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A qualitative exploration of fathers' perceived roles and emotional experiences during their infant's hospitalization in the neonatal intensive care unit

Selda Yüzer Alsaç^a, Adnan Batuhan Coşkun^{b,*}

^a Bozok University, Faculty of Health Sciences, Department of Nursing, Yozgat, Turkey

^b Hasan Kalyoncu University, Faculty of Health Sciences, Department of Nursing, Gaziantep, Turkey

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ABSTRACT

Objective: This study aimed to explore the emotional experiences, perceived roles, and support needs of fathers whose infants were hospitalized in Neonatal Intensive Care Units (NICUs).

Methods: A descriptive qualitative design with a phenomenological approach was employed. Data were collected between March and May 2025 in the NICU of a public hospital in southern Türkiye. In-depth, semi-structured interviews were conducted with 27 Turkish-speaking fathers whose infants had been hospitalized in the NICU for at least one month. Thematic analysis, supported by NVivo 12 software, was used to interpret the data.

Results: The analysis revealed four central themes: (1) emotional responses and support needs, (2) perceptions of the paternal role, (3) communication with healthcare professionals, and (4) the impact of the NICU experience on family dynamics. Fathers commonly reported intense emotional distress such as anxiety, helplessness, and fear amplified by limited access to information. Many felt excluded from caregiving due to institutional practices prioritizing maternal involvement. Effective communication with healthcare professionals was reported to ease emotional burden, while impersonal or inconsistent interactions contributed to distress. The NICU experience influenced family dynamics in dual ways, strengthening familial bonds for some and causing emotional fatigue for others.

Conclusions: The findings underscore the need for inclusive, father-sensitive practices in NICUs to promote paternal engagement and emotional well-being.

Implications for Practice: Implementing culturally responsive and father-focused strategies such as clear communication, flexible visitation, and inclusive caregiving policies can enhance family-centered care and foster greater paternal involvement and resilience.

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Introduction

Neonatal Intensive Care Units (NICUs) provide specialized medical care for infants born prematurely or with congenital health conditions requiring intensive support (Rogowski et al., 2023). While NICUs play a crucial role in improving neonatal outcomes, they also exert significant psychosocial effects on parents (Kawafha et al., 2025). The uncertainty surrounding the infant's health status, the complexity of the NICU environment, and the emotional burden of hospitalization contribute to heightened stress and anxiety for both mothers and fathers (Çelen & Arslan, 2017). Although both mothers and fathers are deeply affected by the NICU experience, emerging literature suggests that

fathers may encounter unique emotional responses and role-related challenges due to differing societal expectations and institutional caregiving dynamics. Fathers accompanying their infants in the NICU often experience intense emotional distress, including feelings of helplessness, fear, and sadness (Atashsokhan et al., 2024). Studies indicate that NICU hospitalization increases the risk of anxiety and depression among fathers (Bonacquisti et al., 2020). Additionally, unfamiliarity with the NICU setting, changes in parental roles, and insufficient information about their infant's condition and prognosis can lead to sleep disturbances and heightened emotional distress (Atashsokhan et al., 2024). Uncertainty and fluctuations in the infant's health status can challenge fathers' sense of competence and hinder emotional bonding with their child. Research suggests that effective communication between healthcare professionals and fathers helps alleviate parental anxiety by reducing ambiguity and fostering emotional attachment (Bonnot Fazio et al., 2022). Consequently, involving fathers in the care

* Corresponding author.

E-mail address: adnanbatuhan.coskun@hku.edu.tr (A.B. Coşkun).

process and providing them with adequate information not only benefits their emotional well-being but may also positively influence neonatal recovery (Gülçek & Aylaz, 2021). Although existing literature often centers maternal involvement in NICU care, fathers also play meaningful roles shaped by sociocultural expectations, including emotional support, financial provision, and decision-making responsibilities (Lee & Choi, 2023). In Türkiye, these roles are often rooted in paternalistic family structures that prioritize male authority while limiting fathers' direct caregiving participation, leading to role conflict and emotional tension during NICU stays (Parmaksız, 2016). Their active participation in neonatal care is increasingly recognized as essential (Baldoni et al., 2021). Family-centered care models highlight the importance of engaging both parents in the caregiving process, demonstrating benefits for both infants and caregivers (Albayrak & Büyükgöneç, 2022). Studies have shown that when fathers are actively involved in NICU care, they experience stronger parental attachment and increased self-efficacy (Toivonen et al., 2023). Given that NICU nurses interact directly with fathers during daily care routines, understanding paternal experiences can offer empirically grounded insights for improving communication strategies and emotional support within neonatal care teams. This study aims to explore fathers' perceptions of their roles and emotional experiences during their infants' NICU stay, identifying their challenges, needs, and expectations. Despite the increasing recognition of the father's role in neonatal care, existing research disproportionately emphasizes maternal experiences, often overlooking paternal emotional responses, caregiving challenges, and interactions with healthcare providers during NICU hospitalization. In particular, there is a limited body of qualitative evidence exploring how fathers interpret and cope with their roles within the emotionally intense and structurally maternal-oriented NICU environment especially in non-Western cultural contexts. Therefore, this study addresses a critical research gap by providing in-depth, culturally embedded insights into fathers' lived experiences, perceived roles, and psychosocial needs during their infant's NICU stay in Türkiye. By addressing the gap in the literature on paternal involvement in NICU settings, this research seeks to contribute to the development of more inclusive family-centered care models.

