

FAKTOR-FAKTOR YANG MEMPENGARUHI KEPATUHAN PENGOBATAN PADA PASIEN PENYAKIT JANTUNG KORONER (PJK)

Factors Affecting Medication Adherence in Patients with Coronary Heart Disease (CHD)

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Riwayat artikel

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Abstrak

Pendahuluan : Penyakit jantung koroner adalah penyakit jantung yang disebabkan oleh penyempitan pembuluh darah koroner akibat penumpukan kolesterol, timbunan lemak, dan zat lain (plak) pada dinding pembuluh darah koroner yang dapat menyebabkan aterosklerosis dan akhirnya menghambat suplai darah ke jantung. Perkembangan penyakit ini dapat dicegah dengan penatalaksanaan pengobatan yang tepat dan teratur, salah satunya dengan kepatuhan minum obat. Kepatuhan minum obat merupakan aspek utama pengobatan penyakit jantung koroner (PJK). **Tujuan:** untuk mengetahui faktor-faktor yang mempengaruhi kepatuhan minum obat pada pasien penyakit jantung koroner. **Metode:** Metode penelitian ini menggunakan pendekatan kuantitatif dengan studi cross sectional. Populasi dalam penelitian ini adalah seluruh pasien penyakit jantung koroner yang datang untuk pemeriksaan rutin di Poliklinik Jantung RSAU Dr. M. Salamun Bandung dengan sampel sebanyak 67 orang, pengambilan sampel menggunakan teknik convenience sampling. **Hasil:** Hasil Pada penelitian ini didapatkan hasil yang signifikan antara usia (0,000), lama sakit (0,004), self-efficacy (0,001), dan dukungan keluarga (0,029) dengan kepatuhan minum obat pada pasien penyakit jantung koroner. **Kesimpulan:** Dapat disimpulkan bahwa faktor yang paling berpengaruh dalam penelitian ini adalah usia mempengaruhi kepatuhan minum obat pada pasien penyakit jantung koroner dengan p-value 0,000 ($p < 0,05$).

Abstract

Background: Coronary heart disease is a heart disease caused by the narrowing of the coronary arteries due to the accumulation of cholesterol, fat deposits, and other substances (plaque) on the walls of the coronary arteries which can cause atherosclerosis and ultimately hamper blood supply to the heart. The development of this disease can be prevented with proper and regular treatment management, one of which is by adhering to taking medication. Adherence to taking medication is the main aspect of the treatment of coronary heart disease (CHD). **Objective:** to determine the factors that influence medication adherence in patients with coronary heart disease. **Method:** This research method uses a quantitative approach with a *cross-sectional study*. The population in this study were all patients with coronary heart disease who came for routine checkups at the Cardiac Polyclinic of RSAU Dr. M. Salamun Bandung with a sample of 67 people, taking samples using a *convenience sampling technique*. **Results:** significant results were found between age (0.000), length of illness (0.004), *self-efficacy* (0.001), and family support (0.029) with medication adherence in patients with coronary heart disease. **Conclusion:** The most influential factor in this study was that age influenced medication adherence in patients with coronary heart disease with a p-value 0,000 ($p < 0,05$).

INTRODUCTION

Coronary heart disease is a condition in which blood does not flow properly to the heart due to problems in the coronary arteries. This condition occurs because the coronary arteries that supply oxygen-rich blood to the heart muscle can narrow due to the buildup of cholesterol, fat, and other substances (plaque) that can cause atherosclerosis. When the plaque in the heart's arteries ruptures, a blood clot forms around the plaque. These blood clots can block blood flow in the arteries leading to the heart muscle (Ottawa Heart, 2020). Signs and symptoms experienced by coronary heart disease patients include a feeling of heaviness and pressure in the chest area, chest discomfort, a burning sensation in the chest area, and chest pain that lasts more than 20 minutes at rest or during activities accompanied by diaphoresis (cold sweats).), other symptoms such as nausea and heartburn, weakness, and dizziness (RI Ministry of Health, 2018).

