

The lived experiences of patients post coronary angioplasty: a qualitative study

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Abstract

Few qualitative studies have focused on the experiences of patients post angioplasty. A deep understanding of patient experiences of care and the way a treatment can affect their everyday life is particularly important in chronic disease management. The aim of this study is to explore experiences that patients undergo after angioplasty. Using a phenomenological study design, 15 patients participated in an individual face-to-face semi-structured interview. Data were analysed using qualitative content analysis. The following core themes emerged from the analysis, which reflect the experiences of patients post angioplasty: a) angioplasty: a milestone in the patient's life; b) living with a mended heart; and c) psychological distress as an integral part of the patient's life. Participants after angioplasty went through both positive and negative changes in their life. Understanding of these experiences are essential to modify the high risk behaviours while also support the patients through their rehabilitation.

Keywords: *patient experience, coronary artery disease, coronary angioplasty, qualitative study*

Introduction

Similar to international trends, cardiovascular diseases (CVD) remain the main cause of mortality and morbidity in Iran, accounting for about 50% of the annual deaths.¹ Coronary angioplasty, particularly with stent implementation, is increasingly preferable for the treatment of coronary heart disease (CHD), which is the major manifestation of CVD.² Angioplasty has proved to be an effective technique for treatment of coronary arterial stenosis, resulting in significant relief in angina symptoms. Compared to open surgery, angioplasty is a relatively safe and cost effective treatment alternative.³ Some 1260 coronary interventions are carried out every day in Iran,⁴ and the success of angioplasty has been reported 95%, comparable to the international statistics.⁵ Despite a common belief, coronary angioplasty cannot halt the progression of CHD, and 30 to 40% of patients experience a recurrent cardiac event or the need for a repeat angioplasty during the first two years after the procedure.^{6,7} Yet, a substantial number of the relapses can be avoided or reduced by the use of risk modification strategies which aim to reduce major CHD risk factors.⁸ Most patients also need to take antiplatelet drugs for about one year after angioplasty.⁹

Overall, patients' experiences after angioplasty and how these factors impact their overall wellbeing and functioning have not been widely studied. The available evidence suggest that the diagnosis of CHD, disease symptoms, and the need for invasive treatment approaches, such as angioplasty provoke a range of adverse emotional responses in cardiac patients, including denial, uncertainty, stress, frustration, fear, anxiety, and depression.^{10,11} Patients commonly experience distress and fear of dying during the initial phase of their disease and medical interventions, increasing the risk of subsequent psychological disorders.^{11,12} The results of a longitudinal study showed that anxiety before angioplasty predicted patients' experience of anxiety after

angioplasty.¹¹ Another study reported increase in symptoms of depression 6-8 months after angioplasty compared with immediately after angioplasty.¹³ On the other hand, some patients who experience the immediate resolution of the symptoms tend to underestimate the severity of their disease, which may hinder their active in risk reducing behaviours. Astin et al. (2006) studied patients' illness representations before and after angioplasty and noted a transition from an acute to a chronic type of disease representation, 6-8 months after angioplasty. The patients perceived they had less personal control over their illness, and that their disease had less severe consequences.¹⁴ While these changes help patients to cope with their illness, it is also important that the patients remain motivated and continue to engage in risk reduction activities.¹⁵

Patients' experiences during recovery can affect their overall wellbeing and engagement in rehabilitation programs. Supporting patients during the plateaus of their illness and helping them to understand their risk and become actively involved in risk reduction programs help behaviour change to reduce future cardiac events.^{16,17} Patients who undergo angioplasty need more specific information about the level of damage, the risk of subsequent recurrence, medications after discharge, and appropriate levels of physical activity and diet.¹⁸ Yet, risk factor modification is a complex and multi-faceted phenomenon in that the patients' beliefs and values, previous experiences, perception of personal risk as well as socio-cultural factors influence the patient's decision to adhere to recommended treatment regimens and takes actions to reduce their future risk.^{19,20} Understanding these factors can help clinicians in better management of CHD risk post angioplasty.²¹ This study aims to contribute to the body of knowledge by exploring Iranian patients' lived experiences after angioplasty. The results of this study help optimise the patients' journey through evidence based care, and can serve to inform risk management programs for patients after angioplasty.

