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Explaining Positive Couple Interactions after Myocardial Infarction: A Qualitative Study

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Abstract

Background: The quality of marital relationships can impact couples' cardiovascular health directly and indirectly. Given that communication is essential for a happy marriage and plays an important role in health, this study aimed to explain the positive interactions of couples after myocardial infarction.

Methods: The current study was conducted qualitatively with the participation of seven couples (patient and his or her spouse) in teaching hospitals affiliated with Zahedan University of Medical Sciences. Purposive sampling was used to select participants. Then, unstructured in-depth interviews were conducted after obtaining informed consent. The interviews were immediately transcribed and analyzed. MAXQDA 2020 was used to categorize the data, and the method proposed by Elo and Kingas was used for data analysis.

Results: The analysis of the data revealed that myocardial infarction could affect the way couples interact through two main themes including empathetic union (acceptance of each other's true selves, mutual understanding, adjusting expectations, increase in cooperation and joint activities) and optimizing couples' interactions (mutual care and attention, increase in intimacy, mutual reliance).

Conclusion: This study indicated that positive couple interactions affected not only marital relationships but also health status, both directly and indirectly. Therefore, the findings of this study can be used to improve nursing student education and nursing care, and would help to develop educational and supportive interventions for patients and their spouses.

Keywords: Communication, Couple interaction, Patients, Myocardial infarction, Spouse

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Introduction

Myocardial infarction is one of the most common coronary artery diseases and one of the leading causes of infection, hospitalization, disability, and death in human societies, imposing significant care and treatment costs on the health-care system (1,2).

The consequences of this disease last throughout life, leading people to believe that they require constant care (3). This imposes high costs on the family and society due to the decrease in productivity and income levels of patients and caregivers (4).

Aside from the effects that myocardial infarction has on the entire family, it can also have a serious impact on the couple's relationship, and the disease may affect the patient's spouse positively or negatively (1,5).

Numerous studies on marriage and quality of marital relationships have found that psychological factors such as the quality of personal relationships, socio-environmental characteristics, emotional adjustment, and personal predictions can predict the progression of cardiovascular diseases (6-8).

Over the last 50 years, researchers in health psychology, communication, psychology, neurology, and other disciplines have not only discovered that the quality of interpersonal relationships, particularly family and marital relationships, has a profound effect on health (9), but that it can improve relationships and increase friendship, trust, and support among couples (10). Studies in this area have also shown that people in a marital relationship, or any other similar emotional relationship, can provide the patient with a primary source of social and supportive communication (11-14).

Effective communication is also the best way to avoid misunderstandings, express feelings to one another,

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transfer information that has a direct impact on a person's mental health and helps him or her grow, improve quality of life, cope with anxiety and stress, and improve physical health (15). According to Dunkel Schetter, there is irrefutable evidence that close relationships are necessary for human health and survival (16). Poor and inefficient relationships, on the other hand, can lead to marital conflict, anxiety, depression, and poor physical health (17).

Many researchers and professionals believe that positive support from the spouse is essential for successful recovery after myocardial infarction and adaptation to the conditions. The patient's spouse is a key person in reducing the psychosocial distress associated with acute myocardial infarction or heart surgery (1), and he or she plays a vital role in patient's recovery, rehabilitation, and quality of life (18,19). Vedes et al, for example, concluded that the more supportive a person finds his or her partner, the more satisfied he or she and the partner will be (20).

Communication is also a key component of social life, and if this component is damaged, the fundamentals of life will undoubtedly crumble (15). Today, the core of the family is based on the relationship between the couples, and it is up to the couples to find solutions to the crisis in the process of discourse and provide scientific solutions (21).

In order to feel safe in life, patient and his or her spouse must prevent any misunderstanding. If communication is ineffective, dissatisfaction, loneliness, and conflict will emerge, misunderstandings will increase, people will suffer psychologically, the couples' self-confidence will be disturbed, and family members' ability to cope with problems will decrease (15).

