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Confusion at the beginning of sexual intercourse, the challenge of patients after coronary artery bypass graft surgery in Iran: A qualitative study

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Abstract:

BACKGROUND: Many patients suffer from sexual dysfunction after coronary artery bypass graft surgery, but they refuse to propose and follow up on the problem due to the cultural structures prevailing in Iranian society. Untreated sexual dysfunction will disturb the quality of life of these patients. This study was performed to explain the experiences of male patients from sexual problems after coronary artery bypass graft surgery.

MATERIALS AND METHODS: This qualitative study was performed with the approach of conventional content analysis in Tehran in 2020. The data were collected through semi-structured interviews with 12 men after coronary artery bypass graft surgery at the hospital's cardiac surgery clinic, as well as the surgeon's clinic. Participants were selected by the targeted sampling method. After obtaining informed consent, the collected data were written word by word, and the content analysis approach was used to name the data, create analytical codes, and determine subcategories and categories. The data were analyzed by MAXQDA 10 software.

RESULTS: The findings of this study show that the dimensions of confusion in patients' sexual intercourse after coronary artery bypass graft surgery in four subcategories of challenges of the first intercourse after surgery, ambiguity in how to obtain information, the ambiguity of sexual issues after surgery, and spouse are concerned about having sexual intercourse.

CONCLUSION: The results of this study show that male patients who have undergone coronary artery bypass graft surgery have many ambiguities in the process of sexual intercourse, which passes the beginning of sexual intercourse with fear and avoidance of intercourse. Postoperative patients do not propose these problems with the medical staff when they suffer from sexual dysfunction or ambiguity due to the taboo of talking about sexual intercourse. Eventually, the patient and his or her partner become confused about sexual intercourse after surgery. Therefore, it is recommended that policymakers in the field of health create the culture and planning for solving the ambiguities created in the path of sexual intercourse of these patients.

Keywords:

Coronary artery bypass graft surgery, qualitative research, sexual behavior

Introduction

Cardiovascular disease is one of the most common causes of death worldwide, which included 31.5% of all deaths,[1] and it causes more than 17.7 million deaths annually worldwide. Eighty percent of deaths are in the middle- and low-income countries.[2] In Iran, many people suffer from cardiovascular disease, so that the prevalence of this disease was reported to

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be 32.2% in Iran in 2015,[3] and the death rate caused by it has been announced 46%.[4]

There are several ways to treat cardiovascular disease; one of the most common interventions is surgery. One of the most common types of heart surgery is coronary artery bypass graft surgery.[4] Nearly 686,000 coronary artery bypass graft surgeries are performed annually in the United States, and 20,000 coronary artery bypass graft surgeries are performed annually in Australia.[5] In Iran, more than 40,000 open-heart operations are performed annually in various medical centers,[6] of which 50%–60% are coronary artery bypass graft surgery.[7]

After coronary artery bypass graft surgery, various physical and psychological problems are observed in the life of these patients, and on the other hand, the quality of life related to the health of these patients is impaired following the occurrence of these problems.[8,9] Sexual dysfunctions are one of the most common issues in cardiovascular patients that occur after cardiac incidents, and it can imbalance the interpersonal relationships and family problems and affects the quality of life of couples.[10]

Some studies have shown that the sexual dysfunctions are after the coronary artery bypass grafting in more than half of the patients,[11] and other studies showed that 85%–48% of patients suffered from sexual dysfunctions after coronary artery bypass graft surgery and they do not have enough sexual satisfaction.[9,12-14] In a study conducted by Forouzannia *et al*., in 2007, the results showed that the incidence of sexual dysfunction increased from 20.1% before surgery to 76.4% after surgery.[15] According to research, the causes of sexual dysfunction following heart disease are the patient's spouse's fear of sudden death during sexual activity and the misinterpreting the natural symptoms of sexual arousal, such as increased heart rate and respiration into heart attack.[15,16] Impairments in sexual intercourses caused by any reasons lead to a decrease in sexual satisfaction, deprivation feeling, mental health-compromising, and subsequently family breakdown, the decline in sexual life quality, and finally impairment in general life quality in these patients.[17]

