

## The Efforts to Reduce the Risk of Hypertension Complications in Prunggahan Wetan Village with the "CERMAT" Program

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### ABSTRAK

The number of hypertension sufferers in Prunggahan Wetan Village in 2022 will be 940 people, 840 of whom have received health services and 100 other people haven't received. The aim of this activity is to provide health education about hypertension and healthy living behavior through the "CERMAT" program so that targets are able to implement it in an effort to reduce the risk of hypertension complications. The method used was lectures and demonstrations using PPT media, videos, and posters, the target number was 50 elderly people and was held over 3 meetings. The result of this activity is that the majority of targets are able to implement the "CERMAT" program as an effort to reduce the risk of hypertension complications.

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## INTRODUCTION

Hypertension is a threat to most of the world's population, including in Indonesia, because it can cause death without complaints or clear clinical symptoms, so sufferers do not know that they have hypertension and only find out after complications occur (Pangaila, et al, 2020). Based on data from the Tuban Regency Office in 2019, the number of hypertension sufferers in Tuban Regency was 295.706 people. Of this number, only 90.050 people provided health services or around 30.45%. Of the 33 Community Health Centers in Tuban Regency, the highest incidence of hypertension was in the Semanding Community Health Center working area, namely 14.255 people. This figure then increased in 2022 with the number of sufferers reaching 27.492 people.

In Prunggahan Wetan Village, one of the villages in the Semanding Community Health Center working area, the number of hypertension sufferers in 2022 will be 940 people, of which 840 people have received health services and 100 other people have not received health services. Thus, efforts are needed to increase public awareness in controlling hypertension and preventing its complications. One of the efforts that we will implement in Prunggahan Wetan Village is through the "CERMAT" program. This program is a form of health education by teaching healthy living behavior aimed at controlling hypertension and reducing the risk of complications.

The "CERMAT" program includes recommendations to check blood pressure regularly at least once a month, avoid smoking and alcohol, exercise diligently, maximize medication, reduce salt consumption, and adopt a good sleep pattern. In this way, it is hoped that it can help the community in Prunggahan Wetan Village, especially the elderly, in controlling hypertension and preventing complications due to hypertension.

## IMPLEMENTATION AND METHODS

In carrying out this community service activity, we use lecture and demonstration methods with a series of activities such as education about hypertension; free health checks, including blood pressure, glucose, cholesterol and uric acid; teaching anti-hypertension exercises; as well as installing "SI CERMAT" posters around the environment. The following is the flow of community service activities in an effort to reduce the risk of hypertension complications in Prunggahan Wetan Village with the "CERMAT" program:

### **Site survey**

Before carrying out community service activities, the team conducted a site survey to explore existing problems at the location. In this case, the team chose Prunggahan Wetan Village as the location for carrying out activities.

### **Licensing**

The team held a meeting with related parties, namely the head of Prunggahan Wetan Village to discuss problems in Prunggahan Wetan Village as well as carry out activity permits. Based on this discussion, problems were found related to the large number of local residents, especially the elderly, who

suffer from hypertension, so there is a need for a program to control hypertension and the risk of complications.

### **Discussion**

After knowing the existing problems, the team discussed to finalize the concept that would be implemented related to the problem of hypertension in Prunggahan Wetan Village along with the program that would be implemented to control hypertension and the risk of complications. In this case, the team formed the "CERMAT" program which was implemented through counseling, free health checks, exercise, and the installation of "SI CERMAT" posters.

### **Preparation of Tools and Materials**

#### a. Supporting equipment

Includes: blood pressure meter, poster, banner, set of GCU check up tools (glucose, cholesterol and uric acid), LCD, laptop and sound.

#### b. Consumables

Includes: participant consumption, glucose stick, cholesterol stick, uric acid stick, clean handsoon, alcohol swab, blood lancet, hand sanitizer, check up card, evaluation sheet, and ATK.

### **Implementation**

The activity was held at the Gajah Mada Culinary Hall, Prunggahan Wetan Village for 3 days. These activities include:

#### a. Counseling

Counseling is carried out at each meeting using the lecture method. The material presented was related to the description of hypertension (first day), complications of hypertension (second day), and management of hypertension with the "SI CERMAT" program (third day).

#### a. Glucose, cholesterol, and uric acid check up

This check up is carried out once at the first meeting.

#### b. Blood pressure check

Blood pressure checks are carried out at every meeting. The target is expected to undergo regular check up (3x) to control blood pressure from the first to the last check up.

#### c. Exercise

Gymnastics was carried out on the second and third days with the theme "Anti-Hypertension Gymnastics".

#### d. Poster installation

The poster installation was carried out on the third day with the poster theme "SI CERMAT", namely a poster containing education about hypertension and the "CERMAT" program. The locations for installing posters are in strategic places, such as village halls, patrol posts and food stalls because they are frequently visited and used as gathering places, making it easier for people to read and obtain information about hypertension.

