Parents and Health Care Teams Perceptions of Communication in Neonatal Intensive Care Unit

marjan mardani
Associate professor, School of Nursing and Midwifery, Department of Nursing, Shahrekord University of Medical Sciences, Tehran, Iran., marjanmardani@gmail.com

haydeh heidari
Associate Professor, Faculty of Nursing and Midwifery, Modeling in Health Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran., haydeheidari@gmail.com

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Abstract
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Keywords
parent, communication, health care team, neonatal intensive care unit

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Acknowledgements
Acknowledgments: This study is research that approved by Sharekord Universiy of Medical Sciences (no 2957). The researchers appreciate all participants who shared their experiences with us

This article is available in The Qualitative Report: https://nsuworks.nova.edu/tqr/vol29/iss5/2
Parents and Health Care Teams Perceptions of Communication in Neonatal Intensive Care Unit

Marjan Mardani-Hamooleh and Haydeh Heidari
School of Nursing and Midwifery, Shahrekord University of Medical Sciences, Iran

Parents experience a lot of stress in the neonatal intensive care unit (NICU). Then effective communication between parents and members of the care team is an essential component of improving the quality of care. The present study was conducted by qualitative exploratory research method for explaining parents and health care teams' perceptions of communication in NICU. We selected 39 participants by purposive sampling. We collected data through in-depth semi-structured, face-to-face interviews. The transcripts were analysed using the conventional content analysis approach. Three themes were obtained by analyzing the data included, the nature of communication, the theme of factors affecting successful communication, the theme of factor affecting continuity communication. All members of the care team should be involved in parent communication. But according to our results, nurses are more responsible for communicating with parents. Finding from the study indicates the key role of nurses in communicating in the NICU. It is necessary to teach physicians and nurses, especially physicians, how to communicate with parents. Also, health system authorities have an important role in continuing education on communication methods in the NICU.

Keywords: parent, communication, health care team, neonatal intensive care unit

Introduction

The neonatal intensive care unit (NICU) is full of various medical equipment and sounds (Chifa et al., 2021). Admission of infants to NICU affects both parents and infants (Kynoe et al., 2020). Parents experience a lot of stress due to concerns about the infant's health, unfamiliar and complex environment, and inability to play a parenting role (Heidari et al., 2015; van den Hoogen et al., 2021). For this reason, adequate and frequent communication of care team members with the family is essential to ensure that the family reduces their stress by being familiar with the unit environment and infant's condition (Marçola et al., 2020). Parents in the NICU constitute a vulnerable hospital population in need of culturally, linguistically, and individually tailored information (Kynoe et al., 2020). However, lack of a common language in the NICU creates a challenge. Maternal vulnerability challenges the nurse's awareness of the asymmetric distribution of power and ability to establish a trusting relationship with the mother. This is particularly important when mother and nurse do not share a verbal language (Kynø & Hanssen, 2022). In this regard, effective communication between parents and members of the care team is an essential component of improving the quality of care (Horwood et al., 2019; Labrie et al., 2021).

Effective parents’ communication with healthcare team is created via building/maintaining relationships, exchanging information, sharing decision-making, and
enabling parent self-management. Thus, the quality of communication can improve the quality of care (Labrie et al., 2021)

The most prominent cause of infant mortality is prematurity. Hospital care plays an important role in the survival of these infants. Most families with premature babies face several problems due to long term outcomes (Donoho et al., 2021; Garne Holm et al., 2019; Lakshmanan et al., 2019). Due to the complex medical conditions in the NICU, most parents are unaware of the treatment, the neonate condition, the prognosis of the neonate illness, and the treatments (Taylor et al., 2020). Approximately 18 to 87% of mothers of preterm infants experience at least one symptom of post-traumatic stress (Malin et al., 2020). This stress causes decreased infant-mother interaction (Gateau et al., 2021).

