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Health Education by Nurses: Strengthening Patients' Knowledge and Self-Care Behavior

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ABSTRACT

Health education is a core component of nursing practice that plays a critical role in improving patients' understanding of their health conditions and strengthening their capacity for self-care. This article examines the role of nurse-led health education in enhancing patients' knowledge and self-care behavior, particularly among individuals managing chronic diseases such as diabetes, hypertension, and heart failure. Using a narrative literature review, evidence was synthesized from studies examining nurse-delivered educational interventions, their outcomes, and the barriers and facilitators affecting their implementation. The findings indicate that structured, individualized health education significantly improves patients' knowledge retention and comprehension, particularly when delivered through multiple teaching modalities and reinforced with techniques such as teach-back. This improved knowledge is associated with better self-care behaviors, including medication adherence, dietary management, and symptom monitoring, ultimately contributing to reduced hospital readmissions and improved quality of life. However, the effectiveness of health education is often constrained by time limitations, insufficient training in teaching strategies, and inadequate institutional support. Facilitating factors such as dedicated education time, standardized materials, continuous professional development, and technology integration were found to enhance educational outcomes. The review concludes that nurse-led health education should be recognized as an essential clinical intervention rather than a supplementary task, requiring stronger institutional commitment and further rigorous research to optimize its delivery and long-term impact on patient self-management.

Keywords: nurse-led health education; patient knowledge; self-care behavior; chronic disease management; health literacy.

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INTRODUCTION

Health education is one of the fundamental responsibilities of professional nursing practice and represents a core strategy for promoting positive health outcomes among patients (Pueyo-Garrigues et al., 2022). As frontline healthcare providers who spend the most direct time with patients, nurses occupy a unique position to translate complex medical information into practical, understandable guidance that patients can apply in their daily lives. Health education delivered by nurses is not merely an administrative task appended to clinical care; it is an essential therapeutic intervention that shapes how patients understand their conditions, adhere to treatment plans, and manage their own health over time.

The global burden of chronic and non-communicable diseases such as diabetes mellitus, hypertension, cardiovascular disease, and chronic kidney disease has increased substantially over the past two decades (Freihat et al., 2025). These conditions require sustained, long-term management that extends far beyond the walls of a hospital or clinic. Patients living with chronic illnesses must make daily decisions about diet, physical activity, medication adherence, and symptom monitoring. Without adequate knowledge and skills, patients are more likely to experience complications, unplanned hospital readmissions, and diminished quality of life. In this context, health education becomes a critical bridge between clinical treatment and everyday self-management.

Self-care behavior refers to the activities that individuals undertake to maintain their own health, prevent disease, and manage existing health conditions. Effective self-care requires more than good intentions; it requires accurate knowledge, practical skills, confidence, and motivation. Patients who understand the nature of their illness, the rationale behind their treatment, and the specific actions they need to take are generally better equipped to manage their conditions independently. Conversely, patients with limited health literacy often struggle to interpret medical instructions, take medications incorrectly, or fail to recognize warning signs that require urgent attention.

Nurses are ideally positioned to address these gaps because of the nature of their role. Unlike physicians, who typically interact with patients for relatively brief periods, nurses provide continuous, hands-on care and build ongoing relationships with patients and their families. This sustained contact allows nurses to assess a patient's baseline knowledge, identify misconceptions, tailor educational content to the patient's literacy level and cultural background, and reinforce learning through repetition and demonstration. Nurses can also observe non-verbal cues, such as confusion or anxiety, that may indicate a patient has not fully understood the information provided.

Despite the recognized importance of health education, its implementation in clinical practice is often inconsistent (Pereira et al., 2022). Time constraints, heavy workloads, inadequate training in educational techniques, and a lack of standardized educational materials frequently hinder nurses' ability to deliver comprehensive health education. Additionally, health education is sometimes treated as a low priority compared to technical clinical tasks, despite substantial evidence that it directly influences patient outcomes, satisfaction, and healthcare costs. Patients who receive structured education are less likely to be readmitted, more likely to adhere to prescribed therapies, and generally report higher satisfaction with their care.

