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RESEARCH ARTICLE

EXPECTATIONS OF MOTHERS WITH INFANTS IN THE NEONATAL INTENSIVE CARE UNIT FOR HEALING CARE PROCESSES: A QUALITATIVE STUDY

Cigdem Sari Ozturk[1], Kadriye Demir[2]

[1] Gazi University, Nursing Faculty, Pediatric Nursing Department, Ankara, Turkey
[2] Lokman Hekim University, Health Sciences Faculty, Pediatric Nursing Department, Ankara, Turkey

ORCID: Ç.S.Ö. 0000-0001-8203-5925; K.D. 0000-0002-7064-5432

Corresponding author: Cigdem Sari Ozturk, **E-mail:** cigdemsari@gazi.edu.tr
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ABSTRACT

Purpose: The study aimed to describe the expectations of mothers whose infants were in the neonatal intensive care unit regarding the healing care processes.

Material and Methods: This study is descriptive qualitative research conducted with mothers whose infants were in a private hospital's neonatal intensive care unit. Data were collected between October and November 2022 by using purposive sampling method. Semi-structured interviews were conducted with 11 mothers via an audio recorder. The inductive thematic analysis method was used.

Results: The analysis identified three main categories and seven sub-themes: "humanistic healing care behaviors, healing physical environment and supports." In the theme of humanistic healing care behaviors, mothers stated that open and honest information sharing was necessary; in the healing care environment, the organization of the neonatal intensive care unit and noise control were necessary. The support theme mentioned the effect of family and home health personnel support on healing processes. The themes were created based on Watson's human caring theory.

Conclusion: The analysis identified three main categories and seven sub-themes: "humanistic healing care behaviors, healing physical environment and supports." In the theme of humanistic healing care behaviors, mothers stated that open and honest information sharing was necessary; in the healing care environment, the organization of the neonatal intensive care unit and noise control were necessary. The support theme mentioned the effect of family and home health personnel support on healing processes. The themes were created based on Watson's human caring theory.

Keywords: infant, mothers, nursing, Watson's human caring theory.

INTRODUCTION

Some infants are treated in the Neonatal Intensive Care Unit (NICU) for various reasons in the postpartum period. Spending the first days of her/his life in intensive care may be challenging for the infant and her/his family. Incubators and devices for diagnosis and treatment in NICUs can present a frightening sight for parents (1). This can be even more challenging, especially for mothers who bond with their neonate during the prenatal period. Uncertainties about what awaits them in the future, as well as the treatments received by the infant during the intensive care process, are a major source of stress for mothers. The stress of the parents may increase continuously due to the uncertainty of the infant's prognosis (2). It is known that high-stress

level hinders the ability of parents to make healthy decisions and their participation in the care of the infant (3).

Mothers with infants in NICU have many needs in the postpartum period, such as their health issues, newborn care, and home care after intensive care. Studies in the literature report that families need information about the treatment process of the infant and whether he/she receives good care (4, 5). A study conducted in Jordan reported that parents need information about their children and need holistic care in case of a loss. It has also been reported that the expectations of the families and the care given by the nurses do not match and that this area needs to be developed (3). For this reason, it is essential to determine the expectations of mothers about the process and their needs to alleviate the stress they experience and improve their coping skills. At this point, nurses have important responsibilities.

Neonatal nurses are essential in creating a family-centered healing care environment in NICUs. The mothers' seeing the NICU for the first time after birth, the excessive amount of devices in the unit, the treatments received by the infant and the mothers' inability to hold their infants affect the healing care processes (6). At this point, it is vital to support the needs of parents who have an infant in the NICU to express their feelings and experiences. Nurses need to evaluate newborns holistically and determine their mothers' feelings, their views on infant care, and their expectations to provide effective care in NICUs.

Watson's Theory of Human Caring provides a guiding framework for conceptualizing healing care processes. Healing processes are defined as creative problem-solving processes. Watson emphasized the importance of regulating the care environment in healing processes (7).