Most parents in the NICU experience severe stress due to the hospitalization of their infant, the complex equipment available, and the unknown condition of their infant. But there is little information about parental support and assistance (Pauline Voie et al., 2018). Therefore, most parents are prone to various psychological problems after their baby is hospitalized (Ahlqvist-Björkroth et al., 2019; Lorié et al., 2021). Family-centered care approach aims to increase quality of care and decrease parental stress (Lundqvist et al., 2021). Nurses have an important role in reducing the stress of parents because of their unique situation due to the care of very critically ill infants, working with specialized devices and communicating with the family in NICU (Bry & Wigert, 2022; Pouraboli et al., 2019).

On the other hand, effective communication increases parents' satisfaction in the NICU. One of the essential skills for staff is effective communication with families in the NICU (Bowen et al., 2020; Heidari et al., 2016; Nassef et al., 2020). In some countries, such as Canada and the United States, there is a communication skills program in the post graduate curriculum (Ditton-Phare et al., 2017). Also, most doctors and nurses feel that they do not have enough ability to communicate with anxious and distressed parents in the NICU (Hall et al., 2019).

Today, with the increase in technology and the advancement of science, and changes in providing care, continuous training of nurses is essential (Kol et al., 2017). Nurses working in the NICU need special skills and competencies (Alfieri et al., 2017). The results of a systematic review of the literature showed that to provide effective communication to parents and provide a comprehensive communication framework, further research is needed (Wreesmann et al., 2021). Other researchers suggested that more studies regarding evidence-based care and culture-based care are needed on parental communication in the NICU (Lorié et al., 2021). To provide quality care, it is essential to pay attention to the cultural, managerial, and organizational aspects (Kynoe et al., 2020).

It is worth noting that the provision of quality care must not be only "justice-oriented" but must be respectful of all principles of medical ethics. In fact, respecting the four principles of medical ethics as described by Beauchamp and Childress (e.g., respect for patient autonomy, beneficence, non-maleficence, justice; Beauchamp & Childress, 2001) is crucial for healthcare professionals, as it plays a significant role for the provision of quality care. The NICU is full of various staff (Cuttini et al., 2020), so knowledge of parents' and health care teams' communication approaches and how both parties think, feel and act to overwhelmed communication issues are necessary to improve clinical practice and decrease communication barriers (Kynoe et al., 2020).

One researcher (HH) had experience in neonatal and qualitative nursing and another researcher had experience in psychiatry and qualitative nursing. In addition, we have conducted several studies on parents in the neonatal intensive care unit, and I have always seen parents who are worried about their communication with the members of health care team when the infant is hospitalized to the NICU. Therefore, the aim was to explain parents and health care teams' perceptions of communication in NICU.
Methods

We used qualitative exploratory research to identify the parents' and health care teams' perceptions of communication in NICU. For the analysis of the results, we applied content analysis according to Graneheim & Lundman (Graneheim & Lundman, 2004).

Participants

The participants of the present study were parents and members of health care team who worked in the NICU of Shahrekord University of Medical Sciences in Iran. They were selected by purposive sampling. To achieve different views, the participants were selected with the maximum variety in terms of age, type of education, parents, and health care team. The selection of participants continued until the saturation of the data, so that no new theme was obtained. Thirty-nine participants (15 nurses, four physicians, 16 mothers and five fathers) were selected purposefully. Inclusion criteria were willingness to participate in the study and having at least one year of work experience in the NICU as nurse or physician. Exclusion criteria included unwillingness to continue participating in the study. The demographic characteristics of the participants are given in Table 1.

Table 1
The Demographic Characteristics of the Participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Nurses</th>
<th>Physicians</th>
<th>mothers</th>
<th>fathers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>15</td>
<td>4</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Age mean</td>
<td>34.5</td>
<td>45.4</td>
<td>25.4</td>
<td>38.7</td>
</tr>
<tr>
<td>Work experience in neonatal intensive care unit</td>
<td>8</td>
<td>6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Education level</td>
<td>Bachelor 11 Neonatologist 2 Illiterate 2 Elementary 1</td>
<td>Master 4 Pediatrician 2 Elementary - High school 2</td>
<td>High school 6 Diploma 1</td>
<td>Diploma 5</td>
</tr>
</tbody>
</table>

