IMPORTANCE OF SELF – MANAGEMENT OF PATIENTS WITH CARDIOVASCULAR DISEASE ON HEALTH-RELATED QUALITY OF LIFE

Vilma Rastenienė¹, Aurelija Blaževičienė²

¹Department of Nursing, Faculty of Medicine, Kaunas University of Applied Science,  
²Department of Nursing and Care, Faculty of Nursing, Medical Academy,  
Lithuanian University of Health Sciences

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Summary
The aim of the paper was to find out what is known about how do people effectively manage their illness, heart and cardiovascular diseases, themselves in the advanced stages of their disease.

Material and Methods. An integrative review.

Results. Promotion of self-management in patients with a viable health care strategy in order to maintain health and prevent exacerbations. Optimal treatment of care, patients' self-management promotion reduces the financial costs of treating patients. Increasing the patient’s ability to achieve a healthy lifestyle, the application of medical recommendations to recognize the symptoms and signs of consultations with health care professionals can reduce repeated hospitalization rates. For health care professionals self-management education promotion is a great strategy to improve patients’ quality of life.

Conclusions. Self management strategies for people with heart and cardiovascular disease should be related to helping them cope with pain and debilitating symptoms, coping emotionally and adjusting psychosocially to their illness, and alleviating distress associated with symptoms that can not easily be improved. Examples of good practice should be formally evaluated.

Introduction
Lithuanian population structure for causes of death remains unchanged for many years. Cardiovascular disease (CVD) in Lithuania, as well as throughout Europe, has been and remains the main cause of death. The mortality of cardiovascular diseases ranks first among all deaths. CVD cover a range of diseases associated with cardiovascular diseases, including coronary heart disease (CHD) and cerebrovascular disease. From these 53 diseases of the World Health Organization European Region die every year from 4.35 million, in the European Union (EU) countries - 1.9 million people. In Lithuania cardiovascular disease kills almost twice more residents than the average of the old EU countries - Lithuania male and female standardized death rates from cardiovascular disease rates are among the highest in the EU [1]. Contemporary modern medical technology should be directed not only to the treatment options, symptom reduction, but the stability of the body functions and quality of life. Health-related quality of life is considered as the most important result of chronic diseases in the treatment process, defining the physical, emotional and social well-being [2].

According to the Centers for Disease Control, in the U.S. alone, chronic diseases account for nearly 75 percent of aggregate healthcare spending, or an estimated $5300 per person annually [3].

Patients with chronic diseases make decisions on a daily basis related to the management of the disease. This reality presents a new paradigm for chronic disease management: a professional patient care partnership-joint and self-management training. Self-management complements the traditional patient education, with a view to a high level of quality of life in chronic diseases. The traditional patient education provides information and technical skills of the patient, it is self-management science that teaches self control skills. Self-management central concept is directed to reach the desired goal independently. Self-efficacy is increased when patients successfully solve the problems independently. Clinic research evidence shows that 1) self-management training programs are more effective than just providing information in order to improve the clinical outcome; 2) in certain cir-
cumstances, the self-management improves the performance and can reduce costs. And (3) the initial study brings together patients with chronic diseases, to improve results and reduce costs. Self-management can quickly become an integral part of high-quality primary care [4]. Koch et al. (2004) identified three self-management types: medical model, in which patients receive professional help in managing their health, follow the instructions; cooperation with healthcare professionals model, in which patients are actively involved in facilitating the support level selection; and self-model, which includes the patient’s own activities [5].

**Methods**

An integrative review was chosen because it allowed the inclusion of studies with diverse methodologies (for example, qualitative and quantitative research) in the same review. Integrative reviews have the potential to generate a comprehensive understanding, based on separate research findings of problems related to self-management. The searches were limited to studies published during the period 2000-2020. The integrative review was split into the following phases: problem identification, literature search, data evaluation, data analysis and presentation of the results.

**Search strategy.** The search strategy combined MeSH headings and free search terms around self-management, heart and cardiovascular diseases, quality of life, patient centered. Although only English papers were extracted, no geographical or methodological limitations were placed on the literature. This enabled the researchers to encapsulate as broad a picture as possible of the concept of self-management in cardiovascular diseases. The majority of this were found in the health care databases PubMed, Medline, Cinahl, Google Scholar. Google Scholar however proved a useful adjunct to the traditional databases. The majoriy of grey literature was sourced via the internet using the search engine Google, but did not fit the inclusion criteria. Titles and abstracts of articles were reviewed, and studies were only included if they met the inclusion criteria outlined. Key, relevant web sites such as the Department of Health heart and cardiovascular diseases programme, Preventing Disease and death worldwide, ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure were also searched. The search strategies yielded 54 articles. The agreement on the reviewers initial assessment on whether to include or exclude the articles these articles was 86%.

