



# Recovery from Loss of Balance in the Spouses of Patients with Myocardial Infarction: A Qualitative Study

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## Abstract

**Background:** Spouses of patients with myocardial infarction commonly experience severe psychological distress. Having a sick spouse exposes them to a high risk of physical, psychological, and social harm. However, little is known about these spouses' experiences and adjustment resources. Therefore, this article was conducted to explain how adjustment occurs in the spouses of patients with myocardial infarction.

**Methods:** In order to achieve this research objective, comprehensive semi-structured interviews were conducted with ten spouses of individuals diagnosed with myocardial infarction, with a mean age of 52 years. The study occurred at two educational hospitals in the southeastern region of Iran from 2023 to 2024. The interviews were transcribed verbatim immediately after their completion and were subsequently analyzed using conventional content analysis methodology. MAXQDA 2020 software was employed for the systematic classification of data, and the analytical process was carried out following the methodological framework outlined by Lundman and Graneheim.

**Results:** Five themes and thirteen sub-themes emerged as (1) "Disruption in family structure," including the subthemes (a) Changes in the role of people, (b) Increase in the responsibilities, and (c) accountability of members towards the patient, (2) "Disruption in daily life," including the subthemes (a) Disruption in the social relations between spouses, (b) Disruption in work life, (c) Changes in the patient's job following the disease, and (d) facing economic and financial problems, (3) "Seeking information," including the subthemes (a) Referring to different doctors, (b) using internet websites, (c) Using other people's experiences, and (d) Studying and updating information, (4) "Seeking treatments," with the subtheme (a) Paying attention to and following up on every symptom during the treatment process, and (5) "Coping with disease," with the subtheme (a) Acceptance of the disease by the spouse.

**Conclusion:** This study showed that adapting to a spouse's illness is complex and unique, and spouses experience numerous life changes. Consequently, clarifying therapeutic methodologies, providing information, involving them in the therapeutic process, organizing counseling sessions, and developing supportive interventions for both patients and their spouses may aid in the adaptation process for spouses.

**Keywords:** Coping, Adjustment, Myocardial infarction, Spouse, Heart disease

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## Introduction

At the beginning of the twentieth century, cardiovascular disorders were responsible for under 10% of global deaths. However, by the end of the century, this statistic increased to about 50% in developed and 25% in developing nations (1, 2). This increase is attributed to lifestyle changes, decreased physical activity, and rising obesity and type 2 diabetes rates, particularly in developing countries like Iran (3).

One of the most common coronary artery diseases is myocardial infarction. Due to its debilitating nature, myocardial infarction has many adverse effects on various aspects of patient's lives and causes much stress in the lives of the patient and their family (4). The rapid progression

of this condition leads to complications, including cardiac decompensation, acute pulmonary fluid accumulation, cardiogenic shock, and mortality (5).

One study reported that families, particularly spouses, of myocardial infarction patients experience significant stress (6). Spouses may face positive or negative effects from the disease, driven by fears of recurrence, feelings of insecurity, and inadequate knowledge, ultimately impacting their adjustment to the situation (6, 7). Individuals facing chronic diseases must adapt to challenging treatment choices, shifting family roles, and insufficient information. Research suggests that adaptation influences physical health, mental health, and social performance. As all these aspects are



interconnected, affecting one can impact the others (6).

Adjustment is a continuum. At one end, there is adjustment with a positive concept that indicates a positive reaction to stressors, and at the other end, adjustment is negative, which means surrendering to stressors (8, 9). In psychology, adjustment refers to the desired state or endpoint. This definition shows that adjustment occurs over time (10).

Adjustment is a fundamental human characteristic with significant implications for survival mechanisms and psychological well-being. Contemporary scientific discourse has increasingly highlighted the therapeutic importance of the adjustment processes in resolving pathophysiological conditions (11). Also, for overall adjustment, three dimensions, including adjustment in daily activities, interactive or communicative adjustment (interpersonal relationships), and work adjustment (related to work and tasks), are necessary (12). With the help of this ability, human beings can cope with their changing environmental and internal conditions and maintain a balanced existence and mental health (11).

Lazarus and Folkman argue that effective adjustment is linked to conformity and should be evaluated based on its outcomes rather than the strategy itself (13, 14). They distinguish between problem-focused coping, which aims to eliminate stress sources, and emotion-focused coping, which seeks to manage emotional responses when stressors are viewed as unchangeable. The appropriateness of these coping strategies depends on the context and their impact on the individual's relationship with their environment (15, 16).

