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Improving the Health of Stroke Survivors Through Education and Training Among Health Cadres Regarding Stroke Prevention in Malang

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A B S T R A C T

Stroke is a leading cause of death and disability in Indonesia. Stroke requires prompt, precise, and high-quality treatment to prevent and avoid disability and death. Problems experienced by cadres in one village in Malang were lack of socialization of programs related to stroke care for patients, lack of training and mentoring to improve knowledge and skills in stroke-related interventions in the elderly. This community service program was implemented by involving Health Cadres in Malang. This activity was implemented through outreach activities to increase cadres' knowledge and provide training to cadres on screening and actions that can be taken to prevent stroke. All participants were very enthusiastic and actively involved in this activity, making it very important for health workers and health cadres in the community to be involved in stroke prevention.

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INTRODUCTION

Damage to the nerves and neurological impairments result from a stroke, which happens when a part of the brain loses oxygen, nutrients, and blood flow. Stroke ranks as the third most common cause of disability and the second most common cause of death worldwide(Pindus et al., 2018; Venketasubramanian et al., 2022). According to a meta-analysis and systematic review, the total prevalence of stroke in the elderly was 7.4%, with 6.4% of women and 7.0% of men affected. The prevalence declined with the year of publishing and rose with age (Rajati et al., 2023). The population of elderly in East Java has nearly reached 13.57% of the total population and increasing each year, moreover, the prevalence of stroke in East Java is 12.4‰ where the highest number of cases was in the 60-69 age group, namely 10,149 cases (Putri, 2023).

Elderly stroke patients may have a range of symptoms, some of which may be unusual when compared to younger populations. The common symptoms observed such as neurological deficit that manifest as weakness or numbness in the face, arm, or leg on one side of the body (Abdulsalam et al., 2017). Slurred or confused speech is common among older stroke patients, and some may have difficulty speaking or understanding the language (Kallollimath, 2018). Other symptoms that we can usually find in elderly population is sudden visual disturbances, such as loss of vision in one or both eyes and the problems in balance and coordination such as difficulty in walking (Kallollimath, 2018). A comprehensive clinical examination and prompt imaging are essential for an accurate diagnosis and successful treatment of elderly stroke because it can present in a number of ways, some of which are uncommon.

Stroke is a major global cause of death and disability among the elderly. According to data from around the world, stroke was responsible for 69.8% of all neurological deaths and 61.7% of the total disease burden (measured in disability-adjusted life years, or DALYs) brought on by neurological disorders in 2019 (Avan & Hachinski, 2021). Meta-analysis study by Li et al., (2024)found that frailty is common among stroke patients and is associated with an increased risk of mortality and poor functional outcomes. Health care professionals need to focus on frailty in stroke patients to improve the quality of life of stroke survivors.

In order to support access to community services, facilitate transfers back to specialist services when new issues arise, provide training and respite care, identify and address the health needs of caregivers, and manage aspects of care that are typically managed in general practice (such as risk factors and psychological issues), primary care can play a critical role in the care of stroke survivors and their caregivers. The sense of abandonment that stroke patients feel after being released from the hospital, however, suggests that this function is not entirely carried out. According to qualitative reports, patients and informal caregivers feel abandoned when there is a lack of coordinated post-discharge care (Martinsen et al., 2015).

Community-Based Health Efforts is a government program aimed at health development to empower communities and provide convenience to the

public in obtaining basic health and social services to help reduce disability rates, accelerate the decline in mortality rates in all levels of society. Although various health programs have been implemented to address the increasing burden of stroke, especially among the elderly, most of these initiatives have primarily focused on curative and rehabilitative efforts rather than preventive strategies at the community level. In particular, the role of health cadres as a front line in health promotion and early detection remains underutilized. Existing studies have shown that empowering health cadres can significantly improve awareness, screening, and lifestyle modification in communities; however, evidence from the Indonesian context, is still limited. Furthermore, there is a lack of community-based models that systematically integrate health cadres into stroke prevention programs for the elderly. This gap highlights the need for innovative community service activities that optimize the role of health cadres, not only to increase knowledge and awareness but also to actively contribute to reducing stroke risk factors and incidence among the elderly population.

