

Elderly Respondent Characteristics Through BE-FAST Education for Early Stroke Detection

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Abstract

Stroke is the second leading cause of death and disability worldwide. The elderly represent a vulnerable group at high risk for stroke. Raising awareness of early detection is a crucial strategy to reduce the incidence and impact of stroke. One effective early detection tool is the BE-FAST method (Balance, Eyes, Face, Arm, Speech, Time). This community service aimed to assess the characteristics of elderly participants and promote early stroke detection through BE-FAST education using the POAC approach (Planning, Organizing, Actuating, Controlling). A total of 79 elderly participants were included. Health screenings were conducted, including blood pressure measurements and BE-FAST assessments. Results showed that 55.7% of participants had hypertension, 67.1% had difficulty moving limbs on one side of the body, 36.7% experienced visual disturbances, and 32.9% showed signs of facial droop or numbness. The BE-FAST method was effective in detecting early stroke signs with a sensitivity of 92%. This initiative demonstrated the feasibility and effectiveness of using BE-FAST education in community settings to empower the elderly in recognizing early stroke symptoms and minimizing associated risks..

Keywords: Early detection, BE FAST education, hypertension, stroke.

A. INTRODUCTION

Stroke is a clinically defined acute focal neurological deficit syndrome caused by vascular injury (infarction, hemorrhage) to the central nervous system. Stroke is the second leading cause of death and disability worldwide. Stroke is not a single disease but can be caused by various risk factors, disease processes and mechanisms (Murphy & Werring, 2020). Nationally, the prevalence of stroke in Indonesia in 2018 based on a doctor's diagnosis in the population aged over 15 years was 10.9%. Based on age group, it can be seen that the incidence of stroke occurs more in the 55-64 year age group (33.3%) and most stroke sufferers also live in urban areas (63.9%), while those living in rural areas are (36.1%) (Ministry of Health of the Republic of Indonesia, 2018).

Stroke can occur as a result of various risk factors, such as high blood pressure, smoking, diabetes, and others (Kariasa, 2022). Previous studies have shown that in Indonesia the majority (65.7%) of people with hypertension (a risk factor for stroke) have low stroke prevention (Sarah et al., 2023). The elderly are a vulnerable population to stroke. This guides rational acute management, investigation, and secondary prevention. Factors that influence stroke behavioral prevention are knowledge and awareness of stroke. A person's awareness of the importance of early detection can be an effort to reduce the risk of stroke, namely through the BE-FAST method (Balance, Eye, Face, Arm, Speech & Time) is one method that can be used to detect early stroke events (Simanjuntak, et al. 2022).

The BE-FAST method is a very simple technique and can be easily understood in early detection of stroke. The BE-FAST method is, Balance (complaints of loss of balance or dizziness or a heavy head so that you tend to hold on to something or sit), Eyes (complaints of blurred vision), Face (complaints of the face looking abnormal such as drooping on one side and asymmetrical), Arm (complaints of weak arms), Speech (complaints of speech becoming difficult, unclear, or even unable to speak), Time (If you get the above complaints, go to the hospital immediately) (El Ammar, et al. 2020). The BE FAST method is very sensitive for screening for acute ischemic stroke with a prediction rate of >95% (Aroor, et al. 2017 & El Ammar, et al. 2020). This community service activity will discuss the characteristics of the elderly in Basangalas Village, Abang District, Karangasem Regency, Bali through BE-FAST education as an effort to detect stroke early.

B. METHODS

The target of the activity was carried out in Basangalas Village, Abang District, Karangasem Regency with a total of 79 elderly participants using a purposive sampling technique with the following inclusion criteria:

1. Respondents aged 60-90 years
2. Have a history of hypertension

The form of activity carried out is in the form of public health counseling regarding early detection of stroke through the BE FAST method. The steps in the early detection of stroke counseling activity using the FAST method are:

1. Health checks on the elderly, in the form of blood pressure measurements
2. Distribution of questionnaires to respondents to measure the level of knowledge regarding early detection of stroke
3. Provision of health education about stroke
4. Counseling about BE-FAST educational materials as self-awareness of early detection of stroke through audiovisual media
5. Early detection training for stroke using the BE-FAST method

C. RESULTS

The results of community service activities carried out by ITEKES Bali Nursing Masters students on May 23, 2024 in Basangalas Village, Abang District, Karangasem Regency, began by gathering elderly people who had been previously informed that a health check would be held at the banjar hall. The elderly who came registered first, then had their blood pressure

checked, weighed, and height measured, then interviewed officers regarding early detection of stroke using the BE-FAST questionnaire. The expected results of this community service are able to help the elderly to know and carry out early detection related to their health problems, especially early detection of stroke symptoms. The results obtained based on the collected data are as follows:

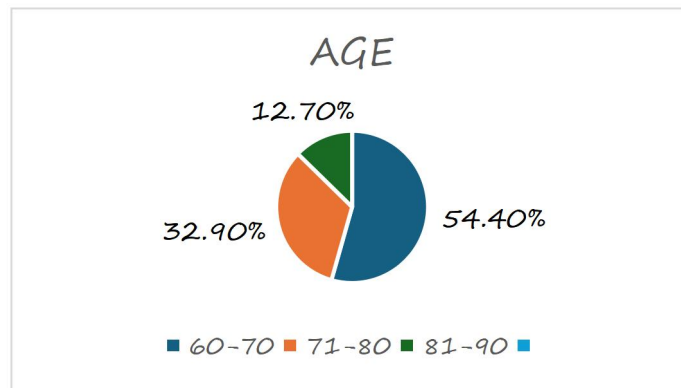


Figure 1. Respondents' Age

The diagram above shows that of the 79 elderly people present during data collection, the ages of the elderly who were respondents at the time of the activity were obtained, the most in the age range of 60-70 years at 54.4%, 71-80 years at 32.9%, and the least in the age range of 81-90 years at 12.7%.