The study by Salminen-Tuomaala et al found that spouses of myocardial infarction patients experienced confusion and insecurity at both 4 and 12 months post-event. Furthermore, research indicates that adjustment can enhance understanding and empathy among family members through social and emotional support (17-19).

Quantitative studies have shown that isolation and low levels of social support can predict the rate of progression and spread of cardiovascular disease symptoms (20, 21). Matrimonial unions and interpersonal intimacy are primary channels for communication and psychosocial support. Consequently, marital status is inversely associated with the risk of cardiovascular morbidity and positively correlated with therapeutic efficacy outcomes (22-26). Therefore, excluding the patient's spouse from the care process and not providing them with sufficient information will prevent them from properly coping with their spouse's illness (27).

Consequently, it is essential for all family members, especially spouses, to create supportive environments for the patient. They should offer encouragement, instill hope for continued life, engage in discussions about their emotional connections, and strive to cultivate harmonious relationships with them to facilitate the patient's recovery

process (28). Although most patients are thought to adjust well to the psychological aspects of chronic diseases, patients' psychological conformity changes due to the defect in their health status (10). Therefore, considering the importance of research on stress and coping, it has received increasing attention in marital research today. Facing permanent chronic stress can lead to the breakdown of marital life. Therefore, identifying factors that can help these families stay resilient in the face of stressors is crucial (29).

Therefore, as Ganong and Coleman (2014) pointed out, qualitative research is the most effective method for examining the complexities inherent in familial relationships, yielding significantly richer data than quantitative methodologies. It transcends the limitations of quantitative analysis to fulfill specific research objectives; in qualitative research, phenomena are viewed as subjective and context-dependent rather than as objective and static entities (30). Therefore, it is necessary to study mental and human phenomena such as the adjustment of the spouses of patients with myocardial infarction using a qualitative approach to determine the extent to which the disease has affected the adjustment of the spouses of patients with myocardial infarction. The purpose of this study was to explain how spouses adjust to the condition of patients with myocardial infarction.

## **Methods**

### ***Study Design***

The present qualitative investigation was conducted in two educational medical institutions in the southeastern region of Iran from 2023 to 2024. This research utilized a conventional content analysis methodology aimed at elucidating the adaptive mechanisms of spouses caring for individuals suffering from myocardial infarction. Conventional content analysis is appropriate for deriving valid and reliable findings from textual data. When the objective is to examine causal relationships and to provide a comprehensive representation of reality, and when the researcher aims to explore the phenomenon in depth, content analysis serves as the methodological framework (17, 31).

This method also seeks to collect data from participants with sufficient information and field experience. In this way, the researcher constantly moves between questions, examines and refines the previous questions, pays attention to the positive and negative points, and, as a result, examines the data in depth (32). Consequently, this investigation employs this methodology to thoroughly examine empirical experiences and behaviors in real-world contexts, thereby elucidating the phenomenon of interest.

### ***Participants***

The participants in the present investigation consisted

of the spouses of individuals diagnosed with myocardial infarction. The inclusion criteria required participants' spouses to provide informed consent to engage in the study, have physical and psychological stability, be at least 30 years old, experienced a myocardial infarction event at least six months prior, and be free of other chronic medical conditions, particularly neurological disorders and musculoskeletal diseases. The researchers were acutely aware that adjustment is a dynamic and iterative process; therefore, after the acute phase of the illness, and when the patients and their spouses presented at the hospital for ongoing treatment and annual evaluations, the researchers invited the spouses to participate in this study. The selection of participants was based on specific requisite characteristics: they were capable of verbal communication, had a documented diagnosis of myocardial infarction in their spouse's medical records, were aged 18 years or older, were legally married at the time of the study, cohabited with their spouse, and had experienced a minimum of six months since the occurrence of their spouse's myocardial infarction (regardless of whether the spouse was a husband or wife). After identifying the participants, informed consent was obtained from the patient and their spouse for the interview. The interviews were conducted in environments where patients felt comfortable, including hospital rooms, nursing facilities, or post-discharge settings within the participants' residences. A total of 10 participants, consisting of four males and six females with a mean age of 54 years, were interviewed. Efforts were made to ensure a diverse representation of spouses characterized by various factors, including gender, educational background, medical history, duration of marriage, severity of the disease, and parental status. The purposive sampling approach continued until information saturation was reached, meaning that all codes and categories were fully developed, and subsequent interviews did not yield additional data to supplement those previously collected.

