INTERNATIONAL JOURNAL OF QUALITATIVE RESEARCH
Journal Homepage: https://ojs.literacyinstitute.org/index.php/ijqr
ISSN: 2798-6047 (Online)
Research Article

Volume 5	Issue 1	July (2025)	DOI: 10.47540/ijqr.v5i1.2052	Page: 73 – 84

Community-Based Hypertension Management: Qualitative Study

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ARTICLE INFO

Keywords: Community Empowerment, Health Education, Hypertension.

Received : 29 May 2025
Revised : 26 July 2025
Accepted : 30 July 2025

ABSTRACT

Hypertension is a global problem that causes morbidity and mortality due to cardiovascular disease, which is a burden on public health. Community-based hypertension management can improve treatment adherence, reduce the level of complications, and improve the quality of life of patients. The role of community empowerment in hypertension management. Qualitative research design to examine hypertension management carried out by the community, starting from preventive, promotive, curative, and rehabilitative actions in Sukoharjo, Central Java, Indonesia. The sampling technique was purposive sampling. Informants in this study were the Village Head, village midwife, elderly posyandu cadres, Family Empowerment and Welfare, Ward Head, Neighbourhood heads, and hypertension patients. The instruments used were interview guidelines containing 7 themes and 20 questions. Data analysis techniques included data reduction, reliability testing, and validation of research results. Hypertension management in Ngasinan Village is a routine health check, health education to behave in a healthy way and obey the instructions of health workers, routine activities such as exercise and daily activities, eating a balanced diet, reducing salt, encouraging people to get enough rest especially at night, and stress management.

INTRODUCTION

Hypertension, or high blood pressure, is a major global health concern, particularly in developing countries. According to the World Health Organization (WHO), hypertension is the leading cause of morbidity and mortality from cardiovascular diseases, such as heart attacks, strokes, and kidney failure (WHO, 2018). Its increasing prevalence, especially among the elderly population, poses a significant burden on public health systems. Community-based hypertension management has emerged as a strategic approach focusing on the prevention, early detection, and control of blood pressure through active community involvement. This approach is founded on the principle that communities can effectively support individuals in adopting healthy lifestyles and managing their health conditions independently (Jafar et al., 2020).

Effective hypertension management requires not only formal health services but also a more holistic approach that includes community-based interventions. Advocates for a more holistic approach to hypertension care that acknowledges broader social determinants of health and prioritizes structural support for patient well-being (Li, 2025). This emphasizes the importance of community empowerment in detecting, preventing, and controlling hypertension autonomously. By actively engaging community members, these programs aim to facilitate sustainable behavior changes, improve access to health information, and strengthen social support systems for at-risk individuals.

Community-based approaches address the limitations of formal healthcare systems, especially in areas with limited access to medical facilities. This approach typically involves training health cadres, promoting healthy lifestyles, and educating the community about the risks of hypertension and

the importance of blood pressure control. Through community involvement, the goal is to enhance knowledge and awareness of hypertension while encouraging the necessary behavioral changes to prevent and manage the disease (Hao et al., 2022). Culturally appropriate mHealth applications supported by CHWs can improve hypertension self-management among resource-poor African American individuals (Brewer et al., 2023).

Community-based hypertension management can improve treatment adherence, reduce the rate of complications, and improve the quality of life of sufferers (Fullman et al., 2023). In addition, community-based programs tend to be more sustainable because they are supported by active community involvement in various activities, such as integrated health posts, hypertension exercise groups, and health campaigns through local media (Lamptey et al., 2017). Community-based hypertension management is effective in increasing public awareness of the risks of hypertension and the importance of controlling blood pressure. "Through education provided at the community level, such as in integrated health posts or through counseling programs, individuals become better equipped to understand the risk factors for hypertension, the importance of adhering to treatment, and the long-term consequences of unmanaged hypertension. Research indicates that community-based interventions can reduce the incidence of hypertension-related complications, improve patient quality of life, and enhance overall clinical outcomes (Iso et al., 2023). While this approach offers numerous benefits, several challenges exist during its implementation.

These challenges include limited resources, a lack of training for health cadres, and obstacles to behavioral change in the community. Therefore, strong support is needed from the government, health workers, and nongovernmental organizations to optimize community-based hypertension management programs. Community-based hypertension management can be ensured to be successful with strong policy support. The government must provide a sufficient budget, adequate health infrastructure development, and integration of community programs with formal health services. In addition, intensive public education campaigns must also be carried out to increase public awareness of the importance of hypertension control. The success of community-based hypertension management programs is highly dependent on strong policy support from the government. Planning and implementing programs integrated with formal health services and adequate budget allocation for health infrastructure development in remote areas are essential to ensure the sustainability of this program. In addition, comprehensive public education campaigns must also be carried out to increase public awareness of the importance of early detection and proper management of hypertension (Akwanalo et al., 2019).

Research using a qualitative approach on community-based hypertension management is very urgent to produce an in-depth understanding and contextual solutions in facing the hypertension epidemic, increasing the effectiveness of interventions, and building a more accessible and equitable health system.

METHODS

A qualitative research design was used to examine hypertension management carried out by the community, starting from preventive, promotive, curative, and rehabilitative actions in Sukoharjo, Central Java, Indonesia. Hypertension cases in Sukoharjo are the highest health cases that need to be studied in more depth to obtain an overview of community-based hypertension management. This research activity was conducted in Ngasinan Village, Bulu District, Sukoharjo. This research was conducted from May to August 2024.

