



## Health Education Provided by Nurses and Its Effect on Patient Awareness

Rehab Duhaim Alanezi<sup>1\*</sup>, Latifa Osaifer Alenazi<sup>2</sup>, Ashwaq Mayouf Alruwaili<sup>3</sup>, Aljawhara Manawar Alanezi<sup>4</sup>, Jamila Daas Alrowaili<sup>5</sup>, Sitah ALSahali Hezam Alanazi<sup>6</sup>, Hanan Daas Alrowaili<sup>7</sup>, Entesar Agil Alenezi<sup>8</sup>, Ather Modhi Jadaan Alenazi<sup>9</sup>, Shuaa Ayidh Lafi Alenzi<sup>10</sup>, Budur Ayad Odhayb Alruwaili<sup>11</sup>, Mona Saeed Alanizi<sup>12</sup>

<sup>1</sup>Nursing Technician, Maternity and Children Hospital, Northern Border Health Cluster, Saudi Arabia  
\* Corresponding Author Email: [reha2b@gmail.com](mailto:reha2b@gmail.com) - ORCID: 0000-0002-5247-0050

<sup>2</sup>Nursing Technician, North Medical Tower Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [latif2a@gmail.com](mailto:latif2a@gmail.com) - ORCID: 0000-0002-5247-115X

<sup>3</sup>Nursing Technician, Maternity and Children Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [ashwa2d@gmail.com](mailto:ashwa2d@gmail.com) - ORCID: 0000-0002-5247-915X

<sup>4</sup>Nursing Technician, Maternity and Children Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [manawa2r@gmail.com](mailto:manawa2r@gmail.com) - ORCID: 0000-0002-5247-815X

<sup>5</sup>Nursing Specialist, North Medical Tower Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [jamil2a@gmail.com](mailto:jamil2a@gmail.com) - ORCID: 0000-0002-5247-715X

<sup>6</sup>Nursing Technician, Eradah Complex For Mental Health, Northern Border Health Cluster  
Email: [sita2h@gmail.com](mailto:sita2h@gmail.com) - ORCID: 0000-0002-5247-615X

<sup>7</sup>Nursing Technician, Maternity and Children Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [hana2n@gmail.com](mailto:hana2n@gmail.com) - ORCID: 0000-0002-5247-515X

<sup>8</sup>Nursing Technician, Maternity and Children Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [entesa2r@gmail.com](mailto:entesa2r@gmail.com) - ORCID: 0000-0002-5247-415X

<sup>9</sup>Nursing Technician, Maternity and Children Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [athe2r@gmail.com](mailto:athe2r@gmail.com) - ORCID: 0000-0002-5247-315X

<sup>10</sup>Nursing Technician, Maternity and Children Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [shua2a@gmail.com](mailto:shua2a@gmail.com) - ORCID: 0000-0002-5247-215X

<sup>11</sup>Nursing Technician, Nursing Department, Northern Borders Health Cluster, Saudi Arabia  
Email: [budu2r@gmail.com](mailto:budu2r@gmail.com) - ORCID: 0000-0002-5247-115X

<sup>12</sup>Nursing Specialist, Maternity and Children's Hospital, Northern Border Health Cluster, Saudi Arabia  
Email: [mon2a@gmail.com](mailto:mon2a@gmail.com) - ORCID: 0000-0002-5247-225X

### Article Info:

DOI: 10.22399/ijcesen.4859

Received : 01 June 2024

Accepted : 30 June 2024

### Keywords

Health Education,  
Patient Awareness,  
Health Literacy,  
Health Outcomes,  
Nurse-Patient Interaction.

### Abstract:

This comprehensive research paper examines the critical nexus between structured health education provided by nurses and its measurable effect on enhancing patient awareness, which serves as a fundamental precursor to improved health outcomes. Operating from the premise that nurses are the primary and most effective health educators due to their sustained, holistic patient interactions, the paper employs an extensive literature review methodology to analyze this relationship across multiple dimensions. It establishes a theoretical foundation, linking pedagogical frameworks like Social Cognitive Theory and the Health Belief Model directly to the process of patient empowerment. The analysis details the multifaceted role of the nurse as an assessor, tailored information provider, cultural broker, and transition coach throughout the healthcare continuum. It further evaluates evidence-based educational strategies, including the teach-back method and motivational interviewing, and investigates their impact on clinical indicators, self-care behaviors, healthcare utilization, and quality of life. The paper also rigorously addresses the systemic and practical barriers—such as

time constraints and insufficient training—that impede optimal education delivery, while proposing facilitators like institutional support and technology integration. Concluding with future directions, the research advocates for curricular reform, policy change, and advanced research to amplify the societal impact of nurse-led education. The synthesis of evidence confirms that deliberate, theory-informed nursing pedagogy is a powerful, cost-effective intervention for building patient awareness, fostering self-management, and contributing to the broader goals of sustainable, patient-centered healthcare.

