



Behavioral Treatment of Cardiac Patients: The Theory of Motivational Protection

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A B S T R A C T

Ischemic heart diseases are the most important cause of disability in most of the developing and even developed countries of the world. Many researchers have identified modifiable risk factors and unhealthy health behaviors as important determinants of disability and death in heart diseases. Creating the motivation to protect or the intention to perform protective behavior causes the health behavior to be stimulated in the patient. Therefore, theory-based interventions such as protection motivation can motivate people to change their attitudes and behaviors in the face of danger. Therefore, in this research, based on a fundamental approach, a treatment package based on the motivation theory of protection in ischemic heart patients has been identified and an effective intervention has been introduced.

Keywords: Self-Care, Motivation, Protection Motivation Theory, Ischemic Heart Patients.

INTRODUCTION

Ischemic heart diseases are the most important cause of disability in most of the developing and even developed countries of the world ([Moshki, Mojadam, & Dusti Irani, 2015](#)), however, it is one of the most preventable non-communicable human diseases. are also considered ([Cleland, van Veldhuisen, & Ponikowski, 2019](#)); that health habits and behaviors have a significant effect on the level of infection and their severity ([Al-Tawfiq & Pittet, 2013](#); [Habibović et al., 2018](#); [O'Boyle, Henly, & Larson, 2001](#)).

The medical staff related to ischemic heart patients admit that these patients require long and frequent hospitalization and heavy care costs ([Menzin, Wygant, Hauch, Jackel, & Friedman, 2008](#); [Tigabe Tekle, Bekalu, & Tefera, 2022](#)), and despite the medical and therapeutic follow-ups, after partial recovery and discharge from the hospital, Abandoned and how to take care of them and control the disease is not observed. Stopping the drug early and not following the prescribed treatment regimen correctly and on time was the main cause of death of these patients immediately after discharge ([Cowie et al., 2014](#); [Filippatos et al., 2020](#)). In the extensive global efforts that have been made to prevent the recurrence of this disease and to control it, it is suggested to use new methods to influence the attitude and create favorable behavioral changes in the patient. It is believed that the method that causes faster and more stable learning in the patient will have better results. In the meantime, changing and modifying behavioral patterns is the most sustainable method. Because care (medicine, food, treatment and mental

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DOI: [In pressing](#)

To cite this article: Zakipour, M., Sirfi, M. R., Nikparvar, M., Abedini, S. (2023). Behavioral Treatment of Cardiac Patients: The Theory of Motivational Protection. *Iranian Journal of Positive Psychology*, 9 (1), 6-11.

health) is a part of the patient's daily life, the most care should be taken by the patient himself. The patient's awareness of the fact that the feeling of danger (relative to the disease) or fear has a deep and important effect on his behavior choices, will create the motivation in him that he needs more protection against that health risk. Therefore, it seems necessary to investigate theory-based programs such as self-care protection motivation theory, medication adherence and treatment of ischemic heart patients.

Many studies have shown that the theories of behavioral sciences play a significant role in explaining and clarifying the factors affecting the disease ([Blanchard et al., 2009](#); [Nouri, Adili, Pouebrahim, Heshmat, & Fakhrzadeh, 2004](#)); Creating the motivation to protect or the intention to perform protective behavior causes the health behavior to be stimulated in the patient. Therefore, theory-based interventions such as protection motivation can motivate people to change their attitudes and behaviors in the face of risk ([Heath, Cooke, & Cameron, 2015](#); [Menti, Limbert, & Lyrakos, 2019](#)). Based on this, in this research, based on the needs of the patients, a self-care package based on the motivation theory of protection in ischemic heart patients has been designed and described.

METHODOLOGY

In order to design the protective motivation theory training package, reliable scientific sources and the perspective of the medical staff involved with ischemic heart patients were used. Valid sources included articles published in valid scientific journals from 2017 to 2020 regarding the theory of protection motivation, which were found and received from Google's scientific resources search engine (Google Scholar). Sources used include Menard, Bott, and Crossler (2017), Van Bavel, Rodríguez-Priego, Vila, and Briggs (2019), Shafiei and Maleksaeidi (2020), Wu (2020), Oakley, Mohun Himmelweit, Leinster, and Casado (2020), and Chen, Dai, Zhu, and Xu (2020), based on these sources, protection motivation structures were identified. The identified constructs included perceived sensitivity or (vulnerability), perceived severity, self-efficacy, response efficiency, and response costs. In order to identify the examples of extracted structures in ischemic heart patients, a structured interview was arranged with an emphasis on the issues related to these patients in the treatment and health care issues. This interview consisted of 7 questions which were listed in the table below.