Informants are subjects who provide information about phenomena and social situations that occur in the field. The selection of informants is carried out by following the principles of sufficiency and suitability. The principle of sufficiency: the data obtained is sufficient to describe the phenomena related to community empowerment in the prevention and management of hypertension. The principle of suitability: the selected informants are appropriate/competent with the topic of hypertension.

The research data were collected through interviews. Age, gender, occupation, and level of education were among the sociodemographic information gathered. The research objectives, which were also converted into a number of questions to investigate the informant's experience

adopting hypertension control, served as the basis for the interview guideline. Participants were interviewed in-depth using the interview guideline (Sandesara et al., 2023). The data collected in qualitative research is not numerical in nature. Tape recorders are among the instruments used by qualitative researchers to collect data. Twenty questions with seven themes were utilized in the interview.

The researcher began the interview by asking the participants the following question: "What is your experience in handling and preventing hypertension cases in this area?" The participants' general information was gathered using this central query. Qualitative data were obtained from semi-structured interviews and focus groups, and participants were asked about managing hypertension, local resources, and preferences for a behavioral intervention (Sandesara et al., 2023). For participants, the researcher utilized an interview guide that comprised of 20 questions, encompassing open-ended questions, to delineate the fundamental inquiries. The interview guide included precise questions aligned with the research objectives. An overview of the fundamental questions was presented by the researcher. In cases where participants struggled to comprehend the questions, the researcher elaborated on the core questions following the interview guide. The researcher endeavored to remain impartial towards participants' responses based on their understanding or experiences. The interview procedure for this study was concluded once the required information had been acquired in line with the research objectives, guided by data saturation. The research conducted in this study has received approval from the Health Research Ethics Commission at ITS PKU Muhammadiyah Surakarta (No. 434/LPPM/ ITS.PKU/VIII/2024).

Data analysis techniques include data reduction, reliability testing, and validity assessment of research results. At this stage, data reduction is carried out, followed by the selection of relevant data that aligns with the research objectives. Standard qualitative methods were used to analyze the data (Odusola et al., 2016). The obtained data is then sorted and organized systematically, with emphasis on highlighting important aspects that are easier to control. Data presentation is conducted to gain an overall understanding of the research findings, as well as to examine specific components of the overall picture. Conclusions are drawn, summarizing the main points of the research and elucidating the underlying concepts. The consistency and accuracy of the research findings are assessed to establish the degree of trust in the qualitative standards, including internal validity and the applicability of results to other contexts (external validity). Descriptive statistics were employed to analyze the responses from 10 participants. Once the data was collected, the participants' recordings were transcribed, then the two researchers (MN and PH) analyzed the transcripts by reading and identifying keywords.

Thematic analysis procedures were applied to identify the experiences and meaning of the views expressed in each participant's transcripts. In the phenomenological approach, the meaning of the participants' lived experiences includes the main thematic points in the 10 data analysis processes of this study, following the steps described by Miles Huberman. The analysis focuses on what is in the data, paying attention to patterns and themes. At this stage, several analysis activities were carried out. This involves highlighting metaphors, categorizing variables, organizing specific details into broader categories, identifying key factors, examining the connections within logical sequences of the available evidence, and establishing theoretical or conceptual guidelines.

RESULTS AND DISCUSSION

The majority of participants were women more than men. Participants with the highest level of education were high school same as higher education. The age range of the majority of participants was 40-60 years old, compared with over 60 years. The most common occupations among participants were housewives (IRT) with three people, and farmers with three people. Most respondents have a role as policymakers or those who implement policies related to hypertension management in Ngasinan Village. The majority of informants are policymakers. The informants play a role in the preparation and implementation of hypertension management, funding in hypertension management, and preparing the program implementation schedule. Policymakers play an important role in hypertension management,

especially in preventive, promotive, curative, control, and rehabilitative efforts in the form of cross-sectoral communication. The research report by Kohrman et al. (2024) states that the semi-structured interviews were focused on perceptions of the medical system, study intervention, and the influence of social factors on health.

The Role of Policymakers in Hypertension Management Programs

The interview findings indicate that respondents who serve as policymakers play a significant role in the planning, implementation, and monitoring of hypertension management programs at the local level. Respondent P1 briefly stated that they "participate in compiling program management programs," highlighting their involvement in the initial planning phase. This role was elaborated further by P8, who noted: "I participate in compiling and implementing hypertension management programs related to promotive, preventive, and rehabilitative actions." This statement reflects active participation across the full program cycle, from design to the execution of public health interventions.

In addition, P9 emphasized the budgeting aspect of policymaking by stating, "I am a policymaker in terms of compiling a program budget for hypertension management in my village. I include a budget for hypertension management in the village budget." This demonstrates the integration of health programs into the village's financial planning, which is a key factor in ensuring program sustainability. Meanwhile, P10 contributed a perspective on technical planning and supervision by saying: "…compiling a program implementation schedule and participating in monitoring blood pressure in hypertension patients." This shows that beyond policy formulation, policymakers are also involved in operational and monitoring tasks.

Overall, the respondents' statements reveal that the role of policymakers is not limited to administrative planning but extends to hands-on implementation and oversight of hypertension management efforts at the community level. This multi-dimensional involvement is crucial for ensuring the effectiveness and continuity of the programs.