The nurse has an important role in the healing process. According to Watson, the nurse is at the center of the individual-nurse relationship that produces therapeutic results in the interpersonal care process (8). Caring behaviors recommended to be used to create a healing process in nursing practices within the framework of Watson's human caring theory are touching, artistic expressions, play, eye contact, smiling, and active listening (7). Healing consists of 10 processes, each interacting with the others. In the NICU, healing processes are essential in guiding care and directing holistic, developmental, and family-centered care. This way, the life chances increase, neurodevelopmental support is provided, and the family participates in the care (6). Studies assess different stages of healing processes in different populations (9, 10). There are studies about the expectations of mothers who have infants in the NICU (3, 4). It is seen that there are qualitative studies, especially about the supportive care practices that mothers expect from nurses (11), expectations in terms of needs and communication (12), and their actual experiences. There are also qualitative studies on some healing processes in studies on family-centered care in the neonatal intensive care unit (13, 14).

However, this study is thought to contribute to the literature as it investigates mothers' expectations and experiences regarding healing care processes based on Watson's human caring theory. The experiences and expectations of the mothers with their infants in the NICU are essential in providing evidence for safe and effective clinical practices.

MATERIAL AND METHODS

Objective

This study aims to determine the expectations of mothers whose infants are hospitalized in the NICU from the healing environment based on Watson's human caring theory. The main research question of this study is: What are the expectations of the mothers whose infants are hospitalized in the NICU? The detailed interview questions of the study are provided in Table 1.

Design and Participants

The study was conducted in a qualitative research design with mothers whose infants were hospitalized in the NICU of a private hospital between October 19 and November 19, 2022. Healing care, by its very nature, requires in-depth and comprehensive examination. For this reason, a qualitative research design was preferred to reveal the expectations of mothers whose infants were hospitalized in the NICU. This study was conducted and written considering the Consolidated Criteria for Reporting Qualitative Research (COREQ). The components of qualitative rigor (Credibility, Transferability, Dependability, and Confirmability) were considered to make sure confidence in the methods.

The study was carried out in the NICU of a private hospital in Ankara, the capital city of Turkey. The NICU is a unit with 13 incubators. Families were able to visit their infants two days a week (Tuesday and

Table 1. Interview Questions of The Study

IInterview questions
1. What are your expectations from nurses responsible for your infant's care? a) What are your expectations from nurses regarding the infant's care and treatment process? b) What are your expectations from nurses in terms of communication?
2. What are your expectations and wishes regarding the physical environment of the hospital/NICU?
3. What are your expectations and requests from your family during the intensive care process?
4. What social supports (peer, friend, community, spirituality) do you expect during the intensive care process?

Thursday) and received information by phone on other days.

The purposive sampling method was used in this study. In qualitative research, there is no definite rule regarding the number of people to be included in the research. It was aimed to reach data saturation in the in-depth interviews. The saturation point is reached when there is no more new information in the interviews (15). Interviews were continued until the data became repetitive and were concluded upon reaching data saturation after interviewing 11 mothers. The interviews were listened and codes were determided by the researchers. Since no new codes were created and data saturation was achieved, and interviews of 11 mothers were analyzed in the research.

The acceptance criteria of mothers in the study were determined as follows:

1) Those who agree to participate in the study will be selected voluntarily,
2) Those who have a premature infant or an infant who has been in intensive care for at least a week due to a health problem,
3) Those who are over the age of 18,
4) Those who do not have problems in terms of communication and do not have any physical or mental health problems.

Ethical Considerations

Ethical approval was obtained from the Lokman Hekim University, Non-Invasive Clinical Research Ethics Committee (Date: 18.12.2022, Decision No: 2022/169) before starting the study. Consent regarding participation in the study was obtained from each participant The study was conducted by the principles of the Declaration of Helsinki.

Data Collection

Qualitative data were collected during semi-structured interviews conducted by the researchers. Before the interview, a descriptive characteristics form was used, which asked about the demographic characteristics of the mother and the infant (a total of 3 questions, including the mother's age, the infant's gestational age, and the length of stay in NICU). Mothers were asked to fill out the form. Additionally, information about the infants was checked from medical records.

The interviews were held in the mother's waiting room when the mothers came to see their infants. The mother's waiting room is for one person as it is a place where mothers who want to express their milk can express their milk and wait. For this reason, the interviews were held in a quiet environment where the conversation would not be interrupted. Mothers who wanted to participate in the study were asked when they would be available for an interview, and interviews were held in the mother's waiting room at the date and time given by the mothers. Mothers especially see their infants between 13 and 14 in the afternoon. That is why the interviews were held at these hours. Only the first researcher who will conduct the interview participated in the interview. Four semi-structured questions were asked one by one to each mother.

