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Exploring nursing students' perspectives on communicating with hospitalized children: A qualitative study using mind map-based interviews

Fatemeh Ebrahimpour

F.Ebrahimpour93@gmail.com

Department of Pediatric Nursing, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences

Manijeh Nourian

Department of Pediatric Nursing, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences

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Abstract

Introduction

Nursing students are expected to develop and strengthen these communication skills during their clinical placement.

Methods

A qualitative approach was used to explore nursing students' perspectives regarding communication with children during clinical placement, Tehran, Iran. Data were collected using mind map–based interviews and analyzed through content analysis.

Results

A total of 17 nursing students participated in the study; 11 were female and 6 were male, with ages ranging from 21 to 23 years, and all were single. Analysis led to the extraction of four main categories and nineteen subcategories. Meaning of communication in child care, pathways to entering the child's world, communication in clinical procedures and communication within clinical education settings emerged as central elements.

Conclusion

Pediatric communication is a dynamic and developmental process requiring structured educational support. Strengthening experiential learning and clinical guidance is essential to improve nursing students' communication competence and confidence in pediatric care.

1. Introduction

Within undergraduate nursing curricula, students are expected to develop the knowledge and skills required to provide safe and effective care to diverse populations. Pediatric clinical placements constitute a core component of nursing education, offering opportunities for students to engage with children across developmental stages and to integrate theoretical learning into clinical practice (Liang et al., 2020). The development of communication competence is a central objective of nursing education, as effective communication underpins professional practice and quality of care (Moghadam et al., 2025). In pediatric settings, communication is closely aligned with the principles of Family-Centered Care, which emphasize partnership, mutual respect, and collaboration among healthcare professionals, children, and their families (Coşkun et al., 2025). Therapeutic communication is particularly critical in this context, as it not only supports clinical recovery but also enhances coping, emotional well-being, and interpersonal functioning (Mercan and Mersin, 2025). Effective communication has been associated

with improved satisfaction, reduced anxiety, enhanced adherence to treatment, and more accurate assessment of children's needs (Grant et al., 2025; Weng et al., 2024).

Developing communicative competence in pediatric contexts requires sensitivity to developmental characteristics, family dynamics, and the stressors inherent in hospitalization (Medeiros et al., 2024; Zendeh et al., 2025). Children differ from adults in their cognitive, emotional, and social development, necessitating age-appropriate and responsive communication strategies (Chang et al., 2024). Hospitalization may evoke fear, confusion, and helplessness due to limited understanding of illness and medical procedures (Abazari et al., 2025). Simultaneously, parents often experience uncertainty and emotional distress, requiring clear information and empathic engagement from healthcare professionals (Navein et al., 2022).

Despite its importance, pediatric clinical placements present complex relational environments in which students may perceive communication as challenging, avoid sustained interactions (Chang et al., 2024), encounter facilitators and barriers (Zendeh et al., 2025), and experience anxiety when interacting with hospitalized children and their parents (Çunkuş et al., 2021).

Individual characteristics of nursing students, including gender, prior experience with children, communication skills, and professional interest, may influence the formation of their experiences and the perceived meaning of communication in pediatric care (Kudubes et al., 2023). From an educational perspective, communicative competence develops through experiential engagement in authentic clinical contexts (Aldolaim et al., 2025). Experiential Learning Theory conceptualizes learning as a cyclical process of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Cheng et al., 2025). Pediatric placements therefore represent dynamic contexts in which students construct, test, and refine communicative skills through lived relational encounters (Chang et al., 2024).

In addition, most existing research in Iran has focused on quantitative approaches in adult or general clinical settings, with limited attention to the lived experiences of nursing students in pediatric wards. Therefore, there is a need for qualitative approaches that can capture the depth of students' perceptions and experiences (Cheraghi et al., 2016; Khedmatizare et al., 2021). Accordingly, this study aims to explore nursing students' perceptions of communication with hospitalized children during clinical placements, using mind mapping as a facilitative tool in qualitative interviews (Ordu and Caliskan, 2023; Mammen et al., 2025) to enhance the depth and richness of data.

