". The identified theme was "Despite the obstacles, kangaroo care is a blessing," which emerged from two main categories: Positive perceptions and experiences, and Negative perceptions and experiences (Table 2). The findings are presented using direct quotes from participants. The numbers within brackets refer to a particular participant's statement during the specified interview.

Theme: Despite the obstacles, kangaroo care is a blessing

In spite of the difficulties, the participants believed that the kC was an effective method in caring for premature babies, concerning substantial benefits for both the mother and the baby, which implies this overarching theme: "Despite the obstacles, kangaroo care is a blessing".

Category 1: Positive perceptions and experiences

This category, " Positive perceptions and experiences on Kangaroo Care," emerged

from three subcategories: " Good Practice", " supportive Role," and the benefits of KC, which illustrate participating postnatal mothers' understanding about kangaroo care as a whole.

Sub category 1: Good practice

Based on the insights shared by the participants, it reflects that KC is a good practice. Almost every participant expressed that KC is a successful method, particularly for developing countries like ours.

"Good thing. This is good because it doesn't cost money. This is a very safe method" (P17)

"This is a good method..... This is good for a country like ours anyway. ...This is a good way to keep the baby warm and keep the baby close to us. I think this is good." (P10)

Subcategory 2: Supportive role

The participants' perceptions strongly indicated that KC requires support from someone else. They highlighted the pivotal role of nurses during the KC practice. Many participants noted that nurses not only provide a safe and comfortable environment for KC, but also help him gain support from their family for it. Every participant appreciated the invaluable support provided by nurses.

".... They(nurses) help us put the baby in the Kangaroo position and keep checking if we are doing it right. They encourage us that we can go home soon. They are the ones who do everything. They check whether we eat or drink, give food if needed, take care of the baby while eating, and also check our health. Mmm...also helps with early discharge. They try to keep us happy. They talk to our family and tell them what we need. They always help us." (P11)

"Nurses are always ready to help and provide assistance if needed.... They really work hard to take care of us. We always appreciate their support." (P6)

Subcategory 3: Benefits

This subcategory describes benefits based on participants' experiences. Positive things experienced by participants during KC

were depicted as benefits. Mothers had experienced KC as the most effective method. They felt not only they but also the baby benefited the most from it; therefore, they were happy with it. Many participants pointed out that KC reduced maternal and baby separation, increased mother-baby bonding, and also helped dispel fears about the baby and loneliness.

"I can stay close to the baby while wearing the Kangaroo. So, I know he is fine. This gives me the opportunity to be with the baby. As a result, my fear is dispelled." (P3)

"This decreases the worry and fear I have about my baby.... Therefore, my mind is at ease. I also got keep the baby with me for a long time. Loves being around the baby. Happy as well. I could also give milk while wearing a kangaroo." (P15)

"First ... I think ... I'm alone in the ward because the baby is in the baby room. When doing KC, I do not feel lonely because the baby is next to me. I always think of him." (P 9)

All participants reported, there is an increase in milk secretion due to kangaroo care.

"... I also feel that the milk is increasing. I feel like the veins are swollen while wearing this ... the breasts are tightening. Then the milk flows out. I think it increased because of this." (P3)

Almost every noted that the mother and baby have good sleep after the KC

"After putting the kangaroo, the baby sucks more milk. Baby sleeps well. I'm getting a good night's sleep now, too." (P5)

Some participants noted that KC led to weight gain in the child and, therefore, early discharge from the hospital.

"The weight of the baby increases due to kangaroo care. The baby's weight was measured daily. Now the weight is gradually increasing. Mmm. So ... We will be able to go home soon because the baby is gaining weight." (P7)

Category 2: Negative perceptions and experiences

This category emerged through two subcategories: "Separation" and "Obstacles."

Within these subcategories, participants shared their personal experiences and reflections regarding the separation from their baby, and also difficulties faced while practicing KC.

Sub category 1: Separation

Based on the participants' experiences, it is noted that mother and baby separation occurs when caring for a premature infant. Participants pointed out that the separation of a mother from her baby is a very painful experience. They shared their experiences with great pain.

