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THE RELATIONSHIP OF KNOWLEDGE WITH ANXIETY IN POPULATION WITH THE RISK OF CORONARY HEART DISEASE

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ABSTRACT

Background: Knowledge is an important factor as part of the promotive and preventive efforts in controlling the development of CHD risk factors in the community and can affect the psychological condition that causes anxiety. Understand and know the health status or risk of disease well, for some people it can cause or increase the anxiety experienced. Conversely, by not knowing or understanding the disease is minimal disease makes a person become calmer and less anxious. **Objective**: The aim of research to identify the relationship of knowledge with the incidence of anxiety in the population with CHD risk. **Methods**: The study used observational analytic design with an approach. *Cross-sectional* respondents numbered 111 people who have risk factors for CHD. The sample is determined by purposive sampling. The study was conducted in the village of Kota Lama District of Kedungkandang Malang, Indonesia in April and May 2018. **Result**: There is a significant relationship between knowledge and the incidence of anxiety in the population at risk of CHD with the value of ($p= 0.001$) and $r = 0.321$. **Conclusion**: Knowledge have a significant relationship with the incidence of anxiety in population with the risk of CHD in the village of Kota Lama District of Kedungkandang Malang, Indonesia.

KEYWORDS: Knowledge, Anxiety, Population with the Risk of CHD.

INTRODUCTION

High-mortality caused by coronary heart disease (CHD) become a major health problem in many developed and developing countries including Indonesia. In the United States, one-third of all deaths in people over 35 years of age due to CHD. Nearly half of men and a third of middle-aged women have symptoms of CH.[1] Based on data from the *World Health Organization* (WHO) in 2012 shows that of the 56.5 million deaths worldwide are 31% due to cardiovascular disease and 42.3% of the disease caused by CHD.[2]

Based on data from Health Research Association in 2013 in Indonesia, CHD causes of death in all age groups at 12.9% with CHD prevalence of 1.5%, this number continues to increase with age, especially in the age group 65-74 years. In Malang, the prevalence of CHD aged ≥ 15 years at 1.6%. The highest incidence in the age of 65-74 years to reach 3.6%, which is dominated by

women, a population not in school and not working, urban, and low economic status.[3]

Various epidemiological studies have found variations in the incidence of coronary heart disease (CHD), which differ depending on the specific geographic and social circumstances in which the cause is not known with certainty.[4] One of CHD risk factors that can be changed is the psychological factor.[5] Anxiety becomes strong and proven predictor factors increase the risk of CHD doubled.[6]

Physiologically, anxiety resulting in an increase of neuroendocrine, the activation process of plaque formation and hyperventilation. Work will be increased sympathetic nervous system in excess and cause abnormal heart rhythms that can lead to the occurrence of CHD.[7] Individuals who experience anxiety are likely to have risky behaviors on cardiovascular health and can lead to coronary heart disease such as smoking behavior

and alcohol consumption, diet disorganized, lazy to do physical activity and exercise.[8]

Various efforts have been made by the Government in the prevention of CHD, one of which is to prepare primary and secondary prevention programs in an effort to control the development of CHD risk factors. Primary prevention efforts to reduce the incidence of CHD was first such increase healthy behaviors related to heart health and reduce psychological anxiety.[9]

According to Kaplan *et al.*, knowledge and access to information are one of the external factors that influence the occurrence of anxiety.[10] Knowledge is an important factor as part of promotive and preventive efforts in controlling the development of CHD risk factors in the community and can affect the psychological condition that causes anxiety.[11-12] Understand and know the health status or risk of disease well, for some people it can cause or increase the anxiety experienced. Conversely, by not knowing the illness or lack of understanding of the disease makes a person become calmer and less anxious.[13] Notoatmodjo explains that knowledge is used as a source of support to increase self-confidence, positive attitude and behavior in everyday life.[14]

MATERIALS AND METHODS

This research is a quantitative research carried out by using observational analysis with cross-sectional approach. The study was conducted in the village of Kota Lama District of Kedungkandang Malang, Indonsesia in April and May 2018. Respondents numbered 111 people who have the interaction of six or more risk factors for CHD such as hereditary factors, age adults over 40 years, hypertension, overweight to obesity, diabetes mellitus, high cholesterol, a diet high in saturated fats and calories, eat less vegetables and fruit, lack of physical activity and sport, as well as psychological stress. Determination of the sample by *purposive* sampling. The research instrument used questionnaire. Anxiety assessment using the DASS-42 questionnaire. Questionnaire knowledge about coronary heart disease using questionnaires compiled by researchers and have been tested for validity (*Corrected Item-Total Coresction* ≥ 0,3) and realibility (*Alpha Cronbach's* = 0,913). This research has obtained an ethical clearance from Health Research Ethics Committee Faculty of Medicine Universitas Brawijaya registered with the number of 87/EC/KEPK-S2/04/2018. There were two types of analysis, univariat and bivariat. The univariat analysis was conducted to identify characteristic of the respondent, while bivariat analysis was conducted to describe relationship between knowledge and the incidence of anxiety in the population at risk of CHD using Spearman rank correlation test with significant level (α) = 0,005.

