

The Influence of Health Education on Increasing Self Awareness of Coronary Heart Disease Prevention in High Risk Population

Rahmania Ambarika^{1*}, Indah Aprilia Angelina²

^{1,2} Universitas STRADA Indonesia

*Corresponding author: rahmania.ambar@gmail.com

ABSTRACT

Background: Coronary heart disease is one of the leading causes of death in Indonesia. Ideally, people should understand the basic signs, symptoms, and early prevention of coronary heart disease. However, in reality, many people are still unaware, leading to a lack of self-awareness regarding the prevention of coronary heart disease.

Purpose: The aim of this study is to analyze the effect of health education on increasing self-awareness for the prevention of coronary heart disease in high-risk patients.

Methods: This study uses a pre-experimental approach with a one-group pre-test and post-test design and an accidental sampling technique involving 49 respondents of high risk populations. The research instrument was a questionnaire and giving health education for increasing the self awareness.

Results: The results of the study showed that before the health education, most respondents had moderate self-awareness with a prevalence of 69.39%, amounting to 34 respondents. After the health education, self-awareness improved significantly, with almost all respondents exhibiting good self-awareness with a prevalence of 77.52%, totaling 38 respondents. The Wilcoxon sign rank test getting a result p value 0.00, indicating that health education had a significant effect on increasing self-awareness.

Conclusion: This health education can enhance self-awareness as it provides knowledge on how to prevent coronary heart disease. With this information, individuals better understand the importance of preventive measures and become more aware of their own condition, thus encouraging better behaviors in maintaining heart health.

Keywords: coronary heart disease, health education, self-awareness

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BACKGROUND

Coronary heart disease is one of the leading causes of death in Indonesia, particularly due to heart attacks (Rahayu et al., 2020). Heart attacks can occur suddenly, which makes it essential for the public, especially patients diagnosed with heart disease, to understand the basics of early signs, symptoms, and prevention of heart attacks. However, many people remain unaware, which leads to a lack of awareness about the prevention of coronary heart disease and contributes to the high mortality rate from heart attacks in the community (Sugiyanti et al., 2020).

According to the World Health Organization (WHO) in 2022, heart and blood vessel diseases are the leading causes of death globally, with an estimated 17.9 million people dying annually, and in 2016, 9.4 million of those deaths were attributed to coronary heart disease. Based on data from the Basic Health Research (Riskesdas) in 2022, the mortality rate from heart disease has increased year after year.

Coronary heart disease is a disorder of the heart and blood vessels, characterized by the thickening of the arterial walls, which leads to the narrowing of blood vessels and disrupts blood flow to the heart muscle. This condition reduces blood flow to the heart and impairs its function (Rahayu et al., 2021). The typical symptoms include chest pain or discomfort that radiates to the arms, neck, jaw, and back, along with shortness of breath, nausea, vomiting, and cold sweats (Trisila, E. & Pitang, Y., 2023). This condition can be prevented by maintaining a balanced diet, quitting smoking, avoiding alcohol, and exercising regularly (Tampubolon, L.F., et al., 2023).

Early detection of heart disease is part of the management of non-communicable diseases, particularly heart disease (Lina, N. & Saraswati, D., 2020). One of the preventive efforts against coronary heart disease is increasing self-awareness. Self-awareness is the process of recognizing the importance of knowing oneself and being mindful of one's actions. It plays a crucial role in helping individuals quickly and appropriately respond to the symptoms of a heart attack (Shinta Ika Sandhi, 2019).

Health education is one method to improve self-awareness. It aims to change people's behavior from unhealthy to healthy (Suprayitno et al., 2020). There are many methods of health education, including individual or group education, and various media such as lectures, focus group discussions, leaflets, videos, and more (Rachman, 2019). In this research, the researcher used group education with a lecture followed by a discussion session.

Based on the above discussion, the researcher considers it important to conduct research on the impact of health education on improving self-awareness in preventing coronary heart disease among high-risk patients at Blabak Public Health Center, Kediri Regency.

METHODS

This study used a quantitative approach with a pre-experimental design, specifically a one-group pre-test and post-test design. The research was conducted on Thursday, July 11, 2024, at the Ngreco Village Sub-District Hall. The population in this study consisted of all respondents at high risk of coronary heart disease in July 2024, totaling 54 respondents. The sample size was 49 respondents, selected using accidental sampling technique. This research to measure the self-awareness before and after get health promotion. Health promotion using leaflet about coronary heart disease. The data collection instrument used in this study was a self-awareness questionnaire. The data was analyzed using the Wilcoxon statistical test with a significance level of $\alpha=0.05$. The obtained data was then interpreted and presented in tables and narratives. This study received ethical clearance from the Ethics Review Board of the

Strada Indonesia Institute of Health Sciences with the number 001427/EC/KEPK/1/07/2024.

RESULTS

Table 1. Characteristics of respondents

Age	Frequency	Percent (%)
< 30 years	2	4,9
31 - 40 years	9	22,0
41 - 50 years	17	21,9
> 51 years	21	51,2
Total	49	100

Based on table 1 above, it is known that most of the respondents were > 51 years old as much as 51.2%,

Self-awareness before health education

No	Self awareness before HE	Frequency	(%)
1.	Good	10	20,41%
2.	Moderate	34	69,39%
3.	Poor	5	10,20%
	Total	49	100%

Table 1. Self-awareness in coronary heart disease prevention before Health Education

Based on Table 1, it is known that out of 49 respondents, the measurement of self-awareness before health education revealed that the majority of respondents had moderate knowledge, with 34 people (69.39%).

