

## Motivation for Cardiac Rehabilitation Attendance: Creating an Evidence-based Strategy

Konstantine C Balakatounis<sup>1</sup>, Antonios G Angoules<sup>2\*</sup> and Kalomoira A Panagiotopoulou<sup>3</sup>

<sup>1</sup>School of Health and Social Care, Oxford Brookes University, Oxfordshire, UK

<sup>2</sup>Department of Medical Laboratories, Technological Educational Institute of Athens, Greece

<sup>3</sup>School of Medicine, University of Ioannina, Ioannina, Greece and Filoktitis Medical Center, Athens, Greece

\*Corresponding author: Angoules AG, Department of Medical Laboratories, Technological Educational Institute of Athens, Greece, Tel: +30 6977011617; E-mail: antoniosangoules@yahoo.com

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### Abstract

Cardiac rehabilitation is a long-term plan of care that is based on the motivation of patients to attend rehabilitation. The purpose of the review was to synthesize existing evidence on motivational methods to attend outpatient cardiac rehabilitation; in order to create an evidence-based strategy addressing patient education, psychological issues and guide healthcare professional action.

**Keywords:** Cardiac rehabilitation; Motivation; Attendance; Myocardial infarction

### Introduction

In today's healthcare cardiac rehabilitation attendance remains low despite the evidence that recovery is promoted, and quality of life is improved [1-4]. Investigating patient needs and looking into methods of motivating patients to attend cardiac rehabilitation is crucial. Thus, approaching patients and addressing key issues that are important for their well-being, lifestyle is facilitated and cardiac rehabilitation attendance may be promoted.

### Definitions of Motivation

Motivation is the inner force that stimulates a person to take action [5]. In another definition it is referred as a process that arouses, sustains and regulates healthy behaviors [6]. Motivation is a dynamic process which engulfs an interaction of personal factors, behavior and the environment, therefore internal and external factors [7].

It should be noted that not all these factors interact equally, since they are dependent on the individual's psychological and spiritual characteristics. Motivation has been associated with self-efficacy [7].

Maintaining health behavior is dependent upon the individual's perception of abilities to successfully initiate, sustain and fulfill a task. Promoting self-motivation and self-efficacy is likely to result in increased participation [8,9] and compliance [9].

Limited self-efficacy and self-motivation have been associated with poor participation in cardiac rehabilitation [8,9] and reversely autonomy and self-determination has been demonstrated to promote participation and motivation [10]. A term confused with motivation in cardiac rehabilitation is compliance. Compliance can be defined as the expected behavior of patients to follow medical advice [11].

### Motivation to Attend Cardiac Rehabilitation through Patient Education

#### The relation of patient education and motivation in cardiac rehabilitation attendance

Patient education should be focused on understanding the information provided, not simply on provision of information. Perception of illness relates to the understanding of information about the patients' condition and personal experiences [12], or can be influenced by past experiences, friends, health professionals, media etc. [13].

It has been demonstrated that although patients tend to recognize provision of health education, they associate cardiac rehabilitation with exercise [14].

Another study by Cooper et al. [13], demonstrates that elevated cholesterol, a risk factor for congestive heart disease, has been associated with attendance but the same does not stand for elevated blood pressure.

It is postulated that elevated blood pressure is perceived as quite common and therefore a not as threatening risk factor. Thus, absent or unsuccessful patient education may lead to misconceptions which might be proven to be detrimental to patients.

The patient's view of cardiac rehabilitation is also important. Misconceptions in the role of exercise, for instance, can lead the patient to doubts whether cardiac rehabilitation can help and influence motivation to participate, which could lead to non-attendance [15].

#### Methods of achieving motivation through patient education

Educational videos have been shown to be a useful tool for patient education. Demonstration of an educational video delivered by a health care professional before discharge has been shown to increase compliance with exercise and dietary recommendations. The

effectiveness of the video was suggested to be due to the realistic and direct approach to the patient's everyday life [16].

