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A Review of Theses with Randomised Controlled Experimental Designs on Kangaroo Care (Skin-to-Skin Contact) in Nursing and Midwifery in Turkey: A Retrospective Study

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ABSTRACT

Aim: This study was conducted to examine postgraduate theses on kangaroo care and skin-to-skin contact in Turkey.

Materials and Methods: The study involved a search of theses published in the fields of nursing and midwifery at the National Thesis Centre of the Higher Education Council (YÖK) in Turkey between 16/07/2025 and 23/07/2025, which were available for full access. The keywords 'kangaroo care' and 'skin-to-skin contact' were used in the abstract section of the search. A total of 68 theses were identified, but since 4 of them were found to be duplicates, 64 theses were included in the analysis. A total of 9 postgraduate theses that met the inclusion criteria were analysed.

Results: The study included 9 postgraduate theses that met the inclusion criteria. Eight of the theses examined were in the field of nursing and one was in the field of midwifery. Seven of the theses were at the master's level and the remaining two were at the doctoral level. Only one of the randomised controlled studies showed that kangaroo care had no effect between groups, while the other studies showed that it was effective.

Conclusion: Skin-to-skin contact and kangaroo care are considered fundamental and effective methods in nursing and midwifery practices for the care of preterm infants. Skin-to-skin contact and kangaroo care are indispensable practices in preterm infant care, both in terms of improving clinical outcomes and supporting maternal and infant health holistically, and their widespread use in healthcare systems is recommended.

Keywords: Kangaroo care, Skin-to-skin contact, Premature infant

Türkiye’de Hemşirelik ve Ebelik Alanlarında Kanguru Bakımı (Ten Tene Temas) Konusunda Yapılmış Randomize Kontrollü Deneysel Tasarıma Sahip Tezlerin İncelenmesi: Retrospektif Bir Çalışma

Öz

Amaç: Bu araştırma Türkiye’de kanguru bakımı ve ten tene temas üzerine yapılmış lisansüstü tez çalışmalarının incelenmesi amacıyla yapılmıştır.

Gereç ve Yöntem: Araştırmada 16/07/2025-23/07/2025 arasındaki tarihlerde, 2020-2025 yılları arasında, ülkemizin Yükseköğretim Kurulu (YÖK) Ulusal Tez Merkezi’nde, Hemşirelik ve Ebelik alanlarında yüksek lisans ve doktora türünde yayınlanmış ve ulaşılma izni olan tezlerin taraması yapılmıştır. Taramada özet kısmına “kanguru bakımı” ve “ten tene temas” anahtar kelimeleri kullanılmıştır. Toplamda 68 teze ulaşılmış, 4 tezin incelemede ortak olduğu tespit edildiğinden 64 tez incelemeye dahil edilmiştir. Dahil edilme kriterlerini karşılayan toplam 9 lisansüstü tez incelenmiştir.

Bulgular: Çalışmada, dahil edilme kriterlerini karşılayan 9 lisansüstü teze yer verildi. İncelenen tezlerin 8’i hemşirelik alanında 1’i ebelik alanındadır. Tezlerin 7’si yüksek lisans kalan 2 tez ise doktora düzeyindedir. Yapılan randomize kontrollü çalışmaların sadece birinde kanguru bakımın gruplar arasında etkisinin olmadığını diğer çalışmalarda ise etkili olduğu görülmüştür.

Sonuç: Preterm bebeklerin bakımında ten tene temas ve kanguru bakımı hem hemşirelik hem de ebelik uygulamalarında temel ve etkili bir yöntem olarak kabul edilmektedir. Preterm bebek bakımında ten tene temas ve kanguru bakımı hem klinik sonuçların iyileştirilmesi hem de anne-bebek sağlığının bütüncül olarak desteklenmesi açısından vazgeçilmez bir uygulama olup, sağlık sistemlerinde yaygınlaştırılması önerilmektedir

Anahtar Kelimeler: Kanguru bakımı, Ten tene temas, Prematüre bebek

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INTRODUCTION

The World Health Organisation defines a premature baby as a baby born alive before the completion of the 37th week of pregnancy. Additionally, it has categorised preterm births based on gestational age, referring to those born before 28 weeks as 'extremely preterm', those born between 28 and 32 weeks as 'very preterm', and those born between 32 and 37 weeks as 'moderate to late preterm' (WHO, 2022).

