



Original Article

Self-Healing in Post Cardiac Surgery Patients: A Qualitative Study

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ABSTRACT

Background/Purpose: Physiological, psychological, and social stressors remained in post cardiac surgery patients and impacted their quality of life. Self-healing, an intrinsic healing capacity, improve and restore patients' welfare and quality of life after illness. The concept has not been applied in cardiac surgery postoperative care. Integrating the concept of self-healing in nursing may improve the quality of care.

Methods: For this exploratory qualitative study, 8 patients had been undergone cardiac surgery were recruited. Data were collected through purposive sampling and semi-structured, audio-recorded face-to-face interviews. Narratives were analyzed using Giorgi's five-step method.

Results: Three themes emerged from the data: "Injured from the disease", "image of health" and "strategies for self-healing". "Injured from the disease" described the remembrance of physical and psychological distress due to cardiac disease and its treatment. "Image of health" encompassed cognitions related to the concepts of health and self-healing. "Strategies for self-healing" described how interviewees developed their own methods for promoting health, including following a healthy diet, engaging in health-promoting activities and adhering to professional recommendations.

Conclusion: Self-healing is a concept to help patients restore their well-being and intrinsic homeostasis. Integrating the concept of self-healing into post-cardiac surgery care has the potential to optimal health outcome.

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1. INTRODUCTION

Cardiovascular disease is the leading cause of death in the aging population globally.¹ Although cardiac surgeries can prolong patients' survival, they remain physiological, psychological, and social stressors that impact the restoration of function for maintaining

postoperative independence and quality of life.²⁻⁴ Physical complications and limitations, death and waiting anxiety, and stress due to impairment in fulfilling role in post cardiac surgery had been addressed in the study.⁴ Social factors including adaptive characteristics, social support, geographic distance, and socioeconomic status, as well as social stressors of social network decline due

to the deaths and functional limitation affected cardiac surgery outcomes continuously in lifespan.⁵ From post-surgery care of effective pain control and deep breathing exercises, lifestyle change of engaging in exercise and cessation of tobacco and alcohol use, and self-healing ability augmentation of massage and fatigue prevention were beneficial for patients' health status in previous studies.⁵⁻⁹ Activating patients' intrinsic capacities could prevent, reduce or postpone the degeneration of patients' physical status and cognitive level.⁹ Preventative measures could also support the global goal of promoting the well-being of elderly individuals and preventing their degeneration.^{9,10,17}

Self-healing was defined as "an active, innate and personal process that, upon the use of an energetic catalyst, results in the rechanneling of innate and vital energy forces throughout the journey towards transcendence" by Robb (2006)¹¹ and is an intrinsic healing capacity that smoothly coordinates various physio-psychological system functions. It is either a process or an outcome. The process involves the restoration of balance to systems using the intrinsic capacity for self-repair and by unifying the physiological, psychological, social and spiritual aspects of an individual. The outcomes or consequences are balance, wholeness, relaxation, and harmony. Self-healing keeps an individual's body and mind in homeostasis and requires individuals to take responsibility for their own health.¹¹⁻¹⁴ Biobehavioral strategies, such as hypnosis, biofeedback, relaxation and imagery, have been used to modulate the function of self-healing in restoring health and have been associated with immunity generally. Additionally, nature-based environments, such as outdoor gardens, green spaces, parks or forests, have been associated with mental health and vitality^{11,15,16} For healthy aging, it is important for individuals to improve and maintain their capacity for self-healing.

The enhancement of self-healing has been addressed in a variety of ways. For instance, complementary and alternative medicine practices, such as chiropractic massage, acupuncture, herbal remedies and reiki therapy, have been identified to promote self-healing in healthcare.^{11,17} Indo-Tibetan medicine, a form of Asian traditional medicine, is more comprehensive in nature and scope in terms of its emphasis on self-healing and has attracted much attention in the West since the twentieth century.¹⁸ Self-healing-based interventions for stress cessation and mindfulness practices could improve the quality of life of breast and gynaecologic cancer survivors, as shown in previous research.^{18,19} Several studies supported that 4-week to 20-week self-healing-based interventions could promote breast and gynaecologic cancer survivors' quality of life, relieve their stress and reduce their disability.¹⁸⁻²¹ Jacobs revealed that self-healing-based contemplative practices including deep breathing, meditation, reflective writing, and peer or community support could improve patients'

resilience.²² Many of these self-healing practices are in alignment with interventions associated with cardiovascular disease.