**Aim and research questions.** The review specifically aimed to answer the following questions:

1. What self-management strategies enable patients to engage with their heart and cardiovascular diseases care?
2. How can self-management in heart and cardiovascular diseases be improved? (Table 1).

**Results**

What self-management strategies enable patients to engage with their heart and cardiovascular diseases care.

Quality of life is an important measure of disease affecting the treatment efficiency of human life psychological states. Cardiovascular diseases in clinical practice involves various aspects of quality of life: angina, heart failure symptoms reduction, limited physical activity promotion, physical weakness reduction of psychological stress associated with chronic stress reduction.

The Institute of Medicine has identified 6 domains of quality of care, including safety, effectiveness, patient-centered care, timely care, efficiency, and equitable care. According to the Medicare Patient Safety Monitoring System, between 2005 and 2011, adverse event rates in hospitalized patients declined for both myocardial infarction (from 5.0% to 3.7%) and congestive heart failure (from 3.7% to 2.7%) [6] (Table 2).

Table 1. Inclusion Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rationale</th>
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<td>Published between 2000-2020</td>
<td>It was necessary to put time limits on the review. It was also determined that the majority of self management research in heart and cardiovascular diseases has been published during this period.</td>
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<td>Self management behaviours used by patients with heart and cardiovascular diseases</td>
<td>The key focus of the review was to find out what self management strategies patients used in heart and cardiovascular diseases care.</td>
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<td>Self management interventions related to heart and cardiovascular diseases</td>
<td>The literature on self management interventions may help to improve care by changing practice.</td>
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<td>Interventions or other studies with family members or health professionals were included.</td>
<td>Patient experience is the focus of the review and findings.</td>
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<td>Englich and Lithuanian text</td>
<td>Text other than Englich and Lithuanian was excluded.</td>
</tr>
<tr>
<td>Adults only</td>
<td>Heart and cardiovascular diseases care issues affecting children are different.</td>
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Patients with cardiovascular disease are faced with the progress of the disease, treatment of uncertainty, uncertainty. According to research carried out, we can say that self-management treatment in hospital shortens the time set for the results of patient-centered care, avoid ambiguity and complexity of the health care professionals and patient cooperation [16]. Regular monitoring reduces symptoms and prevent hospitalization, acute exacerbation of asthma symptoms, allows early diagnosis of heart failure complications. Patients with moderate levels of heart failure self-management is an important factor in the daily peripheral edema, body weight, fatigue, shortness of breath normal physical activity during the night, and during exercise monitoring [17].

Health-related quality of life can be defined as a medical condition, a continuum, a continuous sequence comprising the patient’s biological, physiological factors, symptoms, function, general health perception of well-being.

How can self-management in heart and cardiovascular

Table 2. Study Features Included in the Systemic Treatment of Patients with Heart Failure Self-Managment Assessment of Interventions