2. Methods

2.1. Study design and participants

This study adopted a qualitative design using a conventional content analysis approach, as described by Hsieh and Shannon (2005). The study was conducted in 2025 at the School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Iran. According to the undergraduate nursing curriculum

in Iran, clinical placement is undertaken in the fifth semester and is delivered over a six-week period, consisting of three consecutive days per week. Clinical placements are completed in groups of 5–10 students under the supervision of a clinical instructor in various inpatient wards of a university-affiliated pediatric hospital in Teheran.

Participants were recruited through purposive sampling based on predefined inclusion criteria. Eligible participants were Persian-speaking Iranian undergraduate nursing students who had completed the pediatric nursing clinical placement and were willing to participate in the study. Participates who withdrew from the study during data collection were excluded.

2.2. Data collection

Data were collected during the first week following completion of the clinical placement through semi-structured interviews incorporating a mind-mapping technique. All interviews were conducted by the first author, who holds a PhD in Nursing and is a faculty member in the Department of Pediatric Nursing at the study site. The first author has extensive experience in qualitative interviewing, participant-engaged and arts-based data collection, and qualitative research methodologies.

Individual, face-to-face interviews were conducted at a time and location agreed upon by the participants and the interviewer. Interviews were held either in the nursing instructors' room at the clinical placement hospital or in faculty offices at the School of Nursing and Midwifery, between 08:00 and 16:00. In both settings, care was taken to ensure a quiet environment with minimal interruptions.

Data collection occurred in two stages. First, participants were provided with a blank A4 sheet and drawing materials (pen, pencil, colored pencils, eraser, and sharpener) and were asked to construct a mind map over 30–40 minutes in response to the question: "How did you understand the key components of communication with children during your clinical placement?" Participants were informed that mind mapping would help them visually represent their experiences and understanding of therapeutic communication, using words or short phrases to identify key components and illustrate relationships among them. They were encouraged to use shapes, lines, colors, symbols, and personal creativity to convey their perspectives.

In the second stage, a semi-structured interview was conducted to explore the meaning, importance, interconnections, perceived outcomes, and emotional and cognitive aspects represented in the mind maps. The interview guide was developed based on relevant literature and the authors' clinical experience and was pilot tested with three nursing students who had previously completed the pediatric nursing placement. Core interview questions focused on the components depicted in the mind maps, their significance, related clinical experiences, and their relationships with other components. The interview questions included: What components or characteristics does this mind map represent based on your understanding of therapeutic communication with children during your clinical placement in a pediatric hospital? Why was this component important to you? Can you describe an experience related

to this component? How does this component influence or relate to other components? Is there anything you would like to explain that you did not include in the mind map?

Probing questions were used as needed to deepen participants' responses. Interviews lasted between 40 and 80 minutes, were audio-recorded with participants' consent, and all completed mind maps were collected at the end of each interview. Recruitment and data collection continued until data saturation was reached, with no new categories or insights emerging.

2.3. Data analysis

Data were analyzed using a conventional content analysis approach, in which codes were derived directly from the textual and visual data (i.e., interview transcripts and mind maps) (Hsieh and Shannon, 2025). Audio-recorded interviews were transcribed verbatim as the first step of data preparation. To achieve immersion and gain an overall sense of the data, interview transcripts and mind maps were read repeatedly. During open coding, the data were broken down into meaning units, and descriptive codes were assigned to each unit. Codes with similar meanings were then grouped into conceptual categories, leading to the development of subcategories and overarching main categories.

2.4. Trustworthiness

To ensure scientific rigor, the criteria proposed by Lincoln and Guba (1985) were applied. The study was reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Tong et al., 2007).

3. Results

3.1. Participants and mind map characteristics

Seventeen nursing students participated in the study (Table 1). No participants withdrew during the study. Regarding the mind map representations, six participants used circles, unidirectional or bidirectional arrows, lines, words, short phrases, and explanatory sentences (Fig. 1). Three participants depicted the hospital environment and real clinical situations in a narrative format (Fig. 2), four used the human figure symbol (Fig. 3), and the remaining four used metaphors such as a butterfly, tree, pyramid, or heart, accompanied by explanatory boxes or words and phrases (Fig. 4), to illustrate their understanding of therapeutic communication during the pediatric nursing clinical placement.

