



Experiences of Acute Myocardial Infarction Survivors: A Qualitative Research

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Abstract

Background: Cardiovascular diseases are among one the leading causes of death worldwide. The advancements in technology have improved survival rates in acute myocardial infarction patients. Survivors of acute myocardial infarction patients have to face many challenges to adapt to new situations. In-depth understanding of their lived experiences is pivotal for designing tailored made educational programme for their prevention and rehabilitation. There are limited researches available and inadequate attention has been paid to this issue. Therefore, this paper will evaluate personal lived experiences and perspectives of acute myocardial infarction survivors.

Methods: Qualitative Literature Review from DELNET, MEDLINE, CINHAL and EBESCO electronic databases. Eighteen articles, 2002-2018, met the inclusion criteria. To identify themes constant comparative method was used.

Results: Six key themes were identified: knowledge of causes (risk factors) of the disease, responses led by the event, adopting lifestyle changes, family and social support, future concerns and insecurities and expression of needs. Many survivors did not have adequate knowledge pertaining to causes and risk factors, warning signs and symptoms of acute myocardial infarction. Participants found changing one's lifestyle is difficult and require constant support from family and health care providers.

Conclusion: Community awareness campaigns are required to be increased by health care providers. Patients should be educated about the risk factors, signs, symptoms and appropriate changes in lifestyle during their routine checkup visits. Acute myocardial survivors need time-sensitive education especially during and after their hospitalization. Patients need constant support from family and health care providers to combat challenges during their recovery process. Health care providers can utilize this information to develop teaching programmes and to assist in care of acute myocardial infarction survivors.

Keywords

Myocardial infarction; Lifestyle changes; Survivors; Teaching programme.

Introduction

Cardiovascular diseases (CVDs), especially Coronary Heart Disease (CHD) is one of the leading causes of morbidity and mortality throughout the world[1]. It has assumed epidemic proportions worldwide. CHD global fatality was estimated to be 17.5 million/year, 31% of deaths - 75% in low- and middle-income countries[2]. According to WHO 7.4 million deaths were due to coronary heart diseases in 2015. In contrast to developed countries mortality from CVD is increasing in developing countries. Eighty-two percent of deaths in low and middle-income countries are accountable for CVD. It is estimated that 23.6 million people will die from CVDs by 2030[1].

The international number one killer disease (CVD) is largely a product of unhealthy lifestyle transformations in terms of urbanization, globalization and industrialization[3]. Acute Myocardial Infarction(AMI) is one of the manifestations of CHD that effects large number of people. In India in all age specific groups, prevalence of MI is higher in men than in women[4]. India is currently experiencing high AMI morbidity and mortality rates from AMI. In India, out of all deaths nearly 24.8% deaths are due to cardiovascular diseases as estimated by Global Burden of Disease Study (2010)[5]. The prevalence of CHD in rural India is 3%-4%, whereas it is 8%-10% in urban areas[6,7] by, 2020, 111% rise in deaths due to CVDs has been predicted in India[8].

Advancements in medical technology and treatment modalities have contributed towards improvement of survival rates of patients with AMI. Survivors of AMI face myriad of challenges in a way to adopt new lifestyle. Health care providers have also designed specific programs to help AMI survivors to overcome the negative consequences of the event. These programs aim to improve health outcomes and prevent other cardiac events in future.

Understanding the responses and lived experiences of AMI survivors is an essential requirement for designing and improving tailor made effective cardiac rehabilitation programs. Qualitative data provide a strong basis for understating personal and lived experiences of AMI survivors. It allows the examination of the behaviour, experiences and characteristics of the study participants. Therefore, the need and purpose of this qualitative literature review is to explore AMI survivors' perspectives as their personalized experiences. This data will be useful for health care providers to develop programs to decrease incidence of AMIs and to develop effective and appropriate cardiac rehabilitation plans. Personalized patient's plan will contribute to improve the survivors' post AMI experience.

Methods

Search strategy

Electronic databases DELNET, MEDLINE, CINHAL and EBESCO were searched for related qualitative literature, using the following keywords, qualitative research, myocardial infarction, lifestyle changes, patient's perception, survivor's needs. The search was restricted to articles published between 2002-2018. It was assumed that newer findings would highlight improved awareness about CVD's, in view of the international efforts to improve CVD outcomes, with subsequent needs for support for survivors.