Methods

Study design

This study employed a qualitative descriptive research design, which is appropriate for exploring individual experiences while remaining close to participants' language and avoiding heavy theoretical abstraction (Doyle et al., 2020). While the primary methodology was descriptive, we incorporated certain phenomenological elements, particularly focusing on participants' lived experiences and the meaning they attributed to their NICU journey (Creswell, 2013; Moustakas, 1994). However, this was not a fully phenomenological study in an ontological or epistemological sense. Instead, the descriptive design provided a flexible framework enriched by interpretive depth, allowing participants to convey their perspectives and emotional coping mechanisms in a nuanced manner (Patton, 2015). To ensure comprehensive and transparent reporting, this study followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Tong et al., 2007). The completed 32-item checklist is provided in Supplementary File 1.

Sample and participants

The study sample was determined using purposive sampling, which ensures the selection of participants with the most relevant experiences for the research objective, thereby enhancing the reliability of the study (Patton, 2015). A total of 37 eligible fathers were invited to participate in the study, of whom 27 agreed and completed the interview process, resulting in a participation rate of 73 %. The main reasons for

non-participation among the 10 fathers were reported as lack of time due to work commitments and emotional distress related to their infant's condition. All participants were Turkish-speaking, had actively engaged in their infant's NICU stay, and provided written informed consent after being informed about the study's purpose and procedures by both the researcher and a neonatal nurse. Data collection continued until thematic saturation was achieved, which was observed after the 24th interview, with three additional interviews conducted to confirm data stability.

Setting and duration

This study was conducted between March 2025 and May 2025 in the NICU of a public hospital located in a southern city of Türkiye. All interviews were conducted during the infants' active hospitalization in the NICU, specifically between their second and sixth week of admission. This timeframe was chosen to ensure that fathers had sufficient exposure to the NICU environment to reflect on their experiences, while still capturing their perceptions during the active hospitalization period. The first week was avoided due to heightened parental distress and adjustment, and interviews beyond the sixth week were avoided to reduce variability associated with discharge or transfer. The NICU was a Level-III unit with limited infrastructure for parental presence. Rooming-in was not available. In this NICU, parents were permitted to visit their infants twice daily between 10:00–12:00 and 16:00–18:00. Within this restricted framework, fathers could engage in non-invasive caregiving tasks such as kangaroo care, diaper changing, and verbal soothing, depending on the infant's condition and with nurse supervision. In this study, the term “actively engaged” refers to this context-specific paternal involvement during scheduled visiting hours. To ensure participant confidentiality, all interviews were carried out face-to-face in a quiet and private space within the hospital. Interview sessions were scheduled based on each participant's availability to minimize disruption to their daily responsibilities.

Inclusion and exclusion criteria

The study included biological fathers whose infants had been hospitalized in the NICU for at least one month, who voluntarily agreed to participate, and who were proficient in Turkish. Fathers whose infants were discharged or transferred within a month, those who withdrew from the study, or those with insufficient Turkish proficiency were excluded. There were no predefined age restrictions for inclusion; all biological fathers who met the NICU duration and language requirements were considered eligible regardless of their age.

Data collection methods

Data were collected through face-to-face, semi-structured interviews using a pre-designed interview guide. The guide, developed based on a comprehensive literature review and expert opinions, included five open-ended questions exploring fathers' experiences in the NICU. Each interview lasted 45–60 min (mean \approx 52 min). All interviews were conducted by a single, doctoral-trained interviewer to enhance procedural consistency across sessions. Recognizing that a single-interviewer approach may also introduce interviewer bias, we implemented multiple safeguards to mitigate this risk, including a standardized semi-structured guide developed through team consensus and piloted before data collection, reflexive memo-writing before and after interviews, regular peer debriefings, independent double-coding with consensus meetings (with adjudication by a senior qualitative researcher when needed), member checking with participants, and maintenance of a detailed audit trail. With written consent from participants, all interviews were audio-recorded and transcribed for data analysis. Additionally, field notes were taken to support qualitative analysis. All