Preventive Actions in Hypertension Prevention

1. Implementation of Preventive Programs

The interviews revealed that participants had undertaken various preventive actions to reduce the risk of hypertension. Participants P2 and P3 reported engaging in light physical exercise, reducing salt intake, and ensuring adequate rest as part of their daily routines. Similarly, participant P6 mentioned that activities at the integrated health post, such as health counseling and regular physical activity, were key components of the community-based preventive approach. These findings reflect a general awareness of the importance of adopting a healthy lifestyle in hypertension prevention.

2. Success of Preventive Programs

Several participants acknowledged the successful implementation of certain preventive programs. According to P8, the most effective measures included routine health check-ups, health counseling, regular physical activity, a balanced diet, and sufficient rest. P9 added that the monthly activities organized at the integrated health post by community health cadres and local health center officers—including mobile health services rotating among seven health posts—had been effective in promoting health awareness. These activities included health education, physical exercise, and the distribution of supplementary food (PMT), reflecting a coordinated and systematic approach to community health promotion.

3. Challenges in Promotive Programs

Despite the successes, some challenges hindered the full implementation of health promotion activities. Participants P2 and P10 noted that community health cadres lacked the necessary skills to deliver effective health counseling. Furthermore, P8 pointed out the absence of educational materials such as hypertension leaflets or guidebooks, which limited the effectiveness of information dissemination. These challenges underscore the need for capacity building among cadres and the provision of accessible educational resources to support promotive programs.

4. Proposed Solutions for Strengthening Preventive Programs

In response to these challenges, several participants emphasized the importance of motivating community members to actively engage in health post activities. Participants P6, P8, P9, and P10 consistently highlighted the need to encourage

residents to attend monthly integrated health post sessions. These sessions provide opportunities for health monitoring, implementation of the CERDIK Program (a national strategy for non-communicable disease prevention), and early detection of hypertension. The findings suggest that enhancing community participation is a key strategy for improving the effectiveness and sustainability of preventive health initiatives.

Promotive Action in Hypertension Prevention

This study reveals that the implementation of promotive actions for hypertension prevention at the community level has been carried out through various activities, yet it still faces several implementation challenges.

1. Implementation of Promotive Programs

Several informants reported that promotive activities have been conducted in the form of health education and community-based initiatives. Informant P6 stated that the activities include counseling on the dangers of smoking, dietary advice—particularly reducing salt intake—ensuring adequate rest, and stress management. Similarly, P7 highlighted the presence of community health programs such as Posyandu (integrated health services), group exercise sessions, health counseling, and the provision of supplementary feeding (PMT). These findings suggest that there are local initiatives aimed at raising public awareness regarding hypertension risk factors.

2. Success of Promotive Programs

Although promotive programs have been implemented, several informants emphasized that their effectiveness remains suboptimal. Informant P1 explicitly stated that "the promotive program is not yet optimal." P3 added that the program has not been scheduled properly due to the community still waiting for health professionals to deliver the counseling sessions. Informant P10 further noted that the promotive activities remain ineffective because community health cadres have other commitments, making them reliant on health workers. These findings indicate that the sustainability of promotive efforts is still highly dependent on medical personnel and has not yet become a fully community-driven initiative.

3. Constraints in Promotive Program Implementation

Informants also identified several constraints to the implementation of promotive programs. P2 stated that "cadres are not yet capable of conducting health counseling," highlighting the limited human resource capacity. P10 echoed this by saying that the cadres lack the necessary skills to carry out educational activities. Additionally, P8 pointed out the absence of supporting materials such as educational booklets or leaflets on hypertension, which hampers the delivery of health information to the public. The lack of training and absence of educational tools have limited the effectiveness of these programs.

The findings indicate that although promotive actions in hypertension prevention have been initiated through counseling and community-based activities, their success remains limited. Key challenges include limited human resource capacity, reliance on health professionals, and the absence of educational materials. Strengthening cadre capacity and providing adequate educational resources are essential steps toward enabling more independent and sustainable promotive programs in the community.

Curative Action in Hypertension Prevention

1. Implementation of Curative Programs

Curative efforts for hypertension management in the community have been carried out through the provision of medical treatment. Several informants mentioned that medication was administered by healthcare professionals. One participant (P4) stated that they were "...given captopril...", while others (P5 and P6) confirmed the "...administration of high blood pressure medication..." by doctors or medical staff at the health center. This indicates that curative programs are available and regularly provided to residents diagnosed with hypertension.

2. Success of the Curative Programs

Although curative programs are in place, their effectiveness is perceived as suboptimal due to low medication adherence among patients. One participant (P3) noted that "...the hypertension treatment program is not yet optimal because many residents do not take their medication regularly...". Similarly, P4 mentioned, "I sometimes forget to take my medication, and do I have to take my high blood pressure medication every day, ma'am?" This reflects a lack of understanding or confusion about the importance of consistent medication intake. Another participant (P8) indicated that hypertension treatment is mainly accessed by residents who

regularly visit the integrated health posts and receive ongoing care at the health center.

3. Constraints of the Curative Program

Several challenges hinder the success of the curative program, particularly related to patient compliance. Informants revealed that individuals with hypertension often fail to take their medication regularly due to forgetfulness or boredom. P1 and P2 pointed out that "...residents suffering from hypertension do not take their medication regularly..." and "...are bored with taking their medication regularly...". Additionally, P10 emphasized that forgetfulness was a major reason for non-compliance. These barriers pose significant challenges to achieving effective hypertension control at the community level.

