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FACTORS RELATED TO QUALITY OF LIFE IN CORONARY HEART DISEASE PATIENTS AT CARDIAC POLYCLINIC DR. M. DJAMIL PADANG HOSPITAL

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ABSTRAK

Pendahuluan: Penyakit jantung koroner (PJK) adalah salah satu penyakit kardiovaskular yang menyebabkan kematian tertinggi, yaitu sebanyak 35% dari penyebab kematian di seluruh dunia. Kualitas hidup yang baik pada pasien PJK diperlukan untuk menjaga status kesehatan yang optimal. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi kualitas hidup pasien PJK di Poliklinik Jantung RSUD Pusat Dr. M. Djamil Padang. **Metode:** Penelitian ini menggunakan desain analitik dengan pendekatan cross-sectional studi, dengan jumlah sampel 94 orang dengan teknik purposive sampling. Data dikumpulkan menggunakan Kuesioner *the Seattle Angina Questionnaire* (SAQ-7*), the Social Support Questionnaire*, *the Cardiac Anxiety Questionnaire* (CAQ), dan *the Cardiac Self-Efficacy Scales*. **Hasil:** Hasil penelitian ini menunjukkan bahwa rata-rata kualitas hidup pasien PJK adalah 42,72. Ada hubungan antara dukungan keluarga (p-value = 0,001 dan r = 0,93), ansietas (p-value = 0,003 dan r = -0,67), dan efikasi diri (p-value = 0,032 dan r = 0,49) dengan kualitas hidup pasien PJK. Faktor yang mempengaruhi kualitas hidup pasien PJK adalah dukungan keluarga, ansietas, dan efikasi diri, sebanyak 80,2% (R2 = 0,082), dengan faktor yang paling dominan adalah dukungan keluarga, yaitu 89,1% (B = 0,891). **Diskusi:** berdasarkan hasil penelitian ini, diharapkan perawat dapat memberikan dukungan informasi berupa edukasi kesehatan kepada pasien PJK dan caregiver, terutama mengenai menjaga stabilitas angina, sehingga dapat menjaga kualitas hidup yang baik pada pasien PJK.

Kata Kunci: penyakit jantung koroner (pjk), kualitas hidup, dukungan keluarga, ansietas, efikasi diri

ABSTRACT

Introduction: Coronary heart disease (CHD) is one of the cardiovascular diseases that causes the highest mortality, which is as much as 35% of the causes of death worldwide. A good quality of life in patients with CHD is needed to maintain optimal health status. This study aims to determine the factors influencing the quality of life of CHD patients at the Cardiac Polyclinic of the Central General Hospital Dr. M. Djamil Padang. **Method:** This study used an analytic design with a cross-sectional study approach, with a sample size of 94 people and a purposive sampling technique. Data was collected using the Seattle Angina Questionnaire (SAQ-7), the Social Support Questionnaire, the Cardiac Anxiety Questionnaire (CAQ), and the Cardiac Self-Efficacy Scales. **Results:** The results of this study indicate that the average quality of life of CHD patients is 42.72, which is low compared to the maximum quality of life value of 100. There is a relationship between family support (p-value = 0.001 and r = 0.93), anxiety (p-value = 0.003 and r = -0.67), and self-efficacy (p-value = 0.032 and r = 0.49) on the quality of life of these CHD patients. Factors affecting CHD patients' quality of life are family support, anxiety, and self-efficacy, as much as 80.2% (R2 = 0.082), with the most dominant factor being family support, which is 89.1% (B = 0.891). **Discuccion:** With the results of this study, it is hoped that nurses can provide informational support in the form of health education to CHD patients and caregivers, especially regarding maintaining angina stability, so that they can maintain a good quality of life in CHD patients.

Keywords: coronary heart disease (chd), quality of life, family support, anxiety, self-efficacy

INTRODUCTION

Coronary Heart Disease (CHD) is a cardiovascular disease that causes disturbances in the function of the heart and blood vessels (Smeltzer, S.C. & Bare, B.G, 2015). CHD is a general term for plaque buildup Atherosclerosis in the arteries of the heart that can cause a heart attack (Panchal et al., 2019). Cardiovascular disease is a worldwide threat. Data from Global Burden of Cardiovascular Disease (2020) There were 523 million incidents of cardiovascular disease in 2019 (Roth et al., 2020). Based on data from Basic Health Research (Riskesdas) in 2018 in Indonesia, heart and blood vessel disease incidence is increasing yearly. West Sumatra ranks 10th, increasing from 1.2% in 2013 to 1.9% in 2018.

