HOME POSTOPERATIVE CARE FOR CARDIAC SURGERY: PATIENTS' PERCEPTIONS

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ABSTRACT

Objective: to understand patients' perceptions of home postoperative care for cardiac surgery. Method: an exploratory, descriptive, qualitative study that employed the theory of medical anthropology, based on Kleinman's explanatory model of illness. The participants were selected through convenience sampling, and data were collected through semi-structured interviews, which were recorded. The information was subjected to Bardin's content analysis technique. Results: The research involved 13 patients who underwent cardiac surgery. Two categories with their subcategories were identified, named as 'Facilitators' and 'Challenges' in home care during the postoperative period of cardiac surgery. Final considerations: the perceptions of patients who underwent cardiac surgery were permeated by facilitators, enabled by the guidance they received from healthcare professionals during their hospitalization. However, they also encountered difficulties related to the post-surgical recovery process. The instructions provided at the time of hospital discharge were crucial in ensuring that home care was carried out with greater safety, promoting a faster recovery.

Descriptors: Cardiac Surgical Procedures; Postoperative Care; Patient Discharge.

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INTRODUCTION

Cardiovascular diseases (CVDs) are defined as diseases that affect the anatomy and/or functioning of the heart, veins and arteries, and account for 31% of all deaths worldwide, making them the leading cause of death in developing countries\(^{(1)}\). In Brazil, approximately 30% of all annual deaths are attributed to cardiovascular diseases. Socioeconomic inequalities in Brazil contribute to high mortality rates from non-communicable diseases, especially cardiovascular diseases\(^{(2)}\). According to the Ministry of Health, approximately 300,000 individuals per year experience Acute Myocardial Infarction (AMI), with a 30% fatality rate in these cases. It is estimated that by 2040, there will be an increase of up to 250% in these events in the country\(^{(3)}\).

Cardiovascular diseases (CVDs) can be treated with medical or surgical interventions, and the latter option often results in significant physiological and anatomical changes in patients. The most common cardiac surgeries (CS) include MR and correction of valvular diseases, both of which are complex interventions\(^{(4)}\).

Cardiac surgery (CS) is considered a highly complex, invasive, and major procedure. Its goal is to restore the functional capacity of the heart, reduce symptoms, and enable the patient to resume their daily routine. The choice for this type of intervention occurs when there is a greater life expectancy compared to clinical treatment\(^{(5)}\).

The immediate postoperative period (within 24 hours after surgery) and a portion of the intermediate postoperative period (after the first 24 hours post-surgery) of cardiac surgeries take place in Intensive Care Units (ICUs) to ensure better patient recovery and access to the necessary interventions and technologies for treatment success\(^{(6)}\).

Patients in the postoperative (PO) period of cardiac surgery require specific, safe, and continuous care practices, such as maintaining hemodynamic stability, controlling fluid and electrolyte balance, and preventing infections, among others. This demands a multidisciplinary team to develop an individualized and holistic care plan, which, in turn, enhances the quality of care provided and reduces the risk of complications during the PO period\(^{(7)}\). A study conducted in the state of Rio Grande do Sul identified that the most common complications within 72 hours post-cardiac surgery were urinary output issues (38.9%), followed by arrhythmias (22.2%), hypertension (18.7%), hypotension (17.1%), and hypokalemia (15.1%)\(^{(8)}\).

Thus, nursing care is required to cover from the postoperative period to hospital discharge. Regarding discharge planning, it is crucial to have a health education and a well-structured plan to ensure the continuity of care at home, aiming to reduce health complications and alleviate potential feelings of insecurity and fear among patients and their families\(^{(9)}\).
There is also a lack of a systematic strategy for discharge education, poor quality of the provided guidance, and reports from patients with doubts about what care is needed and how to perform it. Therefore, it is necessary to reassure patients through the implementation of instructions that can prepare them to take self-care actions\(^1\).

Given the above, the following question is formulated: How do patients perceive the postoperative period at home after undergoing CS? To answer this question, the objective was to understand patients' perceptions of home postoperative care for cardiac surgery.