Self-awareness after health education

No	Self awareness after HE	Frequency	(%)
1.	Good	38	77,52%
2.	Moderate	11	22,46%
3.	Poor	0	0%
	Total	49	100%

Table 2. Self-awareness in coronary heart disease prevention after Health Education

Based on Table 2, it is evident that after health education, the self-awareness of 49 respondents increased. The results showed that almost all respondents had good self-awareness, with 38 people (77.52%).

Bivariate Analysis

Test Statistics^b

	POST_TEST - PRE_TEST
Z	-5.511 ^a
Asymp. Sig. (2-tailed)	.000
a.	Based on negative ranks.
b.	Wilcoxon Signed Ranks Test

Table 3. Wilcoxon Test

Based on the Wilcoxon test results, the negative Z value (-5.511) indicates a significant and negative difference between the pre-test and post-test scores. The negative value of the post- test tends to be lower, and the Asymp. Sig. (2-tailed) value is 0.000. Since $0.000 \leq 0.05$, it can be concluded that H_0 is rejected, and H_1 is accepted. This means that there is an effect of health education on improving self-awareness in preventing coronary heart disease in the Blabak Public Health Center area, Kediri Regency.

DISCUSSION

Self-awareness before health education

Based on the research results, the majority of respondents had moderate self-awareness, while a small portion had low self-awareness. This is evidenced by their inability to reduce the consumption of foods that increase the risk of coronary heart disease (CHD) and their inability to differentiate between heartburn and chest pain related to CHD, as reflected in the low attention score, which had a total score of 127 (see Appendix 13). Additionally, many were unable to provide initial treatment when experiencing chest pain that persisted for more than 15 minutes, as summarized in the wakefulness score, with a total score of 125. However, a small portion of respondents (10 people) had good self-awareness.

There are many signs and symptoms of CHD, namely chest pain that spreads to the back, chest pain after doing activities, nausea, vomiting, cold sweats, shortness of breath, and decreased consciousness. There are many ways to prevent coronary heart disease, one of which is not consuming foods high in cholesterol, high in sugar, high in salt, regular exercise and so on (Tampubolon. L F, dkk. 2023).

Most of these respondents indicated that if they thought they were experiencing CHD, they would immediately seek help from others to go to the hospital and not let the symptoms worsen. This is supported by a total score of 143, with most of these respondents having previously received health education on CHD prevention. This prior education likely influenced their total score, as the information they received helped them better understand the importance of maintaining personal health.

Self-awareness after health education

Almost all respondents had good self-awareness, as shown in Table 2, with a percentage of 77.51%. However, a small portion (11 respondents) still had moderate self-awareness. Most of these respondents were unsure if regular light exercise could help maintain physical stamina and reduce the risk of CHD (as indicated in S9). They also remained uncertain about whether consuming cholesterol-rich foods could cause CHD and whether these foods should be reduced. The majority of these respondents had an elementary school

education, with a total of 7 respondents. This could be due to differences in how quickly they process information. At the elementary school level, the focus is more on reading, writing, and arithmetic, and individuals at this developmental stage may have more difficulty processing information compared to those with higher levels of education.

CHD is one of the highest contributors to death in Indonesia, CHD can occur anytime and anywhere, people should understand the management and how to prevent it, but in fact many people are not aware of prevention so that CHD does not occur, which is evidenced by the high risk of CHD, namely hypertension, hypercholesterolemia and diabetes mellitus. In fact, this can cause a high death rate caused by CHD in Indonesia. One effort that can be made is to increase self-awareness, namely by providing health education.

Respondents with higher education levels are generally better able to quickly understand new concepts. Additionally, almost all respondents with moderate self-awareness were over 51 years old, and this age group may also experience difficulties in fully absorbing the health education provided.

The effect of health education on improving self-awareness

Based on the output results of the Wilcoxon test in table 4.7, it is known that Asymp, Sig. (2-tailed) is worth 0.000. Because the value of $0.000 \leq 0.05$, it can be concluded that H_0 is rejected and H_1 is accepted, which means that there is an influence of health education on increasing self-awareness of coronary heart disease prevention in high-risk patients in the Blabak Health Center Work Area, Kediri Regency.

In accordance with Notoatmojo's opinion (2010) that a person's behavior can be influenced by self-awareness and attitude, but self-awareness will only emerge when there is a reasonable encouragement. One form of encouragement in the world of health is by providing health education. Health education aims to increase self-awareness, provide and increase community knowledge about maintaining themselves and their surroundings.

The research results showed an increase in self-awareness after health education was provided. This was marked by respondents becoming more aware of the importance of regular health check-ups to detect CHD early, recognizing the signs and symptoms such as chest pain lasting more than 15 minutes that indicate the need to go to the hospital, and reducing the intake of foods that increase the risk of CHD, such as foods high in salt, sugar, and cholesterol. It can be concluded that health education has a significant effect on improving self-awareness. The higher the community's self-awareness of CHD, the more the prevention of CHD will be implemented. Good self-awareness will improve the quality of life of the community and can also influence changes in good health behavior. This will reduce the number of delays in providing first aid for coronary heart disease, so that providing health education on increasing self-awareness is expected to provide insight to the community about CHD prevention before it's too late.

CONCLUSION

1. From the 49 respondents, the measurement of self-awareness regarding the prevention of coronary heart disease (CHD) before health education showed that the majority of respondents had moderate self-awareness, with a prevalence of 69.39% or 34 respondents.
2. Self-awareness increased after health education, with almost all respondents demonstrating good self-awareness, achieving a prevalence of 77.52% or 38 respondents.
3. Based on the output of the Wilcoxon statistical test, the Asymp. Sig. (2-tailed) value was 0.000. Since $0.000 \leq 0.05$, it can be concluded that H_0 is rejected and H_1 is accepted, meaning that health education has a significant effect on improving self-awareness in preventing coronary heart disease among high-risk patients in the Blabak

Public Health Center area, particularly in Ngreco Village.

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