If issues related to sexual intercourse are not considered part of nursing care for patients with cardiovascular problems, patients may create significant and unavoidable restrictions for their spouse, assuming they are unable to do the sexual activity, or they can lead to sudden death with improper sexual activity.[18,19]

Gallegos and Lai state that the promotion of sexual knowledge after cardiac treatment is essential in these patients so that weak sexual knowledge is sufficient on health, performance, satisfaction aspects, and quality of sexual life.[11,20] The cross-sectional study conducted by Lunelli *et al*. showed that although most patients are interested in obtaining information about the sexual activity after discharge, 69% of whom had not received any training on their sexual issues from medical staff and had been discharged from the hospital.[21] Studies showed that education about sexual intercourse is not paid attention to these patients in Iran. Studies showed that knowledge regarding sexual relationships is not also considered in Iran, so marital problems that occurred regarding these patients are forgotten.[22,23] Although impairment in sexual relationships and function does not threaten life, it can lead to low sexual function, so it leads to a decline in sexual quality of life, a decline in occupational function, and an increase in the need for health care.[24]

One of the obstacles in the way of sex education in these patients is the negative attitude toward talking about sex, and in Iran due to cultural and social fields, talking about marital relations and sexual problems is taboo in society so that the marital issues created for these patients are forgotten.[22,23] Nurses and other members of the treatment team can reduce sexual problems in patients by providing sexual educations to patients with cardiovascular problems such as patients after coronary artery bypass graft surgery, and despite confirmation of this issue by the treatment team, only 3%–6% of patients reported experience of sexual education.[25] Although sexual dysfunction does not threaten life, it can lead to a decrease in sexual function in a way that reduces the quality of sexual life, reduces work performance, and increases the need to use health care.[24]

Cultural factors prevented sexual function and satisfaction from being frequently asked by physicians, and patients did not mention these problems [22,26]. Due to the lack of studies in the field of sexual activity after open heart surgery in Iran[26] and the multidimensional nature of the factors affecting sexual interaction, the researcher decided to conduct this study with the aim of discovering male patients' experiences of sexual intercourse after coronary artery bypass graft surgery.

Materials and Methods

Design

This study was conducted using a qualitative research method and content analysis approach in Tehran in 2020. Qualitative content analysis, as a research method, identifies themes or overt and covert patterns in data through an ordered classification of gathered information. In contractual content analysis, the researcher refuses to apply predetermined categories, and apply the categories from the inside.[27].[27] The main

participants of this research were male patients who referred to selected heart surgery clinic of the hospital and also heart surgeon office, who were selected through targeted sampling and interviewed. The inclusion criteria were being married and having satisfactory sexual relation before surgery, and patient with no sexual satisfaction before surgery were excluded from the study. The tendency to participate in the research and ability to state experiences were among other inclusion criteria. Targeted sampling was initiated and continued until the fulfillment of the data so that no novel finding was achieved. Spontaneous data analysis and gathering was performed in 3 months.

Data collection

Data gathering was done using in-depth, semi-systematic, individualized, and face-to-face interviews. Interviews were done at a time, and the place agreed with participants. Informed consent was obtained from all participants to perform the meeting and record them. Due to the fact that in several cases patients were not willing to record audio using voice recorder, the research team decided not to use voice recorder devices. Interviews were thoroughly written at the place with the presence of the patient and were typed immediately after ending the meeting. The duration for each transcript was between 30 and 70 min and was 40 min on average. Central questions of the interview include the following cases: Could you explain to me about your conditions and position after surgery? How do you feel about yourself and your body? How surgery affects your marital relations? Please explain more. After surgery, what problems did you have? Please explain about it. Explain about your status of satisfaction on marital relations after surgery? If you received education regarding marital relations, explain it to me? Which source or whom do you receive these educations? Did they give you pieces of training? Explain in general about satisfaction in your marital life after surgery if you have any explanation.

