

Communication Pathways Between Families, Healthcare Teams, and Infants in the NICU: A Narrative Review

Ayhan Çeri^{1,a,*} Nazlı Dilay Gültekin^{1,b}

¹ Dr. Ali Kemal Belviranlı Obstetrics and Gynecology and Pediatric Diseases Hospital, Konya, Türkiye

*Corresponding author

Review

History

Received: 04/12/2025

Accepted: 01/02/2026

Copyright



This work is licensed under
Creative Commons Attribution 4.0
International License

ABSTRACT

Effective communication in neonatal intensive care units (NICUs) is central to Family-Centered Care (FCC), shaping how parents understand their infant's condition, engage in shared decision-making, and form therapeutic partnerships with the healthcare team. Grounded in communication theory, this narrative review explores the triadic interaction among families, healthcare professionals, and infants, emphasizing how information exchange, relational communication, and emotional attunement influence clinical processes and parental experiences. The review synthesizes international and national literature to highlight recurrent communication challenges, including fragmented information flow, limited parental inclusion in care discussions, and variability in professional communication skills. Drawing on FCC principles, we identify evidence-based strategies that strengthen communication effectiveness, such as structured communication tools, routine family meetings, digital information platforms, parent-reported experience measures, and nurse-led relational support. These interventions enhance parental empowerment, reduce anxiety, and contribute to improved continuity and quality of care. The Turkish NICU context is also considered, underscoring the cultural and systemic factors that shape family engagement and communication expectations. Overall, this review demonstrates that communication is not merely a clinical task but a relational process that underpins FCC and supports the emotional well-being of families navigating the NICU environment. Strengthening communication pathways can promote safer, more collaborative, and developmentally supportive neonatal care.

Keywords: Intensive Care Units, Neonatal, family-centered care, communication; parents, nursing

Yenidoğan Yoğun Bakım Ünitelerinde Aile, Sağlık Ekibi ve Bebek Arasındaki İletişim Yolları: Anlatısal Bir Derleme

Derleme

Süreç

Geliş: 04/12/2025

Kabul: 01/02/2026

Telif Hakkı




Bu çalışma Creative Commons Atf
4.0 Uluslararası Lisansı
Kapsamında Lisanslanmıştır.

ÖZ


Yenidoğan Yoğun Bakım Ünitelerinde (YYBÜ) etkili iletişim, Aile Merkezli Bakım (AMB) yaklaşımının temel bileşenlerinden biridir. Bu derleme, aileler, sağlık profesyonelleri ve bebekler arasındaki üçlü iletişim etkileşimini iletişim kuramı temelinde incelemektedir. Bilgi aktarımı, ilişkisel iletişim ve duygusal uyumun klinik süreçler ile ebeveyn deneyimleri üzerindeki etkileri vurgulanmaktadır. Ulusal ve uluslararası literatürden elde edilen bulgular, bilgi akışının kesintili olması, ebeveynlerin karar süreçlerine yeterince dahil edilmemesi ve profesyonel iletişim becerilerindeki değişkenlik gibi tekrar eden iletişim sorunlarını ortaya koymaktadır. Yapılandırılmış iletişim araçları, düzenli aile toplantıları, dijital bilgi platformları, ebeveyn deneyim ölçekleri ve hemşire liderliğinde verilen ilişkisel destek gibi kanıta dayalı stratejiler sunulmaktadır. Bu müdahaleler, ebeveynlerin güçlenmesini destekler, kaygı düzeylerini azaltır ve bakımın sürekliliğini artırır. Türk YYBÜ bağlamı da ele alınarak kültürel ve sistemsel etkenlerin iletişim beklentilerini nasıl şekillendirdiği irdelenmiştir. Bu derleme, iletişimin yalnızca klinik bir görev değil; aynı zamanda duygusal destek ve bakım kalitesinin belirleyicisi olduğunu ortaya koymaktadır.