METHODS

This was an exploratory and descriptive study with a qualitative approach. The research was approved by the Research Ethics Committee under Opinion No. 4,439,431 and CAAE: 39664920.4.0000.0104, following all recommendations of Resolution No. 466, dated December 12, 2012, from the National Health Council. To preserve anonymity, the identification of participants was coded with the letter E, representing 'interviewee,' and numbering from 1 to 13, as follows: E1, E2, E3...

The study was conducted with patients who underwent cardiac surgery at a hospital located in the northern region of the state of Paraná, Brazil. The hospital has a total of 131 beds, including 46 in the Intensive Care Unit (ICU), 43 in private rooms, and 42 in wards, and it experiences a high demand for CSs. It is worth noting that the main author (first author) of this research was a member of the nursing staff at the hospital where the research was conducted. However, the data were not collected while performing her job duties, as the data pertained to the post-discharge period.

The study included adult patients (18 years and older) who underwent cardiac surgery and were discharged from the hospital within 72 hours. Exclusion criteria applied to those who were not mentally and cognitively capable of responding to the questions.

Participants were selected through convenience sampling, and the number of participants was determined by the data saturation criterion, which is understood as the point at which the data show theoretical consistency to address the research objective. Data saturation occurs when the collected data no longer yield new insights, establishing a common framework regarding the studied phenomenon\(^10\). Data collection took place from January to April 2021. Participants responded to interview questions individually over the phone, with pre-scheduled appointments. At the beginning of the interview, the study's objectives were explained, and participants were asked for their consent to the Informed Consent Form (ICF). It is worth noting that during the phone call, the location of the participant was not inquired about, but they were asked if they were comfortable and in a private setting.

The interviews were conducted by the first author and were all recorded with the participants' consent. Each interview lasted approximately 20 minutes. Subsequently, the data were transcribed in full into a text file in Microsoft Word. It is important to note that data collection was carried out using
the following guiding question: "Tell me how the postoperative period has been after cardiac surgery, following your discharge from the hospital. Additionally, data were collected to characterize the participants, including age, gender, marital status, cohabitants, and the specific cardiac procedure performed. It is emphasized that the guiding question did not undergo evaluation by a panel of judges since, in qualitative research, the interviewer has the flexibility to frame questions in a way that serves the research objectives. The literature (11) highlights that the researcher should follow a set of predefined questions, but they do so in a context very similar to an informal conversation. The interviewer should remain attentive to steer the discussion towards the topic of interest when they find it appropriate. They may ask additional questions to clarify issues that were not clear or to help reconstruct the context of the interview if the interviewee has deviated from the topic or is having difficulty with it. This type of interview is used when one desires to limit the volume of information, thus obtaining a greater focus on the topic, intervening to ensure that the objectives are achieved.

The data were analyzed using Bardin’s content analysis (10), which allows for a systematic description of the discourse and attitudes associated with the context of enunciation. The data analysis was conducted manually, without the use of software. In the pre-analysis stage, the material was explored, which involved direct contact with the participants’ discourse. This was done to further delve into the data and define categories, seeking elements that could comprise the analysis corpus. During the material exploration stage, categories and their subcategories were defined by classifying constituent elements into analogous groups based on the frequency of registration units. Finally, inferences were made, and the data were interpreted in accordance with the literature on the subject.

The study also followed the principles of medical anthropology, based on Kleinman’s explanatory model of illness (12). This model describes that the understanding and interpretation of illness are a process of symbolic construction, in the search for treatment and cure, occurring in a context influenced by intrinsic and extrinsic factors to the individual and sociocultural elements, involving different social actors in constant interaction.

RESULTS

Out of the 13 participants, four were women, with two aged 60, one aged 66, one aged 68, and one aged 72. All of them underwent procedures for mitral and aortic valve replacement and MR, and they all lived with their partners and/or family members. Nine were men, with five aged over 73, two aged 65 and 69, and two aged 40 and 51. All of them underwent MR (Myocardial Revascularization), were married, and lived with their partners and/or family members.