Interview questions were sent to three experts in pediatric nursing and qualitative research methods for peer review. No changes were made to the questions due to peer review. In addition, a sample interview was conducted with two mothers to test the semistructured interview questions. After sample interviews, it was understood that the first question was general. As a result, two sub-questions were created: mothers' expectations from nurses in infant care and their expectations from nurses regarding communication. The study did not include the two mothers with whom we conducted a sample interview.

Each interview lasted an average of 45-60 minutes. Researchers reviewed their notes with each mother before the end of the interview. The interviews were recorded with a voice recorder. The mothers were

Table 2. Sociodemographic Characteristics of Mother and Infants

Sample	Age	Infant's Gestational Age (week)	Length of Stay in Neonata Intensive Care Unit (days)
Participants 1	33	33 weeks, three days	20
Participants 2	27	38 weeks	8
Participants 3	23	38 weeks, two days	21
Participants 4	25	36 weeks, four days	19
Participants 5	25	36 weeks, three days	18
Participants 6	28	35 weeks, two days	21
Participants 7	26	38 weeks	14
Participants 8	25	36 weeks	17
Participants 9	27	35 weeks, four days	19
Participants 10	30	37 weeks, one day	21
Participants 11	26	38 weeks, two days	23

informed before the recording started, and the research purpose and consent form were given in the envelope in advance. Those who accepted to participate in the study were included in the study. The questionnaire prepared by the researchers to determine the descriptive characteristics of mothers and infants was filled in by the researchers before the interview.

Data Analysis

The data obtained from the interview form were analyzed using inductive thematic analysis. While thematic analysis offers a systematic and flexible approach, it guides the objective analysis of data (16). First, the interviews in the audio recordings were listened to and transcribed. The researchers transcribed the interview records themselves to prevent data loss. The written interviews were coded sentence by sentence to make their meanings more understandable. A “code list” was created using the data included in the coding. Later, themes that can explain these codes under certain categories were created. Six stages of the thematic analysis were followed: familiarization with the data, assigning preliminary codes, searching for themes, reviewing themes, defining and naming themes, and producing the report (16). All categories and themes were discussed with all researchers to complete the analysis. Thematic analyses were carried out independently by two researchers to ensure the consistency of the data. The themes and expressions coded for the validity of the data were presented to two other experts in the pediatric nursing field. Researchers and consulted experts were required to be experienced in qualitative work and to have at least one SCI article prepared and published using the individual/focus interview technique.

Research Team and Reflexivity

The first author is a female pediatric nursing lecturer (assistant professor) who completed her doctorate in neonatal nursing. The second author is a female lecturer in the field of pediatric nursing. At the same time, the second author previously worked as an intensive care nurse in an accredited hospital for one year. The authors have received courses and education in qualitative research. As a result, there are studies on qualitative research methodology in international indexed journals. The first author conducted interviews and had a PhD at the time of the interviews. There was no relationship between the interviewer and any of the participants. Reflexivity was used in all phases of data collection and analysis. The primary author was transparent with the participants about her career as a mother and an academic working in neonatal nursing. Since the second researcher had one year of experience working in the pediatric intensive care unit, the first author carried out the data collection phase for reflexivity. The emphasis was to be aware of one own perspective and, with different perspectives, read the data and actively enhance reflexivity. The perspectives of the two authors were discussed in the analysis and reporting.

Rigor

In this study, the components of qualitative rigor as Credibility, Transferability, Dependability and Confirmability were used to provide confidence about methodology of the study (17).

Table 3. Themes and Sub-themes of The Study

Themes	Sub-themes	Codes	f
1. Humanistic Healing Care Bahviours	Clear and honest information sharing	Factual knowledge sharing	11
		Responding sensitively to questions	10
		Communication that will make me feel safe	8
		Eye contact	8
	Instilling faith and hope	Sharing experiences	6
		Establishing eye contact	8
		Psychological support	11
2. Healing physical environment	Design/organization of neonatal intensive care unit	Private areas or single rooms reserved for mother and infant	9
	Noise control	Noise control of medical devices	11
3. Supports	Family support	Spousal support	11
	Support of healthcare professionals	Nurse and doctor support	10
	Spiritual support	Praying	6
		Questioning the meaning of life	5

Credibility: Transcripts of all interviews were analyzed separately by two researchers and similarities and differences were evaluated. After a few examinations, the statements of the participants were quoted in the results section.

