Original Article

Empowering Acute Coronary Syndrome Patients: Assessing Self-Motivation, Self-Belief, and Self-Management Readiness

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ABSTRACT

Self-management readiness is needed for acute coronary syndrome patients to improve health behavior to prevent recurrence. The aim of the research was to analyze the influence of self-motivation and self-belief on self-management readiness in acute coronary syndrome patients. The research design uses a cross-sectional study. A sample of 145 SKA patients was taken using accidental sampling technique. The variables measured are self-motivation, self-belief and self-management readiness. The research instrument used a questionnaire. Data were analyzed using a linear regression test. The results showed that self-motivation had an effect on participation (0.003), self-motivation and perceived threat had an effect on therapeutic alliance (0.013; 0.057), self-motivation and perceived threat had an effect on goal setting (0.011; 0.003), self-motivation influence on self-evaluation (0.005) and self-motivation and perceived threat influences emotional control (0.003; 0.002). Conclusion: High self-motivation and increasing perceived threat in ACS patients have an impact on increasing self-management readiness. The practical implication of this research is the need for education from health workers, especially doctors and nurses, to increase self-motivation so that self-management readiness can increase. It is hoped that increasing self-management readiness will increase better health behavior so that there will be a reduction in relapses in patients.

Keywords

Acute coronary syndrome; self-motivation;self-belief; self-management readiness.

INTRODUCTION

Acute Coronary Syndrome (ACS) is a disease in the emergency category that easily recurs[1]. This disease is the main cause of death throughout the world, both in developed and developing countries[2]. One of the factors causing the high mortality of ACS patients is due to patient non-compliance with treatment and care. This non-compliance has an impact on the emergence of relapses in patients. The results of the study showed that the recurrence rate for ACS patients was still high, which could result in a high rate of recurrence and the need for re-hospitalization[3]. Non-compliance with care and treatment also has an impact on increasing the risk of ACS complications and worse outcomes, including death in post-ACS patients[4].

Several studies illustrate that so far ACS patients have carried out self-management which includes daily lifestyle management, disease treatment management and emotional management[5]. However, self-management abilities in ACS patients were found to be still low[6]. It is proven by the data that compliance with treatment in the good category is only 55%[7]. ACS sufferers also often experience

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sudden death or sudden cardiac arrest, where one of the risk factors is low self-management readiness in self-care and the absence of changes in healthier behavior[8]. Unprepared self-management behavior will influence non-compliance with care and treatment, resulting in relapses and leading to emergencies in ACS patients[9]. Self-management in ACS patients is very important to improve the patient's health status[10]

Authors' Contributions

The role of the first author is to make a proposal, collect data, analyze and make a research report.

The role of the second and third authors is to provide input, make a comparative analysis with literature review for completeness of the discussion. The fourth author's role is to assist in data retrieval, analysis and manuscript writing.

The theory of treatment readiness model explains that a person's readiness to manage their health is influenced by internal and external factors. These factors require full involvement in someone suffering from acute coronary syndrome. Internal factors in this readiness include demographics, knowledge about the disease, affective, willingness and religious behavior factors, while external factors consist of access to health services and information, environmental conditions of sufferers, availability of health workers, service facilities and service programs. These internal and external factors are components of readiness that require confidence to be able to care for oneself well[11].

Readiness for self-care in ACS patients requires self-belief in caring for their health because it will have an impact on the speed of recovery. Related research shows that there is a significant relationship between health beliefs and a shorter duration of treatment for coronary heart disease[12]. Studies illustrate that beliefs are an important component that influences a person's health behavior[13]. Apart from that, according to self-determination theory, self-motivation is also an important component in a person's health behavior towards better outcomes[14]. Several studies have been conducted on coronary heart disease patients in relation to adherence to treatment and medication. However, there has not been much research examining self-motivation and self-belief towards self-management readiness in patients with coronary heart disease. The aim of this research is to analyze the influence of self-motivation and self-belief on self-care management for patients with coronary heart disease.

METHOD AND MATERIALS

The research design in this study uses an analytical observational study with a cross-sectional study approach. Researchers measured self-motivation, self-belief and self-management readiness in acute coronary syndrome patients at the same time.

