CORRELATIVE ANALYSIS OF DEMOGRAPHIC CHARACTERISTICS AND DEPRESSIVE SYNDROME ON QUALITY OF LIFE

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Abstract

Background: The main factor contributing to coronary heart disease (CHD), the world's biggest killer, is the buildup of plaque in the arteries that provide oxygen to the heart muscle. CHD continues to be a serious health issue with socioeconomic effects because it causes a decline in physical and psychological functioning that lowers quality of life. Depression has been linked to a poorer quality of life, influencing social, psychological, and physical elements as well as morbidity and death rates in the medical field. Depressive symptoms have been linked closely to health status, symptom severity, physical restrictions, and general quality of life in CHD patients. Therefore, the purpose of this study is to examine the relationship between the depressive syndrome, demographic features, and quality of life of CHD patients.

Method: This study used a cross-sectional and correlational analytical technique. Consecutive sampling, a non-probability sampling technique, was used to gather the samples. The Short Form-36 (SF-36) questionnaire, a standardized tool used to assess quality of life in individuals with chronic conditions, was used to measure quality of life. The evaluation tool was split into two categories: general (generic scale) and specific (specific scale), each of which was used to measure certain features of the disease, a specific demographic, or a function like emotions.

Result: The median age of the participants was 49 (30-55), with 79 subjects (65.8%) being male. The median duration of disease was 3 (1-9), 92 subjects (76.7%) were married, and 36 subjects (29.8%) had an educational level of primary school. Furthermore, the median income and quality of life were 3 (1-8) and 70 (40-85), respectively. There was a significant correlation between age and income with SF-36 among CHD patients ($p=<0.001$, $r=0.318$ and $p=0.021$, $r=-0.324$). The variables of gender, marital status, and educational level also showed significant associations with SF-36, and r values of 0.038, 0.664, and 0.118, respectively.

Conclusion: This study showed a close correlation between quality of life and CHD patients.

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1. Introduction

A prevalent disorder known as coronary heart disease (CHD) is defined by alterations in the blood arteries that supply the heart. [1]. Acute myocardial infarction (AMI) to asymptomatic atherosclerosis are just a few of the signs this illness can cause. Heart disease is the primary and most common cause of mortality in Indonesia, where it affects 4.5% of the population. [2]. In Germany, CHD is a primary diagnosis that requires hospital treatment. Previous studies have shown that about one in five cardiac rehabilitation patients experience psychological disorders. Therefore, it is crucial to accurately identify anxiety and depression following a diagnosis for effective treatment, as they can be predictors of mortality in this clinical group [3]. Depression occurring after AMI can also increase the risk of death and new cardiac events due to associated behaviors [4].

Physical, emotional, and social elements of life, as well as medical morbidity and mortality rates, are all impacted by depression, which is also linked to a poorer quality of life. Depressive symptoms and health status, symptoms, physical restrictions, overall quality of life, and general health have all been found to be strongly correlated among CHD patients. Various factors, including lifestyle habits such as smoking, diet, exercise, relationships with family members, social life, and work contribute to this relationship. Decreased productivity can result from these factors, causing self-loss, and increased burden on both the family and the country. Several studies have reported poor quality of life experienced by patients with heart disease, highlighting that depression doubles the likelihood of death after a cardiac event [5]. As a result, evaluating quality of life is crucial for medical evaluation and therapy. Studies on cardiac pacemaker installation evaluate gains in quality of life, including physical function, emotional state, social interaction, and sensory sensation, in addition to survival. The view of an individual within the framework of culture, values, aspirations, expectations, norms, and concerns is how WHO defines quality of life. Quality of life has evolved, and now encompasses life satisfaction in particular areas. [6-8]. Therefore, this study aims to examine the correlation between quality of life and CHD.

2. Method and Result

2.1. Method

This cross-sectional correlational analytical study examined the relationship between depression and demographic factors among CHD patients at the Integrated Heart Center of Haji Adam Malik Hospital in Medan. The study used a non-probability sampling strategy known as sequential sampling, in which all subjects who met the eligibility requirements were included in it until the required number was reached. The Short Form-36 (SF-36) questionnaire, a standardized tool for evaluating quality of life, was utilized for the assessment, specifically for patients with chronic conditions. The instrument was broadly divided into two types, namely a general instrument (generic

scale) used to assess overall functional ability, disabilities, and concerns arising from the disease, and a specific instrument (specific scale), which was used to measure targeted aspects specific to the disease, a particular population, or a function, such as emotions [9].

2.2. Result

The median age of the participants was 49 (30-55), the majority consisting of 79 subjects (65.8%) were male, and the median length of disease was 3 (1-9). A total of 92 subjects (76.7%) were married individuals and a higher number of participants with a primary school education, consisting of 36 subjects (29.8%). The median values for income and quality of life were 3 (1-8) and 70 (40-85), respectively, as presented in Table 1. There was a significant relationship between age and income with SF-36 among CHD patients (p=< 0.001, r=0.318, and p=0.021, r=-0.324), as shown in Table 2.

As illustrated in Table 3, the variables of gender, marital status, and educational level also showed significant associations with SF-36, with r values of 0.038, 0.664, and 0.118, respectively.

Table 4. 1. Demographic description

Variable	Median (min-max)	n (%)
Age	49 (30-55)	
Gender		
-Male		79 (65.8%)
-Female		41 (34.2%)
Length of Disease	3 (1-9)	
Marital Status		
-Married		92 (76.7%)
-Not Married		28 (23.3%)
Income	3 (1-8)	
Education		
Primary School		36 (29.8%)
Middle School		18 (14.9%)
High School		33 (27.3%)
College		33 (27.3%)
Quality of Life	70 (40-85)	

Table 2. Correlation between age and income with SF-36 in CHD patients.

Variable	N	r	P-value
Age with SF-36	120	-0.318	<0.001
Income with SF-36	120	0.324	0.021

Table 3. Correlation between age and income with SF-36 in CHD patients.

Variable	n	R	F count	F table
Gender	120	0.038	4.66	3.92
Marital Status	120	0.664	11.04	3.92
Education Level	120	0.118	5.22	2.68

3. Discussion

This study found a significant relationship between age and income with SF-36 among CHD patients. These results aligned with Durmaz Tahir et al (2009), that married patients and those with higher income had better quality of life scores [10,11]. However, Andre Conradie et al. (2022) explored the influence of age on quality of life of CHD patients treated with PCI and did not find a significant correlation between the variables observed.

The results indicated differences in quality of life between males and females after a coronary event, which aligned with Duenas Maria et al. (2011) [12]. Married patients and those with higher income had higher quality of life scores, which was consistent with the results of Durmaz Tahir et al. (2009). However, the educational level also influenced quality of life of patients. Based on the results, patients who completed high school or college had higher scores compared to patients with only primary and/or secondary school, which was not in line with the report of Durmaz Tahir et al. in 2009 [11].

4. Conclusion

This study showed a close correlation between quality of life and CHD patients. Therefore, maintaining physical and mental health, as well as adopting a healthy lifestyle, can effectively reduce the risk of CHD and improve quality of life.

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