"(Silent) It was indescribable ... inexplicable ... I was in an indescribable pain at the time. While the baby was taken away, my chest felt tight. It's so sad. There are no words to describe it. I felt at that time a great sadness and pain." (P6)

"How can I say ... it is an indescribable grief. (Tears in eyes). I mean ... as soon as I had the baby, they took the baby away. A nurse came and told me to take the baby to the baby room. Pointed out from a distance as the baby was being carried. I do not even know if the baby is really well. On the way, the baby was taken away with oxygen. I was frightened until I actually saw the baby. This ... I felt very sad when I took the baby. Can't say that. It was very painful. My chest felt tight, and I felt like I could not breathe. There is no one to talk to about my grief. I waited until I saw the baby alone. (Sighs)". (P10)

Participants consistently reported that their separation from the baby was a deeply distressing experience, as evidenced by their non-verbal expressions, including crying, falling into silence, rapid blinking, and trembling voices.

Sub category 2: Obstacles

Under the subcategory of obstacles, it has been described that participants' experiences of encountering some difficulties in providing KC. Essentially, they reported difficulty staying in the same position for a long period of time and an inability to do KC alone. Many participants described the need for nursing support for KC. It sometimes becomes an issue with the nurse's heavy workload.

"We are still sitting on the chair. In the evening, both legs hurt ... legs swollen." (P8)

"I have to wear this a lot and then fall asleep. I fall asleep while holding the baby like that. That's why I'm afraid the baby will fall.... Too lazy when in the same position too much." (P12)

"When the nurses are overworked, they have no chance to help us with KC. Then we don't put KC. We can't do it alone. We are waiting for them at that time." (P3)

"It cannot be done alone. Someone's help is needed. When the baby pees or poop, I feel it. At that time, my clothes get wet. I have to change clothes." (P4)

Discussion

It is widely acknowledged that kangaroo care is an effective method of achieving optimal health outcomes for premature and low birth weight babies, particularly in resource-constrained settings. Literature suggests that KC provides numerous benefits not only to the infant but also to the mother. Since mothers are the primary providers of KC, it is imperative to gain insight into and examine their perspectives on this practice. Therefore, the current study aimed to explore postnatal mothers' perceptions and experiences of KC in a low-resource setting.

Postnatal mothers in this study perceived KC as a blessing despite the challenges of caring for a premature infant. They reported that KC reduced mother-baby separation, strengthened emotional bonding, enhanced maternal confidence, and lowered maternal stress. These findings align with John Bowlby's Attachment Theory (21), which posits that infants and mothers are biologically predisposed to maintain proximity and emotional contact. Bowlby suggested that attachment behaviors evolved because infants who remained close to responsive caregivers had higher chances of survival. KC supports these innate attachment behaviors by providing continuous skin-to-skin contact, thereby promoting both emotional bonding and infant well-being. Consistent with previous studies, KC also contributed to shorter hospital stays,

lower incidence of hypothermia, and better weight gain in premature infants (14, 22,23).

According to the findings of our study, mothers felt that KC was a beneficial practice due to its low cost, ease of use, and versatility in application. This made it particularly well-suited for implementation in developing countries like ours. This observation aligns with the findings of a study conducted in Thailand (24), where the study findings proposed the routine use of KC as a practical, non-invasive, and cost-effective treatment to raise the temperature of both mothers and preterm infants, whether in hospitals or at home. These findings were further supported by other studies (25, 26), which emphasized that KC is a natural, effective, and inexpensive intervention suitable for utilization in both developed and developing nations. Consistently, some studies highlighted the cost-effectiveness of KC, as it does not demand complex infrastructure or specialized skills; hence, it is an ideal option for low-income countries (15,22).

Besides, the postnatal mothers in our study perceived KC as a convenient method since it provides comfort and warmth for both the mother and the infant. This sense of safety stems from the constant proximity of the baby to the mother, allowing for continuous monitoring, which corresponds to the findings of previous studies where KC was associated with a comfortable and warm environment, leading mothers to feel safer while practicing it. Additionally, the current study found that KC reduced infants' susceptibility to infections and complications, which was corroborated by Boundy and others (27). Their findings revealed that KC protects against various adverse effects pertaining to preterm birth, such as infection, hypoglycemia, and mortality. In line with this, Salami (28) concluded that KC is a safe and effective treatment option for the care of premature neonates across all healthcare settings. This is further supported by Parsa and others through their quasi-experimental study done in a neonatal intensive care unit in Iran employing one hundred newborns (29), where the authors suggested that KC improves physiological indices to normal levels and positively affects the physical health of preterm infants. Recent literature also

indicates that KC can be used to manage delirium in neonates and to prevent its negative effects (30).