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Inclusion criteria

Studies meeting inclusion criteria were included: they were full texted articles; published in peer reviewed journals; qualitative research methodology articles, articles on patients’ experiences of AML, survivors of AMI. Quantitative studies and integrative literature reviews and studies which focused on patients’ experiences on CVD in general were excluded. The flow of task during the current literature review was organized according to Polit and Beck’s task flow plan[9].

The primary search identified 80 potential articles. The abstract of each article was screened for appropriateness, which resulted in 20 articles that appeared to satisfy the inclusion criteria. However, 3 of those articles were rejected after in depth analysis. Two additional articles were included after screening the reference list of the selected articles. Finally, 19 articles met the inclusion criteria (Figure 1).

Since, this is an integrative literature review; the authors needed no institutional review boards’ approval for the same.

Data analysis

After reviewing data of each primary source, it was reduced to a single page. Following this all the primary sources were organized in a table to facilitate ordering, coding, categorizing and summarizing the data (Table 1). In the next step of data analysis, the themes from each individual source were ordered and sorted to identify common themes that reflected all the primary sources.

Strauss and Corbin’s constant comparative method was used for data comparison to assemble similar findings from every primary source under common themes[10]. This technique identified six key themes. The results were presented in a manner to help readers to understand the perspectives of patients about their post AMI experiences.

Results

Among the 18 qualitative studies, eight authors reported that they used qualitative tradition to conduct their studies: four studies used a phenomenological approach[11-13] two used the grounded theory approach[13] one was a descriptive qualitative stud and one was ethnographic study[12]. Purposive sampling was used in all studies and the two grounded theory studies incorporated theoretical sampling for representation of themes[13]. 10 studies included more males than females in the sample, four studies included only female’s population[11] two studies only used male participants two studies included more women than men in sample(Table 1).

Audio-tape recording was used for data recording in all the studies[14] studies collected data through semi-structured

interviews[12,14-16] three through un-structured interviews[11,13] and two used the focus group technique[17,18]. Data was analyzed manually according to traditional qualitative analysis technique.

Six key themes were identified: anticipation about causes (risk factors) of disease, responses related to the event, adopting lifestyle changes, family and social support, future concerns and insecurities and expression of needs.

Knowledge of causes (risk factors) of disease

Majority of participants stated that stress has become part of their daily living and they identified stress as the major root source of AML[14,17]. They suffered from physical and physiological stress in all phases of life. However, few participants believed that family predisposition[14,15]. Unhealthy lifestyle, neglecting regular check-ups[11-13] and follow ups and destiny 15 were part of causes of their AMIs. “Well, I live more consciously, indeed. Yes, well, I. How can I say it? I think more often about situations and I try to enjoy my life.”

Some participants assumed that they were not at a risk of having AMI and disease would not affect them.13 In one study participants believed that AMI only affected older population. In another study female participants did not consider themselves susceptible to AMI even those who had confirmed risk factors[16]. “Otherwise, I wouldn’t ride my bicycle or quit smoking. To be honest, if I didn’t gain something positive, I wouldn’t do it.”

Several participants believed that AMI would be preceded by warning sign and will give them time to change their lifestyle[14]. Furthermore, some participants were convinced by perception of their friends and families that AMI victims will have another second, third or even a fourth recurrent AMI. They assumed that their friends, neighbours who previously suffered from AMI were good sources of information[15] Although few participants could identify some of the risk factors of AMI, additional education and information is much needed to educate the public regarding risk factors of AMI and the methods to reduce the modifiable risk factors.

