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Non-Communicable Disease Screening Through the Healthy Tent Program in Menunggal Village, Kedamean District, Gresik

Muhamamd Rafli[1], *Alvania Medikana Putri*[1]

[1]*Departement of Medicine, Faculty of Medicine, Universitas Nahdlatul Ulama Surabaya, East Java, Indonesia*

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CORRESPONDENCE

E-mail:
muhammadrafli033.dr19@student.unusa.ac.id

A B S T R A C T

Non-communicable diseases are diseases that are not transmitted from one individual to another. The most common non-communicable diseases that occur in the community are hypertension, hypercholesterolemia, hyperuricemia, and hyperglycemia. Because the disease is individual, the only way to find the case is to check directly with a health facility. One of the efforts that can be made is with activities in the form of free health checks to screen for certain diseases with simple examinations. This activity was carried out at the Village Hall with the target age of the elderly, namely for those over 45 years old. Participants were gathered in one place and then examined ranging from anthropometry such as height and weight, vital signs such as blood pressure and temperature as well as some simple blood tests such as cholesterol, uric acid and blood sugar. Participants who were found to have abnormal examination values, they were given education in the form of treatment and correct lifestyle information to control the disease or complaints experienced. This activity was quite enthusiastic from the community with the number of participants who participated was 28 people. In the results of the data found, it was found that 6 people with hyperuricemia, 6 people with hyperglycemia, 6 people with hyperglycemia and 1 person with hyperglycemia. Thus, although the examination carried out seems simple, it turns out that it has succeeded in screening some of these non-communicable diseases so that it is expected to be treated early and not continue fatally.

INTRODUCTION

According to the World Health Organization (2014), a non-communicable disease is a disease that is not transmitted from one person to another. Some non-communicable diseases that are common in the community are cardiovascular diseases (such as heart attacks and strokes), cancer, chronic respiratory diseases (such as chronic lung diseases and asthma) and diabetes. In 2013 there were 38 million. The world community dies from non-communicable diseases and most of them occur in countries with low and middle economic levels. Deaths caused by non-communicable diseases mostly occur in old age.

The definition of hypertension according to the Ministry of Health of the Republic of Indonesia in 2014 is a condition in which systolic blood pressure increases more than 140 mmHg and diastolic blood pressure of more than 90 mmHg in two measurements with an interval of five minutes in a state of sufficient rest or calm. Worldwide, the incidence of hypertension is recorded in more than 1.3 billion people, where this figure shows that adults often suffer from hypertension (Bloch, 2016). Factors that cause hypertension are closely related to lifestyle habits such as high sodium and alcohol consumption, smoking, obesity, and stress conditions (Padila, 2013). In addition, hypertension can also be caused by an unhealthy lifestyle such as lack of physical activity and consuming high-fat foods (Ainun, Sidik, & Rismayanti, 2014).

Gout is the result of the body's metabolism that must be excreted and should not be excessively high in the body. If uric acid in the body is excessive, it can cause various diseases, one of which is gout arthritis which can cause bone deformities, as well as complications of kidney disorders, heart, diabetes mellitus, stroke, and oesteoporosis. (Safitri A, 2012). Meanwhile, cholesterol is a fatty substance that circulates in the blood and is produced by the liver which has an important role in the body. Cholesterol belongs to the class of lipids that are not hydrolyzed and are the main sterols in the tissues of the human body (Noni and Russell, 2013). Cholesterol can be caused by several factors, such as genetic factors, gender, age and secondary hypercholesterolemia. Secondly, hypercholesterolemia occurs due to excessive consumption of saturated fat, lack of physical activity, obesity and nephrotic syndrome. The prevalence of hypercholesterolemia aged 25-34 years reached 9.3% and increased to 15.5% in the age group of 55-64 years (Ruth et al., 2012).

The next non-communicable disease is Diabetes Mellitus which is a disease characterized by the onset of hyperglycemia and impaired carbohydrate, fat, and protein metabolism associated with the disorder insulin secretion. Typical symptoms that appear in people with Diabetes Mellitus such as polydipsy, polyuria, polyphagia, and weight loss, as well as tingling. According to the results of Basic Health Research in 2008, the prevalence of DM in Indonesia reached 57%. The high prevalence is caused by risk factors such as gender, age, genetic factors, smoking habits and alcohol consumption, and lack of physical activity (Restyana, 2015).

