

Through the Eyes of Parents: Unpacking Parental Perception of Kangaroo Father Care

Meghana Kamble, Sheela Upendra*, Shital Pimpalekar

Department of Nursing, Symbiosis College of Nursing, Symbiosis International (Deemed) University, India

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Abstract Kangaroo care is a nurturing method for infants, emphasizing skin-to-skin contact, usually with the mother. This adaptable guide helps health professionals implement kangaroo care effectively for optimal newborn outcomes. To explore parents' perceptions of Kangaroo Father Care, the study adopted a non-experimental quantitative exploratory research design with purposive sampling. The study took place in selected mother and child clinics in Pune City. The tool used had two sections: Part I included demographic variables, and Part II was a Likert scale assessing parents' perceptions of Kangaroo Father Care with 15 items on a three-point scale. The analysis showed that a majority of 52.5% of participants had a high level of perception, 44.3% had an average perception, and only 3.3% had a poor perception. A Chi-square test examined the link between demographic variables and parents' perception of Kangaroo Father Care. At a 5% significance level, only the infant's gender showed a significant association. **Conclusion:** A significant portion of participants exhibited positive perceptions of Kangaroo Father Care, acknowledging its benefits for the newborn's health, bonding with the child, and reducing neonatal mortality. However, some parents harbored negative perceptions about KFC, expressing concerns about discomfort to parents, potential harm, and hindrances to constant engagement with neonate. It is evident that fostering awareness and encouraging the adoption of Kangaroo Father care can contribute to the holistic well-being of both parents and infants, fostering a deeper connection within the family unit. Further research can be explored to promote the widespread acceptance and implementation of this valuable caregiving practice.

Keywords Parents, Perception, Kangaroo Care, Kangaroo Father Care

1. Introduction

Ensuring that newborns receive the warmth, stimulation, parental contact, and affection they require is a universally recognized nursing approach (World Health Organization. Reproductive Health and World Health Organization, 2003). The kangaroo care (KC) guidelines advise starting KC as soon as feasible upon delivery or upon arrival at the newborn unit. It can be used up to 24 hours a day, depending on the mother's and baby's health [1].

Kangaroo Father Care (KFC) is a strategy to enhance the health of the baby by providing skin-to-skin contact between the newborn and the chest of the father. This method of caring for newborns involves keeping the infant skin-to-skin and chest-to-chest with a parent. It is defined as a crisis for both parents when a child is delivered prematurely and must be taken away from them right away for medical examination and treatment after birth [2].

Within this framework, the KFC technique is a method to support bonding between the father and the newborn who is there after birth in the hospital, at the beginning Kangaroo Care technique has to be used together with the mother. These behaviors (The behaviors refer to the acts of performing Kangaroo care, including skin-to-skin contact

and the involvement of both parents in the caregiving process) of giving KFC have a major positive impact on the parent-child triad's emotional attachment. With special emphasis on maintaining the third stage (this stage involves continued parental involvement and care at home, emphasizing the father's role in maintaining the benefits of Kangaroo care and supporting the family dynamic) of the approach after the preterm infant is discharged, the paternal role is essential in reestablishing the family dynamic, offering support, and dividing up caregiving duties. As the research focuses on the neonates under 28 days of age till 6 months who continuously need parental care.

Fathers had the opportunity to bond closely with their infants in the neonatal intensive care unit (NICU), which facilitated the development of their paternal role. When faced with this situation, the father might feel a range of emotions, from excitement at seeing the newborn to anxiety over the child's clinical development. Placing the preterm infant on the father's chest provides a tactile, olfactory, visual, and auditory experience for the father and newborn. The skin contact enhances the infant's sense of security and love. Parents who have experienced kangaroo father care generally have positive perceptions of the practice [3].

According to various sources, parents believe that kangaroo father care provides intimate interaction and bonding between the father and the infant [4]. Parents also appreciate the benefits of kangaroo father care in terms of maternal feeding, reduction of maternal distress, and improved development of communication through infancy. In addition, parents report that kangaroo father care helps infants to be more alert and engaged, as they gaze more at their father's face [5].