Table 1
Socio-demographic characteristics of participants (n = 17)

Variable	Category	n (%)
Age (years)	21	5 (29.4)
	22	10 (58.8)
	23	2 (11.8)
Gender	Female	11 (64.8)
	Male	6 (24.2)
Marital Status	Single	17 (100)
	Married	0 (0)

3.2. Categories and Subcategories

A total of 390 initial codes were extracted from the interview transcripts. Following analysis of similarities and differences, these codes were organized into four categories and 19 sub categories, providing a comprehensive understanding of the nursing students' perceptions of communication with hospitalized children (Table 2).

Table 2
Categories, Subcategories, and Coding

Categories	Subcategories	Example of cods
Meaning of Communication in Child Care	Child and mother as a single communicative unit	-Mother's presence during communication with the child -child's presence during communication with the mother
	Communication as a means of establishing trust	-Building trust in the child -Building trust in the mother
	Stepwise nature of communication with the child	-Silent presence -Initiating conversation with topics of the child's interest
	Communication as an emotional responsibility	-Prevention of post-traumatic stress -Prevention of emotional harm
Pathways to Entering the Child's World	Interest in children: spontaneous communication	-Loving children -Interest in communicating with children
	Developmental considerations: a roadmap for entering communication with the child	-Communication with toddlers through play -Communication with school-age children through child-centered conversations
	Mother as a facilitator of communication with the child	-Responding to the mother's questions and concerns -Empathy with the mother
	Play and art as inseparable elements of communication with the child	-Drawing with the child -Playing with the child
	Child-friendly environment and facilities as a precondition for communication	-Colorful forms with cartoon designs used by healthcare staff -Presence of a playroom in the ward
	Verbal and non-verbal skills as communication bridges	-Being friendly and smiling -Showing attentiveness to the child's speech

Categories	Subcategories	Example of cods
Communication in Clinical Procedures	Preparing the child before the procedure	-Simple explanation of the procedure -Familiarizing the child with equipment and the procedure environment
	Providing a sense of safety during the procedure	-Presence of the mother -Attention to the child's preferences
	Emotional comfort and reassurance after the procedure	-Relieving distress through play -Empathy with the child
Communication within Clinical Education Settings	Lack of knowledge and unfamiliarity with pediatric clinical settings	-Unfamiliarity with pediatric ward routines - Limited knowledge of pediatric diseases
	Greater success of female nursing students in communicating with children and mothers compared to male students	-Easier communication of young children with female nurses - Perceived compassion of female nurses
	Insufficient clinical role models for child–family communication	-Limiting nurse–child communication to medication administration or blood sampling -Neglecting the mother's emotional support needs by nurses
	Previous positive experiences in communicating with children	-Previous experience communicating with relatives' children -Having a younger sibling
	Mediators of communication learning in clinical settings	-Peer learning for communication -Modeling from the instructor for communication
	Learning and experiencing a sense of usefulness among nursing students	-Helping the child through communication -Learning how to establish communication

1) Meaning of communication in child care

Nursing students developed a multidimensional understanding of communication through their interactions with children during their pediatric nursing clinical placements. This category includes four subcategories:

a) Child and mother as a single communicative unit

The nursing students described communication as occurring within a relational context, considering the mother and child two inseparable components of a unified whole. According to the nursing students' experiences, attempts to communicate with the child without considering the mother or vice versa were unlikely to succeed. One participant stated, " *The child and mother are emotionally interconnected and cannot be separated from one another*." (P7) Another participant emphasized, "*Involving both the mother and the child in the conversation reduces the child's anxiety toward an unfamiliar person and allows the mother to clarify our explanations for the child*." (P11)

b) Communication as a means of establishing trust

Nursing students developed a fundamental understanding that the primary outcome of communicating with children and their caregivers was establishing and maintaining trust. They repeatedly found that until a child trusted them, any attempt at interaction or care would likely be met with resistance, fear, or indifference. In this regard, one participant stated, "*Communicating with a child means establishing trust. The child must trust you; otherwise, communication will not develop*." (P1) Another participant explained, "*Communication and trust are interconnected and inseparable. I tried different communication approaches to gain the trust of the child and mother and show them that I was not a threat*." (P3)

