

The Effect of Cardiac Diet Counseling on Knowledge of Heart Diet in Congestive Heart Failure (CHF) Patients at Prof.Dr.H Aloe Saboe Hospital, Gorontalo City

Fadli Syamsuddin¹, Asni Ayuba¹, Nurfitriah I. Nasir¹

¹Bachelor of Nursing Study Program, University of Muhammadiyah Gorontalo, Indonesia

Email: fadlisysamsuddin@umgo.ac.id

Abstract. *Congestive Heart Failure (CHF) is a condition in which the heart fails to pump blood to meet the needs of the body's cells for adequate nutrition and oxygen, so a special cardiac diet is required in patient care. The design of this study used pre-experimental designs one group pretest-posttest, sampling using purposive sampling, obtained 25 respondents, then given cardiac diet counseling. The results showed that the p value was 0.000 ($p < 0.05$), which means that there is a significant effect. It can be concluded that there is an effect of cardiac diet counseling on knowledge of cardiac diet in patients with Congestive Heart Failure (CHF). So it is hoped that cardiac dietary counseling should be given to increase knowledge of cardiac diet in CHF patients, both those undergoing intensive care and outpatient care at the cardiac polyclinic.*

Keywords: : *Congestive Heart Failure (CHF), Diet, Counseling, Knowledge*

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INTRODUCTION

Heart failure is a condition in which the heart fails to pump blood throughout the body so that the heart will try harder to pump blood to meet its needs. Heart failure is usually triggered by health problems related to the heart such as coronary heart disease, heart rhythm disorders and others (Kemenkes.RI, 2016). Congestive heart failure is a pathophysiological condition in the form of abnormalities in heart function so that the heart is unable to pump blood to meet the metabolic needs of tissues and or its ability is only present when accompanied by an abnormally elevated diastolic volume. This condition is accompanied by an abnormally elevated diastolic volume. Congestive heart failure is the inability of the heart to meet the tissue demands for oxygen and nutrients (Pangestu et al., 2020).

According to data from the World Health Organization (WHO) and the World Heart Federation, it predicts that heart disease will become the leading cause of death in Asian countries by 2025. Currently, at least 78% of global deaths from heart disease occur in

the poor and middle class. In developing countries from 1990 to 2020, the death rate from heart disease will increase by 137% in men and 120% in women, while in developed countries the increase is lower. Namely 48% in men and 29% in women (WHO, 2019).

Data from the Basic Health Research (Riskesmas) of the Indonesian Ministry of Health in 2018, the prevalence of heart failure in Indonesia based on a doctor's diagnosis was estimated at 1.5% or an estimated 29,550 people. Most of them are in the province of North Kalimantan, which is 29,340 people or about 2.2%, while the fewest sufferers are in the province of North Maluku, which is as many as 144 people or about 0.3%. Estimates of the number of people with heart failure based on diagnosis or symptoms, mostly in West Java province as many as 96,487 people or about (0.3%) while the least is 945 people or (0.15) in the province of Bangka Belitung Islands. As for the province in Central Java. Based on a doctor's diagnosis, the prevalence of heart failure is around 1.5% or 29,550 people. Meanwhile, according to the diagnosis or or symptoms, the estimated number of people with heart failure is 0.4% or around 29,880 people (Kemenkes RI, 2018).

Based on the data obtained in the CVCU (Cardio Vascular (Care Unit) Room at the Prof.Dr.H. Aloei Saboe Hospital, the number of patients with CHF in 2020 reached 59 patients. Where in January there were 12 patients as the highest cases and from September to December 2020 there were 3 patients per month. Then the data obtained from January to April 2021 in the CVCU (Cardio Vascular (Care Unit) Room of Prof.Dr.H. Aloei Saboe Hospital the number of CHF patients was 35 patients. Where in January there were 7 patients, in February there were as many as 10 patients in 2021, in March there were 10 patients in 2021, and in April there were 8 patients in 2021. So the total number of CHF sufferers from 2020 to April 2021 reached 94 patients.