Parents also view kangaroo father care as a valuable opportunity to establish early attachment and promote mother-infant bonding, which can ease the adaptation process for both the mother and the infant. Furthermore, parents find that kangaroo care enhances breastfeeding success and allows for a deeper connection between the father and the baby.

Particularly with low-birth-weight infants, kangaroo care benefits both parents and their new-borns. Despite the significance of kangaroo care, parents who choose to use it may require assistance and encounter challenges. Nguah et al. [6] conducted a study in Ghana that looked at the beliefs and practises after discharged from hospital of 202 mothers who practised kangaroo care and had low birth weight children. The results indicated that mothers in Ghana had a lack of understanding of kangaroo care.

Study will help to identify the gap in knowledge that parents may have about the practice and understand parent's comprehension of the benefits and significance of Kangaroo father care for both infant and the father. The study on parents' opinions on Kangaroo Father Care is important because it can provide useful information to a range of stakeholders, like as families, legislators, and healthcare professional experts.

The study results of fathers and mothers provide kangaroo care to their preterm children. A study of the physiological and stress responses in these infants showed no discernible changes in the physiological and stress responses following KMC or KFC. KFC may be just as secure and efficient as KMC [7].

The study highlighted that mothers felt anxious, fearful, and helpless about their babies' NICU admission and needed substantial support from medical professionals to care for their infants. The research ensured the validity and reliability of the data through methods like reflexivity, triangulation, peer debriefing, and member checks, adhering to criteria of credibility, confirmability, dependability, and transferability [8].

Understanding parent's perceptions helps in promoting family-centered care by recognizing the role of fathers in the care of infants. Healthcare professionals can use the findings to tailor support and guidance for parents, ensuring they understand the benefits and proper implementation of Kangaroo Care. It contributes to a more inclusive approach in healthcare that considers both parents as active participants in the well-being of the child. Insight from the study can guide healthcare professionals in recommending and promoting Kangaroo Care as a beneficial component of early infant care.

1.1. Objective

- To explore the perception of parents on Kangaroo Father Care.
- To determine the association of Parents' perception of Kangaroo father care with selected demographic variables.

2. Research Question

What influences parental views of Kangaroo Father Care (KFC) for neonates and how does this impact parental involvement, satisfaction, and well-being?

3. Materials & Methodology

The study adopted a non-experimental, quantitative research design. This design is suitable for exploring relationships between variables without manipulating any of them. The aim was to gather quantitative data on the effects of Kangaroo care on newly became parents and their neonates. A purposive sampling technique was used for this study. This technique was chosen because the study required specific criteria to be met by the participants, ensuring that the sample would be relevant and informative. The target population for this study included new parents with their first child, focusing on neonates under 28 days of age up to 6 months old who received Kangaroo care during and after hospitalization and the study excluded the Parents

with chronic illness, the infant with critical illness and on a mechanical ventilator. The sample size was determined by the study's time constraints and logistical considerations. The study was conducted in selected Mother and Child clinics in Pune City. These clinics were chosen based on their accessibility and the likelihood of encountering eligible participants. These participants were approached and informed about the study, and those who consented to participate were included in the sample. Kangaroo Father Care with a moderate effect size, a power of 0.80, and a significance level of 0.05, needs at least 60 participants. The study, conducted from April to June 2023, (a span of 3 months) involved a carefully selected sample of 61 participants. This size was chosen to balance our available resources and timeframe, ensuring the collection of valuable preliminary insights into the research topic. The tool had two sections. Part I included the description of demographic variables – Age, education, occupation of parents and age and gender of the baby and Part II was a Likert scale for the perception of parents on kangaroo father care having 15 items on three-point scale (0= Disagree, 1= Neutral and 2= Agree). The score range is minimum score <10 and maximum score is >21. The tool aimed to assess fathers' awareness, beliefs, and perception regarding Kangaroo Father Care (KFC). The initial set of items was reviewed by experts in neonatal care, pediatric, and research methodology. Experts reviewed and revised items for content validity, and the tool was pilot-tested on a small sample of fathers, with adjustments made as per their feedback. Initial pilot testing with 6 participants provided insights into the tool's applicability and clarity. The tool was adjusted for three items according to the findings and finalized before being used in the main study. The measurement tool used in this study was self-made, specifically designed to measure the perceptions of new parents regarding Kangaroo care. This helped identify the key constructs and variables that needed to be measured. Based on the literature review, a list of potential items was generated. These items were designed to capture various aspects of parental perception related to Kangaroo care. For the self-made tool assessing fathers' perception towards Kangaroo Father Care (KFC), the design involved identifying key objectives and constructs such as awareness, benefits, attitudes, and barriers. Items were created in clear language and reviewed by experts for content validity. Pilot testing on a small sample led to adjustments based on feedback. Validation included ensuring face validity through expert review, assessing reliability with Cronbach's alpha.