Control Measures

1. Hypertension Control Program

Interviews with several informants revealed that the hypertension control program in the village has been implemented through various preventive and promotive efforts. One of the primary activities is routine monthly blood pressure checks conducted at the elderly health post. As noted by Participant 6 (P6), "... hypertension control is carried out by routinely checking blood pressure every month at the elderly health post...". This was reinforced by Participant 8 (P8), who mentioned that the control program follows the CERDIK approach, which includes regular blood pressure monitoring not only at elderly health posts but also at sub-village health centers and community health centers. Participant 9 (P9) added that the village already has a sub-village health center that residents can use to check their blood pressure at any time. These findings indicate that the necessary infrastructure for hypertension control is available and functional, although participation largely depends on individual initiative.

2. Success of the control program

Despite the availability of hypertension control facilities, the program's effectiveness remains limited due to low community participation. Several informants pointed out that many residents do not regularly monitor their blood pressure. P1 stated, "... there are still many residents who do not routinely check their blood pressure…". Similarly, P2 noted that "... the number of attendees at the elderly health post for blood pressure checks is still low...". P4, a resident, admitted to often forgetting to attend health post activities due to farming responsibilities, saying, "I often forget to attend the elderly health post because I go to the rice fields...". These responses highlight that while services are available, the community's engagement in routine monitoring is still lacking, which undermines the success of the hypertension control program.

3. Constraints in Program Implementation

Several constraints were identified as barriers to the successful implementation of the hypertension control program. P6 explained that "... residents with hypertension often forget to attend the integrated health post even though they have been reminded by cadres…", indicating challenges with individual compliance. In addition, low awareness was a recurring theme. P7 observed that "... residents' awareness to check their blood pressure regularly is still low because they have no complaints." This reflects a common perception that the absence of symptoms equates to being healthy, which hinders early detection efforts. P8 added that "... the busyness of residents with hypertension causes residents not to check their blood pressure regularly." These findings suggest that the success of hypertension control initiatives is influenced not only by the availability of services but also by behavioral factors, health perceptions, and lifestyle constraints within the community.

Rehabilitative Measures

1. Rehabilitative program

The interviews revealed that hypertension rehabilitation programs in the study village consist of several interventions delivered through both community-based initiatives and formal health facilities. According to Participant 8, the rehabilitative efforts include "hypertension exercise and routine medication," indicating a preventive approach focused on the continuous management of blood pressure. Meanwhile, Participants 9 and 10 emphasized that physiotherapy services at the Community Health Center are a key component of the rehabilitation process, especially for patients who have experienced complications such as stroke. As noted by P10, "the rehabilitative program for residents who have had a stroke is usually carried out by physiotherapists at the Community Health Center," highlighting the involvement of professional health personnel in delivering specialized care.

2. Success of the rehabilitative program

In terms of the program's effectiveness, several participants reported positive outcomes and continuity of care. Participant 2 mentioned that "patients who have been discharged from the hospital due to hypertension usually come back for check-ups at the hospital or Community Health Center," indicating post-hospital follow-up. Similarly, P3 stated that "all residents who are in the rehabilitation phase after being treated for hypertension are treated at the Community Health Center or previous hospital," demonstrating an established referral and monitoring system. Participant 10 affirmed that "the rehabilitation program for hypertension patients often goes well," suggesting a generally favorable perception of the program's success.

3. Constraints of the rehabilitative program

Nevertheless, the implementation of rehabilitation programs also faces several challenges. One of the main issues is non-adherence to long-term treatment regimens. As expressed by P4, "after two months of rehabilitation, sometimes they often forget to take their medication regularly and check their blood pressure regularly because they feel good," pointing to a decline in health behavior once symptoms subside. Social constraints also emerged as barriers, as P6 explained that "many residents do not undergo rehabilitation treatment at the Community Health Center because there is no one to accompany them." Additionally, structural limitations were observed at the Integrated Health Post (Posyandu) level. P8 noted that "the rehabilitation program related to hypertension exercise is not routinely carried out because many cadres are not yet able to [facilitate it]," revealing gaps in human resource capacity that hinder consistent community-based program delivery.

Based on the results interview, we found that the preventive program in Ngasinan Village / Sukoharjo consists of sports / doing routine physical activities for at least 30 minutes a day, providing nutrition with reduced salt, health education, and elderly care. Reducing salt consumption, maximizing vegetable and fruit intake in a plant-based diet (PBD) (Susanto et al., 2023), and implementing a healthy lifestyle are suitable for a blood pressure-lowering program (Moreira-Rosário et al., 2023). Moreira's report states that salt can be replaced with spices and herbs so that it can lower blood pressure. The issues of medication adherence and Ghana's medical pluralism were noted (Laar et al., 2019). Appropriating agricultural resources, enhancing dance as an exercise form, employing motivational techniques, supporting organizations that deal with the welfare of the elderly, and empowering facilitators are all ways to create an effective and long-lasting intervention for the elderly (López-Mateus et al., 2017).

Education on healthy nutritional intake by reducing salt and increasing fruit and vegetable intake can meet the nutritional needs of patients with hypertension. In addition, a healthy lifestyle can be applied to control hypertension. This healthy lifestyle is consuming enough fluids for the body's needs, around 2 liters per day as long as the kidneys can function properly, improving good sleep quality, and avoiding alcohol and cigarettes is highly recommended to prevent hypertension (Moreira-Rosário et al., 2023). Stakeholders provide their support in the preventive program (Floríndez et al., 2024). Support from regional heads, health cadres, health workers, and local community health centers is very important for the success of the program. Exercise can effectively improve endothelial cell function in patients with hypertension, although the results vary from patient to patient (Pedralli et al., 2020). Involving the family in supporting care (Rai et al., 2021).

