DETERMINAN *SELF CARE* PASIEN PENYAKIT JANTUNG KORONER SETELAH INTERVENSI KORONER PERKUTAN

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Abstrak

Intervensi yang dilakukan untuk Penyakit jantung coroner (PJK) adalah reperfusi miokard dengan tindakan Intervensi Koroner Perkutan (IKP). Namun setelah tindakan IKP dapat terjadi risiko infark miokard berulang dan restenosis sehingga *self-care* merupakan bagian penting dalam upaya peningkatan kualitas hidup pasien yangtelahmenjalaniIKP. Penelitian ini bertujuan untuk mengidentifikasi faktor determinan *self-care* pasien yang menjalani IKP. Desain penelitian menggunakan *cross sectional survey* pada 300 responden yang diambil dengantehnik *consecutive sampling* di Poli Jantung RS Hermina Bekasi. Penelitian menggunakan kuesioner SC-CHDI (*self-carecoronary heartdisease invantory*), kuesioner CADE-Q SV (*Coronary Artery Disease Education Questionnaire Short Version*) dan kuesioner dukungan keluarga. Hasil penelitian menunjukan faktor yang berhubungan dengan *self-care* adalah jenis kelamin(p=0,000), pendidikan (p=0,000), lama IKP (p=0,165), pekerjaan (p=0,000), penghasilan(p=0,000), pengetahuan(p=0,000) dan dukungan keluarga (p=0,000). Sedangkan pada analisis multivariat, faktor yang paling dominan dengan*self-care*adalah dukungan keluarga (p=0,000) dengan OR 6,724. Responden yangmempunyai dukungan keluarga yang tinggimemiliki*self-care*yanglebih adekuat. Implikasidalamkeperawatanadalahmemberikan edukasi yang sesuai dengan kebutuhan pasien dengan melakukan identifikasi kebutuhan edukasi sebelumnyadanmelibatkan keluarga dalampemberian edukasi.

Kata Kunci : Intervensi Koroner Perkutan*,* Penyakit Jantung Koroner, *Self-care*

Abstract

The intervention for coronary heart disease (CHD) is myocardial reperfusion with percutaneous coronary intervention (IKP). However, after the IKP procedure, there is a risk of recurrent myocardial infarction and so restenosis, self-care is an important part in efforts to improve the quality of life of patients who have undergone IKP. This study aims to identify the determinants of self-care in patients undergoing IKP. The research design used a cross-sectional survey on 300 respondents who were taken by consecutive sampling technique at the Heart Polyclinic at Hermina Bekasi Hospital. The study used the SC-CHDI (self-care coronary heart disease inventory) questionnaire, the CADE-Q SV (Coronary Artery Disease Education Questionnaire Short Version) questionnaire and the family support questionnaire. The results showed that factors related to self-care were gender (p=0.000), education (p=0.000), length of IKP (p=0.165), occupation (p=0.000), income (p=0.000), knowledge (p=0.000) and family support (p=0.000). Meanwhile, in multivariate analysis, the most dominant factor with self-care is family support (p=0.000) with OR 6.724. Respondents who have high family support have more adequate self-care. The implication in nursing is to provide education according to the needs of patients by identifying educational needs beforehand and involving families in providing education.

Keywords: Coronary Heart Disease, Percutaneous Coronary Intervention, Self-care

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INTRODUCTION

Coronary heart disease (CHD) is the leading cause of death globally, accounting for up to 16% of all deaths worldwide. The figure has steadily increased since 2000, from 2 million deaths in 2000 to 8.9 million deaths in 2019 (World Health Organization, 2019) . The 2018 Basic Health Research recorded 1.01 million people in Indonesia suffering from heart disease, or 1.5% of the population. CHD accounts for 42.3% of all cardiovascular disease-related deaths in Indonesia (Ministry of Health, 2018) . CHD is a blockage of blood flow that occurs in the coronary arteries so that it causes the blood supply to be forwarded to the heart muscle cells to decrease, and the cause is fat deposits in the arterial walls of the heart blood vessels (Williams & Hopper, 2015)