interviews were conducted by a male researcher experienced in qualitative interviewing. The broader research team consisted of nursing scholars (two female, one male) specializing in neonatal and family-centered care. The interviewer held doctoral-level training in pediatric nursing and qualitative research methods. The research team's clinical and academic expertise in neonatal intensive care informed the development of the interview guide. In addition, the interviewer's professional background as a pediatric nurse and his prior clinical exposure to NICU settings shaped his initial assumption that fathers are often positioned at the margins of neonatal care. Acknowledging this presupposition, the research team deliberately designed open-ended and non-directive questions to prevent steering participants toward predefined narratives. The interviewer's gender concordance with participants was recognized as a factor that facilitated rapport and emotional disclosure; however, it was also considered a potential source of bias. To address this, reflexive memo-writing and iterative team discussions were used to critically examine how the researchers' own perspectives and prior experiences could influence the framing of questions, interpretation of narratives, and emphasis in thematic development. Reflexivity was maintained through regular peer debriefing and external expert consultation to minimize potential bias. In addition, because the same interviewer conducted all interviews, we relied on reflexive bracketing and memo-writing to surface and monitor potential influences of the interviewer's assumptions and interactional style. Participants were informed that they had the right to terminate the interview at any time without any consequences. All interviews were conducted in a private setting, and no individuals other than the participant and the researcher were present during the sessions.

To gain in-depth insights, participants were asked the following questions:

- o *How did you feel during your infant's care in the NICU?*
- o *How would you describe your role as a father in this process, and what kind of support did you expect?*
- o *What were the supportive or challenging factors you encountered during the NICU experience?*
- o *How would you evaluate your interaction with healthcare professionals in the NICU?*
- o *How did this experience affect your family life and parenting?*

Data analysis

The collected data were analyzed using thematic analysis, as developed by Braun and Clarke (2006), which allows for the systematic identification and organization of key themes within participant narratives (Braun & Clarke, 2006). This approach facilitated a structured response to the research questions while maintaining methodological rigor. The analysis followed these key steps:

Transcription: Audio recordings of interviews were transcribed verbatim, and the accuracy of the transcriptions was verified to ensure data integrity (Braun & Clarke, 2006).

Coding: Independent researchers systematically coded the dataset, identifying key meaning units and patterns within the data (Braun & Clarke, 2006). Each transcript was initially coded independently by two researchers. Discrepancies in code interpretation were discussed and resolved through consensus meetings. If consensus could not be reached, a third senior qualitative researcher was consulted to adjudicate and finalize coding decisions.

Theme Development: Relationships among codes were examined, grouping similar codes into broader thematic categories. These categories were further refined through iterative review until four coherent themes were established, reflecting the emotional, relational, communicative and familial dimensions of fathers' NICU experiences (Braun & Clarke, 2006).

Theme Validation: To enhance reliability, the research team conducted a consensus review of the themes. Additionally, two external experts independently evaluated the thematic structure to ensure validity and confirm alignment with qualitative research standards (Creswell & Poth, 2018).

Quotation Selection: Representative participant statements were extracted for each theme to substantiate the findings and illustrate key insights in the results section (Patton, 2015).

For data management and analysis, NVivo 12 software was employed to facilitate systematic coding, theme categorization, and secure data storage. The software enhanced the organization and retrieval of qualitative data, ensuring analytical transparency and methodological consistency (Patton, 2015). Descriptive statistics such as means, standard deviations, and percentages were calculated using Microsoft Excel. These numerical summaries were used solely to contextualize participant characteristics and did not inform inferential analysis. To enhance methodological transparency and reader comprehension, a visual flowchart has been included (Fig. 1). This flowchart summarizes the study design, sample selection, inclusion and exclusion criteria, data collection procedures, and stages of thematic analysis.

Trustworthiness and rigor

To ensure the trustworthiness of the findings, the criteria of credibility, dependability, confirmability, and transferability were followed, as outlined by Lincoln and Guba (1985). Credibility was enhanced through member checking, whereby participants reviewed and confirmed the accuracy of the interpretations derived from their interviews. Dependability and confirmability were supported by maintaining a detailed audit trail documenting all stages of data collection, coding, and theme development. Two external qualitative experts independently reviewed the coding structure and thematic categories to further strengthen analytical rigor. These experts were experienced researchers with doctoral-level training in qualitative methodology, nursing, and psychosocial health. They were included to ensure objective evaluation of theme coherence and methodological alignment with qualitative standards, thereby minimizing interpretive bias. Transferability was enhanced by providing rich, contextualized descriptions of the setting, participant demographics, and the NICU environment to allow readers to assess the relevance and applicability of the findings to other contexts. These procedures collectively aimed to counterbalance any potential interviewer-specific influences associated with using a single interviewer while preserving consistency across interviews.

Ethical approval

Prior to the commencement of the study, ethical approval was obtained from the Ethics Committee of xxxxxx University (No:23/01–2025), and institutional permission was secured from the relevant organization. All participants were provided with detailed information regarding the study's purpose, procedures, and confidentiality policies before giving written informed consent. To ensure participant anonymity and privacy, all identifying information was strictly protected, and the collected data were used solely for research purposes. Additionally, audio recordings and transcripts were securely stored in a locked cabinet and a password-protected computer, ensuring data confidentiality and security.