Methodology

Using qualitative methodology, semi-structured individual face to face interviews were carried out to help the researcher gain insight into life experiences of patients post angioplasty.

Ethics approval was obtained for the study. Eligible participants were identified through medical records of Shahid Madani Hospital in Tabriz and Shahid Chamran Hospital in Isfahan, two metropolitan cities in Iran. The researchers contacted the eligible participants via telephone to seek their interest to participate in the study. The study objectives were explained to potential participants and they were made aware of the need for audio recording of the interviews.

Participants were assured of the confidentiality of provided information and that they could withdraw from the study at any time with no penalty. Participants who gave informed written consent to the study, had age above 20 years, were able to communicate in Persian and/or Azeri languages, and had undergone angioplasty at least one month prior to the interview were recruited. Potential participants with cognitive impairments and several comorbidities were excluded from the study. Overall 17 potential participants were invited of which two patients rejected the study.

Interviews were carried out with 15 participants, of whom four participants were interviewed twice to provide more in-depth data and elaborate on the issues raised in the previous interview. This boosted up the total number of the interviews to 19 interviews. The main demographics of the study participants are presented in Table 1. Date and venue for the interviews were agreed upon by the participants.

Table 1. Demographic characteristics of the study participants

Gender	female (4), male (11)
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Age	Mean 55.8 ± 9.28 years, range 37–70 years
Marital Status	Married (12), widowed (1), divorced (1)
Job	Employed (4), housewives (3), retired (5), self-employed (3)
Education	Primary school (2), high school (3), diploma(4), university degree (6)
Time since angioplasty	Mean 3.27 ± 2.9 years, range 3months -10 years
Type of angioplasty	Angioplasty with stent placement (10), Angioplasty without stent placement (5)

Data were collected using open interviews and participants were encouraged to provide in-depth information on their experiences and feelings after angioplasty. The interviews were guided by an interview guide and probing questions used depending on the participants' responses (Table 2). The interviews were lasted between 40 to 90 minutes and all audio-taped with previous permission from the participants. At the conclusion of each interview, the researcher summarised the information to the study participants to determine their accuracy and completeness.

Table 2. Interview guide

Interview guide

- *Tell me about your life after angioplasty?*
- *How has your life changed after angioplasty?*
- *What are some positive and negative aspects of living after angioplasty?*
- *Have you ever faced any problems or limitations due to your illness since you have had angioplasty?*

The interviews were transcribed verbatim and data analysis was carried out simultaneously with data collection in order to identify the initial themes and follow up on the issues raised in previous interviews.²² Data saturation was achieved at interview 13, but the researchers continued on data collection by conducting two more interviews to ensure data saturation. Data were analysed using content analysis, which allowed making subjective interpretations of the content of the interview data. The adoption of a systematic classification process enabled the emergence of both implicit and explicit study themes.²³ The researchers first read out the transcripts several times to gain in-depth insight into the data. Data were then converted into meaning units- a piece of the text of any length that conveys one meaning- and codes were extracted. The meaning units were compared for similarities and differences, leading to the development of categories, from which broad study themes and sub-themes were conceptualised.^{22,24} Preliminary findings of the study were shared and discussed with academics in the field and clinicians who had clinical experience in providing care to angioplasty patients.

Results

The analysis of data on patients' experience after angioplasty revealed the following three themes and six sub-themes: The first theme, angioplasty: a milestone in the patient's life, consisted of two sub-themes of 'symptom free- disease free' and 'redefining the life'; the second theme, living with a mended heart, consisted of two sub-themes of 'a sense of significant loss' and 'feeling of vulnerability'; and the third theme 'psychological distress as an integral part of the patient's life' included two sub-themes of 'persistent anxiety' and 'giving up'.

1. Angioplasty: a milestone in the patient's life

This was one of the core themes that represented patients' feeling of a positive shift in life after angioplasty. Patients perceived the recent heart event and subsequent angioplasty as a milestone in their life, providing them with a second chance to reconsider some of the choices they had made and an opportunity to redefine some life goals. The related subthemes of 'symptom free disease free' and 'redefining the life' are explained accordingly:

1.1. Symptom free- disease free

Patients expressed their deep contentment to the advances in medical science, specifically angioplasty, enabling the treatment of life-threatening diseases, such as CHD.