Data collection

Data collection and analysis were performed simultaneously for six months. Data collection was conducted using in-depth semi-structured, face-to-face interviews. 39 interviews with 39 participants were conducted by the second author. All planning was coordinated by the second author. Interviews were conducted at the agreed time and place with participants in the staff restroom. After each interview, a verbatim transcript was written word for word. Interview time was between 30 and 150 minutes, with an average of 90 minutes. The types of guiding questions were determined based on the target group and asked appropriately in the interviews (see Table 2). Probing questions were also used as needed and based on the responses and data provided by the participant.
Table 2
Interview Guide

<table>
<thead>
<tr>
<th>Participant</th>
<th>Main question</th>
<th>Probing question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>- Please talk to me about the concept of communication in the intensive care unit.</td>
<td>- Can you explain more?</td>
</tr>
<tr>
<td></td>
<td>- Have you ever had the experience of communicating with parents?</td>
<td>- Please give me more information?</td>
</tr>
<tr>
<td></td>
<td>- What do you think is the most important parents need for communication?</td>
<td>- Please give me an example?</td>
</tr>
<tr>
<td>Physicians</td>
<td>- Please talk to me about the concept of communication in the intensive care unit.</td>
<td>- Can you explain more?</td>
</tr>
<tr>
<td>Mothers</td>
<td>- Please tell me about your experiences of communication with the health care team when your child was admitted in the NICU?</td>
<td>- Please give me more information?</td>
</tr>
<tr>
<td></td>
<td>- How did the health care team communicate with you?</td>
<td>- Please give me an example?</td>
</tr>
<tr>
<td></td>
<td>- Could you describe your experience of your communication with nurses and physicians?</td>
<td></td>
</tr>
<tr>
<td>Fathers</td>
<td>- Please tell me about your experiences of communication with the health care team when your child was admitted in the NICU?</td>
<td>- Can you explain more?</td>
</tr>
<tr>
<td></td>
<td>- How did the health care team communicate with you?</td>
<td>- Please give me more information?</td>
</tr>
<tr>
<td></td>
<td>- Could you describe your experience of your communication with nurses and physicians?</td>
<td>- Please give me an example?</td>
</tr>
</tbody>
</table>

Data Analysis

Conventional content analysis approach was used for data analysis (Graneheim & Lundman, 2004). Content analysis consists of analyzing written, spoken, or visual communications through inferences from the raw data to summarize and categorize them. In analyzing the contractual content, the researcher avoids using predefined categories and instead allows the categories and their titles to appear from within the data (Graneheim & Lundman, 2004). One researcher (HH) had experience in neonatal and qualitative nursing and another researcher had experience in psychiatry and qualitative nursing. Two researchers contribute initial open coding. First, the text of the recorded interviews was transcribed word for word. The text of each interview was read several times to gain a general understanding of its content. It was then divided into meaning units and each meaning unit was considered condensed meaning unit and coded. Then the different codes were compared with each other and based on the similarity, difference, and homogeneity of the content, they were placed in subcategories and categories.

Trustworthiness

The four Guba and Lincoln criteria were used to ensure the trustworthiness of the data (Lincoln & Guba, 1985). To determine the credibility of the data, scrutiny of the data and the subject were going. The research team’s comments were used in relation to the interview process as well as in the data analysis. The interview texts and findings were returned to nurses for comment and correction. To determine confirmability of the data, all activities were
recorded, and a report was prepared on the research process. For dependability, we used a draft of project research throughout the study. We examined coding accuracy and reliability through two researchers. For transferability, we used purposeful sampling in data collecting and data saturation occurred.

**Ethical Consideration**

This study is the result of an approved plan with ethics code from XX University of Medical Sciences. All participants were informed about the objectives of the study, and they were assured that their participation was optional in the study and that they could leave the study at any time. Participants were also assured that all their information would remain confidential. Prior to the interview, informed written consent was obtained from the participants to conduct and record the interview.

**Results**

Three themes were obtained by analyzing the data which are the nature of communication, the factors affecting successful communication, the factors affecting successful communication continuity. The theme of the nature of communication was identified with two sub-themes: supportive communication and information communication. The theme of the factors affecting successful communication was identified with four sub-themes: communication facilitator, appropriate communication outcome, having a positive attitude to communication and responsibility. The theme of the factors affecting communication continuity was included with the five sub-themes: communication based on empathy, nurse and parent satisfaction, respect for parents’ opinions, and attention to parents and honesty.