## 1. Introduction

Health education, a cornerstone of modern nursing practice, transcends the mere dissemination of information. It is a planned, holistic, and interactive process aimed at empowering individuals, families, and communities to make informed decisions about their health, adopt healthy behaviours, and improve their overall quality of life [1]. Within the intricate ecosystem of healthcare, nurses stand as the most constant and trusted point of contact for patients. Their unique position—characterized by sustained, intimate patient interactions—renders them not only primary caregivers but also the most effective and impactful health educators [2]. The research topic, "**Health Education Provided by Nurses and Its Effect on Patient Awareness**," delves into the critical nexus between structured nursing-led educational interventions and the enhancement of patient knowledge, comprehension, and self-efficacy. This paper posits that systematic, patient-centred health education delivered by nurses is a fundamental determinant of heightened patient awareness, which in turn serves as a pivotal precursor to improved clinical outcomes, enhanced adherence to treatment plans, and successful long-term disease management.

The evolution of nursing from a task-oriented vocation to a knowledge-based profession has placed patient education at the heart of its mandate. Historically, nursing focused on providing comfort and carrying out physician orders. However, paradigm shifts towards patient-centred care, preventive health, and chronic disease management have redefined the nurse's role. Contemporary nursing frameworks, such as the American Nurses Association's standards, explicitly identify patient education as an essential component of professional practice [3]. This educational role is no longer ancillary; it is integral to the nursing process—assessment, diagnosis, planning, implementation, and evaluation. Nurses assess learning needs, diagnose knowledge deficits, set mutually agreed-upon educational goals, implement tailored teaching strategies, and evaluate the effectiveness of their education, thereby closing the loop of care [4]. This systematic integration underscores that health education is not an optional add-on but a core therapeutic intervention in its own right.

Patient awareness, in this context, is a multidimensional construct. It extends beyond simple recall of facts (knowledge) to encompass a deeper understanding of one's health condition, its aetiology, the rationale behind prescribed treatments, potential complications, and the necessary lifestyle modifications [5]. True awareness involves comprehension, where patients can connect information to their personal context, and self-efficacy, the belief in their capability to execute behaviours necessary to manage their health [6]. For instance, a patient with diabetes may be *aware* not only of their target blood sugar levels but also understands how different foods affect those levels, believes they can monitor and adjust their diet, and recognizes the early signs of hypoglycaemia. This level of awareness is a critical mediator between receiving care and actively participating in it. It transforms a passive recipient of care into an active partner in the healthcare journey, a transition essential for managing the growing global burden of chronic illnesses such as hypertension, heart failure, and COPD [7].

The imperative for effective nurse-led health education is amplified by several global healthcare trends. The rising prevalence of chronic diseases, often managed outside acute care settings, demands that patients possess the knowledge and skills for daily self-management [8]. Similarly, shorter hospital stays compress the time available for teaching, making concise, impactful, and reinforced education crucial for preventing readmissions [9]. Furthermore, the increasing cultural diversity of patient populations necessitates culturally sensitive and linguistically appropriate educational approaches to ensure comprehension and relevance [10]. In this complex landscape, the nurse's role as an educator becomes the linchpin for ensuring continuity of care, promoting health literacy, and bridging the gap between hospital and home. Despite its acknowledged importance, the delivery of health education in clinical practice is often inconsistent, hindered by barriers such as time constraints, heavy workloads, lack of formal training in pedagogical techniques, and variability in institutional support and resources [11]. This gap between the ideal and the practice makes investigating the specific methods, content, and timing of nursing education that most effectively

boost patient awareness an urgent scholarly and clinical priority.

This research will explore the mechanisms through which nurses impart health education. These methods range from formal, structured teaching sessions to informal, opportunistic moments of teaching during routine care. Effective strategies often include the use of teach-back methods (where patients explain information in their own words), the provision of written and visual aids tailored to health literacy levels, motivational interviewing to address ambivalence, and the involvement of family members in the educational process [12]. The setting also varies, encompassing acute care hospitals, primary care clinics, long-term care facilities, and community health visits. The central hypothesis is that the quality, consistency, and patient-centredness of these nursing interventions have a direct and measurable effect on elevating patient awareness. Enhanced awareness is then linked to tangible outcomes: better medication adherence, improved ability to recognize warning signs, more confident performance of self-care procedures (like wound care or insulin injection), and ultimately, better management of the health condition [13].