RESULTS

The general characteristics of respondents are age group, gender, knowledge and incidence of anxiety, which can be seen as follows:

Table 1: Distribution of respondents by age group, gender, knowledge and incidence of anxiety.

Characteristics	f	%
Age Group		
Adults (26-45 years)	41	36.9
Elderly (> 46 years)	70	63.1
Gender		
Male	40	36.0
Female	71	64.0
Knowledge		
Good	63	56.8
Less	48	43.2
Incidence of Anxiety		
Anxiety	68	61.3
Not Anxiety	43	38.7

Source: Primary Data (2018)

Table 1 shows that out of 111 respondents, most of the age groups elderly is 70 respondents (63.1%), mostly female of 71 respondents (64.0%), most have a good knowledge of coronary heart disease is 63 respondents (56.8%), and most of the anxiety that is 68 respondents (61.3%).

Table 2: The results from bivariate analysis of *spearman rank* correlation in the relationship between knowledge with incidence of anxiety in population with the risk of CHD.

		Anxiety
Knowledge	*Correlation Cooffcient (r)*	0.321
	Sig. (2-tailed) (p)	0.001
	N	111

Source: Primary Data (2018)

Table 2 shows the value *p* 0.001 <of α (0.05), which means that there is a relationship significantly between knowledge with the incidence of anxiety in population with the risk of CHD in the Village of Kota Lama District of Kedungkandang Malang, Indonsesia. Correlation coefficient value by 0321, meaning that a positive correlation with enough force.

DISCUSSION

The results of data analysis showed knowledge has a significant relationship with the occurrence of anxiety in the population with CHD risk, evidenced by the *p*-value <α (0:05). This shows that the less one's knowledge of coronary heart disease, the potential to experience higher anxiety. The results are consistent with research Altino et al., that the lack of knowledge about the disease can lead to feelings of fear and anxiety.[15] Likewise, the results of research Bjelland et al., that knowledge is significantly related to the incidence of anxiety. Individuals with the

knowledge that can improve the ability to respond to the psychological stress experienced. Inadequate knowledge led individuals to behave in unhealthy and can affect the incidence of anxiety.[16] Reinforced by the results of research Jackson & Emery that a person who has a good knowledge about heart disease can show emotional stress and lower anxiety and coping skills.[17]

Asmadi explains that understands and knows the disease well, for some people it can cause or increase anxiety. Conversely, people who do not know or understand the disease is minimal disease do not become anxious or making it quieter. This is influenced by the perception and acceptance of health status or illness and adaptation mechanisms.[13] However, Notoatmodjo explains that knowledge is used as a source of support to increase self-confidence, attitudes, and behavior in everyday life. Knowledge is an important factor to support the healthy behavior of a person.[14] *The HUNT study* by Bjelland *et al.*, describes an individual with good knowledge may be protective against anxiety and depression as a result of the psychological pressures that accumulate throughout life.[16]

The results of this study also found nearly half of respondents have less knowledge about coronary heart disease. According to Ross & Mirowsky, the knowledge that less can decrease self-awareness and tend to affect the psychological well-being, emotional and mental health.[18] Confirmed by the statement Davey *et al.*, found that lack of knowledge can lead to stress, anxiety, and depression that play an important role in cardiovascular disease risk factors.[19] Likewise, Simao *et al.*, explain that inadequate knowledge can disrupt a person adherence to a healthy lifestyle, adherence to treatment and disturb the orientation of a person on aspects that increase the risk of morbidity and mortality of coronary heart disease.[20]

CONCLUSION AND SUGGESTIONS

There is a significant relationship between knowledge with the incidence of anxiety in populations with the risk of CHD in the Village of Kota Lama District of Kedungkandang Malang, Indonesia.

It is expected to improve community health behavior, such as reducing stress and anxiety, not smoking, a balanced diet, vegetables, and fruits, resting and sufficient physical activity and regular blood pressure checks. Community health centers improve services promotive, preventive and curative such as *health education*, early detection, screening and intervention of anxiety and risk of CHD in healthy people.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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