CHD or coronary heart disease is the leading cause of death from non-communicable diseases worldwide. The main cause of death in cases of coronary heart disease in the world reaches 75%, caused by consuming alcohol, hyperglycemia (high blood sugar), tobacco use (smoking), hypertension, obesity, increased cholesterol, lack of fruit and vegetable intake, and lack of exercise (WHO, 2020). Based on data in 2018, deaths from cardiovascular disease were 217.1 per 100,000 people. Usually, someone dies of cardiovascular disease every 36 seconds in the United States (Aparicio et al., 2021). Based on information from the Indonesian Ministry of Health, in 2019 the incidence of heart and blood vessel disease is increasing every year. In Indonesia, at least 15 out of 1,000 people experience cardiovascular disease. The prevalence of heart disease based on medical diagnosis in Indonesia has reached 1.5%, and the highest prevalence is in North Kalimantan as much as 2.2%, DIY at 2%, and Gorontalo at 2%. In addition, in West Java, the prevalence is no less high,

namely 1.6% (P2PTM RI Ministry of Health, 2019).

Coronary heart disease cannot be cured, but it must always be controlled or controlled so that there are no complications that will worsen the condition, heart coronary disease should be taken regularly, so many found problems no obedience drink drugs which lead to further complications.

The prevalence of non-adherence to taking medication in patients with coronary heart disease shows as many as 187 million people with non-adherence taking medication that has been prescribed in the United States (American Heart Association, 2016). In Indonesia, adherence to taking medication in coronary heart disease patients still looks very concerning, the level of adherence to taking medication for people with heart disease is relatively low as many as 31 respondents, and only 25 respondents (80.6%) are compliant with taking medication (Rakhmawati & Henniwati, 2019).

Medication adherence is still a common problem in the health sector. *The National Institute for Health and Care Excellence* (NICE) classifies drug non-adherence into two categories: intentional and unintentional. In intentional nonadherence to treatment, the patient consciously chooses not to follow the treatment given due to beliefs and perceptions, skips taking medication to prevent side effects, or remembers the cost of treatment. It is proven that half of the problems of non-compliance with taking medication are intentional (Alalaqi, 2019)

Factors that can increase the likelihood of someone complying with taking medication in patients with coronary heart disease include having family support (Artidarma et al., 2018). Reinforced by Green's theory (1980) that medication adherence has three factors, namely predisposing factors (attitudes, knowledge, beliefs, values, beliefs, and perceptions). Supporting or driving factors (health facilities and availability of facilities, ease of reaching health facilities, ease of transportation, and service time). Finally, there are reinforcing factors (support from family, friends, teachers, and health service providers) (Wulandari, 2015). In this condition, the presence of the family is needed as support for coronary heart disease patients to carry out their treatment. This is also one of the factors that will affect the patient's

consistency in taking the drug. Family support is very important for social assistance that can be given to family members in focusing on and further developing their health status (Artidarma et al., 2018).

Several previous studies confirmed that family support can affect medication adherence. One way for patients to comply with taking medication is to have family support. Research result Previously it was found that family support could play a role in helping coronary heart disease patients to adhere to taking medication, out of 166 respondents only 94 respondents (56.7%) with good family support and respondents with poor family support were 72 people (43.3%) and there is a relationship between family support and medication adherence in CHD patients with a P value = 0.005 (Artidarma et al., 2018). Family support is an important factor in medication adherence, with a p -value of 0.005. Previous research also proved that with high family support, there were as many as 35 respondents (85.4%) and most of them had a high level of compliance with as many as 36 people (74.1%). Spearman rank test results obtained p value = (0.02) < (0.05) (Galih Aditya Putranto, Sih Ageng Lumadi, 2022).

Previous research only focused on the relationship, while this study will research what factors can influence medication adherence in coronary heart disease patients with two variables, namely the dependent variable (dependent) and independent variable (free). The dependent variable in this study was adherence to taking medication in patients with coronary heart disease, and the independent variables were age, gender, last education level, length of illness, self-efficacy, and family support.