After analyzing the interviews, two categories were identified that interact with each other and encompass subcategories, as presented in the following sequence.
Facilities in home care after the PO of CS.

Having been adequately instructed on wound care.

The statements of the interviewees reveal that they perceived knowing how to perform wound dressings as a facility, and they felt secure since they were instructed to do so in their homes:

*Wound dressings, my wife and I did them with ease, we didn't have any problems, we learned how to do them in the hospital (E1).*

*I was concerned about doing the wound dressings, but when I got home, my wife did it correctly. She learned from the nurses (E4).*

*It was easy to do the wound dressing; the nursing staff provided guidance (E8).*

It can be inferred from the statements that the facilities were related to the guidance received during hospitalization.

The Faith

Patients attributed faith as a source of strength for their speedy recovery, as revealed in their statements:

*My faith and my wife's faith were what helped us a lot to get through this delicate moment in my life. We prayed a lot every day (E3).*

*Everything helped a lot, all the guidance, but without faith, nothing would have been possible (E6).*

*I never lost faith; I believe that God can do anything (E9).*

It is evident that faith was perceived as positive by the interviewees, meaning that faith is something fundamental for the treatment and recovery of patients.

Support from family members

Family members, when sharing care with PO patients of CS, experience feelings of ease

*I couldn't do anything alone, my wife and children help me a lot (E1).*
Whoever has family and a husband has everything; they are always close to me (E4).

Wow!!! My family has been so good to me; they take care of me all the time (E7).

By the expressions used, it is evident the importance of family involvement and assuming care responsibilities alongside patients to ensure a swift and as comfortable as possible recovery. The family has been acknowledged as a key player in patients' treatment, and as such, it should be taken into consideration by healthcare professionals, given that the family, as a care unit, becomes indispensable in the treatment.

Difficulties in home care in the PO of CS

Limitation when taking a shower.

The patients reported feeling tired and experiencing difficulties while taking a shower.

I had difficulties during the shower. We expose ourselves too much, and there's also fatigue, but I need to be thankful because there's someone to help (E2).

When I go to take a shower, I get a little sad because it's something I still can't do on my own, but thankfully, I have a family member to help me (E5).

I find the shower quite complicated; I've lost my freedom, but it will end; it's temporary (E8).

It is evident from the statements that performing everyday tasks has become a loss of autonomy, and this dependence has also been experienced as an invasion of privacy for the patients. However, they recognized the importance of collaboration.

Difficulty sleeping

The simple act of sleeping or relaxing was complex and uncomfortable because the dorsal position did not provide comfort for certain patients. Thus, the statements contextualize the difficulty these patients faced in the face of this basic human need.

A lot of difficulty sleeping on my back, I can't relax (E3).

Sleeping on my back is complicated; I've been having difficulties. I believe this is what is bothering me the most (E4).

Sleeping on my back is a struggle; I face a lot of difficulty with it (E5).
No way to sleep on my back. (E10).

The pain

The presence of pain during the PO was identified as a significant challenge that directly affected the quality of recovery, the availability, and the mental health of the patients.

Pain interferes with everything: walking, showering, sleeping, going to the bathroom, smiling, coughing (E1).

Pain is the biggest issue, it bothers me when walking, breathing, coughing. It even makes me afraid to laugh (E6).

Pain affects us. It hurts to breathe, move, go to the bathroom, take a shower, disrupts sleep, almost everything becomes difficult (E8).

The pain makes us angry, because it hurts a lot, even stay in bed; if you move, it hurts, cough, then!! (E9).

The lack of appetite

Even after being in their homes, it is evident from the statements that loss of appetite was mentioned as a difficulty to be overcome during the PO.

I thought that at home my appetite would return, but I still don’t have any hunger (E2).

I don’t feel hungry, even though I’m at home (E5).

At home, we usually eat better, but I have no desire to eat anything (E11).