Results

While this study employed a qualitative descriptive design with phenomenological elements, participants' experiences are presented through thematic analysis supported by direct quotations and unique

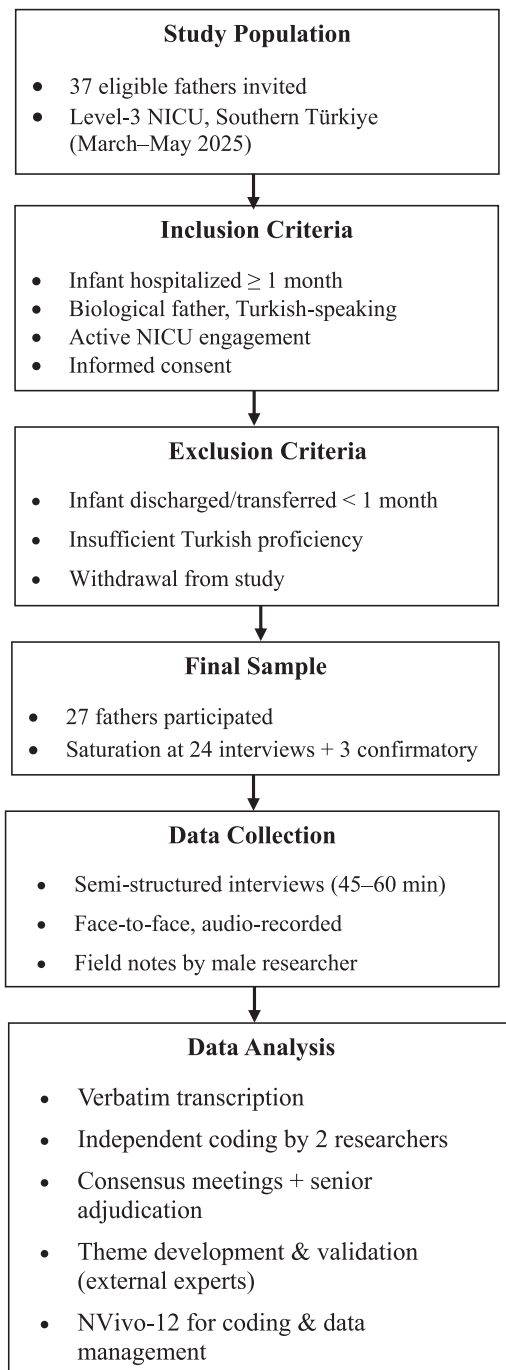


Fig. 1. Flowchart of Study Design, Sample Selection, Data Collection and Thematic Analysis Process.

identifiers. This approach ensures transparency in the representation of themes while preserving the interpretative depth and authenticity of fathers' narratives (Nowell et al., 2017; Sandelowski, 2001). The analysis of in-depth interviews with 27 fathers revealed that the findings were categorized into four main themes: (1) Fathers' Emotional Responses and Support Needs, (2) Perceptions of the Father's Role and Level of Involvement, (3) Communication and Information Exchange with Healthcare Professionals, and (4) The Impact of the NICU Experience on Family Dynamics. The results are presented through a rigorous qualitative analysis, incorporating in-depth participant narratives to ensure a comprehensive and authentic understanding of their experiences.

Characteristics of participants

Participants were 27 biological fathers ($N = 27$). Fathers' ages ranged from 28 to 50 years ($M = 37.51$, $SD = 6.48$). They reported having 1–5 children, and the mean duration of marriage was 9 years. All participants were Turkish-speaking and were interviewed while their infants were still hospitalized in a Level-III NICU (interviews conducted during weeks 4–6 of admission). Infant-related clinical context was as follows: the primary indication for NICU admission was prematurity $n = 16$ (59.3%), followed by congenital anomalies $n = 6$ (22.2%) and neonatal infection $n = 5$ (18.5%). At the time of data collection, the mean NICU length of stay was 42.22 days ($SD = 13.57$).

Building on these participant characteristics, the subsequent thematic analysis identified four central themes that capture fathers' emotional, relational, communicative and familial experiences during their infants' hospitalization. To provide a comprehensive overview of these patterns, the four themes and their representative participant quotations are summarized in Table 1.

Theme 1: Fathers' Emotional Responses and Support Needs

Most fathers reported experiencing intense emotional reactions during their infant's hospitalization in the NICU. The most commonly expressed emotions included anxiety, helplessness, and fear, which were particularly heightened when uncertainty surrounded their infant's medical condition. Fathers emphasized that the lack of clear prognostic information exacerbated their distress and increased their need for psychological and social support throughout the NICU process (Table 1, Theme 1). Fathers also noted that financial strain and insufficient social support further intensified their emotional burden. For example, Father 7 stated, "I worry about my baby's health every day; I wish I had access to psychological support during this process." This highlights the need for accessible psychosocial resources. Additionally, some fathers engaged in a personal search for meaning and reevaluated their paternal role during this time. As Father 12 reflected, "I worry about my baby's health every day; there's nothing I can do," underscoring the depth of helplessness and the psychological toll associated with prolonged uncertainty (Table 1, Theme 1).