A limitation of this study is that since it is a quantitative study, compliance can be directly measured but not the level of the patients' motivation in depth, through educational videos.

Patient education is generally recommended by research to be provided in a structured format. Structured patient education by nurses has been shown to be more effective than non-structured teaching in post-operating patients [17].

## **The Link between Psychological Factors and Motivation to Attend Cardiac Rehabilitation**

### **The relation of psychological factors and motivation in cardiac rehabilitation attendance**

Motivating patients to follow cardiac rehabilitation is directly related to psychological factors [18,19]. This is also evident from the definition of motivation as an inner force, suggesting psychological/spiritual factors.

The idea of exercising in a group of people is usually preventing patients from participating in cardiac rehabilitation activities. This occurs due to the possible embarrassment resulting from their limited capacity, at least in the first stages.

Patients that participated noted that a supportive relationship between them was developed. This relationship was stated to be a result of similarities among patients in terms of age, circumstances and physical condition [14].

Patients attending cardiac rehabilitation have reported to be more active, feel more capable of managing symptoms.

What is indicative of the effect of cardiac rehabilitation is that the patients referred to problems as difficulties that had been surpassed. On the contrary, patients that did not attend cardiac rehabilitation experienced fear for their condition, felt unwell and vulnerable [14].

### **Methods of achieving motivation through addressing psychological factors**

Listening to patients is important, and an effective method of identifying factors influencing changes in the patient's life and adherence to cardiac rehabilitation [20].

Psychotherapy with a focus in insight has been indicated to motivate patients to participate in cardiac rehabilitation. Still, compliance did not improve in proportion [21].

Other approaches such as motivational interviewing [22] and CHANGE (Change Habits by Applying New Goals and Experiences) intervention have also been proposed in order to promote cardiac rehabilitation participation [23].

Another element of psychological intervention is reassuring patients especially in early stages of cardiac rehabilitation in order to assist them in coping with exercise embarrassment [14].

Fletcher et al., present another important element of motivation and psychological factors. In a community based cardiac rehabilitation program of duration of 8 weeks, a theme identified and affecting attendance and motivation was that participants reported "feeling abandoned" [24]. Patient's education as a psychological factor is of

great importance, since being aware of the facts (through patient education) is essential in dealing with psychological issues.

## **Motivating Patients through Health Care Professional Action**

The healthcare professional can promote participation in cardiac rehabilitation. Research has shown that the health professional must be flexible in planning cardiac rehabilitation according to patient's needs in order to promote attendance. Appropriate timing for cardiac rehabilitation is necessary. Cardiac Rehabilitation should be arranged to take place at convenient times and particularly initiation of cardiac rehabilitation should be flexible to some extent [25]. Co-ordination of referral and post-discharge care is an important part of rehabilitation services and is often poor [26]. It has been suggested that it can be improved by using liaison nurses. The implementation of this method has been shown to increase participation in cardiac rehabilitation [27].

The role of the social worker has been shown to be important. Regular visits by a social worker after inpatient rehabilitation for cardiac patients were effective [8]. Another potentially effective professional-led action could be sending motivational letters to patients after discharge which may lead to increased cardiac rehabilitation participation. It is probable nonetheless, that the letter may be interpreted as a fear message [28].

Providing social support can also improve cardiac rehabilitation attendance. In the study of King et al. [29], cardiac rehabilitation attendance was not found to be related to self-motivation or social support. It was cited though, that the results could be due to sample characteristics. The sample consisted of patients that intended to participate in some part of the cardiac rehabilitation program. Therefore, the patient may have not benefited from social support since this sample was already motivated and had decided to participate to some extent. However, not only professionals can promote attendance. Additional services by trained lay volunteers, patients who had previously attended cardiac rehabilitation, have been proposed [28]. Furthermore, spouse or family support programs have been linked with cardiac rehabilitation attendance as well [30].