Furthermore, exploratory questions were used based on necessity and emerged responses and data by the participants. The MAXQDA V 10.0 (VERBI Company; Berlin, Germany) was used for data analyzing.

Data analysis

Data analysis was done due to suggested stages by Graneheim and Lundman,[27] including (1) the interviews were transcribed verbatim, (2) each of transcriptions was considered as a unit of analysis and was read several times by researcher to achieve a general understanding of its content, (3) the sentences or entire paragraphs of text were determined as meaning units and primary codes were extracted from them, and (4) classifying similar preliminary codes in more comprehensive classes and finally determining the hidden content in the data.

Trustworthiness

Following coding, to determine the validity of data, codes were assessed and confirmed by other members of the research team. Furthermore, findings were checked and approved by several participants. In this study, to achieve the capability of the validity of data, long-term involvement with the data, revising data by colleagues, and revising data by participants were used.

Ethical considerations

This study was a part of the results of the dissertation of the doctorate in nursery entitled "explanation of sexual life quality process of patients after CABG," which was approved in the University of Social Welfare and Rehabilitation Sciences. Ethical approval for this study was achieved by the University of Social Welfare and Rehabilitation Sciences with the code of IR.USWR. REC.1397.165. All the participants were assumed to be voluntary to participate in the study, and they can quit whenever they want. Besides, all the participants were assured of the confidentiality of their information. Before performing the interview, a written informed consent form was obtained from all the participants to conduct the interview and noting.

Results

Of the 12 men who participated in the study, 8 men were retired and 2 men were employees aged 54–66 years. Two participants were under diploma, four participants were diploma, three participants had an associate degree, and one participant has a bachelor's degree. A significant category of confusion in sexual intercourse was extracted from in-depth descriptions of the findings from the interview with these participants which included four subcategories of the challenges of the first intercourse after surgery, ambiguity in how to obtain information, the uncertainty of sexual issues after surgery, and wife's concern from the ambiguous sexual future [Table 1].

Confusion in sexual intercourse

This category means, patients who did CABG surgery, they had doubt, fear, and ambiguity about their sexual intercourse after the operation, because they didn't received appropriate training for. They had not been educated sexually in the hospital and during discharge. According to the Iranian culture, talking about marital affairs is as a taboo, even in the treatment team. Due to that, doctors and nurses did not attend to the patient sexual need and training. In this society, it is challenging to propose sexual problems, and due to the taboo of talking about sexual relations, patients do not have accurate information about sexual relations. They consider the re-initiation of the relationship entirely in doubt and fear. During the operation, the main focus is on heart problems due to the tensions to the patient

Table 1: Confusion category in sexual intercourse with subcategories and extracted codes

Category	Subcategory	Code
Confusion in sex	The challenges of the first sex after operative	Decreased self-esteem to start the first sexual intercourse
		Confusion at the beginning of the first sex after the operation
		Unsuccessful experience of the first sexual intercourse after operation
		Fear in the first sex after the operation
	Ambiguity in how information is obtained	Lack of knowledge about support centers (counseling)
		Lack of information on how to ask sexual questions from the treatment team
		Ambiguity in asking sexual issues from a doctor or nurse
	Unknown sexual issues after surgery	Lack of accurate knowledge of marital relationship problems
		Lack of awareness of patients about sexual issues
		Doubt in having sex after surgery
		The ambiguity of marital issues after surgery
	Spouse's concern about having sex	Spouse refuses to have sex for fear of harm
		Family worries about future patient problems
		Spouse's concern about the pressure on the heart during sex

and spouse, and the patient and family do not seek to follow up on the issues raised at the beginning of their sexual intercourses. This category consists of four subcategories of the challenges of the first intercourse after the surgery, ambiguity about how to obtain information, the ambiguity of sexual issues after the surgery, and the spouse's concern about the sexually ambiguous future.