The increasing prevalence of CHD in Indonesia, especially in West Sumatra, is affected by multiple variables, such as lifestyle modifications, an ageing demographic, and healthcare inequities. Sedentary lifestyles, elevated smoking prevalence, and stress substantially contribute to the rise in coronary heart disease cases. Moreover, eating practices involving high-fat and processed meals exacerbate the issue. The restricted availability of preventive care and treatment exacerbates the problem, particularly in rural regions (Arsyad et al., 2023).

People with CHD experience a variety of problems that have an impact on their physical, psychological, social, and spiritual (Santoso et al., 2017). This situation can affect the quality of life of people with CHD (Srivastava et al., 2017). According to WHO, quality of life is an individual's perception of their position in life in the context of the culture and values in which they live and with life goals, expectations, standards, and concerns (Skevington et al., 2021). Good quality of life in people with CHD is very necessary to maintain optimal health status and evaluate the success of a treatment action, especially in chronic diseases (Morys et al., 2016).

Management of CHD emphasises symptom alleviation, enhancement of cardiac function, and mitigation of complication risks. It often entails a synthesis of lifestyle modifications, including a nutritious diet, consistent physical exercise, cessation of smoking, and stress management, in conjunction with pharmacological interventions such as beta blockers. In critical instances, surgical procedures including angioplasty, stent insertion, or coronary artery bypass grafting may be required. Furthermore, the treatment encompasses physical and psychological health, as mental well-being is crucial to managing the condition. These treatments, customised to the patient's need, seek to improve quality of life and avert more cardiovascular complications (Apaeva et al., 2024; Sonoda & Khoo, 2024).

The assessment of the quality of life in people with CHD can be specifically seen from five domains of physical limitations (limitations in the ability to carry out daily activities), the domain of stability angina (a scale of change in stability angina), frequency of angina (how often do you feel symptoms angina in the form of pain and tightness in the chest), the domain of satisfaction with treatment (patient's perception of his comfort in undergoing CHD treatment), and the domain of perception of disease (the perception of each CHD patient towards his or her disease) (Chan et al., 2014).

Results of Shoufiah, R. (2017) It was found that 70.9% of CHD sufferers had a poor quality of life. Further, the results of research from Iswahyudi (2020) Said that the majority of people with unstable CHD have a very poor quality of life. The decline in the quality of life of people with CHD is influenced by several factors, including socio-demographic characteristics such as gender, age, physical, psychological, tribal or ethnic health status, education, employment, and marital status (Mei et al., 2021; Santoso et al., 2017; Srivastava et al., 2017), factors of medical action or management of the treatment undertaken, internal factors of the individual such as self-concept, anxiety, personality, resilience, self-efficacy, religiosity, and coping mechanisms, as well as external factors such as family support and stigma also affect the quality of life of an individual (Imanuna et al., 2021, Du et al., 2020, Susanti et al., 2020).

Among all these factors, family support, anxiety, and self-efficacy are the factors that most affect the quality of life of people with CHD (Iqbal et al., 2021; Imanuna et al., 2021; Mei et al., 2021; Dewi et al.) Family support includes accepting family members and providing attention, care, knowledge, motivation, and aid to deliver physical and psychological security to individuals in stressful circumstances. and Family support includes educational, evaluative, instrumental, and emotional assistance for recovery (Friedman, 2014). With family support, a patient will feel calm, comfortable, and stronger, and their physical condition will improve, which also impacts psychological conditions, so it will improve their health status, adjust to stress, and improve their quality of life. Results Utomo et al. (2019) stated that social support can affect the quality of life of people with heart failure.

Another factor that affects the quality of life of a CHD patient is anxiety. Anxiety is the apprehension, concern, or unease elicited by a perceived danger. The patient will experience discomfort, helplessness, and dependence because of anxiety. Patients with heart failure experience varying degrees of anxiety and panic due to feelings of constriction, the chronic nature of their condition, and fear of mortality (Carmin et al., 2024). Anxiety can cause cardiovascular responses such as palpitations, heart palpitations, decreased blood pressure, and pulse rate, which results in the hemodynamics of heart disease patients being disrupted. In addition, anxiety also causes psychological, emotional, and socio-spiritual symptoms that occur simultaneously, which affects the overall quality of life of heart disease patients and can worsen the condition of heart disease (Salsabila & Nugroho, 2021).