**Nature of Communication**

The nature of communication theme was identified with two sub-themes: supportive communication and information.

Most parents had several informational needs when their infant is admitted to the NICU, such as the need to get familiar with the unit, the need to be aware of the infant's condition and how to care for the infant. The nurse1 said: “An intimate relationship with parents, especially mothers who are prone to depression. I had the most contact with mothers to learn about the complications of the baby's illness and the baby's condition.” Mother1 stated: “The first time I came to this unit, I did not know an environment full of different devices that were aimed at the baby, and I was looking for information. I asked the nurse.”

These needs create information communication between the care team and parents. Most participants stated that communication is based on essential care needs in the NICU. Nurse2 stated: “It is a connection to educate the mother. The atmosphere should be such that the mother remembers to ask her questions, especially in the intensive care unit where the mother needs to take care of the premature baby.” Nurse3 said:

Our good relationship with the parents, I do not know (laughs.) For example, there was a case about the prone condition of the baby, which many mothers did not know they should not put the baby in the prone condition at home. Well, we taught them about this condition to learn it. The mothers were also very satisfied.
The care team provides information about infant nutrition and care to parents for informational communication. A doctor stated that: “For most of the parents of my babies I ask the nurses, especially during the discharge of the baby, to teach the parents training such as feeding, bathing.”

In the care context of Iran, one of the most important problems in the communication between the care team and parents is the negligence of doctors in communication to parents. This has highlighted the nurse’s communication role. Most of the nurses stated that the doctors did not involve themselves in the parents’ communication and did not have a positive attitude towards communication with the parents. Nurse4 said:

During my several years of work experience, I have seen that doctors are not interested in communicating with parents. Perhaps because the doctor himself is only responsible for treatment, he thinks that the nurse should communicate with the patient. If I have time, I will talk to the parents. But many of them want to talk to their baby’s doctor.

The parents were also dissatisfied with the doctors' inattention to the relationship with them. Therefore, despite the above conditions, nurses are only responsible for information and support communication in the NICU. The nurse's sense of responsibility increases her insight to promote effective communication. Father1 stated that:

Our baby was transferred when my wife and I were out of the unit. We would have loved to have been given information about the baby's condition and length of stay. Nurse5 came and guided my wife to the maternity unit but told me to go. Come here at special times to meet. I did not see a doctor. But the nurses; they are very kind such as a sun.

Factors Affecting Successful Communication

The theme of the factors affecting successful communication was identified with four sub-themes: communication facilitator, appropriate communication outcome, having a positive attitude to communication and responsibility.

The analysis of the interviews showed that the communication in the NICU is made with the first contact with the care team, which is usually a nurse. Thus, the nurse plays a key role in communication with the parents. Father2 stated that: “Some nurses are good-natured. Well, it is easier for us to ask them. Patience is very important for nurses. It is hard work here.” The reaction of the care team can have a positive or negative effect on the health of the parents and the infant. Father3 stated that: “Some nurses are kinder, but by God, they are all good, but it also depends on the character of the nurse. Some are kinder.”

Most of the participants stated that nurses are interested in supportive communication but do not have time for it due to the high workload. Nurse6 said:

The unit is so crowded that we only have time to take care of the baby, such as administering medicine and providing nutrition. Parents need support, and I know that the nurse plays an important role in this issue. Sometimes we admit a baby that is so ill that we have no time for contact with the other parent at all. Another nurse said: Although most of our communication with parents is information communication, if we have time, we will spend more time communicating with them. I myself am interested in helping my parents.
The nurse is responsible for communication and parental support due to the doctors' inattention to communication in context of Iran. Father4 stated that: “Communication with the doctor is also important. The subject of cooperation is very important. There is a problem in communicating. Some doctors, if we ask them, tell us about our baby's condition they answered: please ask the nurse.”

Mother3 said:

The staff gave me information about discharge and care after the premature baby's discharge. "The doctor is better, but I did not know anything until now. I have been reading a book since yesterday about how to take care of a child. I have been here for 8 days, whatever it is, I still need information.

