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Utilization of TOGA to Reduce the Risk of Hypertension in Cibiru Wetan Village

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ABSTRACT

Community service activities in Cibiru Wetan Village, Bandung Regency have been carried out by lecturers and students of the Faculty of Pharmacy, Bhakti Kencana University (BKU) with partners, namely PKK Cibiru Wetan and Cibiru Wetan Health Center. Activities carried out in November include health screening (blood pressure, blood sugar, uric acid and total cholesterol checks), education on hypertension and the benefits of TOGA, training in processing medicinal plants such as ginger, Kaempferia galanga, and Curcuma into ready-to-consume herbal products, distribution of booklets on practical guidelines for the use of TOGA. This activity involves BKU lecturers from various expertise groups such as Pharmacology & Clinical Pharmacy; Pharmacy and Pharmaceutical Technology; General Pharmacy and Pharmacists; Pharmaceutical Biology.

Keywords: health, hipertension, TOGA

INTRODUCTION

Lecturers at the Bhakti Kencana University campus held a community service activity with the theme of Utilization of TOGA to Reduce the Risk of Hypertension in Cibiru Wetan Village. This activity was carried out in August 2024 by involving lecturers from the faculty of pharmacy with expertise groups: Pharmacology & Clinical Pharmacy, Pharmaceutics and Pharmaceutical Technology, General Pharmacy and Pharmacists, and Pharmaceutical Biology.

Cibiru Wetan Village is located in Cileunyi District, Bandung Regency, West Java. This village was chosen as a partner because it has great potential in terms of land availability and a supportive environment for the development of medicinal plants, but its utilization is still not optimal. The village community also faces challenges in the form of a high prevalence of non-communicable diseases, especially hypertension, and low awareness of the importance of routine health checks and blood pressure management.

Age is a significant factor that influences hypertension. This is related to natural changes in the body that affect the heart, blood vessels, and hormones, which can lead to increased blood pressure and hypertension. There is a significant relationship between age and the incidence of hypertension, with studies showing that as age increases, the cardiovascular system declines, leading to an increase in the incidence of hypertension (Adila & Mustika, 2023). There is a relationship between diet and blood pressure. Studies show that there is a relationship between fat consumption and systolic blood pressure (p <

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0.05), although there is no significant relationship between fat consumption and diastolic blood pressure (Andamsari et al., 2015).

The partners are PKK Cibiru Wetan and Puskesmas Cibiru Wetan. The solutions provided by this program include initial health checks to check blood pressure, blood sugar, uric acid, and cholesterol, as well as TOGA education for health. The plants used in this community service activity are ginger, galangal, and ginger processed into ready-to-eat herbal products. In this program, direct training is provided in planting and cultivating TOGA so that the community can utilize the natural resources around them.

The purpose of this community service is to form and increase public awareness and knowledge about hypertension, as well as the benefits of TOGA in maintaining health and preventing disease. With this training, it is hoped that the people of Cibiru Wetan Village will be able to utilize TOGA sustainably to reduce the risk of diseases such as hypertension.

METHOD

The method of implementing community service activities in Cibiru Wetan Village is carried out by conducting initial health screening in the community through health checks, blood pressure, and health screening (blood sugar, uric acid, and total cholesterol), education about hypertension and the benefits of TOGA, training in processing medicinal plants such as ginger, Kaempferia galanga, and Curcuma zanthorrhiza into ready-to-consume herbal products, as well as community assistance in utilizing TOGA independently. In addition, this program also includes the creation of practical guides on the use of TOGA for health, with the aim of empowering the community in maintaining health and preventing disease sustainably.

RESULTS AND DISCUSSION

This community service activity began with a survey in the Cibiru Wetan area by holding discussions with related agencies. From the results of the discussion, information was obtained that hypertension is the biggest problem in Cibiru Wetan Village. The Cibiru Wetan area itself has a productive age and elderly population of more than 50%. The lack of awareness of the importance of health checks causes many cases to go undetected, requiring more intensive medical treatment and higher costs.



Figure 1. Preliminary discussions with stakeholders

According to WHO, non-pharmacological approaches to the treatment or prevention of hypertension include reducing salt intake, eating more fruits and vegetables, avoiding tobacco use (Gao et al., 2023) (Lusno et al., 2020), reducing alcohol consumption (Husain et al., 2014) (Tasnim et al., 2020), limiting intake of foods high in saturated fat (Wiesen, Jonatha Moshe Ornstein2, Adriano R Tonelli1, Venu Menon3 & Ashton, 2008), and eliminating/reducing trans fats in the diet (Campbell et al., 2022). Studies have concluded that lifestyle choices, especially exercise (Rêgo et al., 2019), stress management (Rainforth et al., 2007), and salt consumption (Grillo et al., 2019) (Frisoli et al., 2012), play an important role in the occurrence of hypertension (Sinta Septiyawati et al., 2022). Common symptoms of hypertension include muscle weakness, cramps, arrhythmias, sudden pulmonary edema, sweating, palpitations, frequent headaches, snoring, and daytime sleepiness (Goldstein et al., 2004). These symptoms may indicate underlying conditions such as hypokalemia, renal artery stenosis, pheochromocytoma, obstructive sleep apnea, or thyroid disease (SHELEMO, 2023).

This community service activity was attended by 45 participants. Before and after the counseling activity was carried out, participants were first given a test in the form of a pre-test and post-test to determine the extent of the participants' understanding of hypertension, symptoms and treatment. From 45 participants, information was obtained that there was an increase in participants' understanding after the counseling.



Figure 2. Pre and post test

This community service activity includes initial screening in the community consisting of blood pressure, blood sugar, uric acid, and total cholesterol checks. The activity is continued with education about hypertension and the benefits of TOGA. After that, training is carried out on processing medicinal plants such as ginger, Kaempferia galanga, and Curcuma zanthorrhiza into ready-to-consume herbal products. Then continued with community assistance in utilizing TOGA independently. In this activity, the lecturers create a practical guide on the use of TOGA for health, with the aim of empowering the community in maintaining health and preventing disease sustainably.



Figure 3. Preliminary health check

Education about hypertension, the benefits of TOGA, and training in processing medicinal plants into ready-to-consume herbal products was presented alternately by the lecturers, which was then carried out with community assistance in utilizing TOGA independently.



Figure 4. Socialization activities

This activity ended with the provision of practical guidance on the use of TOGA for health in the form of a booklet containing important information related to the use of natural materials for the prevention and management of hypertension. This media will be disseminated through social media and distributed by PKK cadres, village cadres, RW cadres, integrated health posts, and youth organizations to reach a wider community.



Figure 5. Booklets

In this community service activity, educational videos were also made and uploaded on the YouTube platform so that the public can access the information at any time. In addition, this program will involve long-term collaboration with various parties, including Forkopimda, Puskesmas, DLH, and other community elements to maintain the continuity of the program through structured communication and cooperation.

CONCLUSION

Community service activities with the theme "Utilization of TOGA to Reduce the Risk of Hypertension in Cibiru Wetan Village" have been carried out by lecturers and students involving the community of Cibiru Wetan Village, Bandung Regency. This activity was

carried out well and can be understood by the community, as seen from the results of the post-test, which showed an increase in participant understanding. This activity was also uploaded on the YouTube platform to provide information about hypertension to the wider community.

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