Results Barham et al. (2019). It has been mentioned that self-efficacy also affects the quality of life of CHD patients. A low level of self-efficacy contributes to individuals' poor quality of life. Self-efficacy is the capacity to motivate oneself, utilize cognitive resources and commitment, and perform the actions required to accomplish anticipated tasks. Recovery from chronic illness necessitates self-efficacy. Elevated self-efficacy can enhance therapeutic confidence, empower patients to feel cognitively and physically robust, mitigate frustration, and enable a passionate engagement with life (Gilar-Corbi et al., 2024; Hameli et al., 2023).

Patients with CHD have conditions that require quick emergency treatment, the best health workers, and sophisticated and complete equipment like Dr. M. Djamil Padang Central General Hospital. Based on data obtained from the medical records, the number of visits of CHD patients increased from 3,024 in 2020 to 4,363 in 2021 (Medical Record Data of Dr. M. Djamil Padang Hospital in 2021). Several CHD patients who visited the Cardiac Polyclinic of Dr. M. Djamil Padang Hospital revealed that they felt the impact on the quality of life of the CHD they suffered in the domain of physical limitations (chest pain, tightness, fatigue when doing heavy activities such as lifting heavy objects), in the angina stability domain (feeling chest pain and/or tightness more than 3 times a day in the last 4 weeks), in the angina frequency domain, (consumed Nitroglycerin in the last 4 weeks), in the domain of satisfaction with treatment (feeling discomfort in their lives since they were diagnosed and had to undergo CHD treatment), and in the domain of perception of the diseases (expressed dissatisfaction if had to spend the rest of their lives with chest pain and the disease).

CHD sufferers who reveal the decline in quality of life stated that the family rarely gives attention and enthusiasm for the patient's recovery, rarely provides advice and information about the disease, rarely provides material assistance because the client goes to the hospital with health insurance, besides that the patient also feels anxiety about the disease process that cannot be completely cured, and feels unable to pass the CHD and feels unenthusiastic to undergoing treatment even feels frustrated if you remember that heart disease can have a sudden attack and cause death.

Research on the increase in the incidence of CHD primarily focuses on the physical aspect. However, the psychological element is just as important because it directly impacts the well-being of CHD patients. Nonetheless, studies on the psychological dimension, especially those examining the relationship between quality of life and factors such as social support, self-efficacy, and stress levels, remain limited. To the best of the researcher's knowledge, this is the first study in West Sumatra to investigate all psychological aspects of CHD patients using a measuring instrument specifically designed for heart disease patients.

Based on the description above, the researcher is interested in researching factors related to the quality of life of CHD patients at the Cardiac Polyclinic of Dr. M. Djamil Padang Hospital.

RESEARCH METHODS

This type of research is quantitative research using an analytic design with a cross-sectional study approach. A research sample of 94 respondents was selected by purposive sampling, which is a sample determination technique using certain considerations that meet the following criteria: (1) CHD patients with a medical diagnosis of APS (Angina Pectoris Stable), UAP (Unstable Angina Pectoris), NSTEMI (Non-ST-Segment Elevation Myocardial Infarction), and STEMI (ST-Segment Elevation Myocardial Infarction), (2) have been diagnosed with CHD since the last 6 months, (3) live with family, (4) be able to read and write and agree to be a respondent. The research was carried out at the Cardiac Polyclinic of Dr. M. Djamil Padang Hospital in September 2023.

The research instruments used are the sociodemographic characteristics questionnaire, the Seattle Angina Questionnaire (SAQ-7) by Chan et al. (2014), the Social Support Questionnaire by Friedman (2014), The Cardiac Anxiety Questionnaire (CAQ) by Van Beek, M. et al. (2012) and the Cardiac Self Eficacy Scales by Fors et al., (2015). The study received ethical approval from the Health Research and Ethics Committee of Dr. M. Djamil Padang Hospital with reference number LB.02.02/5.7/549/2022. The research was carried out by examining research ethics such as autonomy, beneficence, maleficence, anonymity, and justice. The data were analyzed with univariate analysis to see the frequency distribution of dependent and independent variable data, bivariate analysis to determine the relationship between family support, anxiety, self-efficacy, and quality of life using the Pearson Product Moment correlation test, and multivariate analysis to see the determinant and dominant factors that affect the quality of life in CHD patients using the Multiple Linear Regression Test. Multivariate analysis was carried out in several stages, namely the classical assumption test (Non-Multiclonality Test, Non-Autocorrelation Test, Heteroscedasticity Test, Normality Test, Linearity Test), multiple linear regression analysis, Hypothesis Test (Simultaneous Significance Test (F Test), and Determination Coefficient Test (R2)).