This article aims to examine the role of health education provided by nurses in strengthening patients' knowledge and self-care behavior. It explores the methods used to study this relationship, discusses key findings organized around three central themes, and concludes with implications for nursing practice and future research. The discussion is structured to address three interrelated aspects: the impact of nurse-led health education on patient knowledge, its influence on self-care behavior and treatment adherence, and the barriers and facilitating factors that affect the effectiveness of health education delivery. By synthesizing these dimensions, this article seeks to underscore why investment in structured, patient-centered health education by nurses should be regarded as an indispensable component of quality healthcare delivery rather than an optional add-on to clinical duties.

Understanding this relationship is particularly important given the shifting landscape of healthcare, which increasingly emphasizes patient empowerment, shared decision-making, and the management of chronic conditions in community and home settings rather than solely within hospitals (Vainauskienė & Vaitkienė, 2021). As healthcare systems continue to move toward models that place greater responsibility on patients for their own care, the role of nurses as educators becomes even more central. Equipping nurses with the skills, time, and institutional support needed to deliver effective health education is therefore not only a matter of best practice but a strategic necessity for improving population health outcomes.

RESEARCH METHOD

This article employs a narrative literature review approach to synthesize existing evidence on the role of nurse-led health education in improving patients' knowledge and self-care behavior (Wahyudi & Karso, 2026). A narrative review was selected because it allows for a broad, integrative examination of a topic that spans multiple patient populations, chronic disease contexts, and educational strategies, providing a comprehensive overview rather than a narrowly defined quantitative synthesis.

Literature Search Strategy. Relevant literature was identified through searches of academic databases commonly used in nursing and health sciences research, including PubMed, CINAHL, Scopus, and Google Scholar. The search focused on peer-reviewed articles published within the last ten years to ensure the inclusion of contemporary evidence reflecting current healthcare practices and educational technologies. Keywords used in the search included combinations of terms such as "nurse-led health education," "patient education," "self-care behavior," "health literacy," "chronic disease management," and "nursing intervention."

Inclusion and Exclusion Criteria. Studies were included if they specifically examined health education interventions delivered by nurses, measured outcomes related to patient knowledge or self-care behavior, and were published in English. Both quantitative studies, such as randomized controlled trials and quasi-experimental studies, and qualitative studies exploring patient or nurse perspectives were considered eligible for inclusion. Studies were excluded if the educational intervention was delivered

exclusively by non-nursing personnel, if the primary outcome was unrelated to knowledge or self-care behavior, or if the full text was not accessible.

Data Extraction and Synthesis. From each selected study, key information was extracted, including the study design, patient population, type of health education intervention, delivery method, and reported outcomes. This information was then organized thematically to identify recurring patterns and insights across the literature. Rather than presenting a statistical meta-analysis, the findings were synthesized narratively to highlight consistent themes, contrasting results, and gaps in the current body of knowledge.

Analytical Framework. The synthesis was guided by a conceptual framework linking health education inputs (content, delivery method, frequency, and nurse-patient interaction) to intermediate outcomes (knowledge acquisition and retention) and distal outcomes (self-care behavior, treatment adherence, and quality of life). This framework helped organize the discussion around three central themes: the effect of health education on patient knowledge, its effect on self-care behavior and adherence, and the factors that influence the successful implementation of health education by nurses.

Limitations of the Method. As a narrative review, this study does not employ the systematic and reproducible search protocols characteristic of systematic reviews or meta-analyses, nor does it apply formal statistical pooling of results. Consequently, the conclusions drawn should be interpreted as a synthesis of prevailing evidence and trends rather than definitive, generalizable statistical findings. Nonetheless, this approach provides valuable insight into the breadth of research on nurse-led health education and offers a foundation for more rigorous systematic investigations in the future.