Even in the most difficult times, effective communication can keep a marriage stable (22). As a result, effective methods should be used in dealing with patients with myocardial infarction and their spouses due to the importance of couple interaction and the impact of the disease on various aspects of couples' lives. It should be noted that many studies in this field are quantitative. Nevertheless, to gain a true understanding, couples' views and opinions need to be described in depth, revealing their feelings and giving meaning to their actions. Thus, qualitative studies would be more useful. Accordingly, the current study sought to explain positive couple interactions after myocardial infarction.

Methods

The present study was conducted qualitatively using conventional content analysis in two teaching hospitals affiliated with Zahedan University of Medical Sciences (Khatam and Ali Ibn Abitaleb hospitals) in 2020-2021. A set of methods for analyzing written texts resulting from interviews was included in qualitative content analysis (23-25). To explain the positive interactions of couples following myocardial infarction, qualitative content analysis with the inductive method proposed by Elo and Kingas was adopted. This method is recommended for investigating phenomena, for which there is little information (26-28). It also results in a broad description of the phenomenon under consideration (29). Therefore, this study used this method and investigated people's experiences and behaviors in the real world to explain the phenomenon under study.

Patients with myocardial infarction and their spouses took part in this study. The researcher was well aware that couple interaction is a changing and evolving process, thus, the patients and their spouses were asked to participate in this study if they wished after the acute phase of the disease and when they visited the hospital to continue treatments and examinations. Therefore, after obtaining the necessary permits, the researcher went to the aforementioned centers in person and selected couples with a history of myocardial infarction by reviewing their medical records. These people had the following characteristics: they could communicate verbally, myocardial infarction diagnosis was mentioned in their medical records, they were over 18 years old, they were married at the time of the study and lived with their spouses, and at least 6 months had passed since their myocardial infarction. A total of 14 participants, including seven patients (6 males, 1 female) and seven spouses (6 females, 1 male) with a mean age of 53 years were interviewed for six months, A wide range of couples with varying characteristics (sex, education, medical history, duration of marriage, severity of the disease, and having or not having a child) were selected through purposive sampling. Data collection continued until data saturation i.e., until all codes and categories were completed and no new data was added to the previous ones.

In this study, data were mainly collected using unstructured interviews with the participants. After selecting the participants, the patients and their spouses provided written and verbal consent to participate in the study. The interviews were conducted in a location where the couple felt at ease (whether in a hospital room, nursing school, or after discharge in the participant's home). Observation, field notes, and memos were used in addition to unstructured interviews.

During the interview, the participants were encouraged to share their experiences of couple interaction and changes following myocardial infarction. They were also asked to respond to the following questions: "How do you communicate with your spouse after myocardial infarction?" and "Could you please tell us about your experiences?" The researcher also drew the attention of the participants to the phenomenon by asking a question based on their statements. It should be noted that during and at the end of each interview, an attempt was made to confirm the accuracy of the data by retelling the highlights or a summary of the participants' responses, and in case of ambiguity, they were asked to be transparent. It is

noteworthy that the researcher allowed participants to speak freely in all interviews and express their experiences in a safe and comfortable environment. At the end of the interviews, the researcher asked questions such as "Is there anything else you have not mentioned?" and "Is there an important issue that should have been addressed?" Therefore, the participants were encouraged to share their experiences. The duration of the interviews ranged from 45 to 90 minutes, depending on the circumstances and the participants' patience. Each interview was conducted in one or more sessions, depending on the information gathered and the desires of the participants. All interviews were recorded with written and verbal consent and then transcribed verbatim 24 hours later. The data were stored, managed, and reconstructed using MAXQDA 2020. Before the next interview, the data from the previous interview was analyzed and coded.

After completion of each interview, the data were analyzed using Elo and Kingas' proposed method. According to this method, when the study is inductive and lacks hypothesis, the steps for qualitative content analysis are as follows: open coding, coding sheets, grouping, categorization, and abstraction (26).