METHOD

This research uses descriptive quantitative with a *Cross-Sectional Study approach* which is a research design by measuring or observing variables at one time and done once.

Research Population

The population in this study were coronary heart disease patients who were undergoing outpatient care at the Cardiac Polyclinic, Dr. Air Force Hospital (RSAU). M. Salamun Bandung, totaling 67 patients. Sampling was done by using a *convenience sampling technique*. *Convenience sampling* or *accidental sampling*

instruments

Characteristics respondent uses Respondent characteristic data checklist sheet

Consists of the respondent's name/initials, age, sex, last level of education, and duration of illness.

Measuring tool for self-efficacy use *Cardiac Self-Efficacy* (CSE) was developed by (Sullivan et al., 1998), and has been translated and modified into the Indonesian version by Wantiyah (2010). The CSE questionnaire consists of statements containing risk factor management and function maintenance. After testing the validity and reliability, the results were obtained (0.77) using *Cronbach alpha*. The *Cardiac Self-Efficacy* Questionnaire (CSE) consists of 20 statement items with a Likert scale of 1-4, namely: 1 "not sure", 2 "not sure", 3 "sure", and 4 "very sure", the higher the score, the higher the level of self-efficacy. The calculation of the total score obtained is divided into three, namely low, medium and high (Wantiyah, 2010).

Support gauge families use the *Perceived Social Support from Family* (PSS-Fa) questionnaire, a measuring instrument designed by Procidano and Heller (1983) to measure the extent to which a person receives or obtains information, support, and feedback from the family in particular. In the validity test, the results were obtained (0.361), and from the reliability value (0.787), the test results stated that the 20 question items in the questionnaire had meaning or were valid. The PSS-Fa consists of 20 family support questions which are translated back into Indonesian. The questionnaire uses closed statements using the Gutman scale. The value of each answer in the family support variable is divided into "yes", "no", and "don't know". Each indicator has *favorable* and *unfavorable* with different values.

The compliance questionnaire uses MMAS-8 items (*Morisky Medication Adherence Scale*) which has 8 question items in it. Compliance with taking coronary heart disease medication was measured using data from the MMAS-8 Questionnaire. Morisky published the latest version in 2008, namely MMAS-8 with a higher reliability of 0.83 and higher sensitivity and specificity as well. This questionnaire contains questions about how often patients forget to take their medication, how often patients deliberately stop taking the medication without the doctor's knowledge, and the patient's ability to continue taking medication. When measuring the score of the MMAS questionnaire with 8 question items using a Likert scale, numbers 1-7 score 1 if you answer "yes" except for question number 5, score 0 if you answer "yes", meanwhile question number 8 if you answer "never or rarely" " is worth 0, and if the respondent answers "occasionally" (1 time in 1 month), "sometimes" (2-3 times in 2 months), "usually" (2-3 times in 1 month), and "every time" (3-4 times in 1 week) has a value of 1. Respondents with a score above 2 have low compliance, scores 1-2 indicate moderate compliance, and a score of 0 indicates high compliance (Morisky et al., 2008).

Data analysis

Univariate analysis of the data was descriptive, namely showing the results of the frequency distribution of the characteristics of the respondents and the factors that influence adherence to taking medication in patients with coronary heart disease (CHD).

Analysis bivariate If the data is not normally distributed, the statistical test for bivariate analysis used in this study is the *Spearman Rank Correlation Coefficient* to see the relationship between the two variables, and if the data is normally distributed, the statistical test used is *Pearson Correlation*. The multivariate test used in this study is the *Linear Regression test*

RESULT

Univariate analysis

Table 1 showed the characteristic of respondents. The mean age of respondents was 61.43 years , most of them man (55.2 %). Majority respondent had senior high school education background with length of suffering from coronary heart disease was more than 5 years (37.3%)

Table 1. Characteristic respondents (N= 67)