The success factors for healing congestive heart failure can be done in several ways, namely adherence to taking medication, doing a heart diet regularly, not doing excessive physical activity, and recognizing symptoms of recurrence. In this case, regular cardiac diet can reduce the workload of the heart, reduce fluid buildup and make breathing easier. The recommended heart diet for people with heart failure is to eat food according to the Diertry Approaches to Stop Hypertension (DASH) Diet (Nursita & Pratiwi, 2020).

The DASH diet is a diet consisting of lots of vegetables and fruit, dairy products and less meat, and lots of micronutrients. The DASH Diet also aims to reduce salt (sodium) consumption to 1500mg per day and emphasizes the consumption of foods that are fresh and less processed. If the heart diet is not carried out, the work of the heart will continue to be heavy and blood flow will decrease, causing abnormalities in blood pressure resulting in edema/swelling (Nursita & Pratiwi, 2020).

Knowledge is a result of human knowledge of the combination or cooperation between a subject who knows and an object that is known. Everything that is known about a particular object. Factors that influence knowledge include education, occupation, age, interests, experience, surrounding culture and information facilities such as television, radio, magazines, and newspapers (Lestari, 2018). In this case, cardiac diet counseling is needed to help increase knowledge in patients and be able to recognize their condition and the problems they face so that they can make the right decisions. In dealing with the problem independently based on his self-awareness.

Research conducted by Baik Heni Risprawati in 2019 said that to increase knowledge of the heart diet, it can be started by conducting cardiac diet counseling to patients by forming awareness of the importance of the heart diet. The provision of cardiac diet

counseling can be started through the formation of understanding and motivation in the family before, during and after being given health education about the cardiac diet so that it can increase the patient's motivation or enthusiasm to focus on participating in activities or activities properly in accordance with the standard operating procedures being taught (Risprawati, 2019)

In a study conducted (Welsh et al., 2017) analysis of covariance (intersubject effect) revealed that educational interventions were effective in reducing dietary sodium intake in patients with heart failure. The brush against following a low diet has also increased. Individualized at-home instruction with well-organized specific teaching strategies can result in dietary changes such as adherence to a low-sodium diet among patients with newly diagnosed or long-standing heart failure.

In Islam, Allah Almighty commands humans to eat halal food, that is, that which is not haram, as well as both the substance and the way to obtain it. Apart from being halal, food must also be good, that is, healthy, safe, and not excessive. As the word of Allah SWT in the Qur'an Surah Al-Baqarah 168 which means "O people! Eat from (food) that is lawful and good that is found on earth, and do not follow the steps of the devil. Indeed, Satan is a real enemy to you." (Surah Al Baqarah: 168).

The results of interviews with the Head of the CVCU Room and being registered in the room, CHF sufferers in the last 4 months in 2021, namely January to April, experienced an increase. It was said that the cause of the increase was due to the patient's lack of knowledge about the heart diet to reduce salt (sodium) consumption, and the lack of ability of CHF sufferers to receive information including information related to the heart diet.

Based on the background, the researchers are interested in researching "The Effect of Cardiac Diet Counseling on Knowledge of Heart Diet in Congestive Heart Failure (CHF) Patients at Prof.Dr.H Aloe Saboe Hospital, Gorontalo City".

METHODS

The research was carried out in the CVCU, HCU Cardio and Cardiology Clinic at Prof.Dr.H Aloe Saboe Hospital, Gorontalo City in September 2021. The research method used in this study was quantitative research using pre-experimental designs one group pretest-posttest. . The population in this study were patients with CHF in the CVCU room at Prof.Dr.H Aloe Saboe Hospital Gorontalo City with a sample of 25 respondents. The sampling technique used is purposive sampling. The data collection technique used is through questionnaires distributed by researchers and filled in by respondents. Analysis of the data using the paired t test and the data is presented in tabular form, which is then explained in the discussion.