Focusing on another facet, while mothers embraced KC as a blessing, they encountered various challenges in its practice. Most participants identified physical challenges as significant barriers, including difficulties in setting up KC, fatigue, discomfort, sleep disturbances, and discomfort resulting from prolonged baby positioning on the chest. These findings are supported by Blomqvist and others (31), who reported that the uncomfortable position and lack of sufficient sleep were stressful factors for mothers. Consistent with this finding, Seidman and others (32) observed infant retention, difficulty in sleeping on the chest, other problems related to breastfeeding, chest and back discomfort due to KC, and increased body temperature as challenges. Tarus (26) also supported these findings by highlighting that a lack of adequate sleep and the use of one posture for sleep and rest could increase back pain, skin-to-skin contact with high temperatures, and disturbed sleep as obstacles in practicing KC.

Moreover, the current study identified a shortage of nurses and heavy nurse workloads as barriers to successful KC practice. Matheis and others (33) identified insufficiently skilled service providers, a lack of integration of KC messages in antenatal clinics, and a lack of service providers as major obstacles to KC. Similarly, a study carried out in Ethiopia highlighted that workload and staffing shortages in neonatal intensive care units, lack of resources, inadequate training, and management reluctance were constraints to KC (34). In line with those findings, Smith and others (35) emphasized that heavy nurse workload, inadequate staffing, resource scarcity, lack of professional training, inadequate space, and management resistance are barriers for KC. These findings shed light that mothers' negative perceptions are shaped by not only personal physical discomfort or issues but also institutional contextual factors.

According to the study findings, despite the shortage of nurses and the heavy workload, postnatal mothers received good support from nurses to make KC successful, which gave some novelty to the existing literature. Almost all commented that nurses were very supportive, not

only imparting knowledge about KC but also encouraging and educating family members on the importance of providing support for the mother. These findings illuminate that participating mothers' positive perceptions may essentially have been influenced by nurses' supportive role. Consistently, Robertson & Crowley (36) identified the crucial role of nurses in facilitating KC by providing information, advice, encouraging mothers, and creating a supportive environment for them. Contradictory results were found in a qualitative study conducted in Uganda with 20 mothers and caregivers. The study identified a lack of staff support as a major barrier to KC, and other surprising findings included the identification of myths, societal misconceptions, and stigma as additional main barriers. These findings may be due to diverse cultural and social factors (37). Salimi and colleagues (28) suggested that nurses should play a pivotal role in advising mothers on proper positioning of premature and low-birth-weight infants, promoting understanding of the positive effects of KC, and maintaining the physical well-being of preterm infants.

Furthermore, Bandura's *Self-Efficacy Theory* provides valuable interpretive insight into the findings (38). Mothers' growing confidence in performing KC was reinforced by the supportive role of nurses and a conducive clinical environment, which enhanced mothers' belief in their ability to provide effective KC. Conversely, lack of institutional support occasionally diminished this confidence, reflecting the influence of environmental factors on self-efficacy.

Limitations of the study need to be pointed out. The main limitation is the generalizability of the findings. The current study was conducted in one study setting that does not represent postnatal mothers elsewhere in the country. Moreover, as a qualitative study, the findings are inherently limited in their generalizability, and researcher bias may have influenced data collection and analysis. For instance, translation of participants' narratives may have altered subtle meanings despite careful verification, and social desirability may have influenced mothers' responses. Additionally, most participating mothers happened to be Sinhalese,

which may limit the perspectives of mothers from other ethnic groups. Despite these limitations, the study provides valuable insights into mothers' experiences with KC in this context. Our study adds new insight into how local cultural norms and institutional structures shape the translation of global neonatal care recommendations into practice, contributing valuable evidence from a lower-middle-income South Asian perspective.

Conclusion

Based on the study findings, participating mothers' perceptions and experiences of kangaroo care blended with both positive and negative dimensions, which were shaped by cultural, social, and contextual factors. Addressing contextual factors is required for the successful implementation of KC. These findings inform nursing practice by emphasizing the critical role of nurses in facilitating effective KC and suggesting policy considerations regarding staffing and supportive hospital environments. At the same time, the study warrants further research on this topic to explore mothers' experiences in diverse linguistic, cultural, and socio-economic contexts to enhance generalizability, while quantitative studies may further investigate factors influencing KC uptake for nationwide, broader implementation.

Acknowledgement

The authors would like to thank all the participants for their valuable contribution during the data collection of the study.

Conflict of interest

The authors declared no conflict of interest.