Medical management of CHD can be done by reperfusion of the heart muscle. One of the techniques is Percutaneous Coronary Intervention (CCI). IKP is a coronary angioplasty combined with the use of stents to treat narrowed coronary arteries. In addition, IKP is also a minimally invasive measure of trauma, low risk compared to Coronary Artery Bypass Grafting (CABG) surgery and can increase patient survival (Saeidzadeh et al., 2016). The use of IKP as a reperfusion method is rapidly increasing because after IKP, patient recovery is rapid and hospitalization is short. Compared to CABG, IKP has a risk of recurrent acute myocardial infarction (1.9%) in patients without complete reperfusion, repeat reperfusion (7.2%) and restenosis (5-20%) (Yuniadi, 2015) . Acute myocardial infarction, stroke, and death can all occur more frequently in patients who do not lead a healthy lifestyle. So patients are expected to apply self-care after undergoing IKP (Susanti et al., 2018). Self-care is an individual's ability to engage in behaviors that promote health and well-being. Self-care refers to adherence to treatment recommendations, symptom response, and healthy lifestyle modifications, smoking cessation and management. Self-care in CHD patients includes three main domains, namely self-care maintenance, self-care monitoring, and self-care management (Riegel et al., 2017). The development of appropriate nursing interventions, especially in providing specific and effective information related to post-ICP care, can be implemented by first identifying factors associated with self-care of CHD patients undergoing percutaneous coronary intervention.

METHODS

This study used an analytic survey design using a cross-sectional approach. The population in this study were all CHD patients who had undergone percutaneous coronary intervention who received treatment at the heart polyclinic of Hermina Bekasi Hospital. The sample in this study amounted to 300 respondents with consecutive sampling technique. Samples in this study were taken from all subjects who came sequentially to the heart polyclinic of Hermina Bekasi Hospital by meeting the inclusion criteria and were included in the study until the required number of subjects was met. Respondents taken were patients who had undergone percutaneous coronary intervention > 1 month. The data collection method in this study used the Self-Care Coronary Heart Disease Inventory (SC-CHDI) questionnaire, the Coronary Artery Disease Education Questionnaire Short Version (CADE-Q SV) questionnaire, and the family support questionnaire by interviewing respondents and willing to fill out informed consent to be the subject of research (de Melo Ghisi et al., 2016; Indrawati, 2014; Vaughan Dickson et al., 2017). The analysis method in this study is univariate analysis for descriptive statistics reported in the form of frequency distribution and percentage. Bivariate analysis to determine the relationship and influence between the independent variable and the dependent variable using the Chi Square test with a confidence level of 95% or a significance level of 5%. The multivariate analysis used is logistic regression analysis because the dependent variable is categorical and researchers include variables in one model (Hastono & Sabri, 2017.

RESULTS AND DISCUSSION
Respondent Characteristics
Table 1. Distribution of Respondents (n=300)

Variable	Total (n)	Percentage (%)
Age		
< 60 years	161	53.7
≥ 60 years	139	46.3
Gender		
Female	41	13.7
Male	259	86.3
Education		
High	105	35.0
Basic	195	65.0
Jobs		

Work	205	68.3
Not Working	95	31.7
Income		
≥ Rp. 5 million	190	63.3
< Rp. 5 million	110	36.7
Duration of Post IKP		
< 6 months	81	27.0
≥ 6 months	219	73.0
Knowledge		
Good	156	52.0
Less	144	48.0
Family Support		
High		
Low	156	52.0
	144	48.0
Self-care		
Good	187	62.2
Less	113	37.7

The results of the analysis based on table 1 can be seen that most of the proportion of respondents had an age < 60 years as many as 161 people (53.7%), male gender as many as 259 people (86.3%), elementary education 195 people (65%), and working status 205 people (68.3%) with income above UMR as many as 190 people (63.3%). Most of the respondents had undergone IKP< 6 months as many as 219 people (73%). Meanwhile, 156 respondents (52%) had good knowledge, 156 people (52%) had high family support. As for good self-care 187 people (62.3%).

Relationship between Independent and Dependent Variable

Table 2. Bivariate *Chi-Square* Analysis of Independent Variables with *Self-care* CHD patients who underwent IKP (n=300)

Variables	Self-Care				Total		OR (95% CI)	*P Value*
	Good		**Less**					
	n	**%**	**n**	**%**	**n**	**%**		
Age							2.958	0.000
<60 years old	119	73.9	42	26.1	161	100	(1.823 - 4.800)	
≥60 years old	68	48.9	71	51.1	139	100		
Gender							0.258	0.000
Female	14	34.1	27	65.9	41	100	(0.129 - 0.517)	
Male	173	66.8	86	33.2	259	100		
Education							9.372	0.000
High	94	89.5	11	10.5	105	100	(4.725 - 18.590)	
Low	93	47.7	102	52.3	195	100		
Jobs							6.573	0.000
Work	156	76.1	49	23.9	205	100	(3.847 - 11.230)	
Not Working	31	32.6	64	67.4	95	100		
Income							9.981	0.000
≥ UMR (5 jt)	154	81.1	36	18.9	190	100	(5.783 - 17.229)	
< UMR (5 jt)	33	30	77	70	110	100		
IKP Duration							1.697	0.061
< 6 months	144	65.8	75	34.2	219	100	(1.011 - 2.848)	
≥ 6 months	43	53.1	38	46.9	81	100		
Knowledge							8.234	0.000
Good	131	84	25	16	156	100	(4.782 - 14.178)	
Less	56	38.9	88	61.1	144	100		
Family Support							16.353	0.000
High	139	89.1	17	10.9	156	100	(8.874 - 30.135)	
Low	48	33.3	96	66.7	144	100		

meaningful α< 0.05

Table 2 shows the results of bivariate correlation. Almost all independent variables correlated with *self-care of* CHD patients undergoing percutaneous coronary intervention.