"I feel that I am a lucky patient, my problem was resolved by angioplasty, whereas many patients of my age had to have open heart surgery done...It was lifesaving forme...People who have had this problem, many have died from heart diseases, but angioplasty saves lives, this is priceless. A 67- year-old male participant (p14)

Patients defined their experiences after angioplasty as ‘a rebirth’, expressed the gratitude for being given a new chance in life. The feeling ranged from remission of symptoms to feeling of complete cure. Generally, participants shared a view that being free of angina symptoms, mainly chest pain and shortness of breath meant they heart condition was resolved.

"I perceive myself as being free from any illness now". A54-year-old male patient (p11)

While, patients who continued to experience some degree of chest pain and shortness of breath after angioplasty, had a perception that angioplasty could be considered as a treatment modality, providing the patients with relative recovery. Generally, patients seemed to have little awareness about their heart condition and the extent to which angioplasty could benefit heart disease.

1.2. Redefining the life

Patients perceived angioplasty as a ‘lifesaver’, providing them with a second chance to live. Participants mentioned that they had taken their life for granted and reported a greater appreciation of the life after having heart event and undergoing an angioplasty. Living after angioplasty was viewed as a unique experience, affecting many aspects of the patients’ life.

Patients had found an opportunity to take a new look to their life; begin to find new meanings in the life, and revise their personal goals in order to live a more meaningful life.

"I started appreciating my life more after angioplasty. I told myself that I should have goals in my life, as I have been given a second chance." A 51-year-old male patient (p15)

The cardiac event and subsequent angioplasty became a milestone in some patients' life, raising their consciousness on risk behaviours and triggering the need for lifestyle changes. Some patients became actively involved in risk reduction behaviours and shifted to a more healthy way of living.

"I told myself that I must plan for a healthy life now that I am given a new chance ... I must commit to them (plans)." A 54-year-old female patient (p3)

This was particularly evident in patients who regret their lifestyle in the past. They began to seek ways to avoid the factors of aggravation and reduce the recurrence of cardiac events in the future. Some patients reported having started revising their eating behaviours, quitting smoking, increasing physical activities, and avoiding stressful situations.

"When I underwent angioplasty for the second time I came to realize how stupid I was, smoking, no exercise, eating fatty food...". A 51-year-old male patient (p15)

Patients who expressed a higher perception of risk from heart disease, they also seemed to be more motivated, have plan, or have already being involved in risk factor modification.

2. Living with a mended heart

While many patients reported being relieved from angina symptoms after angioplasty, a sense of significant loss, vulnerability, and living in doubt and uncertainty were evident in participants' discussions. The negative experiences were perceived to adversely impact the physical, physiological, and social well-being of the patients and their day to day functioning. These subthemes are elaborated on below.

2.1. A sense of significant loss

Regardless of age and sex, many participants expressed suffering from ongoing fatigue and constant lack of energy. Patients perceived a significant loss in both physical and emotional well-being after the cardiac event. The feeling of persistent fatigue and tiredness was believed affected the participants' daily functioning, subjective wellbeing, and self-esteem.

"I don't have that vigour anymore... things that I used to do before, I can't do them anymore." A 48- year-old patient (p4)

"Well somehow I feel tired. I am not in the mood I used to be." A60- year-old female patient (p2)

"I work in construction; I used to go to work from morning till 5 to 6 in the afternoon, but not anymore... I am not the same person; neither my physical condition nor the fatigue let me anymore." A 54- year-old male patient (p11)

In addition, the participants brought up issues around sexual dysfunctioning. This was particularly of concern for relatively younger patients, they were mainly attributed the reduction in sex drive to medications that they were taking for heart condition.

2.2. Feeling of vulnerability

Feeling of vulnerability was a strong sub theme emerged from the interview data. Patients used terms that captured their emotional turmoil and disturbed body image. Terms such as, ‘not the same person’, ‘tinkered heart’, and ‘a broken china dish’ were frequently used by the participants. The feelings of vulnerability and fragility are evident in the following excerpts.

