ABDIMASNU: Jurnal Pengabdian kepada Masyarakat
HTTPS://EJOURNAL.IIKNUTUBAN.AC.ID/INDEX.PHP/ABDIMASNU
E-ISSN: 2774-3470
VOL.5 NO.3, September, Page. 127 - 135

Empowerment of the Healthy Village Program through Self-Screening Management of Non-Communicable Diseases in Bogorejo Village, Merakurak District

Miftahul Munir[1)*], Surotul Ilmiyah[2)]
[1, 2]Institut Ilmu Kesehatan Nahdlatul Ulama Tuban
email: munir.stikesnu@gmail.com

Article Info:
Submitted: 15 Sept 2025
Accepted: 30 Sept 2025
Published: 10 Nov 2025

Handling Editor:

Keywords: community empowerment; healthy village; non-communicable diseases; self-screening; health promotion

ABSTRACT

Introduction: *Non-communicable diseases (NCDs) such as hypertension, diabetes mellitus, cardiovascular diseases, and stroke represent major public health challenges due to their increasing prevalence and long-term health impacts. Early detection through routine health screening is an important strategy to reduce the risk and complications of these diseases. However, community awareness regarding early detection of NCDs remains limited, particularly in rural areas.*

Methods: *This community service program was conducted on February 7, 2025, in Bogorejo Village, Merakurak District, Tuban Regency, involving 50 participants consisting of community members and local health cadres. The program used a community empowerment approach through health education, training sessions, and practical demonstrations of self-screening techniques. Participants were trained to measure blood pressure, calculate body mass index (BMI), and measure waist circumference as simple indicators for early detection of NCD risk factors.*

Results: *The results showed an improvement in participants' knowledge and awareness regarding the importance of early detection and prevention of non-communicable diseases. Participants also demonstrated increased confidence and ability to perform simple health screening independently after receiving training and practical guidance.*

Discussion: *Community-based education and practical training proved to be effective strategies in improving public awareness and capacity for early detection of NCDs. The involvement of local health cadres further supported community participation and contributed to the sustainability of health monitoring activities within the Healthy Village program.*

1. INTRODUCTION

Non-communicable diseases (NCDs) such as hypertension, diabetes mellitus, cardiovascular diseases, and stroke have become major public health problems worldwide. These diseases generally develop slowly and often show no significant symptoms in the early stages, causing many individuals to be unaware of their health conditions until complications occur. As a result, NCDs contribute significantly to morbidity, mortality, and increased healthcare costs.(1)

In Indonesia, the prevalence of non-communicable diseases continues to

ABDIMASNU: Jurnal Pengabdian kepada Masyarakat
HTTPS://EJOURNAL.IIKNUTUBAN.AC.ID/INDEX.PHP/ABDIMASNU
E-ISSN: 2774-3470
VOL.5 NO.3, September, Page. 127 - 135

increase each year. Lifestyle changes, unhealthy dietary habits, lack of physical activity, smoking, and stress are among the main risk factors contributing to the growing incidence of these diseases.(2)(3) Early detection through regular health screening is one of the most effective strategies to prevent and control NCDs. However, many communities still have limited awareness and knowledge regarding the importance of early screening and preventive health behaviors.(4)

In Bogorejo Village, Merakurak District, Tuban Regency, some community members still perceive common symptoms such as dizziness, fatigue, or numbness as minor health issues that do not require medical attention. Health examinations are usually conducted only when symptoms become severe and interfere with daily activities. In fact, many non-communicable diseases can be prevented or managed effectively if individuals routinely monitor their health conditions and recognize risk factors at an early stage.