Table 1. Structured interview items regarding examples of treatment and care of ischemic heart patients with an emphasis on the protection motivation theory

No.	Subject raised in the interview
1	What are the learning needs (self-care) of ischemic heart patients?
2	What is the motivation and ability of ischemic heart patients to learn? Please mention in full.
3	Obstacles that stop or accelerate the process of following health and hygiene recommendations (lack of motivation) by ischemic heart patients?
4	What is the best teaching method for ischemic heart patients?
5	What is the best suggestion for equipping the patient at home? (What resources should be available to the patient)
6	What are the main reasons for the failure of ischemic heart patients to achieve treatment goals after discharge from the hospital?
7	Does adherence to treatment and drug regimen interfere with the daily schedules of ischemic heart patients?

Conducting this research was approved by the Ethics Committee of the University Research and Technology Vice-Chancellor. Written informed consent was obtained from each participant at the beginning of the study. Before starting the work, a full explanation was given about the topic and the method of conducting the study. The participants were assured that their private information is protected and that they are free to leave the study if there is any discomfort at any stage of the research.

RESULTS

Classified structures and examples of each of them are presented in Table 2. These constructs are based on studies and structured interview results.

Table 2. The results of the classification of structures based on the interview of the protective behaviors of ischemic heart patients based on the theory of protection motivation

Indicators	Sources	Examples extracted from structured interviews
Perceived sensitivity or (vulnerability)		1. ischemic heart diseases, in addition to inappropriate physical conditions, also affect the social and psychological status of the patient.
		2. If the patient has certain physical conditions (for example, other concomitant diseases such as diabetes, history of smoking, smoking), he is more at risk of ischemic heart disease.
		3. Loss of mental control and lack of self-care will weaken the patient.
Perceived intensity		1. Suffering from ischemic heart disease shortens life span.
		2. Even if no surgery is needed, the ischemic patient has to spend most of his time in the hospital because of this disease.
Efficacy		1. There are successful ways to prevent ischemic heart disease from becoming an emergency.
		2. If necessary and discomfort occurs, the patient can receive medical advice and perform according to the doctor's prescription.
		3. It is easier for the patient to learn the skill of self-care instead of being hospitalized repeatedly.
Response efficiency		1. The correct and timely use of prescribed drugs reduces the recurrence of acute heart complications.
		2. Preventive behavior (such as avoiding cigarette smoke, proper exercises, etc.) reduces the possibility of surgery.
		3. Special care and proper nutrition at home reduces the risk of hospitalization.
Response costs		1. Adhering to self-care behaviors is effective in reducing costs related to illness and hospitalization time.
		2. Carrying out protective behaviors prevents the aggravation of signs and symptoms of the disease.
		3. Self-care increases the feeling of comfort and functional ability.
Protection motivation		Adopting health-promoting behaviors and abandoning harmful behaviors related to illness

According to the guidelines defined in the theory of protection motivation and the information gathered from the implementation of structured interviews, the training package

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based on the theory of protection motivation was set up for ischemic heart patients, which is presented in Table 3. In the following, a complete description of each session of the organized training package has been discussed.

Table 3. Intervention package based on protection motivation theory for ischemic heart patients

sessions	Description of the session
First	Lectures to introduce and acquaint patients with various types of ischemic heart diseases, giving correct general information about the structure and function of the heart, high-risk behaviors, proper nutrition, the harms of smoking, the need for exercise, proper medication use, and self-care skills. Presentation of information was also done through pamphlets or educational slides to be more effective and lasting in the mind.
Second: Motivational needs assessment	Examining the needs of patients based on stress, anxiety, insomnia, sexual problems, etc. Providing appropriate solutions and relaxation exercises (1 visualization and feeling, 2 mental commands, 3 will and suggestion, 4 feeling relaxed)
Third: Perceived sensitivity and severity	Application of the supportive motivational theory of fear attraction and attitude change (Rogers). The following goals should be achieved at the end of the meeting to show the persuasive power of the message: 1. The audience is convinced that the mentioned risks are serious; 2. The audience believes that the risks are probable; These cases convince the patient that they should change their behavior.
Fourth: Self-efficacy	Increasing awareness through the peering method (Bandura); By using the peer group, the patients participating in the research are given the necessary training and information so that people can get the necessary conviction about their efficiency by comparing and observing their peer group. The following goals should be achieved at the end of the meeting: 1. The audience should accept that the recommendations are effective; 2. The client should be convinced that he can implement the requested recommendations and actions. Observing the peer group gives the patient heart strength, which can change the necessary behavior to avoid danger.
Fifth: Effectiveness of the response (symbolic coping modelling)	Playing the educational video of the symbolic model, repeatedly watching the movie scene of a person who was able to overcome the problems of his illness, helps a person to understand and understand the different aspects of dealing with his illness.
Sixth: Answer costs	Doing comparisons and motivational interviews

CONCLUSION

Interest in understanding health behaviors and trying to improve them, increasing life expectancy and quality of life is one of the important social-cognitive variables, which is considered an important and increasing approach to understanding health; The theory of protection motivation is a developed and proven example for this purpose. Likewise, this model is an important basis for achieving the goal of changing health behaviors through prevention and treatment-based implementation.

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