The samples used were 145 SKA patients who were undergoing health check-up visits at heart disease clinics in hospitals in the Yogyakarta region, Indonesia at January until March 2023. Samples were taken using accidental sampling technique. The inclusion criteria included: (a) ACS patients who have been hospitalized in the last 1 year, (b) The patients are in stable condition (compos mentis, not having a heart attack), (c). Normal physical mobility. Meanwhile, the exclusion criteria included: (a) ACS patients with complication, such as: stroke, kidney failure and carcinoma, (b) ACS patients who have congenital heart diseases.

The research independent variables measured in this study are self-motivation and self-belief. Self-motivation is anything that encourages ACS patients to carry out care and treatment for the disease they suffer from, with indicators including personal drive, commitment, initiative and optimism. Meanwhile, self-belief is a belief in something that is considered true by SKA patients in interpreting the health problems that occur to them. The self-belief subvariable consists of perceived susceptibility, perceived severity, perceived threat, perceived benefit, perceived barrier and self-efficacy. Meanwhile, the dependent variable in this research is self-management readiness, which is readiness to manage oneself to improve the health of ACS patients. Self-management readiness has research sub-variables including participation, therapeutic alliance, goal setting, self-evaluation and emotional control. The research instrument used in this research was a questionnaire. The self-motivation questionnaire uses the Self-motivation Questionnaire and Social Motivation Questionnaire[15], by modifying the instrument according to needs. The answer choices are presented into four choices, namely never (score 1), sometimes (score 2), often (score 3) and always (score 4). The perceived susceptibility, perceived severity, perceived threat, perceived benefit and perceived barrier questionnaires are modifications of the perceived susceptibility to chronic diseases questionnaire. The answer choices consist of strongly disagree (score 1), disagree (score 2), doubtful (score 3), agree (score

4) and strongly agree (score 5). Meanwhile, the self-efficacy instrument uses the General Self Efficacy Scale (GSE) questionnaire). The participation questionnaire is a modification of the Participation Scale[16]. The Therapeutic Alliance Questionnaire modified The Revised Helping Alliance Questionnaire (HAq - II)[17]. The goal setting questionnaire was modified from the Goal-Setting Questionnaire[18]. The emotional control questionnaire presents ten statements modified from the Emotion Regulation Questionnaire[19]. The answer choices for the participation, therapeutic alliance, goal setting and self-evaluation questionnaires are presented into four choices, namely never (score 1), sometimes (score 2), often (score 3) and always (score 4). Meanwhile, emotional control answer choices using a Likert scale consist of strongly disagree (score 1), disagree (score 2), doubtful (score 3), agree (score 4) and strongly agree (score 5). All research questionnaires have been tested for validity and reliability and declared valid and reliable.

Statistical analysis of research data was carried out using SPSS for Windows version 23 which includes univariate and muktivariate analysis. Univariat analysis of each variable is presented in percentage. Meanwhile, the multivariate analysis uses a linear regression test which aims to analyze the influence of self-motivation and self-belief on the self-management of ACS patients. Data analysis used a significance level were 0.05, with a 95% confidence interval

ETHICAL CLEARANCE

The implementation of the research has been adjusted to the research protocol that has been approved by the Health Research Ethics Committee of the Faculty of Nursing Universitas Airlangga, Indonesia with Number: 2737-KEPK. This research has several ethical principles, namely: (1) the principle of justice, (2) the principle of autonomy, (3) the principle of benefits, (4) the principle of respecting the rights of subjects, (5) the principle of maintaining confidentiality.

RESULTS

The data presentation in this research includes the distribution of data on respondent characteristics, self-motivation, self-belief, self-management readiness and result of linear regression test.

Table 1 Distribution of Frequency of Characteristics of Subjects

Variable	Total n	%
Age (year)		
25 – 35	1	0.7
36 – 45	15	10.3
46 – 65	89	61.4
>65	40	27.6
Sex		
Male	103	71.0
Female	42	29.0
Duration of diseases (month)		
< 6	6	4.1
6 – 12	38	26.2
> 12	101	69.7

Table 1 describes the characteristics of respondents based on age, gender and duration of suffering from ACS. More than half of the respondents, namely 61.4%, were aged 46 - 65 years, 71.0% were male and 69.7% had suffered from ACS for more than 12 months.