According to a new report published on 10 May 2023 by United Nations agencies and partners, one in ten babies worldwide is born prematurely (before 37 weeks of gestation) (Ohuma et al., 2023) and one of these babies dies every 40 seconds (Perin et al., 2022; WHO, 2022) It highlights that preterm birth rates have not changed in any region of the world over the past decade and that the current risks for women and babies globally have increased due to the effects of conflicts, climate change and the COVID-19 pandemic (UNICEF, 2023).

In 2020, approximately 13.4 million babies were born prematurely. One million of these premature babies died due to complications related to early birth. This number corresponds to approximately 1 in every 10 babies born prematurely (before 37 weeks of pregnancy) worldwide (UNICEF, 2023). Preterm birth is the leading cause of death among children under the age of 5, accounting for more than one-third of all neonatal deaths (Perin et al., 2022).

Kangaroo care

Kangaroo care is a method in which premature and full-term newborns are placed on their mothers' bare skin, with only a diaper between them, to ensure skin-to-skin contact (Pattinson et al., 2006). Kangaroo care was first implemented in 1978 by Martinez and colleagues at a centre in Bogota, Colombia (Martinez et al., 1992). Kangaroo care was developed for low-birth-weight babies due to insufficient incubator numbers, infections, limited technological capabilities, inability to obtain sufficient breast milk, and weak mother-baby bonding. Thus, kangaroo care was supported by UNICEF in 1984 due to its ability to reduce high mortality rates, decrease infections, be cost-effective, strengthen mother-infant bonding, and be easily applied to all term and mature infants in any environment (Charpak et al., 2005; Simkiss 1999; Venancio and Almeida, 2004). The WHO recommends the use of kangaroo care. It has been reported to strengthen the mother-baby bond, promote breastfeeding, and protect breast milk (WHO, 2003). There are many studies demonstrating the benefits of kangaroo care. Kangaroo care has been shown to protect the baby from hypothermia, increase breastfeeding, and strengthen the mother-baby bond in term, preterm, and low birth weight babies (McCall et al., 1996; Nyqvist et al., 2010).

Maternal and Paternal Bonding

Maternal bonding is a continuous love relationship between mother and baby that brings happiness and pleasure to both parties (Mercer, 2006). The first minutes after birth are crucial for establishing maternal attachment. It has been reported that separating the mother and baby for the first 60-90 minutes after birth has negative effects on the baby's development and the mother's behaviour (Zeynep and Can, 2010).

The Relationship Between Kangaroo Care and Maternal and Paternal Attachment

In 1969, Bowlby defined attachment as a strong emotional bond between two people, marking a turning point in the evolution of the concept (Bell et al., 1998). According to Bowlby, attachment is a behaviour necessary for survival (Bowlby, 2008). This

behaviour manifests itself in situations such as fear, pain, fatigue, and illness, where a person feels a need to be close to a specific individual and maintain that closeness. Attachment behaviour can be observed with many people, but lasting attachment is limited to very few individuals. Bowlby argued that attachment behaviour takes its most distinct form during early infancy through experiences with attachment figures, remains constant throughout life, and influences relationships with other people. Bowlby's ideas were experimentally tested by his colleague Ainsworth, leading to the development of attachment theory (Bowlby, 2008; Subaşı and Kazan, 2020).

The mother-infant bond, a special and unique relationship that promotes healthy growth and development, also plays a key role in ensuring positive adaptation to motherhood and acquiring the role of motherhood (Dağ Tüzmen, 2024; Fijałkowska and Bielawska-Batorowicz, 2020).

The effects of mother-infant bonding last a lifetime, contributing significantly to the individual's self-confidence, self-control, and communication skills (Kesebir et al., 2011; Köse et al., 2013).

The bond that develops during pregnancy, birth and the postnatal period is supported as long as the mother-baby interaction continues (Güleşen and Yıldız, 2013; Kesebir et al., 2011). It has been demonstrated that secure attachment established with fathers from the neonatal period onwards helps children to form healthy relationships in adulthood. One of the important factors influencing secure father-infant attachment is the nature of communication between the mother and father. The appropriate and sufficient form of communication between spouses in marital dynamics, the satisfaction they feel, and their thoughts about being a mother and father are closely related to attachment. It is known that paternal attachment is influenced both directly and indirectly by fathers' behaviours towards their children (Newland et al., 2014). Infants who form secure attachments with both parents have been reported to have more adequate mental, emotional, and cognitive development compared to infants who form secure attachments with only one parent (Belsky and Fearon, 2008). Secure attachment to fathers specifically has also been linked to greater sociability, self-confidence, and happiness in infants (Güleç and Kavlak, 2015).

MATERIALS AND METHODS

Type of Research: In this study, the analysis method from qualitative research designs was used to examine postgraduate theses conducted in Türkiye on kangaroo care and skin-to-skin contact.