Ethics Consideration

This study was approved by Symbiosis College of Nursing (IRC No SCON/03-17/2023). Informed consent

was obtained from all participants.

4. Results

From Table 1, the data provides a comprehensive overview of the demographics of the parents and infants involved in the study. It shows a balanced representation of mothers and fathers, with most parents being in their mid-20s to early 30s. The educational background is diverse, with a significant portion of parents having higher education qualifications. The occupation data indicates that most parents are employed, particularly in the private sector. The age distribution of the infants is fairly evenly spread across the first three months of life, with a slight majority being between 2.1 and just under 3 months old. The gender distribution of the infants is also balanced.

Table 1. Demographic Variables/Data

n=61

Questions	F	%
I am of my child		
Mother	31	50.8%
Father	30	49.2%
Age of parents in years		
19 – 24	12	19.7%
25 – 30	33	54.1%
31 – 36	16	26.2%
37 & above	0	0%
Education of parents		
Secondary & Higher Secondary	23	37.7%
University diploma or degree	17	27.9%
Post-graduate degree and above	21	34.4%
Occupation of parents		
Not-working	15	24.6%
Government job	11	18.0%
Private job	28	45.9%
Self-Employed	7	11.5%
Age of Baby		
0 - 1 month	14	23.0%
1.1 - 2 months	19	31.1%
2.1 - Less than 3 months	28	45.9%
Gender of Infant		
Female	30	49.2%
Male	31	50.8%

Table 2. Perception of Parents towards Kangaroo Father Care

(n=61)

Items	Disagree	Neutral	Agree
I have heard about kangaroo father care.	17 (27.9%)	16 (26.2%)	28 (45.9%)
I am aware that the goal of kangaroo father care is to reduce the length of hospital stay following birth.	4 (6.6%)	23 (37.7%)	34 (55.7%)
I am aware that providing kangaroo care necessitates constant parent-newborn skin-to-skin contact after birth till infant.	5 (8.2%)	16 (26.2%)	40 (65.6%)
I am aware that kangaroo father care can enhance my newborn's health.	2 (3.3%)	15 (24.6%)	44 (72.1%)
I am aware that kangaroo father and mother care has helped to lower neonatal mortality (newborn deaths).	6 (9.8%)	20 (32.8%)	35 (57.4%)
I'm aware that Kangaroo Father Care fosters a strong bond between father and newborn.	3 (4.9%)	19 (31.1%)	39 (63.9%)
Skin-to-skin contact with my newborn infant is something I look forward to since it fosters a sense of intimacy and strong bonds.	1 (1.6%)	10 (16.4%)	50 (82.0%)
I believe that both parents should engage in kangaroo care (skin-to-skin contact) for their children.	4 (6.6%)	10 (16.4%)	47 (77.0%)
Kangaroo Paternal Care enhances my confidence in my capability to look after a newborn infant.	4 (6.6%)	23 (37.7%)	34 (55.7%)
I am certain that Fatherly Kangaroo Care helps in calming my baby and improving the quality of sleep.	4 (6.6%)	14 (23.0%)	43 (70.5%)
I like to engage in kangaroo father care because it improves my child's wellbeing.	3 (4.9%)	15 (24.6%)	43 (70.5%)
Due to the nature of my profession, I feel that I enjoy holding my newborn skin-to-skin all day.	16 (26.2%)	26 (42.6%)	19 (31.1%)
I choose to participate in kangaroo paternal care because of the baby's weight.	30 (49.2%)	21 (34.4%)	10 (16.4%)
I am not hesitant for the kangaroo father care out of concern that it would harm my child.	30 (49.2%)	19 (31.1%)	12 (19.7%)
I like to practice kangaroo father care since it not causes me to have back and chest pain from carrying the baby for such a long time.	26 (42.6%)	24 (39.3%)	11 (18.0%)