Anahtar Kelimeler: Yenidoğan Yoğun Bakım Ünitesi, aile merkezli bakım, iletişim, ebeveynler, hemşirelik

 ceriayhan@gmail.com

 0000-0002-8754-0901

 dilayyenihan@hotmail.com

 0000-0002-9624-1954

Introduction

The NICU represents a uniquely challenging environment where clinical complexity intersects with profound emotional distress.^{1,2} Within this high-stakes context, family communication plays a critical role in shaping the caregiving experience, influencing both clinical outcomes and psychosocial well-being of the parents. Infants admitted to the NICU often require prolonged hospitalization, which can disrupt the early bonding process and impose high levels of stress and anxiety on parents. Effective communication between healthcare professionals and families is therefore not merely a supportive measure, it is an essential component of family-centered neonatal care.^{3,4}

Family-centered care (FCC), as advocated by the World Health Organization (WHO), emphasizes dignity, respect, information-sharing, and active participation of families in the decision-making process. In NICU settings, this philosophy demands structured and empathetic communication pathways that allow families to feel informed, empowered, and emotionally supported. Yet, despite these widely endorsed principles, studies indicate that communication in NICUs often remains inconsistent, insufficiently tailored to individual family needs, and hindered by institutional and interpersonal barriers.⁵⁻⁸

Research over the past decade has increasingly highlighted the dual burden faced by NICU families: navigating medical uncertainty while coping with emotional overload. Parents frequently report experiencing helplessness, confusion, and alienation due to unclear or limited communication from healthcare providers.⁹ On the other side, nurses and physicians often cite lack of training, high patient loads, and emotional fatigue as barriers to effective communication.^{10,11} These findings suggest that improving communication practices in NICUs is not only an ethical imperative but also a modifiable factor that can enhance satisfaction, reduce parental anxiety, and promote better neonatal outcomes.

This literature review aims to examine the dynamics of family communication in NICUs by synthesizing current evidence from both international and Turkish studies. Particular emphasis is given to the roles of healthcare professionals, parental stress factors, and effective interventions that strengthen the communication process.^{12,13} The article also incorporates clinical reflections from neonatal settings in Turkey, providing contextual insights into family experiences, staff perspectives, and institutional practices. By outlining evidence-based strategies and highlighting areas requiring further improvement, this review intends to contribute to the ongoing development of empathetic and collaborative neonatal communication practices. This paper is presented as a traditional review focusing on evidence-based communication practices and clinical insights from NICUs.

Methods

This literature review was conducted to explore existing research on family communication in NICUs, with emphasis on communication challenges, parental experiences, and evidence-based interventions.

A narrative literature search was carried out using three major academic databases PubMed, Scopus, and Google

Scholar, covering publications from 2015 to 2025.^{14,15} Keywords such as "neonatal intensive care", "family communication", "parental stress", "FCC", "neonatal nurse", and "shared decision-making" were used in various Boolean combinations to ensure comprehensive coverage of both clinical and psychosocial aspects of NICU communication.

Peer-reviewed studies in English and Turkish focusing on NICU-specific communication practices were included.¹⁶ Studies not directly addressing NICU or not involving family communication were excluded to maintain thematic focus and methodological rigor.

The literature synthesis draws from both international and Turkey-based sources and aims to provide a comprehensive understanding of communication dynamics, with attention to clinical relevance and cultural context. Building upon the methodological framework described above, the following section synthesizes key patterns identified across the reviewed literature.

Key Dynamics of Family Communication

Effective communication in NICUs is shaped by a complex interplay of emotional, informational, and systemic factors. For families, particularly parents, the NICU represents a period of intense vulnerability, uncertainty, and disruption. Understanding the emotional and cognitive dynamics that influence communication in this context is essential for developing empathetic and FCC models.

One of the most profound challenges in NICU communication is the emotional burden experienced by parents. The hospitalization of a newborn, especially under life-threatening or uncertain conditions, evokes a spectrum of emotional responses ranging from shock and guilt to fear and helplessness. Numerous studies report high levels of anxiety, depression, and post-traumatic stress symptoms among NICU parents, which may impair their capacity to process information, make decisions, or engage in meaningful dialogue with healthcare professionals.¹⁷ In this emotionally charged environment, even well-intentioned communication efforts may fail if not attuned to the parents' psychological readiness and coping capacity.

Another major factor is the information gap that frequently exists between healthcare teams and families. Medical terminology, fast-paced clinical routines, and the evolving nature of neonatal conditions can leave parents feeling confused or inadequately informed. Parents often express frustration over inconsistent information, lack of updates, or the use of technical jargon that is difficult to comprehend.^{18,19} This lack of clarity can undermine trust, increase emotional distress, and limit parental engagement in care decisions. Structured communication protocols, such as regular family meetings or bedside briefings, have been proposed to bridge this gap and foster shared understanding.