Table 2. Frequency Distribution of Self-Motivation, Self-Belief and Self-Management of Acute Coronary Syndrome Patient.

Self-Motivation	Total n	%	Self-Belief	Total n	%	Self-Management Readiness	Total n	%
Self-Motivation			**Perceived Susceptibility**			**Participation**		
High	103	71.0	High	8	5.5	Good	80	55.2
Moderate	42	29.0	Moderate	62	42.8	Enough	65	44.8
			Low	75	51.7	Less	0	0
			Perceived severity			**Therapeutic Alliance**		
			High	1	0.7	Good	6	4.1

Self-Motivation	Total n	%	Self-Belief	Total n	%	Self-Management Readiness	Total n	%
			Moderate	58	40.0	Enough	139	95.9
			Low	86	59.3	Less	0	
			Perceived threat			**Goal Setting**		
			High	135	93.1	Good	69	47.6
			Moderate	10	6.9	Enough	76	52.4
			Low	0	0	Less	0	0
			Perceived benefit			**Self - Evaluation**		
			High	0	0	Good	101	69.7
			Moderate	99	68.3	Enough	44	30.3
			Low	46	31.7	Less	0	0
Self-Motivation	**Total n**	**%**	**Self-Belief**	**Total n**	**%**	**Self-Management Readiness**	**Total n**	**%**
			Perceived Barrier			**Emotional Control**		
			High	0	0	Good	48	33.1
			Moderate	88	60.7	Enough	89	61.4
			Low	57	39.3	Less	8	5.5
			Self_Efficacy					
			High	51	35.2			
			Moderate	94	64.8			
			Low	0	0			

Table 2 depicts the frequency distribution of respondents' self-motivation, self-belief and self-management readiness. Self-motivation shows that the majority of respondents, 71.0%, have high self-motivation. Self-belief showed low perceived susceptibility of 51.7%, low perceived severity of 59.3%, high perceived threat of 93.1%, moderate perceived benefit of 68.3%, moderate perceived barrier of 60.7% and moderate self-efficacy of 64.8%. Meanwhile, self-management readiness showed good participation at 55.2%, sufficient therapeutic alliance at 95.9%, sufficient goal setting at 52.4%, good self-evaluation at 69.7% and sufficient emotional control at 61.4%.

Table 3. Linier Regression Test of The Effect of Self – Motivation and Self - Belief to Self-Management Readiness of Acute Coronary Syndrome Patient

Model	B	SE	β	T	P-value
Participation					
(Constant)	17.395	6.072		2.865	0.005
Self – Motivation	0.286	0.094	0.251	3.036	0.003
Perceived susceptibility	-0.569	0.661	-0.809	-0.861	0.391
Perceived severity	-0.656	0.673	-0.795	-0.975	0.331
Perceived threads	0.047	0.141	0.027	0.335	0.738
Perceived benefit	0.158	0.624	0.185	0.254	0.800
Perceived barrier	0.748	0.970	1.114	0.771	0.442
Self - Efficacy	0.081	0.133	0.050	0.609	0.544

