



EVALUATION OF THE IMPACT OF HEALTH EDUCATION ON THE KNOWLEDGE AND ATTITUDES OF OLDER ADULTS IN HYPERTENSION MANAGEMENT IN MOJOKERTO REGENCY

By

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ABSTRACT

Limited knowledge and attitudes among older adults regarding hypertension represent a significant public health issue in Mojokerto Regency, affecting medication adherence, dietary habits, and physical activity. This study aimed to evaluate the effect of health education on older adults' knowledge and attitudes in hypertension control. A qualitative case study approach was employed, collecting data through in-depth interviews with health workers, older adults, and elder cadres, as well as observations and documentation of educational activities. Data analysis followed Miles and Huberman's techniques, including data reduction, presentation, and verification. Findings indicated that health education effectively increased older adults' knowledge; however, behavioral and attitudinal changes require additional support. These results provide both theoretical and practical contributions for developing more effective health education programs for older adults.

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1. INTRODUCTION

Hypertension remains a major public health concern among older adults, particularly in Mojokerto Regency, where a significant proportion of the elderly population demonstrates limited knowledge regarding risk factors, symptoms, and management strategies. This knowledge gap often correlates with less favorable attitudes toward hypertension control, manifesting in behaviors such as irregular medication adherence, insufficient physical activity, and excessive salt intake (Abdelaziz, S. H., & Ahmed, R. A. 2021). The persistence of these patterns highlights the critical role of health education in improving both the knowledge and quality of life of older adults with hypertension (Abraham, C., & Sheeran, P. 2018).

Previous literature suggests that while numerous interventions have aimed to increase awareness of hypertension among older adults, theoretical frameworks have not fully addressed the translation of knowledge into practical behavioral changes (Alsairafi, Z., Alattar, A., & Alenezi, M. 2022). Studies have shown that knowledge acquisition alone does not automatically result in improved health behaviors, indicating a gap in current educational approaches and the need for more comprehensive, behavior-focused strategies. This underscores the importance of investigating not only the informational content delivered but also the mechanisms through which education influences attitudes and practices among older adults (Asiimwe, S. B., & Mirembe, B. G. 2020).

The primary objective of this study is to evaluate the impact of health education on the knowledge and attitudes of older adults in managing hypertension. Specifically, it seeks to determine whether structured educational interventions can enhance understanding of hypertension-related risks and promote positive behavioral changes in

daily self-management practices (Barasa, A., & Wanyonyi, W. 2019). By addressing both cognitive and behavioral outcomes, this research aims to provide evidence-based insights for designing effective educational programs tailored to the needs of the elderly population (Bhandari, P., & Kim, M. (2023).

Given the persistent challenges in translating knowledge into action and the recognized importance of targeted health education, this study hypothesizes that health education interventions will positively influence both knowledge and attitudes of older adults toward hypertension control (Fauziyah, N., & Widodo, A. 2022). These findings are expected to inform public health strategies and contribute to the development of programs that effectively support elderly populations in managing chronic conditions such as hypertension (Hall, M. E., Cohen, J. B., & Ard, J. D. 2021).

2. LITERATURE REVIEW

Health Education

Health education refers to a structured process of providing knowledge, skills, and motivation to individuals or communities to promote informed health decisions and positive behaviors (Nutbeam, 2021). It encompasses various strategies, including verbal instruction, printed materials, and participatory activities aimed at enhancing awareness and understanding of health issues. Effective health education is not limited to information transfer but also emphasizes behavioral reinforcement and supportive environments to enable lasting health-promoting practices.

The manifestations of health education among older adults can be observed through active participation in educational sessions, engagement with health promotion materials, and the implementation of recommended lifestyle changes. These activities may include attending counseling sessions, following medication schedules, reducing salt intake, and performing regular physical exercises. The effectiveness of health education is often contingent upon tailoring interventions to the cognitive and motivational capacities of the elderly, as well as the availability of social support systems (WHO, 2022).

Knowledge

Knowledge in the context of health refers to the understanding of health-related concepts, risk factors, disease mechanisms, and preventive or therapeutic measures (Glanz et al., 2022). For older adults, possessing adequate knowledge about hypertension is critical for recognizing symptoms, understanding the importance of medication adherence, and adopting lifestyle modifications that reduce disease progression. Knowledge serves as the foundation upon which attitudes and behaviors are built, influencing decision-making in health self-management.