The "Healthy Village" (Kampung Sehat) program implemented in Bogorejo Village provides an opportunity to promote healthy lifestyles and community participation in health improvement efforts.(5) The community has strong social cohesion, active health cadres, and regular social activities. However, the current implementation of the Healthy Village program is still largely focused on environmental cleanliness and has not yet maximized community-based early detection of non-communicable diseases.(6)

Self-screening for non-communicable diseases, such as measuring blood pressure, body weight, body mass index (BMI), and waist circumference, is a simple and practical approach that can be performed independently by community members.(7) Unfortunately, not all residents understand how to conduct these screenings properly, recognize risk indicators, or determine appropriate follow-up actions after obtaining screening results.(8)

Therefore, community empowerment through the management of self-screening for non-communicable diseases is necessary to improve community awareness and participation in maintaining their own health.(9) Through this community service program, residents of Bogorejo Village are encouraged to actively participate in early detection activities and adopt healthier lifestyles.(10) It is expected that the Healthy Village program will not only serve as a community initiative but also become a sustainable platform for promoting preventive health behaviors and reducing the risk of non-communicable diseases.(11)

2. METHODE

This community service activity was conducted in Bogorejo Village, Merakurak District, Tuban Regency**, on** February 7, 2025**.** The activity involved approximately 50 participants**,** consisting of community members and local health cadres. The main objective of the program was to increase community knowledge and skills in performing self-screening for non-communicable diseases (NCDs) through the empowerment of the Healthy Village program.

The implementation of the activity used a community empowerment approach through health education, training, and practical demonstrations. The program was carried out in several stages: preparation, implementation, and evaluation. During the preparation stage, the community service team coordinated with village authorities and health cadres to determine the activity schedule and identify the needs of the community. Educational materials and supporting media related to non-communicable diseases and self-screening procedures were prepared. In addition, health screening equipment such as digital sphygmomanometers, digital scales, and waist circumference measuring tapes were provided to support the practical session.

The implementation stage consisted of several activities. First, participants received health education sessions focusing on the introduction of non-communicable

Miftahul Munir, munir.stikesnu@gmail.com, IIKNU Tuban

ABDIMASNU: Jurnal Pengabdian kepada Masyarakat
HTTPS://EJOURNAL.IIKNUTUBAN.AC.ID/INDEX.PHP/ABDIMASNU
E-ISSN: 2774-3470
VOL.5 NO.3, September, Page. 127 - 135

diseases, their risk factors, and the importance of early detection. The educational session was delivered through lectures and interactive discussions to encourage active participation from the community.

Second, participants attended a training session on self-screening techniques for non-communicable diseases. The training included demonstrations and explanations on how to measure blood pressure, calculate body mass index (BMI), and measure waist circumference. These indicators were introduced as simple screening tools to identify potential risks of hypertension, obesity, and other NCDs.

Third, participants were given the opportunity to practice the screening procedures directly under the supervision of the community service team and local health cadres. This hands-on activity aimed to ensure that participants were able to correctly perform the measurements and interpret the results independently.

Finally, the activity concluded with a discussion and evaluation session, where participants shared their experiences and asked questions related to health screening practices. In addition, a follow-up plan was discussed with community members and health cadres to encourage the continuation of routine health screening activities within the Healthy Village program.

Through this participatory approach, the community was expected to gain both knowledge and practical skills in monitoring their health conditions, thereby promoting early detection and prevention of non-communicable diseases.

3. RESULTS AND DISCUSSION

Results

Overview of Activity Implementation

The community service program entitled “Empowerment of the Healthy Village through Self-Screening Management of Non-Communicable Diseases” was conducted on February 7, 2025, in Bogorejo Village, Merakurak District, Tuban Regency. The activity involved community members, health cadres, and village officials. A total of 50 participants attended the program, consisting of local residents and village health cadres.

The activity was implemented through several stages, including health education, self-screening training, practical sessions of simple health examinations, as well as discussions and the development of follow-up plans. The approach used in this program was community empowerment, which focuses on strengthening the capacity of community members so that they can independently maintain and monitor their health conditions.

The implementation began with educational sessions on non-communicable diseases (NCDs) and their associated lifestyle-related risk factors. The purpose of this session was to improve community understanding of the importance of early detection and prevention of non-communicable diseases.