Transferability: Demographic characteristics of mothers and infants were tabulated in the study so that readers could evaluate whether the study findings applied to their populations.

Dependability: Researchers decided on each stage of the research process together. Peer review on interview questions and content was sought. A pre-application was made with a mother to ensure reliability in advance.

Confirmability: Spare questions were asked for each interview question to clarify that question considering the impact of the results due to the perceptions of the researchers. The final form was summarized, and the participant was expected to approve of the situation. The opinions of two faculty members who are experts in their fields were taken for the themes and sub-themes created by two researchers. Different children made citations to increase conformability.

RESULTS

While the age range of mothers varies between 23-33, fathers' age varies between 24-33 years. Most mothers are high school graduates, and most fathers are university graduates. The gestational age at which mothers give birth is between 33.3 and 38.2 weeks, and the majority were primiparous. Detailed sociodemographic characteristics of the participants are shown in Table 2.

Themes

After the content analysis, the expectations of the mothers regarding the healing care processes were determined as three themes: humanistic healing care behaviors, healing physical environment and supports, and seven sub-themes explaining these. Themes, sub-themes and codes explaining the themes are given in Table 3.

Main Theme 1: Humanistic Healing Care Behaviours

The theme of humanistic healing care behaviors consists of two sub-themes: open and honest information sharing and instilling faith and hope. Mothers emphasized that important components of interpersonal communication such as eye contact, being respected as an individual, feeling safe, nurse sensitivity, and feeling understood are very important in the healing processes.

Sub-theme-1: Being clear and honest in information sharing

All of the participants stated that they expected clear and real information from the nurses about the health status of their infants. Mothers emphasized that nurses' being sensitive to their questions, making them feel understood, and establishing eye contact with them had a healing effect.

"…My biggest expectation is that when I ask questions about my infant's health, the nurses give clear information in a way that I can understand. Since I don't see my infant all the time, the clear and honest information provided by the nurses makes me very comfortable at home…" (P1,33 years, 33 gestational weeks)

"…Especially as the time to see my infant is coming to an end, more questions come to my mind. Nurses may not allow questions or continue breastfeeding because time is running out. Nurses need to be a little more flexible, reassuring, and supportive when answering questions…" (P3,23 years, 38 gestational weeks)

Sub-theme 2: Instilling faith and hope

The mothers stated that the nurses' tone of voice, eye contact, and sincere behavior instilled hope in them while communicating with them, and this increased their belief that their infants were well taken care of and would be well.

"It was very bad to see my infant in the NICU among many devices. A nurse talked about the healing and discharge of families who had a similar situation… Especially the nurse's suggestions about believing and being strong changed a lot in our lives.…." (P8, 25 years, 36 gestational weeks)

"…In this process, one needs a small ray of hope... Sometimes, this can be the reassuring voice of the nurse, and sometimes, it can be a look…" (P5, 25 years, 36 gestational weeks)

Main Theme 2: Healing Physical Environment

Most of the mothers stated that they wanted to spend time with their infants in a more comfortable room away from people and noise. They stated that especially the sounds of medical devices coming from a large number of incubators affect the heart and respiratory rates of their infants. The physical environment is an important factor in establishing a healing care environment.

Sub-theme 3: Design/organization of neonatal intensive care unit

Most mothers want a single room or a suitable environment where they can spend time with their "My infant is in a large room with many incubators. My infant's weights two kilos, but the infant in the incubator next to him is four kilos and looks more active. This made me very sad, and my milk was running low. I wish there were partitions between incubators or single rooms, especially during the visiting hours of mothers." (P4, 25 years, 36 gestational weeks)

"As two mothers, we went to see our infants at the same time. We both tried to breastfeed our infants. The other mother had a hard time breastfeeding and when she saw my infant suckling she cried and fainted. Therefore, it would be better for infants to be in single rooms so that mothers do not compare and influence each other's infants.…" (P7, 26 years, 38 gestational weeks)

Sub-theme 4: Noise control

All mothers stated that noise control is important in providing a healing environment for maternal and infant health.