The weakness and dizziness

The presence of dizziness and weakness led patients to stay lying down for longer during the PO and to be reluctant to engage in even small activities.

A lot of dizziness and weakness, I could barely stand (E5).

The weakness I feel makes it difficult to even eat; it feels like I’m going to fall (E6).

Everything requires a lot of patience, as dizziness and weakness always come (E7).
With regard to the characterization data found in the present study, the results differ from a study in Pakistan with 340 patients, where the majority were women, over 60 years old, and with a prevalence of CS of MR. However, a Brazilian study showed a higher prevalence in males, with 55.94% of cases compared to 44.06% in females. Thus, it can be inferred that both sexes are at risk of heart problems and, consequently, of having a CS outcome. It is observed that, out of the four women who participated in this study, two underwent valve replacement procedures. A study with women undergoing MR showed that valve replacement occurred in 34% of the participants.

The patients undergoing CS in the present investigation did not report difficulties in caring for the surgical wound, that is, in dressing changes. This finding may be related to the guidance received from the healthcare team regarding the care to be performed at home. The instructions provided to the patient and the family regarding wound care upon the discharge of CC patients contribute to the reduction of surgical site infection, as they provide safety, peace of mind, and encouragement for effective self-care. Thus, it can be inferred that the instructions received regarding this procedure were effective for the patients and/or their families, serving as a facilitating factor for them.

The importance of nursing, as well as other healthcare professionals, using the principles of Kleinman's Explanatory Model of Illness, is emphasized, guiding care actions based on the meaning and experiences of individuals, as each human being is unique, has particularities, and is also influenced by sociocultural factors in their living context. Although it is a model originating from medical anthropology, it can be used by various fields of knowledge, as it encompasses the essence of the human being. It is emphasized that the study of explanatory models used by different professional categories, patients, families, and others allows for an assessment of the gap between medical and non-medical models, an examination of the interaction between them, and an analysis of communication problems that arise from the encounter between cultural models and medical models during educational or research activities. Understanding explanatory models facilitates communication with individuals and enables the implementation of interventions that are understandable and acceptable to them, two essential conditions for the success of any healthcare program.

Faith was perceived as a resource for coping with the postoperative period at home after hospital discharge. Research with heart failure patients has found that spirituality/faith is associated with overall quality of life, showing a direct relationship with the health and disease process. The results of this investigation also demonstrated a favorable and significant relationship between spirituality and religion in the quality of life of patients, providing greater mental and emotional well-being.

It is observed that Kleinman's theory can be applied regarding people's faith, as it is necessary to take into account the patient's perspective in order to maximize the quality of their treatment, especially because this theory attempts to break away from the disease's purely biological model, or merely curative model. It is necessary to consider people's perceptions and the meanings of the illness. Regarding the recognition of the family as a facilitator of recovery, a study reveals that the family is
considered the most important support network used by individuals in situations of illness, meaning that family relationships constitute strategies for coping with the illness process\(^{(19)}\).

Reflecting on Kleinman's Explanatory Model of Illness theory\(^{(12)}\), it is observed that family members and even neighbors are non-professionals and non-specialists but are the first to assist patients in facing difficulties because illness disrupts everyday life. Care can be provided by the person who is ill or by the family and includes: administration of home remedies, encouragement of rest, emotional support, religious practices, changes in diet, and massages\(^{(20)}\).

Among the difficulties, the invasion of privacy during bathing was reported by the patients, but it was recognized as necessary. It is known that spatial and territorial privacy is a human need, and in specific situations, such as illness, and with the tendency for bodily exposure, the integrity of the person is even more essential It is observed that the health process is configured through the accomplishment of creative adjustments, meaning it is related to the human capacity to position oneself creatively and authentically in the context in which they find themselves, not excluding possibilities and limits but recognizing and legitimizing their experiences\(^{(21)}\). Thus, it can be inferred that the patients in this study overcame difficulties related to personal hygiene through an understanding of their strengths and weaknesses.