In summary, self-healing-based interventions may be key to promoting patients' quality of life and preventing degeneration in patients' physical and cognitive status. The relevance of the concept of self-healing used in post-cardiac patients remains unclear. The purpose of this qualitative study was to explore the experience of self-healing in patients post cardiac surgery.

2. METHODS

2.1. Study Design

An exploratory qualitative design was applied to explore an individual's knowledge and attitudes without preconceptions by analysing narrative data of interviewees.²³ Since self-healing has not been explored in the cardiac surgery field, exploring individuals' experience is appropriate in this target population.

2.2. Sample and Setting

Purposive sampling was used to collect comprehensive and rich data. The inclusion criteria were who had undergone open-heart cardiac surgery within three months and be able to communicate in Mandarin or another Chinese dialect for 30 to 60 minutes. The exclusion criterion was having mental illness and disorientation. All interviewees were recruited from a single general hospital.

2.3. Data Collection

The study design was approved by the Institutional Review Board at the general hospital (No: (581)105A-5). Informed consent was obtained before data collection. All interviewees were notified of their rights and the privacy protection measures. Data were collected by a single researcher in a semi-structured, face-to-face interview that was audio-recorded and lasted for 30-45 minutes. The interview guide was generated by literature review and opinions from experienced qualitative researcher and cardiac nurse in order to understand the experience about self-healing in patients post cardiac surgery, and is presented in Table 1. All interviews were conducted in a private room of the hospital. The interviews were transcribed within 24 hours.

Table 1. Interview guide

1. Please tell me what health is?
2. Please tell me your illness experience about this surgery.
3. Please tell me what self-healing is?
4. Please tell me how do you think about the link between self-healing and health?
5. How do you think the relationship between your post-operative recovery and self-healing?

2.4. Data Analysis

The data were analysed using Giorgi's five phases to determine the essential meanings of self-healing based on the descriptive phenomenological method.²³⁻²⁵ The analysis process started with reading the transcripts in their entirety to obtain a sense of the whole. The transcripts were then reread to mark the nature transitions in content. The data were then transformed into words referring specifically to the psychological value of self-healing. After seeking possible meanings through the utilization of imagination was applied to review the sensitive phrases and words, the structure of the experiences was explored, and the essential structure was used to clarify and interpret the raw data.²³ An experienced qualitative researcher as the second author was invited to conduct peer debriefing to review the transcripts and to conduct emerging and final categories from the transcripts and the final themes of the study.

2.5. Study Rigor

The rigor of the data was ensured based on the four criteria of Lincoln and Guba: credibility, dependability, conformability and transferability.²⁶ With respect to credibility, the researcher had 10 years of experience as a cardiac surgical intensive care unit nurse and conducted the interview in a private and quiet space. Tape-recording and transcription within 24 hours could help preserve the details and accuracy of the interviewees' expressions. Peer debriefing and read and re-read meaning extraction were used to ensure the reliability of the phenomena. Dependability and conformability were enhanced by having the experienced qualitative research and maintaining an audit trail of the research process, respectively. Transferability was promoted by recruiting as diverse a sample of interviewees as possible.

3. RESULTS

Data were collected between May 20, 2017, and January 23, 2018. Eight interviewees who had undergone cardiovascular surgery joined this study.

The demographic characteristics of the interviewees are listed in Table 2. The interviewees were between the ages of 55 and 64 years. The majority were associate degree, were married, were retired and had religion in belief; most had at least one kind of chronic illness, namely, hypertension, hyperglycaemia or hyperlipidaemia. Three themes and seven subthemes emerged from the interviewees' descriptions. (Table 3)

3.1. Injured from the Disease

The interviewees expressed they were injured from the disease. Physical and psychological distress related with cardiovascular disease and its treatment were symbolized by interviewees' remembrance as "injured from the disease" The theme emerged from the two subthemes, physical distress and psychological distress.