Improvement of Community Knowledge

One of the indicators of success for this community service program was the improvement of community knowledge regarding non-communicable diseases and the importance of health screening. Prior to the activity, many community members had limited understanding of non-communicable diseases. Many residents believed that health examinations were only necessary when they experienced severe symptoms or serious health complaints.

After participating in the educational and training sessions, participants demonstrated improved understanding of several aspects, including:

risk factors of non-communicable diseases

ABDIMASNU: Jurnal Pengabdian kepada Masyarakat
HTTPS://EJOURNAL.IIKNUTUBAN.AC.ID/INDEX.PHP/ABDIMASNU
E-ISSN: 2774-3470
VOL.5 NO.3, September, Page. 127 - 135

the importance of early disease detection

how to conduct simple health screening independently

The increase in knowledge was reflected in the participants' active involvement during discussion and question-and-answer sessions, as well as their ability to explain the material that had been delivered.

Table 1: Changes in Participants' Knowledge Levels (n = 50)

Knowledge Level	Before Activity	After Activity
Good	12 participants (24%)	35 participants (70%)
Moderate	23 participants (46%)	12 participants (24%)
Poor	15 participants (30%)	3 participants (6%)

Based on Table 1, the number of participants with a good level of knowledge increased significantly after the educational and training activities. This finding indicates that the educational methods used in this community service program were effective in improving community knowledge regarding non-communicable diseases.

Improvement of Self-Screening Skills

In addition to increasing knowledge, this program also aimed to improve community skills in conducting independent health screening. During the training session, participants were taught several simple health examination techniques, including:

blood pressure measurement
body weight and height measurement
body mass index (BMI) calculation
waist circumference measurement

The training was delivered using demonstration and hands-on practice methods, enabling participants to better understand the procedures for conducting simple health examinations.

Table 2: Types of Health Screening Conducted

Type of Examination	Purpose
Blood pressure measurement	To detect hypertension risk
Body Mass Index (BMI)	To determine nutritional status
Waist circumference measurement	To assess central obesity risk

The results of the practice sessions showed that most participants were able to perform health measurements independently after receiving training and guidance from the community service team. This demonstrates that the training method used in the program was effective in improving community skills in the early detection of non-communicable diseases.

Discussion

The findings of this community service program demonstrate that health education combined with practical training can significantly improve community knowledge and skills related to the early detection of non-communicable diseases (NCDs).(12) Prior to the implementation of the activity, many participants had limited awareness regarding NCD risk factors and the importance of regular health screening. This condition reflects a common challenge in many communities where preventive health behavior is still relatively low, and healthcare services are often sought only after symptoms become severe.(13)

The results of the program indicate a significant increase in participants' knowledge after attending the educational sessions. This improvement suggests that health education interventions play a crucial role in enhancing public understanding of disease prevention.(14) Educational

activities delivered through interactive discussions and participatory learning methods can effectively increase awareness and motivate individuals to adopt healthier lifestyles.(15) Knowledge improvement is an important first step in behavioral change, as individuals who understand health risks are more likely to engage in preventive practices such as routine health screening.vv(16)

In addition to improving knowledge, the program also enhanced participants' practical skills in conducting self-screening for NCDs. Participants were trained to measure blood pressure, calculate body mass index (BMI), and measure waist circumference as indicators of potential health risks.(17) These screening methods are widely recognized as simple and effective approaches for identifying early signs of hypertension, obesity, and other metabolic conditions. The hands-on practice session allowed participants to directly apply the knowledge they had learned, which contributed to increased confidence in performing these measurements independently.(18)

The results also highlight the importance of experiential learning in community health promotion. Practical demonstrations and direct practice enable participants to better understand the procedures involved in health screening compared to theoretical explanations alone.(19) By engaging participants actively in the learning process, the training encouraged a sense of responsibility and ownership over their personal health monitoring. This approach is consistent with the concept of community empowerment, where individuals are equipped with knowledge and skills that allow them to take an active role in maintaining their own health.(20)