RESEARCH RESULT

The Impact of Nurse-Led Health Education on Patient Knowledge

A consistent finding across the literature is that structured health education delivered by nurses significantly improves patients' knowledge about their health conditions. Knowledge serves as the foundational building block upon which self-care behaviors are constructed; without accurate understanding, patients cannot make informed decisions about their treatment or lifestyle modifications (Tetteh et al., 2024). Studies examining patients with diabetes mellitus, for example, have consistently shown that those who receive structured education from nurses demonstrate significantly greater understanding of blood glucose monitoring, dietary requirements, medication regimens, and the recognition of hypoglycemic or hyperglycemic symptoms compared to patients who receive only standard discharge instructions.

The mechanisms underlying this improvement in knowledge are multifaceted. First, nurses are able to individualize educational content based on a patient's existing knowledge, literacy level, and specific concerns, rather than delivering generic, one-size-fits-all information (Sajjadi et al., 2025). This individualized approach ensures that education is relevant and comprehensible to each patient. Second, nurses often employ multiple teaching strategies, including verbal explanation, written materials, visual aids, and hands-on demonstration, which cater to different learning styles and reinforce retention through repetition across different modalities (Horntvedt et al., 2018). Third, the

ongoing nature of the nurse-patient relationship allows for iterative reinforcement of key concepts over multiple encounters, rather than a single educational session that may be quickly forgotten (Alreshidi et al., 2024).

Importantly, the format and structure of health education appear to matter considerably. Research comparing structured, protocol-based education programs to informal, ad hoc teaching suggests that patients retain significantly more information when education follows a clear, organized curriculum with defined learning objectives. Structured programs that incorporate the "teach-back" method, in which patients are asked to repeat information in their own words to confirm understanding, have been shown to be particularly effective in identifying gaps in comprehension and correcting misunderstandings before they lead to errors in self-management.

Technology-assisted education has also emerged as a valuable complement to traditional face-to-face teaching (Paudyal, 2022). Nurses who incorporate digital tools, such as educational videos, mobile applications, or interactive websites, into their teaching often report improved patient engagement and knowledge retention, particularly among younger patient populations who are accustomed to digital learning formats. However, evidence also indicates that technology should supplement rather than replace direct nurse-patient interaction, as the interpersonal relationship and the ability to ask questions in real time remain central to effective learning, especially for older adults or patients with lower digital literacy.

Despite these positive findings, some studies note that improvements in knowledge do not always translate directly into improvements in clinical outcomes, suggesting that knowledge alone, while necessary, is not sufficient to drive meaningful behavior change. This observation underscores the importance of examining not only whether patients understand their condition but also whether they are able and willing to apply that knowledge in their daily lives, a theme explored further in the following section.

The Influence of Health Education on Self-Care Behavior and Treatment Adherence

Beyond knowledge acquisition, the literature demonstrates that nurse-led health education has a substantial positive influence on patients' self-care behaviors and adherence to treatment regimens. Self-care behavior encompasses a broad range of activities, including medication adherence, dietary management, physical activity, symptom monitoring, and appropriate health-seeking behavior when complications arise (Godfrey et al., 2011). Multiple studies indicate that patients who receive comprehensive, nurse-delivered education demonstrate measurably higher rates of adherence to prescribed medications and recommended lifestyle changes compared to those who do not receive such education.

One of the most frequently studied populations in this regard is patients with heart failure, for whom self-care behaviors such as daily weight monitoring, sodium restriction, and prompt recognition of worsening symptoms are critical to preventing hospital readmission. Educational interventions led by nurses that specifically target these self-care behaviors, often delivered before hospital discharge and reinforced through follow-up telephone calls or home visits, have been associated with reduced rates of readmission

and improved quality of life scores. Similarly, among patients with hypertension, nurse-led education focusing on home blood pressure monitoring, dietary sodium reduction, and medication adherence has been shown to contribute to better blood pressure control over time.

A key factor contributing to improved self-care behavior is the concept of self-efficacy, or a patient's confidence in their own ability to successfully perform a given health behavior. Effective health education does not simply transmit information; it builds patients' confidence by breaking down complex tasks into manageable steps, providing opportunities for supervised practice, and offering positive reinforcement as patients demonstrate new skills (Nutbeam, 2019). For instance, when teaching insulin self-administration, nurses who allow patients to practice the technique under supervision and provide constructive feedback tend to produce patients who are more confident and competent in performing the task independently after discharge.