“Well, I’m not the same person anymore... in the past people would repair their broken china dishes, but didn’t use them as they would break easily. They would look after it... I’m just like it (a broken china dish)”. A 70- year- old male patient (p6)

The feeling of susceptibility vulnerability resulted in some patients overreacting to their condition and becoming obsessed about their health. The patients reported being constantly conscious about their health and obsessively caring for themselves. The excessive psychological response to the disease and the burden of self-over- protection seemed to have adverse effects on the patients’ psycho-social well-being and functioning.

“Many things happen around, but I do not get involved. I stay at home... I fear something might happen to me again.” A 67- year-old male patient (p12)

“I’m always conscious about my heart... When I do a bit physically demanding job, I remind myself of my condition. ..I am very cautious not to exceed the limits. In fact, it has made me to take more care of myself. I always have it in my sub-conscious.” A 68- year-old male (p8)

3. Psychological distress as an integral part of the patient’s life

Participants also discussed about living in ongoing anxiety and worry about the future. In some circumstances, they have to give up their normal activities. Participants perceived themselves as being embraced by death. These subthemes are elaborate on further below.

3.1. Persistent anxiety

Despite the feeling of relief and rescued after angioplasty, patients were commonly suffering from feelings of persistent anxiety and unending concern and uncertainty. Patients were anxious about the recurrence of a cardiac event and/or sudden death that could happen anytime. They shared experiences of living in fear and uncertainty, which had impacted their perceived psychological well-being. These feelings became particularly aggravated if they were alone, on a trip, or participated in a physical activity.

I am afraid of exercise that might bring about an event (heart attack)... always concerned... always think if I do a physical activity, I should be waiting for a disaster.” a 70 year-old male patient (p6).

3.2. Giving up

The previous experience of heart attack and fear from future events had adversely affected patients’ lifestyle and their everyday functioning. The fear of uncertainty had significantly limited the patients’ social activities and negatively affected their quality of life. This was particularly evident among older patients.

Well, I am not thinking about getting back to work anymore, I don’t wanna take on serious responsibilities. I feel like something gonna happen... This makes me not to do much.” a 67 year-old male patient (p12).

In addition, the diagnosis of CHD and the subsequent invasive treatments including angioplasty, it seemed, had awakened the consciousness of death in the patients.

“I feel like, that’s it I am done (laughter)” a 54-year-old female patient (p3).

“In the past, I would never think about having a premature death, but now I am getting to realise it is possible.” a 48-year-old male patient (p4).

Some patients believed in having a premature death, and that it was an undeniable fact; yet, they raised more concerns about how their death would affect their loved ones. While elderly patients expressed more concerns about their death having devastating emotional effects on their children, relatively younger patients were more apprehended about the possible impact of their death on the future life of their dependent children.

“I’m always concerned... I might not live a normal life span...have two little girls (cry &silence...)...I doubt if I will live enough to raise them.” a 49 year-old male patient (p5).

Discussion

Understanding patients’ viewpoints and experiences gains increasingly greater recognition, as the new models of care move towards patient-concerted care. This is particularly important in the management of chronic diseases, including CHD; where the success of the provided care is extremely dependent upon the patient’s collaboration with health care professionals and adherence to recommended treatment regimen.²⁵ While a valuable procedure, angioplasty offers limited benefits to patients with established CHD and it does not a cure for atherosclerosis which is the underlying cause of CHD, thus, it is important that patients who undergo angioplasty develop realistic expectations and coherent understanding of the procedure.²⁶⁻²⁸ Overall, there is limited evidence on the experiences of patients post angioplasty. This is the first study of its type in Iran, which reports on Iranian patients’ lived experiences after angioplasty.

In this study, patients reported going through a range of positive and negative experiences after angioplasty. Relief from cardiac symptoms was perceived as a positive outcome, which was highly appreciated by the patients. Most patients perceived angioplasty as lifesaving, giving them a positive feeling of rebirth and an opportunity to redefine life goals and live a more meaningful life. Patients had gained knowledge about CHD and the associated risk factors through interacting with health care professionals and other patients while waiting for angioplasty. This had raised the patients’ awareness of their personal risk factors, and the availability of risk reduction programs. An increased motivation for secondary prevention has been widely reported