The challenges of the first sexual intercourse after surgery

This subcategory means that one of the most challenging issues involved in patients' sexual experience is the first sexual intercourse after surgery. Many patients have not had a good experience from the first intercourse according to the physical problems created during operation and lack of knowledge about how to start intercourse, and this intercourse has been with fear of starting or fear during the sexual intercourse. The patients have had this bitter experience in the first sexual intercourse.

"I remember the first time I had intercourse after the operation, my spouse told me to be careful, you are breathing fast, don't put pressure on your heart, and because I couldn't satisfy myself, the intercourse lasted a long time, and it lasted a long time. We were both scared. I had heart beating during the intercourse, and at that moment, I felt a torment of conscience about why I had sexual intercourse. I had a bad memory from that day because I was so scared, and it was a horrible experience," said one participant (Participant 5).

According to the participants, training should be conducted to start sexual intercourse so that the patient not to be afraid and confused to start this intercourse. Another participant noted, "No one told me how I could have sex after surgery, just on a piece of paper that told me not to have sex for 2 months, but what to do after 2 months and how to have intercourse, no one said anything about" (Participant 2).

Ambiguity in the way of getting information

This subcategory means that patients are skeptical about how to get information and do not know when and to whom to ask their sexual questions. Due to the taboo of talking about marital relations in Iranian culture, the feeling of shame and embarrassment in the patient does not allow the expression of problems in the path of marital relationships, and the patient becomes confused about how to get information.

One participant points out: "After the surgery, either the doctor or those who have information in this field should tell us, for example, tell us when to start sexual intercourse, when to stop, and how, and I don't know exactly. Who should say when the intercourse should start, doctor or nurse, and where and from whom I should ask, but no one said, we will be confused when nobody tells us, and we have doubts about what we think is right" (Participant 6)?

Lack of knowledge about how to ask sexual questions, along with the lack of a specialized sexual counseling center, is a challenge for patients with coronary artery bypass graft surgery, which ultimately leads the patient to confusion. Another participant points out that:

"I don't know when and how to ask these marital questions not to be impolite, or I don't have where I can have a consultation. If a question arises for us, how should it be solved?" As I said, speaking about marital issues is a defect culturally and religiously, and the doctor or nurse tries not to get involved. When there is a question, they remain silent or generally answer" (Participant 5).

The ambiguity of sexual intercourse after surgery

According to the participants, one of the problems in patients' sexual life is having incomplete information

about sexual relations, and the lack of transparency and lack of education about possible issues in sexual relations lead patients to ambiguity in having sex after surgery.

One of the participants points out that "These issues have been investigated a lot, but it's incomplete. I feel the sexual problems are still not very clear, and we've complicated it. I don't know, my feeling becomes low to my spouse, is it normal or not, or how long can I have intercourse? Less or more or how? All these are questions that have no answer in my mind" (Participant 4).

According to the participants, sex education should be considered for these patients to the sexual questions and possible questions of the patients to be answered. Another participant points out that:

"Patients need to be taught and talked about these issues because many people may not have book information and have something traditional in mind, so I think there is a need to talk about that for people like us who have had a heart operation, it should be considered, and sometimes it may be a fearless thing that is talking about it can help us a lot because I don't know much about it myself" (Participant 5).

Spouse's concern about having sexual intercourse

This subcategory means that the spouse has had sexual intercourse based on his/her knowledge due to the inaccurate application of a spouse, and he/she has fear and worry about having sex. It is ambiguous for them to have intercourse or not.

One participant points out: "It has never happened for me that my spouse asked me to have sex because she/he told me I didn't want to put pressure on your heart and the doctors' efforts to be wasted because and you have a health problem and a fear that may harm me because of sex" (Participant 1).

Another participant points out that the spouse was worried about having sexual intercourse after the surgery. "What worried my spouse was whether sexual intercourse was dangerous now or not. When I breathe fast, he/she was scared and said for a few days, 'I wish we didn't have sex not to put pressure on your heart.' And he/she was afraid that I would have a problem in the coming days. He/she once told me, maybe not to have sex any more and I had to ask the doctor" (Participant 5).