Variable	total n (%)	Min-Max
Age (Mean $\pm$ SD)	61.43 $\pm$ 13.540	29 - 89
Gender		
Man	37 (55.2%)	
Woman	30 (44.8%)	
Last Education Level		
No school	0 (0%)	
SD	22 (32.9%)	
JUNIOR HIGH SCHOOL	7 (10.4%)	
SMA/SMK	27 (40.3%)	
College	11 (16.4%)	
Length of Suffering from Illness		
< 1 year	6 (9.0%)	
1-2 years	9 (13.4%)	
2-3 years	10 (14.9%)	
4-5 years	17 (25.4%)	
> 5 years	25 (37.3%)	

Table 2. Univariate Dependent and Independent Analysis of coronary heart disease (CHD) patients at RSAU Dr. M. Salamun

Variable	Mean $\pm$ SD	Min-Max
Medication Compliance	2.61 $\pm$ 2.103	0-8
Self-efficacy	62.72 $\pm$ 7.152	40-75
Family support	53.66 $\pm$ 4.932	38-59

Bivariate Analysis

Table 3 Relationship between age, gender, last education level, length of illness, self-efficacy, and family support with adherence to taking medication in patients with coronary heart disease (CHD) at RSAU Dr. M. Salamun

Variables	Medication Compliance (Continuous)	
	<i>p-value</i>	r/t
Age ^a	0.000	0.416**
Gender ^b	0.814	-0.123
Last Education Level ^c	0.338	1.145
Length of Suffering from Illness ^c	0.004	4,349
<i>Self-efficacy</i> ^a	0.001	-0.406**
Family Support ^a	0.029	-0.267*

results of this study, the average age of CHD patients is almost the same as research conducted by (Wahidah & Harahap, 2021) which states that part big respondents aged 50-69 years (75.4%). results study showing that part respondents manifold sex men as many as 37 respondents (55.2%). Type sex is associated with various roles and behavior of different life _ Among boys and girls in society. at the moment studying in thing guard health, men tend better health than a girl. Research (Wantiyah, Saputra, et al., 2020) shows that part big respondent manifold sex male 91 respondents (81.25%). A man is far more many suffering from CHD than the compared woman because condition the happen almost 10 years more early in men than in girl. Condition this happens because a woman own hormone preventing estrogen _ damage vessels blood. The

Multivariate Analysis

Table 4. Linear Regression Test in coronary heart disease (CHD) patients at RSAU Dr. M. Salamun

Variable	Unstandardized Coefficients		Unstandardized Coefficients		
	B	std. Error	Betas	Q	Sig.
Age	0.070	0.015	0.454	4,770	0.000
Long-suffering from illness	-0.530	0.157	-0.337	-3,381	0.001
<i>Self-efficacy</i>	-0.075	0.031	-0.256	-2,394	0.020
Family support	-0.046	0.044	-0.108	-1.043	0.301

DISCUSSION

The results of this study indicate the average age of coronary heart patients (CHD) at the Cardiac Polyclinic of RSAU Dr. M. Salamun Bandung, 61 years old. Age is a risk factor for coronary heart disease that cannot be changed. As age increases, the risk of developing coronary heart disease also increases. Most of the respondents with coronary heart disease in this study were over 60 years old. This condition is related to the aging process which causes a decrease in the function of the heart organ. In old age, there will be an increase in the process of atherosclerosis in blood vessels. Based on the

risk caught disease heart coroner will same increasing if a woman has entering menopause. Education level final part big patient disease heart coroner (CHD) in the Polyclinic Heart RSAU Dr. M. Salamun Bandung namely SMA/SMK graduates were 27 respondents (40.3%). Height education respondents could increase their knowledge about how the method for arranging behavioral health in the healing process, so respondents could control experienced and maintained symptoms _ and function in their health. Based on experience study no all who have education tall know or understand how method arrange behavioral health so you can control symptoms disease heart

coroner (CHD). In line with research (Dewi et al., 2019) which explains that a more tall level of education, the increasing big possibility of behaving positively, and tall level of knowledge and understanding about living healthy, increasingly high awareness.