Another key factor contributing to the success of the program was the involvement of local health cadres. Health cadres serve as important community-based health resources because they maintain close relationships with local residents and can provide continuous guidance after the completion of the program.(21) Their participation in the training and mentoring process helped ensure that the knowledge and skills introduced during the activity could be sustained within the community. The role of health cadres is particularly important in supporting long-term health promotion activities and encouraging regular health monitoring among community members.(22)

Furthermore, the integration of self-screening activities into the Healthy Village program represents an important step toward strengthening community-based health promotion. Previously, the Healthy Village initiative mainly focused on environmental sanitation and cleanliness.(23) By incorporating health screening activities into the program, the initiative now addresses both environmental and individual health factors. This integrated approach is essential for improving overall community health outcomes because non-communicable diseases are closely associated with lifestyle and behavioral factors.(24)

Despite the positive outcomes observed in this program, several challenges were identified during its implementation. Some community members were still unfamiliar with routine health screening practices, indicating that behavioral change requires continuous reinforcement. In addition, limited availability of health screening equipment and time constraints during the activity restricted the opportunity for more comprehensive mentoring.(25) These challenges highlight the importance of sustained community engagement and support from local stakeholders, including village authorities and health institutions.(26)

Continuous follow-up activities are therefore necessary to ensure the

sustainability of the program. Regular health education sessions, routine screening activities conducted by health cadres, and collaboration with local health centers can help maintain community participation in preventive health practices. Long-term community empowerment strategies are essential to strengthen public awareness and reduce the risk of non-communicable diseases in rural communities.(27)

Overall, this community service program demonstrates that community empowerment through health education and practical training is an effective strategy for improving public awareness and capacity in the prevention of non-communicable diseases. By strengthening community participation and integrating preventive health practices into existing community programs, sustainable improvements in public health can be achieved.

4. CONCLUSION

The community service program on the empowerment of the Healthy Village through self-screening management of non-communicable diseases (NCDs) in Bogorejo Village successfully improved community knowledge and awareness regarding the importance of early detection and prevention of NCDs. Through health education sessions, practical training, and direct demonstrations, participants gained a better understanding of NCD risk factors and the importance of regular health monitoring.

The training activities also enhanced participants' practical skills in conducting simple health screenings, including blood pressure measurement, body mass index (BMI) calculation, and waist circumference measurement. These skills enable community members to independently monitor their health conditions and identify potential health risks at an early stage.

In addition, the involvement of local health cadres contributed to strengthening community participation and supporting the sustainability of health screening activities. Integrating self-screening practices into the Healthy Village program provides an opportunity to promote preventive health behaviors and improve community health outcomes.

Overall, this program demonstrates that community empowerment through health education and practical training is an effective approach for increasing public awareness and participation in the prevention of non-communicable diseases. Continuous collaboration between community members, health cadres, and local authorities is necessary to ensure the sustainability of routine health screening activities and to support long-term improvements in community health.

5. ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to the Institute of Health Sciences Nahdlatul Ulama (IIK NU) Tuban for supporting the implementation of this community service program. The authors also extend their appreciation to the government of Bogorejo Village, Merakurak District, Tuban Regency, for their cooperation and support during the activity.

Special thanks are also given to the community members and health cadres of Bogorejo Village who actively participated in the program and contributed to the success of this activity. Their enthusiasm and collaboration were essential in promoting health awareness and implementing self-screening practices for non-communicable diseases.

Finally, the authors acknowledge all members of the community service team who contributed their time, effort, and expertise to ensure the successful implementation of this program.