In this study, the interview texts were transcribed verbatim immediately after each interview. Then, the written texts were read several times, the units of analysis of each interview that could be analyzed and coded were identified, and the initial codes were extracted. The related codes were then merged, and categories were created based on similarities, which included a group of contents with semantic and conceptual similarities. Finally, the concepts hidden in the data were extracted.

Four criteria proposed by Guba and Lincoln, including credibility, dependability, confirmability, and transferability, were used to ensure data trustworthiness (30). Researchers used specific methods, such as ongoing engagement with the subject and data and member-checking, to ensure the credibility of the data. Regarding member-checking, a brief report of the findings was provided to the participants. Then, they were asked to review the data and indicate the extent to which the analyzed data reflected their experiences and perspectives. The codes were corrected in case of disagreement with the opinions of the participants. To meet researcher triangulation requirements, multiple researchers with considerable experience in qualitative research methods reflected on the analyzed data. In addition, continuous data comparison, code review, and sampling a wide range of participants were the measures taken to ensure credibility.

For dependability, the opinions of an external supervisor were used. Besides, all codes and contents of this study were provided to other professors (external check, peer check) for further examination and finally a consensus was reached.

All activities were recorded, and a report of the research process was prepared for confirmability. Finally, the findings were shared with two patients and two spouses of patients who did not participate in the study but had the same conditions as the participants and they approved the data.

Furthermore, the participants were assured of the confidentiality of all data and their freedom to withdraw from the research. It should be noted that the data were analyzed using MAXQDA 2020 software.

Results

A total of 400 initial codes were extracted from the descriptions of the participants. Following several reviews, the codes were condensed and categorized based on similarity and appropriateness. Finally, seven subcategories and two main categories were identified, as described below (Table 1).

One of the most significant changes that occurs following the disease is change in the couples' interpersonal relationships, or so-called couple interactions, as described below.

Empathetic union

The first main category identified in this study was empathetic union, which was further subdivided into four subcategories (acceptance of each other's true selves, mutual understanding, adjusting expectations, and increase in cooperation and joint activities), each of which is described separately below.

A. Acceptance of each other's true selves

The disease disrupts couples' mental and emotional structures and changes their perceptions of each other's characteristics, so that after the illness and the resulting shock, the couples appreciate each other more and try to accept each other as they are. This type of acceptance and attitude toward life greatly helps couples in accepting the existing realities. Hence, in addition to its many negative effects, the disease also has positive effects. For example, it increases couples' tolerance and causes them to accept each other as they are.

"*Well, no human being is perfect, and everyone has morals and characteristics that may not be appropriate from another perspective. Maybe I was more sensitive*

Table 1. Categories and subcategories of couple interactions following myocardial infarction

Main categories	Subcategories
Empathetic union	Acceptance of each other's true selves Mutual understanding Adjusting expectations Increase in cooperation and joint activities
Optimizing couples' interactions	Mutual care and attention Increase in intimacy Mutual reliance

to these issues before my husband's illness, but after the illness, I tried to love him for who he is" (Participant 7, a patient's 54-year-old wife).

"Before I had a heart attack, I was always upset that my wife was so concerned about my health and was constantly looking after me, but now I see that she was right, and thus those behaviors that seemed obsessive to me and caused us to quarrel, no longer bother me" (Participant 10, a 45-year-old male patient).

B. Mutual understanding

Following the illness, the couples also attempted to understand each other better.

"Anyway, I understand he has been ill for a long time. If I am unable to understand him, the children will be unable to understand him as well. I am patient with his bad behavior and have attempted to act in accordance with his wishes" (Participant 12, a patient's 66-year-old wife).

"Following the illness, I attempted to gain a better understanding of him. I will help him with issues and problems and will not allow him to shoulder all life responsibilities alone" (Participant 11, a patient's 42-year-old wife).

C. Adjusting expectations

The disease can unexpectedly alter couples' expectations. Thus, couples attempt to moderate their expectations.

"Due to our living condition, I lowered my expectations and also asked the children to lower their expectations" (Participant 5, a patient's 50-year-old wife).