c) Stepwise nature of communication with the child

Nursing students understand that establishing reassuring and security-enhancing communication with children is a gradual process consisting of multiple stages. Nursing students described a stepwise approach to communicating with children, beginning with distant observation, followed by nonverbal interaction and gradual physical approach. They then established communication with the mother and ultimately engaged the child using mediators such as toys or informal conversation. One participant explained, "*First, I entered the child's room and looked at the child from a distance, smiling so the child could become accustomed to my presence.*" (P9) Another participant described: " *the child should first see us from a distance or while we interact with another child. Then, we gradually decrease the physical distance before talking or playing with them*." (P6)

d) Communication as an emotional responsibility

The nursing students understood that inappropriate communication could cause emotional harm to the child. They felt obligated to avoid any form of interaction that could cause psychological or emotional damage. One participant stated, "*Communicating with a child means taking responsibility for their emotional and psychological well-being*." (P1) Another participant explained, "*We must communicate with children in a way that does not negatively affect their emotional or psychological state because some*

psychological harm can persist into adulthood. As nurses, it is our responsibility to ensure that our communication is not emotionally harmful." (P9)

2) Pathways to entering the child's world

Nursing students understood that effective communication with children requires recognizing and entering this distinct world. They considered various strategies across six subcategories:

a) Interest in children: spontaneous communication

The nursing students believed that liking children was an intrinsic motivator that naturally drew them toward initiating interaction and fostering a willingness to engage. One participant stated, "*I have always been interested in children and have been excited to communicate with them. The world of children is beautiful, and I wanted to connect with it*." (P4) Another participant explained: "*We must love children. This love means appreciating their world. Communicating with a child means being willing to enter their world*." (P17)

b) Developmental considerations: a roadmap for entering communication with the child

Nursing students referred to several age- and developmentally-appropriate strategies for engaging with children. For toddlers and preschool-aged children, these strategies included role-playing, humor, play, and drawing. For school-age children, they included play combined with conversation and promoting a sense of autonomy in communication. For adolescents, they emphasized respect for independence while engaging them in discussions about their concerns, interests, and preferences. One participant explained, "*A child was afraid of the blood pressure device because she was four years old. At this age, children are usually afraid of bodily harm. So, I first let her play with the device*." (P9) Another participant stated, "*What adolescents need in communication is for us to pay attention to their sense of independence and their opinions*." (P10)

c) Mother as a facilitator of communication with the child

Nursing students described mothers as key facilitators in establishing communication with children. They reported that mothers often help nurses understand the child's preferences, emotions, and needs, while also encouraging the child to engage with healthcare providers. Building a trusting relationship with the mother through empathy and adequate information was considered essential, as it reduced maternal anxiety and promoted more effective communication between the nurse and the child.

One participant stated, "*When Parents, especially mothers' questions are answered, their anxiety decreases, and they trust us more. This trust helps the mother cooperate with us in establishing successful communication with the child*." (P10) Another participant explained, "*In the surgical ward, a mother was upset and angry because her child had been fasting for a long time, and the surgery had been postponed until the next day. I empathized with her, telling her that I understood her anger*." (P7)

d) Play and art as inseparable elements of communication with the child

Nursing student view play and art as a critical pathway to building trust because it helps children overcome their fear of healthcare personnel, medical procedures, and the unfamiliar hospital environment. One participant stated, "*Play is always present in the process of communicating with children and is inseparable from it. To communicate with children, especially toddlers and preschoolers, we need to use play.*" (P16) Another participant explained, "*We should communicate with children through play and drawing so they allow us into their world*." (P1)

e) Child-friendly environment and facilities as a precondition for communication

Nursing students recognized that the physical design of pediatric wards, hospital equipment, and staff uniforms can implicitly facilitate interaction and prepare children for engagement even before direct communication is initiated. In this sense, the hospital environment was perceived as a form of "pre-communication" that can reduce or increase a child's willingness to interact. One participant stated, "*The MRI imaging department was designed like a spaceship with stars and a sky. In contrast, the endoscopy unit looked like a formal medical ward, which made children afraid and uncomfortable*." (P8). Another participant explained, "*Child-friendly hospital design and inpatient wards reflect the child's world. For example, if each ward had a playroom with various entertainment materials, the child could transition from a sterile medical environment to their own world*." (P5)

f) **Verbal and non-verbal skills as communication bridges**

The nursing students precepted that verbal communication style and nonverbal behaviors, when chosen appropriately, can serve as powerful tools for connecting with children and ensuring successful communication. One participant stated, "*We should speak simply and briefly, using familiar words instead of medical terminology*." (P14) One participant noted, "*Empathy with the child means understanding their feelings*." (P4) Another participant explained, " *I used eye contact and nodded while bending down to their level to show that I was paying attention*." (P13**)**