Another participant also mentions fear and anxiety in the spouse: "After the surgery, my spouse is afraid instead of me, in the first time, he/she said no, we should not have sex because it is dangerous and it is not clear that the heart can bear the sexual intercourse or not. My spouse used to say, don't hurry for sex right now" (Participant 8).

Discussion

The results of this study showed that participants emphasized the ambiguity and confusion about how to start and have sexual intercourse after coronary artery bypass graft surgery. In this study, participants pointed out the lack of awareness and ambiguity about how to have sexual intercourse after surgery. They emphasized the need to improve their knowledge, but they try to hide these issues due to shame and shyness to raise issues related to sexual intercourse. Gallegos *et al*. and Lai *et al*. state that the promotion of sexual knowledge after cardiac treatment is significant in these patients so that weak sexual experience is sufficient on aspects of health, performance and satisfaction, and quality of sexual life.[11,20]

In our study, participants also emphasized the ambiguity of sexual issues after surgery. In many cases, they did not know how to start intercourse and its time and their information was incomplete. They did not seek to promote sexual knowledge due to the taboo nature of sexual issues in society, and the treatment team has not investigated this issue based on the same culture in society.

Sadatinejad *et al*. point out that sexual education in these patients for improving couple relationship is one of the treatment methods of this disorder in patients.[19] In our study, participants also pointed out the need for investigating this issue but given that no education is given to patients. The patient refuses to ask questions about sexual problems because of the atmosphere of shame and embarrassment that has overshadowed on sexual issues in society. There are no sexual counseling centers to follow up on these patients, or the patient is unaware of their existence and tries to suppress sexual intercourse. Then, it reduces the quality of the sexual life of patients. According to the participants, this feeling of embarrassment and secrecy in the treatment team, including the doctor and the nurse, caused the patients not to be appropriately educated, and the patients have become confused and ambiguous, which eventually leads to the marginalization of marital relations after surgery. These results were consistent with the results of the study conducted by Steg *et al*. (2013).[28] Steg believed that some of the sexual problems are caused by the lack of knowledge and correct information about sexual intercourse and lack of proper advised by the medical staff before discharge, and the treatment team must accurately teach the patient and his companions to avoid confusing the patient and his companions.[28] The results obtained in our research confirm the results of Steg. In our study, patients after coronary artery bypass graft surgery were confused about how to receive information and did not know where the exact center for sex

education support is and did not have accurate answers to their sexual questions and ambiguities. This ambiguity in resuming sexual intercourse led the patient to the reluctance to have sex, and patients forgot their marital relationships. Byrne *et al*. point out that education by the treatment team improves performance knowledge and sexual satisfaction and faster return of people to sexual activity after a heart attack.[29] Participants in our study often emphasized the role of culture in not pursuing questions and problems in their sexual relationships. Lack of knowledge about how to address the issue from the treatment team and also how to deal with the spouse in the first postoperative sex has been one of the challenges for patients after coronary artery bypass graft surgery, and this lack of knowledge increases the fear of heart damage during sexual intercourse and impairs the patient's self-confidence when resuming sexual intercourse, and if appropriate and principled training is given to the patient, this ambiguity and confusion will be avoided. The patient will return to her sexual life as soon as possible, which is consistent with the study of Byrne *et al*.,[29] but the existence of cultural factors in our country causes neither the patient to solve this problem nor the treatment team to consider sexual education to the patient,[22] which ultimately all of the above cases lead the patient to confuse in the sexual intercourse path after coronary artery bypass graft surgery.