Theme 2: Perceptions of the Father's Role and Level of Involvement

Many fathers expressed a strong desire to take an active role in their infant's care during the NICU stay. However, this aspiration was often met with systemic barriers rooted in hospital policies and sociocultural norms that implicitly prioritized maternal involvement. Fathers frequently described feeling excluded due to the lack of physical accommodations tailored to their presence and the absence of formal avenues for participation. Several fathers also reported frustration about limited access to clear and timely information regarding their infant's medical condition, which contributed to feelings of helplessness, uncertainty, and emotional disengagement. Others emphasized a need for spiritual or religious support to cope with the emotional demands of the hospitalization period. These findings highlight the multifaceted challenges fathers face in the NICU from institutional exclusion to unmet emotional and spiritual needs and emphasize the critical importance of designing inclusive, communicatively transparent, and culturally responsive models of neonatal care that recognize and support the paternal role (Table 1, Theme 2).

Theme 3: Communication and Information Exchange with Healthcare Professionals

Communication with healthcare professionals emerged as a pivotal determinant of fathers' emotional well-being during their infant's NICU stay. Many fathers emphasized that clear, consistent, and empathetic communication alleviated psychological distress and reinforced their sense of confidence and security. Transparent dialogue and timely updates were perceived as crucial for enhancing their understanding of medical procedures and fostering an emotional connection with their infant's care. At the same time, several fathers reported barriers, including restricted access to professionals during busy hours, inconsistent information flow, and a lack of empathy from some staff members. These

Table 1
Major Themes and Representative Participant Statements Regarding Fathers' Experiences in the NICU.

Main Theme	Subcategory	Example Participant Statement
Theme 1: Fathers' Emotional Responses and Support Needs	Anxiety and Fear	Father3: "I worry about my baby's health every day; I feel powerless."
	Helplessness	Father12: "As a father, I wish I could do more, but I feel helpless."
	Need for Psychological Support	Father7: "I want to receive psychological support during this process, but I don't know where to start."
Theme 2: Perceptions of the Father's Role and Level of Involvement	Search for Meaning	Father 15: "I keep wondering how I can contribute as a father during such a challenging time."
	Sense of Exclusion	Father3: "There is no dedicated space for fathers in the hospital; the entire care process seems oriented toward mothers."
	Desire for Active Involvement	Father12: "As a father, I would like to be more involved in my baby's care, but I am not permitted to do so."
	Lack of Information	Father19: "I want to receive more information about my baby's condition, but it is difficult."
Theme 3: Communication and Information Exchange with Healthcare Professionals	Need for Spiritual Support	Father7: "During this process, I realized an increased need for spiritual or religious support."
	Supportive Communication	Father22: "Talking to healthcare staff gives me confidence and reduces my worries."
	Inadequate Communication	Father19: "Sometimes I struggle to get information and feel excluded."
	Difficulty Accessing Information	Father14: "It's hard to reach the staff, especially when they are busy."
	Lack of Empathy	Father11: "Some healthcare providers don't show empathy, and that made me feel alone."
Theme 4: The Impact of the NICU Experience on Family Dynamics	Strengthening of Family Bonds	Father12: "This experience brought us together; as a family, we are more united now."
	Stress and Interpersonal Tension	Father18: "Financial difficulties and hospital routines caused tension at home."
	Financial Difficulties	Father4: "We were financially overwhelmed; this affected family communication as well."
	Reduced Communication with Children	Father21: "I found it harder to spend time with my older children they needed emotional support too."

challenges created feelings of exclusion and uncertainty. The diversity of these experiences illustrates how the quality of communication either eased or intensified paternal distress during the NICU process (Table 1, Theme 3).

Theme 4: The Impact of the NICU Experience on Family Dynamics

The NICU experience had a dual impact on family dynamics, functioning both as a unifying and a straining force. Many fathers described how the shared stress and uncertainty of neonatal hospitalization strengthened familial bonds and increased emotional solidarity. Others emphasized that financial burdens and hospital routines disrupted communication and heightened intra-household tension. In some cases, fathers reported difficulties in balancing caregiving responsibilities, while a few reflected on reduced communication with their other children during the infant's hospitalization. These narratives underscore the need for psychosocial interventions that consider the entire family unit and support fathers in maintaining both spousal and parental roles. While many fathers reported that the shared stress of hospitalization strengthened family cohesion and emotional solidarity, a substantial subset described strain arising from financial hardship, prolonged separation, and interpersonal tension at home. These findings highlight the importance of family-oriented psychosocial interventions that support fathers in maintaining healthy spousal and parental relationships during hospitalization and the transition to home (Table 1, Theme 4).