Communication barriers in NICUs also arise from institutional, cultural, and interpersonal dynamics. Staff workloads, shift changes, and time constraints often hinder thorough and personalized interactions. Language differences, cultural expectations, and differing health-literacy levels may further complicate the communication process. Moreover, healthcare providers may feel unprepared or inadequately trained to navigate sensitive conversations, particularly when

conveying bad news or discussing ethical dilemma.³ This mismatch between parental expectations and provider communication skills can lead to dissatisfaction, misinterpretation, or disengagement.

In sum, the communication landscape in NICUs is influenced not only by the emotional vulnerability of parents but also by systemic constraints and relational competencies. Addressing these dynamics requires a multifaceted approach, one that emphasizes emotional sensitivity, consistent information delivery, and institutional support for reflective communication practices. By recognizing and responding to these key challenges, NICUs can better support family integration into care and enhance the overall quality of neonatal outcomes. The communication landscape in NICUs can be conceptualized through a triadic relationship between families, healthcare teams, and infants (see Figure 1).

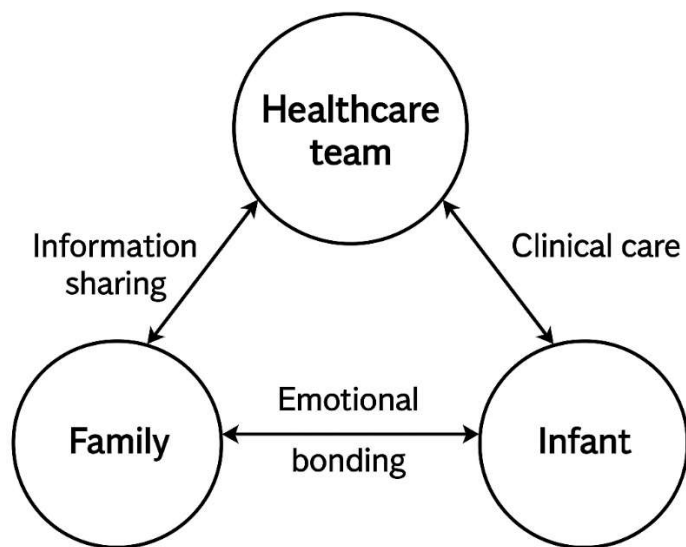


Figure 1. Conceptual Model of Family Communication in the NICU

The Role of Healthcare Professionals in Family Communication

In the NICU environment, healthcare professionals serve not only as medical caregivers but also as key communicators who shape the emotional and informational experiences of families. Their ability to establish trust, convey complex information, and provide emotional support directly affects family satisfaction, decision-making capacity, and overall care outcomes.^{18,20} The communication roles of physicians, nurses, and social workers are complementary yet distinct, each contributing uniquely to the family experience.

Physicians often act as the primary source of diagnostic information and medical decision-making in the NICU. Their role in family communication involves discussing the infant's condition, treatment plans, prognosis, and potential complications. Studies show that parental satisfaction with NICU care is strongly influenced by the clarity, consistency, and empathy exhibited during physician-family interactions.^{21,22} However, challenges such as time constraints, medical uncertainty, and the emotional intensity of conversations can hinder effective dialogue. Training in relational communication and standardized communication pathways has been shown to enhance physicians' capacity to deliver difficult news while maintaining trust.^{23,24}

Nurses, by contrast, maintain the most continuous contact with both infants and families. As such, they serve as crucial mediators of information and emotional support. Nurses are often responsible for reinforcing medical updates, translating technical jargon, and recognizing parental stress indicators. Their proximity to families allows for more frequent and informal interactions, which can foster emotional bonding and facilitate early identification of communication breakdowns.^{23,24} However, without institutional support and adequate training in communication strategies, nurses may feel underprepared to manage complex family dynamics.²⁵

Social workers play a vital but often underrecognized role in addressing the psychosocial needs of NICU families. Their responsibilities include counseling, crisis intervention, care coordination, and connecting families with community or financial resources. Importantly, social workers often act as cultural and emotional interpreters, helping both families and clinical teams navigate sensitive topics such as end-of-life care or parental guilt. Interdisciplinary collaboration with medical staff ensures that communication is holistic, culturally sensitive, and aligned with the family's values and needs.^{9,26}

