Relationship between Disease Duration and Preventive

by ninuk Dian Kurniawati

Research Article

Relationship between Disease Duration and Preventive Motivation with Quality of Life of Patients with Coronary Heart Disease at Productive Age in Cardiology

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ABSTRACT

Coronary heart disease (CHD) is a chronic disease that will caused a long time indirect suffering . Patients suffering from CHD in the long duration of the disease often experience a decrease in motivation, especially in taking secondary prevention. The disease is impacting various aspects of the sufferer's life, both physically and psychosocially. This study aimed to analyze the relationship between duration of illness and motivation with the Quality of life of patients with coronary heart disease in cardiology. This research used a descriptive-analytic research design with a cross-sectional approach. The population of coronary heart disease patients at productive age at the cardiology was 151 respondents using a nonprobability sampling, purposive sampling technique that met inclusion criteria. The independent variable was the duration of illness and motivation, while the dependent variable was Quality of life. Data were obtained from respondents' demographic data, motivational questionnaires, and Short Form quality of life questionnaire 36 (SF-36). Data analysis using the Spearman Rho statistical test with a significance level <0.05. The results showed a relationship between duration of illness and Quality of life with a significance level of $p = 0,000$ and a coefficient value $(r) = -0.435$ and a relationship of motivation with Quality of life with a significance value of $p = 0,000$ and the correlation coefficient value $(r) = 0.588$. The duration of the disease is related to the Quality of life with the direction of the negative relationship where the longer the duration of the patient's illness, the worse the Quality of life of the patient. Motivation is related to the Quality of life with the direction of a positive relationship where the higher the motivation, the better the Quality of life of patients with CHD at a productive age.

Keywords: coronary heart disease, duration of disease, motivation, productive age, Quality of life

INTRODUCTION

Coronary Heart Disease (CHD) accounts for the greatest prevalence of premature death and loss of productivity at a productive age (Qanitha et al., 2017; World Heart Organization, 2012). Wahyuni & Kurnia (2014), in his research, states that the age of CHD has shifted, namely attacking the age under 41 years or early adulthood. While on Saesarwati & Satyabakti (2017) research mentioned that 91 respondents of the age of CHD patients were mostly 51-60 years old or 58.2%. Coronary heart disease (CHD) is a buildup of plaque in the heart arteries that can cause heart attacks (Fihn et al., 2012). Like other chronic diseases, CHD patients will indirectly suffer from this disease for a long period of time. The duration of illness indicates the length of time since CHD diagnosis was established. There are several studies that mention the duration of the disease associated with the Quality of life, but in CHD patients so far, there have not been many studies related to the duration of the CHD whether or not associated with a decrease in the Quality of life.

Sadeghpour, Yaghoubi, & Shamsi (2017) mentioned that patients with CHD have a lower quality of life and different coping uses than healthy people. In the results of his study, in particular, the Quality of life variable in healthy and sick patients there are significant differences in the physical health domain $(p = 0.00)$, psychological domain $(p = 0.001)$, social relations domain $(p = 0.001)$ and environmental domain $(p = 0.003)$. Low Quality of life is associated with disease severity, lower survival, increased days of care or hospitalization, and lack of cardiac activity (Rassart et al., 2013). Often CHD patients also suffer from diseases in long-range cause boredom or found a lack of patient awareness that causes CHD patients do not get checked regularly (Indrawati, 2012). So that the patient's motivation decreases and

experiences an inability to perform preventive management, which makes one of the predictors of the patient's recurrence of a heart attack.

Data from the World Heart Organization (WHO) shows that cardiovascular disease is the number one cause of death globally with a percentage of 31%, and in 2015 the death rate from coronary heart disease was 20 million people (WHO, 2016). Kemenkes RI (2018) stated that the prevalence of CHD as diagnosed by doctors experienced an increase of 1.5% or showed 15 out of 1000 Indonesians suffer from coronary heart disease. Dinas Kesehatan Surabaya (2016) mentioned, Surabaya is one of the regencies/cities in East Java that has a high CHD case. In 2016, data showed there were 12,412 cases of patients with CHD. Based on the recapitulation of CHD patients according to age group, the number of CHD sufferers of productive age (15-64 years) in 2016 was quite large, namely 88.21%. The data also shows the number of visits of productive age patients with CHD at Haji Hospital Surabaya in January to July 2019 as many as 6,559 patients.