Model	B	SE	β	T	P-value
Therapeutic Alliance					
(Constant)	22.190	4.418		5.023	0.000
Self – Motivation	0.173	0.069	0.205	2.519	0.013
Perceived susceptibility	-0.402	0.481	-0.773	-0.836	0.405
Perceived severity	-0.409	0.490	-0.671	-0.835	0.405
Perceived threads	0.196	0.102	0.154	1.918	0.057
Perceived benefit	0.387	0.454	0.612	0.853	0.395
Perceived barrier	0.250	0.706	0.503	0.354	0.724
Self - Efficacy	-0.042	0.096	-0.035	-0.432	0.667
Goal Setting					
(Constant)	22.781	7.072		3.221	0.002
Self – Motivation	0.282	0.110	0.205	2.572	0.011
Perceived susceptibility	-0.141	0.769	-0.166	-0.183	0.855
Perceived severity	-0.211	0.784	-0.211	-0.269	0.789
Perceived threads	0.497	0.164	0.238	3.034	0.003
Perceived benefit	0.220	0.727	0.212	0.302	0.763
Perceived barrier	-0.046	1.130	-0.056	-0.040	0.968
Self - Efficacy	-0.142	0.154	-0.073	-0.919	0.360
Self - Evaluation					
(Constant)	15.939	4.887		3.262	0.001
Self – Motivation	0.217	0.076	0.241	2.859	0.005
Perceived susceptibility	-0.762	0.532	-1.373	-1.434	0.154
Perceived severity	-0.680	0.542	-1.045	-1.256	0.211
Perceived threads	-0.008	0.113	0.006	0.075	0.940
Perceived benefit	0.589	0.502	0.872	1.173	0.243
Perceived barrier	0.702	0.781	1.324	0.899	0.370
Self - Efficacy	-0.001	0.107	-0.001	-0.010	0.992
Emotional Control					
(Constant)	14.750	12.22		1.206	0.230
Self – Motivation	0.574	0.190	0.233	3.022	0.003
Perceived susceptibility	0.407	1.331	0.267	0.305	0.760
Perceived severity	0.929	1.356	0.521	0.685	0.494
Perceived threads	0.877	0.284	0.235	3.093	0.002
Perceived benefit	0.113	1.258	0.061	0.090	0.929
Perceived barrier	-1.467	1.954	-1.010	-0.751	0.454
Self – Efficacy	-0.291	0.267	-0.083	-1.091	0.277

Table 3 describes the test results of the influence of self-motivation and self-belief on respondents' self-management readiness. The results showed that self-motivation had an effect on participation (p-value: 0.003), self-motivation and perceived threat had an effect on therapeutic alliance (p-value: 0.013; p-value: 0.057), self-motivation and perceived threat had an effect on goal setting (p-value: 0.011; p-value: 0.003), self-motivation influences self-evaluation (p-value: 0.005) and self-motivation and perceived threat influence emotional control (p-value: 0.003; p-value: 0.002).

DISCUSSION

The study in this research shows that self-motivation increases participation, therapeutic alliance, goal setting, self-evaluation and emotional control. The presence of high self-motivation increases the participation of ACS patients in carrying out their care and treatment. The therapeutic alliance between ACS patients and health workers also increases along with increasing self-motivation. The availability of good self-motivation will increase the ability of ACS patients to formulate and set the expected goals for their health behavior. Apart from that, this will also increase the ability to self-evaluate whether the health behavior that has been carried out is successful or not. Emotional control also increases along with increasing self-motivation in ACS patients.

The results of this study are supported by several studies that have been conducted previously. Motivation is a basic component in behavior change. Self-motivation is a form of internal motivation that is associated with increased well-being and sustainable behavior change[20]. Apart from that, self-motivation is one of the main focuses in self-determination theory. Self-determination theory explains that a person's basic needs drive the goal setting process. Setting these goals depends on the extent to which a person's basic needs have been met. If needs are met, individuals tend to develop intrinsic aspirations which include personal growth, affiliation and intimacy, contribution to one's community, and physical health. However, if basic needs have not been met, individuals tend to develop external aspirations which include financial success, social recognition and fame, and image or attractiveness[21].

Self-motivation is one of the main driving components for a person's success and influences a person's ability to adapt to new things and behave[22,23]. Self-motivation and goal setting are basic prerequisites for planning a person's stress reduction. If we have set a goal, we will be able to arrange stages on how to achieve that goal. Determining targets is also necessary to maximize the achievement of goals[24]. Goal setting is one strategy that can be used to change behavior. In preparing this goal setting, there are two things that need to be done, namely identifying the characteristics of the goal to be achieved and action planning. Action Planning can help someone to achieve action[25]. Having good goal setting will certainly improve a person's self-care behavior. Self-care behavior plays an important role in a person's health and well-being. Studies have found that self-care behavior is significantly related to self-evaluation[26]. High self-care behavior is influenced by the availability of social support[27].