In conclusion, effective communication in the NICU requires a multidisciplinary approach wherein physicians, nurses, and social workers operate in synergy. Each professional brings a unique perspective and skill set that contributes to a supportive, transparent, and FCC environment. Strengthening these roles through targeted training and institutional frameworks is essential to improving communication outcomes in neonatal intensive care settings.^{10,11}

Interventions to Enhance Communication

Improving communication between healthcare teams and families in NICUs requires the implementation of structured, evidence-based interventions that address both informational and emotional dimensions. A growing body of research supports the use of multimodal strategies to foster more inclusive, empathetic, and consistent communication with parents. These interventions not only enhance the family's understanding and emotional resilience but also promote collaboration in clinical decision-making.^{6,7}

One widely adopted approach is the use of parental information sessions, which provide structured opportunities for families to receive clear, consistent updates about their infant's condition and care plan. These sessions—conducted by neonatologists, nurses, or interdisciplinary teams—offer space for parents to ask questions, express concerns, and participate actively in the care process. Regular family meetings have been associated with decreased parental anxiety and increased satisfaction with care.^{6,7,27} When scheduled at predictable intervals, these sessions also reduce confusion arising from inconsistent bedside updates.

Video-based educational tools have also gained prominence as a means of supporting parental understanding, particularly for families who may feel overwhelmed during verbal consultations. Videos explaining common NICU procedures, equipment, or developmental milestones can be viewed repeatedly, helping parents absorb information at their own pace. These resources have shown effectiveness in improving parental knowledge and reducing feelings of helplessness, especially when language barriers or health literacy limitations are present.¹⁴

Family guidance tools, including printed or digital handbooks, are another key resource for promoting communication. These materials typically outline the structure of the NICU, introduce members of the care team, explain clinical terminology, and offer practical advice for coping with stress and participating in infant care. Providing such materials early during admission helps establish realistic expectations and fosters a sense of preparedness among families. Customizing content to cultural and linguistic contexts further enhances their utility.²⁸

Recent advances in technology have enabled the integration of mobile health (mHealth) applications into NICU communication strategies. These digital platforms allow families to access real-time updates, track clinical parameters, and communicate asynchronously with care providers. In some settings, apps also offer mood-tracking and psychosocial support features, connecting parents to mental health

resources. Studies suggest that digital interventions can improve accessibility, especially for parents unable to remain at the bedside due to distance, employment, or other caregiving responsibilities.²⁹

In conclusion, enhancing communication in NICUs requires a multifaceted approach that includes informational, emotional, and technological dimensions. Interventions such as structured meetings, video support, printed guidance, and digital applications create a communication ecosystem that empowers families, reduces distress, and fosters collaborative care. Institutions seeking to improve family-centered outcomes should prioritize the integration and evaluation of these communication-enhancing tools within routine NICU practice.³⁰ While international literature provides a comprehensive foundation, localized evidence from Turkey offers important contextual insights. A synthesis of key evidence-based interventions is presented in Table 1.

Table 1. Evidence-based communication interventions used to improve family-centered communication in NICUs

Intervention type	Description	Primary effect	Supporting literature
Family information sessions	Scheduled, structured meetings providing consistent updates to parents about the infant's clinical status and care plan.	Improves informational continuity, reduces anxiety, and strengthens shared decision-making.	(6, 10, 19)
Video-assisted education	Short audiovisual materials explaining NICU equipment, environment, and procedures in clear, accessible language.	Enhances comprehension, reduces uncertainty, and supports parents with limited health literacy.	(7, 28, 40)
Guidance materials	Printed or digital booklets introducing NICU structure, team roles, routines, and frequently asked questions.	Promotes preparedness, confidence, and informed participation in care.	(8, 14, 23)
Mobile health applications	Secure mobile platforms providing parents with updates, educational content, and communication channels.	Improves accessibility of information and emotional support, especially when parents are off-site.	(18, 25, 29)

Summary of structured, multimodal communication strategies shown to improve parental understanding and emotional coping in NICU settings. Each approach is supported by empirical evidence demonstrating measurable improvements in family satisfaction and participation in care.

The Role of Touch-Based Infant Communication: Kangaroo Care and Skin-to-Skin Contact

While the title of this review highlights the triadic communication between families, healthcare teams, and infants, the main body of the manuscript primarily focuses on the interaction between families and professionals. To ensure coherence between the title and the content, it is essential to include communicative interactions involving the infant, particularly through sensory modalities such as physical touch.