Patients with CHD affect both the physical and psychosocial aspects of a patient's life, a previous study found that patients after having a heart attack reported a decrease in value in daily life, such as housework, physical activity, such as climbing stairs, sexual activities, and hobbies, could not do the same level of work they could do before the diagnosis of illness and low mood (Panthee & Kritpracha, 2011). Quality of life is felt or used as a reference to achieving good conditions, and develop or maintain reasonable physical, emotional and rational functions. One effort that can be done to improve the Quality of life is through primary and secondary prevention by increasing patient awareness of identifying risk factors and conducting preventive management (Barter et al., 2005; Indrawati, 2014; Syarifuddin, Nasution, Dalimunthe, & Khairunnisa, 2019).

In supporting the success of patients in preventing secondary risk factors, it is important to prepare patients, especially in increasing knowledge, attitudes and positive self-perception, motivation to want to make lifestyle changes, have sufficient financial resources to support the process of change, family support in every decision was taken(Indrawati, 2014). Especially intrinsic factors from within the patient, namely motivation. Where motivation is a motivating factor in CHD sufferers in making secondary prevention so they will not experience a recurrence/heart attack again and improve the Quality of life of patients. Therefore researchers want to examine whether there was a relationship between duration of illness and motivation with the Quality of life of patients with coronary heart disease in productive age.

MATERIALS AND METHODS

This research used a descriptive-analytic design with a cross-sectional approach. The study population was patients with coronary heart disease in the productive age at the Cardiology Surabaya hospital. Based on patient visit data during January - July 2019, the average monthly population obtained was 242 patients. The sample used in this study were 151 respondents selected by using a non-probability sampling, purposive sampling technique. The independent variable of the study was the duration of the disease obtained by using questions in the respondents' demographic data and prevention motivation, which was measured using the preventive motivation questionnaire instrument adopted from Indrawati (2014), which consists of 10 questions. The dependent variable of the study is the Quality of life of CHD patients at a productive age using the Short Form 36 questionnaire (SF-36) adopted from Rochmayanti (2011). The SF-36 questionnaire is divided into eight dimensions, namely the dimensions of physical function (10 questions), physical role (4 questions), pain (2 questions), general health (6 questions), social function (4 questions), emotional role (3 questions), vitality (2 questions), and mental health (5 questions). Respondents filled out the questionnaire given after the data were obtained then analyzed using the Spearman Rho test with a significance level α <0.05

RESULTS

Table 1:Distribution of characteristics of respondents in productive age coronary heart disease

Characteristics	Parameter	n	%
Age	25-29 years old	1	0.7
	30-34 years old	6	4.0
	35-39 years old	6	4.0
	40-44 years old	8	5,3
	45 - 49 years old	19	12.6
	50-54 years old	19	12.6
	55 - 59 years old	35	23.2
	60 - 64 years old	57	37.7
Gender	Male	63	41.7
	Female	88	58.3
Education	None	4	2.6
	Elementary school	24	15.9
	Middle School	35	23.2
	High School	64	42.4
	College	24	15.9
Occupation	Civil Servants / Armed Forces	8	5,3
	Entrepreneur	37	24.5
	Labor	0	0
	Farmer	0	0
	Private employees	17	11.3
	Retired	19	12.6
	Unemployed	70	46.4
Duration of Disease	<5 years	105	69.5
	5-10 years	27	17.9
	> 10 years	19	12.6
Smoking History	Active	47	31.1
	Passive	104	68.9
Hypertension History	Yes	103	68.2
	No	48	31.8
Hereditary Coronary Heart Disease History	Yes	31	20.5
	No	120	79.5
Hospitalization History	Yes	109	72.2
	No	42	27.8
Socioeconomic Status	> Rp. 3,871,052	4	2.6
	Rp. 3,871,052	46	30.5
	<Rp. 3,871,052	31	20.5
	No income	70	46.4