According to Table 2:

- **Kangaroo Father Care awareness:** 45.9% of respondents agreed, 26.2% were neutral, and 27.9% disagreed that they had heard about KFC. This indicates a relatively high level of awareness among parents, with nearly half acknowledging familiarity with the concept
- **KFC's Goal and How It Works:** A significant majority (55.7%) agreed that the purpose of KFC is to reduce the length of hospital stay after birth, while only 6.6% disagreed. This suggests that parents recognize the practical benefits of KFC in terms of healthcare efficiently.
- **Significance of Skin-to-Skin Contact:** 65.6% of parents agreed that KFC requires constant skin-to-skin contact after birth, with only 8.2% disagreeing. This highlights an understanding of the fundamental aspect of KFC, which is crucial for its effectiveness.
- **Perceived Health Benefits:** The majority (72.1%) believe that KFC enhances the newborn's health, and 57.4% agree that it contributes to lowering newborn

mortality rates. This reflects a strong belief in the health benefits associated with KFC.

- **Bonding and Confidence:** (63.9%) agreed that KFC fosters a strong bond between father and newborn, and 55.7% felt that it enhances their confidence in caring for their newborn. This indicates that parents see KFC not only as a health practice but also as a means to strengthen familial relationships.
- **Engagement in KFC:** Majority 70.5% of parents expressed a desire to engage in KFC for the improvement of their child's well-being, suggesting a positive attitude towards participating in this care method.

Data revealed a generally positive perception of Kangaroo Father Care among parents. The high levels of agreement regarding the benefits of KFC, such as reducing hospital stays and enhancing health, indicate that parents are not only aware of KFC but also value its significance.

However, the varied responses, particularly in the awareness section, suggest that there may still be a need for increased education and outreach about KFC to ensure that all parents are informed about its benefits and practices.

While most parents recognize the importance of skin-to-skin contact, some may still have concerns or misconceptions that could be addressed through targeted educational programs.

The findings suggest that promoting Kangaroo Father Care could lead to improved health outcomes for newborns and stronger bonds between fathers and their children. However, further efforts are needed to enhance awareness

and address any lingering concerns among parents. This comprehensive understanding can help healthcare providers tailor their support and resources to encourage the adoption of KFC practices among families.

Fig 1 states that the majority of Participants, 52.50%, have a high level of perception, 44.30% of parents have an average perception, and only 3.30% of participants have a poor perception.