IMPLEMENTATION AND METHODS

The implementation stage was carried out in three stages and was started from Februari to March 2024. The first stage is preparation. In this preparation stage, a team of lecturers from Faculty of Health Sciences, University of Muhammadiyah Malang, as organizers and supervisors conducted a preliminary study by meeting with the head of the Health cadre from one of the community in Malang. A cadre explained the purpose of providing mentoring and training to the cadres. The cadre provided an overview of the current situation in her village. From the interview results, it was discovered that there were two of them were active in the Posyandu Lansia cadre.

The team presented the following programs during the socialization process: planning and implementing programs for cadres to actively improve health, particularly in stroke prevention, in the community. Collaborating with elderly Posyandu cadres to identify programs that have not been optimally implemented by the cadres. It is hoped that the active role of cadres would complement existing programs that have not been optimally implemented. Sharing opinions and experiences with cadres is expected to provide solutions to program challenges.

The team also do counselling to improve the knowledge of cadres. The module is expected to improve participants' understanding of prevention materials, including definitions, etiology, potential impacts, and intervention/care programs for stroke patients. The modules and posters would enhance health education and information for cadres and the public in general. The module is a book written with the aim of enabling students or trainees to learn independently with or without teacher guidance. Therefore, the module contains at least all the basic components of the material. Posters was displayed in strategic locations where they are easily accessible to the

public. The team also did the focus group discussion with the cadres to discuss the problem and giving the solutions.

In the final stage, the team conducted monthly reviews to determine the effectiveness of the training provided. Sharing progress and challenges during the planned program implementation is ongoing to identify issues and find solutions, which serve as material for evaluating the program's implementation during the community service and research process. Collaboration with Posyandu cadres for the elderly was expected to lead to more effective intervention activities.

RESULTS AND DISCUSSION

The cadres mentoring and training program implementation can be considered to have run well because all activities were carried out according to the timeline scheduled by the team as agreed with the Partners. The first step in this program was an initial site survey, the purpose of which was to identify the problems and potentials in the village. By conducting interviews with village midwives and local village cadre leaders, the problems faced by each Posyandu were identified. After the problems and solutions offered by the team were truly utilized, the next step was to obtain permits and consult with other team as partners. The response from the partners was very positive and supportive of the program offered, which is expected to also develop and be followed by all residents.

The initial socialization was conducted to the head of the Health cadre in Malang to explain the programs offered on February 14, 2024. The implementation of this community service was carried out by UMM nursing lecturers consisting of three lecturers and 2 students or nursing. The implementation of training and mentoring for cadres was carried out for 2 days starting on February 14, 2024. The initial meeting was held for counseling, sharing knowledge and experiences from the presenters with the posyandu cadres. The materials provided on the first day included management or the role of the family for family members who have had a stroke, screening od body weight and height to calculate the Body Index and Diabetes Mellitus. All materials provided were according to the problems faced by the cadres. Primary prevention for stroke included blood pressure control, healthy lifestyles, and sodium reduction must be implemented in order to achieve optimal health outcomes (Yan et al., 2016).

The health team detected the diseases, especially non-communicable diseases, early. Training provided includes blood pressure monitoring, blood sugar testing with a glucose monitor, using an oximeter to monitor oxygen saturation levels, and observing vital signs, including temperature, pulse, and respiration. Prior to the vital signs training, the cadres were educated on normal vital signs. The "train the trainer" model is considered the most effective strategy for implementing specialist stroke education, whereas the integration of technology may serve as an additional support when sufficient resources are accessible for its development and utilization (Habibi et al., 2023).

The counseling, mentoring, and training were enthusiastically received by the cadres. There was an association between the involvement of Posyandu Cadres and the quality of life of elderly individuals who have experienced stroke (Ulfa & Rahmi, 2023). Residents responded well to this initial introduction and fully supported the program. All participants had the opportunity to practice all items under the guidance of a team of lecturers. Representatives from the elderly Posyandu cadres, with a total of 14 participants, participated in the program.

CONCLUSIONS AND RECOMMENDATIONS

The main problem experienced by partners is the lack of training and mentoring, especially to hone the skills of cadres. The absence of a Posyandu program discourages people from attending Posyandu activities. With skilled Posyandu cadres, their role will be more optimal in assisting the Health Team in achieving optimal health. The active role of cadres in screening prevents an increase in the number of diseases or recurrences.

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