The manifestation of knowledge can be assessed through the ability of older adults to correctly identify hypertension risk factors, describe symptoms, and explain effective control measures (Hasan Nidlom, & Eko Budi Santoso. 2025). Observable behaviors such as adherence to prescribed medication, dietary modifications, and engagement in physical activity indicate the practical application of acquired knowledge. Research indicates that knowledge alone may not guarantee behavioral change, emphasizing the need for reinforcement strategies in educational programs (Khosravi et al., 2020).

Attitude

Attitude encompasses the psychological tendencies and predispositions of individuals to respond favorably or unfavorably to particular health issues, including chronic disease management (Ajzen, 2020). Positive attitudes toward hypertension management involve motivation to comply with medical advice, willingness to engage in preventive behaviors, and proactive participation in health-promoting activities. Conversely, negative attitudes may manifest as non-compliance, neglect of lifestyle recommendations, or resistance to educational interventions.

Attitudinal manifestations among older adults are reflected in daily practices such as consistency in medication intake, dietary adjustments, and participation in exercise programs. The interplay between knowledge and attitude is crucial, as even well-informed individuals may fail to adopt healthy behaviors if their attitudes are not aligned with recommended practices. This underscores the necessity of integrating attitude-shaping strategies within health education programs to ensure effective translation of knowledge into action (Alam et al., 2021).

3. METHOD

This study employed a qualitative case study approach to explore the impact of health education on older adults' knowledge and attitudes in hypertension management. The case study method allows for an in-depth investigation of a single unit of analysis, which may include an individual, group, organization, or community, with the goal of understanding contemporary phenomena within their real-life context. Utilizing multiple data collection methods provides a comprehensive depiction of the case, yielding holistic insights and supporting both theoretical development and practical knowledge application.

The primary data for this study were collected through in-depth interviews with informants concerning hypertension-related issues observed in the community. Secondary data included relevant literature and documents pertaining to the study's keywords. This combination of primary and secondary data ensured a robust understanding



of the case and facilitated triangulation, enhancing the credibility of findings. The study design focused on capturing both the cognitive and behavioral aspects of older adults' responses to health education interventions.

Participants in this research included health workers, older adults, and elder cadres who served as key informants. Health workers provided insight into program implementation, older adults shared their experiences and perceptions regarding hypertension education, and cadres offered perspectives on facilitation and community engagement. The inclusion of multiple participant perspectives ensured a comprehensive understanding of the phenomena under study.

Data collection involved systematic procedures, including interviews, participant observations, and documentation of health education activities. Interviews captured participants' personal experiences and perceptions, observations documented behaviors and engagement during educational sessions, and documents provided supportive information on program structure and content. These triangulated data sources were analyzed collectively to identify patterns, relationships, and emerging themes.

Data analysis followed Miles and Huberman's framework, which involves data reduction, data presentation, conclusion drawing, and verification. To ensure data trustworthiness, the study employed multiple validation techniques, including credibility, dependability, transferability, and confirmability. The integrated analysis allowed for a case-based interpretation that contributes to scientific knowledge development while reflecting practical insights derived from the observed phenomena.

4. RESULT AND DISCUSSION

Result

1. Health Education

The findings indicate that health education interventions for older adults in Mojokerto Regency were delivered through structured counseling sessions, printed materials, and guidance by elder cadres. These sessions were conducted regularly, though the frequency and reach varied across different community settings. Older adults were observed actively participating in these educational activities, demonstrating engagement with the materials provided. Despite these efforts, some participants required repeated exposure to fully comprehend the information, suggesting variability in absorption and retention of knowledge.

"During the sessions, some of us still forget to take the medicine on time, even though the health worker explained it clearly." (Informant 4, Participant)

2. Knowledge of Older Adults

Analysis of the data revealed that older adults' knowledge of hypertension, including risk factors, signs and symptoms, and control measures, showed noticeable improvement after participation in health education programs. Many participants could accurately describe lifestyle modifications and the importance of medication adherence. However, occasional lapses in applying this knowledge were observed, particularly among those with limited prior exposure to health information or lower educational backgrounds.

The explanation of these findings suggests that while educational interventions enhanced cognitive understanding, translating knowledge into consistent daily practices remained a challenge for some participants. This emphasizes the need for reinforcement mechanisms beyond initial educational sessions, such as follow-up counseling or community support programs.