#### **Data Collection Procedure**

The primary methodology employed for data acquisition in this investigation involved semi-structured, individualized interviews with each participant. Before initiating the sampling process, a comprehensive review of the key points relevant to the interview was conducted, and the consent document was developed following the latest guidelines for acquiring consent in qualitative research. Following this, the data collection phase began with procuring referral letters from hospitals in southeastern Iran and obtaining authorization from the relevant authorities and the participants. In this context, after clearly explaining the research objectives to the participants, the interviews were conducted through a reciprocal dialogic exchange.

In the present study, interviews with the initial

participants were conducted in an unstructured format. The investigator utilized a methodologically rigorous approach to minimize their presence during the interview process, intentionally limiting researcher interference to promote authentic participant discourse and enhance the natural emergence of subjective experiential data. The researcher employed the interview framework to contextualize the situation and ensure that the inquiries remained relevant to the study's objectives as the interview and subsequent analysis progressed. Following the initial interviews, additional interviews were conducted in a semi-structured format, informed by the insights gained from the initial interview framework.

The interview guide questions explore the concept of adaptation and examine the experiences of spouses in achieving adjustment following a myocardial infarction. The interview began with straightforward, general questions to foster discussion and improve communication. Subsequently, inquiries regarding background information, diagnosis, and treatment were made. The interview progressed with several open-ended questions, allowing participants to articulate their emotions, thoughts, and experiences using their own language and expressions. These inquiries encompassed the challenges faced in life following the diagnosis and the experiences of spouses in addressing these challenges:

"In what way did you attempt to manage your spouse's illness?"

"In what ways did you navigate this condition alongside your spouse following the diagnosis of a heart attack?"

Subsequently, additional inquiries were posed to advance the discussion and finalize the interview process, thereby facilitating the acquisition of more nuanced data based on the nature of the respondents' responses. Furthermore, as deemed necessary during the interview, probing questions such as "Could you elaborate further?", "What do you intend to convey?" were included. Participants were invited to identify any potentially overlooked content after the interview. The interviews were conducted in one or more sessions, depending on the temporal constraints and patience of the participant, the information gathered, and the participants' willingness to participate. Each interview lasted 45 to 90 minutes, depending on individual circumstances and the participant's endurance. All interviews were recorded with written and verbal consent and transcribed verbatim within 24 hours. MAXQDA2020 was utilized to systematically store, manage, and analyze the data. The preliminary data underwent analysis and coding prior to the subsequent interview.

#### **Data Analysis Procedure**

Data analysis was conducted following the methodological framework established by Graneheim and Lundman, which outlines a five-phase analytical process for interpreting qualitative data: (1) verbatim transcription

of interview content immediately after the interview; (2) holistic examination of the text to determine the overall significance of the content; (3) identification and extraction of meaning units and preliminary codes; (4) categorization of similar initial codes into broader thematic classifications; and (5) elucidation of the latent content embedded within the dataset (17). In the present study, interviews were transcribed immediately and comprehensively, followed by multiple iterative reviews of the textual data to facilitate the extraction of preliminary codes. Subsequently, related codes were synthesized and systematically categorized based on conceptual similarities. The final analytical phase involved identifying and articulating latent concepts embedded within the dataset. It is important to note that numerous codes were refined and reclassified throughout the analytical process, and thematic categories were designated with appropriate descriptive nomenclature.

Four validation criteria proposed by Guba and Lincoln (1989) were systematically implemented to establish methodological rigor to ensure data integrity. These evaluative parameters included credibility, dependability, conformability, and transferability, each elucidated in the following discussion (33). The investigators employed multiple methodological strategies specific to qualitative inquiry to establish data credibility. These strategies included prolonged engagement with the phenomenon and dataset, methodological triangulation, external observer validation, identification of disconfirming evidence, and member-checking procedures. Dependability was ensured by soliciting evaluations from external reviewers; specifically, all coded materials and analytical content were submitted to additional faculty members for comprehensive assessment (external check, peer check). This process allowed for identifying and rectifying inconsistencies and methodological limitations until consensus was achieved. Confirmability was maintained by meticulously documenting all research activities and creating a comprehensive procedural audit trail. To establish transferability, the analytical

outcomes were presented to two individuals who were spouses of myocardial infarction patients not included in the participant cohort but who shared comparable demographic and experiential characteristics with the study participants. These individuals validated the interpretive findings. Additionally, confidentiality protocols were rigorously upheld throughout all interview proceedings. It is worth noting that MAXQDA 2020 software was utilized to facilitate the data analysis process.