The promotional program for hypertension in Ngasinan Village is health education about hypertension, diet management, stress management, and adequate rest. Health education is the most effective promotional action to control hypertension. Simplified nutrition education, budget-friendly healthy eating strategies, and connection to community-based food programs are some examples of Community Health Worker (Gu et al., 2024). The intervention carried out by Nong et al. (2024) involved using tablets connected to the internet and a platform for accessing independent learning and sharing to promote a healthy lifestyle.

Interactive educational workshops may be the most effective strategy in community-based health promotion education programs for hypertensive patients in increasing patient knowledge about hypertension and reducing clinical risk factors to prevent complications related to hypertension (Tan et al., 2022). Integrated health education and

hypertension management are expanded in clinics, and more efficient and cost-effective innovative interventions are needed, including decentralization to the community (Van Hout et al., 2024). Health education is one of the government's programs in hypertension promotive efforts (Ministry of Health of the Republic of Indonesia, 2018).

Curative efforts for hypertension include the administration of oral antihypertensive drugs. Some oral antihypertensive drugs include nifedipine, labetalol, and methyldopa. This oral antihypertensive drug is a beta-blocker. This oral antihypertensive drug is very effective in reducing hypertension (Easterling et al., 2019). It will take many context-specific actions to effectively manage individuals for drug adherence (Edward et al., 2021).

Other oral hypertension drugs are candesartan, amlodipine, indapamide, and bisoprolol (Huffman et al., 2024). Doctors and nurses can also provide opportunities for hypertensive patients to explore obstacles and potential problems and how to deal with these problems (Culhane-Pera et al., 2023). The role of family and society is very important in providing support to always remind taking medication, serving the elderly with chronic diseases in terms of healthy eating with low salt, of course, this requires the role of the family in preparing food consumed by respondents every day (Eïd & Desgrées du Loû, 2022).

Hypertension control efforts in Ngasinan Village include routine blood pressure checks and health education related to hypertension prevention with transdisciplinary strategies (Galson et al., 2017). Several studies have stated that hypertension control can be in the form of community-based screening, health education related to hypertension control and lifestyle, and home-based treatment (Wongsin & Chen, 2023).

These interventions focus on people's training and involvement and the implementation of support measures tailored to the individual (Eïd & Desgrées du Loû, 2022). Health cadres/hypertension care groups must have good knowledge and skills in dealing with hypertension problems. As reported by Tina Potoynik that peer support groups are given self-management training so that they have comprehensive knowledge in managing hypertension (Fakhri et al., 2020). A pilot of a specialist nurse-led self-management training for peer supporters was found to be feasible, acceptable, and effective (in the study group). It improved knowledge, maintained disease control, and encouraged positive self-management behaviors among peer supporters, as evidenced by a six-month reduction in their BMI (Virtic Potocnik et al., 2024). Barriers to control are asymptomatic hypertension, hypertension due to stress, difficulty changing behavior, and fear of drug dependence (St Sauveur et al., 2025). Challenges: health system disparities, sociodemographic factors such as poverty, low level of health education, low access to nutritious food (Flor et al., 2020). The CHW interventions were primarily community-based and aimed to modify behavior to promote blood pressure control in both healthy individuals and hypertensive patients (Woods et al., 2024). The interventions improved blood pressure, treatment adherence, linkage to care, and the risk level for cardiovascular disease (Mbuthia et al., 2022).

The solution to the human resource problem of managing hypertension in low-resource environments is nurse management (Vedanthan et al., 2016). The results of this needs assessment will inform the development of a clinic-community-based practice facilitation program utilizing three multi-level evidence-based interventions (nurse case management, remote blood pressure (BP) monitoring, and social determinants of health support) integrated as a community-clinic linkage model for improved HTN control in Black patients (Gyamfi et al., 2022). Reports from Defo et al. (2017) indicate that research is needed to provide stakeholders in the health system with information as a basis for the prevention and control of hypertension in African countries. Management of hypertension in the community by shifting tasks with effective teamwork increases medication adherence (Easterling et al., 2019; St Sauveur et al., 2024). The research is in line with WHO recommendations to task sharing as a technique for managing chronic conditions such as hypertension in places with limited resources (Huffman et al., 2024; Adler et al., 2020). Trained Community Health Workers (CHWs) will provide counseling on hypertension screening, home health education, and promoting healthy lifestyles to prevent cardiovascular disease (CVD) risk factors. They will also refer individuals with high blood pressure

to medical facilities for further treatment (Muhihi et al., 2018).

CONCLUSION

Respondents in this study were mostly female, primary and secondary education was more dominant, the majority of respondents worked as farmers and housewives, policymakers develop regulations that promote the prevention and management of hypertension. Hypertension management in Ngasinan Village is routine health checks, health education to behave in a healthy lifestyle and comply with the directions of health workers, routine activities such as exercise and daily activities, eating a balanced diet reducing salt, encouraging people to get enough rest, especially at night, and managing stress by not thinking too hard which causes physical complaints such as headaches, nausea like vomiting, whining / headaches.