ABDIMASNU: Jurnal Pengabdian kepada Masyarakat
HTTPS://EJOURNAL.IIKNUTUBAN.AC.ID/INDEX.PHP/ABDIMASNU
E-ISSN: 2774-3470
VOL.5 NO.3, September, Page. 127 - 135

6. REFERENCES

1. Khatib M El, Hamidi S, Ameeri I Al, ... Digital disruption and big data in healthcare-opportunities and challenges. Clin … [Internet]. 2022; Available from: https://www.tandfonline.com/doi/abs/10.2147/CEOR.S369553
2. Coffey JD, Christopherson LA, Williams RD, ... Development and implementation of a nurse-based remote patient monitoring program for ambulatory disease management [Internet]. Frontiers in digital …. frontiersin.org; 2022. Available from: https://www.frontiersin.org/journals/digital-health/articles/10.3389/fdgth.2022.1052408/full
3. Omaghomi TT, Akomolafe O, Onwumere C, ... Patient experience and satisfaction in healthcare: a focus on managerial approaches-a review [Internet]. Int Med Sci Res …. researchgate.net; 2024. Available from: https://www.researchgate.net/profile/Toritsemogba-Omaghomi/publication/379079072_PATIENT_EXPERIENCE_AND_SATISFACTION_IN_HEALTHCARE_A_FOCUS_ON_MANAGERIAL_APPROACHES_-_A_REVIEW/links/65fa06dba8baf573a1c5ddcd/PATIENT-EXPERIENCE-AND-SATISFACTION-IN-HEALTHCARE-A-FOCUS-ON-MANAGERIAL-APPROACHES-A-REVIEW.pdf
4. Sutam E Di, Pei FL, Jia JT, ... A comparative study on user satisfaction from manual to online information system using define-measure-analyze-improve-control (dmaic) in service administrative …. J Adv … [Internet]. 2024; Available from: https://www.akademiabaru.com/submit/index.php/ard/article/view/5552
5. Price RA, Quigley DD, Hargraves JL, Sorra J, ... A systematic review of strategies to enhance response rates and representativeness of patient experience surveys [Internet]. … Care. journals.lww.com; 2022. Available from: https://journals.lww.com/lww-medicalcare/fulltext/2022/12000/a_systematic_review_of_strategies_to_enhance.7.aspx
6. D'Anza B, Pronovost PJ. Digital health: unlocking value in a post-pandemic world. Popul Health Manag [Internet]. 2022; Available from: https://journals.sagepub.com/doi/abs/10.1089/pop.2021.0031
7. Linz D, Gawalko M, Betz K, Hendriks JM, ... Atrial fibrillation: epidemiology, screening and digital health [Internet]. The Lancet Regional …. thelancet.com; 2024. Available from: https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(23)00205-3/fulltext
8. Redding TS, Keefe KR, Stephens AR, ... Evaluating factors that influence patient satisfaction in otolaryngology clinics. Ann Otol … [Internet]. 2023; Available from: https://journals.sagepub.com/doi/abs/10.1177/00034894211055531
9. Maita KC, Maniaci MJ, Haider CR, ... The impact of digital health solutions on bridging the health care gap in rural areas: a scoping review [Internet]. The Permanente …. pmc.ncbi.nlm.nih.gov; 2024. Available from: https://pmc.ncbi.nlm.nih.gov/articles/