## 2. The Theoretical Foundation: Linking Nursing Pedagogy to Patient Empowerment

The efficacy of health education provided by nurses is not a matter of haphazard information transfer; rather, it is deeply rooted in a robust theoretical foundation that connects deliberate pedagogical strategies to the ultimate goal of patient empowerment. Understanding these underpinning theories is crucial for moving beyond anecdotal evidence and constructing a scientific framework that explains *how* and *why* nursing education influences patient awareness and behavior. These theories provide nurses with a predictive and explanatory lens, guiding the assessment of learning needs, the design of interventions, and the evaluation of outcomes, thereby transforming education from an intuitive art into a replicable, evidence-based science [14]. At its core, this theoretical nexus posits that effective pedagogy is the primary vehicle through which patients transition from a state of passive dependence to active, informed self-management.

One of the most influential frameworks in this domain is Bandura's Social Cognitive Theory (SCT), with its central construct of self-efficacy. SCT posits that learning occurs in a dynamic triad of personal, behavioral, and environmental factors. For nursing education, this translates to understanding that a patient's confidence (self-

efficacy) in managing their health is a stronger predictor of action than their knowledge alone [15]. A nurse applying SCT principles does not simply list instructions for diabetic foot care; instead, they create mastery experiences through supervised practice, provide vicarious learning by sharing stories of successful peers, offer verbal persuasion and encouragement, and help interpret physiological feedback (e.g., explaining stable blood glucose readings as a success) [16]. This pedagogical approach directly builds the patient's belief in their capabilities, which is the engine of empowerment. Empowered with high self-efficacy, a patient is more likely to adhere to complex medication regimens, persist in lifestyle changes, and proactively problem-solve challenges that arise in their daily management.

Complementing SCT, the Health Belief Model (HBM) offers a valuable framework for understanding the cognitive prerequisites for health action. The HBM suggests that a patient's readiness to act depends on their perceived susceptibility to a health threat, the perceived severity of that threat, the perceived benefits of taking action, and the perceived barriers to doing so, all triggered by cues to action [17]. A nurse's pedagogical strategy, informed by the HBM, involves structured assessment and addressing of these perceptions. For instance, educating a hypertensive patient requires more than stating, "Take this pill." Effective pedagogy involves clarifying their personal risk (susceptibility/severity) of stroke or kidney disease, explicitly linking medication adherence to risk reduction (benefits), and collaboratively identifying and addressing side effects or cost concerns (barriers) [18]. The nurse acts as a facilitator who shapes these perceptions through factual information, empathetic dialogue, and practical support, thereby aligning the patient's health beliefs with therapeutic goals and empowering them to make the rational choice to engage in protective behaviors.

Further deepening the theoretical understanding is the concept of health literacy, which is both an outcome of and a mediator for effective education. Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information needed to make appropriate health decisions [19]. It is a critical component of patient awareness. Nursing pedagogy must be explicitly designed to address varying levels of health literacy. This involves employing universal precautions—assuming all patients may have difficulty understanding—and using techniques such as the Teach-Back Method, where patients explain information in their own words, simplifying language, and utilizing visual

aids [20]. Theories of adult learning (Andragogy), as articulated by Knowles, further specify that effective education for adults must be relevant, problem-centered, and acknowledge the learner's experience [21]. Thus, a nurse practicing theory-informed pedagogy does not deliver a standardized lecture; they co-create knowledge with the patient, connecting medical advice to the patient's life context, which directly enhances comprehension, retention, and the practical application of knowledge—key dimensions of true empowerment. The Transtheoretical Model (TTM), or Stages of Change model, provides another essential lens, recognizing that behavioral change is a process, not an event. The model identifies stages: precontemplation, contemplation, preparation, action, and maintenance [22]. A one-size-fits-all educational approach is ineffective if a patient is in precontemplation (not seeing a problem) versus action (actively trying new behaviors). Nursing pedagogy, guided by the TTM, becomes stage-matched. For a patient in precontemplation regarding smoking cessation, education focuses on raising awareness of consequences (increasing perceived susceptibility/severity). For a patient in preparation, pedagogy shifts to developing a concrete plan, identifying support systems, and building skills [23]. This tailored approach respects the patient's autonomy and readiness, preventing alienation and fostering a collaborative partnership. It empowers patients by meeting them where they are and providing the specific type of information and support needed to progress to the next stage of change.

Finally, the broader philosophy of Patient Empowerment itself serves as an overarching theoretical orientation. Empowerment is defined as a social process of recognizing, promoting, and enhancing patients' abilities to meet their own needs, solve their own problems, and mobilize the necessary resources to gain control over their own lives [24].