Among the most widely recognized forms of infant-directed communication in NICUs are kangaroo care and skin-to-skin contact. These interventions extend beyond physiological advantages, such as thermal regulation and stabilization of vital signs, to serve as fundamental mechanisms of relational communication between infants and caregivers. They enhance bonding, promote emotional synchrony, and help parents feel more engaged and competent in caregiving roles.

Evidence indicates that skin-to-skin care significantly reduces parental stress and improves perceived parental competence, especially among mothers of preterm infants.^{14,15}

These practices facilitate non-verbal attunement, enabling parents to interpret infant cues and establish mutual regulation despite the absence of verbal language. Such embodied communication is particularly critical in NICUs, where typical behavioral expressions may be limited or absent.

In the Turkish context, kangaroo care and related touch-based strategies have been increasingly promoted in tertiary care hospitals and nursing protocols.^{3,12} However, the implementation of these practices varies significantly depending on healthcare professionals' training, institutional policies, and parental readiness. Integrating such methods as essential components of Family-Centered Care (FCC) can reinforce the communicative bond between infants and caregivers, ensuring the infant's role as an active participant within the triadic model.

Recognizing the infant as a dynamic communicative agent, not merely a passive recipient, requires embedding touch-based interventions as standard tools in family-professional partnerships in the NICU.

Clinical Observations and Findings from Turkey

Family communication practices in NICUs in Turkey reflect both the universal challenges of neonatal care and the unique cultural, institutional, and systemic characteristics of the national healthcare context. Over the past decade, a modest but growing body of Turkish research has explored the interaction between healthcare professionals and families in NICUs, providing valuable insights into information delivery, emotional support, and perceived communication barriers^{31,32}.

Several studies from Turkey indicate that parents frequently experience high levels of emotional distress, exacerbated by unclear or inconsistent communication with clinical staff.

Recent Turkish studies have highlighted ongoing challenges in family staff communication within NICUs. Surveys using validated instruments such as the Turkish versions of the *EMPATHIC-30* and the *Parent-Staff Communication Perception Scale* have shown that many parents remain only moderately satisfied with the frequency, clarity, and consistency of medical information.^{32,33} Qualitative evidence further indicates that, in the absence of planned family meetings, parents often receive fragmented and hurried updates from different professionals, leading to confusion and feelings of uncertainty or exclusion from their infant's care process.³⁴

Turkish research indicates that nurses serve as the primary communicative link between families and healthcare teams in NICUs, with parents frequently turning to them for explanations, reassurance, and day-to-day updates.^{34,35} In the absence of planned family meetings, however, information is often conveyed in brief and fragmented exchanges by different professionals, which can create confusion and heighten parental anxiety.³⁴ Quantitative evidence from Turkish adaptations of standardized satisfaction instruments, including the *EMPATHIC-30* and the *Parent-Staff Communication Perception Scale*, similarly shows that parents' satisfaction with the frequency, clarity, and consistency of medical updates remains moderate rather than optimal.^{32,33} Complementary qualitative research with Turkish NICU nurses reveals that, while they play a central communicative role, many experience difficulties in managing family interactions and express a need for structured institutional support, such as scheduled family meetings, written materials, and standardized communication protocols.³⁶

From a clinical practice standpoint, structured parental information sessions remain underutilized in many public hospitals across Turkey. While some tertiary NICUs, particularly in university hospitals, have adopted more systematic approaches, such as daily family rounds or informational brochures, these are not uniformly implemented. For example, in one urban NICU where this author conducted clinical observation, parental briefings were primarily physician-led, lasted less than five minutes, and often relied on medical terminology not readily understandable to laypersons. Families expressed gratitude for any interaction but frequently reported lingering uncertainty about their infant's condition and care plan.^{4,12}

Cultural expectations also play a significant role. Turkish families often prefer a more paternalistic communication model, expecting direct and authoritative input from

physicians. However, when combined with limited emotional expression from clinicians, this dynamic can lead to perceptions of detachment or insensitivity.³⁷