RESULTS AND DISCUSSION

Table 1. Distribution of respondents based on characteristics

| No. | Age | Frequency | Presented |
|-----|---------------|-----------|-----------|
| 1. | 20-40 Years | 2 | 8% |
| 2. | 41-60 Years | 17 | 68% |
| 3. | >60 years | 6 | 24% |
| | Gender | | |
| 1. | Female | 13 | 52% |
| 2. | Male | 12 | 48% |

| | | Work | |
|----|------------------|---------------------------|-------------|
| 1. | Work | 14 | 56% |
| 2. | Doesn't Work | 11 | 44% |
| | | The Last Education | |
| 1. | Lower Education | 16 | 64% |
| 2. | Higher Education | 9 | 36% |
| | | Total | 100% |

Source: Primary Data, 2021

Based on the table above, it can be seen the frequency based on age, the most respondents in this study were 41-60 years with 17 respondents (68.0%). Based on gender, the majority of respondents in this study were male as many as 13 respondents (52.0%). Based on occupation, the most respondents in this study were working as many as 14 respondents (56.0%). Based on the latest education, the most respondents in this study were Low Education as many as 16 respondents (64.0%).

Table 2. Distribution of respondents based on knowledge of cardiac diet before and after being given cardiac diet counseling

| Knowledge of the Heart Diet | Before Dietary Counseling Heart | | After Dietary Counseling heart | | Total | |
|------------------------------------|--|----------|---------------------------------------|----------|--------------|----------|
| | N | % | N | % | n | % |
| Good | 3 | 12% | 19 | 76% | 2 | 100% |
| Less | 22 | 88% | 6 | 24% | | |
| Total | 25 | 100% | 25 | 100% | | |

Source: Primary Data, 2021

Based on the table above, it can be seen that there is an increase in knowledge of cardiac diet in respondents before and after being given cardiac dietary counseling, this is seen from the frequency distribution of respondents who have knowledge of cardiac diet before being given good category treatment as many as 3 respondents (12%), while the distribution the frequency of respondents after being given good category treatment was 19 respondents (76%). In this study, there were 6 respondents (24%) who experienced a slight difference before and after being given cardiac diet counseling, this was because the 6 respondents were respondents who were older than 60 years. So that when given treatment there is little possibility to be able to receive and absorb and recall the information provided.

Table 3. Effect of cardiac diet counseling on knowledge of cardiac diet

| Variable | Before-after | Mean | Std. Deviation | t | P-Value | N |
|------------------------------------|---------------------|-------------|-----------------------|----------|----------------|----------|
| Knowledge of the Heart Diet | Before | 12,24 | 1,762 | 11,673 | 0,000 | 25 |
| | After | 17,72 | 2,300 | | | |

Source: Primary Data, 2021.

From the results of statistical tests using the Paired t test, the P value of 0.000 is obtained where <0.05 is a significant level, then H_a is accepted and it can be concluded that there is an influence between cardiac diet counseling on knowledge of cardiac diet

in patients with Congestive Heart Failure (CHF). at Prof. Dr. H Aloei Saboe Hospital, Gorontalo City.

In table 2. there are 6 respondents (24%) who experience a slight difference before and after being given cardiac diet counseling, this is because the 6 respondents are respondents who have an advanced age of over 60 years. So that when given treatment there is little possibility to be able to receive and absorb and recall the information provided. In 19 respondents (76%) during the observation before and after experiencing differences in knowledge which previously was not good, seen from the age of the respondents, namely under the age of 60 years. So in this study, it shows that the respondent's age affects memory or knowledge to receive and absorb information. In this study, researchers used lecture and discussion methods, as well as image media and real object media as materials to provide cardiac diet counseling to respondents.

According to Notoatmodjo (2012) knowledge is the result of "knowing" and this occurs after people have sensed a certain object. Sensing of objects occurs through the five human senses, namely sight, hearing, smell, taste, and touch by themselves until the sensing time produces that knowledge. Most of human knowledge is obtained through the eyes and ears. So that through counseling it will make it easier for respondents to understand related to the heart diet which can affect the respondent's knowledge about the heart diet.