REFERENCES

Adler, A. J., Laar, A. K., Kotoh, A. M., Legido-Quigley, H., Perel, P., Lamptey, P., & Lange, I. L. (2020). Barriers and facilitators to the implementation of a community-based hypertension improvement project in Ghana: A qualitative study of ComHIP. *BMC Health Services Research*, *20*(1).

Akwanalo, C., Njuguna, B., Mercer, T., Sonak D. Pastakia, Mwangi, A., Dick, J., Dickhaus, J., Andesia, J., Bloomfield, G. S., Valente, T., Kibachio, J., Pillsbury, M., Shravani, P., Thakaar, A., Vedanthan, R., Kamano, J., & Naanyu, V. (2019). Strategies for Effective Stakeholder Engagement in Strengthening Referral Networks for Management of Hypertension Across Health Systems in Kenya. *Glob Heart*, *14*(2), 173–179.

Brewer, L. P. C., Jones, C., Slusser, J. P., Pasha, M., Lalika, M., Chacon, M., Takawira, P., Shanedling, S., Erickson, P., Woods, C., Krogman, A., Ferdinand, D., Underwood, P., Cooper, L. A., Patten, C. A., & Hayes, S. N. (2023). mHealth Intervention for Promoting Hypertension Self-management Among African American Patients Receiving Care at a Community Health Center: Formative Evaluation of the FAITH! Hypertension App. *JMIR Formative Research*, *7*, 14–15.

Culhane-Pera, K. A., Vang, K. B., Ortega, L. M., Xiong, T., Northuis, C. A., de la Parra, P., & Lakshminarayan, K. (2023). Mobile health technology for hypertension management with Hmong and Latino adults: mixed-methods community-based participatory research. *Ethnicity and Health*, *28*(3), 413–430.

Defo, B. K., Mbanya, J. C., Tardif, J. C., Ekundayo, O., Perreault, S., Potvin, L., Cote, R., Kengne, A. P., Choukem, S. P., Assah, F., Kingue, S., Richard, L., Pongou, R., Frohlich, K., Saji, J., Fournier, P., Sobngwi, E., Ridde, V., Dubé, M. P., … Dubois, C. A. (2017). Diagnosis, prevalence, awareness, treatment, prevention, and control of hypertension in cameroon: Protocol for a systematic review and meta-analysis of clinic-based and community-based studies. *JMIR Research Protocols*, *6*(5), 2016–2017.

Easterling, T., Mundle, S., Bracken, H., Parvekar, S., Mool, S., Magee, L. A., von Dadelszen, P., Shochet, T., & Winikoff, B. (2019). Oral antihypertensive regimens (nifedipine retard, labetalol, and methyldopa) for management of severe hypertension in pregnancy: an open-label, randomised controlled trial. *The Lancet*, *394*(10203), 1011–1021.

Edward, A., Campbell, B., Manase, F., & Appel, L. J. (2021). Patient and healthcare provider perspectives on adherence with antihypertensive medications: an exploratory qualitative study in Tanzania. *BMC Health Services Research*, *21*(1), 1–2.

Eïd, J., & Desgrées du Loû, A. (2022). Empowerment-based support program for vulnerable populations living with diabetes, obesity or high blood pressure: a scoping review. *BMC Public Health*, *22*(1), 1–9.

Fakhri, G., Assaad, S., & Chaaya, M. (2020). Hypertension prevalence and control among community-dwelling lebanese older adults. *Journal of Clinical Hypertension*, *22*(9), 1727–1731.

Flor, L. S., Wilson, S., Bhatt, P., Bryant, M., Burnett, A., Camarda, J. N., Chakravarthy, V., Chandrashekhar, C., Chaudhury, N., Cimini, C., Colombara, D. V., Narayanan, H. C., Cortes, M. L., Cowling, K., Daly, J., Duber, H., Ellath Kavinkare, V., Endlich, P.,

Fullman, N., … Gakidou, E. (2020). Community-based interventions for detection and management of diabetes and hypertension in underserved communities: A mixed-methods evaluation in Brazil, India, South Africa and the USA. *BMJ Global Health*, *5*(6), 2–3.

Floríndez, L. I., Kim, L. Y., Martinez, B., Manoukian, M. G., Pamu, J., Clegg, D. J., Sauls, T. R. K., Spiegel, B., & Coleman, B. (2024). Engaging an African American Church-based Community in Developing a Technology-focused Virtual Reality Hypertension Program. *Progress in Community Health Partnerships: Research, Education, and Action*, *18*(2), 225–234.

Fullman, N., Cowling, K., Flor, L. S., Wilson, S., Bhatt, P., Bryant, M. F., Camarda, J. N., Colombara, D. V., Daly, J., Gabert, R. K., Harris, K. P., Johanns, C. K., Mandile, C., Marshall, S., McNellan, C. R., Mulakaluri, V., Phillips, B. K., Reitsma, M. B., Sadighi, N., … Gakidou, E. (2023). Assessing the impact of community-based interventions on hypertension and diabetes management in three Minnesota communities: Findings from the prospective evaluation of US HealthRise programs. *PLoS ONE*, *18*(2 February), 1–2.

Galson, S. W., Staton, C. A., Karia, F., Kilonzo, K., Lunyera, J., Patel, U. D., Hertz, J. T., & Stanifer, J. W. (2017). Epidemiology of hypertension in Northern Tanzania: A community-based mixed-methods study. *BMJ Open*, *7*(11), 1–2.