### 3. The Nurse as Educator: A Multifaceted Role in the Healthcare Continuum

The role of the nurse as an educator is not a singular task but a complex, multifaceted identity woven into the very fabric of patient care across every setting and stage of the health journey. Unlike other healthcare professionals whose patient interactions may be episodic and condition-specific, the nurse's presence is constant and holistic, providing a unique platform for sustained, impactful education. This educational mandate is a fundamental standard of professional nursing practice, demanding a diverse skill set that

integrates clinical expertise with psychosocial insight, cultural competence, and pedagogical savvy [25]. From the acute care bedside to the community clinic, and from the moment of diagnosis through long-term management, the nurse operates as the chief interpreter of the healthcare experience, translating medical jargon into actionable knowledge and empowering patients to navigate their own care. This section elucidates the dimensions of this critical role, positioning the nurse educator as an indispensable agent for fostering patient awareness and autonomy throughout the healthcare continuum.

The foundational facet of this role is that of **Assessor and Diagnostician of Learning Needs**. Effective education cannot begin without a clear understanding of the learner. The nurse systematically assesses a multitude of factors that influence a patient's ability to learn and become aware. This goes beyond identifying a knowledge deficit about a disease. It involves evaluating the patient's health literacy level, their readiness to learn (often informed by stages of change models), their emotional state (e.g., anxiety, denial), their cultural beliefs and values regarding health and illness, their physical limitations (e.g., pain, fatigue), and their available support systems [26]. The nurse diagnoses not just "diabetes" but "deficient knowledge regarding glycemic self-monitoring related to unfamiliarity with device use and anxiety about needle sticks as evidenced by verbal statements and observed hesitation." This precise diagnostic approach allows for a highly individualized educational plan, ensuring that the content, pace, and method of teaching are tailored to the unique person, not just the generic disease. It is this personalized assessment that forms the critical first step in making education relevant and effective.

Building upon this assessment, the nurse assumes the role of **Tailored Information Provider and Skill Developer**. Here, pedagogical theory meets practice. The nurse selects, adapts, and delivers information using strategies proven to enhance comprehension and retention. This involves employing the teach-back method to confirm understanding, utilizing plain language and appropriate visual aids, demonstrating procedures, and providing opportunities for supervised practice of skills like wound care or insulin injection [27]. Furthermore, the nurse acts as a **Cultural Broker and Communicator**, bridging potential gaps between the biomedical model and the patient's belief system. They respect and incorporate culturally specific health practices where safe to do so, use professional interpreters when needed, and ensure that educational materials are linguistically

and culturally congruent [28]. This culturally sensitive approach is not merely about politeness; it is a prerequisite for true understanding and trust, ensuring that the education resonates and is integrated into the patient's life worldview, thereby significantly deepening awareness and promoting adherence.

A particularly critical facet of the nurse's educational role is that of **Facilitator of Continuity and Transition Coach**. The modern healthcare landscape is often fragmented, with patients moving between hospitals, primary care providers, specialists, and home. The nurse educator is pivotal in ensuring that patient awareness and self-management capabilities are maintained across these transitions. During hospital discharge, the nurse provides comprehensive education to prevent readmission, reviewing medications, warning signs, and follow-up plans [29]. In chronic disease management within primary care or community settings, the nurse provides ongoing, longitudinal education, helping patients adapt to the evolving nature of their condition, troubleshooting new challenges, and reinforcing positive behaviors [30]. This continuous, relationship-based education counters the "information dumping" that can occur in episodic care, allowing for reinforcement, clarification, and adjustment of the educational plan over time, which is essential for sustaining long-term patient awareness and self-efficacy.

Beyond the individual patient interaction, the nurse educator also functions as a **Collaborator and Advocate within the Interprofessional Team**. Patient education is most effective when it is consistent and reinforced by all team members. The nurse communicates the patient's identified learning needs, health literacy level, and educational goals to physicians, pharmacists, physical therapists, and social workers [31]. They advocate for the patient's need for understandable information and for the time and resources required to provide adequate education. This collaborative role ensures a unified, patient-centred approach, preventing mixed messages and maximizing the systemic support for the patient's learning journey. Additionally, the nurse often extends their educational role to **Family and Community Educator**, recognizing that health decisions are frequently made within a social context. By educating family caregivers, the nurse creates a supportive home environment that reinforces learning and assists with care management, thereby extending the reach and impact of their pedagogical efforts [32].

Despite its centrality, the nurse educator role is fraught with **Challenges and Systemic Barriers** that can impede its full realization.