Table 1 showed the characteristics of respondents with CHD at a productive age. Respondents in the study were almost half in the age range 60-64 years by 37.7% or a number of 57 people. Most respondents were female (58.5%). Based on the level of education, almost half of the respondents were high school graduates (42.4%). The employment status of respondents is almost half not working, because most respondents are women and housewives, which is 46.4% (70 people). Most of the duration of illnesses of respondents suffering from CHD is <5 years by 69.5% or a total of 105 people. Respondents in the study were mostly passive smokers (68.9%). Most respondents had a history of hypertension of 68.2%. Respondents in the study mostly did not have a family history of coronary heart disease in the family (79.5%). Most respondents had a history of hospitalization (72.2%).

Table 2:Distribution of motivation of patients with coronary heart disease in the productive age

Variable	Category	Total	%
Preventive motivation	Low	70	46.4
	High	81	53.6
Total		151	100

Table 2 showed that most productive age CHD patients are highly motivated with a mean value of> 3.4 and have an intrinsic and extrinsic drive of 53.6%.

Table 3:Distribution of Quality of life for patients with coronary heart disease at a productive age

Variable	Category	Total	%
Quality of life	Less	0	0
	Moderate	72	47.7
	Good	79	52.3
Total		151	100

Table 3 showed that of the 151 respondents, most of them had a high quality of life of 79 people (52.3%).

Table 4:Analysis of the relationship between duration of disease and Quality of life of coronary heart disease patients in the productive age

Duration of Disease	Low		Moderate		High		Total	
	n	%	n	%	n	%	Σ	%
<5 years	0	0	36	23.8	69	45.7	105	69.5
5-10 years	0	0	17	11.3	10	6.6	27	17.9
> 10 years	0	0	19	12.6	0	0	19	12.6
	0	0	72	47.7	79	52.3	151	100

Spearman R
Significance Test (p) = 0,000; correlation coefficient (r) = - 0.435

Based on table 4, it showed that respondents with the duration of illness <5 years have a high quality of life as many as 69 people (45.7%) whereas respondents with a duration of illness in the range of 5-10 years had a moderate quality of life of 11.3% and high Quality of life of 6.6%. A total of 19 respondents with a duration of illness> 10 years have a moderate quality of life. Statistical test results using the Spearman rho correlation test show that the significance value p = 0,000 (α <0.05) then H1 is accepted which means there is a relationship between the duration of the disease and the Quality of life of CHD patients at productive age in cardiology with the strength of the relationship enough, namely the value of the correlation coefficient r = - 0.435.

Table 5:Analysis of the relationship between preventive motivation and Quality of life of coronary heart disease patients in the productive age

Preventive Motivation	Quality of life							
	Low		Moderate		High		Total	
	n	%	n	%	n	%	Σ	%
Low	0	0	60	39.7	10	6.6	70	46.4
High	0	0	12	7,9	69	45.7	81	53.6
Total	0	0	72	47.7	79	52.3	151	100

...an R
...ance Test (p) = 0,000; correlation coefficient (r) = 0.708

Table 5 showed that respondents with low motivation as many as 60 people (39.7%) have a moderate quality of life. Then almost half of the respondents who have high motivation also have a high quality of life by 45.7% (69 people). Statistical test results using the Spearman Rho correlation test show that the significance test p = 0.000 (α <0.05), which means H1 is accepted, there is a relationship between motivation and Quality of life of CHD patients at productive age with a strong relationship. The correlation coefficient r = 0.708 in a positive direction, which means the higher the motivation, the better the Quality of life of patients with CHD at a productive age.

DISCUSSION

The results showed that there was a significant relationship between the duration of the disease and the Quality of life of CHD patients at productive age with sufficient strength of the relationship and the direction of the negative relationship which meant the longer the duration of the disease, the Quality of life of the patient worsened. So from this result, respondents of CHD sufferers at a productive age who have a shorter duration of the disease have a better quality of life than CHD sufferers of productive age who have a longer duration of disease. Researches currently have not found much research related to the Quality of life of CHD patients, especially the relationship with the duration of the disease. Most studies of disease duration are associated with other chronic diseases such as Diabetes Mellitus (DM). Patients with DM can suffer from the disease for a long period of time, even for life, and undergo continuous treatment. There are several studies related to the duration of the disease with Quality of life in DM patients. Previous research, according to Tulloch-Reid & Walker (2009) and Amelia (2018) which states that the length of suffering from DM is significantly related to anxiety, thereby reducing the Quality of life of patients with type 2 diabetes. Then the study Lathifah (2017) stated that the duration of the patient's illness is associated with an increase in subjective complaints of DM patients so that it increases long-term complications, and the Quality of life of patients deteriorates.