## Results

Ten volunteer participants were recruited to examine the lived experiences and the coping resources of spouses of MI patients. The demographic profile revealed an age distribution ranging from 47 to 74 years (mean = 52 ± 4.5). Participant demographic characteristics are systematically presented in Table 1. The comprehensive analytical process yielded 380 preliminary codes extracted from participant narratives. These codes underwent consolidation and systematic categorization based on conceptual homogeneity and thematic relevance following iterative review processes. The final taxonomic structure comprised four primary classificatory domains and 13 subordinate categories delineated in the subsequent discussion (Table 2).

### Disruption in Family Structure

Based on the experiences of the participants, myocardial infarction can cause many changes, including individual, marital, economic, and social changes, in patients' and their spouses' lives.

Analysis of the text of the interviews in this main class and its subclasses showed that myocardial infarction disrupts the natural structure of the family (especially when the patient is the family's breadwinner) and changes the role of individuals in the family. The patient's disability due to disease causes the spouse and children to change their roles to some extent, and each, in turn, assumes new roles in the family. In this regard, one of the participants said, "My son is the breadwinner of the family. Now he works

**Table 1.** Demographic Characteristics of the Participants

Demographic variables	Sex	Age	Education level	Occupational status	Marriage duration	Children No.	Illness duration
P1	Female	54	University	Retired	22	5	5
P2	Male	62	Middle/high school	Self-employed	23	4	10
P3	Male	47	High school diploma	Self-employed	16	7	11
P4	Female	57	High school diploma	Retired	20	3	2
P5	Female	50	High school diploma	Homemaker	32	2	4
P6	Female	37	University	Government employee	10	5	8
P7	Male	57	High school diploma	Government employee	20	6	3
P8	Male	70	Elementary	Retired	30	3	7
P9	Female	50	High school diploma	Homemaker	34	3	8
P10	Female	45	Illiterate	Homemaker	18	2	7

**Table 2.** Classes and subclasses extracted about adjustment of spouses of patients with myocardial infarction

Main classes	Subclasses
Disruption in family structure	Changes in the role of people Increase in responsibilities Responsibility of members toward the patient
Disruption in daily life	Disruption in the social relations between spouses Disruption in the work life Changes in patient's job following disease Economic and financial problems
Seeking information	Referring to different doctors Using internet websites Using other people's experiences Studying and updating information
Seeking treatments	Paying attention to and following up on every symptom during the treatment process
Coping with the disease	Acceptance of the disease by the spouse

and pays for my life and that of his sisters and brother ...” (P 1). Another participant said, “After my husband's disease, I had to go to work and found a part-time job.” (P 4)

In addition to changes in the structure and family roles, myocardial infarction also increases the responsibilities of family members. In this regard, one of the participants said, “My responsibilities had increased. I had to do many of the things that my husband used to do. Things like buying a house, following up on children's issues, etc.” (P 4)

Of course, it should be noted that the changes were different at the family level, and sometimes, these changes took different forms depending on the family's economic and social situation.

In families in a better economic and social situation, these changes were more in the form of changes in responsibilities. In this regard, one of the participants said, “She has entrusted the responsibility of the work to the children, but she still supervises it herself.” (P 9).

### **Disruption in Daily Life**

The presence of a sick person in the family and the complications of the disease cause people to make changes in their everyday lives to adjust to the disease. The participants in this study also believed that their lifestyles had changed, and each person faced new situations in their lives, things they had not encountered before. Issues such as disruption of the spouses' social relations, disruption of the spouses' work life, and changes in the patient's job led to their economic and financial problems.