## **Relation of Age and Gender with Motivation and Appropriate Strategies**

### **Age and motivation**

Current research attests that older people are less encouraged to attend cardiac rehabilitation by physicians [31]. Encouragement may possibly be a considerable factor in promoting attendance [32] and motivating patients. Especially older female patients suffering coronary diseases are rarely referred for cardiac rehabilitation in spite of the similar clinical profile and recorded improvement in cardiovascular parameters accomplished in every case through individualized rehabilitation programs [31]. Cardiac rehabilitation for older patients can be beneficial [33]. Provision of information has been proposed to progress slowly and without many details in every session [28]. Exercise at lower intensity is likely to result in higher attendance rates [34]; still the duration of rehabilitation would probably have to be extended which is most of the times not convenient for professionals and patients [28]. Other activities, appropriate sports such as swimming are likely to improve participation [34].

## Gender and motivation

Physician recommendation for cardiac rehabilitation is one of the most important predictors leading to attendance [35]. It is interesting then to note that rehabilitation is not equally encouraged for both genders. Physicians recommend cardiac rehabilitation to men more than women [36]. Rehabilitation for women has to be designed in a special way. Women are often more in need of psychosocial support than physical [37]. Being married is directly linked with an increase in attendance although it is significantly less than in men [13].

A range of different exercise has been proposed to be offered or strategies to improve social support, support in childcare and house [38]. It is stated that cardiac rehabilitation attendance should be pursued while still inpatient [36]. There are other issues that should be investigated concerning cardiac rehabilitation attendance of women. Female patients have been shown to consider staff behavior an important issue. They also particularly value encouragement through assistance in reaching realistic goals and verbal cues [36]. Women's participation has also been associated with their level of education and the availability of transportation [39].

## Other Methods of Motivation for Cardiac Rehabilitation

Apart from the aforementioned methods of achieving adherence to cardiac rehabilitation, the use of diaries for heart rate monitoring, daily activities and diet has been proposed [40]. Rewarding patients in the end of cardiac rehabilitation has also been mentioned in the literature [41].

Patient education	Educational videos
Psychological intervention	Psychotherapy-focus in insight or/and
	Motivational interviewing or/and
	Change intervention (while inpatient or outpatient)
Healthcare professional action	Flexible planning of cardiac rehabilitation from health professionals
	Co-ordination of services from health professionals
	Regular social worker visits
	Trained lay volunteer services or past participants in cardiac rehabilitation
	Rewards following completion of cardiac rehabilitation program
Self-monitoring	Use of diaries (regular contact with health professionals)
	Aged population considerations: encouragement, slower provision of information in patient education; lower exercise intensity
	Gender considerations: Additional psychosocial support and staff behavior important for female population
Change	Change habits by applying new goals and experiences

**Table 1:** Model for motivation to attend cardiac rehabilitation.

## Recommendations for Further Research

Most studies investigating motivation to attend cardiac rehabilitation, mentioned that cultural factors were not taken into consideration [42], which acknowledges the potential influence of culture on cardiac rehabilitation attendance. It is proposed that research should include the variable of a different cultural background.

In general, only a few studies in healthcare settings so far have been conducted, investigating issues for ethnic minorities. The most common barriers mentioned that could be proven to be related to cardiac rehabilitation attendance is failure of hospitals to address the different linguistic backgrounds of the ethnic minority groups generally in hospitals [43].

Failure to communicate results in the healthcare professional not being able to provide information to the patient that as mentioned previously could motivate the patient to attend cardiac rehabilitation.

## Conclusion

Patient education and psychological factors have been shown to be related to cardiac rehabilitation attendance and literature attests that they are best promoted through educational videos and psychological support respectively. The role of the healthcare professional has been proven significant in motivating patients as well.

Flexibility in planning rehabilitation and improved co-ordination have been proposed by research, but trained lay volunteers can also play a significant role in motivation. In the female population and older patients, less encouragement to attend cardiac rehabilitation by physicians was traced.

For older patients slower-paced information sessions have been proposed and in women, enhancing psychosocial supports (Table 1).

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