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BUILDING QUALITY OF LIFE: ELDERLY WITH HYPERTENSION

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ABSTRACTS

Hypertension is a significant health issue among the elderly and is a major risk factor for cardiovascular diseases and other disorders. Factors such as unhealthy eating habits, lack of physical activity, stress, hormonal imbalance, and genetic predisposition significantly increase the risk of hypertension in the elderly. Integrated management, including regular blood pressure monitoring, appropriate pharmacological therapy, and an emphasis on healthy lifestyle changes, has proven to be effective in controlling and preventing complications of hypertension in the elderly population. The objectives of this activity are (1) to increase the knowledge and understanding of the community, especially the elderly, about hypertension and food management, and (2) to enhance the elderly's awareness of the importance of physical activity in maintaining their health. The results of the evaluation involving 20 participants showed an improvement in knowledge about hypertension, food management, and physical activity, and participants were motivated to prevent hypertension through proper food management and exercise.

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1. INTRODUCTION

Cihanjuang Village is one of the villages in the Parongpong sub-district, West Bandung Regency, West Java, Indonesia. It is located between the foothills of Mount Tangkuban Perahu and Mount Burangrang, serving as a border area between Bandung Regency and the city of Cimahi. In the early 1980s, Cihanjuang was known as a center for agriculture and farming that supplied not only the Bandung area but also Jakarta and the border areas of Central Java. The agricultural produce included various crops, vegetables, rice, and fruits, as well as livestock farming for cattle and goats. The name "Cihanjuang" is derived from "Ci," which means river, and "Hanjuang," a tree that grows abundantly in Cihanjuang.

Kampung Bojong is one of the neighborhoods (RW) within Cihanjuang Village. Similar to other residents of Cihanjuang, the people of Kampung Bojong primarily work as farmers, and a significant portion of the farmers in Kampung Bojong are elderly individuals who receive daily wages, resulting in low purchasing power. This situation has an impact on the health of the elderly, including the prevalence of hypertension. The elderly population in Kampung Bojong typically consumes salty fish, spicy condiments, and vegetables as part of their daily diet. Salty fish is a staple in their daily meals, which is one of the contributing factors to the occurrence of hypertension, especially among the elderly.

Hypertension is a significant cardiovascular risk factor that can affect the elderly. Research shows that hypertension often goes untreated in some elderly patients, but in others who may be more vulnerable to the adverse effects of high blood pressure, excessive treatment is prescribed. Systolic blood pressure (SBP) increases from middle age, while diastolic blood pressure decreases. This is due to the gradual hardening of the arteries as elastin is replaced with collagen and other age-related changes. In normal physiological conditions (as seen in young adults), large arteries, particularly the aorta, create a reservoir effect, expanding and holding blood during heart systole and contracting while projecting blood forward during diastole, resulting in even blood pressure throughout the cardiac cycle (normal pulse pressure). However, in the elderly, when large arteries are affected by hardening, the aortic reservoir cannot expand and store as much blood; hence, higher pressure is achieved during systole, and lower pressure during diastole due to the reduced blood flow from the reservoir during diastole (widening pulse pressure). This is why isolated systolic hypertension is common in older patients, while diastolic hypertension is rare, and why the average pulse pressure range is wider in older adults compared to young adults.

Systolic hypertension is a stronger risk factor for adverse cardiovascular outcomes compared to diastolic hypertension. Postural hypotension is also associated with older age due to these hemodynamic changes but also because of the blunted baroreceptor response that occurs with age. These patients may also suffer from supine hypertension, which can complicate their blood pressure management.

One of the efforts to reduce the incidence of hypertension among the elderly is to provide free health check-ups and education about hypertension as a community intervention. The aim of this community service program is to enhance the knowledge and skills of the community in preparing local food items as part of their daily diet and to prevent hypertension.

Hypertension, or high blood pressure, is a common medical condition in which the blood pressure in the arteries remains persistently elevated. While in many cases, hypertension may not present obvious symptoms, it can increase the risk of serious diseases such as heart disease, heart failure, stroke, and kidney disorders. Several issues are associated with hypertension. It has become a concern for the elderly population in Kampung Bojong. This is due to a lack of information about healthy eating and a lack of knowledge about the preparation of nutritious food for the elderly. Therefore, it is important to adopt a healthy lifestyle, consume a balanced diet, engage in regular physical activity, and manage stress to prevent or manage hypertension. Additionally, following medical advice and treatment from a doctor is a crucial key to controlling blood pressure and preventing potential complications.

2. METHODS

The community service activity is carried out in several stages in accordance with the plan:

1. Planning Stage, which includes discussions with the Cihanjuang Village community, specifically in Kampung Bojong, to formulate solutions and set target objectives.
2. Preparation Stage, involving the preparation of materials, the arrangement of health examination equipment (Sphygmomanometer, Stethoscope), and the documentation of the number of elderly individuals suffering from hypertension.
3. Health Examination Execution.
4. Education on Hypertension, Healthy Food Preparation, and Physical Activities.

Work Procedure

1. Notification of the community service event's timing.
2. Gathering the elderly individuals coinciding with the Posbindu activities on Saturday, September 24, 2022.
3. Conducting Blood Pressure and Pulse Rate Examinations.
4. Providing education on Hypertension, Healthy Food Preparation, and Physical Activities.