In conclusion, communication practices in Turkish NICUs are characterized by variability, role-specific constraints, and limited structural support, despite the recognized importance of family engagement. Addressing these gaps requires the development of national guidelines, communication training for staff, and culturally adapted interventions that balance informational clarity with emotional sensitivity. Such steps are essential to advancing FCC in neonatal settings across Turkey.^{3,13}

Conclusions and Recommendations

This review synthesized current evidence demonstrating that effective family communication is a cornerstone of high-quality, family-centered care (FCC) in NICUs. Across the literature, communication dynamics were shown to be shaped by interconnected emotional, informational, professional, and cultural factors.³⁸ When these channels are fragmented or insufficiently supported, parents experience greater psychological distress, diminished trust in healthcare teams, and reduced participation in decision-making regarding their infant's care.¹¹

Building upon the Turkish evidence base, the synthesis highlights clear practice implications for NICU professionals. First, neonatal nursing and medical curricula in Turkey should integrate structured communication training anchored to unit realities and parent-reported needs, signals already evident in Turkish satisfaction/communication studies (*EMPATHIC-30-TR*; *EPIAÖ-YYBÜ*).^{32,33} Evidence from Turkey further shows that simulation-based learning, role-play, and interdisciplinary workshops are feasible and effective training modalities in neonatal contexts and can be adapted to communication scenarios (video-based neonatal simulation RCT; standardized NICU simulation designs; national CME/simulation programs)^{39,40}. Embedding these methods, together with written materials and standardized update protocols, can strengthen relational competence, cultural sensitivity, and delivery of complex or emotionally charged information in routine NICU practice in Turkey.^{32,33}

At the institutional level, the establishment of evidence-informed communication guidelines is critical for standardizing practice. These guidelines should include explicit protocols for parental briefings, structured family meetings, and post-discharge follow-up communication. Embedding such structures within hospital policy frameworks ensures that communication is recognized not as an adjunct to clinical work, but as a *core clinical function* essential to family-centered neonatal care.^{3,13}

From a broader systems perspective, health policy reforms are needed to sustain these practices. Integrating communication quality indicators into NICU accreditation standards, incentivizing institutions that implement family-centered communication protocols, and supporting digital innovations can collectively promote structural improvement.^{4,41}

Despite growing momentum, a research-practice gap remains within the Turkish context. Longitudinal and mixed-

methods investigations are warranted to evaluate the sustained impact of communication interventions on parental well-being, infant health outcomes, and staff satisfaction.^{13,38} Such evidence would strengthen the empirical foundation for national policy and curriculum development.

In summary, this synthesis underscores that advancing family communication in NICUs requires a multi-level implementation strategy-linking educational reform, institutional policy, and health system priorities. Aligning these dimensions has the potential to transform neonatal units into environments where parents are consistently informed, emotionally supported, and authentically engaged in their infant's care.^{4,11}

Contribution to the Field

This review contributes to the neonatal care literature by integrating communication theory with Family-Centered Care principles to explain how meaningful family-provider interactions shape outcomes in the NICU. By synthesizing international evidence and incorporating contextual insights from Turkish NICUs, the paper identifies practical strategies that enhance parental engagement, emotional support, and collaborative decision-making. The conceptual communication model presented in the review offers a clear framework for understanding the triadic relationship between families, healthcare teams, and infants. Overall, the review highlights actionable approaches that can guide nurses, clinicians, and health institutions in strengthening communication pathways and improving the family experience in neonatal intensive care settings.

Declarations

Ethics approval: Ethics approval was not required for this study, as it is a literature review that did not involve human participants or identifiable data.

Consent to participate: Not applicable

Consent for publication: Not applicable

Conflicts of interest statement: The authors declare that there are no conflicts of interest regarding this study.

Funding: None

Authors' contributions: Çeri A: Concept and design, literature review, writing the article, and critical review. Gültekin N.D.: Concept and design, and writing the article.