The presence of a sick person in the family and acceptance of the role of patient care disrupt the spouses' social relations with others. Spouses limit many of their social relationships. Many family hobbies and family trips change due to the patient's condition. One participant said, “We used to have at least one annual trip before, but after my husband's disease, we canceled it. We limited parties, family relations, and gatherings....” (P 5). Another participant suggested, “Yes, we reduced a lot of our social

relations because of my wife's condition. I mostly try to be at home and take care of her.” (P 3)

In addition to the changes in the spouses' social relationships, The spouses' work lives are also disrupted, and people face problems at work. A participant expressed the following perspective on this phenomenon: “I had a problem at work because of my husband's problem. For example, I tried to take some days off every month to accompany him for check-ups. For this reason, I had constant conflicts with my boss and colleagues in the workplace.” (P 6)

In addition to the changes that occur in the work life of spouses, myocardial infarction also causes changes in patients' work life. Disabilities and complications of the disease cause the patient to lose or change their current job in some cases. One of the participants said, “My husband lost his job and could no longer work like before. Well, this caused many problems. I had to work harder so that I could make a living.” (P 10)

In this regard, another participant stated, “My husband used to work in a restaurant, but after his heart disease, he had to change his job.” (P 4)

According to the participants, these changes were extensive and impacted various aspects of the spouses' lives. Another participant stated, “The changes were too much, as the disease progressed and its complications increased, his disabilities increased, and he could no longer work.” (P 5)

The analysis of the text of the interviews also showed that most patients in this province experience adverse economic and social conditions. Therefore, the occurrence of a chronic disease such as myocardial infarction causes spouses to deal with complications and problems of the disease for the rest of their lives and to face the economic problems and the financial burden caused by the disease. Therefore, most of these spouses had many worries and mental preoccupations with financial and economic problems. One participant provided the following observation regarding this phenomenon: “Our situation worsened after my wife's myocardial infarction. We had financial problems. There was no one else to help us.” (P 2)

The emergence of economic and financial problems due to disease also forced the spouses to sell their property and take out heavy loans. In this regard, one of the participants said, “I had to take out heavy loans to treat my wife. I had to sell some of my property as well.” (P 7) or another participant said, “After that, we sold the taxi at my insistence. My wife needed open heart surgery, and the cost of treatment was very high for me. I was just a driver, so I had to sell my taxi.” (P 8)

### **Seeking Information**

The disease also has a changing nature, and with the increase of the patient's age, the complications of the

disease increase, and the complications caused by aging and new disabilities are added to the complications of the disease. On the other hand, treatment methods, drugs, and side effects of drugs increase day by day. Therefore, due to the chronic course of the disease, after the acute stage of the disease, spouses need to continue to increase their information about the disease. For this reason, they constantly seek new information by referring to different doctors. People with better financial conditions follow part of their treatment process in other cities and provinces, such as Tehran and Mashhad. Moreover, even if they sometimes travel to these cities for the trip, they search for the best medical specialist in that city and seek his opinion to recover at least part of the lost health.

In this regard, one of the participants said, *"He was fine, and we took him to Mashhad. In Mashhad, we took him to the hospital. The doctor said that a blood vessel in his heart was closed. The only person who may be able to do the surgery in Iran is that doctor in Tehran. If that doctor says he can do it, then do it. If he says the vessel will not open, do not refer him to any other doctor. Do not go to another doctor. We took him to Tehran to the doctor that they had named."* (P1)

Seeing different doctors in different cities was only part of the spouses' attempt to achieve peace of mind. In addition, the spouses had started searching Internet websites to increase their information in this area. In this regard, one of the participants said, *"Well, I was constantly reading articles and searching for more information."* (P3)

Spouses also used the experiences of others to seek information and gain more information. Accompanying the patient in different hospitals, continuous hospitalization of the patient, even referring to different doctors, and meeting the spouses of similar patients allowed them to learn. On the other hand, the feeling of empathy and similarity between people caused a feeling of stronger trust between them, and as a result, they were able to help each other. In this regard, one of the participants stated, *"During the time he was hospitalized, I met a woman whose husband had also had a stroke several years before. Well, during that time, I got some information from her."* (P 4)

The motivation to get information is stronger in spouses who have a higher level of education, and they usually seek information and even start searching on different websites with the introduction of a new drug. One of the findings of this study is that in illiterate or less educated spouses, the motivation to obtain information was weaker. It also seemed that because they have little information about the course of the disease, their stress and anxiety are lower, and they sometimes even cope with the disease better. In this regard, one of the participants said, *"Whenever a new drug is started for him, I go and study, especially I read its side effects so that if my wife has a problem, I can find out sooner."* (P 7)

### **Seeking Treatments**

Spouses find a way to regain balance in their lives together, adjust to the situation as new symptoms emerge, and search for treatments to regain some of the lost peace. Analysis of the text of the interviews in this main class showed that this class has a subclass titled the occurrence of new symptoms and seeking treatment, which is described below.