RESULTS

The results of this study consist of respondent characteristics, univariate analysis, bivariate analysis, and multivariate analysis, which are processed and analyzed using computerization. The results of the study are presented as follows:

A. Respondent characteristics

Table 1.
Respondent characteristics (n= 94)

Respondent characteristics	f	%
Gender		
Man	59	62,8
Woman	35	37,2
Age		
Adult (25-44 years)	11	11,7
Middle Age (44-60 years)	39	41,5
Elderly (60-75 years)	44	46,8
Marital Status		
Marry	72	76,6
Not married	5	5,3
Divorced	17	18,1
Last education		
Elementary school	15	16,0
Junior high school	19	20,2
Senior high school	37	39,4
Undergraduate	22	23,4
Postgraduate	1	1,1
Working status		
Work	44	46,8
Stop working	29	30,9
Retired	21	22,3
Primary Caregiver		
Spouse	65	69,1
Parents	4	4,3
Children	15	16,0
Sisters/brothers	10	10,6
Medical diagnosis		
APS	24	25,5
UAP	19	20,2
NSTEMI	27	28,7
STEMI	24	25,5
Duration of illness		
< 5 years	33	35,1
5-10 years	53	56,4
> 10 years	8	8,5
PCI		
Never	43	45,7
Ever	51	54,3

Note. APS= Angina Pectoris Stable, UAP= Unstable Angina Pectoris, NSTEMI= Non-ST-Segment Elevation Myocardial Infarction, and STEMI= ST-Segment Elevation Myocardial Infarction. PCI= Percutaneous Coronary Intervention.

Table 1 indicates that most respondents are male, 59 (62%). The predominant age group is the elderly (60-75 years), comprising 44 individuals (46.8%). Most respondents are married, amounting to 72 (76.8%), with the highest level of education being high school, represented by 37 (39.4%). Employment status reveals that 44 respondents (46.8%) are working, while the primary caregivers are spouses, totaling 65 (46.8%). The most common medical diagnosis is NSTEMI, affecting 27 individuals (28.7%). Furthermore, the longest duration of patients suffering from CHD is between 5 to 10 years, accounting for 53 (56.4%), and 51 patients (54.3%) have undergone PCI (Percutaneous Coronary Intervention) procedures.

B. Description of Quality of Life of CHD Patients and the Related Factors

Table 2
Univariate analysis of quality of life of CHD patients and the related factors.

Characteristics	**Actual Score**	**Continuous variables**	
		Mean	**±SD**
Quality of life	0-100	42,72	8,57
Physical limitations		37,77	13,7
Angina stability		35,96	18,7
Frequency of angina		39,15	18,5
Treatment satisfaction		45,74	19,6
Disease perception		45,48	22,8
Family support	16-64	33,09	4,82
Anxiety	18-90	61,44	8,07
Self-efficacy	14-56	38,41	6,23

Based on Table 2 above, the average quality of life of CHD patients at the Heart Polyclinic of Dr. M. Djamil Padang Hospital is 42.72 with a standard deviation of 8.57. Further, the mean values for the related factors are as follows: family support is 33,09 with a standard deviation of 4,82, anxiety is 61,44 with a standard deviation of 8,07, and self-efficacy is 38,41 with a standard deviation of 6,23.

Specifically, based on the subgroup analysis of the quality of life domain among CHD patients, the lowest mean scores in this domain are found in the Angina stability and physical limitation domain.

C. Analysis of Factors Related to Quality of Life of CHD Patients

The results of the normality test found that the variables of quality of life (0.056), family support (0.195), anxiety (0.073), and self-efficacy (0.52) were normally distributed (p-value> 0.05). The results of the bivariate analysis research are presented as follows:

Table 3
Bivariate between quality of life of CHD patients and the related factors.