Responses related to the event

According to the participants responses related to the event were affected by the various cause of AMI. They attributed their symptoms to ageing process, or to less serious causes like muscular pain, indigestion[19-25]. However, participants who previously had myocardial infarction sought medical attention sooner than other participants[26] It is clearly established that additional education will certainly help people increase awareness of AMI symptoms and timely response, so that they seek medical attention on time and as

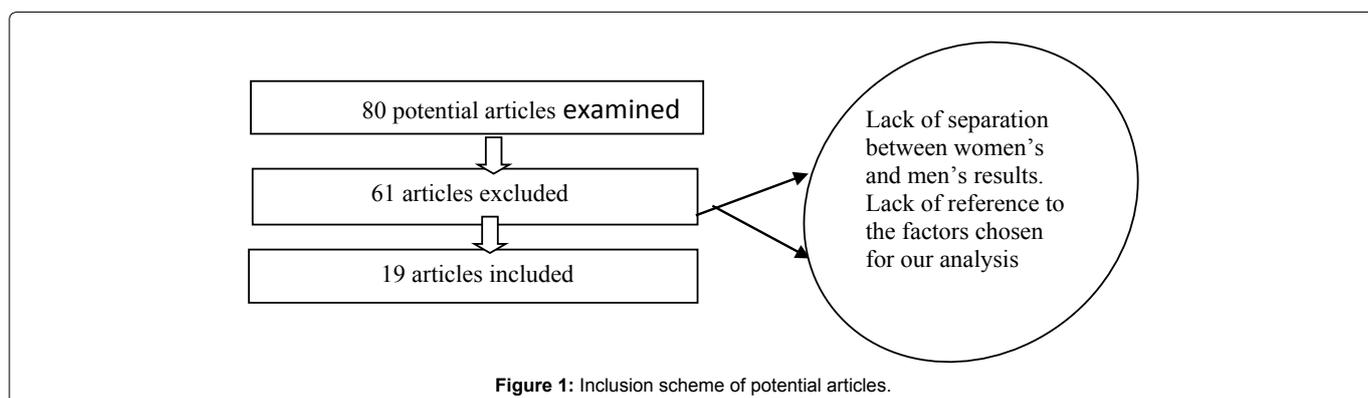


Figure 1: Inclusion scheme of potential articles.

Table 1: Authors Name, Sample size, Qualitative Research Methodology, Data Collection Methods and Data Analysis

| Author/Country | n | Gender/Age (Mean) | Sampling Criteria | Research Methodology | Data Collection Method | Data Analysis |
|-----------------------------------|----|----------------------|---------------------------|----------------------------|----------------------------|---|
| Kerr et al. (2002) Canada | 7 | 7F 76-86yrs | Purposive | Heideggerian Phenomenology | Unstructured Interviews | Interpretive process of hermeneutic analysis |
| Webster et al.(2002)UK | 35 | 25M/10F 65yrs | Purposive | Ethnography | Semi structured Interviews | Thematic Analysis |
| Bergan et al. (2003) Sweden | 13 | 7M/ 6F 38-75yrs | Purposive and Theoretical | Grounded Theory | Unstructured Interviews | Grounded theory analysis technique |
| Jensen et al. (2003)Denmark | 30 | 22M/ 8F 41-80yrs | Purposive | Not Specified | Semi structured Interviews | Content analysis |
| Clark(2003) UK | 14 | 8M/6F 36-86yrs | Purposive | Not Specified | Semi structured Interviews | With specific focus on the language |
| Svedlund et al. (2004) Sweden | 9 | 9F 47-57yrs | Purposive | Hermeneutic Phenomenology | Semi structured Interviews | Hermeneutic phenomenological mode of analysis |
| Hanssen et al. (2005) Norway | 14 | 12M/2F 42-69 yrs | Purposive | Not Specified | Three focus groups | QSR NS software, Content analysis |
| Gregory et al(2005) Scotland | 53 | 35M/18W | Purposive | Not Specified | Focus group discussion | Thematic analysis |
| Brink et al. (2006) Sweden | 21 | 10M/11F 48-83 yrs | Purposive and Theoretical | Grounded Theory | Unstructured Interviews | Grounded theory analysis technique |
| Condon et al. (2006) Ireland | 10 | 9M/1F 38-75yrs | Purposive | Descriptive Qualitative | Semi structured Interviews | Thematic Analysis |
| MacInnes (2006) UK | 10 | 10F 72yrs | Purposive | Not Specified | Semi structured Interviews | Thematic analysis |
| Johansson et al.(2007) Sweden | 15 | 9M/6F 41-83 yrs | Purposive | Phenomenology | Semi structured Interviews | Phenomenological method of analysis |
| Albarran et al.(2007) UK | 12 | 12F 47-57yrs | Purposive | Not Specified | Semi structured Interviews | Thematic Analysis |
| Kristofferzon et al.(2007) Sweden | 39 | 19M/20F 47-88yrs | Purposive | Not Specified | Semi structured Interviews | Content analysis |
| Moonaghi et al(2014) Iran | 18 | 12M/6W 45-80yrs | Purposive | Not Specified | Semi structured Interviews | Content analysis |
| Christopher et al(2017) UK | 10 | Under 45 | Purposive | Phenomenology | Semi structured Interviews | Interpretative phenomenological analysis |
| Sharovsky et al(2017) Brazil | 8 | 8M 48-70yrs | Purposive | Not Specified | Semi structured Interviews | Content analysis |
| Nicolai et al.(2018) Germany | 21 | 13M/8F | Purposive | Not Specified | Semi structured Interviews | Content analysis |