The timing and continuity of education also play an important role in shaping self-care behavior. Education delivered solely at the point of hospital discharge, when patients may be anxious, fatigued, or overwhelmed by the volume of new information, tends to be less effective than education that begins earlier in the care process and continues through follow-up encounters. Programs that incorporate post-discharge follow-up, whether through phone calls, home visits, or outpatient clinic appointments, allow nurses to assess how well patients are applying what they learned, address emerging questions or difficulties, and provide additional reinforcement as needed. This continuity helps bridge the transition from hospital to home, a period during which many patients struggle to translate educational content into sustained behavior change.

Family and caregiver involvement in health education also appears to strengthen self-care outcomes, particularly for patients who are elderly, cognitively impaired, or otherwise dependent on others for aspects of their care (Adëraj et al., 2025). When nurses actively involve family members in educational sessions, caregivers are better equipped to support and reinforce the patient's self-care activities at home, creating a supportive environment that extends the impact of nursing education beyond the clinical setting.

Nevertheless, the relationship between education and behavior change is not always straightforward. Some patients, despite receiving thorough education and demonstrating good knowledge, continue to struggle with adherence due to factors unrelated to understanding, such as financial constraints, competing life priorities, mental health challenges, or entrenched habits that are difficult to change. This highlights the need for health education to be complemented by broader psychosocial support and individualized behavior-change strategies, rather than being viewed as a standalone solution.

Barriers and Facilitating Factors in the Implementation of Nurse-Led Health Education

While the evidence supporting the benefits of nurse-led health education is robust, the literature also reveals significant barriers that limit its consistent and effective implementation in real-world clinical settings. Understanding these barriers, as well as

the factors that facilitate successful education delivery, is essential for translating research findings into sustainable clinical practice.

One of the most frequently cited barriers is time constraint. Nurses in acute care settings often manage heavy patient loads and face competing demands from technical and administrative tasks, leaving limited time for thorough, individualized patient education (Dresser et al., 2023). Under such conditions, health education may be reduced to brief, rushed instructions delivered at discharge, which are unlikely to be fully understood or retained by patients. Institutional cultures that prioritize procedural efficiency over educational quality can inadvertently signal to nursing staff that health education is a lower priority compared to other clinical duties.

A second significant barrier is inadequate training in patient education techniques. While nursing curricula generally cover the theoretical importance of patient education, many nurses report feeling underprepared to apply effective teaching strategies in practice, particularly when working with patients who have low health literacy, language barriers, or cognitive impairments. Without specific training in communication techniques such as the teach-back method, motivational interviewing, or culturally sensitive education approaches, well-intentioned educational efforts may fail to achieve their intended impact.

Organizational and resource-related factors also play a substantial role (Sun & Jung, 2024). The availability of standardized educational materials, such as printed handouts, visual aids, or validated digital resources, can significantly support nurses in delivering consistent, high-quality education. In settings where such materials are lacking or outdated, nurses must rely on ad hoc, improvised explanations that may vary considerably in content and quality from one nurse to another. Similarly, institutional support in the form of dedicated time for education, private spaces for confidential discussions, and interdisciplinary collaboration with dietitians, pharmacists, and health educators can enhance the comprehensiveness and effectiveness of patient education.

Patient-related factors also influence the success of health education efforts. Patients with low baseline health literacy, cognitive impairment, sensory deficits, or significant emotional distress related to their diagnosis may require more time, repetition, and adapted teaching methods to achieve comprehension. Language and cultural differences between nurses and patients can further complicate the educational process, underscoring the importance of culturally competent care and, where necessary, the use of professional interpreters rather than relying on family members for translation.

On the facilitating side, several strategies have been identified as effective in overcoming these barriers. Institutional policies that formally allocate time for patient education within nursing workflows, rather than treating it as an informal add-on task, have been associated with more consistent and thorough educational practices (Wahyudi, 2026). Ongoing professional development programs that train nurses in evidence-based educational strategies, including the teach-back method and motivational interviewing, have been shown to improve both nurses' confidence and the quality of education delivered. The integration of structured educational protocols and checklists into electronic health records can also help ensure that essential educational content is not overlooked, even during busy shifts.