Variable	**Quality of life**	
	r	**p-value**
Family support	0,93	0,001
Anxiety	-0, 67	0,003
Self-efficacy	0,49	0,032

Table 3 shows that all the independent variables were correlated with quality of life among CHD patients, as computed using Pearson’s correlation coefficients. The results show that family support (p=0.001, r=0.93) has a very strong positive correlate with quality of life, anxiety (p=0.003, r=-0.67) has a strong negative correlate with quality of life, and self-efficacy (p=0.032, r=0.49) has a moderate positive correlate with quality of life.

D. Regression Analysis of Factors Influencing Quality of Life

Conventional assumption examinations were performed before conducting multiple regression analysis, including autocorrelation, heteroscedasticity, multicollinearity, and normality. All the variables fulfilled the assumptions for linear regression, including normal distribution, linear relationships, and no multicollinearity.

The results in Table 5 indicate that family support (ß = 0.891, ρ = 0,007), anxiety (ß = -0,664, ρ = 0,039), and self-efficacy (ß = 0,437, ρ = 0,046) were significant predictors of quality of life of CHD patients. Moreover, family support has the highest correlation with the quality of life of CHD patients (0.891). Furthermore, all the independent variables had a significant effect (at a level of 81.6%) on the quality of life of CHD patients, with the remaining 18.4% influenced by other variables not examined in this study.

Table 5
Multiple regression analysis of factors influencing the quality of life of CHD patients

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig**	**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
Constant	0,682	0,971					
Family support	0.891	0,912	0,801	3.254	0,007	0,927	1,078
Anxiety	-0,664	0,087	-0,231	.732	0,039	0,923	1,083
Self-efficacy	0,437	0,032	0,442	-1.250	0,046	0,973	1,028
R=0.886 **R^2**=0.816 **Adjusted R^2**= 0.802 **SE Est**=1.233 **F**= 3.921 **sig of F**=0,001							

DISCUSSION

The results of this study are in line with the research Huffman et al., (2019) The average quality of life score of 1261 patients with Coronary Heart Disease (CHD) was 44.4 for male patients and 46.5 for female patients. This study also uses the same measuring tools used by the researchers, namely Seattle Angina Pectoris-7 (SAQ-7). The minimum score value for this questionnaire is 0, and the maximum score is 100. When viewed from each quality of life domain, the angina stability domain has the lowest average value of all other domains, which is 35.96, which means that the quality of life of CHD sufferers is the most disturbed or problematic in the angina stability domain.

These results are in line with the results of the study (2020), which states that the average quality of life in the stability domain, Angina, i.e., 54.6, is lower than the average value of other domains. The low quality of life of the stability domain, Angina, in CHD patients, can be seen from the results of the questionnaire analysis, where as many as 42.6% of respondents experienced chest pain, chest tightness, or Angina three or more times per week. Angina is defined as a clinical syndrome caused by a temporary imbalance between the supply and need for oxygen in the cells of the heart muscle or myocardium (Smeltzer, S.C. & Bare B.G, 2015).

Further, the results of this study are in line with the results of the research Nuraeni et al., (2021) The Average social support for patients with CHD is 28.2, with a standard deviation of 5.6 for female patients and 28.7, with a standard deviation of 6.5 for male patients. Results Abbasi et al., (2021) states that the Average social support sourced from the family in CHD patients is 32.00 with a standard deviation of 16.82. The minimum score for this family support questionnaire is 16, and the maximum score is 64.

Family support received by CHD patients is low even though based on the data on the characteristics of the respondents stated that as many as 72 (76.6%) respondents have a married status; this can be caused by 65 (69.1%) of the respondents' principal caregivers are couples, where the spouses are usually more busy managing the household and working to earn income because they have a husband or wife who suffers from CHD and does not have a job—namely 50 (53.2%) respondents.

The low family support received by CHD patients can be seen from the results of the questionnaire analysis; the domain that the respondents least felt was the information support domain, in which as many as 58.5% of respondents stated that their families had never informed about the results of the patient's disease examination from the doctor. Information support is the help that can be provided to the patient, including giving advice, guidance, suggestions, feedback, or explanations about the situation and everything related to the problem he is facing (Friedman, 2014).

The results of this study stated that there was a relationship between family support and the quality of life of CHD patients; this result was in line with the findings Kim et al., (2019) Which states that a significant relationship exists between social support received from family and quality of life in CHD patients, with a p-value of 0.001 and a value of r = 0.972. CHD patients with high family support will have a sense of security and comfort, so that they will grow a sense of self-care and increase motivation to carry out disease management that is directly related to the improvement of the quality of life of CHD patients (Blumenthal et al., 2019).