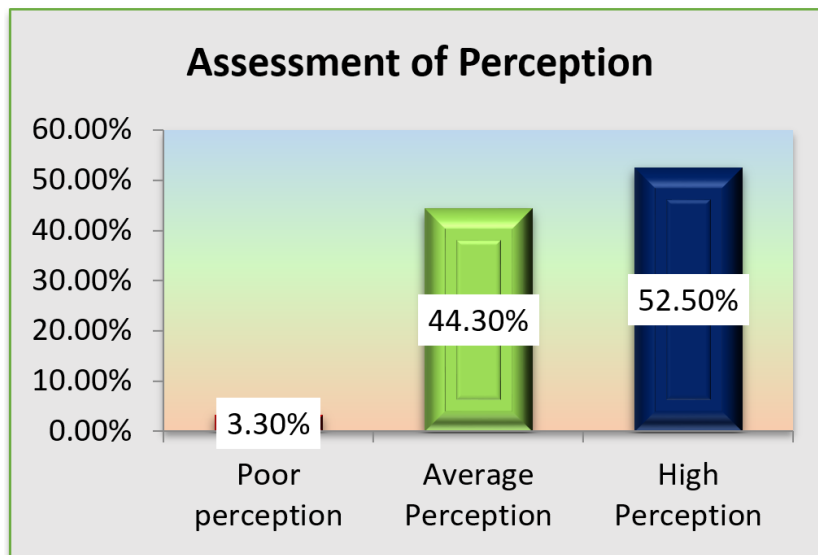


Figure 1. Distribution of the samples according to perception level

Table 3. Association of parent’s perception with demographic variables

n=61

Variable	Groups	df	Chi Square value	P value	Significance
Age of Parents (Years)	19 – 24	4	2.828	0.587	Not Significant
	25 – 30				
	31 – 36				
	37 & above				
Education	Secondary & Higher Secondary	3	7.110	0.130	Not Significant
	University diploma or degree				
	Post-graduate degree and above				
Occupation	Not working	4	10.677	0.099	Not Significant
	Government job				
	Private job				
	Self-Employed				
Age of Baby	0 - 1 months	3	5.931	0.204	Not Significant
	1.1 - 2 months				
	2.1 - Less than 3 month				
Gender of Infant	Male	2	10.968	0.004	Significant
	Female				

Table 3 shows that:

- **Age of Parents:** If younger parents (e.g., ages 19-24) show different perceptions than older parents, this could indicate generational differences in understanding or valuing KFC. Younger parents might be more open to modern caregiving practices, while older parents might rely on traditional methods.
- **Education Level:** The level of education could significantly impact perceptions. Higher education levels might correlate with a better understanding of the benefits of KFC, leading to more positive perceptions. This could suggest a need for targeted educational interventions for less educated parents to improve their understanding and acceptance of KFC.
- **Occupation:** Parents in different occupations may have varying stress levels, time availability, and support systems, which could influence their perceptions of KFC. For instance, parents in government jobs might have more structured leave policies that allow for better engagement in KFC compared to those in private sectors
- **Age of Baby:** Perceptions might also vary depending on the age of the infant. Parents with younger infants may have different concerns or experiences with KFC than those with slightly older babies, reflecting the evolving nature of parental involvement and care practices.
- **Gender of Infant:** While the infant's gender may not directly influence perceptions of KFC, it could play a role in parental expectations and bonding experiences, which could be explored further in the analysis.

5. Discussion

The present study showed that 52.50% had a high level of perception towards Kangaroo father care, followed by 44.30% of parents had an average perception, and only 3.30% of participants had a poor perception.

There are studies on mothers' knowledge of and opinions on kangaroo mother care, as well as the function of healthcare providers in certain primary healthcare facilities. The results showed that mothers had low awareness of kangaroo mother care (24.0%), had a negative perception of mothers who practiced it, and that 50.0% of respondents strongly agreed that they felt very hesitant about it. Additionally, there was a significant positive relationship between the role of healthcare providers and mothers' awareness of kangaroo mother care [9].

In the present study findings, only 16.2 % of participants responded positively to kangaroo paternal care. Eighty-eight percent of the questionnaires that were sent were completed, indicating that these instruments should be used in further studies with this group. If verified, these early findings point to a chance to objectively evaluate KFC impacts, assisting in creating KFC programs with an

empirical foundation that assists NICU families [10].

Stress is a major factor for fathers of premature babies admitted to the NICU, and this can have a negative impact on parent's mental health. Paternal stress levels can be effectively decreased with kangaroo care [11]. The study results showed that fathers and mothers provide kangaroo care to their preterm children. A study of the physiological and stress responses in these infants showed no discernible changes in the physiological and stress responses following KMC or KFC. KFC may be just as secure and efficient as KMC [12].

The present study findings revealed that 55.6% of participants believe that kangaroo Paternal Care enhances the confidence of fathers to look after a newborn infant.

Kangaroo Care clearly benefits from fathers' experiences. Therefore, in order to further promote KFC, it is imperative that professional training be strengthened, that methods for obtaining counsel from KFCs outside of hospitals be developed and that KFCs be explored [13].