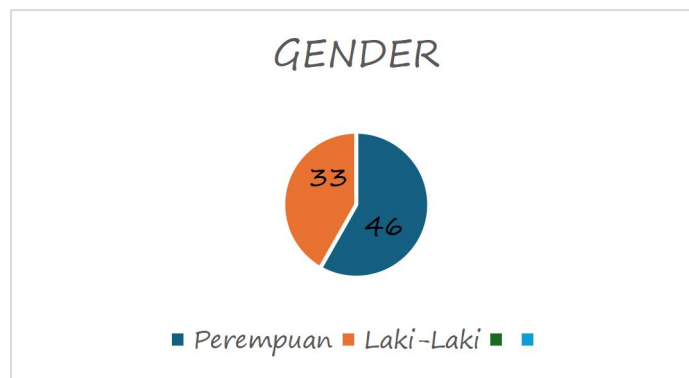


Figure 2. Respondent Gender

In terms of gender, out of 79 elderly people, the majority were female, namely 46 people or 58.2%, and 33 men or 41.8%.

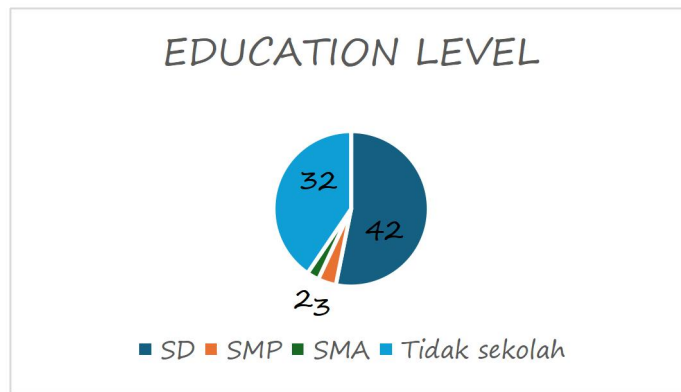


Figure 3. Respondents' Education Level

The results of the last education of the elderly found that the most had elementary school education, namely 53.2% or 42 people, then the elderly who did not attend school were 40.5% or 32 people, junior high school education was 3.8% or 3 people, and the smallest was 2.5% or 2 elderly who had high school education.



Figure 4. Respondents' Job Types

In terms of employment, the majority of elderly people work as farmers, 55.7% or 44 people, as craftsmen 17.7% or 14 people, as laborers 8.9% or 7 people, as housewives 7.6% or 6 people, elderly people who do not work 5.1% or 4 people, and as livestock breeders and civil servants 2.5% or 2 people each.

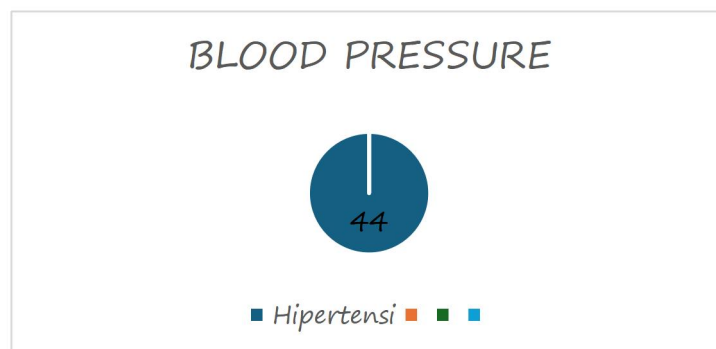


Figure 5. Respondents' Blood Pressure Categories

Based on the results of blood pressure examinations obtained from 79 elderly people, it was found that 55.7% or 44 elderly people experienced hypertension.

From the results of the questions conducted on the elderly to detect early stroke using the BE-FAST method, the results obtained in the last 7 days in question number 7, the elderly who had difficulty moving their legs and hands on one side right or left were 67.1% or 53 people, then in question number 8, the elderly who had difficulty opening their eyes or one eye right or left and causing visual disturbances were 36.7% or 29 people. In question number 9, 32.9% or 26 people experienced changes in the shape of their face on one side right or left, then 53.2% or 42 elderly people experienced weakness or numbness on one side of the body right or left such as the legs and hands and finally the elderly had difficulty speaking, slurred speech, or difficulty understanding speech by 84.8% or 67 people.

D. CONCLUSION

Stroke diagnosis needs to be established quickly and accurately so that immediate treatment can be carried out to reduce the number of disability and mortality of patients. With this community service activity, the characteristics of respondents in Basangalas Village, Abang District, Karangasem can be described. This activity provides education on early symptoms of stroke in preventive efforts so that the risks described can be minimized as much as possible.

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