"My infant is being treated in an incubator in a large room. When there is too much noise from other infant's medical devices during visiting hours, my infant's heart rate and breathing are negatively affected. I think noise control is essential for my infant's health." (P1, 33 years, 33 gestational weeks)

Main Theme 3: Supports

In the third main theme, all of the mothers stated that they received support and/or the support sources they expected were important in the healing processes. In this theme, the sources of support that mothers expect are family, spirituality, and healthcare professionals.

Sub-theme 5: Family support

All of the mothers stated that they especially expected support from their spouses and that this was very important for them on the way to recovery. They also emphasized that within the scope of family support other than their spouses, it is important for their families to ask few questions and to be empathetic rather than accusing.

"The biggest support came from my husband during this period. With my partner's support, I feel better and I think it reflects on our infant as well." (P6, 28 years,35 gestational weeks)

"My wife was with me at every stage of the process. While waiting to see our baby, every moment …" (P4, 25 years, 36 gestational weeks)

Sub-theme 6: Support of healthcare professionals

All of the mothers reported that their biggest source of support was healthcare professionals. They reported that the healthcare professionals who care and treat their infants provide social support in terms of information support and emotional support.

"Knowing how they take care of my infant in intensive care is the most important thing for me. It's so nice to see they take better care of our infants than mothers. This support of the healthcare professionals, who I can get information about during visiting hours and on the phone, who understand me and take care of my infant, is very valuable." (P2, 27 years, 38 gestational weeks)

"The support of doctors and nurses is so essential… Their support affects me both psychologically and affects my breastfeeding and my whole family …" (P11, 26 years,38 gestational weeks)

Sub-theme 7: Spiritual support

Mothers stated that one of their greatest supports during the stressful intensive care process is to cling to prayer and faith. They also reported that this period caused them to question the meaning of life and increased the importance of spiritual support.

"It is very sad to see my infant in intensive care while dreaming of holding my infant. I began to question the meaning of life. Clinging to my faith and praying was my biggest support during this period." (P10, 30 years, 37 gestational weeks)

"I questioned the meaning of life a lot. I could not hold my baby to my heart's content. I always asked why. However, now I realize my life's meaning is my baby, and I will stand up straighter for him…" (P9,27 years, 35 gestational weeks).

DISCUSSION

This study, based on Watson's human caring theory, examined the expectations regarding the recovery care processes of mothers whose infants are in the NICU in Turkish society. Revealing the expectations of mothers regarding healing care behaviors and examining the effects of healing environments and supports are the strengths and new aspects of our study.

We concluded that mothers had expectations from nurses such as facilitating access to real information, providing clear and understandable information, and instilling faith and hope. These expectations of mothers are based on basic human values such as respect, appreciation, compassion, empathy, and eye contact. Therefore, mothers whose infants are hospitalized in the NICU expect humanistic care behaviors from nurses. This finding supports previous studies emphasizing that humanistic care (respect, sustainability of communication, eye contact, valuing, etc.) is essential in pediatric healthcare (9, 18). This is related to the healing processes of humanity and devotion that correspond to Watson's humanistic care. According to Watson, humanistic healing behaviors are an indicator of higher-quality care (7). The findings of our study emphasize behaviors that prioritize basic human values in care, and in this sense, it is compatible with the international basic care framework. Considering that maternal and infant health will affect each other, it is thought that nurses' healing care behaviors will contribute to both maternal and infant health.

The mothers in our study want to have a single-family room where they can spend more time with their infants and if possible, away from incubators. Mothers stated that the sounds of many incubators and medical devices cause stress in mothers and infants and negatively affect the communication between mother and infant. Mothers expect an environment during their visit that is as quiet as possible, where no one will disturb them, and where they can have close contact with their infants. It has been reported that in an environment where many incubators are together, sharing mothers with other mothers and comparing infants' development negatively affect the health of mothers and infants. Although the design of NICUs is related to hospital policy and capacity, nurses should lead the creation of a quiet, well-adjusted environment where mother and infant will spend time together and will not be interrupted by others. Nightingale's Environmental Theory and Watson's healing environment support the findings of our study within the scope of creating a remedial care environment. In many countries, NICUs are large spaces where more than one incubator can fit, but one or more single family rooms can also be provided. Others may only have units with more than one single family room (19, 20). In a meta-analysis study evaluating the effectiveness of the design of NICUs, newborns staying in a single-family room had a lower incidence of infant sepsis and higher breastfeeding rates at discharge compared to newborns staying in a standard neonatal unit. It has been determined that family-centered care and skin-to-skin contact are more common in the NICU, which has a family room design where infant can stay with the mother (21). Studies have reported that mothers with infants in an open NICU have higher levels of

stress than mothers staying with their infants in a single-family room (19, 22). Our study is similar to the existing literature although the number of studies evaluating the design of NICUs is limited in the literature. Creating the healing care environment to meet the expectations in terms of maternal and infant health is compatible with pediatric nursing practices and philosophy in terms of the implementation of family-centered care.