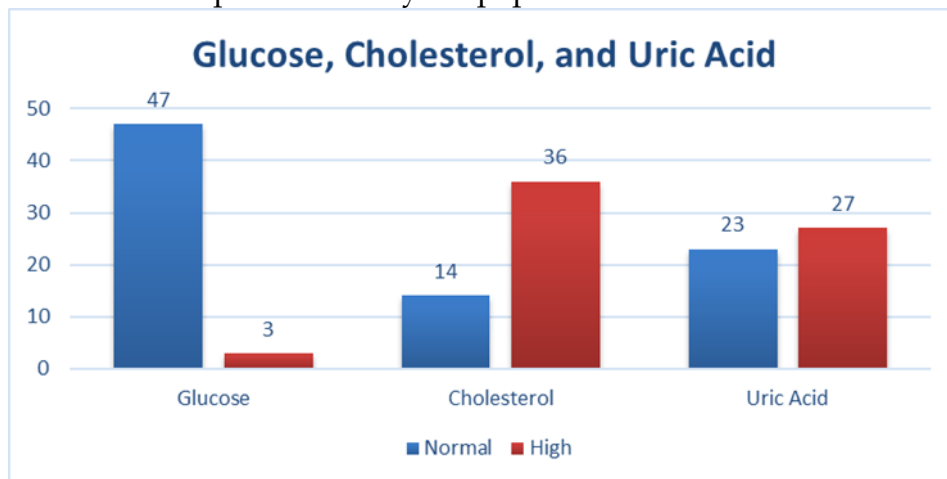
### **Evaluation**

The evaluation was carried out on the third day by giving an evaluation sheet to the elderly to find out whether they had implemented the "CERMAT" program or not after being provided with previous counseling and activities.

## RESULTS AND DISCUSSION

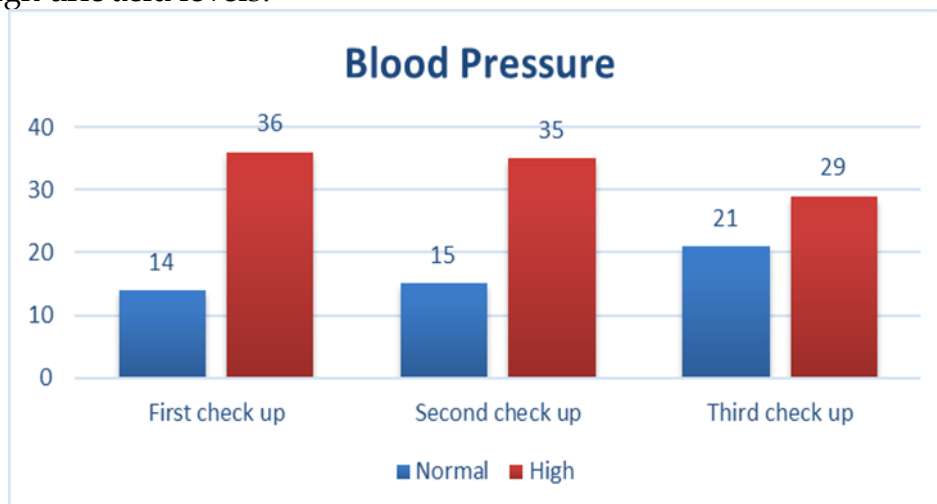
### Medical check up data

In this section, you should describe each step taken to complete your dedication process along with the material presented. The results of the discussion can also be submitted here. You should not include too many descriptive statistical results here; on the other hand, it should be summarized in a more readable table or graph. You should never forget the numbers for each table and chart presented in your paper.



Picture 1. Glucose, cholesterol and uric acid check up results

Based on the graph above, 47 elderly people had normal glucose levels and 3 of them had high glucose levels. There were 14 elderly people who had normal cholesterol levels and 36 people who had high cholesterol levels. In the uric acid check up, 23 elderly people had normal uric acid levels and 27 people had high uric acid levels.

