



Education on Risk Factors of Cerebrovascular Disease among the Community of Kuwue Village, Montasik Subdistrict, Aceh Besar

Nanda Desreza^{1*}, Rizkidawati², Annisa Putri³, Winda Artika Syafitri⁴

¹⁻⁴Universitas Abulyatama, Aceh, Indonesia

E-mail: ¹⁾ nandadesreza.psik@abulyatama.ac.id, ²⁾ rizkidawati_pspd@abulyatama.ac.id

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*Corresponding author:

Nanda Desreza

nandadesreza.psik@abulyatama.ac.id



ABSTRACT

Cerebrovascular disease is a condition in which rapidly developing clinical signs in the form of focal and global neurological disorders appear. These signs can worsen and persist for more than 24 hours and can cause death. The aim of this activity is to increase public understanding of how to prevent this disease and reduce its complications. The venue for this event is Kuwue Montasik village in Aceh Besar. The Kuwue village community, consisting of 18 people, attended in person. This community service method was implemented through training and discussion. The activity began on 20 August 2025 at 10:00 a.m. and lasted until completion. Starting with participant data, the activity continued with a presentation of the objectives and material on the risk factors for this disease, better known as stroke, its triggers, and its complications. The activity showed that the community understood low-fibre diets, low physical activity, smoking, and excessive salt use in cooking. It was recommended that the community improve their lifestyle, diet, and rest patterns, and families should continue to provide strong motivation to family members who are vulnerable to danger. In addition, the responsibility of health workers to provide consistent education should be increased.

Keywords: Diet, Lifestyle, Prevention, Stroke

1. Introduction

Chronic diseases are long-term problems that tend to be severe, stable, and recurrent. They are included in the category of long-term diseases identified by the WHO, such as cancer, tuberculosis, diabetes mellitus, stroke, and heart disease. These diseases are among the ten major health problems in the world (Iskandar & Rumahorbo, 2018).

The WHO states that stroke is a condition in which rapidly developing clinical signs consist of neurological impairment that is widespread and generalised, which may worsen, lasts for 24 hours or more, and may lead to death (Temorubun & Patalle, 2022). One of the most common causes of death and neurological disability in Indonesia is stroke (Bakraa et al., 2021). Most strokes are not caused by haemorrhage (Saputra & Mardiono, 2022).

There are two categories of stroke risk (Boehme et al., 2017) including, Unmodifiable risk factors such as age, gender, certain races, and genetics and Modifiable risk factors such as hypertension, diabetes mellitus, obesity, dyslipidaemia, atrial fibrillation.

Factors influencing the incidence, risk factors, and prediction of quality of life in stroke patients: 1) Ischemic stroke, intracerebral haemorrhage, and subarachnoid haemorrhage, with a mortality rate of 24.6% of cases, and an improvement in quality of life after 12 months (Lavados et al., 2021).

This does not mean that there is no way to prevent stroke if someone has stroke risk factors. To identify the symptoms and signs of stroke, pay attention to the slogan 'SeGeRa Ke RS (Go to the hospital immediately)' (Hendra et al., 2022) which includes the following:

1. Asymmetrical smile
2. Sudden weakness in one side of the body
3. Slurred speech / sudden inability to speak / inability to understand words / incoherent speech
4. Numbness or tingling in one side of the body
5. Sudden vision loss
6. Severe headache that comes on suddenly and has never been experienced before.

Stroke is the second leading cause of death and the third leading cause of disability worldwide. Disability caused by stroke poses financial and emotional challenges for families, hindering the productivity of other family members (Fu et al., 2015). Communities vulnerable to stroke are more susceptible (Sanyasi & Pinzon, 2018). Undoubtedly, this adds to the financial burden on families and exacerbates poverty due to the high cost and long duration of stroke treatment (Imanda et al., 2019).

Blood pressure control and a healthy lifestyle are key to stroke prevention. To live a healthy lifestyle, you should avoid smoking (and if you are a smoker), avoid alcohol, be physically active, and eat a healthy diet with plenty of fruits and vegetables, little trans fat, and low sodium (Inchai et al., 2021).