and when necessary[17]. “I have a heart rate monitor, and I always look for it when I get out of breath, so that I regulate breathing again using the breathing technique and take a break when I notice that it doesn’t work, when I notice that I can’t breathe anymore, simply taking a break...”

Adopting lifestyle changes

Lifestyle change was most difficult challenge experienced by the patients. It was tougher than expected by the participants[14,24,25]. Some participants reported that fear, uncertainty and lack of knowledge made lifestyle changes more difficult. Few patients were worried that physical activity will do more harm and may lead to recurrent AMI attack[22]. On the other had some participants recognized the need to change their lifestyle in order to return to the activities they preferred to do before AMI attack[25,26]. Some participants believed that lifestyle change was limited to their efforts to live within their capabilities. “I have to go on the cross-trainer for 40 or 50 minutes so that I have exercised today... You have to go at least 3000 steps each day... at least 3000 steps, that’s a rule.”

Many participants considered surviving AMI as warning sign of impending death, which motivated them to make healthy lifestyle choices[14,17]. For instance, some participants improved their nutritional habits, quit smoking and alcohol, meditation to decrease stress, working hour’s reductions, engaging in recreational

activities[15]. However, some participants performed strenuous activities too early which caused discomfort and discouraged them[19,20]. Tailor made plans and individualized counselling may help survivors to develop appropriate lifestyle changes.

Family and social support

Majority of participants were satisfied with the professional support and treatment they received during hospitalization[24] However, few of them stated that they have received better care and support after their discharge[25] Most of the participants did not identify nurses as a source of information. In contrast, one group of participants identified nurses as major source of information[24].

The most stressful period for participants was the early period after being discharged. Patients needed more care and support during that time. Participants appreciated and valued the care and support of their family members in recovery process[14]. However, high stress among families related to their illness lead to hopelessness, frustrations in patients[11,13]. Health care programs certainly need to provide additional support in early days and post discharge period. They also need to help and counsel family members/caregivers to learn appropriate support modalities. “Fourteen days after discharge from CR, the family and the patient will be thrown into the deep end. ‘And now see how you get along.’ And that should not actually be.”

Future concerns and insecurities

Many participants reported that they were keen to return to their previous lifestyle after surviving AMI[14]. Unfortunately, other participants were pessimistic about future, they were fearful of having another attack of AMI and its consequences[15]. They had a fear of death and saw life as fragile. Additionally, participants also experienced feeling of helplessness, powerlessness and uncertainty regarding future[25,26]. They believed that AMI has ended their productive and active life and some started preparing themselves for death. There was wide range of concerns for the future. Positive reinforcement, support and proper information could help to allay fears and help them to tackle the challenges properly.

Expression of needs

Participants expressed different needs which could be sorted in three phases: during hospitalization, discharge and follow up. Participants received general information like risk factors, healthy lifestyles during hospitalization. However, they could not adapt during that period due to lack of knowledge about how to imply such changes. Patients were not prepared to hear the information they received, as they were overwhelmed emotionally. They also reported lack of directions from health professionals related to personalized plans and implementation of instructions[11,12,24].