In line with research conducted (Rina, 2018) which states that counseling is a process of providing objective and complete information, carried out systematically with interpersonal communication skills guidelines, guidance techniques and mastery of knowledge about problems faced by clients that aims to help someone recognize the current condition, the problem being faced and determine a way out or an effort to overcome the problem. This shows that the counseling intervention will significantly increase the respondent's knowledge.

Based on the results above, the researchers assumed that the change in respondents' knowledge was due to the provision of counseling related to the cardiac diet, cardiac diet counseling using lecture and discussion methods, as well as image media and real object media as materials to increase knowledge of cardiac diet in patients with CHF. Most of human knowledge is obtained through eyes and ears and the focus of a person in receiving information in the form of writing and verbally in the form of sound such as lectures and discussions as well as pictures and original objects that help stimulate sensing in the learning process. Cardiac diet counseling can make the patient experience an increase in knowledge about the cardiac diet and thus the patient can realize the importance of counseling about the cardiac diet. Cardiac diet counseling can be given to CHF patients to increase patient knowledge, so that it can reduce the incidence of CHF sufferers and recurrent patients.

Table 3. shows that after the paired t test, in general, cardiac dietary counseling can affect the knowledge of cardiac diet in patients with Congestive Heart Failure (CHF). This can be seen from the results of research on the variable knowledge of heart diet in patients with Congestive Heart Failure (CHF) at Prof.Dr.H Aloei Saboe Hospital, Gorontalo City before and after being given treatment, the statistical test value ($p = 0.00$) was obtained, with $p < 0.005$ means that in this study H_0 is Rejected H_a is accepted. So, it can be concluded that there is a significant effect between knowledge of cardiac diet in patients with Congestive Heart Failure (CHF) before and after being given cardiac diet counseling.

According to Majid (2015) that the selection and use of media aids and good delivery methods are important components to do, with the aim of helping the use of the senses as much as possible. In providing counseling, the material provided must also be in accordance with what is recommended for people with CHF and easy to understand.

This is in line with research conducted (Neswita et al., 2016) which states that dietary counseling given to patients with heart failure can significantly increase knowledge. The increase in knowledge scores that occurred after counseling showed that the counseling goals were achieved. In accordance with the educational theory which states that counseling should aim to educate people with heart failure so that knowledge about diet will increase and this will encourage behavioral changes. This is also in line with the results of Baik Heni Risprawati's research (2019) at the Cardiology Clinic of the General Hospital of NTB Province which showed that there was an effect of cardiac diet counseling on the knowledge of the heart diet of Congestive Heart Failure (CHF) patients at the Cardiology Clinic of the NTB Provincial General Hospital.

Based on the results above, the researcher assumes that cardiac diet counseling is an appropriate method to increase knowledge. In providing cardiac diet counseling, media is also needed as material to provide counseling, for example, image media and real object media have a success rate in increasing respondents' knowledge about the heart diet because using media can attract respondents' attention by showing real objects or real foods according to their needs. with what is recommended to the respondent. In addition, the counseling material provided is also easy to understand because it goes straight to the core of the discussion and uses words that are not difficult to understand. This increase in knowledge can change in understanding and understanding about the risks and problems that will be caused if they do not do a heart diet regularly so that respondents can understand the importance of doing a heart diet for the heart problems they are currently experiencing.

CONCLUSION

Based on research on the effect of cardiac diet counseling on knowledge of cardiac diet in patients with Congestive Heart Failure (CHF) at Prof.Dr.H Aloe Saboe Hospital, Gorontalo City, the following conclusions can be drawn; (1) The level of knowledge of the respondent's heart diet before being given cardiac dietary counseling was less (88%); (2) The level of knowledge of the respondent's heart diet after being given cardiac dietary counseling is good (76%); (3) There is an effect of cardiac diet counseling on knowledge of cardiac diet in patients with Congestive Heart Failure (CHF).

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