by survivors of potentially life-threatening events.^{29,30} Likewise, Bergman et al. (2003) found that patients after myocardial infarction had become motivated to find strategies to help them live healthier, and reported behaviour changes such as, quitting smoking, improving diet and stressors.³¹ The awareness of the need for change is a key element in behaviour change models and should be seen by the health care providers as a window opportunity to induce and support patient behaviour change.³² While a wake-up call for some patients, angioplasty, otherwise, was conceived as a complete cure by the participants. This was particularly evident among patients whose symptoms were fully resolved after the procedure. This finding is consistent with the results of Austin et al. study (2009) which reported that patients experienced substantial emotional shock after angioplasty, because of a mismatch between their expectations and the reality. The patients expected that angioplasty would cure their heart disease and were not ready to admit their disease to be a chronic condition.²⁶ This brings an important implication for health care professionals to accurately converse with the patients about the capacity of the procedure to benefit their heart disease and discuss with the patients about their personal risk. Although understanding of risk cannot always lead to positive behaviour change, accurate perception of one's personal risk helps motivate the patient to initiate positive lifestyle changes in order to reduce future cardiac events.^{20,33} In this study, many patients mentioned experiencing negative psychological momentum after coronary angioplasty, including feeling of loss, a sense of vulnerability, persistent anxiety, living in an ongoing uncertainty and becoming more conscious about death. Patients reported feelings of a significant physical and psychological loss, which had adversely affected their overall wellbeing and confidence to become engaged in risk reducing behaviours, such as participating in physical activities. The relationship between mood and participation in risk reduction programs have been well documented in the literature.^{8,25} The

persistent feelings of uncertainty, a sense of vulnerability, and lost autonomy also had adverse effects on the patients' day to day life, negatively affecting their physical, social, role, and emotional functionings. These negative experiences support the increased level of depression reported in patients 6-8 months post angioplasty. In addition, whilst past research shows overall improvements in patients' health related quality of life after coronary angioplasty, the benefits have been mainly attributed to improved physical functioning and alleviation of cardiac symptoms.^{34,35} The extent to which angioplasty affects various aspects of patients' life needs to be further investigated, particularly in different socio-cultural contexts. These information can inform development of strategies that help promote overall health and wellbeing of patients after angioplasty.¹³ There is little data from Iran, with a particular study reporting reduced quality of life in Iranian patients after angioplasty, a finding that contradicts the broader literature.³⁶ It is, however, noted that coronary angioplasty typically follows a cardiac event. It is, therefore, difficult to attribute these patient experiences to angioplasty only; rather they should be understood as a combined impact of CHD diagnosis, symptoms, and medical interventions, such as angioplasty.^{25,37,38} The adverse patient experiences, found in this study, provide further support for the need for psychological assessment of patients with cardiac disease. Although mental health has been increasingly integrated into many cardiac rehabilitation programs,²⁵ the available data from Iran demonstrate that patients after angioplasty are not often referred to a cardiac rehabilitation program.³⁹ Thus, many patients are likely miss the opportunity to discuss their psychosocial disturbances with the health professionals, or participate in exercise training, that has proven benefits to patients with cardiac disease. Cardiologists, general practitioners, and cardiac nurses need to be conscious about the psychosocial impact of CHD and the associated treatments on patients and work collaboratively to identify and manage these adverse patient

outcomes. The negative psychological distress has been linked to patients' lack of adherence to medication regimen and involvement in risk reduction activities.²⁵ Ongoing monitoring and screening of patients for psychological distress and offering supportive interventions such as counselling and treatment may help the patients to effectively cope with various aspects of their disease, develop more realistic goals for their life and take actions to reduce their future risk.^{25,40} This study focused only on patients' experiences after coronary angioplasty, future research is recommended to study patients' reaction to angioplasty when it is used for blood vessels other than coronary arteries.

Conclusion

Patients in this study experienced both positive and negative changes after angioplasty. While appreciating angioplasty as a lifesaving procedure and a wake-up call for adopting a healthier lifestyle, many patients reported suffering from emotional and psychological distress. It is important that health professions be aware of the impact of cardiac disease and the associated interventions on patients' everyday life and help the patients to effectively cope with their disease. Further, patient motivation for behaviour change after angioplasty should be seen as a window of opportunity to support risk reduction behaviours in cardiac patients.

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