"I need to reduce my level of expectation. I have been living with her for 37 years, so we have become one person rather than two. She agrees with me as well" (Participant 14, a patient's 62-year-old husband).

D. Increase in cooperation and joint activities

Another positive change in the couples' interactions was the division of tasks and their increased cooperation with each other.

"We worked as a team, no matter what obstacles we faced" (Participant 1, a 55-year-old male patient).

"I do the shop work, and he does the shopping himself, though I accompany him. We help each other with housework, and we assist each other even more after the illness. Occasionally, while I am in the shop, he prepares food" (Participant 3, a patient's 35-year-old wife).

Optimizing couples' interactions

Another positive change in couples' relationships following myocardial infarction was the optimization of their processes and interactions. This category had subcategories of mutual care and attention, increase in intimacy, and mutual reliance. They are discussed in more detail below.

A. Mutual care and attention

Caring, despite the difficulties it presents, brings couples closer and more attentive to each other. According to the findings of the current study, after myocardial infarction, the patient's spouse feels more responsible for his health condition and even contributes to his treatment course.

"Her regard, honor, and devotion to me increased" (Participant 13, a 60-year-old male patient).

"She is looking after me, she is concerned, and she does not allow me to engage in certain activities because I am sick. My life would be in danger if she did not look after me" (Participant 6, a 73-year-old male patient).

B. Increase in intimacy

The constant care and attention of the spouses leads them to spend more time together, which increases their intimacy.

"We were like two friends who worked together to solve problems" (Participant 9, a 51-year-old male patient).

"We have a good relationship, we do not have children, we try to support each other, in any case, he is the only person I have, and vice versa" (Participant 2, a patient's 50-year-old wife).

C. Mutual reliance

The couple's reliance on each other improves because of myocardial infarction and the fear of losing the patient.

"The disease has made me more dependent on her, of course, my wife is more dependent on me. I think this is due to the disease" (Participant 4, a 53-year-old patient).

"He himself has become very dependent now and he cannot be alone at home for even a second. He keeps saying, 'Let's sit here and talk'." (Participant 7, a patient's 43-year-old wife).

Discussion

The current qualitative study revealed that myocardial infarction could improve couples' interpersonal interactions. This was indicated through two main themes in this study including empathetic union and optimizing couples' interactions.

Myocardial infarction, according to the participants, caused the couples to accept each other's true selves, accept each other as they are, and respect each other's individual differences. The issue has become so significance that encouraging mutual acceptance is now included in the teaching of appropriate communication skills to spouses (31). This research supports the findings of the studies by Pirsaghi et al and Namvaran et al (10,32).

The current study's findings also indicated that myocardial infarction could improve couples' mutual understanding. Numerous studies have found that the root of many marital problems and conflicts is the lack of mutual understanding or poor understanding of the other person's point of view, as well as the lack

of cognitive coordination between husband and wife (33). This finding is consistent with the findings of the studies by Salminen-Tuomaala et al and Hammond et al. They also demonstrated that illness, as an individual experience, could influence how spouses perceive each other and move towards or away from each other (34,35).

The current qualitative study also revealed that after the disease, couples' levels of expectations from each other changed, and it is worth noting that in all interpersonal relationships, including marriage, individuals enter into a relationship with certain expectations. These expectations have an impact on their behavior, both positively and negatively (36). These expectations can be confirmed via two mechanisms: perception confirmation and behavior confirmation. Although these expectations are formed over time and under the influence of socially accepted values, expectations, and justifications, they may differ from person to person (37); thus, it is recommended that couples understand each other's conditions and desires and have realistic expectations (32). According to Mousavi and Dehshiri, the greater the gap between marital expectations and reality, the lower the men and women's marital satisfaction (38). Omrani et al also demonstrated that marital expectations had an effect on marital adjustment via cognitive and emotional mechanisms, one of which was marital conflicts (37). This finding is also consistent with the findings of the studies by Bakhshoodeh and Bahrami Ehsan (39) and Alibakiyan and Afsharineya (40).