3) **Communication in clinical procedures**

Nursing students experienced that clinical procedures provide important opportunities for nurse-child communication. This category includes three subcategories:

a) Preparing the child before the procedure

Nursing students identified preparing the child as one of the most important factors in managing anxiety and pain during clinical procedures. The nursing students believed various strategies could be employed to this end, such as explaining procedures in simple, using child-appropriate language, familiarizing children with medical equipment and devices, and being honest with children about pain. One participant stated, "*Children are stressed during procedures, and we should explain things to them in their own language*." (P11) Another participant explained, "*We should not lie to children by saying that needle*

insertion is not painful." (P8) A further participant noted, "*Sometimes, procedures like an ECG are not painful, but the devices themselves look large and frightening to children. They assume the procedure will be painful. Therefore, we should first allow them to become familiar with the equipment*." (P9).

b) Providing a sense of safety during the procedure

Nursing students noticed that performing procedures skillfully, efficiently, patiently, and calmly in response to a child's resistance while avoiding physical restraint and allowing the child's caregiver to be present during the procedure can foster a sense of safety and trust in both the child and their caregiver. One participant stated, " *I planned the procedure to be completed as quickly as possible so it wouldn't cause further fear or pain*." (P1) Another participant explained, "*Holding a child's arms and legs during venipuncture or blood sampling significantly increases their fear, and it becomes difficult to communicate with them later*." (P12) One participant stated, "*If the mother is present during venipuncture, it helps calm the child*." (P16)

c) Emotional comfort and reassurance after the procedure

Nursing students emphasized that providing emotional support after procedures plays a key role in building trust and mitigating negative emotional experiences associated with pain, fear or distress. Strategies include acknowledging the child's cooperation with rewards and verbal praise, and providing opportunities for play. One participant described, " *In my opinion, it is very easy to improve the child's post-procedural experience by giving a small reward, such as chocolate or stickers, so the child feels better after the procedure*." (P7) Another participant stated, "*After a venipuncture, I saw a child leave the treatment room and return to the ward crying and hitting his mother. My classmates and I tried to calm him down by playing with him and making him laugh*." (P16)

4) Communication within clinical education settings

The clinical educational context influenced how nursing students understood communication with children. This category includes six subcategories:

a) Lack of knowledge and unfamiliarity with pediatric clinical settings

Nursing students reported that limited knowledge of pediatric conditions, unfamiliarity with pediatric ward routines, and insufficient clinical experience contributed to fear and insecurity when communicating with children and their mothers. These factors reduced their confidence in communication and increased concerns about maintaining families' trust. One participant stated, "*I was worried that the mother might ask me something about her child's illness that I wouldn't know, and that she wouldn't trust or communicate with me*." (P6) Another participant explained, " I found it difficult to communicate with mothers because I didn't know the usual routines in the ward, and so I couldn't answer their questions." (P2)

b) Greater success of female nursing students in communicating with children and mothers compared to male students

Nursing students believed that mothers and, in some cases, children particularly younger ones communicated more easily with female nursing students because of their perceived maternal qualities. One male participant stated, "*Female nursing students communicated more easily with mothers because they were with the children and shared the same gender as the mothers. Maybe because I was a male student, I felt somewhat uncomfortable communicating with mothers*." (P7). A female participant noted, "*I think female nursing students may be more successful at communicating than male students, perhaps because of the maternal instinct and empathy they have*." (P4)

c) Insufficient clinical role models for child–family communication

Nursing students experienced a lack of effective role models for communicating with children in the clinical learning environment. They observed deficiencies in nurses' communication practices during various activities and identified challenges such as high patient workloads, nursing staff shortages, and limited communication skills among nurses. One participant stated, " *The nurse's behavior was rigid and formal, particularly during procedures such as venipuncture*." (P14) Another participant explained, "*We didn't see any nurses who were good role models for communicating with children*." (P16)