Acknowledgments: None

References

1. Debelić I, Mikolčić A, Tihomirović J, et al. Stressful experiences of parents in the paediatric intensive care unit: searching for the most intensive PICU stressors. *Int J Environ Res Public Health*. 2022;19(18):11450.
2. Gavey J. Parental perceptions of neonatal care. *J Neonatal Nurs*. 2007;13(5):199-206.
3. Akkaş N, Geçkil E. Family-centered care scale in neonatal intensive care unit (FCCS-NICU): development and psychometrics evaluation. *J Pediatr Nurs*. 2023;72:168-176.
4. Aljawad B, Miraj SA, Alameri F, Alzayer H. Family-centered care in neonatal and pediatric critical care units: a scoping review of interventions, barriers, and facilitators. *BMC Pediatr*. 2025;25(1):291.
5. Baykal D, Tütüncü SK. Yoğun bakımdaki sağlık çalışanlarının hasta yakınlarıyla olan iletişiminin araştırılması. *İstanbul Gelişim Üniversitesi Sağlık Bilim Derg*. 2017;(1):33-47.
6. Guttmann KF, Raviv GN, Fortney CA, Ramirez M, Smith CB. Parent perspectives on communication quality in the neonatal intensive care unit. *Adv Neonatal Care*. 2024;24(4):382-388.
7. Labrie NHM, van Veenendaal NR, Ludolph RA, Ket JCF, van der Schoor SRD, van Kempen AAMW. Effects of parent-provider communication during infant hospitalization in the NICU on parents: a systematic review with meta-synthesis and narrative synthesis. *Patient Educ Couns*. 2021;104(7):1526-1552.
8. Novak JL, Vittner D. Parent engagement in the NICU. *J Neonatal Nurs*. 2021;27(4):257-262.
9. Obeidat HM, Bond EA, Callister LC. The parental experience of having an infant in the newborn intensive care unit. *J Perinat Educ*. 2009;18(3):23-29.
10. Guttmann K, Belkin E, Deming R, Lerou PH, Grunberg VA. Challenges and solutions to building family-staff relationships in the NICU: a qualitative study. *Hosp Pediatr*. 2025;Published online August 27:e2024008304.
11. Hynan MT, Steinberg Z, Baker L, et al. Recommendations for mental health professionals in the NICU. *J Perinatol*. 2015;35(1):S14-S18.
12. Çarıkçı F, Girgin BA, Gözen D. Yenidoğan yoğun bakım hemşireliği hizmetlerinin geliştirilmesinde inovasyonun rolü. *Avrasya Sağlık Bilim Derg*. 2024;7(2):130-138.
13. Ceylan SS, Kahraman A. Yenidoğan yoğun bakım ünitesinde çalışan hemşirelerin gelişimsel destek yetkinlik durumlarının incelenmesi. *İzmir Katip Çelebi Üniversitesi Sağlık Bilim Fakültesi Derg*. 2023;8(2):337-342.
14. Melnyk BM, Alpert-Gillis L, Feinstein NF, et al. Creating opportunities for parent empowerment: program effects on the mental health/coping outcomes of critically ill young children and their mothers. *Pediatrics*. 2004;113(6):e597-e607.
15. Provenzi L, Khashu M, McLean M, Morelius E. Editorial: psychological implications of preterm birth. *Front Psychol*. 2025;16.
16. Franco Fuenmayor ME, Fawcett A, Schwartz KE, et al. Understanding family-centered care in the NICU: a scoping review protocol. *JBI Evid Synth*. 2024;22(7):1379-1386.
17. Shaw RJ, Bernard RS, DeBlois T, Ikuta LM, Ginzburg K, Koopman C. The relationship between acute stress disorder and posttraumatic stress disorder in the neonatal intensive care unit. *Psychosomatics*. 2009;50(2):131-137.
18. Bonnot Fazio S, Dany L, Dahan S, Tosello B. Communication, information, and the parent-caregiver relationship in neonatal intensive care units: a review of the literature. *Arch Pediatr*. 2022;29(5):331-339.
19. Lorié ES, Wreesmann WJW, van Veenendaal NR, van Kempen AAMW, Labrie NHM. Parents' needs and perceived gaps in communication with healthcare professionals in the neonatal (intensive) care unit: a qualitative interview study. *Patient Educ Couns*. 2021;104(7):1518-1525.
20. Beattie EB, Ibrahim M, Kelly A, Ibrahim N. A scoping review of satisfaction of parents of babies in NICU units. *J Neonatal Nurs*. 2025;31(1):68-81.
21. Limacher R, Fauchère JC, Gubler D, Hendriks MJ. Uncertainty and probability in neonatal end-of-life decision-making: analysing real-time conversations between healthcare professionals and families of critically ill newborns. *BMC Palliat Care*. 2023;22:53.
22. Spijkers AS, Akkermans A, Smets EMA, et al. How doctors manage conflicts with families of critically ill patients during conversations about end-of-life decisions in neonatal, pediatric, and adult intensive care. *Intensive Care Med*. 2022;48(7):910-922.
23. Loutfy A, Zoromba MA, Mohamed MA, et al. Family-centred care as a mediator in the relationship between parental nurse support and parental stress in neonatal intensive care units. *BMC Nurs*. 2024;23(1):572.