The occurrence of new symptoms in patients is interpreted as a recurrence of crisis for their spouses. Therefore, they begin to seek treatment to adjust to the new conditions with the emergence of each new symptom in the patient. In this regard, one of the participants said, *"A new drug was started for him, and I was constantly seeing dizziness and shortness of breath. He did not want to go to the doctor, but I forced him to do so, and now he has been hospitalized again, and his treatment has started. I do not know what would have happened if he had not come."* (P 7)

### **Coping with the Disease**

Another finding of this qualitative study is that the patient's spouse finally copes with their spouse's disease after going through the stages of crisis. This main class had a subclass titled acceptance of the disease by the spouse, which is explained below.

Analysis of the texts of the interviews in this subclass showed that, in the view of the majority of participants, the disease was a critical point in their shared lives that was challenging to get through. However, they were finally able to adjust to their spouse and their spouse's the disease. In this regard, one of the participants said, *"I said to myself, 'Look, your husband is no longer a healthy person from this moment on, and this disease is not for one or two days, it is forever, so get along with him.'" (P 5)*

### **Discussion**

Myocardial infarction and its complications can disrupt family structures, so families, especially spouses, are forced to change their roles, accept new responsibilities, and adapt to the increase in their responsibilities. The empirical findings from this qualitative investigation align with the research outcomes reported by Salminen-Tuomaala et al who similarly documented that myocardial infarction leads to role transformation among spouses and necessitates taking on more daily responsibilities (19). Hammond et al also demonstrated that spousal illness triggers the redistribution of marital and familial obligations (34). The qualitative findings presented in this study are consistent with the scholarly contributions of Pretter et al and Salminen-Tuomaala et al (7, 35). Coping strategies are specific behavioral and psychological mechanisms that individuals use to navigate, adapt to, and alleviate stressful situations. In the context of our study, the spouses of patients employed various adaptive strategies to adjust to their altered lifestyle parameters,

including reconfiguring roles and the intensifying of caregiver responsibilities toward the affected individual.

The empirical findings from this qualitative investigation indicate that myocardial infarction significantly disrupts the daily functioning of both patients and their spouses. This phenomenon aligns with the research outcomes reported by Pretter et al, which similarly documented that medical conditions lead to lifestyle modifications among spouses. These modifications require adjustments in daily routines to accommodate medication adherence, physical activity recommendations, nutritional guidelines, and scheduling of clinical appointments (35). Additionally, Garcia et al and Callegaro et al elucidated that myocardial infarction imposes limitations that hinder the resumption of normal daily activities, necessitating adaptive responses from patients and their family support systems (36, 37). The research findings published by Salminen-Tuomaala et al align significantly with the qualitative data obtained in our current investigation (7).

The findings of the present qualitative study also showed that myocardial infarction can disrupt the social relations of spouses. The findings of this part of the qualitative study are similar to those of Garcia et al and Callegaro et al. They also indicated in their study that myocardial infarction can disrupt leisure and social relationships in the family, and interactions between family members and other social networks become difficult (36, 37). Salminen-Tuomaala et al also showed in their research that the increase in the responsibility of spouses possibly causes anxiety and feelings of loss of personal freedom or even leads to social isolation (19).

The current study further elucidates that myocardial infarction significantly disrupts the occupational functioning of patients and their spouses. These qualitative findings align with the research outcomes of Gullick et al (15). Quantitative research contributions in this field indicate that recent modifications in cardiovascular disease management protocols have increased home-based care provided by spouses (19, 38). This paradigm shift has resulted in extensive transformations in caregivers' biopsychosocial functioning (39). Caregivers have reported varying incidences of job termination, involvement in their spouse's daily care, and premature cessation of professional activities (40-42).

The economic and financial disruptions within families following a myocardial infarction emerged as a significant theme in our qualitative investigation. This finding aligns closely with the research conducted by Salminen-Tuomaala et al, who documented that myocardial infarction leads to considerable financial concerns, particularly among spousal caregivers (19). In a separate study, these researchers further established that financial anxieties following a myocardial infarction significantly affect the adjustment processes of spouses (7). Similarly, Hammond et al observed an increase in debt among

spouses after a partner's brain injury (34). It is important to note that facilitating adaptation and seamless lifestyle modifications across socioeconomic, demographic, and cultural dimensions requires systematic planning and acquiring preventive strategies from healthcare professionals that are explicitly tailored to the individual needs of patients' spouses.