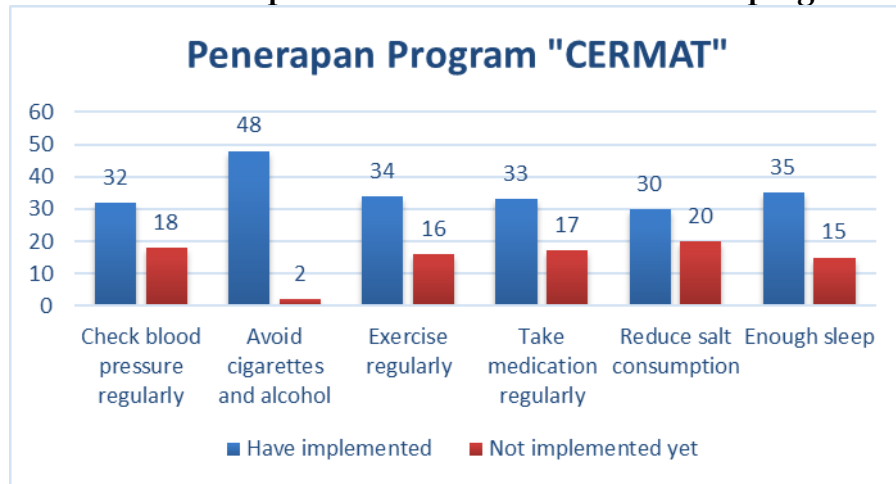


Picture 2. Blood pressure check up results

Based on the graph above, in the first check up, 14 elderly people had normal blood pressure and 36 people with hypertension were found. In the second check up, 15 elderly people had normal blood pressure and 35 people

had hypertension. Meanwhile, in the third check up, 21 elderly people had normal blood pressure and 29 people had hypertension.

### Evaluation data on the implementation of the "CERMAT" program



Picture 3. Evaluation results of the implementation of the "cermat" program

Based on the graph above, the majority of elderly people have implemented the "CERMAT" program.

This student creativity program in the field of community service was carried out over 3 meetings in the Gajah Mada Culinary Hall, Prunggahan Wetan Village, targeting 50 elderly people and various activities, including counseling, health checks, anti-hypertension exercises, and the installation of "SI CERMAT" posters.



Picture 4. Counseling

Counseling is carried out by delivering material about hypertension, including understanding, signs and symptoms, causes, risk factors, complications, and management of hypertension with the "CERMAT" program. The media used are power points and posters. This counseling aims to increase awareness of elderly people in living a healthy lifestyle as an effort to prevent and reduce the risk of hypertension complications. During the counseling, the elderly seemed enthusiastic about listening to the material presented.



Picture 5. Medical check up

Medical check up are carried out to determine the health condition of the elderly. In this case, we provide free health checks, including blood pressure, glucose, cholesterol and uric acid checks. From the results of the examination, it was found that the majority of elderly people had hypertension, high cholesterol and high uric acid. For the results of random glucose checks, the majority are within normal limits. An increase in blood pressure that lasts for a long time (persistent) can cause complications such as damage to the kidneys (kidney failure), heart (coronary heart disease), and brain (causing stroke) if it is not detected early and receives adequate treatment (Harahap, et al. , 2019).



Picture 6. Anti-hypertension exercises

Apart from medical check up, we also teach anti-hypertension exercises for the elderly. In this case, exercise aims to help elderly people move actively because one of the causes of hypertension and its complications is lack of physical activity. Siregar, et al, (2014) said that the causes of hypertension in the elderly are influenced by several factors, including genetic factors, history of smoking habits, and lack of physical activity (exercise) (Siregar, et al, 2014 in Wiyono & Dwi, 2022). According to Chakim, et al, (2022), exercise is a physical activity that can reduce the risk of hypertension and is an effort to improve body health so that it can train the heart, reduce stress, increase stamina and stretch muscles.



Figure 7. Poster Installation

The next activity is the installation of the "SI CERMAT" poster as a media for health promotion and preventive efforts to reduce the risk of hypertension complications. The "CERMAT" program consists of C (check blood pressure regularly), E (get rid of cigarettes and alcohol), R (exercise regularly), M (maximize medication), A (recommend reducing salt), and T (enough sleep). Posters are placed in strategic places, such as stalls, roadsides and other strategic places so that people can easily read them and become a source of information related to hypertension. Posters are image media that combine visual elements such as lines, images and words to attract attention and communicate messages briefly (Anwar, et al, 2022). According to Ahmil, et al, (2023), using posters as a medium for health education is more effective than not using posters.

The evaluation stage was carried out at the 3rd meeting after the entire series of activities had been completed to find out whether the target had implemented healthy living behavior in the "CERMAT" program as an effort to prevent and reduce the risk of complications due to hypertension. Based on the results of this evaluation, the majority of elderly people have been able to implement the "CERMAT" program.

## **CONCLUSIONS AND RECOMMENDATIONS**

The activities were carried out well and successfully on 20-22 September 2023 at the Gajah Mada Culinary Hall, Prunggahan Wetan Village, targeting 50 elderly people and various activities, including hypertension education, free health checks, anti-hypertension exercises and poster installation. Based on the evaluation results, the majority of elderly people have been able to implement the "CERMAT" program as an effort to reduce the risk of hypertension complications. For the Prunggahan Wetan Village Government, it is hoped that it can carry out continuous monitoring and action so that this program becomes effective in reducing the risk of hypertension complications.

## **ACKNOWLEDGMENT**

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