The relationship between the descriptive and explanatory data shows that increased knowledge is necessary but not always sufficient for behavioral change. Older adults with enhanced understanding were more likely to engage in recommended practices, yet inconsistencies indicated the influence of other factors, including motivation, social support, and habitual behaviors within family or community contexts.

3. Attitude of Older Adults

Findings regarding attitudes demonstrated gradual improvement in older adults' perspectives toward hypertension management. Participants expressed greater willingness to adhere to prescribed medication schedules, modify dietary habits, and engage in regular physical activity. However, attitude changes were not uniform across all individuals; some participants continued to show reluctance or skepticism toward implementing lifestyle modifications despite possessing adequate knowledge.

Explanatory data indicate that attitudes are shaped not only by knowledge but also by psychosocial factors, reinforcement from family members, and perceived benefits of behavior change. The observed variations highlight that positive attitudes require ongoing support and engagement beyond information provision.

The relationship between descriptive and explanatory observations demonstrates that while health education successfully enhances both knowledge and attitudes, translating these improvements into consistent behavioral change requires additional interventions. Reinforcement strategies, continuous guidance, and social

support play a crucial role in enabling older adults to apply knowledge and adopt positive attitudes effectively in daily hypertension management.

Discussion

The findings of this study indicate that health education has a measurable impact on older adults' knowledge and attitudes toward hypertension management. The analysis reveals that structured educational interventions contributed to improved understanding of risk factors, symptoms, and preventive measures among the elderly population. Additionally, participants demonstrated more favorable attitudes toward medication adherence, dietary modifications, and physical activity. These results highlight the effectiveness of combining cognitive instruction with practical guidance to foster positive behavioral intentions in older adults.

Comparatively, these findings align with previous studies on health education interventions, yet this research demonstrates a distinct contribution by integrating local elder cadres as facilitators, which enhances engagement and contextual relevance. While other studies primarily emphasize knowledge acquisition, this study underscores the interdependence of knowledge, attitudes, and social support in achieving behavior change, indicating that community-based facilitation strengthens the overall impact of educational programs.

Reflecting on the outcomes, the research provides clear evidence that targeted health education can serve as a vital mechanism to empower older adults in managing chronic conditions. Improved knowledge and attitudes observed among participants suggest that educational programs can effectively bridge gaps in understanding and motivation, fostering greater self-efficacy and proactive health behaviors. This reinforces the importance of continuous education tailored to the needs and cognitive capacities of older adults.

The implications of these results are significant for public health strategies. Health education programs should not be limited to information dissemination but must include reinforcement mechanisms, ongoing guidance, and active participation by local health workers and community cadres. By providing supportive environments, these programs can enhance adherence to hypertension management practices, ultimately contributing to reduced health risks and improved quality of life.

The observed outcomes can be explained by the combined effects of structured instruction, personalized guidance, and social reinforcement. Participants who received regular follow-ups and practical support demonstrated more consistent application of knowledge into daily behavior, indicating that educational content alone is insufficient without continuous engagement and reinforcement strategies.

Based on the findings, actionable recommendations include the implementation of ongoing health education sessions, enhanced involvement of family members in supporting older adults, and continuous training for cadres and health workers to ensure sustained program effectiveness. These strategies aim to translate improved knowledge and attitudes into consistent behavioral change, thereby optimizing hypertension management among the elderly population.

5. CONCLUSION

This study revealed a striking finding: structured health education interventions significantly enhanced older adults' knowledge regarding hypertension risk factors, symptoms, and management strategies. The improvement in understanding was notable across participants, yet behavioral change and attitude adjustments varied, indicating that knowledge acquisition alone does not guarantee consistent implementation of healthy practices.

The study contributes substantial value to both theory and practice. Theoretically, it reinforces the interconnection between knowledge, attitude, and behavioral outcomes in chronic disease management among the elderly. Practically, it provides a framework for designing health education programs that incorporate local cadres and tailored interventions, ensuring that older adults receive not only information but also guidance and support necessary for adopting sustainable health behaviors.

Despite these contributions, the study acknowledges limitations related to generalizability, as the findings are based on a specific community context in Mojokerto Regency. This, however, does not diminish the relevance of insights; rather, it highlights opportunities for future research to replicate and extend these interventions in diverse settings. Subsequent studies could explore long-term behavioral impacts and the integration of technology-assisted educational tools to further enhance outcomes among older adult populations.

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