The quality of interpersonal dynamics and communication skills between spousal caregivers and healthcare professionals significantly influence positive adaptation outcomes for patients' spouses. The findings of this qualitative research also stated that spouses seek more information about the disease to be able to adjust. This includes referring to different doctors, using internet websites, using other people's experiences, and studying and updating personal information. The qualitative data derived from our study align with the findings reported by Salminen-Tuomaala et al, who indicated that spousal caregivers show a strong commitment to patient care following a diagnosis and actively seek information about its pathophysiology, treatment options, and medication management. Their subsequent research further clarified that family interaction patterns and shared experiences significantly impact the adjustment processes of spouses (7). Thus, the lives of spouses after myocardial infarction are affected by their spouse's disease, and the meaning of their lives is to control the symptoms of the disease. Spouses constantly increase their awareness of various mental and psychological clues (18, 19).

Upon manifesting novel symptomatology, spousal caregivers actively seek therapeutic interventions to promote adaptive functioning. The empirical outcomes observed in our qualitative investigation align with the scholarly research conducted by Huriani et al, which demonstrated that patients experience significant changes in their educational needs and informational priorities post-myocardial infarction (43). The results of the aforementioned studies indicate that the quality of life of spouses is improved by providing information. In order to achieve this goal, healthcare system workers must identify patients' educational needs and provide them with the necessary information.

As an integral component of shared marital existence, disease acceptance has emerged as a prominent adaptive strategy employed by spousal caregivers. This qualitative finding aligns with the scholarly contributions of Salminen-Tuomaala and Hammond et al (7, 18, 19, 34). Their research established that acceptance requires the spousal development of situational perceptual accuracy, stress tolerance mechanisms, and congruent behavioral responses (7). Adaptive processes necessitate lifestyle modifications, which are influenced by psychological facilitators and physiological barriers. Facilitating factors include constructive somatic feedback, subjective disease interpretation from the spousal perspective

(conceptualized as either a rehabilitative opportunity or therapeutic futility), risk factor identification, and the development of symptomatic self-regulatory capacities.

### Conclusion

This qualitative study revealed that spousal caregivers utilize a variety of adaptive mechanisms to facilitate adjustment, including information acquisition, engagement in therapeutic interventions, and strategies for accommodating the disease. Furthermore, the empirical evidence generated by this study demonstrates that experiential phenomena related to post-myocardial infarction among patients' spouses can influence their daily functional patterns and their understanding of healthcare delivery systems. Therefore, it is suggested that nurses and physicians help spouses adjust to the disease by providing information about the disease, treatment, recovery period, etc. In light of the demonstrated impact of myocardial infarction on spousal caregivers, healthcare institutions are encouraged to incorporate spousal-focused components into their educational initiatives, psychotherapeutic services, and rehabilitative programs. Furthermore, developing and implementing standardized marital intervention protocols for use in hospital settings and cardiac rehabilitation facilities are strongly recommended.

Additionally, the theoretical framework derived from this investigation elucidates how spouses adjust to chronic and prolonged pathological conditions and provides valuable pedagogical material for nursing education and professional development contexts. The knowledge generated can also be effective in raising the awareness and knowledge of nursing students and nurses about family dynamics and interactions, spouses' need for social support, counseling, and empowerment, and the nurses' role in providing counseling and support. This awareness can help them better understand the role of their spouse and their insecurities. Implementing further empirical investigations utilizing both quantitative methodologies and qualitative approaches is recommended to identify and develop innovative strategies to optimize the biopsychosocial well-being of spousal caregivers for individuals with cardiovascular conditions.

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### Competing Interests

The authors declare that they do not have any conflict of interest.

### Ethical Approval

The project was approved by the institutional review board of Kerman University of Medical Sciences (IR.KMU.REC.1399.219). When recruiting participants, the purpose of the study was clearly explained, and informed consent (written and oral) was obtained. We granted the participants the right to decline or cease participation at any time. They were assured that the gathered data would be strictly confidential and that we would share the results with them upon their request. We used abbreviations to ensure the anonymity of the participant's identities. This study was carried out following the relevant guidelines and regulations.

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