Study also explains that the level of education in the Heart Polyclinic room of Arifin Achmad Hospital shows part big respondent is high school, that is as many as 17 respondents (48.6%). The level of education also influences knowledge and understanding somebody about moderate illness _ experience (illness heart coroner). duration suffering the disease in patients disease heart coroner (CHD) in the Polyclinic Heart RSAU Dr. M. Salamun Bandung > 5 years as many as 25 respondents (37.3%). According to research (Rohayati & Rumahorbo, 2020) shows the range ever suffer disease heart coroner > 5 years with a total of 14 people (45.2%). The longer the patient suffers disease heart coroner the level of obedience to drinking drugs or the treatment high. this _ is caused by experiencing ever suffer pain and mechanics coping that can increase trust in self in doing the activity and drinking drugs related to maintenance function his health. Along ever suffer disease heart coroner patient could get used to self how should behave

Research results this showing that patient disease heart coroner (CHD) in the Polyclinic Heart RSAU Dr. M. Salamun Bandung tends to experience obedience to drink drugs with a mean value of 2.61 (SD = 2.103), p this showing that obedience drink medication in patients with disease heart coroner (CHD) almost no one on purpose for no drink drug for 2 weeks last. this _ is described through answering respondents in the questionnaire where obedient respondents _ drink drug always drink drug in a manner regularly, drink drug corresponding dose, no stop treatment without instructions Doctor, you know timetable drink medicine, as well quick take drug corresponding specified schedule. According to research (Galih Aditya Putranto, Sih Ageng Lumadi, 2022) stated obedience drink medication in patients disease heart coroner (CHD) at the cardiac

polyclinic of RSUD Dr. Saiful Anwar Malang shows that patient disease heart coronary artery disease (CHD) experienced obedience currently as many as 36 respondents (87.8%). The study explains that the respondent's good perception of moderate illness and treatment _ lived, the respondent was convinced that undergoing treatment corresponding with the advice given will prevent the happening risk of recurrence and severity of the disease. It appears because the patient knows that obedience to treatment being undertaken will impact good for illnesses so that respondent showing behavior obeys to treatment being undertaken.

CONCLUSIONS

1. The demographic characteristics of coronary heart patients (CHD) were identified, the majority of respondents were male, 37 respondents (55.2%), the average age of respondents was 61 years, the most recent level of education was SMA/SMK with 27 respondents (40.3%), and most of the respondents indicated that the duration of illness was > 5 years by 25 respondents (37.3%).
2. Identified description of medication adherence in coronary heart disease (CHD) patients with an average value of 2.61 (SD = 2.103; range 0-8) which indicates lower medication adherence in coronary heart disease (CHD) patients.
3. Identified a picture of *self-efficacy* in patients with coronary heart disease (CHD) with an average value of 62.72 (SD = 7.152; range 40-75) which shows the better *self-efficacy* of patients with coronary heart disease (CHD).
4. Identified description of family support in patients with coronary heart disease (CHD) with an average value of 53.66 (SD = 4.932; range 38-59) which indicates better family support for patients with coronary heart disease (CHD).
5. Identified a relationship between age and medication adherence in patients with coronary heart disease (CHD), with a significance value of 0.000 ($p\text{-value} < 0.05$).
6. It was identified that there was no relationship between gender and medication adherence in patients with coronary heart

disease (CHD), with a significance value of 0.814 ($p\text{-value} > 0.05$).

7. It was identified that there was no relationship between the last level of education on medication adherence in patients with coronary heart disease (CHD), with a significance value of 0.338 ($p\text{-value} > 0.05$).
8. A relationship was identified between the duration of illness and medication adherence in patients with coronary heart disease (CHD), with a significance value of 0.004 ($p\text{-value} < 0.05$).
9. A relationship was identified between *self-efficacy* and medication adherence in patients with coronary heart disease (CHD), with a significance value of 0.001 ($p\text{-value} < 0.05$).
10. A relationship was identified between family support and medication adherence in patients with coronary heart disease (CHD), with a significance value of 0.029 ($p\text{-value} < 0.05$).
11. The most influential factor identified in medication adherence in patients with coronary heart disease (CHD) is age with a significance value of 0.000 ($p\text{-value} < 0.05$).

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