PMC11404635/

10. Mahmoud MA, Daboos M, Gouda S, Othman A, ... Telemedicine (virtual clinic) effectively delivers the required healthcare service for pediatric ambulatory surgical patients during the current era of COVID-19 pandemic …. J Pediatr … [Internet]. 2022; Available from: https://www.sciencedirect.com/science/article/pii/S0022346821007880
11. Juliansyah R, Aqid BM, Salsabila AP, ... Implementation of EMR system in Indonesian health facilities: benefits and constraints. arXiv Prepr arXiv … [Internet]. 2024; Available from: https://arxiv.org/abs/2410.12226
12. Hays RD, Skootsky SA. Patient experience with in-person and telehealth visits before and during the COVID-19 pandemic at a large integrated health system in the United States [Internet]. Journal of general internal medicine. pmc.ncbi.nlm.nih.gov; 2022. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC8725638/
13. Sahoo B, Pillai JSK, Md S, Sahoo MC, Pillai JSK, ... Implementation of wayfinding signage in public hospitals and its evaluation towards quality improvement [Internet]. Cureus. cureus.com; 2024. Available from: https://www.cureus.com/articles/273901-implementation-of-wayfinding-signage-in-public-hospitals-and-its-evaluation-towards-quality-improvement.pdf
14. Almaghaslah D, Alsayari A, Almaghaslah S, Alsanna H. Patients' satisfaction with E-prescribing (Wasfaty) in Saudi Arabia: a survey of country-level implementation [Internet]. Healthcare. mdpi.com; 2022. Available from: https://www.mdpi.com/2227-9032/10/5/806
15. Alqahtani MAA, Al-Anzi FAS, ... The Impact Of Administrative Workflow Efficiency On Patient Satisfaction In Healthcare Facilities. Rev … [Internet]. 2024; Available from: https://diabeticstudies.org/index.php/RDS/article/view/1390
16. Ali J, Jusoh A, Idris N, Nor KM. Healthcare service quality and patient satisfaction: a conceptual framework [Internet]. … of quality &reliability management. emerald.com; 2024. Available from: https://www.emerald.com/ijqrm/article/41/2/608/1216194
17. Abu-Hasheesh SJ, Dandis AO, Eid MAH, ... The influence of service quality and marketing ethics on relationship marketing outcome in private hospitals. J Mark … [Internet]. 2026; Available from: https://www.tandfonline.com/doi/abs/10.1080/13527266.2024.2376256
18. Zhang X, Saltman R. Impact of electronic health record interoperability on telehealth service outcomes [Internet]. JMIR Medical Informatics. medinform.jmir.org; 2022. Available from: https://medinform.jmir.org/2022/1/e31837/
19. Cheema S, Joy C, Pople J, Snape-Burns J, ... Patient experience of diagnosis and management of spontaneous intracranial hypotension: a cross-sectional online survey. BMJ Open [Internet]. 2022; Available from: https://bmjopen.bmj.com/content/12/1/e057438.abstract
20. Liu Y, Zhang F, Guan C, Song B, Zhang H, ... Patient satisfaction with humanistic nursing in Chinese secondary and tertiary public hospitals: a cross-sectional survey

[Internet]. Frontiers in public …. frontiersin.org; 2023. Available from: https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2023.1163351/full

21. Binci D, Palozzi G, Scafarto F. Toward digital transformation in healthcare: a framework for remote monitoring adoption [Internet]. The TQM Journal. emerald.com; 2022. Available from: https://www.emerald.com/tqm/article/34/6/1772/377388
22. Mir O, Ferrua M, Fourcade A, Mathivon D, ... Digital remote monitoring plus usual care versus usual care in patients treated with oral anticancer agents: the randomized phase 3 CAPRI trial. Nat Med [Internet]. 2022; Available from: https://www.nature.com/articles/s41591-022-01788-1
23. Ye F, Parast L, Hays RD, Elliott MN, ... Development and validation of a patient experience of care survey for emergency departments. Heal Serv … [Internet]. 2022; Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/1475-6773.13853
24. Prasse T, Yap N, Sivakanthan S, Pan J, ... Remote patient monitoring following full endoscopic spine surgery: feasibility and patient satisfaction. … Neurosurg Spine [Internet]. 2023; Available from: https://thejns.org/spine/view/journals/j-neurosurg-spine/39/1/article-p122.xml
25. Arabi YM, Ghamdi AA Al, Al-Moamary M, ... Electronic medical record implementation in a large healthcare system from a leadership perspective [Internet]. BMC medical informatics …. Springer; 2022. Available from: https://link.springer.com/article/10.1186/s12911-022-01801-0
26. Xiaoyan G, Leon JM De. Enhancing patient experience through digital transformation: a case study of outpatient department services in hospitals.
27. Huaytan JVP, Rojas GGR, ... Digital transformation in public hospital management: improving the patient experience. Rev Gest … [Internet]. 2024; Available from: https://search.proquest.com/openview/f76b8fddecd7a37b9deb6d76c200cd13/1?pq-origsite=gscholar&cbl=2031968