Social and family support is crucial in enhancing the quality of life for patients with Coronary Heart Disease (CHD). These forms of support offer emotional stability, practical assistance, and a sense of belonging, which are essential for managing the challenges of living with CHD. Family members can encourage adherence to treatment plans, including medication schedules and lifestyle adjustments, while providing emotional reassurance during stressful times. Social support networks, such as friends and community groups, can alleviate feelings of isolation and nurture a positive outlook, which is crucial for mental well-being. Together, these support systems act as mediators by strengthening psychological resilience, promoting healthier behaviors, and ultimately improving CHD patients' overall quality of life (Luo et al., 2024).

In addition, these findings are in line with a previous research by He et al., (2020) states that the average anxiety value of CHD patients was 63.6, with a standard deviation of 12.9. The minimum score value for this questionnaire is 18, and the maximum score is 90. CHD patients will often experience anxiety; this is due to the signs and symptoms felt by the patient, namely chest pain, shortness of breath, paleness, cold, heavy sweating, dizziness, nausea, and vomiting. Other clinical manifestations can be in the form of changes in ECG patterns, ventricular aneurysms, dysrhythmia, and even sudden death can occur if not treated immediately.

This condition is the cause of anxiety in CHD patients (Avelina & Natalia, 2020). The high anxiety of CHD patients can be seen from the results of the questionnaire analysis; the highest anxiety in CHD patients is found in the subscale of heart disease-related catalytic converters; as many as 44.7% of respondents often avoid activities that make the heart pound. Fears related to heart disease that can increase the incidence of anxiety in CHD patients can be in the form of fear of a sudden and unexpected recurrence of heart disease, fear of the disease progression that worsens, is long, and tends to be incurable (Hastuti & Mulyani, 2019).

Further, this study's results show a relationship between anxiety and the quality of life of CHD patients; these results are in line with the research of Morys et al. (2016). This shows that the assessment results are directly related to the quality of life of CHD patients, especially those with Myocardial Infarction and Ischemic Heart Failure. The p-value is 0.01, and the r-value ranges from -0.37 to -0.57.

Anxiety can affect physical and emotional function, so that patients who experience anxiety can experience obstacles in carrying out self-care activities, cannot understand information about lifestyle changes, and have difficulty following treatment programs, activities, and diets, resulting in a general decrease in quality of life (Hastuti & Mulyani, 2019)

Anxiety profoundly impacts the quality of life for individuals with CHD, often acting as a mediator between their physical and psychological health. Increased anxiety levels can amplify symptoms, reduce compliance with treatment regimens, and hinder recovery by raising stress hormones that negatively affect cardiovascular health. This creates a cycle where anxiety worsens the patient's condition, further diminishing their quality of life (Atta et al., 2024). Nursing care is crucial in breaking this cycle. Nurses provide emotional support, teach patients coping strategies, and encourage adherence to treatment protocols. They utilize therapies such as relaxation techniques, counseling, and patient-centered care to lower anxiety levels, thereby improving both mental and physical health outcomes. This comprehensive approach ensures patients feel supported, empowered, and better equipped to manage their condition.

Furthermore, this study is in line with the findings of research from Barham et al. (2019) that using the same questionnaire measuring tool used by the researcher, the Cardiac Self-Efficacy Questionnaire, the average self-efficacy results of 275 CHD patients were obtained with a minimum score of 29 and a maximum score of 38. The minimum score for this questionnaire is 14, and the maximum score is 56.

Self-efficacy positively affects a person's health behavior in controlling symptoms and compliance while undergoing treatment for CHD (Alamsyah et al., 2020). Respondents' characteristic factors also contribute to low self-efficacy in CHD patients, where in this study, it was found that as many as 44 (46.8%) were in the elderly age group (60-75 years old) and 59 (62%) respondents with this male gender were at risk of having low self-efficacy. The results of the questionnaire analysis also show the low self-efficacy of CHD patients: As many as 61.7% of respondents feel unsure of their ability to control shortness of breath by changing their activity level.