Based on the data mentioned above, efforts that can be made to increase public awareness, especially the people of Menunggal Gresik Village, about the dangers of non-communicable diseases such as hypertension and diabetes mellitus is through the Healthy Tent program. This program is an initial screening that includes free examinations ranging from vital sign examinations, anthropometry, to blood sugar, cholesterol, and uric acid examinations. This program also provides brief education about treatment and diet that can reduce the incidence of non-communicable diseases. It is hoped that from this program, researchers can find out the number of people who experience hypertension, diabetes mellitus, cholesterol and gout.

METHOD

This Tenda Sehat is a non-communicable disease screening program carried out at the Menunggal Village Hall, Kedamean District, Gresik Regency, East Java. This program is held at 08.30 – 11.00 WIB. The population of this activity is residents of Menunggal Village. The research sample used was all elderly people in Menunggal Village, Kedamean District, and Gresik Regency who were over 45 years old.

The method of the activity carried out is observational descriptive. First, participants in the activity will be screened or collect initial data related to name, age, gender, and disease history at Post 1. Second,

participants in the activity will be carried out a series of examinations starting from vital sign checks at Post 2, anthropometry at Post 3, and blood tests including blood sugar, cholesterol, and uric acid at Post 4. Furthermore, participants in the activity will be grouped into several groups including the diabetes mellitus group, hypertension group, cholesterol group, and gout group. After being grouped, participants will receive a consultation and education session regarding treatment and dietary arrangements at Post 5.

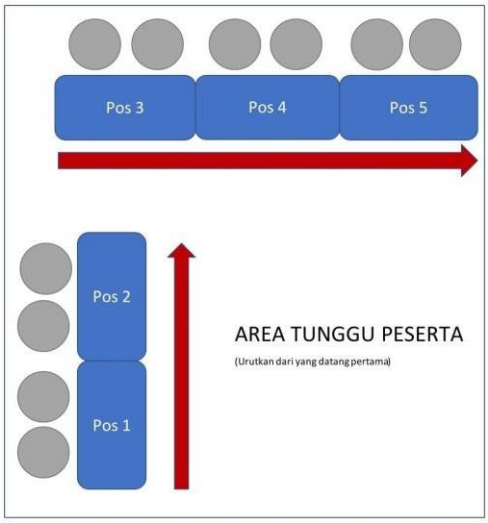

Figure 1. Healthy Tent Inspection Flow

RESULT AND DISCUSSION

This healthy tent activity was carried out on July 28, 2022, at the Menunggal village hall. The number of participants who participated in this healthy tent activity was 28 people. The enthusiasm of the residents is quite high because activities like this already exist, namely in the form of posyandu. However, it has been vacant for 2 years due to the pandemic. The following are the characteristics of healthy tent participants that have been implemented.

Table 1. Characteristics of Healthy Tent Participants

No	Information	Sum	%
	Gender		
1	Woman	25	89
	Man	3	11
	Age		
	46-55	9	32
2	56-65	9	32
	>65	10	36
	IMT		
	Thin	9	32
3	Usual	9	32
	Fat	10	36

From table 1, it was found that female elderly people were more enthusiastic about doing health checks compared to male elderly people. This is most likely because the elderly male prefers to do work according to their profession rather than taking the time to do the examination even though the

examination is free. The low awareness of the elderly men about the examination makes them more likely to suffer from metabolic diseases such as hypertension, diabetes mellitus, hyperlipidemia etc. This is in accordance with Rustika et al., (2019) who stated that in Indonesia the prevalence of metabolic syndrome in men is higher than in women, which is 26.2% in men and 21.4% in women.

After the participants of the activity carried out initial data collection and anthropometric examinations, then a brief anamnesis was carried out related to what complaints were experienced recently and what examinations were needed in this healthy tent activity based on the complaints experienced and the history of pre-existing diseases. The following are the complaints that many participants experienced.