DM patients are patients suffering from chronic diseases as well as CHD patients. Based on the results of this study, several respondents said that as they get older and get longer with illness, patients will experience limited activity because, in addition to their reduced physical function, the pain felt when it appears greatly affects the patient. Did not rule out the longer the patient suffering from CHD will cause physical, psychological, and spiritual aspects in him. Nuraeni, Mirwanti, Anna & Prawesti (2016) stated that physical changes in patients could include angina, tightness, fatigue, and sexual disorders. Psychologically patients with CHD can experience anxiety and depression (Padoli, Suwito, & Hariyanto, 2019). The physical changes experienced result in limitations in both quality and quantity activities. So this is what causes the longer the duration of the disease, the Quality of life of patients decreases.

The results showed that there was a significant relationship between motivation and the Quality of life of CHD patients at productive age with a strong relationship and the direction of a positive relationship, which means the higher the motivation, the better the patients Quality of life. The results of this study mean CHD sufferers in productive age who have high motivation, have a better quality of life than CHD sufferers who have low motivation. In this study, this is driven by the age of patients who are still in the range of productive age so that optimism to maintain Quality of life is also high. The results of this study are in line with research from Kahkonen et al. (2015), which states that there is a significant relationship between motivation and treatment results, which shows the highest association with compliance with CHD patients in living a healthy lifestyle. Compliance with a healthy lifestyle such as adherence to medication and adherence to sports, dieting, smoking, consuming alcohol can maintain the Quality of life of sufferers (Mufarokhah, Putra, & Dewi, 2016; Pandia, Syafiuddin, Bachtiar, & Rochadi, 2019). This compliance will shape the coping of CHD sufferers to increase so that the Quality of life of patients can be maintained because the patient's lifestyle is well maintained.

Rochmayanti (2011) mentioned that the factors that influence the Quality of life of CHD patients are anxiety, depression, coping, and social support. All these factors are said to be a source of motivation (Wahyuni & Kurnia, 2014). Motivation is very influential on the Quality of life of CHD patients. Based on this study, several respondents mentioned that they have high intrinsic motivation, such as the desire to take medication, regularly check themselves, reduce fatty foods and high salt levels, try to exercise regularly. If this motivation encourages patients to improve their health behavior, then the possibility will not be repeated again, patients experience narrowing of the heart arteries, blood flow is not

experienced obstacles and patients in good body condition. Then extrinsic motivation from family support and social support, this support is very important, especially encouragement from the family. Most respondents in this study responded that they always had the full support of the family. The results of this study also mentioned that the Quality of life of most respondents was good, with a total score of 67-100 consisting of dimensions of vitality, mental health, social functioning of patients in good condition, and mostly pain is not felt by patients in the past month. However, the majority of respondents' answers related to the dimensions of physical function, physical health, the role of emotions, and general health were found to experience significant changes, especially the increase of activity restriction. These results are in line with research conducted by Sadeghpour et al. (2017). He stated that the Quality of life in healthy and diseased CHD patients were significant differences in the domain of physical health. Most of the respondents in this study had a good quality of life, which is 52.3% of 151 respondents. This is supported by the high motivation of respondents both intrinsic and extrinsic motivation and the duration of the disease most of the respondents <5 years so that respondents have more encouragement and are still in a state of maintaining their Quality of life to avoid recurring heart attacks.

CONCLUSION

The duration of the disease and preventive motivation is related to the Quality of life where the shorter the duration of the disease and the higher the motivation, the better the Quality of life. Further research needs to be conducted that provide motivational interventions and use variable factors that affect the Quality of life of other CHD patients by using media or health education so that the benefits of motivation in improving Quality of life are more significant.

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