All patients expressed the need for more professional support and information during discharge process. They needed information on how to deal with chest pain, manage stress, medications, nutritional guidance, healthy changes in lifestyles and cardiac rehabilitation programs.

Majority of participants felt need for better communication with health care providers during follow up period, after they settled back in their daily life[27,28]. Since participants had specific needs depending on their phase of recovery, health care professionals need to plan and provide time-sensitive educational teachings to patients when they are ready for it. "Please don't ask me who said what in what context. Everything faded away. Let me think about it. I can't remember having had a special consultation. But I did not attend cardiac rehabilitation totally ignorant"

Discussion

The perspectives of people with heart disease about their knowledge on the nature and long-term support they need not have been directly investigated till date; although it is recognized by all that they need long term support. To identify the desires and lived experiences expressed by participants is the main thrust of this analysis. This analysis includes aspects of long-term monitoring and support the survivor needs as cardiac rehabilitation plan.

This qualitative literature review provided rich and fruitful data to explore AMI survivors' perspective and their personalized experiences. On one hand survivors were happy that they had survived, on the other hand they had to face a myriad of challenges as they worked to re-establish their lives, post AMI. Most of the participants lacked the ability to connect AMI with risk factors. Only few participants expressed dealing with modifiable risk factors to improve their quality of life. Other researchers also validated these concerns[29-32]. Health care professionals need to plan community awareness campaigns to provide education about risk factors of the disease. Adoption of healthy lifestyle can modify risk factors like obesity, smoking, high blood pressure, stress, high cholesterol level, physical

inactivity. The information related to healthy lifestyle can motivate people at risk to adopt lifestyle changes post myocardial infarction.

Participants who had experienced AMI were unable to recognize cardiac symptoms and attributed them to other causes. These findings were confirmed in study where AMI victims who delayed treatment and medical help attributed their symptoms to muscle pain, indigestion, flu like illness and breathing problems[33] Studies have also found that women are less likely to recognize their susceptibility to AMI. These findings clearly indicate the need for continuous education for public, especially for women about the symptoms and to take proper steps while encountering these symptoms.

Survivors showed satisfaction in terms of role of family throughout their recovery process, but they were not completely pleased with the support from health care professionals. Other researchers also have validated these findings[34-36]. Health care providers should involve patients' families in educational campaigns and programs. This will orient and prepare families for managing survivors need appropriately and effectively. Discharge plan of patient should incorporate follow up plan, expectation of patients, professional resources as well. Moreover, additional support can be provided to survivors with the help of community health nurses by linking them with specialized community institutions. Nurses can also provide follow up information about the survivors. In India, nurses have the highest direct contact with the people. They could also be pioneers in health promotion and education programs.

Facing an AMI changed the participants' perspective towards life. Patients can be motivated to make appropriate lifestyle changes by using their positive feelings. Their pessimistic views can be remoulded by using appropriate education and rehabilitation program to foster lifestyle changes.

Participants' needed appropriate information regarding hospitalization, post discharge and during follow up period. These phases are time sensitive and require different information and professional support to go through each phase comfortably. AMI survivors needed more professional support to resolve many issues like pain, fatigue, managing stress. They also required accurate information related to medications, nutritional guidance, and rehabilitation programs.

Limitations

Many journal articles are not available as full text, which limits access to potentially differing information.

Implications and Recommendations

Cardiac disease prevention and health promotion should be a priority for policy makers and clinicians as CVD is one of the leading causes of death globally. Additionally, health education related to cardiac diseases as well the proper management of responses should be included as public education campaigns. As the population of survivors from cardiac events increases, appropriate educational and rehabilitation program are required to be framed to meet their needs.

Nurses are the best resource person to help in making improvement in survivors' life. They can bridge the gap by providing information between survivors and information and planning educational campaigns. Furthermore, post discharge professional support should be provided to survivors with the utmost importance to the survivors needs.

Conclusion

It is important that patient's social environment should be considered as it can facilitate and hinder lifestyle changes in number of ways. This analysis has identified the need for personalized information regarding causes of illness, risk factors for illness and lifestyle changes. Finally, it is revealed that a one-size-fits-all approach is not applicable. Tailored based education has capacity to increase the perceived.

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