Furthermore, adopting a patient-centered approach that actively involves patients in setting their own learning goals and addresses their specific concerns and misconceptions has been shown to enhance engagement and retention compared to a purely didactic, nurse-directed approach. Multidisciplinary collaboration, in which nurses coordinate with physicians, pharmacists, dietitians, and social workers to deliver consistent and complementary educational messages, further strengthens the overall quality and coherence of patient education. Finally, leveraging technology, such as automated reminder systems, educational mobile applications, and telehealth follow-up, can extend the reach and continuity of nurse-led education beyond the constraints of in-person clinical encounters, particularly for patients managing chronic conditions over extended periods.

Taken together, these findings suggest that while nurse-led health education is highly effective when delivered well, its success is heavily dependent on organizational support, adequate training, and the availability of resources. Addressing these systemic barriers is essential to ensuring that the demonstrated benefits of health education can be realized consistently across diverse healthcare settings and patient populations.

CONCLUSION

Health education delivered by nurses plays a pivotal role in strengthening patients' knowledge and fostering effective self-care behavior, particularly among individuals managing chronic health conditions. The evidence reviewed in this article demonstrates that structured, individualized, and continuous health education significantly improves patients' understanding of their conditions and treatment plans, which in turn supports more consistent adherence to medication regimens, dietary recommendations, and other essential self-care activities. These improvements are associated with tangible clinical benefits, including reduced hospital readmissions, better disease control, and enhanced quality of life. However, the effectiveness of nurse-led health education is not automatic; it depends heavily on the manner in which it is delivered. Education that is individualized to the patient's literacy level and specific needs, reinforced through multiple teaching modalities and follow-up encounters, and supported by techniques such as the teach-back method tends to produce significantly better outcomes than generic, one-time instruction. Building patients' self-efficacy through supervised practice and positive reinforcement emerges as a particularly important mechanism linking education to sustained behavior change.

At the same time, this review highlights those substantial barriers, including time constraints, insufficient training in educational techniques, and a lack of institutional resources, continue to hinder the consistent delivery of high-quality health education in many clinical settings. Overcoming these barriers requires deliberate organizational commitment, including the formal allocation of time for patient education, ongoing professional development for nursing staff, the provision of standardized educational materials, and the thoughtful integration of technology to extend educational reach and continuity.

For nursing practice, these findings underscore that health education should be regarded not as a peripheral task but as a central, evidence-based clinical intervention

deserving of dedicated time, resources, and institutional support. Nursing education programs and continuing professional development initiatives should place greater emphasis on equipping nurses with practical communication and teaching skills tailored to diverse patient populations. Healthcare institutions, in turn, should recognize and support the educational role of nurses through policies that protect time for patient teaching and provide access to high-quality, standardized educational resources.

For future research, there is a need for more rigorous, systematic studies, including randomized controlled trials and systematic reviews with meta-analysis, to further quantify the impact of specific health education strategies across different patient populations and healthcare settings. Additional research exploring the long-term sustainability of behavior changes achieved through nurse-led education, as well as the cost-effectiveness of various educational delivery models, would further strengthen the evidence base and support the development of standardized, evidence-informed educational protocols for nursing practice. In conclusion, empowering nurses to deliver effective, patient-centered health education represents a valuable and cost-effective strategy for improving patient outcomes, reducing healthcare utilization, and enhancing the overall quality of care. As healthcare systems continue to shift greater responsibility for disease management onto patients themselves, the role of nurses as educators will only grow in importance, making sustained investment in this aspect of nursing practice both a clinical priority and a strategic imperative for the future of patient-centered healthcare.

REFERENCE

Adëraj, S., Arapi, A., Mazzotta, R., Saurini, M., Taçi, D., Ivziku, D., Bernalte-Martí, V., Stievano, A., Vellone, E., & Rocco, G. (2025). Caregiver contribution to patient self-care in multiple chronic conditions in a low-/middle-income country. *Journal of Nursing Scholarship*, *57*(4), 609–620.