age, gender education, occupation, income, knowledge and family support had a significant relationship with *self-care* of CHD patients undergoing percutaneous coronary intervention.

Most Dominant Variable

The most dominant factors with *self-care of* CHD patients undergoing IKP were analyzed using multivariate tests. The statistical test used in the multivariate analysis of this study is logistic regression to analyze the relationship between one or more independent variables with a categorical dependent variable. The stages of multivariate analysis of this study by conducting bivariate selection first then the modeling stage is carried out.

Table 3. Final Multivariate Modeling Analysis of Independent Variables on *SelfCare* of CHD Patients Undergoing IKP (n=300)

Variables	B	SE	Wald	P Value	OR	95% CI
Gender*	-0,713	0,545	1,710	0,191	0,490	0,168 - 1,427
Education*	0,565	0,476	1,406	0,236	1,759	0,691 - 4,475
IKP* Duration	0,533	0,392	1,850	0,174	1,703	0,791 - 3,670
Occupation*	0,351	0,568	0,382	0,537	1,420	0,467 - 4,319
Income*	0,917	0,551	2,770	0,096	2,501	0,850 - 7,358
Knowledge	1,062	0,391	7,372	0,007	2,892	1,344 - 6,226
Family support	1,906	0,349	29,821	0,000	6,724	3,393 - 13,326
Constant	-2,604					

Based on table 3, it is known that the most dominant variable affecting self-care of CHD patients undergoing percutaneous coronary intervention is family support with a significance of 0.000. This study shows that respondents who have good family support have a 6.724 times chance of having good *self-care* in CHD patients undergoing percutaneous coronary intervention after controlling for variables of gender, education, length of IKP, occupation, income and knowledge.

Discussion

Discharge after IKP is a critical time for patients as they need to adjust to a healthier lifestyle, new treatment regimen and the need for support from their family and healthcare team. Effective secondary prevention efforts are essential as patients are highly vulnerable to *cardiac events*. Patients sometimes feel unprepared for their return home and have uncertainty about their life after IKP. Patients need clear information about *discharge planning,* post-treatment precautions and the consequences related to their heart disease if they do not comply with the information provided.

This of course requires family participation and involvement in the adaptation process. Emotional support and information provided by the family are perceived with better *self-care* behavior both in terms of *maintenance* and management (Rebora et al., 2021) . The presence and existence of family support can help patients be more confident regarding their ability to carry out *self-care* (Pancani et al., 2018) . Innovations and strategies to improve *self-care* adherence are needed in the structure and process of information system service delivery. This can be in the form of teams at the first level of health facilities, the existence of information systems that support and utilize interactive technology (Valaker et al., 2020).

Family support, especially the presence of *caregivers*, has an important role for patients. Support from family is very helpful in the *self-care* process (De Maria, et al., 2021). The role of the *caregiver* ensures that the patient continues to carry out *self-care* consistently. Because CHD is a chronic disease, *self-care* behavior becomes part of the patient's daily routine. Family presence and support has been shown to reduce cognitive and functional impairment and depressive symptoms in patients with chronic illness. The role of the *caregiver* has a positive effect on the patient's *self-care* behavior. *Caregivers* support patients to perform *self-care* maintenance, monitoring and *self-care* management by contributing directly. *Caregivers* in this context are family members who have strong family ties.

Advice

Nurses must be aware of the factors that affect the patient's ability to perform *self-care* and the education program provided according to the patient's needs. Nurses identify the level of family support for *self-care* of CHD patients undergoing percutaneous coronary intervention and collaborate and educate patients and families including *self-care maintenance, self-care monitoring* and *self-care management.*

Future research is expected to explore the role of nurses in conducting health behavior modification programs related to coronary heart disease given the many factors that can affect patients' ability to perform *self-care* and lifestyle changes. And it is hoped that further research will focus on observing the ability to do *self-care* or qualitative research that examines in depth the attitudes and ability to do *self-care of* coronary heart disease patients undergoing percutaneous coronary intervention.

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