According to initial observations in Kuwue Village in the Montasik sub-district of Aceh Besar, the community does not yet fully understand the risk factors for stroke and heart disease, including foods to avoid and unhealthy eating patterns. Prevention is far better than treatment before the disease appears, requiring community training and support for early detection or screening of the elderly and those at risk (Wayunah & Saefulloh, 2017). To implement early prevention, the community must be educated about disease risk factors and how to prevent them, as well as about foods to avoid. Fifteen individuals classified as having stage 2 hypertension (blood pressure exceeding 160 mmHg) were selected as samples for blood pressure examinations among the adult population.

2. Methodology

This community service activity was conducted using an educational and participatory approach. The activity took place in the large hall of Kuwue Village, Montasik Subdistrict, Aceh Besar, on 20 August 2025. A total of 18 participants, consisting of adult and elderly community members, attended the event in person.

The method applied included three main stages: preparation, implementation, and evaluation. In the preparation stage, the team coordinated with village officials, prepared educational materials, and designed pre- and post-session questions to measure participants' level of understanding about stroke and heart disease prevention. During the implementation stage, activities were carried out through presentations, discussions, and question-and-answer sessions. The presentation delivered material on heart disease, stroke, their risk factors, and prevention strategies, with a focus on lifestyle, nutrition, and physical activity. The discussion session allowed participants and family members to share experiences, ask questions, and provide suggestions for future activities.

In the evaluation stage, the team measured participants' level of understanding before and after the educational session using simple questionnaires. Documentation was also carried out through photographs and field notes to capture community involvement and responses. This method ensured that the activity was interactive, informative, and tailored to the needs of the local community.

3. Results and Discussion

The event was held in the large hall of Kuwue Aceh Besar village on 20 August 2025, starting at 10:00 a.m. and continuing until completion. Beginning with participant registration, the event continued with a presentation on the objectives of the event and material related to heart disease and its complications. The event demonstrated that the community has a better understanding of unhealthy eating patterns, including low-fibre diets, low physical activity, blood pressure monitoring, smoking, and excessive salt intake in food. Several issues that can cause heart and lung disease include those mentioned above.



Figure 1. Educational activities for patients

Several patients said during the discussion that they did not understand that excessive salt intake could also affect blood pressure because there are many factors that trigger hypertension. Accompanying family members also expressed hope for future events with themes such as healthy meal options for hypertensive patients.

The community participated proactively in the discussion and Q&A session, ensuring the event ran smoothly and effectively. They also noted that such activities are highly engaging and beneficial for the community, especially when conducted directly in the village. The session concluded with documentation and moderation.



Figure 2. Education for the community

This section describes the research results. Data should be presented in Tables or Figures if possible. There should be no duplication of data in Tables and Figures. Discussions should be consistent and should interpret results clearly and concisely, and their significance, supported by appropriate literature. The discussion must demonstrate the relevance between the results and the field of investigation and/or hypotheses. Each table and figure should be clearly explained in the text.

4. Conclusion

This community service activity ran smoothly, with active participation from both patients and their families, and was attended by 18 people. Throughout the presentation, participants remained attentive, focused, and engaged, with several individuals proactively asking questions and offering suggestions for future activities. As a result, patients gained a better understanding of stroke, its causes, and preventive measures. The community also provided valuable input, expressing hope that similar initiatives would continue, particularly with a focus on healthy meal plans for individuals with hypertension and stroke. Based on the outcomes of this activity, several recommendations can be made. First, community health centres are encouraged to support villages in providing continuous education on the preparation of healthy and nutritious meals. Second, stronger collaboration between health centres and community cadres is needed to ensure the delivery of knowledge, especially to adults and the elderly. Finally, it is expected that the communities who participated in this program will be able to apply healthier lifestyle practices, including appropriate dietary habits and physical activity, within their households.

In addition, it is suggested that future activities not only focus on health education but also include practical demonstrations, such as cooking workshops or simple exercise sessions tailored for elderly participants. This hands-on approach would help communities directly implement the knowledge they gain and make it easier to adopt healthier routines in their daily lives. Furthermore, involving local leaders and family members more actively in the planning and implementation of such activities could increase community ownership and sustainability of the program.

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