Doctor1 stated that: “I do not have time to communicate, but nurses spend more time in the ward, so they can play a better role in effective communication. Most of them work hard.” Another doctor said:

I am at clinic and there are patients' visits. On the other hand, there is also the training of assistants. I do not have time to communicate with parents. Maybe nurses can communicate better because they spend more time in the ward.

The nurse's sense of responsibility increases her insight to promote effective communication. Also, one of the effective factors in successful communication is the positive attitude of nurses towards communication with parents. Father5 stated that: “Some nurses are kinder, but by God, they are all good, but it also depends on the character of the nurse. Some are kinder.” The nurse stated: “I consider myself responsible, that I have to have the necessary communication with the parents. If our communication with the parents is correct, most of the problems will be solved. Well, it depends on the commitment of the staff.”

However, the NICU is full of many hospitalized infants, and there are still nurses who communicate with parents out of a sense of responsibility and high commitment. What is important and affects the development of the relationship are issues such as mother literacy, cooperation of the care team, and the personality traits and attitude of the care team. Undoubtedly, the communication of the care team cannot be effective without considering these factors. Mother5 said:

Thank God I did not have a physical problem and I could easily take care of the baby and ask my staff some questions. I'm reading in the book section now to get information about my baby's care. Some of the parents themselves have physical problems. It is much harder.

Factors Affecting Communication Continuity

The theme of factors affecting communication continuity was included with the five sub-themes of communication based on empathy, nurse and parent satisfaction, respect for parents' opinions, attention to parents and honesty.

Data analysis showed that, if the nurse listens well to the parents and uses the empathy technique to reduce the stress of the parents and the parents feel that the nurse understands them; this will lead to the continuation of the communication between the parents and the nurse. So, it encourages parents to participate in baby care.

Nurse7 said:
Well, in order to communicate more, we need to know what to do in certain circumstances. I have acquired more ways of communicating with experience. I have seen from many years of experience that mothers need empathy. Many parents like us to call their baby by name. I have been working for 7 years. When I enter the ward, I see a mother and I say her baby's name and ask her how she is.

She will be happy. Mother 6 said:

She is a good nurse. She takes good care of the children. When the nurse has a good relationship with me, my self-confidence rises, and I can take care of her more easily. My mood improves and my breast milk improves.

Naturally, the staff will feel satisfied seeing such favorable conditions in the parents. Due to the special circumstances of newborns, most parents are looking for information from staff. Being honest with your parents is one way to show respect. In this regard, the doctor stated that:

When parents ask us about the condition of the baby, it is very important to be honest with them, but the condition of the babies is also unpredictable. Well, I usually tell the nurse to inform the parents about these things.

Discussion

Our findings show that one of the concepts of communication is information communication. It seems that physicians have a patient-centered approach in the care and in the cultural context of Iran they do not have a holistic approach to the treatment and care of patients. This means that the doctor only treats the infant and does not pay attention to the parents.

In line with this finding, the results of another study in Brazil showed that to support parents in the NICU, the first step is to understand the concept of prematurity and explain this situation to parents. Also, members of the care team should support parents with a common language and cooperation (Miele et al., 2018). Members of the care team, including physicians and nurses in the NICU, are responsible for communicating with parents. But data analysis showed that nurses alone are responsible for communicating with parents in the form of information communication and supportive communication. Doctors are distracted from communicating with parents due to factors such as overwork.

According to another study, Kynoe et al. (2020) in Norway showed that doctors do not have the ability to integrate medical care with the needs of the family. In the United States, a neonatal psychologist is responsible for providing mental health services to families, support, and staff training (Saxton et al., 2020). Another study in Uganda contradicted our findings. This study stated that there was a communication gap between nurses and mothers in the NICU (Namusoke et al., 2021). In Indonesia, Hariati et al. (2022) found that nurses were successful in supporting and empowering mothers of preterm infants, but having a multidisciplinary team helps promote proper nursing care. There is no neonatal psychologist in Iran, but a training program could be designed for health care team for successful communication.