The findings of current study also indicated that myocardial infarction could increase couples' cooperation and engagement in life. According to studies, given the current state of modern families, it is critical to share tasks with family members (10,34,41,42).

Rahimi et al found that the distribution of roles, responsibilities, and power in skilled couples is fair while it is unfair in unskilled couples, implying that skilled couples agree in all of these cases (43).

Salminen-Tuomaala et al. also considered couples' division of labor and cooperation as a participatory approach that resulted in changes in couples' lifestyles (34). This finding is compatible with the findings of the studies by Pirsaghi et al (10) and Panda (44).

Aside from the effects myocardial infarction as a chronic disease can have on a couple's life, the couples' care for and attention to each other increase as well. According to studies, the care structure is demonstrated by understanding the concepts of family care and is defined as the length of time a person is placed next to an individual with a life-threatening condition, such as recurrence of myocardial infarction and death (45). Studies show that this approach changes behavior, and improves physical activity, medication and treatment adherence, and the quality of the couples' relationships, which is consistent with the findings of the current qualitative study (46).

The findings of the present study also indicated that myocardial infarction could increase couples' intimacy. According to studies, intimate relationships are a combination of spouse satisfaction and intimacy between couples, which is critical for individuals' health and longevity following myocardial infarction (14,47). This finding is in line with the results of the studies by Sarhadi et al (1) and Arenhall et al (48). They also demonstrated that some wives experienced close relationships with their husbands after myocardial infarction, understood each other, and were content with living together. However, two-thirds of the women in this study reported less concern and intimacy with their husbands (48). The reason for this difference can be found in the cultural differences between the two studies.

The findings of the current study also revealed that myocardial infarction could increase couples' reliance on each other. It is worth noting that the extent to which a person relies solely on his wife as a helper, confidant, source of social support, and companion in interests and activities determines the degree of dependence in the marital relationship (49). Salminen-Tuomaala et al. found that the patients' mood had a significant impact on the sense of cohesion and dependence of spouses, as well as their ability to cope with their experience (50).

In this study, only positive processes have been investigated in couple interactions after myocardial infarction. For this reason, it is recommended to investigate negative and positive processes together in future studies.

Conclusion

According to the findings of this study, myocardial infarction can bring couples closer to each other. Good martial relationships allow the spouses to share their needs, wants, and interests with each other, express their love, friendship, and affection for each other, and solve the inevitable problems in the family. Given the positive effects of couple interaction on the treatment course of patients with myocardial infarction, it is recommended that attention be paid to couples' interpersonal interactions in educational, counseling, and rehabilitation programs for cardiovascular patients. Standard protocols for use in hospitals and cardiac rehabilitation centers should be developed and implemented. Furthermore, the findings of the study provide a clear understanding of couple interaction and family dynamics after a chronic and long-term illness, which can be used to train nurses and nursing students. However, since the focus of this study was mainly on finding the positive aspects of interpersonal interactions between couples following myocardial infarction, there are certainly cases in which marital conflicts increase after myocardial infarction. Therefore, future studies are recommended to focus on

the causes and factors affecting marital conflicts following myocardial infarction or any other chronic disease that affects the couple's relationship, and to further explore the role of the disease in exacerbating these conflicts.

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Conflict of Interests

The authors declare that they have no conflict of interest

Ethical Issues

The protocol for this study was approved by Kerman University of Medical Sciences under the code IR.KMU. REC.1399.417.