<table>
<thead>
<tr>
<th>Citation</th>
<th>Intervention</th>
<th>Description of the study population</th>
<th>Assessment methods</th>
<th>Result</th>
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<tr>
<td>Gonseth J, Guallar-Castillon P, Banegas JR, Rodríguez-Artalejo F, 2004 [7]</td>
<td>Computerised search of MEDLINE (1966 to 31 August 2003) and EMBASE (1966 to 31 August 2003). The Cochrane Library was also searched, and reference lists of review articles on the topic, and of all relevant studies identified, were scanned.</td>
<td>Search and selection of studies, data-extraction using standardised forms, and assessment of study quality was performed by two reviewers.</td>
<td>The end-point was the proportion of persons who underwent hospital re-admission, and pooled relative risks (RR) were used to summarise the effectiveness of DMPs. The meta-analysis included 54 articles, comprising 27 randomised and 27 non-randomised controlled studies.</td>
<td>Disease management programmes are effective at reducing re-admissions among elderly patients with heart failure (HF). Their effectiveness is close to that observed in clinical trials evaluating drugs for HF, such as angiotensin-converting enzyme inhibitors, beta-blockers or digoxin.</td>
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<td>Roccaforte R, Demers C, Baldassarre F, Teo KK, Yusuf S, 2005 [8]</td>
<td>Eligible studies were located through a systematic literature search.</td>
<td>Only randomised controlled trials (RCTs), enrolling HF patients, and allocating them to DMP or usual care (UC), were included.</td>
<td>Information on study setting and design, participants' characteristics and interventions tested were collected. A study quality assessment was performed. Main clinical outcomes assessed were: all-cause mortality and (re)hospitalisations, HF-related (re)hospitalisations and mortality.</td>
<td>Disease management programmes (DMP) have been advocated to improve long term outcomes of heart failure (HF) patients. Thirty-three RCTs were included. Mortality was significantly reduced All-cause and HF-related hospitalisation rates were also significantly reduced: OR = 0.76 (CI 0.69-0.94, p&lt;0.00001) and OR = 0.58 (CI 0.50-0.67, p&lt;0.00001), respectively.</td>
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<td>Jaarsma T, et al. 2009 [9]</td>
<td>Monitored 36 cases of 3 months, patients in the exercises at home.</td>
<td>Heart failure HF - ACTION study observed 2331 middle-aged (average age 59 years) of stable patients with mild or moderate symptoms (NYHA class II, 63 per cent., And Class III 35 per cent.) And IF ≤35%.</td>
<td>The study lasted 30 months. Observation method</td>
<td>This approach is aimed at improving the quality of life of patients and their families facing the problems associated with refractory symptomatic HF, through the prevention and relief of suffering by means of early identification and treatment of physical and psychological symptoms and attention to social and spiritual needs.</td>
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<td>Årestedt, Kristofer Brittin-Inger Saveman, Peter Johansson, and Kerstin Blomqvist, 2013 [10]</td>
<td>Analyzed patients' quality of life associated with age, gender, lifestyle habits, financial situation, disease severity using quality of life questionnaires</td>
<td>Patients’ HRQoL was measured with the Minnesota Living with Heart Failure Questionnaire and the Short Form-12 Health Survey Questionnaire. The Interview Schedule for Social Interaction measured social support. Data were analysed with descriptive statistics, repeated-measure ANOVA, and multiple linear regression analyses with robust standard errors.</td>
<td>Data were collected in a sample of 349 patients (≥65 years) with chronic heart failure.</td>
<td>Social support was generally rated high, although being a man, living alone, perceiving a problematic financial situation, and high disease severity (NYHA) were associated with lower levels of social support. Age was not associated with social support. Social support was generally associated with HRQoL, in particular the emotional dimensions.</td>
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<td>Authors</td>
<td>Description</td>
<td>Methods</td>
<td>Results/Findings</td>
<td>Conclusions</td>
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<td>Shively, Martha J., et al., 2013 [11]</td>
<td>Few studies have examined whether chronic heart failure (HF) outcomes can be improved by increasing patient engagement (known as activation) in care and capabilities for self-care management. The objective was to determine the efficacy of a patient activation intervention compared with usual care on activation, self-care management, hospitalizations, and emergency department visits in patients with HF.</td>
<td>84 participants were stratified by activation level and randomly assigned to usual care (n = 41) or usual care plus the intervention (n = 43).</td>
<td>Participants were primarily male (99%), were white (77%), and had New York Heart Association III stage (52%). The mean (SD) age was 66 (11) years, and 71% reported 3 or more comorbidities. The intervention group compared with the usual care group showed a significant increase in activation/PAM scores from baseline to 6 months.</td>
<td>Although the baseline MOS Specific Adherence Scale mean was lower in the intervention group, results showed a significant group-by-time effect with the intervention group improving more over time. Participants in the intervention group had fewer hospitalizations compared with the usual care group when the baseline activation/PAM level was low or high. This study supports the importance of targeted interventions to improve patient activation or engagement in HF care. Further work is needed related to HF self-management measurement and outcomes.</td>
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<td>Clark, Alexander M and Hong-Gu He, 2013 [12]</td>
<td>The study is a systematic review of randomized controlled trials. The following data sources were used: MEDLINE (1966-11/2005), EMBASE (1980-11/2005), CINAHL (1982-11/2005), the ACP Journal Club database (to 11/2005), the Cochrane Central Trial Registry and the Cochrane Database of Systematic Reviews (to 11/2005); article reference lists; and experts in the field.</td>
<td>Included randomized controlled trials of self-management interventions that enrolled patients 18 years of age or older who were diagnosed with heart failure. The primary outcomes of interest were all-cause hospital readmissions, hospital readmissions due to heart failure, and mortality. Secondary outcomes were compliance with treatment and quality of life scores. Three reviewers independently assessed the quality of each study and abstracted the results.</td>
<td>Used a fixed effects model to quantitatively synthesize results. From 671 citations that were identified, 6 randomized trials with 857 patients were included in the review. Self-management decreased all-cause hospital readmissions (OR 0.59; 95% confidence interval (CI) 0.44 to 0.80, P = 0.001) and heart failure readmissions (OR 0.44; 95% CI 0.27 to 0.71, P = 0.001).</td>
<td>Self-management programs targeted for patients with heart failure decrease overall hospital readmissions and readmissions for heart failure.</td>
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<td>Wenru Wang, Ying Lau, Aloysius Chow, David R Thompson and Hong-Gu He, 2014 [13]</td>
<td>This study aimed to explore and identify the relationship between health-related quality of life (HRQoL) and perceived social support among Chinese patients with coronary heart disease (CHD) in mainland China.</td>
<td>A descriptive correlational study was conducted with a convenience sample of 200 Chinese patients with CHD recruited from the cardiac outpatient departments of two university-affiliated hospitals in Xi’an, China.</td>
<td>The Chinese Mandarin versions of the Short-form 36-item health survey (CM:SF-36) and the Medical Outcomes Study Social Support Survey (CM:MOS-SSS) were administered to assess HRQoL and perceived social support.</td>
<td>Multiple regression analyses identified four significant predictors of deteriorated physical health (increasing age, co-morbidity with heart failure or hypertension, and smoking status) and two significant predictors of poor mental health (co-morbidity with heart failure and perceived social support). Health status and social support in Chinese people with CHD should be routinely assessed and, where feasible, addressed through appropriate individually tailored interventions.</td>
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<td>Piette, John D., et al., 2015 [14]</td>
<td>State-of-the-art review and literature synthesis of peer-reviewed and gray literature published since 2004.</td>
<td>The review prioritized randomized trials and studies focused on cardiovascular diseases and risk factors, but included other reports when they represented the best available evidence.</td>
<td>The search emphasized reports on the potential benefits of mHealth interventions implemented in low- and middle-income countries.</td>
<td>Interactive voice response and short message service interventions can improve cardiovascular preventive care in developed countries by addressing risk factors including weight, smoking, and physical activity for cardiovascular disease management also have shown benefits with respect to hypertension management. Multimodal interventions including Web-based communication with clinicians and mHealth-enabled clinical monitoring with feedback also have shown benefits.</td>
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Self-management is important for quality of life, symptom control, in order to reduce complications, early diagnosis, to a holistic approach, including physical, psychological, social and spiritual well-being. It is important to use command-care policy among palliative care professionals and heart failure care team and/or primary care physician [18].

