
Transformative Health Education for Blood Pressure Normalization Using 3-in-1 Therapy

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Abstract

Hypertension is one of the leading non-communicable diseases and a major public health concern worldwide. Community-based health education is essential to improve awareness and promote sustainable self-management of blood pressure. Objective: This community service program aimed to improve community knowledge and encourage blood pressure control through the implementation of 3-in-1 Therapy. Methods: The program was conducted among residents of Suka Mulia Hulu Village using health education, demonstrations, and interactive discussions. The intervention consisted of hypertension exercise, cucumber juice consumption, and warm water foot soaking therapy. Educational leaflets were distributed to reinforce participants' understanding. Results: The participants showed high enthusiasm and actively engaged in the activities. Following the intervention, community members demonstrated improved understanding of hypertension, its risk factors, prevention strategies, and non-pharmacological management. Participants also expressed their willingness to adopt healthy lifestyles and implement the 3-in-1 Therapy regularly. Conclusion: Transformative health education combined with 3-in-1 Therapy effectively enhanced community knowledge and promoted sustainable self-management practices for blood pressure control, thereby contributing to the prevention of hypertension-related complications and improvement of quality of life.

Keywords: Hypertension, Blood Pressure Control, Health Education, Self-Management, 3-in-1 Therapy.

INTRODUCTION

Hypertension is one of the most common non-communicable diseases and remains a major public health challenge worldwide. It is commonly referred to as the "silent killer" because individuals with hypertension often experience no apparent symptoms until severe complications occur. Uncontrolled hypertension may lead to cardiovascular diseases, stroke, chronic kidney disease, and other life-threatening conditions, thereby contributing significantly to morbidity and mortality worldwide (World Health Organization, 2023). Consequently, effective prevention and management strategies are essential to reduce the burden of hypertension and improve quality of life.

According to the Ministry of Health of the Republic of Indonesia, the prevalence of hypertension among adults aged 18 years and above reached 34.1%, indicating that hypertension remains a significant health problem in Indonesia (Kementerian Kesehatan Republik Indonesia, 2019). Several factors contribute to the development of hypertension, including unhealthy dietary habits, physical inactivity, obesity, stress, smoking, and inadequate health awareness (Akbar & Tumiwa, 2020). These modifiable risk factors highlight the importance of community-based interventions aimed at promoting healthy lifestyles and encouraging self-management practices.

Health education is considered one of the most effective approaches to increasing public awareness and empowering communities to adopt healthy behaviors. Community empowerment through sustainable health education enables individuals to recognize risk factors, perform preventive measures, and participate actively in maintaining their health. In addition, non-pharmacological interventions have gained considerable attention as

complementary approaches for blood pressure control due to their practicality, affordability, and minimal side effects.

Residents of Suka Mulia Hulu Village are not exempt from the growing burden of hypertension. Limited knowledge regarding hypertension prevention and management, coupled with unhealthy lifestyle practices, may increase the risk of hypertension-related complications. Therefore, appropriate educational interventions are necessary to improve community awareness and encourage sustainable self-management behaviors.

This community service program aimed to enhance community knowledge and promote blood pressure control through the implementation of 3-in-1 Therapy, consisting of hypertension exercise, cucumber juice consumption, and warm water foot soaking therapy. Through transformative health education and practical demonstrations, the program is expected to improve community participation in hypertension management and contribute to the prevention of complications and the enhancement of quality of life.

RESEARCH METHODS

This community service program employed a descriptive approach with educational interventions aimed at improving community knowledge and promoting sustainable blood pressure management. The program was conducted on December 13, 2025, at the Village Hall of Suka Mulia Hulu, Deli Serdang Regency, North Sumatra, Indonesia. The subjects involved were community members with hypertension and local health cadres who participated voluntarily in the activity.