References

1. World Health Organization. *Preterm birth*. 2018 Feb. Available at: <https://www.who.int/news-room/fact-sheets/detail/preterm-birth>. Accessed October 22, 2020.
2. UNICEF. World Prematurity Day 2022. Available at: <https://www.unicef.org/vietnam/press-releases/world-prematurity-day-2022>.
3. Evereklian M, Posmontier B. The impact of kangaroo care on premature infant weight gain. *Journal*

- of Pediatric Nursing. 2017 May; 1;34:e10-6. <https://doi.org/10.1016/j.pedn.2017.02.006>
4. Sivanandan S, Sankar MJ. Kangaroo mother care for preterm or low birth weight infants: a systematic review and meta-analysis. *BMJ Global Health*. 2023 Jun 1;8(6):e010728.
5. Lanerolle S, Ranatunga RM. Reducing the Burden of Prematurity—The Obstetric Perspective. *Sri Lanka Journal of Perinatal Medicine*. 2020 Dec 1;1(1).
6. Lawal TV, Lawal DI, Adeleye OJ. Determinants of Kangaroo Mother Care among low-birth-weight infants in low-resource settings. *PLOS Global Public Health*. 2023 Sep 12;3(9):e0002015.
7. Kostandy RR, Ludington-Hoe SM. The evolution of the science of kangaroo (mother) care (skin-to-skin contact). *Birth Defects Research*. 2019 Sep 1;111(15):1032-43. <https://doi.org/10.1002/bdr2.1565>
8. Al-Shehri H, Binmanee A. Kangaroo mother care practice, knowledge, and perception among NICU nurses in Riyadh, Saudi Arabia. *International Journal of Pediatrics and Adolescent Medicine*. 2021;8(1):29-34. <https://doi.org/10.1016/j.ijpam.2019.11.003>
9. Aldirawi A, El-Khateeb A, Mustafa AA, Abuzerr S. Mothers' knowledge of health care for premature infants after discharge from neonatal intensive care units in the Gaza Strip, Palestine. *Open Journal of Pediatrics*. 2019;9(03):239. <http://creativecommons.org/licenses/by/4.0/>
10. Nirubaa U, Sathiadhas MG. Maternal stress level when a baby is admitted to the neonatal intensive care unit at Teaching Hospital Jaffna, and the influence of maternal and infant characteristics on this level. *Sri Lanka Journal of Child Health*, 2016; 45(2), 90-94.
11. Norén J, Nyqvist KH, Rubertsson C, Blomqvist YT. Becoming a mother- Mothers' experience of kangaroo mother care. *Sexual & Reproductive Healthcare*. 2018; 1;16:181-5. <https://doi.org/10.1016/j.srhc.2018.04.005>
12. Hagen IH, Iversen VC, Svindseth M. Differences and similarities between mothers and fathers of premature children: A qualitative study of parents' coping experiences in a neonatal intensive care unit. *BMC Pediatrics*. 2016;16:1-9.
13. Fowler C, Green J, Elliott D, Petty J, Whiting L. The forgotten mothers of extremely preterm babies: A qualitative study. *Journal of Clinical Nursing*. 2019 Jun;28(11-12):2124-34.
14. Campbell-Yeo ML, Disher TC, Benoit BL, Johnston CC. Understanding kangaroo care and its benefits to preterm infants. *Pediatric Health, Medicine and Therapeutics*. 2015 Mar 18:15-32. <https://doi.org/10.2147/PHMT.S51869>
15. Liyanage G. Kangaroo mother care. *Sri Lanka Journal of Child Health*. 2005; 34(1), 13-7.
16. Rowel D, Cooray K, Silva SD. Available at: <http://www.ideassonline.org/pdf/sriLankaAlbaniaMK Document.pdf>. Accessed October 25, 2020.
17. Polit DF, Beck CT. *Nursing Research: Generating and Assessing Evidence for Nursing Practice* (Tenth Edition). Delhi, India: Walters Kluwer. 2016.
18. Blomqvist Y T, Nyqvist KH. Swedish mothers' experience of continuous Kangaroo Mother Care. *Journal of Clinical Research*. 2010; 20, 1472-80.
19. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*. 2004;24(2):105-12.
20. Lincoln YS, Guba EG. *Naturalistic inquiry*. Sage; 1985.
21. McLeod S. John Bowlby's attachment theory. *Simply Psychology*. 2007.
22. Kanodia P, Bora R, Gupta, A. Kangaroo Mother Care- A Cost-Effective and an Alternate Method to Manage Hypothermia in Low Birth Weight Babies for Better Clinical Outcome. *Value in Health*. 2016; 19(7). doi:10.1016/j.jval.2016.09.338.
23. Narciso LM, Beleza LO, Imoto AM. The effectiveness of Kangaroo Mother Care in the hospitalization period of preterm and low birth weight infants: Systematic review and meta-analysis. *Jornal de Pediatria*. 2022; 98(02):117-25. doi:10.1016/j.jped.2021.06.004
24. Eksirinimit T, Punthmatharith B, Bansopit N, Kusola K. Effects of Kangaroo Care on body temperature of premature infants and maternal satisfaction at Maharaj Nakhon Si Thammarat hospital, Thailand. *Journal of Neonatal Nursing*. 2023; 29(2):302-6. doi:10.1016/j.jnn.2022.07.005
25. Sharma D, Murki S, Oleti TP. To compare cost cost-effectiveness of 'Kangaroo Ward Care' with 'Intermediate intensive care' in stable very low birth weight infants. *Italian Journal of Pediatrics Volume*. 2016; 42(64). doi:10.1186/s13052-016-0274-3
26. Tarus TK. Mothers' experiences and perceptions of Kangaroo Mother Care during hospitalization of their preterm babies. [Ph.D. thesis]. 2008. Available at: <http://wiredspace.wits.ac.za/handle/10539/5721>. Accessed on December 16, 2020.
27. Boundy EO, Dastjerdi R, Spiegelman D, Fawzi WW, Missmer SA, Lieberman E, Kajeepeta S, Wall S, Chan GJ. Kangaroo Mother Care and Neonatal Outcomes: A Meta-analysis. *Pediatrics*. 2016; 137(1). doi:10.1542/peds.. 2015-2238
28. Salimi T, Khodayarian M, Bokaie M, Antikchi M, Javadi S. Mothers' experiences with premature neonates about Kangaroo care: Qualitative