24. Stefana A, Barlati S, Beghini R, Biban P. Fathers' experiences of nurses' roles and care practices during their preterm infant's stay in the neonatal intensive care unit. *Intensive Crit Care Nurs.* 2024;85:103803.
25. Cultural and systematic barriers to communication between nurses and family members in the ICU. *BMC Nurs.* 2025.
26. Purdy IB, Craig JW, Zeanah P. NICU discharge planning and beyond: recommendations for parent psychosocial support. *J Perinatol.* 2015;35(1):S24-S28.
27. Andretta V, Cerrone V, Strini V, Prendin A. Family-centered care in pediatric and neonatal intensive care units: a systematic review of effects on parental satisfaction and length of stay. *Patient Exp J.* 2025;12(2):76-82.
28. Ryan L, Logsdon MC, McGill S, et al. Evaluation of printed health education materials for use by low-education families. *J Nurs Scholarsh.* 2014;46(4):218-228.
29. Sunshine IL, Kysh L, Lakshmanan A. Mobile applications to support parents in the transition from neonatal intensive care unit to home: a narrative review. *mHealth.* 2023;9:0.
30. Franck LS, Axelin A. Differences in parents', nurses' and physicians' views of NICU parent support. *Acta Paediatr.* 2013;102(6):590-596.
31. Akkoyun S, Tas Arslan F. Investigation of stress and nursing support in mothers of preterm infants in neonatal intensive care units. *Scand J Caring Sci.* 2019;33(2):351-358.
32. Tiryaki Ö, Çınar N, Caner İ. The effect of family integrated care on preparing parents with premature infants hospitalized in the neonatal intensive care unit for discharge. *J Perinatol.* 2024;44(7):1014-1021.
33. Zengin H, Tiryaki Ö, Suzan ÖK, Çınar N. Yenidoğan yoğun bakım ünitesi ebeveyn-personel iletişimi algıları ölçeği Türkçe geçerlik ve güvenilirlik çalışması. *Dokuz Eylül Üniversitesi Hemşire Fakültesi Elektronik Derg.* 2021;14(2):108-115.
34. Gürol A, Tekgündüz KŞ, Ejder Apay S, Özdemir S, Güven R. Emotional closeness in neonatal intensive care units: a qualitative study. *J Psychiatr Nurs.* 2020;11(4):261-267.
35. Albayrak S, Türkmen E, Göktepe N, et al. Experiences of mothers with infants admitted to neonatal intensive care during the COVID-19 pandemic: a qualitative study. *Mediterr Nurs Midwifery.* 2024;Published online February 26.
36. Sarıkaya Karabudak S, Gerçek E, Yildirim B. Yenidoğan yoğun bakım ünitesinde çalışan hemşirelerin yaşadığı sorunlar: nitel bir araştırma. *Adnan Menderes Üniversitesi Sağlık Bilim Fakültesi Derg.* 2020;4(2):144-153.
37. Söyünmez S, Koç ET, Gör A, Abd H. Pediatri hemşireliğinde aile merkezli bakım.
38. Labrie NHM, van Veenendaal NR, Ludolph RA, Ket JCF, van der Schoor SRD, van Kempen AAMW. Effects of parent-provider communication during infant hospitalization in the NICU on parents: a systematic review with meta-synthesis and narrative synthesis. *Patient Educ Couns.* 2021;104(7):1526-1552.
39. Kan Öntürk Z. A sample of simulation design: individualized supportive developmental care in neonatal intensive care. *J Educ Res Nurs.* 2021;18(3):362-368.
40. Pinar G, Akalin A, Abay H. The effect of video based simulation training on neonatal examination competency among Turkish nursing students. *Eur Sci J.* 2016;12(15):394.
41. Andretta V, Cerrone V, Strini V, Prendin A. Family-centered care in pediatric and neonatal intensive care units: a systematic review of effects on parental satisfaction and length of stay. *Patient Exp J.* 2025;12(2):76-82.