In our study, the results showed that patients' spouses also suffer from fear of worsening of heart problems and damage to the patient's heart due to lack of knowledge about how to have sexual intercourse after surgery. According to the stressful nature of the operation for the family, the patient's spouse also tries to withdraw from sexual intercourse and not having sexual intercourse after surgery, which is consistent with the results of Arenhall *et al*.[30] Arenhall in 2009–2007 in a qualitative study with the purpose of "The male partners' experiences of the intimate relationships after a first myocardial infarction" showed that patients' and spouses' lack of awareness of how to have sex after a heart attack had changed their role, attitudes, sexual withdrawal, and deprivation which can reduce sexual satisfaction.[30] In our study, the results also showed that the patient's spouse was skeptical that the patient's heart might be damaged due to sexual intercourse and had a constant concern about how harmful having sex after the heart operation is for the patient's condition. She sees the dark sexual future in front of her and her sexual partner, and sees her main priority as maintaining optimal heart conditions for her sexual partner, and refuses to raise issues and questions about her sexual relations. This deprivation of sexual relations eventually disrupts the quality of sexual life that these results are consistent with the results of Arenhall. Margareta Brännström in his study titled "Examining and comparing the sexual knowledge of patients and their spouses one month after the first myocardial infarction and one year after it" reported that only 41% of patients and 31% of their spouses received information about their sexual issues 1 year after the heart attack that this information was also limited.[31] It should be noted that this lack of knowledge about sexual intercourse in patients should be seriously considered by the treatment team, including physicians and nurses, and the issues related to sexual intercourse should be considered especially by the treatment team so that the patient does not suffer from fear and anxiety and sexual intercourse in these patients should not be forgotten due to the ambiguity of its process after surgery. Steinke's study also emphasized the role of nurses and other members of the treatment team in responding to issues related to sexual intercourse and resolving ambiguities in the sexual intercourse of heart patients, which is consistent with our results.[25] In our study, participants also emphasized the role of treatment staff, including cardiac surgeons, cardiac rehabilitation nurses, and cardiologists during discharge, in informing patients and their families about issues related to sexual intercourse after heart surgery to avoid confusion of the patients. In the study of Haidarpour *et al*., the role of educating nurses and other members of the treatment team in promoting sexual knowledge among patients prepared for heart surgery was mentioned in order to avoid confusion in these patients.[32]

Limitation

Being single gender is one of the limitations of this research. Participants in this study were only male patients who had coronary artery bypass graft surgery and their families and spouses did not enter into this study. Furthermore, no interviews with therapists and treatment personnel have been done.

Conclusion

According to the participants, the prevailing atmosphere on the community which is based on the indigenous culture caused the patient not only not to follow up sexual problems but also to hide them and cover up sexual intercourse after coronary artery graft surgery and to have doubt and confusion in the process of having sexual intercourse after the surgery.

In this study, participants emphasized that given the cultural structure of society and the fact that talking about sex is a taboo, they prefer not to follow up on the problems in sexual intercourse after coronary artery bypass graft surgery, and the main reason is the norms affecting the Iranian culture. According to our findings in this study, members of the treatment team, including physicians, nurses, and rehabilitation teams, should consider sex education as one of their priorities for these

patients and pay attention to patients' sexual intercourse without any shame or embarrassment, so that sexual quality of patients and their spouses be promoted and ultimately have a positive effect on their quality of life.

In this study, the role of Iranian culture in creating sexual problems of patients and lack of follow-up by the patient and medical staff was clearly explained, so it is recommended that managers and health policymakers take steps toward for the resolving cultural sexual problems of the society. We recommend that an appropriate scale based on the prevailing culture in the country be designed for measuring the sexual knowledge and performance of these patients. There is also a need to design a training package on sexual function in patients after coronary artery bypass graft surgery for these patients and their families in order to reduce confusion and ambiguity in these patients by increasing patients' knowledge about postoperative sex. Furthermore, it should include training programs related to sex education for treatment personnel. The researchers of the study announce that this study has been conducted based on the cultural conditions and health system of Iran among men, so it should be cautious in generalizing the results to other communities. Accordingly, it is suggested that similar studies be conducted in other countries.

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Conflicts of interest

There are no conflicts of interest.

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