Participant Statements Based on Collected Data

Table 2 presents selected participant narratives that vividly illustrate the core themes identified in this study. These statements enrich the thematic analysis by offering direct insights into the emotional, cognitive, and psychosocial complexities fathers encountered during their infant's NICU hospitalization. The narratives underscore both the universality and individuality of paternal experiences, highlighting how

emotional responses, role perceptions, communication barriers, and familial dynamics intersect in this context.

These representative statements serve to validate the study's thematic structure by encapsulating key emotional and experiential dimensions reported by participants. The quotation on emotional distress reflects the urgent need for psychological support and clearer communication. The second highlights the structural invisibility of paternal roles in NICU routines. The third emphasizes communication barriers that erode fathers' emotional stability, while the final statement vividly depicts the intersection of medical, financial, and environmental stressors impacting family cohesion. Collectively, these narratives affirm the complexity of paternal experiences in NICU settings and reinforce the necessity of inclusive, empathetic, and family-centered care practices. To consolidate the thematic architecture and enhance interpretability, we introduce a thematic diagram (Fig. 2) that integrates the four central themes (1) Fathers' Emotional Responses and Support Needs, (2) Perceptions of the Father's Role and Level of Involvement, (3) Communication and Information Exchange with Healthcare Professionals, and (4) The Impact of the NICU Experience on Family Dynamics and visually depicts their interrelationships, thereby facilitating readers' comprehension of the findings.

Discussion

Having an infant admitted to a NICU due to prematurity or medical complications may cause intense stress and anxiety in both mothers and fathers. This section discusses the findings of this study which explored the experiences of fathers with hospitalized infants in the NICU in light of existing literature under four central themes.

Fathers' emotional responses and support needs constituted the first and most striking theme of the study. Having an infant in the NICU is

Table 2
Representative Participant Statements Illustrating Primary Themes in NICU Experiences.

Theme	Participant ID	Coarsened Demographics*	Participant Statement
Emotional Responses and Support Needs	Father 9	Age band: 40–44; Children: ≥3	"Each day my baby stayed in the NICU, I felt helpless as a father. Sometimes the information given by the staff wasn't enough I needed to know more."
Perceptions of the Father's Role and Level of Involvement	Father 14	Age band: 30–34; Children: 2	"As a father, I want to play a more active role in the hospital, but everything seems structured around the mother."
Communication with Healthcare Professionals	Father 18	Age band: 35–39; Children: 2	"It's extremely difficult to reach the nurses or get information when we need it we often wait helplessly to be informed."
Impact on Family Dynamics	Father 22	Age band: 35–39; Children: ≥3	"This process has been financially overwhelming. The recent earthquake in Gaziantep made it even harder. Still, we're trying to stay strong."

* Note: To minimize deductive disclosure risk, demographic descriptors accompanying quotations are presented in broad categories (age bands; parity categories) and potentially identifying contextual details (e.g., place names) have been generalized or removed.

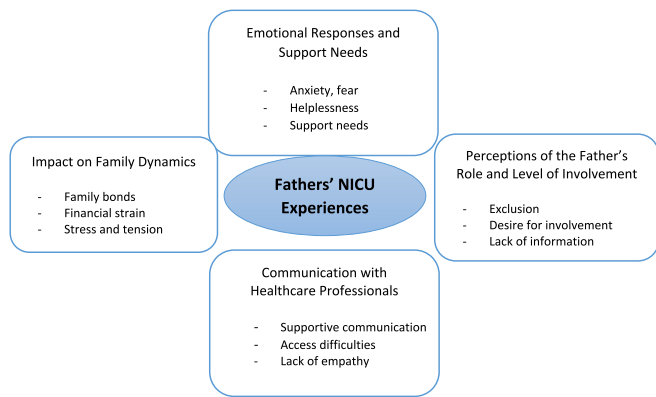


Fig. 2. Thematic Structure of Fathers' Experiences in the NICU.

associated with intense emotional stress for both mothers and fathers. Hollywood and Hollywood emphasized that NICU hospitalization creates significant stress for fathers, who are often emotionally, physically, and psychologically unprepared and face various unmet needs (Hollywood & Hollywood, 2011). Continuous thoughts about their infant's survival, medical condition, and potential treatment outcomes lead to a sense of uncertainty, anxiety, and helplessness (Garten et al., 2013). In our study, most fathers reported experiencing intense anxiety, fear, and helplessness triggered by uncertainty surrounding their infant's health. This aligns with prior studies showing that NICU-related uncertainty and limited parental control can intensify anxiety and helplessness in fathers (Bonnot Fazio et al., 2022; Caporali et al., 2020). Considering the distinctive nature of the NICU environment and the specific needs of infants, it has been reported that parental support must be targeted in accordance with individual needs (Adama et al., 2022). Studies show that individualized support addressing NICU fathers' needs such as honest communication, caregiving involvement, infant comfort, and emotional acknowledgment is essential for mitigating distress (Govindaswamy et al., 2020; Noergaard et al., 2017).