In order to examine the general physical symptoms and depressive effect on the health of patients, depending on the patient’s age, education, New York Heart Association NYHA functional class, financial status, health perception studies using symptoms (Symptom Status Questionnaire), depression (Beck Depression Inventory II) and HRQOL questionnaires (Minnesota Living with Heart Failure Questionnaire). Inves-
tigations were carried out at the onset, and 12 months later. Patients are divided into three groups according to the physical and depressive symptoms: a) there are no symptoms, b) one symptom group (dyspnea or fatigue), c) two symptom group (physical and depressive symptoms). Research reveals the physical symptoms of depression and links to quality of life and HRQOL, reveals further research in this area prospects [18], there is a lack of research in this area by analyzing older people with heart failure and quality of life.

One study in Sweden had analyzed patients quality of life associated with age, gender, lifestyle habits, financial situation, disease severity using quality of life questionnaires (Minnesota Living with Heart Failure Questionnaire and the Short Form-12 Health Survey Questionnaire). The study revealed the most important aspect of the lack of emotional support for patients with chronic heart failure. We can say that the analysis of health-related quality of life is important in view of the social support dimensions [10].

Heart failure is characterized by frequent hospitalization in adults over the age of 65 stage. Studies have shown disease management programs can reduce the number of repeated hospitalizations of older persons in a group with heart failure.

Studies have revealed the self-management programs in a positive impact on reducing the number of mortality, quality of life and shortening the period of hospitalization (8). Further work is needed related to self-management and outcomes measurement [11].