The intervention was implemented through health education sessions, demonstrations, and interactive discussions. The materials provided included information regarding hypertension, risk factors, prevention strategies, and non-pharmacological management. The 3-in-1 Therapy intervention consisted of hypertension exercise, cucumber juice consumption, and warm water foot soaking therapy. Educational leaflets, a laptop, a projector, microphones, and audio equipment were used to support the delivery of the program.

Data were obtained through direct observation and evaluation of participants' responses during the educational sessions and question-and-answer activities. Participants' understanding and level of participation were used as indicators to evaluate the effectiveness of the program. Descriptive analysis was employed to describe the outcomes of the community service activities and participants' responses following the intervention.

RESULTS AND DISCUSSION

The community service program entitled "Transformative Health Education for Blood Pressure Normalization Using 3-in-1 Therapy" was successfully implemented among residents of Suka Mulia Hulu Village, Deli Serdang Regency, North Sumatra, Indonesia. The program was conducted through health education sessions, practical demonstrations, and interactive discussions focusing on hypertension prevention and management. The intervention introduced the concept of 3-in-1 Therapy, consisting of hypertension exercise, cucumber juice consumption, and warm water foot soaking therapy as simple and sustainable non-pharmacological approaches for blood pressure control.

Table 1. Input–Process–Output of Community Service Program

Input	Process	Output
Educational materials and supporting media	Health education and interactive discussion	Improved community awareness regarding hypertension
Hypertension exercise demonstration	Guided exercise sessions	Increased understanding of physical activity benefits
Cucumber juice intervention	Nutrition education and preparation demonstration	Improved awareness of healthy dietary practices
Warm water foot soaking therapy	Practical demonstration and participant involvement	Enhanced self-management skills
Educational leaflets	Distribution of learning materials	Reinforcement of knowledge and sustainable learning

Source: Community Service Program Documentation, 2025.

The program was well received by the participants, as evidenced by their active involvement and enthusiasm during the educational sessions. Participants paid close attention to the materials delivered and actively participated in the discussion sessions by raising questions related to healthy dietary patterns, stress management, physical activity, and home-based blood pressure control. Such responses reflected the community's growing awareness of the importance of preventing hypertension and adopting healthier lifestyles.

The educational intervention contributed to improving participants' understanding of hypertension, including its risk factors, complications, and preventive measures. Through practical demonstrations, participants acquired knowledge regarding the proper implementation of hypertension exercise, preparation of cucumber juice, and application of warm water foot soaking therapy. These activities enabled participants to gain practical experience and increased their confidence in performing the interventions independently at home.

The use of educational leaflets further strengthened participants' understanding by providing written information that could be reviewed repeatedly and shared with family members. This approach facilitated continuous learning and supported the sustainability of health-promoting behaviors within the community. Moreover, the combination of lectures, demonstrations, and interactive discussions created an engaging learning environment and enhanced the effectiveness of knowledge transfer.

The positive responses demonstrated by participants indicated that transformative health education served as an effective strategy for community empowerment. The implementation of 3-in-1 Therapy provided participants with practical, affordable, and easily accessible methods for managing blood pressure. Furthermore, participants expressed their commitment to adopting healthy lifestyles and implementing the recommended interventions regularly.

Overall, the findings of this community service program highlight the importance of community-based health education in promoting sustainable self-management practices and preventing hypertension-related complications. The integration of health education with simple non-pharmacological interventions has the potential to improve the quality of life of individuals with hypertension and strengthen community participation in maintaining long-term health.

CONCLUSION

The implementation of the community service program on transformative health education for blood pressure normalization using 3-in-1 Therapy successfully enhanced community awareness and understanding regarding hypertension prevention and management among residents of Suka Mulia Hulu Village. Through the integration of health education, hypertension exercise, cucumber juice consumption, and warm water foot soaking therapy, participants gained practical knowledge and skills to perform sustainable self-management practices for blood pressure control. The positive responses and active participation demonstrated by the participants indicate that community-based health education combined with simple non-pharmacological interventions can serve as an effective strategy for promoting healthy lifestyles, preventing hypertension-related complications, and improving the quality of life of individuals at risk of hypertension.

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