Gu, K. D., Cheng, J., Malone, A., Faulkner, K. C., Bejarano, O., Gelsomin, E., & Thorndike, A. N. (2024). Patient and Community Health Worker (CHW) Perspectives on a CHW-delivered Nutrition Intervention for Low-Income Adults with Hypertension: A Qualitative Study. *Journal of Primary Care & Community Health*, *15*, 1–2.

Gyamfi, J., Cooper, C., Barber, A., Onakomaiya, D., Lee, W. Y., Zanowiak, J., Mansu, M., Diaz, L., Thompson, L., Abrams, R., Schoenthaler, A., Islam, N., & Ogedegbe, G. (2022). Needs assessment and planning for a clinic-community-based implementation program for hypertension control among blacks in New York City: a protocol paper. *Implementation Science Communications*, *3*(1), 1–2.

Hao, G., Chen, Z., Wang, X., Zhang, L., Kang, Y., Zheng, C., Chen, L., Wang, Z., & Gao, R. (2022). Evaluation of the Community-Based Hypertension Management Programs in China. *Frontiers in Public Health*, *10*(May), 1–7.

Huffman, M. D., Baldridge, A. S., Lazar, D., Abbas, H., Mejia, J., Flowers, F. M., Quintana, A., Jackson, A., Kandula, N. R., Lloyd-Jones, D. M., Persell, S. D., Khan, S. S., Paparello, J. J., Chopra, A., Tripathi, P., Vu, M. H., Chow, C. K., & Ciolino, J. D. (2024). Efficacy and safety of a four-drug, quarter-dose treatment for hypertension: the QUARTET USA randomized trial. *Hypertension Research*, *47*(6), 1668–1677.

Iso, H., Noguchi, M., Yokoyama, T., Yoshida, T., Saito, I., Shintani, A., Sairenchi, T., Nishizawa, H., Imano, H., Kitamura, A., & Shimomura, I. (2023). Effect of a Community-Based Program to Accelerate Referral to Physicians for Individuals at High-Risk of Lifestyle-Related Diseases: A Cluster Randomized Trial. *Journal of Atherosclerosis and Thrombosis*, *30*(10), 1389–1406.

Jafar, T. H., Gandhi, M., de Silva, H. A., Jehan, I., Naheed, A., Finkelstein, E. A., Turner, E. L., Morisky, D., Kasturiratne, A., Khan, A. H., Clemens, J. D., Ebrahim, S., Assam, P. N., & Feng, L. (2020). A Community-Based Intervention for Managing Hypertension in Rural South Asia. *New England Journal of Medicine*, *382*(8), 717–726.

Kohrman, N., Rashid, M., Flores, R., Blyler, C., Barragan, N. C., Kuo, T., Inkelas, M., Chen, S., Rader, F., Cheng, S., Albert, C., Bello, N. A., & Ebinger, J. (2024). A qualitative analysis of post-hoc interviews with multilevel participants of a randomized controlled trial of a community-based intervention. *PLoS ONE*, *19*(5 May), 24–25.

Laar, A. K., Adler, A. J., Kotoh, A. M., Legido-Quigley, H., Lange, I. L., Perel, P., & Lamptey, P. (2019). Health system challenges to hypertension and related non-communicable diseases prevention and treatment: Perspectives from Ghanaian

stakeholders. *BMC Health Services Research*, *19*(1), 1–2.

Lamptey, P., Laar, A., Adler, A. J., Dirks, R., Caldwell, A., Prieto-Merino, D., Aerts, A., Pearce, N., & Perel, P. (2017). Evaluation of a community-based hypertension improvement program (ComHIP) in Ghana: data from a baseline survey. *BMC Public Health*, *17*(1), 1–16.

Li, B. (2025). Burdening patients: qualitative analysis of healthism in community-based hypertension care in China. *Health Sociology Review*, 40443059.

López-Mateus, M. C., Hernández-Rincón, E. H., Correal-Muñoz, C. A., Cadena-Buitrago, G. P., Galvis-Díaz, I. J., & Romero-Prieto, G. E. (2017). Estrategia educativa que promueve los hábitos saludables en adultos mayores con hipertensión arterial en un municipio de Colombia: estudio de investigación-acción participativa. *Medwave*, *17*(8), e7072.

Mbuthia, G. W., Magutah, K., & Pellowski, J. (2022). Approaches and outcomes of community health worker's interventions for hypertension management and control in low-income and middle-income countries: systematic review. *BMJ Open*, *12*(4), 1–2.

Moreira-Rosário, A., Ismael, S., Barreiros-Mota, I., Morais, J., Rodrigues, C., Castela, I., Mendes, I. C., Soares, M. I., da Costa, L. S., Oliveira, C. B., Henriques, T., Pinto, P., Pita, D., de Oliveira, C. M., Maciel, J., Serafim, T., Araújo, J., Rocha, J. C., Pestana, D., … Calhau, C. (2023). Empowerment-based nutrition interventions on blood pressure: a randomized comparative effectiveness trial. *Frontiers in Public Health*, *11*(November), 1–13.

Muhihi, A. J., Urassa, D. P., Mpembeni, R. N. M., Leyna, G. H., Sunguya, B. F., Kakoko, D., Kessy, A. T., & Njelekela, M. A. (2018). Effect of training community health workers and their interventions on cardiovascular disease risk factors among adults in Morogoro, Tanzania: Study protocol for a cluster randomized controlled trial. *Trials*, *19*(1), 1–2.