As for the difficulties related to sleep, it is a fact that poor quality of sleep affects the majority of people undergoing surgical procedures, with insomnia being the primary disturbance. It is worth noting that sleep is responsible for the daily recovery of the body, contributing to the prevention and reduction of health problems, as well as the recovery from illnesses. A systematic review study indicates that non-pharmacological measures are used for hospitalized patients, such as eye masks, muscle relaxation, posture and relaxation training, sound production, and educational strategies\(^{(22)}\). These measures can be addressed in patient guidelines for their homes, and as a result, they can seek medical help, namely medication therapy, to address sleep-related difficulties.

Pain was also mentioned as a difficulty for the patients in their homes after the CS in the present study. Research reveals that pain was a prevalent symptom and considered one of the main stressors perceived by patients in the postoperative period of CS, with the majority of patients experiencing moderate to severe pain, which can persist for up to 60 days after surgery\(^{(23)}\). Thus, preventive and/or educational interventions for postoperative pain relief become necessary, whether during hospitalization or after discharge\(^{(1)}\). Effective guidance on the use of prescribed pain medications is also necessary, aiming to reduce the adverse effects of pain and avoid hospital readmission\(^{(1)}\).

Eating was also identified as a difficulty for the patients in the present investigation. Although it is common after surgery, it is important for the person to make an effort to eat a little with each meal, providing the body with the necessary nutrients for a faster and more effective recovery. A systematic review study indicates that patients in the postoperative period of CC frequently experience loss of appetite and that the healthcare team should take care to promote the nutritional status of patients, especially after hospital discharge. This can be achieved through pain control, reducing emotional stress.
and depression, as well as encouraging the habit of having smaller, more frequent meals and eating with others\(^{(24)}\).

It is worth noting that, according to Kleinman's assumptions\(^{(12)}\), it is necessary for the minimal notions of an episode of illness and its treatment to be employed by all involved so that the clinical process, that is, recovery, can be achieved to its fullest. Therefore, it is emphasized that healthcare professionals, especially nurses and nutritionists, should provide guidance to patients on diets that can be used, offering alternatives to deal with loss of appetite.

It was also verbalized by the interviewees that weakness and dizziness were difficulties. It is common for patients to experience weakness, lack of motivation, and even moments of dizziness, so it is necessary to establish a guidance manual to reduce these issues. Among them, we can mention: never walk alone, read, listen to music, play, engage in light entertainment activities, avoid too many visits and spending too much time standing, avoid long walks, always be close to someone who can help (family members)\(^{(25)}\).

Finally, it is important to emphasize the significance of the assumptions of the Explanatory Model of Illness according to Kleinman\(^{(12)}\), as nursing actions should be organized systematically into subsystems: the informal, the familial, the popular, and the professional, where all involved parties seek continuous interaction to care for health. Thus, this interaction provides the individual with the opportunity to interpret their condition, give meaning to, and reframe the experienced health/illness process.

Although the study achieved its proposed objective, it has limitations as it was conducted with post-CS patients from only one hospital. Therefore, it is suggested to conduct further research on the subject in other settings.

**FINAL CONSIDERATIONS**

The results of this study demonstrate that the perceptions of patients who underwent CC were marked by facilitators, such as feeling secure with wound care, having faith, and receiving help from family members. However, they were also marked by difficulties related to physical and psychological integrity, such as the presence of pain, sleep problems, dizziness and weakness, loss of appetite, and invasion of privacy during bathing.

Instructions for hospital discharge are crucial so that home care can be carried out more safely and easily, thereby reducing complications and promoting a quicker and safer recovery. It is essential for the nurse to educate the patient for hospital discharge through protocols that can be followed, facilitating these specific instructions.

It is also important to emphasize the importance of creating support networks for nursing professionals to make home visits to accompany these patients, thereby avoiding possible readmissions, providing safety, and promoting the well-being of patients and their families. Referrals to Primary
Health Care should be used by nurses and other healthcare professionals in order to strengthen support networks and, in turn, provide greater assistance to patients and their families.

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