Family, healthcare professionals and spiritual support were determined as the sources of support that mothers experienced and expected. A meta-synthesis study examining the experiences of mothers with newborn in the NICU emphasized the importance of family support and the support of health professionals for mothers (23). Our study, on the other hand, concluded that mothers' hopes and beliefs are one of the biggest supports in the intensive care period. Some studies in the literature report that mothers gain a serious power when they think about divine power, are hopeful and feel comfortable, and this reflects positively on the relationship between mother and infant (24, 25). Only a limited number of studies have highlighted the spiritual support needs of mothers with infants in NICUs (24, 25). One of the most important sub-themes of healing supports is spiritual support in this study. One of the most important sub-themes of healing supports is spiritual support in this study. Healing care processes are one of the important health areas that mothers should be supported.

The mothers stated that they were worried about the development of their infants, breastfeeding and communication between them during their visits and that they needed the support of healthcare professionals. They think that the support of nurses is particularly important for their concerns. Heo & Oh (2019) stated in their study that parents of preterm infants need effective communication with the team (26). One of the most important roles of the nurse in this process is to guide the parents in the care of the infant and to support their parenting roles. Studies have emphasized the change in the parenting roles of mothers and have determined that they need accurate and understandable information the most (6, 27). This situation can be associated with mothers feeling inadequate due to not being able to fulfill their parenting roles and having to leave their infants alone among many technological tools whose function they do not know. We can say that family, health professionals, and spiritual support provide healing supports for mothers and their infants. With these supports, it is possible to improve and support the health of mothers and therefore infants.

Limitations

One of the limitations of this study is that most of the participants are primiparous mothers, and the experiences and expectations of multiparous mothers may be different. Therefore, there is a need for future studies that examine the expectations of primiparous and multiparous mothers in depth. Moreover, the fact that all of the children in the study had respiratory problems is thought to be reflected in the expectations of the mothers.

CONCLUSION

This study examined the expectations of mothers whose infants were hospitalized in the NICU within the framework of Watson's Theory of Human Caring. Mothers expect humanistic healing care behaviors from nurses. Moreover, they expect a healing environment where mothers will participate in the care of their infants, where different mothers will not be adversely affected when they see each other, where noise control is provided, and where there are more aesthetic single rooms. The biggest sources of support for mothers during this period are their spouses, families, healthcare professionals, and spirituality. In line with these results, reviewing the organization of NICUs, increasing awareness of health personnel about healing behaviors, and mobilizing mothers' support resources will be effective in the implementation of healing care processes.