Nong, T. T. T., Nguyen, G. H., Lepe, A., Tran, T. B., Nguyen, L. T. P., & Koot, J. A. R. (2024). Challenges and Opportunities in Digital Screening for Hypertension and Diabetes Among Community Groups of Older Adults in Vietnam: Mixed Methods Study. *Journal of Medical Internet Research*, *26*(1), 5–6.

Odusola, A. O., Stronks, K., Hendriks, M. E., Schultsz, C., Akande, T., Osibogun, A., van Weert, H., & Haafkens, J. A. (2016). Enablers and barriers for implementing high-quality hypertension care in a rural primary care setting in Nigeria: Perspectives of primary care staff and health insurance managers. *Global Health Action*, *9*(1), 1–2.

Pedralli, M. L., Marschner, R. A., Kollet, D. P., Neto, S. G., Eibel, B., Tanaka, H., & Lehnen, A. M. (2020). Different exercise training modalities produce similar endothelial function improvements in individuals with prehypertension or hypertension: a randomized clinical trial Exercise, endothelium and blood pressure. *Scientific Reports*, *10*(1), 1–9.

Rai, T., Morton, K., Roman, C., Doogue, R., Rice, C., Williams, M., Schwartz, C., Velardo, C., Tarassenko, L., Yardley, L., McManus, R. J., & Hinton, L. (2021). Optimizing a digital intervention for managing blood pressure in stroke patients using a diverse sample: Integrating the person-based approach and patient and public involvement. *Health Expectations*, *24*(2), 327–340.

Sandesara, U. N., Carson, S. L., Dopp, A., Perez, L. G., Sadia, A., Wali, S., Park, N. J., Casillas, A., Kim, G., Morales, M. G., Ntekume, E., Song, S., Gandhi, P., Wafford, T., & Brown, A. F. (2023). Community and Healthcare Perspectives on Implementing Hypertension Interventions for a Multiethnic Safety-Net Population. *Ethnicity and Disease*, *DECIPHeR*, 68–80.

St Sauveur, R., Sufra, R., Jean Pierre, M. C., Inddy, J., Jean, M., Mourra, N., Sundararajan, R., McNairy, M. L., Pape, J. W., Rouzier, V., Devieux, J., & Yan, L. D. (2025). Stakeholder perspectives on barriers and facilitators to hypertension control in urban Haiti: a qualitative study to inform a community-based hypertension management intervention. *BMC Public Health*, *25*(1), 1–2.

St Sauveur, R., Sufra, R., Jean Pierre, M. C.,

Rouzier, V., Preval, F., Exantus, S., Jean, M., Jean, J., Forestal, G. P. L., Fleurijean, O., Mourra, N., Ogyu, A., Malebranche, R., Brisma, J. P., Deschamps, M. M., Pape, J. W., Sundararajan, R., McNairy, M. L., & Yan, L. D. (2024). Effectiveness of community-based hypertension management on hypertension in the urban slums of Haiti: A mixed methods study. *Journal of Clinical Hypertension*, 1–2.

Susanto, T., Rasny, H., Kurdi, F., Yunanto, R. A., & Rahmawati, I. (2023). Management of Hypertension Using a Plant-Based Diet Among Farmers: Protocol for a Mixed Methods Study. *JMIR Research Protocols*, *12*, 2–3.

Tan, P. P. S., Sandhu, R. S., Zain, S. M., Hall, D., Tan, N. C., Lim, H. M., Daud, F., & Pung, Y. F. (2022). Health motivations and perceived barriers are determinants of self-care behaviour for the prevention of hypertension in a Malaysian community. *PLoS ONE*, *17*(12 December), 1–2.

Van Hout, M. C., Akugizibwe, M., Shayo, E. H., Namulundu, M., Kasujja, F. X., Namakoola, I., Birungi, J., Okebe, J., Murdoch, J., Mfinanga, S. G., & Jaffar, S. (2024). Decentralising chronic disease management in sub-Saharan Africa: a protocol for the qualitative process evaluation of community-based integrated management of HIV, diabetes and hypertension in Tanzania and Uganda. *BMJ Open*, *14*(3), 8–9.

Vedanthan, R., Tuikong, N., Kofler, C., Blank, E., Kamano, J. H., Naanyu, V., Kimaiyo, S., Inui, T. S., Horowitz, C. R., & Fuster, V. (2016). Barriers and facilitators to nurse management of hypertension: A qualitative analysis from western Kenya. *Ethnicity and Disease*, *26*(3), 315–322.

Virtic Potocnik, T., Mihevc, M., Zavrnik, C., Mori Lukancic, M., Ružic Gorenjec, N., Poplas Susic, A., & Klemenc-Ketiš, Z. (2024). Evaluation of a specialist nurse-led structured self-management training for peer supporters with type 2 diabetes mellitus with or without comorbid hypertension in Slovenia. *BMC Nursing*, *23*(1).

WHO. (2018). *Health topics: Hypertension*. World Health Organization.

Wongsin, U., & Chen, T. Y. (2023). Sex differences in the risk factors of disability among community-dwelling older adults with hypertension: Longitudinal results from the Health, Aging, and Retirement in Thailand study (HART). *Frontiers in Public Health*, *11*, 2023–2024.

Woods, S. B., Udezi, V., Roberson, P. N. E., Arnold, E. M., Nesbitt, S., & Hiefner, A. (2024). "A cuff is not enough": A community-based participatory research approach to soliciting perspectives of African Americans with hypertension and their family members on self-management intervention features. *Family Process*, *63*(2), 731–748.