Table 2. Complaints Experienced by Healthy Tent Participants

No	Complaints Experienced	Sum
1	Dyspepsia (heartburn pain)	4
2	Linu-linu	6
3	Myalgia (peaches)	10
4	Dizzy	2
5	Tingling	11
6	Cough with a hot cold	4

Not all participants who came were fully examined. Only those who show or complain of certain symptoms are subject to follow-up examination. For example, participants who complain of sciatica will be directed to have a gout examination. Especially for dyspepsia or pain in heartburn, there is no need for follow-up examination.

Furthermore, diseases that can be screened in this activity are hypertension, diabetes mellitus, hyperkerosestromia, and gout or hyperuricemia. The following are the results of data obtained from the activities that have been carried out.

Hypertension is a common disease in the community. Hypertension is defined as systolic blood pressure above 140 mmHg and diastolic blood pressure above 90 mmHg. Hypertension is one of the most common risk factors for cardiovascular disease and has affected 2 out of 3 adults in the world (Delacroix & Chokka, 2014). In the healthy tent activity that has been carried out in Menunggal Village, it was found that 6 people had blood pressure above normal values. The participants were then given education about the right treatment such as ACE-Inhibitor drugs such as Captopril which is a first-line treatment for hypertension and how to control their blood pressure so that it does not cause more serious diseases such as a low-salt diet (Sinha & Agarwal, 2019).

Hyperuricemia is defined as a uric acid level in blood above 7 mg/dl. Hyperuricemia is a risk factor for several diseases that often occur in the community, namely urolithiasis or urinary tract stones and gout arthritis which is a disease that causes inflammation in the joints (Hisatome et al., 2020). Participants who have high uric acid levels are given education in the form of Treatment use uricostatic (allopurinol) and Appeal to avoid foods high in uric acid levels (Gliozzi et al., 2016).

Hyperglycetrophy is defined as an increase in total cholesterol levels in the blood. This condition is also one of the common medical conditions in the world. This condition is one of the most important risk factors for cardiovascular disease. This is because an increase in cholesterol levels in the blood will cause plaque formation so that it causes the clogging of blood vessels that nourish fatal organs such as the heart and brain, namely atherosclerosis which can cause diseases such as coronary heart disease and stroke in the brain which can be fatal (Umran Mosa et al., n.d.).

The main therapy for hypercoagulostromia cases is lifestyle changes, namely avoiding foods that are high in cholesterol and fat. For the pharmacological therapy itself, if the cholesterol level is above 200 mg/dl, oabt group HMG-co A reductase inhibitor such as statin group can be given. Elevated cholesterol levels in the blood do not immediately cause symptoms such as gout, but they can cause a variety of serious diseases that can be fatal later in life (Fuster, n.d.)

The next disease that can be screened for this healthy tent activity is hyperglycemia, which is a condition in which blood sugar levels increase above the normal value of 200mg/dl (Li et al., 2021). However, it is uncertain whether it is due to diabetes mellitus (DM) or not to establish the diagnosis. However, screening is enough to determine whether one should be examined further.

One of the non-communicable diseases that is also widely screened in this activity is dyspepsia. Dyspepsia is a complex condition where chronic gastrointestinal tract complaints occur that cause a person to feel discomfort in heartburn such as a feeling of being stabbed or burning. Laypeople often refer to this condition as ulcers. In this activity, quite a lot of participants complained, and the first line of treatment was by using antacids and Proton Pump Inhibitor (PPI) drugs. (Zagari et al., 2008).

In this activity, the community's response was quite good. Participants in this healthy tent activity were very active in asking questions related to the complaints they experienced, and when given education regarding treatment and ways to control diseases or complaints that are often experienced, they are very active in recording and then reconfirming the instructions given before.

Figure 3. (a) Capillary Blood Test

Figure 3. (b) Anthropometric Examination

CONCLUSION

This activity managed to get quite high public enthusiasm, and this activity also succeeded in screening several diseases that could cause problems in the future. In addition, participants received good education on treatment and prevention, so it is hoped that they can improve public health which will also have an impact on their welfare.

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