3.1.1. Physical distress

"Physical distress" described interviewees' experience of physical discomfort or life-threatening events before they received cardiac surgery. Their physical discomfort may have signalled the life-threatening event, as indicated by the interviewees' statements below.

Patients' physical symptoms raised their awareness of death and peril.

"I had dyspnea before the surgery and that scared me a lot because I didn't know when I might die. I was fine initially. However, the status dropped and dropped unexpectedly after I received a cardiac catheter examination. Eventually, I had dyspnea even when lying down. The dyspnea made me uncertain when I would die." (PA)

"I thought the tinnitus may relate to a cardiac problem." (PB)

They either noted the physical symptoms or ignored health-related red flags.

"Abruptly, I easily became dyspneic for a period." (PF)

Table 2. The demographic characteristics of participants

No.	Age	Education	Marital Status	Employment	Religion	Chronic Illness (No.)	Type of Surgery
A	59	High school	Single	Retired	Buddhist	2	CABG
B	56	Associate's degree	Married	Retired	Buddhist	1	CABG
C	59	Associate's degree	Married	Yes	Taoist	0	Valve replacement
D	64	High school	Married	Retired	Taoist	2	CABG
E	57	High school	Married	Retired	Buddhist	1	Valve repair
F	55	Associate's degree	Married	Yes	Catholic	1	Valve replacement
G	63	Associate's degree	Married	Retired	Taoist	3	CABG
H	58	Associate's degree	Married	Yes	No	0	Valve replacement

Chronic illness: specific for hypertension, hyperglycemia and hyperlipidemia, 1 indicated having one of the three, 2 indicated having two of the three, 3 indicated having three; CABG: Coronary artery bypass graft

Table 3. Audit trail

Significant Statement	Formulating Meaning	Sub-Themes	Themes
I had dyspnea before the surgery and that scared me a lot because I didn't know when I might die. (PA)	Life-threatening symptoms	Physical distress	Injured from the disease
Abruptly, I easily became dyspneic for a period. (PF)	Ignored health-related red flags		
Before the surgery, I had extreme stress. I fear I can't wake, again. (PE)	Fear surgery	Psychological distress	
...I was still recovering. I am not sure whether the procedure worked. I really don't know. I was still recovering. I just hoped it may get better, but no one knew the real ending. (PF)	Post-operative uncertainty		
Health is wealth. I believed wealth is more important than health in the past. Now, I realize health is really important since I became sick. When you lose health, all of it returns to the start. (PB)	Awareness	Value of health	Image of health
Oh! Health! You can't buy it by paying. (PC)	Inestimable		
Health is being alive, moving and enjoying. Nothing is as special as being able to eat, drink and sleep well. (PF)	Being health		
It is like how you recover from a cold without taking any pills. (PH)	Self-recovery	Cognition of self-healing	
I do what I would like to do. Now I want to quit drinking, so I absolutely stick to it. When I drank, the alcohol did harm my heart. That is a kind of self-healing. That is an attitude! (PC)	Triggers		
Now I eat bland food prepared by the hospital. I favoured delicious foods with a rich taste before. But now I can accept the one from the hospital with less oil and salt." (PA)	Unpalatable foods accepting	Eating a healthy diet	Strategies for self-healing
Because I made medicinal liquor, I was interested in the herbs and studied 7 to 8 books associated with that, which are very thick. Although the herbs taste good, you shouldn't only be concerned about a yummy taste but should also avoid damage to the kidneys. (PC)	Unhealthy foods avoiding		
Health cannot be estimated! This time, I thoroughly quit drinking. The tobacco has been quit 4 to 5 years or 5 to 6 years ago. I even consumed as much as 2 to 3 packs a day. (PC)	Unhealthy hobbies quitting	Engaging in healthy activities	
At least, I kept as regular a lifestyle as possible. It is difficult to maintain or do indeed, but I was really concerned. Usually, I got off at night and then went swimming with the available time. After swimming, I did laundry before sleeping. (PF)	Regular routine maintenance		
We would comply with your recommendations because we rarely knew what to do. I followed your schedule, such as taking medicine, exercising and nebulizing. I noticed it was very helpful for recovery when I exactly carried out all your requirements.... (PA)	Schedule compliance	Adhering to professional recommendations	
Yesterday, the therapist taught me how to complete the 6-minute speed test on the machine. I felt it would be OK with no discomfort. I plan to keep walking, engaging in exercise and adjusting myself after I am discharged. (PA)	Cardiac rehabilitation		