d) Previous positive experiences in communicating with children

Nursing students with prior experience interacting with children in family settings, with relatives, or in the community were more successful at establishing communication with pediatric patients. One participant stated, "*Having a younger brother and interacting with him and other young children in my family helped me not feel stressed when communicating with hospitalized children*." (P5) Another participant explained, "Having previously completed an internship in maternal and child health at a hospital and health monitoring clinic, I found it easy to communicate with children and their families." (P4)

e) Mediators of communication learning in clinical settings

Nursing students identified three main sources peers, clinical instructors, and patients and their families as key to acquiring communication skills during pediatric nursing internships. One participant stated, "*I noticed that my classmate brought colorful stickers to the internship and gave them to children during interactions. I learned this method*." (P1) Another participant explained, "*We learned from each other how each person approached communication and which methods were effective*." (P6) One participant described, "*I carefully observed how my instructor communicated with children and mothers*." (P3) One participant explained, "*when I asked an adolescent, 'Where is your mother?' he replied, 'I am here; ask me directly.' Then, I realized that adolescents do not like to be treated like younger children who depend on their mothers*." (P8).

f) Learning and experiencing a sense of usefulness among nursing students

Nursing students identified the importance of learning how to communicate with children and their families, and of feeling useful after overcoming patients' health needs through communication. One participant stated, " *During the internship, I learned how to communicate with both the child and the family*." (P10). One participant stated, "*I felt useful when I was able to communicate with a child who was afraid of me or gain the mother's trust through empathy*." (P3)

4. Discussion

The findings indicate that nursing students conceptualize communication in pediatric care as a complex process extending beyond interpersonal interaction, involving the child and caregiver as a unified communicative unit, consistent with the triadic communication model in family-centered care (Ye et al., 2025). Nursing students emphasized the importance of establishing trust with both children and caregivers, aligning with evidence identifying trust as a core component of therapeutic relationships and safe care (MacKay et al., 2024). Although prior research has highlighted communication barriers such as anxiety and lack of technique (Medeiros et al., 2024; Kudubes et al., 2023), this study shows that communication is perceived as a gradual, developmental process requiring time, patience, and adaptation to the child's developmental stage (Liang et al., 2020; MacKay et al., 2024).

Communication was also perceived as an emotional and ethical responsibility, with students expressing concern about potential psychological harm to children, reflecting ethical sensitivity and awareness of emotional impact (Bazrafshan et al., 2023; Chang et al., 2024). Effective communication was facilitated by students' interest in children and awareness of developmental stages, which enhanced comfort and engagement, while also reducing anxiety (Akdeniz Kudubeş et al., 2024; Bell and Condren, 2016). However, communication with certain age groups, particularly infants and adolescents, remained challenging (Boztepe and Özbay, 2023).

Participants identified parents, particularly mothers, as key facilitators of access and trust, acting as "gateways" to communication in line with triadic models of pediatric care (Osei Appiah et al., 2022; Barratt et al., 2024). Parental presence was perceived as supportive for establishing child trust (Lind et al., 2024), although gaining parental trust itself was identified as a challenge dependent on continuity and prior positive experiences (Barratt et al., 2024). Additionally, students viewed play and art as primary communication tools rather than supplementary strategies, facilitating engagement, reducing fear, and improving procedural cooperation (Chang et al., 2024; Boztepe and Özbay, 2023). Environmental and child-friendly factors were also considered influential in shaping pediatric experiences (Abazari et al., 2025).

Effective pediatric communication required integration of verbal and non-verbal strategies, including active listening, therapeutic silence, and appropriate physical interaction (Sabetsarvestani and Geçkil, 2024; Osei Appiah et al., 2022). However, deficiencies in non-verbal skills among nursing students highlight the need for structured training (Jin et al., 2023). Communication was described as a continuous process before, during, and after procedures, involving psychological preparation, age-

appropriate explanations, and emotional support, consistent with evidence supporting therapeutic communication in reducing anxiety and procedural distress (Aarts et al., 2023; Naber et al., 1995). Finally, communication competence was influenced by individual and contextual factors, including limited clinical exposure, lack of role models, and anxiety in early practice. Structured education, simulation, and mentorship were identified as key facilitators of skill development (Semerci and Savaş, 2023; Lind et al., 2024). Peer learning and positive clinical experiences further strengthened confidence, professional identity, and communication competence, highlighting the importance of structured clinical guidance in pediatric nursing education (Camara et al., 2024).