. This study's results show a relationship between self-efficacy and the quality of life of CHD patients. This result is in line with the findings of the study Imam &

Jitpanya (2022). The research was conducted on 186 CHD patients at the Hasan Sadikin Hospital Polyclinic Bandung, and the results were obtained that there was a significant relationship between quality of life and self-efficacy (p = 0.001) and moderate relationship strength (r = 0.299). CHD with low self-efficacy tend to give up quickly because they do not have confidence in themselves and consider themselves incapable of having a healthy lifestyle, which results in the appearance of physical problems such as chest pain and shortness of breath, psychological problems in the form of anxiety about the severity of the disease which leads to a decrease in the quality of life in general (Shoufiah, R., 2017).

Self-efficacy plays a crucial role in improving the quality of life for individuals with coronary heart disease (CHD). It empowers patients to take control of their health by building confidence in their ability to manage symptoms, follow treatment plans, and make necessary lifestyle changes. Higher self-efficacy is associated with better health outcomes, enhancing their overall quality of life by alleviating the disease's physical and mental burdens. Nurses should provide education on disease management, offer emotional support, and promote active participation in rehabilitation programs through patient-centered care. They assist patients in setting achievable goals and recognizing small victories, which boosts confidence and motivation. By addressing patients' physical and psychological needs, nurses create a supportive environment that fosters self-efficacy and enhances quality of life (S. Du et al., 2022).

Furthermore, the results of the multivariate test showed that the determined coefficient (adjusted R square) obtained was 0.802, which means that 80.2% of the quality of life of CHD patients at the Cardiac Polyclinic of Dr. M. Djamil Padang Hospital was influenced by determinant factors such as family support, anxiety, and self-efficacy. As much as 19.8% of the quality of life of CHD patients was influenced by other factors that were not studied in this study. If viewed in terms of elasticity, it can be interpreted that if family support increases, it will be followed by an improvement in quality of life, which is as much as 89.1%. If there is an increase in anxiety, it will be followed by a decrease in quality of life by 66.4%, and if self-efficacy increases, it will be followed by an improvement in quality of life, which is as much as 43.7%.

So, it can be concluded that the family support factor is the most dominant factor affecting the quality of life in CHD patients. The results of this study are in line with the research of Kim et al.. The results show that the factor that most affects the quality of life of CHD patients is family support, with a p-value of 0.021 and an R-value of 0.775, which means that 77.5% of social support affects the quality of life of CHD patients. Lack of family support can worsen the prognosis of CHD, increase morbidity and mortality rates, disrupt patients' quality of life, improve the development of CHD, and affect psychosocial adjustment (Karataş & Bostanoğlu, 2017). Family support is a basic factor that affects a person's quality of life. Strong family support will positively impact the behavior of maintaining the quality of life of CHD patients (Utomo et al., 2019).

CONCLUSIONS AND SUGGESTIONS

Based on the research that has been conducted on factors related to the quality of life in patients with coronary heart disease (CHD) at the Heart Polyclinic of Dr. M. Djamil Padang Hospital, the following conclusions can be made is the determinants that affect the quality of life of CHD patients are simultaneously family support, anxiety, and self-efficacy, which is as much as 80.2% ($R^2 = 0.802$), and the most dominant factor affecting the quality of life is family support, which is as much as 89.1%.

Considering that it is very important to maintain the quality of life for patients to live a life with healthy conditions and stability, Angina must be the focus of attention for the family as a *caregiver* at home and for nurses who treat CHD patients in hospitals. The implementation of health counseling to CHD patients about the prevention of tight attacks or chest pain by practicing a healthy lifestyle is very necessary. Based on the results of this study, it is hoped that nurses can further improve the provision of family support to CHD patients and *caregivers*, especially in the domain of informational support. The support can involve informing patients about patient health checks and treatment therapy results, routinely reminding them and providing information about the principle of regular medication taking, among other things. Further, it is highly recommended that nurses provide health education to CHD patients about the factors that cause congestion and pain attacks and how to overcome anxiety when patients feel tightness and pain.

This study possesses considerable limitations, including the inability to establish causality. This approach can identify connections among factors such as social support, anxiety, and self-efficacy related to quality of life. However, it cannot ascertain whether one variable directly impacts another over time. Additionally, reliance on self-reported measures for data collection introduces the possibility of recall bias, as participants may find it difficult to remember past events or behaviors accurately. Despite these challenges, cross-sectional studies are essential in discovering connections and providing a basis for research exploring causal pathways. To address this limitation, future research could investigate longitudinal or experimental methodologies.

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