Research Universe and Sample: The study involved a search of theses published between 2020 and 2025 in the fields of Nursing and Midwifery at the National Thesis Centre of the Higher Education Council (YÖK) of our country, with full access, during the period 16/07/2025-23/07/2025. The keywords 'kangaroo care' and 'skin-to-skin contact' were used in the abstract section of the search. A total of 68 theses were identified, but since 4 of them were found to be duplicates, 64 theses were included in the analysis. A total of 9 postgraduate theses that met the inclusion criteria were analysed.

The criteria for inclusion in the study are as follows:

- Access to the full text of the thesis
- The thesis must have been conducted in Türkiye
- It must be written in Turkish or English
- It must have been conducted with preterm newborns
- It must have been published between 2020 and 2025
- It must have been conducted by nursing and/or midwifery departments

Ethical Aspects of the Research:

In this research, ethical committee approval was not required because the theses in the National Thesis Database of the Council of Higher Education (YÖK) are publicly available and accessible to everyone, and the theses included in the research were those whose full text was made available by the authors.

Seven were master's theses, while the remaining two were doctoral theses. Based on the year of publication, there was one postgraduate thesis each in 2020, 2021, and 2023, two postgraduate theses in 2022, and four postgraduate theses in 2024. Among the randomised controlled studies conducted, only one found no effect of kangaroo care between groups, while the others showed it to be effective

RESULTS

The study included 9 postgraduate theses that met the inclusion criteria. Eight of the theses examined were in the field of nursing and one was in the field of midwifery.

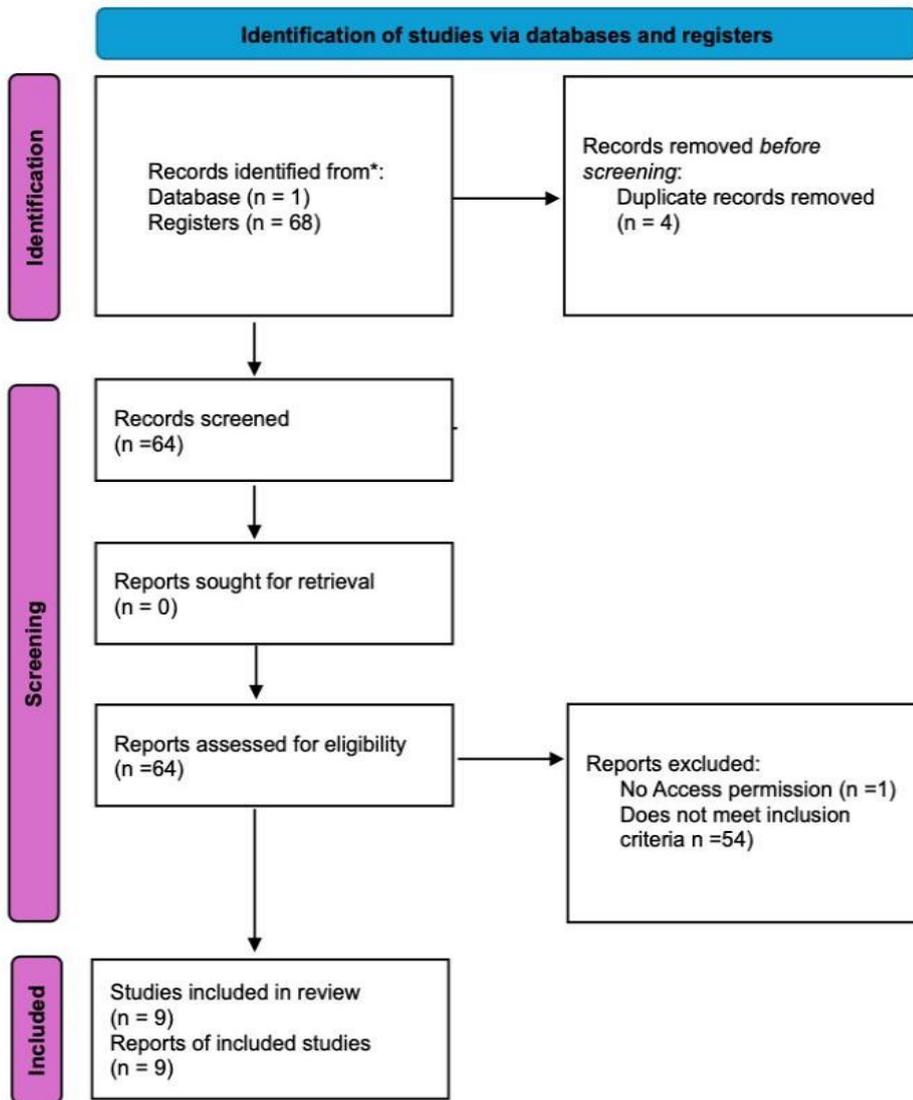


Figure 1. PRISMA flow diagram. PRISMA

Table 1. Profiles of Theses Examined in The Fields of Nursing and Midwifery with a Randomised Controlled Experimental Design Related to Kangaroo Care/Skin-To-Skin Contact in Turkey (N:9)