References

1. Sarhadi M, Navidian A, Fasihi Harandy T, Ansari Moghadam A. Comparing quality of marital relationship of spouses of patients with and without a history of myocardial infarction. Journal of Health Promotion Management. 2013;2(1):39-48. [Persian].
2. Ebrahimi K, Salarilak S, Khadem Vatan K. Determine the burden of myocardial infarction. Tehran Univ Med J. 2017;75(3):208-18. [Persian].
3. Garcia RP, de Lourdes Denardin Budó L, Simon BS, Wünsch S, Oliveira SG, da Silva Barbosa M. [Family experiences post-acute myocardial infarction]. Rev Gaucha Enferm. 2013;34(3):171-8. doi: 10.1590/s1983-14472013000300022. [Portuguese].
4. Laslett LJ, Alagona P Jr, Clark BA 3rd, Drozda JP Jr, Saldivar F, Wilson SR, et al. The worldwide environment of cardiovascular disease: prevalence, diagnosis, therapy, and policy issues: a report from the American College of Cardiology. J Am Coll Cardiol. 2012;60(25 Suppl):S1-49. doi: 10.1016/j.jacc.2012.11.002.
5. Rantanen A, Kaunonen M, Tarkka M, Sintonen H, Koivisto AM, Åstedt-Kurki P, et al. Patients' and significant others' health-related quality of life one month after coronary artery bypass grafting predicts later health-related quality of life. Heart Lung. 2009;38(4):318-29. doi: 10.1016/j.hrtlng.2008.07.007.
6. Blumenthal JA, Sherwood A, Smith PJ, Watkins L, Mabe S, Kraus WE, et al. Enhancing cardiac rehabilitation with stress management training: a randomized, clinical efficacy trial. Circulation. 2016;133(14):1341-50. doi: 10.1161/circulationaha.115.018926.
7. Rutledge T, Redwine LS, Linke SE, Mills PJ. A meta-analysis of mental health treatments and cardiac rehabilitation for improving clinical outcomes and depression among patients with coronary heart disease. Psychosom Med. 2013;75(4):335-49. doi: 10.1097/PSY.0b013e318291d798.
8. Smith TW, Baucom BRW. Intimate relationships, individual adjustment, and coronary heart disease: implications of overlapping associations in psychosocial risk. Am Psychol. 2017;72(6):578-89. doi: 10.1037/amp0000123.
9. Tulloch HE, Greenman PS. In sickness and in health: relationship quality and cardiovascular risk and management. Curr Opin Cardiol. 2018;33(5):521-8. doi: 10.1097/hco.0000000000000553.
10. Pirsaghi F, Zahrakar K, Kiamanesh A, Mohsenzadeh f, Hasani J. The indices of effective marital relationship: a qualitative study. Biannual Journal of Applied Counseling. 2017;7(1):1-26. doi: 10.22055/jac.2017.22007.1464. [Persian].
11. Floud S, Balkwill A, Canoy D, Wright FL, Reeves GK, Green J, et al. Marital status and ischemic heart disease incidence and mortality in women: a large prospective study. BMC Med. 2014;12:42. doi: 10.1186/1741-7015-12-42.
12. Idler EL, Boulifard DA, Contrada RJ. Mending broken hearts: marriage and survival following cardiac surgery. J Health Soc Behav. 2012;53(1):33-49. doi: 10.1177/0022146511432342.