The study also emphasized that 43% of participants were confident that Fatherly Kangaroo Care helps calm the baby, improves the quality of sleep, and improves the child's well-being.

Most existing literature predominantly highlights the maternal-infant bond, often overlooking the essential need for paternal-infant bonding. However, a growing body of evidence reveals that early father involvement plays a critical role in the well-being of both healthy and preterm infants. Infants whose fathers actively participate in their care exhibit remarkable benefits, including enhanced cognitive development [14], reduced crying after cesarean section births [15], enhanced maternal breastfeeding success [16], and better sleep patterns. These findings underscore the profound and multifaceted impact fathers can have on their children's early development. Taking proactive steps is crucial for fathers, who are eager to bond with their newborns right from the start. Our study mirrors these findings, revealing that fathers share similar experiences and the same readiness to connect early with their babies. Fathers highlight the importance of acquiring practical skills and the ability to take action, particularly through skin-to-skin contact. This method grants fathers a significant caregiving role and brings them immense satisfaction as they competently care for their infants. Skin-to-skin contact serves as a gateway, unlocking innate caregiving traits. According to attachment theory and gender role theory, early caregiving experiences lay the foundation for fathers to effectively nurture their own children (Chodorow, 1999; Madsen et al., 2002). Shefaly Shorey et al. [17] have summarized research evidence demonstrating the positive impact of father-infant skin-to-skin contact on both infant and paternal outcomes. The review encompassed twelve studies—ten quantitative and two qualitative—revealing the significant benefits of father-infant skin-to-skin contact. This method positively impacts infants by regulating temperature and pain, enhancing bio-physiological markers, and improving

behavioral responses. Fathers also experience noteworthy benefits, including better parental role attainment, improved interaction behavior, and reduced stress and anxiety. Additionally, combined father and mother visitation significantly contributes to a shorter hospital stay for preterm infants, potentially leading to substantial medical cost savings [18].

Limitations

While our study sheds valuable light on parents' perceptions of Kangaroo Father Care (KFC), several limitations must be considered. The positive perceptions of KFC, such as its benefits for newborn health and bonding, are counterbalanced by some negative views regarding potential harm and discomfort. These varied perceptions highlight the need for broader awareness and education about KFC. Our findings suggest that fostering acceptance of KFC can enhance the well-being of both parents and infants. However, further research is necessary to explore cultural, socioeconomic, and regional differences with larger population in perceptions and practices, which will promote wider acceptance and implementation of this beneficial caregiving practice.

Implication

- **Policy and Practice:** Understanding that parents' education levels impact their perceptions of KFC can help develop targeted educational programs, making it easier for parents to accept and implement KFC, regardless of their educational background.
- **Health Education:** Implication of effective communication about the benefits of KFC to parents by giving health education helps parents feel more confident. Healthcare providers should proactively create awareness about the importance of Kangaroo Care, aiming to transform the perceptions and encourage parents to embrace this beneficial practice.
- **Future Research:** Future studies inspired by this research can explore long-term benefits and additional factors affecting KFC perceptions. This can help parents better understand the importance and effectiveness of KFC, reinforcing its adoption.

6. Conclusions

The study shed valuable light on parents' perceptions regarding Kangaroo Father Care. A significant portion of participants exhibited positive perceptions of KFC, acknowledging its benefits for the newborn & health, bonding with the child, and reducing neonatal mortality, some parents harbored negative perceptions, expressing concerns about potential harm, discomfort, and hindrances to constant engagement.

Parents believe that kangaroo father care provides

intimate interaction and bonding between the father and the infant, improves breastfeeding, reduces maternal distress, enhances communication development through infancy, and promotes early attachment and mother-infant bonding [4].

It is evident that fostering awareness and encouraging the adoption of Kangaroo Father care can contribute to the holistic well-being of both parents and infants, fostering a deeper connection within the family unit. Further research can be explored to promote the widespread acceptance and implementation of this valuable caregiving practice. It opens avenues for additional studies exploring cultural, socioeconomic and regional variations in perceptions and practices related to Kangaroo father care.

Conflict of Interest

No existing or potential conflict of interest relevant to this article was reported.

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