Author-Year Field	Thesis Type	Thesis Title	Result
BÜŞRA YAHŞİ ÖZTÜRK (2024) (Nursing)	Master Thesis	The effect of mother and father kangaroo care newborn and parent outcomes in premature infants: A randomised Cross Over Study	Kangaroo care was found to have an effect on the average body temperature and oxygen saturation measurements of premature babies over time, regardless of group. According to the groups, kangaroo care was found to have an effect on the average respiratory rate and comfort scores of babies whose mothers received kangaroo care. In addition, it was determined that kangaroo care had an effect on comfort scores over time, regardless of group. It was found that kangaroo care had an effect on satisfaction score averages in favour of father kangaroo care, depending on the group. It was determined that kangaroo care had an effect on satisfaction and parent stress scores over time, regardless of group. It can be stated that both mother and father kangaroo care practices are beneficial in improving the baby's clinical outcomes, and that father kangaroo care practice has positive effects on parental satisfaction (Y Öztürk, 2024).
MERYEM BÜŞRA BORAZA (2024) (Nursing)	Master Thesis	Determination of the effect of kangaroo care applied to premature newborns by their parents on the newborn's vital signs, parents' perceived parenting self-efficacy level and infant attachment	Mothers and fathers in the group where both parents practised kangaroo care had higher levels of attachment and parental self-efficacy. It was found that fathers' participation in kangaroo care was effective in both fathers' and mothers' attachment to their babies and their perception of themselves as competent in caring for their babies (Borazan,2024).
ELANUR ATEŞ KARA (2024) (Midwifery)	Master Thesis	The effect of kangaroo care used with the father in reducing the pain during orogastric tube insertation in premature babies	It has been determined that kangaroo care with the father is effective in reducing pain during the placement of an orogastric tube in premature babies (A Kara, 2024).
ZEYNEP BÜŞRA ZEKEY (2024) (Nursing)	Master Thesis	The effect of father kangaroo care on physiological parameters, anxiety, and paternal attachment during transport in preterm infants: A Randomised Controlled Trial	It was determined that early kangaroo care and transport of preterm infants had a positive effect on heart rate, respiration, and oxygen saturation values compared to routine clinical practice, and that their anxiety levels were lower (Zekey, 2024).
EMİNE BAKIR (2023) (Nursing)	Doctoral Thesis	The effect of music-supported kangaroo care applied to mothers who have premature infants in intensive care on breast milk amount, breastfeeding time and anxiety level.	Music-assisted kangaroo care and kangaroo care have been found to have a positive effect on increasing mothers' milk supply, shortening the time to start breastfeeding, and reducing ongoing anxiety levels (Bakır, 2023).
RABIA AYÇA ÖZKAN (2022) (Nursing)	Master Thesis	The effect of using clinical guidelines on kangaroo care in premature infants on newborn and maternal outcomes: A Randomised Controlled Trial	The study found no statistically significant difference between the physiological parameters of premature babies and their comfort scale scores according to group (Özkan, 2022).
BURCU KÜÇÜKKAYA (2022) (Nursing)	Doctoral Thesis	The effect of half swaddle and kangaroo care practices initiated in the early period in preterm infants on breastfeeding, mother-infant attachment, maternal sleep quality and postpartum depression	In preterm infants, mothers who initiated kangaroo care early on and those who used both half swaddling and kangaroo care had a more positive effect on breastfeeding self-efficacy, perceived milk insufficiency, breastfeeding success, mother-infant bonding, and postpartum depression. mothers who only used half swaddling and those who used both half swaddling and kangaroo care had a more positive effect on maternal sleep quality (Küçükkaya, 2022).
KAMİLE ÇİFTÇİ (2021) (Nursing)	Master Thesis	The effect of three different methods applied during setting up peripheral vascular access on pain and comfort level in premature	Kangaroo care, foetal position and swaddling applied during and after peripheral vascular access in preterm infants were found to be effective in reducing the infant's pain and increasing their comfort level (Çiftçi, 2021).