13. Dupre ME, George LK, Liu G, Peterson ED. Association between divorce and risks for acute myocardial infarction. Circ Cardiovasc Qual Outcomes. 2015;8(3):244-51. doi: 10.1161/circoutcomes.114.001291.
14. King KB, Reis HT. Marriage and long-term survival after coronary artery bypass grafting. Health Psychol. 2012;31(1):55-62. doi: 10.1037/a0025061.
15. Hosinezadeh A. Adaptation skills. GHom: Imam Khomeini Educational and Research Institute Publications; 2010. [Persian].
16. Dunkel Schetter C. Moving research on health and close relationships forward-a challenge and an obligation: introduction to the special issue. Am Psychol. 2017;72(6):511-6. doi: 10.1037/amp0000158.
17. Padash Z, Izadikhah Z, Abedi M. Marital satisfaction among coronary artery disease and normal subjects. J Res Behav Sci. 2012;9(5):470-4. [Persian].
18. Sarhadi M, Navidian A, Fasihi Harandy T, Ansari Moghadam AR. Comparison of Patients with a History of Heart Husbands Perspective in the Teaching Hospital in Zahedan Healthy People About the Quality of the Marital Relationship in 2012. Kerman: Kerman University of Medical Sciences; 2013. [Persian].
19. Nohi E, Mehdipour R, Abbaszadeh A. Musculoskeletal pain relief procedures used by elderly in Kerman. J Qual Res Health Sci. 2010;9(1):35-40. [Persian].
20. Vedes A, Nussbeck FW, Bodenmann G, Lind W, Ferreira A. Psychometric properties and validity of the Dyadic Coping Inventory in Portuguese. Swiss J Psychol. 2013;72(3):149-57. doi: 10.1024/1421-0185/a000108.
21. Arab Baferani H, Kajbaf M, Abedi A, Habibolaho S. The effectiveness of "spirituality education" on "couples' marital adjustment". Islamic Studies and Psychology. 2013;7(12):95-112. [Persian].
22. Pirsaqi F, Zahrakar K, Kiamanesh A, Mohsenzadeh F, Hasani J. Development of a model for effective marital communication with an approach based on grounded theory. The Women and Families Cultural-Educational. 2019;13(45):7-35. [Persian].
23. Rahimi F, Hasanpour-Dehkordi A, Motaarefi H. Nursing students' viewpoints on teacher evaluation in Urmia University of Medical Sciences, Iran: content analysis. J Qual Res Health Sci. 2016;5(3):296-304. [Persian].
24. Yektatalab S, Kaveh M, Sharif F, Fallahi-Khoshknab M, Petramfar P. Caring for patients with Alzheimer's disease in nursing homes: a qualitative content analysis. J Qual Res Health Sci. 2012;1(3):240-53. [Persian].
25. Zare E, Simbar M, Shahhoseini Z. Explaining the concept of self-care in adolescents. J Qual Res Health Sci. 2016;5(4):395-405. [Persian].
26. Elo S, Kyngäs H. The qualitative content analysis process. J Adv Nurs. 2008;62(1):107-15. doi: 10.1111/j.1365-2648.2007.04569.x.
27. Aslanbeygi N, Azzimian J, Azh N. Surveying midwives' experiences in performing self-care behaviors: a qualitative study. J Qual Res Health Sci. 2021;10(3):134-42. doi: 10.22062/jqr.2021.91678.