5. Strengths and limitations

Mind map–based interviews enabled participants to visually organize and express complex experiences, demonstrating the potential of this method for nursing education research. However, the findings were limited to nursing students within a specific educational and cultural context and may not reflect the perspectives of other stakeholders or be transferable to all settings.

6. Conclusion

This study highlights pediatric communication as a multidimensional and evolving process involving the child, caregiver, and nurse. Nursing students emphasized the importance of trust-building, developmental awareness, parental involvement, and play-based communication. Communication competence was shaped by educational and clinical experiences, underscoring the need for structured training, mentorship, and experiential learning to strengthen pediatric communication skills.

Declarations

Conflict of Interest:

The authors have no conflicts of interest to disclose.

Ethics approval and consent to participate

This study was conducted in accordance with the Declaration of Helsinki and received ethical approval from the Research Ethics Committee of School of Pharmacy and Nursing & Midwifery, Shahid Beheshti University of Medical Sciences in 2024 (Approval Code: IR.SBMU.PHARMACY.REC.1404.153). Informed consent was obtained from all participants prior to their inclusion in the study.

Conflict of Interest

The authors have no conflicts of interest to disclose.

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Author Contribution

F.E wrote the main manuscript. F.E and M.N reviewed the manuscript.

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Figures

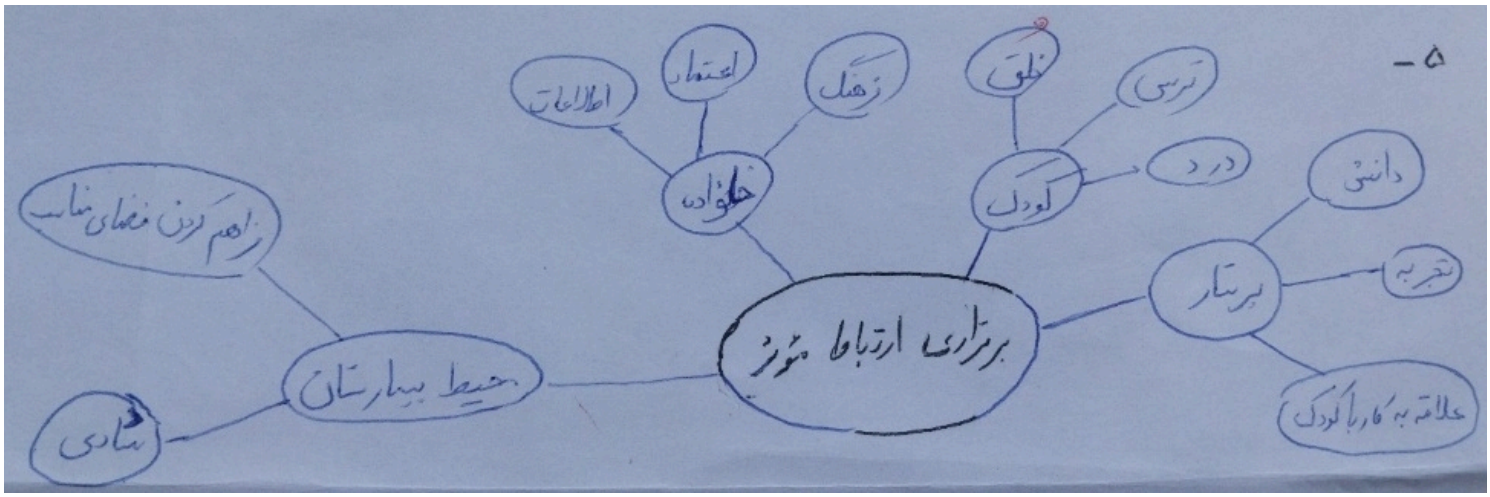

Figure 1

A mind map created by a student depicting their perception of communication with hospitalized children. The central node represents 'communication', while the surrounding nodes illustrate related contextual influences, including the child, the nurse, the family and the hospital environment.



Figure 2

A mind map developed by a nursing student depicting way to facilitate communication with hospitalized children. These include play-based engagement, effective communication between children and their families, and a colorful, child-friendly hospital environment.