Evaluation

Routine evaluations are conducted at the end of each stage of the community service activity. The evaluation includes assessing the improvement in the community's understanding and skills, the level of success in food preparation, and motivation for physical activities. Additionally, program monitoring and evaluation are carried out at the end of the activity to assess the sustainability of physical activities for the elderly conducted by the community health volunteers

3. RESULTS AND DISCUSSION

The health examination began in the late afternoon at 16:00 by conducting individual assessments of the elderly, followed by an evaluation of the activities. The activities proceeded with providing education on hypertension and healthy food preparation. This was followed by elderly exercises and information about the importance of physical activity for the elderly (see Figure 1).

Once the participants received all the materials and participated in the demonstrations, a final evaluation was conducted. The final evaluation involved asking the same questions as in the initial assessment. The difference in scores between the initial and final evaluations indicated the improvement in knowledge and skills. In the evaluation form, alongside participant data, seven questions were provided for each topic. The average scores from the initial and final evaluations are presented in Table 1.

Table 1. Average Initial and Final Evaluation Results for Activity Participants

No	Evaluation Question	Average Initial Evaluation	Average Final Evaluation	Improvement
1	Understanding of Hypertension	40	90	50
2	Causes of Hypertension	70	90	20
3	Healthy Foods to Prevent Hypertension	50	75	35
4	Importance of Physical Activity	50	72	22
5	Benefits of Physical Activity	40	70	30

This activity was attended by 20 participants, with six female participants, accounting for 80%, and four male participants, making up the remaining 20%. This is very encouraging because it shows the involvement of male participants in the activity. This could have been encouraged by the Chairman of the Neighborhood Association (RW) and active community health volunteers (kader) who actively encouraged the elderly. The participants came from various community groups, including RW officials, RT officials, and Posyandu volunteers.

The improvement in knowledge and skills, as seen in the evaluation results, was very positive. Participants gained a good understanding of the definition and causes of hypertension. Efforts to raise awareness about the importance of healthy food in preventing hypertension have been ongoing. Additionally, the community recognized the impact of a lack of physical activity on their health.



Figure 1. Health Promotion to elderly



Figure 2. Exercise in Elderly

Initially, participants had limited knowledge about the appropriate frequency and intensity of physical activity for their health. The materials provided by the team helped enhance their understanding. This is crucial because the intensity and frequency of physical activity for the elderly should not be high or moderate but rather low intensity, lasting for 30 minutes, three times a week. Activities like brisk walking fall under aerobic exercise. It is essential for the community to be aware of this to prevent hypertension. The health check-ups, education sessions, and group exercises were carried out with enthusiasm and participation from the community.



Figure 3. Health Screening for Elderly

Aging is a natural phase of life that everyone will inevitably experience. As individuals grow older, they face unique challenges and vulnerabilities. Among these challenges, maintaining a high quality of life is of paramount importance. The quality of life for the elderly is influenced by various factors, including health, social interactions, and overall well-being. In this essay, we will explore the significant role that increasing knowledge and shaping positive attitudes play in improving the quality of life for the elderly.

Firstly, increasing knowledge among the elderly about various aspects of their health is crucial for enhancing their quality of life. Research indicates that knowledge is power when it comes to managing health conditions. For example, one study published in the Journal of

the American Medical Association (JAMA) found that elderly individuals who were knowledgeable about their chronic health conditions, such as diabetes and hypertension, were more likely to adhere to their treatment plans and achieve better health outcomes (Garcia et al., 2019). This knowledge empowers them to make informed decisions about their health, manage their conditions effectively, and actively participate in their care.

Moreover, knowledge about available support services and resources is vital. Access to information on community programs, healthcare options, and financial assistance can greatly improve the elderly's overall well-being. According to a report by the World Health Organization (WHO), informed elderly individuals are more likely to engage in preventive healthcare measures, seek timely medical attention, and enjoy a higher quality of life (WHO, 2015).

In addition to knowledge, attitude plays a critical role in determining the quality of life for the elderly. A positive attitude can enhance overall well-being, promote mental and emotional health, and foster a sense of purpose. A study conducted by the National Institute on Aging (NIA) found that elderly individuals with optimistic attitudes tend to experience less stress and depression, leading to better health outcomes and longevity (NIA, 2020). Positive attitudes also encourage social engagement and participation in various activities, which are linked to improved cognitive function and life satisfaction (Carstensen, 2006).

Attitude enhancement programs, such as cognitive-behavioral therapy and mindfulness practices, have been shown to be effective in improving the mental and emotional well-being of the elderly. For instance, a systematic review published in the journal *Clinical Psychology Review* found that these interventions can significantly reduce symptoms of depression and anxiety in elderly individuals (Yeung et al., 2019).

Increasing knowledge and shaping positive attitudes are integral components of enhancing the quality of life for the elderly. Knowledge equips them with the tools to manage their health effectively and make informed decisions. Positive attitudes foster emotional well-being, reduce stress, and promote social engagement, ultimately leading to a higher quality of life. As the global population continues to age, efforts to provide knowledge and promote positive attitudes among the elderly should be a priority. Communities, healthcare providers, and policymakers should collaborate to create age-friendly environments that empower the elderly with the information and attitudes they need to age gracefully and enjoy a high quality of life.

4. CONCLUSION

The results of this activity indicate that, by comparing the initial and final evaluation scores, there has been an improvement in the knowledge and skills of the community in Cihanjuang Village, especially in Kampung Bojong, concerning hypertension prevention. There has also been an increase in understanding regarding hypertension, healthy food preparation, and physical activities. This activity was carried out in Kampung Bojong, RW 09 of Cihanjuang Village, as part of an effort to enhance the health status of the elderly.

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