"It seems to be because I faint. I never managed my elevated blood pressure. I had a family history of hypertension. I did not pay attention to the 100-200 units of blood pressure for ten years because I thought it to be a prominent status in my family. So the fainting occurred." (PG)

3.1.2. Psychological distress

"Psychological distress" described interviewees' affective experiences during the peri-surgical period. They feared surgery or its negative outcome and felt uncertain, as indicated by following statements:

"I wouldn't receive surgery. I heard that it will open

here, so I didn't want it. I rejected the option, felt scared and closed it out for a long time. Indeed, I felt fear. I really feared receiving surgery." (PB)

"Before the surgery, I had extreme stress. I was afraid I wouldn't wake up again." (PE)

"...I was still recovering. I am not sure whether the procedure worked. I really don't know. I was still recovering. I just hoped it may get better, but no one knew the real ending." (PF)

3.2. Image of Health

The apperception and the determination of being

health came after the experience of illness. The relation and cognition between health and self-healing in post cardiac surgery interviewees were symbolized as “image of health”. The theme emerged from the two subthemes, value of health and cognitions of self-healing.

3.2.1. Value of health

“Value of health” described how interviewees became aware of the value of health after becoming ill. Patients awoke to the importance of health through the experience of illness, as indicated by the statements below:

“The experience of surgery made me realize health is very important. When I experienced discomfort, such as severe dyspnea, I was afraid of dying at any time. After surgery, I got better. Thus, I realized health is very important.” (PA)

“Health is wealth. I believed wealth is more important than health in the past. Now, I realize health is really important since I became sick. When you lose health, all of it returns to the start.” (PB)

They described health as inestimable and difficult to come by through business dealings, as indicated by the statements below:

“Oh! Health! You can’t buy it by paying.” (PC)

“Oh! Health! Health is an essential capital.” (PD)

“Health should be wonderful and inestimable. Nothing can be traded for it. All we desire is health only. It is useless to have a large fortune when you have lost your health.” (PE)

Additionally, patients described various activities as analogous to health:

“Health is being alive, moving and enjoying. Nothing is as special as being able to eat, drink and sleep well.” (PF)

“Health is the best gift for family, otherwise what is it for?” (PG)

“Health means being able to keep a cheerful mood, act, work and have freedom from physical restriction and so on.” (PH)

3.2.2. Cognition of self-healing

“Cognition of self-healing” described interviewees’ perceptions of “self-healing”. Patients regarded self-healing as encompassing the capacity for self-treatment and self-recovery, self-protection intentions and speed of recovery. Statements from the

interviewees are provided below:

“Self-healing means the human body’s own inherent capacity for self-treatment.” (PB)

“Self-healing means the capacity for self-recovery. I know what it is, but I don’t know how to do it.” (PC)

“I think of it as how someone would best protect themselves. That’s all.” (PD)

“It is the speed of self-recovery. I am not sure whether it is.” (PF)

“It is like how you recover from a cold without taking any pills.” (PH)

Patients recognized some triggers of self-healing or described concrete events to analogize it. The triggers included environment, stress, emotion, health-related attitude, physical baseline and ‘physical purity’. The following statements provide details:

“We have to communicate with our organism and live in a quiet environment with quality air, water and sunshine. I believe environment is an important part to promote self-healing. Stress also influences self-healing extremely. A higher level of stress may increase the severity of physical decline. Thus, we should be relieving stress... Emotion is the other vital essential related to the influence of self-healing. Additionally, the intention of survival is another essential element. ...When someone’s tasks have not been accomplished, they may have stronger intention to survive, which may give them power for physical self-healing.” (PB)

“They should be related to each other. When you have worse physical status, you should recover poorly. When you stand on a normal line of physical and immune status, you may be able to recover better via physical training.” (PE)

“The self-healing is related to ‘physical purity’. As I have just said, “someone who has no contaminated physical organisms should have better self-healing than a contaminated one.” (PF)

Some events were pointed out as indicative of self-healing, and the statements from interviewees are listed below:

“I do what I would like to do. Now I want to quit drinking, so I absolutely stick to it. When I drank, the alcohol did harm my heart. That is a kind of self-healing. That is an attitude!” (PC)

“Meaning of ‘self-healing’, for example, I would recover from illness with no medical treatment. In the psychological dimension, I should keep an open mind

and avoid negative thoughts. Even when I am sick, I face it indifferently and try to overcome. And I don't go against bans, such as lifting heavy things, etc. ... Basically, I avoid negative thoughts. When I sink into a negative mood, I am sure to have worse physical recovery." (PH)

3.3. Strategies for Self-Healing

The interviewees' own methods for promoting health were encompassed as "strategies for self-healing" The theme emerged from three subthemes: eating a healthy diet, engaging in healthy activities and adhering to education.

3.3.1. Eating a healthy diet

"Eating a healthy diet" described how interviewees adjusted their eating style to promote health. Patients started to accept unpalatable but beneficial foods and avoided unhealthy foods, as indicated by the following statements:

"Now I eat bland food prepared by the hospital. I favoured delicious foods with a rich taste before. But now I can accept the one from the hospital with less oil and salt." (PA)

"Because I made medicinal liquor, I was interested in the herbs and studied 7 to 8 books associated with that, which are very thick. Although the herbs taste good, you shouldn't only be concerned about a yummy taste but should also avoid damage to the kidneys." (PC)

3.3.2. Engaging in healthy activities

"Engaging in healthy activities" described how interviewees adjusted their lifestyle to promote good health. Patients quit unhealthy hobbies, maintained regular routines, exercised, and enjoyed a freewheeling life, as indicated by the statements below:

"Health cannot be estimated! This time, I thoroughly quit drinking. The tobacco has been quit 4 to 5 years or 5 to 6 years ago. I even consumed as much as 2 to 3 packs a day." (PC)

"At least, I kept as regular a lifestyle as possible. It is difficult to maintain or do indeed. It was impossible to do under regular conditions, but I was really concerned. Usually, I got off at night and then went swimming with the available time. After swimming, I did laundry before sleeping." (PF)

"I would recuperate my physical status. ...We live in a rural area. We usually go walking, jogging as well as make tea and chat with friends. Sometimes, we go strolling on the hill. That's all." (PD)

3.3.3. Adhering to professional recommendations

"Adhering to professional recommendations" described interviewees' attempts to follow the recommendations of care specialists, such as care team members or the physician. Patients complied with schedules to receive check-ups, take medicine and participate in cardiac rehabilitation exercises, as indicated by the following statements:

"We would comply with your recommendations because we rarely knew what to do. I followed your schedule, such as taking medicine, exercising and nebulizing. I noticed it was very helpful for recovery when I exactly carried out all your requirements. So far, it has been just like the pre-op explanation by the surgeon. ...Yesterday, the therapist taught me how to complete the 6-minute speed test on the machine. I felt it would be OK with no discomfort. I plan to keep walking, engaging in exercise and adjusting myself after I am discharged." (PA)

"I came here for surgery to save my life. Of course I should follow the recommendations from the director, physicians and team members. ... I complied with all arrangements for check-ups, department transfers and surgery." (PC)

4. DISCUSSION

The main findings of this study included concepts, which in relation to each other interviewees a process of regaining health in post cardiac surgery. After deeply experienced the life-threatening symptoms that impacted their physical and psychological status, the concept of injured from the disease led the interviewees to value their health. They realized some triggers related to self-healing is beneficial in promoting health. Several strategies including lifestyle adjustments with respect to diet and activities as well as following the recommendations of professional care team members, especially surgeons had been illustrated the ways in boosting the capacity of self-healing.