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REFERENCES

1. Givrad S, Hartzell G, Scala M. Promoting infant mental health in the neonatal intensive care unit

(NICU): A review of nurturing factors and interventions for NICU infant-parent relationships. Early Hum Dev 2021;154:105281.
2. Ong SL, Abdullah KL, Danaee M, Soh KL, Soh KG, Japar S. Stress and anxiety among mothers of premature infants in a Malaysian neonatal intensive care unit. Journal of Reproductive and Infant Psychology 2019;37(2):193-205.
3. Abuidhail J, Al-Motlaq M, Mrayan L, Salameh T. The lived experience of Jordanian parents in a neonatal intensive care unit: A phenomenological study. Journal of Nursing Research 2017;25(2):156-62.
4. Ayvaz E, Açıkgöz A. Nitel bir çalışma: Yenidoğan yoğun bakım ünitesinde tedavi gören bebeklerin ailelerinin görüş ve beklentilerinin belirlenmesi. Osmangazi Tıp Dergisi 2018;41(3):271-78.
5. Russell G, Sawyer A, Rabe H, Bliss JA, Gyte G, Duley L. Parents' views on care of their very premature babies in neonatal intensive care units: A qualitative study. BMC Pediatric 2014;14(230):1-10.
6. Gilstrap CM. Organizational sensegiving in family-centered care: How NICU nurses help families make sense of the NICU experience. Health Communication 2021;36(13):1623-1633.
7. Watson J. Nursing: The philosophy and science of caring (revised edition). Caring in nursing classics: An essential resource. Colorado: Springer Publishing Company;2012. p. 243-264.
8. Watson J, Woodward T. (2020). Jean Watson's theory of human caring. New York:SAGE Publications Limited; 2020.
9. Gürcan M, Atay Turan S. Examining the expectations of healing care environment of hospitalized children with cancer based on Watson's theory of human caring. Journal of Advanced Nursing 2021;77(8):3472-3482.
10. Nasab SN, Azeri ARK, Mirbazel S. Effective environmental factors for reducing children's fear in children's hospital: Using parent's attitudes. ICONARP International Journal of Architecture and Planning 2020;8(1):01–19.
11. Kim AR. Addressing the needs of mothers with infants in the neonatal intensive care unit: A qualitative secondary analysis. Asian Nursing Research 2020;14(5):327-337.
12. Lorié ES, Willem-jan WW, van Veenendaal NR, van Kempen AA., Labrie NH. Parents' needs and perceived gaps in communication with healthcare professionals in the neonatal (intensive) care unit: A qualitative interview study. Patient Education and Counseling 2021;104(7):1518-1525.
13. McDonald R, Moloney W. Improving the Implementation of Family-Centered Care Within the Neonatal Care Unit: Empowering Parents to Participate in Infant Care. The Journal of Perinatal & Neonatal Nursing 2023;37(3):242-251.
14. Oude Maatman SM, Bohlin K, Lilliesköld S, et al. Factors influencing implementation of family-centered care in a neonatal intensive care unit. Frontiers in Pediatrics 2020;8:222.
15. Morse JM. Data were saturated. Qualitative Health Research 2015;25(5):587–588.
16. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology 2006;3:77–101.
17. Squires A, Dorsen C. Qualitative research in nursing and health professions regulation. Journal of Nursing Regulation 2018;9(3):15–26.
18. Al-Maharma DY, Safadi RR, Durham R, Halasa SN, Nassar OS. Mothers' and Midwives' and Nurses' Perception of Caring Behaviors During Childbirth: A Comparative Study. SAGE Open 2021;11(2):1-9.
19. Lester BM, Salisbury AL, Hawes K, et al. 18-month follow-up of infants cared for in a single-family room neonatal intensive care unit. The Journal of Pediatrics, 2016;177:84-89.
20. Vohr B, McGowan E, McKinley L, et al. Differential effects of the single-family room neonatal intensive care unit on 18-to 24-month Bayley scores of preterm infants. The Journal of Pediatrics 2017;185:42-48.
21. van Veenendaal NR, Heideman WH, Limpens J, et al. Hospitalising preterm infants in single family rooms versus open bay units: a systematic review and meta-analysis. The Lancet Child & Adolescent Health 2019;3(3):147-157.
22. Feeley N, Robins S, Genest C, Stremler R, Zelkowitz P, Charbonneau L. A comparative study of mothers of infants hospitalized in an open ward neonatal intensive care unit and a combined pod and single-family room design. BMC pediatrics 2020;20(1):1-9.
23. Wang LL, Ma JJ, Meng HH, Zhou J. Mothers' experiences of neonatal intensive care: A systematic review and implications for clinical practice. World Journal of Clinical Cases 2021;9(24):7062.

24. Heidari H, Hasanpour M Fooladi M. Stress management among parents of neonates hospitalized in NICU: a qualitative study. Journal of Caring Sciences 2017;6(1):29.
25. Obeidat H, Callister L. The lived experience of Jordanian mothers with a preterm infant in the neonatal intensive care unit. Journal of Neonatal-Perinatal Medicine 2011; 4:137-145.
26. Heo YJ, Oh WO. The effectiveness of a parent participation improvement program for parents on partnership, attachment infant growth in a neonatal intensive care unit: A randomized controlled trial. International Journal of Nursing Studies, 2019;95:19-27.
27. Labrie NH, van Veenendaal NR, Ludolph RA, Ket JC, van der Schoor SR., van Kempen AA. Effects of parent-provider communication during infant hospitalization in the NICU on parents: A systematic review with meta-synthesis and narrative synthesis. Patient Education and Counseling 2021;104(7):1526-1552.