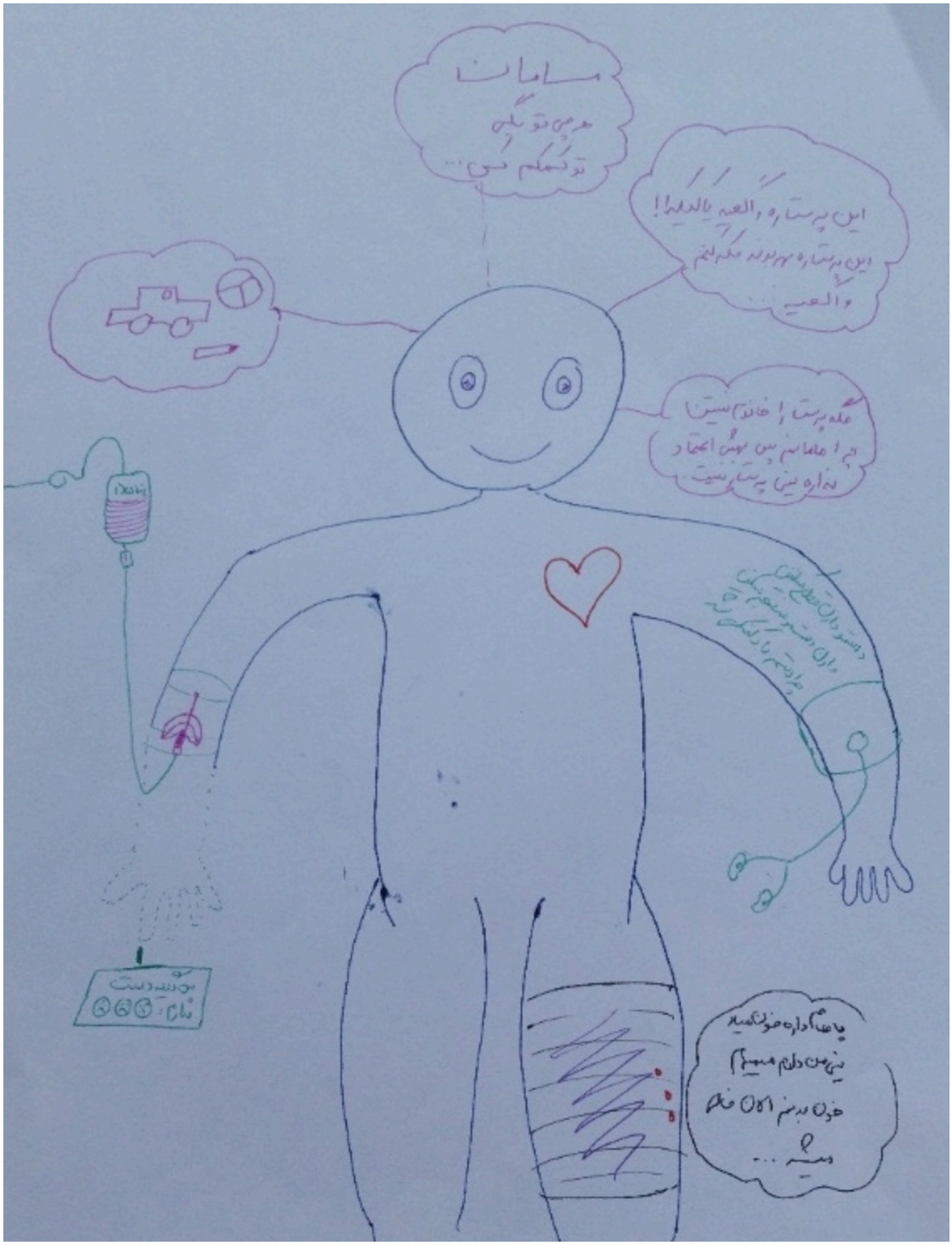

Figure 3

A mind map developed by a nursing student, which illustrates a hospitalized child with an intravenous line at the center. The surrounding cloud-shaped nodes represent the child's perceived emotional and contextual experiences of hospitalization, including fear of bodily harm, trust in nurses, separation from toys, and the absence of a mother.



Figure 4

A nursing student has developed a mind map representing communication with hospitalized children as a tree structure. The central concept of communication forms the trunk, while the branches illustrate the key dimensions of communication. These include communicating with the mother, showing empathy towards the child and caregiver, ensuring psychological safety, being friendly, understanding child development, explaining procedures to the child and encouraging involvement.