Over the past 15 years, nursing research has made great progress in identifying heart failure patients with psychosocial, non-drug measures management and behavioral aspects. Carried out research in this area influenced by a succession of studies, registries and further research development [12].

The progress of analysis of Medline from 1966 to 2005, EMBASE system from 1980 to 2005, CINAHL from 1982 to 2005 and the Cochrane database of systematic reviews at the time, which was analyzed in self-management programs to patients with heart failure (Table Research characteristics). Statistical significance was assessed using the Q - test, the quantitative data synthesis applied Mantel-Haenszel test pattern. The results were achieved through a fully integrated programs that include comprehensive patient assessment, medication usage optimization, patient education, medical specialists monitoring. Self-management programs are to provide patients with opportunities to take on a responsible role in dealing with their illness situation: symptoms monitoring, regular drug consumption, addressing the need for assistance. Application of these interventions can reduce the use of resources in the healthcare system [18].

In view of the heart failure patients it is important to understand the number of self-management programs on clinical outcomes strategies. The study justifies patients with heart failure self-management strategies, the effectiveness of the hospital reports the number of hospital admissions, mortality reduction, improvement of quality of life.

**Discussion**

Although evidence has been provided for all three areas, it is difficult to reach firm conclusions about how people manage their illness themselves with heart and cardiovascular diseases. Self – management strategies such as using information and using distraction techniques were identified, these were largely initiated by researchers, or suggested to patients (20). The lack of papers to self - management for people with heart and cardiovascular diseases suggests there is room for improvement in supported self – management and a need for further research in this area. In addition, although self management programmes are well established in North America, in the UK. Likewise, the programmes in the U.S tend to focus on chronic conditions such as diabetes, arthritis and asthma and emphasise the patients long term illness management role.

The aim of self management education programmes is, therefore, to emphasise the role of patient education in preventative and therapeutic health care activities, and usually consist of organised learning experiences designed to facilitate adoption of health promoting behaviours. Education programmes could improve health status, quality of life while reducing hospitalisation. Likewise, none of the studies specifically asked patients for their experience of how they managed their illness themselves. What people do across their journey and what is perceived to be beneficial. It is, therefore, difficult to ascertain how their self management needs can then be supported. However, the review does identify key aspects of self management and heart and cardiovascular diseases care, has implications for practice, particularly, nursing practice, and identifies areas for future research particularly related to patients experience and self management.

Moreover, the literature on self management in heart and cardiovascular diseases, chronic illness is largely focused on the activities of individuals and families with the intention of enhancing health, preventing disease, limiting illness and restoring quality of life. Information and education helped them manage their emotional self management and adjust psychologically to their illness.

**Conclusions**

1. Self management strategies for people with heart and cardiovascular disease should be related to helping them cope with pain and debilitating symptoms, coping emotionally
and adjusting psychosocially to their illness, and alleviating distress associated with symptoms that can not easily be improved, such as overweight. Examples of good practice should be and be formally evaluated.

2. According to much of the health promotion research, it appears that nurses have not yet demonstrated a clear and obvious political role in implementing health promotion activities. Instead, nurses can be considered general health promoters, with their health promotion activities based on sound knowledge and giving information to patients.

3. Nursing is an appropriate profession in which to implement health promotion, but several barriers associated with organizational culture have a marked effect on delivery. Therefore, more research is needed to determine how to support nurses in implementing health promotion in their roles in a variety of health-care services.

References

PACIENTŲ, SERGANČIŲ ŠIRDIES IR KRAUJAGYSLIŲ LIGOMIS, SAVĖS VALDYMO SVARBA SU SVEIKATA SUSIJUSIAI GYVENIMO KOKYBEI
V. Rastenienė, A. Blaževičienė

Raktąžodžiai: savęs valdymas, širdies ir kraujagyslių ligos, su sveikata susijusi gyvenimo kokybė.

Santrauka
Darbo tikslas – išanalizuoti pacientų, sergančių širdies ir kraujagyslių sistemos ligomis, savęs valdytą pažengusios ligos stadijose.


Širdies ir kraujagyslių ligomis sergančių pacientų savęs valdymo strategijos, susijusios su skausmo ir lėtinių simptomų, neįrimo valdymu, psichosocialiniu prisitaikymu prie savo ligos turi būti diegiamos kaip geros praktikos pavyzdžiai.

Adresas susirašinėti: vilma.rasteniene@go.kauko.lt

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