The self-belief of SKA patients found that perceived threat had a significant effect on therapeutic alliance, goal setting and emotional control. ACS patients who feel a high perceived threat result in an increased therapeutic alliance between the patient and health workers. Apart from that, the presence of perceived threat causes patients to set goals in their care and treatment so that recurrence does not occur. Emotional control is also carried out by patients as a result of the perceived threat of disease. The results of this study are in line with other studies which explain that perceived threat influences a person's behavior. Different perceived threats produce varied behavior. The impact of perceived threat on behavior depends on the extent to which the perceived threat is considered relevant for the individual[28]. Another study found that perceived threat and negative emotions are risk factors for depression and anxiety, while self-efficacy is a protective factor[29]. Negative emotions are related to perceived threat which is mediated by negative emotions that arise from the threat agent being evaluated. Negative emotions can function as a signal to the level of perceived threat and can influence emotional responses[30]. Other studies also show that self-belief influences emotional responses in patients[31].

Subjective perception of threats influences a person's cognition. A person who considers that he is in a state of high threat will have an impact on the emergence of disturbances in him. Meanwhile, for someone who considers themselves not to be under threat, the risk of harm to them is also low[32]. Perceived threat predicts fear in response to physical circumstances and social situations[33]. In addition, negative frames in the form of avoiding the negative consequences of a condition increase perceived threat and willingness to behave[34].

In this study, it was found that self-efficacy, which is part of the self-belief of ACS patients, had no effect on all components of self-management readiness. The results of this research study are different from other studies which state that self-efficacy is closely related to motivation and health such as healthy behavior, improving the function of the immunological system and preventing recurrence. Self-efficacy relates to choosing goals, effort and persistence in dealing with

psychological problems such as frustration, anxiety and depression as well as efforts to overcome psychological problems such as stress and disappointment. In addition, self-efficacy increases patient compliance with treatment. Providing motivation to someone can help them to set specific goals related to health and influence self-efficacy[35]. Another study found that perceived threat and self-efficacy influence the use of online mental health resources. Meanwhile, perceived susceptibility acts as a predictor of a person's behavior and willingness to socialize with other support groups[36].

The patient's self-motivation can also be trained with coping strategies. Mastery of effective coping strategies has great potential in increasing patient self-motivation by reducing stress, increasing a sense of control and self-efficacy, and encouraging satisfaction and better performance. Coping skills training can be a useful intervention to increase patients' self-motivation in facing their health challenges[37]. This coping strategy is important for patients and families in readiness for self-management. This is a method used to handle unwanted situations while managing their internal stress levels. These strategies can be carried out by focusing on dealing with problems directly, and strategies aimed at managing or avoiding emotional reactions to stressful situations[38]. It is hoped that all of the above efforts can increase the self-management readiness of ACS patients through strong individual motivation to recover from the disease and the belief that the care and treatment carried out will bring many benefits.

Readiness for self-management in the participation and self-evaluation indicators is good, but the indicators of therapeutic alliance, goal setting and emotional control need to be improved because they are still in the adequate category[38]. Stress management can also improve quality of life. Studies show that stress management can improve quality and resilience of life. For ACS sufferers, improving quality of life is an important goal in self-management and ACS patients who have high resilience are likely to be better prepared to self-manage their disease[39]. Another factor that needs to be considered in assessing and improving self-management readiness for ACS is self-care, which consists of components of health promotion and disease prevention, treatment, as well as monitoring and rehabilitation .

CONCLUSIONS

High self-motivation and self-belief in the form of high perceived threat in SKA patients increase self-management readiness in terms of participation, therapeutic alliance, goal setting, self-evaluation and emotional control.

Implication practice for this study are health workers, namely doctors and nurses, need to continue to provide education to increase the self-motivation of SKA patients so that self-management readiness will increase. It is hoped that increasing self-management readiness will increase healthy living behavior in care and treatment so that relapses can be reduced in patients

Conflict of interest

We have no conflicts of interest to disclose

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