Perceptions of the paternal role and the level of involvement emerged as the second key theme. Although in many cultural contexts fathers have traditionally been perceived as providers and supporters within a patriarchal framework, the NICU context challenges and reshapes these expectations. Our findings indicate that fathers sought greater emotional involvement, reflecting a transition beyond conventional provider roles. The NICU setting, while limiting father-infant interaction, also motivates fathers to maintain their protective roles. However, restricted access and exclusion from caregiving can prompt reevaluation of their responsibilities and emotional bonds (Lee & Choi, 2023; Mancini, 2023). In our study, most fathers expressed a desire to be involved in caregiving but reported being restricted. This concern regarding the perceived devaluation of paternal roles echoes prior work indicating that a salient paternal identity is a key factor in father-infant care engagement and participation (Hollywood & Hollywood, 2011). Prior research has demonstrated that when fathers are excluded from their infant's care or decision-making processes, they experience heightened stress, uncertainty, and fear (Brødsgaard et al., 2019; Govindaswamy et al., 2019; Reid et al., 2019). While the NICU experience can be emotionally challenging, it also provides an opportunity for fathers to gain deeper insight into their parenting roles and embrace them more actively.

Another important finding is the perceived prioritization of mothers within the NICU environment. Fathers often felt marginalized due to institutional practices that center maternal needs. Although fathers want to be involved in caregiving and decision-making, NICU policies and routines tend to prioritize maternal emotional and physical needs (World Health Organization (WHO), 2022). Participants frequently described the absence of father-oriented spaces and supports within the

hospital; this disparity in physical spaces, support groups, and educational sessions in favor of mothers reinforced a sense of exclusion among fathers. This may hinder the development of secure father-infant bonds and foster feelings of neglect. In some cases, the lack of communication from nurses or the perception that nursing care is reserved for mothers has contributed to this sense of marginalization (Sisson et al., 2015). Although nurses are considered a potential support resource for fathers (Clarkson & Gilmer, 2019), research indicates that support services for fathers remain inadequate (Ireland et al., 2016) and that healthcare providers predominantly focus on newborns and mothers (Kim, 2020). A study from Iran also revealed that despite experiencing considerable tension and difficulty, fathers of preterm infants were often overlooked in NICU settings (Valizadeh et al., 2018). In contrast, Buek et al. (2021) reported that some nurses held positive views regarding paternal involvement, emphasizing its value for infant bonding and advocating for the inclusion of fathers in caregiving, especially in the absence of mothers (Buek et al., 2021).

Communication and information exchange with healthcare professionals formed the third major theme. Arguably, the most critical factor for NICU parents is establishing a healthy communication cycle with healthcare professionals. In NICU settings, the relationship between nurses and parents forms the foundation for effective decision-making and medical care (Bonnot Fazio et al., 2022). Fathers often attempt to engage with nurses to seek information about their infant's condition and consistently request updates and explanations (Urbanosky et al., 2023). Consequently, fathers view nurses as a primary source of support (Hearn et al., 2020). However, inadequate or delayed updates and overly technical language may intensify fathers' uncertainty and anxiety (Bonnot Fazio et al., 2022). Participants also indicated that clear, consistent, and transparent communication tended to reduce worry and enhance confidence, whereas inconsistent messages or changes in routines could undermine their sense of control (Sisson et al., 2015). These observations are consistent with recent reports highlighting that openness and timely explanations from staff can help contain uncertainty (Stefana et al., 2024), while time pressures and heavy workloads may limit opportunities for dialogue (Kelly O'Brien & Leahy Warren, 2014). In this regard, nurses can help reduce fathers' sense of exclusion and helplessness by clearly explaining NICU routines and discussing uncertainties with sensitivity (Ballantyne et al., 2017).

The fourth theme concerned the impact of the NICU experience on family dynamics. The NICU journey can reshape familial roles and emotional interactions, prompting fathers to reassess their paternal identity. Over time, the NICU stay may lead to changes in family dynamics, with emotions such as solidarity, unity, and shared concern becoming more prominent. Fathers may worry about their partner's emotional state, while mothers may be concerned about their husband's workload or stress (Stefana et al., 2024). In our study, several fathers described the NICU experience as having a positive impact on family cohesion and strengthening familial bonds. Such positive interpretations suggest that paternal involvement in the NICU strengthens spousal relationships and fosters empathy and mutual understanding among family members during times of hardship. Nevertheless, the NICU process may also disrupt family routines and emotional stability. Mothers often need to travel frequently for breastfeeding, while older siblings are cared for by relatives, and fathers are left managing both caregiving and professional responsibilities. These circumstances may strain family communication and increase emotional fatigue. Dadkhahtehrani et al. (2018) similarly reported that fathers experienced a sense of division within the family due to competing demands of caregiving, work, and the needs of other children. Moreover, the long-term burden of hospitalization including medical expenses, basic needs, housing decisions, and social isolation can create additional financial stress. If the child has a severe disability or intellectual limitation, the psychological impact is often greater. During hospitalization, the intense focus on the child may cause parents to neglect their own needs or those of their partners. Consequently, if early birth and NICU hospitalization are not