Teaching medical students from student time with a holistic approach can be helpful in this regard. One study showed that, in Europe, communication skills training is included in students' curriculum but at the end of four years, students do not have the ability to communicate with critically ill patients (Expósito et al., 2018). It is suggested that in addition
to changing the curriculum of students, especially medical students, it is necessary for officials to pay more attention to in-service training in completing the curriculum. Williams et al. (2018) in the United States stated that continuous training of the care team is essential, especially on issues such as effective communication, empathy, and awareness of mothers’ needs. A study Horwood et al. (2019) in in South Africa showed that the care team has an important role in supporting infants and parents, and the health and care system should provide the care team with the necessary training to improve their relationship with parents and to inform them of this important role. Due to the large number of infants admitted to the unit, it seems that online education can also help physicians and nurses in developing and improving communication methods. According to the results of a study in the United States, holding an online training course on caring for infants and their families improved the knowledge and attitudes of nurses towards providing psychological support to families (Hall et al., 2019).

Based on the results of our study, important factors in successful communication are the positive attitude of nurses and their commitment and competence. The researcher in the Netherlands stated that the family should also be considered as a member of the care team, and the care team has the task of creating trusting relationships, exchanging accurate and sufficient information, involving parents in care, increasing parents’ self-confidence, and increasing their ability to play a parenting role (Lorié et al., 2021)

Empathy is another element for successful communication. This result was confirmed by another research. Result of one study in Brazil showed that the empathy strategy is one of the important protocols in giving bad news to parents in the NICU (Marçola et al., 2020). Our result showed that due to the special circumstances of newborns, most parents are looking for information from staff. Being honest with your parents is one way to show respect. In Sweden, the results of a study showed that staff support parents, but due to lack of time, limited resources, and inadequate training, they are not able to provide comprehensive support. They suggested that improving working conditions, providing adequate staff and improving the skills and competencies of staff in the psychological field have positive consequences for the family and for the nurses (Bry & Wigert, 2019).

In general, three themes emerged through our content analysis. Parental communication is the responsibility of all members of the care team, including physicians and nurses. But according to our results, nurses are more responsible for communicating with parents. This indicates the key role of nurses in communicating in the NICU. Certainly, one of the important factors in maintaining supportive communication is the positive attitude of the care team members towards supporting communication. The most important component of a supportive relationship is empathy. However, a combination of moral sensitivity, moral commitment, and moral courage for the provision of quality care that respects the principles of medical ethics is necessary. Also, the health care team must be sure of the delivery of quality care that respects the principles of medical ethics.

Limitation

This study is qualitative and showed parents and health care teams' perceptions of communication in NICU and cannot be generalized to other community where there are different cultures and care setting.

Implications for practice

We offer the following recommendations according to our study. (1) It is necessary to teach physicians and nurses, especially physicians about communication skills with parents. It should be started from the being of their academic education and continue in the form of
continuous training courses during their employment. (2) It is also necessary for health managers to address the problems of the care team, including many patients, and physicians’ inattention to communication. (3) It is recommended, the curriculum of physicians and nurses be changed to courses such as communication or counseling of parents with severely ill infant in the student period. (4) Also, health system and hospital managers have an important role in continuing education by holding training courses on communication methods in NICU.

References


Author Note

Marjan Mardani-Hamooleh is an Associate professor in the School of Nursing and Midwifery, Department of Nursing, Iran University of Medical Sciences, Tehran, Iran. ORCID: 0000-0001-5945-9121

Haydeh Heidari (ORCID: 0000-0003-2818-9928) is an Associate professor in the School of Nursing and Midwifery, Department of Nursing, Modeling in Health Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran. Please direct correspondence to haydeheidari@gmail.com

Acknowledgments: This study is research that approved by Sharekord University of Medical Sciences (no 2957). The researchers appreciate all participants who shared their experiences with us.

Conflict of Interest: The authors (Haydeh Heidari and Marjan Mardani-Hamooleh) declare that they have no conflicts of interest.

Ethical Approval: All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000(5). This study is the result of an approved plan with ethics code from Shahrekord University of Medical Sciences (IR.SKUMS.REC.1397.6).

Data Availability: Data were generated at Shahrekord University of Medical Sciences. Derived data supporting the findings of this study are available from the corresponding author [Haydeh Heidari] on request.

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Article Citation