Alreshidi, M. R., Alshammari, A. S. S., Alruwaili, M. O. H., Alruwaill, H. G., Al-Shammari, H. K. H., Al-Shammari, A. M., Alanzy, K. M. A., & Alanzy, N. M. A. (2024). Effective Communication Between Nurses And Patients And Its Impact On Healthcare. *The Review of Diabetic Studies*, 589–610.

Dresser, S., Teel, C., & Peltzer, J. (2023). Frontline Nurses' clinical judgment in recognizing, understanding, and responding to patient deterioration: A qualitative study. *International Journal of Nursing Studies*, *139*, 104436.

Freihat, O., Sipos, D., Aamir, M., & Kovacs, A. (2025). Global burden and future projections of non-communicable diseases (2000–2050): Progress toward SDG 3.4 and disparities across regions and risk factors. *PLoS One*, *20*(12), e0336036. https://doi.org/https://doi.org/10.1371/journal.pone.0336036

Godfrey, C. M., Harrison, M. B., Lysaght, R., Lamb, M., Graham, I. D., & Oakley, P. (2011). Care of self–care by other–care of other: The meaning of self-care from research, practice, policy and industry perspectives. *International Journal of Evidence-Based Healthcare*, *9*(1), 3–24.

Horntvedt, M.-E. T., Nordsteien, A., Fermann, T., & Severinsson, E. (2018). Strategies for teaching evidence-based practice in nursing education: a thematic literature review. *BMC Medical Education*, *18*(1), 172.

Nutbeam, D. (2019). Health education and health promotion revisited. *Health Education Journal*, *78*(6), 705–709.

Paudyal, G. R. (2022). Shift to technology-assisted learning through blended mode: University teachers' experience. *Prithvi Journal of Research and Innovation*, 103–115.

Pereira, V. C., Silva, S. N., Carvalho, V. K. S., Zanghelini, F., & Barreto, J. O. M. (2022). Strategies for the implementation of clinical practice guidelines in public health: an overview of systematic reviews. *Health Research Policy and Systems*, *20*(1), 13.

Pueyo-Garrigues, M., Pardavila-Belio, M. I., Canga-Armayor, A., Esandi, N., Alfaro-Díaz, C., & Canga-Armayor, N. (2022). NURSES' knowledge, skills and personal attributes for providing competent health education practice, and its influencing factors: A cross-sectional study. *Nurse Education in Practice*, *58*, 103277. https://doi.org/https://doi.org/10.1016/j.nepr.2021.103277

Sajjadi, S. L., Ghafourifard, M., & Tayebi Khosroshahi, H. (2025). The effect of nurse-led individualized education on uncertainty in illness and patient activation in patients undergoing hemodialysis: the IDEAL HD project. *Renal Replacement Therapy*, *11*(1), 48.

Sun, Y., & Jung, H. (2024). Machine learning (ML) modeling, IoT, and optimizing organizational operations through integrated strategies: the role of technology and human resource management. *Sustainability*, *16*(16), 6751.

Tetteh, C., Saah, F. I., & Amu, H. (2024). Diabetes self-management: a qualitative study of education needs, practices and caregiver support in the Keta Municipality of Ghana. *BMJ Public Health*, *2*(2).

Vainauskienė, V., & Vaitkienė, R. (2021). Enablers of patient knowledge empowerment for self-management of chronic disease: an integrative review. *International Journal of Environmental Research and Public Health*, *18*(5), 2247.

Wahyudi, K. H. Z. (2026). Legal Protection of Patients Due to Incomplete Informed Consent in Medical Practice. *Synergy: Journal of Governance and Public Policy*, *2*(1), 1–9. https://doi.org/https://doi.org/10.68111/sjgp.v2i1.138

Wahyudi, & Karso, A. J. (2026). *Metode Penelitian Mixed Methods: Pendekatan Kualitatif Dan Kuantitatif*. Penamuda Media.