The physical and psychological burden of life-threatening symptoms from cardiac disease have been well demonstrated in studies,^{3,4,28,29} and the study reports similar findings. Also, hesitating to receive surgery and searching for second opinion were mentioned by two interviewees in the study, which could cause negative consequence by bringing near-death experience of cardiac arrest, anxiety and depression to them during the waiting period.^{28,29} However, social distress didn't illustrate in the study, and the reason for the discrepancy might be that all interviewees were interviewed within 3 months after surgery and haven't return to ordinary life. Thus, they were focusing on physical performance and lifestyle adjustment just after surgery. In order to maintain

independence in their lifespan after cardiac surgery, to help patients overcome the distress in physical, psychological and social is necessarily in healthcare. In addition, the findings of this study emphasized interviewees' valuing of health. Health was defined as a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" by the World Health Organization in 1948,³⁰ which was matched the means of achieving health. "Value of health" in the study concretely supported the motivation to maintain health. Self-healing processes is crucial for the patient in restoring health when illness, a dynamic event and a condition of losing balance.³¹

Several studies have extensively demonstrated how self-healing-based interventions improved quality of life and reduced psychological stress in breast and gynaecologic cancer survivors.¹⁸⁻²¹ Breast cancer and cardiovascular disease share similar risk factors, such as physical inactivity, obesity, and chronic illnesses associated with obesity, so they share similar strategies for health promotion and self-healing.^{25,26,32} The study found that the interviewees with cardiac disease did not have enough awareness of potential life-threatening symptoms. Similar findings were also noted in previous studies.^{29,33} Hence, notifying patients with cardiac disease about the progression of symptoms and teaching them about self-monitoring are important in clinical practice. Additionally, the triggers and events associated with self-healing may be key to support research on healthcare interventions for post cardiac surgery care. Motivation always leads to effective behaviour.³⁴

The difference between self-healing and health promotion is that self-healing emphasizes restoring systemic balance, whereas health promotion emphasizes preventing illness. The definition of health promotion is empowering individuals to take control of their health and its determinants and thereby enhance their quality of life through health.^{35,36} For instance, dietary habit adjustment, health information sharing, nutritional counselling and the control of risk factors are approaches to health promotion. On the other hand, self-healing is an intrinsic healing capacity that coordinates and restores physiological systems' functionality, which could be regulated through bio-behavioural strategies and nature-based environments.¹¹⁻¹⁶ The strategies to achieve health promotion and self-healing seem to be similar.

The study generates the evidence about the capacity of self-healing through the categorizing qualitative finding in terms of a phenomenon of being health for clinical implication. Based on the findings of injured from the disease, image of health and strategies for self-healing, further research in preventive medicine and health care delivery are needed for scale development and the self-healing enhancing

intervention. Even though the concept of self-healing in different groups.

Limitations

The study focuses on a single region with a limited sample size which poses a limitation on generalisability of findings outside of this jurisdiction. Based on the findings of this qualitative study, researchers could explore elements and ideas to develop self-healing-based interventions. The validation of effective interventions remains to be tested in the future.

5. CONCLUSION

Self-healing is a concept to help patients restore either physical or psychological well-being and intrinsic homeostasis. It has been applied in the care of cancer survivors, and is extending it to the field of post-cardiac surgery by supporting the development of care interventions to manage patients' health in clinical practice. Based on the results of this study, the importance of health was highlighted by the recognition of injured from the disease, which motivated post-cardiac surgery patients to pursue health. The strategies of eating a healthy diet, engaging in healthy activities and adhering to professional recommendations enhance self-healing capacity to help patients regain their health in the postoperative lifespan.

CONFLICTS OF INTEREST

There are no conflicts of interests including financial, consultant, institutional and other relationships that might lead to bias.

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