well supported, they may exacerbate relationship tensions and even lead to separation or divorce (Lakshmanan et al., 2017). A large-scale study in Denmark further demonstrated that the divorce rate among parents of preterm infants was significantly higher compared to the general population 19 years post-NICU hospitalization (Kusters et al., 2013). The suppression of personal needs, increased responsibilities, partner conflicts, professional strain, and restrictions on autonomy while caring for a newborn elevate the risk of emotional disorders, particularly depression and anxiety, in both parents (Baldoni et al., 2021).

Limitations

This study employed a qualitative design with purposive sampling. In line with the epistemological assumptions of qualitative inquiry, the aim was not statistical generalizability but rather to provide an in-depth, context-rich understanding of fathers' experiences in the NICU. Thus, instead of generalizability, the transferability of findings to similar contexts is emphasized. Notably, all interviews were conducted during the infants' active hospitalization period in the NICU, thereby eliminating concerns related to retrospective recall bias. Furthermore, the study did not aim to explore longitudinal changes in paternal experience; thus, the absence of long-term follow-up data does not represent a methodological limitation, but rather reflects the predefined scope and purpose of the research. Despite these contextual boundaries, the study provides robust and transferable insights into fathers' emotional experiences, perceived caregiving roles, and unmet support needs within the NICU environment. Although using a single interviewer enhanced procedural consistency, it may also limit variability in interviewing style; our reflexive and analytic safeguards were designed to mitigate this potential source of bias.

Strengths of the study

This study offers a rare and meaningful contribution to neonatal and family-centered care by exclusively centering fathers' lived experiences in the NICU an area long overshadowed by maternal narratives. It provides a rich and nuanced portrayal of paternal emotional distress, caregiving roles, and unmet support needs within a structurally maternal-focused care environment. By capturing culturally embedded narratives from a non-Western, middle-income setting, the study expands global perspectives on paternal involvement and introduces contextually grounded insights into neonatal care practices in Türkiye. Methodologically, the research is grounded in rigor and transparency from purposive sampling to thematic analysis supported by NVivo software and enriched through participant quotations. Beyond its analytical strength, the study offers practical guidance for inclusive and father-sensitive NICU models, aiming to improve communication, emotional support, and family dynamics.

Implications for practice

This study underscores the importance of developing father-inclusive practices in NICUs. To address paternal distress and foster active involvement, healthcare professionals particularly nurses should receive training in family-centered care that emphasizes transparent communication and emotional support for fathers. Practical measures such as flexible visitation, informational resources, and culturally sensitive counseling can enhance paternal self-efficacy, strengthen father-infant bonding, and contribute to improved family outcomes in neonatal care settings.

Conclusions

This qualitative study offers in-depth insights into the emotional and psychosocial experiences of fathers with infants hospitalized in the NICU. Thematic analysis revealed that fathers face significant emotional

burdens, feel marginalized within the care process, and often struggle to communicate effectively with healthcare professionals. Despite these challenges, many fathers demonstrate a strong desire to be involved in caregiving and contribute meaningfully to their infant's recovery. The findings underscore the importance of fostering inclusive, empathetic, and culturally sensitive NICU environments that recognize fathers not only as supportive partners but as active caregivers. By centering paternal experiences in NICU policy and practice, healthcare systems can better support the psychological well-being of families and enhance the quality of neonatal care. In addition to these practical implications, the study highlights the need for future research to adopt longitudinal and cross-cultural designs and to focus on the joint experiences of mothers and fathers to better capture couple-based coping strategies. From a parental perspective, strengthening spousal communication, fostering shared caregiving responsibilities, and providing accessible psychosocial support may empower both parents, enhance emotional resilience, and promote family cohesion during and beyond the NICU journey.

Author contributions

S.Y.A. conceptualized the study, developed the methodology, curated the data, and wrote the original draft. **A.B.C.** supervised the project, contributed to the conceptualization, and provided critical revisions. **S.Y.A.** assisted in data collection and contributed to the writing of the manuscript. **A.B.C.** analyzed the data, created visualizations, and edited the manuscript. Reviewed and provided feedback during the editing process.

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CRediT authorship contribution statement

Selda Yüzer Alsaç: Methodology, Funding acquisition. **Adnan Batuhan Coşkun:** Writing – review & editing, Writing – original draft, Validation, Supervision, Resources, Methodology.

Declaration of competing interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.pedn.2025.10.026>.

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