- approaches. *International Journal of Pediatrics*. 2014;2(1):75-82.
29. Parsa P, Karimi S, Basiri B, Roshanaei G. The effect of kangaroo mother care on physiological parameters of premature infants in Hamadan City, Iran. *The Pan African Medical Journal*. 2018;30. doi:10.11604/pamj.2018.30.89.14428
30. Mirnia K, Osborne JW, Sharif-Nia H, Sánchez-Teruel D, Fomani FK, Mirzaei N. The effects of kangaroo care on delirium management in neonates under non-invasive mechanical ventilation: A randomized controlled trial. *Nursing Practice Today*. 2025;12(1):85-97.
31. Blomqvist YT, Frölund L, Rubertsson C, Nyqvist KH. Provision of Kangaroo Mother Care: supportive factors and barriers perceived by parents. *Scandinavian Journal of Caring Sciences*. 2013;27(2):345-53. <https://doi.org/10.1111/j.1471-6712.2012.01040.x>
32. Seidman G, Unnikrishnan S, Kenny E, Myslinski S, Cairns-Smith S, Mulligan B, Engmann C. Barriers and enablers of kangaroo mother care practice: A systematic review. *PloS one*. 2015;10(5):e0125643. <https://doi.org/10.1371/journal.pone.0125643>
33. Mathias CT, Mianda S, Ginindza TG. Facilitating factors and barriers to accessibility and utilization of kangaroo mother care service among parents of low birth weight infants in Mangochi District, Malawi: A qualitative study. *BMC Pediatrics*. 2020;20:1-2.
34. Asmare MG, Murugan R, Adimasu M. Perceived Enablers and Barriers of Kangaroo Mother Care among Mothers and Nurses in Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia: A Qualitative Study. *Iranian Journal of Neonatology*. 2021;12(4). doi:10.22038/IJN.2021.53431.1976
35. Smith ER, Bergelson I, Constantian S, Valsangkar B, Chan GJ. Barriers and enablers of health system adoption of kangaroo mother care: A systematic review of caregiver perspectives. *BMC Pediatrics*. 2017;17:1-6. doi:10.1186/s12887-016-0769-5
36. Robertson AE, Crowley T. Adolescent mothers' lived experiences whilst providing continuous kangaroo mother care: A qualitative study. *Health SA Gesondheid*. 2020;25. doi: <https://doi.org/10.4102/hsag.v25i0.1450>
37. Naloli M, Ssenyonga LV, Kagoya EK, Nteziyaremye J, Nekaka R. Kangaroo mother care: a qualitative study on the practice and experiences of mothers of preterm neonates in a tertiary teaching hospital in eastern Uganda. *International Journal for Research in Health Sciences and Nursing*. 2021 Nov;7(11):1890.
38. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*. 1977 Mar;84(2):191.