28. Mohamadi Khoshoui R, Salehi S, Saeedian N. A qualitative investigation into components of patient safety organizational culture in the medical education centers: a medical errors management approach. J Qual Res Health Sci. 2020;8(4):49-58. doi: 10.22062/jqr.2020.90990.
29. Kyngäs H, Elo S, Pölkki T, Kääriäinen M, Kanste O. Sisällönanalyysi suomalaisessa hoitotieteellisessä tutkimuksessa. Hoitotiede. 2011;23(2):138-48.
30. Guba EG, Lincoln YS. Competing paradigms in qualitative research. In: Denzin NK, Lincoln YS, eds. Handbook of Qualitative Research. Thousand Oaks: Sage Publications; 1994. p. 105-117.
31. Taheri N, Aghamohammadian Sherbaf H, Asghari Ebrahimabad MJ. The effectiveness of an intimate relationship skills training (PAIRS) on increasing marital adjustment and satisfaction in women with cancer. J Urmia Nurs Midwifery Fac. 2017;15(4):301-12. [Persian].
32. Namvaran Germi K, Moradi A, Farzad V, Zahrakar K. Identifying the dimensions of marital adjustment in Iranian couples: a qualitative study. J Health Care. 2017;19(3):182-94. [Persian].
33. Talebian Sharif J, Ghanbari B, Abadi H. Marital and Sexual Satisfaction: Developed a Model Based on the Teaching of the Islamic Culture an its Effect on Marital Satisfaction [thesis]. Mashhad: Ferdowsi University of Mashhad; 2014. p. 1-469. [Persian].
34. Salminen-Tuomaala M, Astedt-Kurki P, Rekiaro M, Paavilainen E. Spouses' coping alongside myocardial infarction patients. Eur J Cardiovasc Nurs. 2013;12(3):242-51. doi: 10.1177/1474515111435603.
35. Hammond FM, Davis CS, Whiteside OY, Philbrick P, Hirsch MA. Marital adjustment and stability following traumatic brain injury: a pilot qualitative analysis of spouse perspectives. J Head Trauma Rehabil. 2011;26(1):69-78. doi: 10.1097/HTR.0b013e318205174d.
36. Feeney JA, Karantzas GC. Couple conflict: insights from an attachment perspective. Curr Opin Psychol. 2017;13:60-4. doi: 10.1016/j.copsyc.2016.04.017.
37. Omrani S, Jomehri F, Ahadi H. Predicting marital adjustment based on marital expectations with mediate role of marital conflicts. Scientific Journal of Social Psychology. 2019;7(51):89-97. [Persian].
38. Mousavi SF, Dehshiri G. The role of discrepancy between expectations and reality of marital relationship in marital satisfaction of married people in Tehran. Women's Studies Sociological and Psychological. 2015;13(2):93-110. [Persian].
39. Bakhshoodeh A, Bahrami Ehsan H. The role of marital expectations & healthy exchanges in predicting marital satisfaction. Two Quarterly Journal of Islamic Studies & Psychology. 2012;6(10):27-42.
40. Alibakiyan A, Afsharineya K. Evaluating model of meditating marital boredom role in the relationship between self-differentiation, conflict resolution styles & marital expectations in predicting marital adjustment in married men & women in Kermanshah. Psychological Methods and Models. 2020;10(38):225-46. [Persian].
41. Latifnejad Roudsari R, Karami Dehkordi A, Esmaili HA, Mousavifar N, Agha Mohamadian Sherbaf H. The relationship between body image and marital adjustment in infertile women. Iran J Obstet Gynecol Infertil. 2011;14(6):9-19. doi: 10.22038/ijogi.2011.6012. [Persian].
42. Khatibi A. Measuring the effectiveness of adjustment components on family consolidation. Women's and Family Education Cultural Quarterly. 2018;12(42):7-31. [Persian].
43. Rahimi R, Salimi Bajestani H, Farahbakhsh K, Asgari M. Qualitative search on lived experiences of career couples of satisfaction and marital conflicts: master and unmaster career couple. Journal of Psychological Science. 2020;19(88):391-412. [Persian].
44. Panda UK. Role conflict, stress and dual-career couples: an empirical study. The Journal of Family Welfare. 2011;57(2):72-88.
45. Gullick J, Krivograd M, Taggart S, Brazete S, Panaretto L, Wu J. A phenomenological construct of caring among spouses following acute coronary syndrome. Med Health Care Philos. 2017;20(3):393-404. doi: 10.1007/s11019-017-9759-0.
46. Sher T, Braun L, Domas A, Bellg A, Baucom DH, Houle TT. The partners for life program: a couples approach to cardiac risk reduction. Fam Process. 2014;53(1):131-49. doi: 10.1111/famp.12061.
47. Thylén I, Brännström M. Intimate relationships and sexual function in partnered patients in the year before and one year after a myocardial infarction: a longitudinal study. Eur J Cardiovasc Nurs. 2015;14(6):468-77. doi: 10.1177/1474515115571061.
48. Arenhall E, Kristofferzon ML, Fridlund B, Malm D, Nilsson U. The male partners' experiences of the intimate relationships after a first myocardial infarction. Eur J Cardiovasc Nurs. 2011;10(2):108-14. doi: 10.1016/j.ejcnurse.2010.05.003.
49. Sharifi M, Fatehizade MS, Bahrami F, Jazayeri R, Etemadi O. The effectiveness of mindfulness-integrated transactional analysis therapy on marital quality of women with interpersonal dependency. Quarterly Journal of Women and Society. 2019;9(36):177-96. [Persian].
50. Salminen-Tuomaala MH, Åstedt-Kurki P, Rekiaro M, Paavilainen E. Coping with the effects of myocardial infarction from the viewpoint of patients' spouses. J Fam Nurs. 2013;19(2):198-229. doi: 10.1177/1074840713483922.