Chronic nursing shortages and high patient acuity lead to time constraints that often force education to be rushed or omitted [33]. Furthermore, a lack of formal training in pedagogical methods for many practicing nurses can result in variable educational quality and reliance on inefficient, lecture-style formats. Institutional culture may not always prioritize or value patient education, failing to provide adequate resources, protected time, or remuneration for this complex cognitive work [34].

#### 4. Strategies and Modalities: Effective Methods for Delivering Nurse-Led Health Education

The translation of the nurse's educational role into tangible improvements in patient awareness hinges on the deliberate selection and skilled application of specific pedagogical strategies and modalities. Moving beyond the simple transmission of facts, effective nurse-led education employs interactive, patient-centered, and evidence-based methods designed to overcome barriers of health literacy, motivation, and context. These strategies are the practical tools that bring theoretical frameworks—such as self-efficacy building and staged-based approaches—to life at the bedside and in the community. The choice of method is not arbitrary; it is a critical clinical decision that should be informed by a prior assessment of the patient's learning needs, readiness, preferences, and environment [35]. This section examines the core strategies that constitute best practice in nursing pedagogy, demonstrating how their systematic use directly enhances comprehension, retention, and the practical application of knowledge, thereby solidifying patient awareness.

Foremost among these evidence-based strategies is the **Teach-Back Method** (also known as the "show-me" or "closing the loop" method). This technique is arguably the single most powerful tool for confirming understanding and correcting misconceptions in real-time. Instead of asking, "Do you understand?" which often elicits a passive "yes," the nurse asks the patient to explain or demonstrate in their own words what they have just been taught, such as, "I want to make sure I explained everything clearly. Can you tell me in your own words what the two most important warning signs are that mean you should call the doctor?" [36]. This process does not test the patient but rather evaluates the nurse's effectiveness in teaching. It immediately reveals gaps in understanding, allowing for clarification and re-teaching until comprehension is verified. Studies consistently show that teach-back improves knowledge retention, self-management skills, and outcomes in conditions like heart failure and

diabetes, while also reducing readmission rates [37]. It operationalizes the principle of active learning and is a fundamental strategy for ensuring that awareness is accurate and complete.

For patients facing necessary but challenging behavioral changes, **Motivational Interviewing (MI)** is an indispensable conversational modality. MI is a collaborative, person-centered form of guiding that elicits and strengthens an individual's own motivation for change [38]. Recognizing that ambivalence is a normal part of the change process, the nurse using MI avoids confrontation and unsolicited advice. Instead, they employ core skills such as open-ended questions, affirmative statements, reflective listening, and periodic summarization to explore the patient's own reasons for change, resolve ambivalence, and build commitment. For example, with a patient reluctant to start an exercise regimen for COPD management, the nurse might reflect, "So on one hand, you're worried that getting short of breath might be dangerous, and on the other, you miss being able to play with your grandchildren." This approach helps the patient articulate their own motivations, enhancing intrinsic motivation and self-efficacy—key drivers of sustained awareness and action [39]. MI is particularly effective in the contemplation and preparation stages of change, making education a dialogue rather than a monologue.

The strategic use of **Tailored Educational Materials and Multi-Modal Delivery** is crucial to accommodate diverse learning styles and health literacy levels. Relying solely on verbal instruction is insufficient and excludes many learners. Effective nursing pedagogy integrates visual, auditory, and kinesthetic modalities. This includes using simple, pictogram-based instructions for medication schedules, providing anatomically correct models for demonstration, creating personalized asthma action plans with color-coded zones, or utilizing short, focused video demonstrations for wound care [40]. The principle of "universal precautions for health literacy" mandates that information is delivered in a way that is accessible to all, assuming anyone may have difficulty understanding complex medical information [41]. Furthermore, education must be tailored not just to literacy but to cultural and personal relevance. A dietary plan for a diabetic patient must consider cultural food preferences and budgetary constraints to be actionable. By providing take-home materials that reinforce verbal teaching and are customized to the individual, the nurse extends the educational encounter, providing a reference that supports ongoing awareness and independent problem-solving at home.

Finally, the innovative use of **Technology-Enhanced and Follow-Up Modalities** is reshaping the continuity of nurse-led education. The traditional one-time teaching session is often inadequate for long-term condition management. Nurses are increasingly leveraging technology to reinforce and sustain education. This includes scheduled follow-up phone calls to reinforce discharge instructions, secure messaging via patient portals to answer emerging questions, and referral to or management of interactive online patient education platforms and reputable mobile health applications [42]. For chronic disease management, structured telephone coaching or telehealth video visits allow nurses to provide ongoing education, monitor progress, and re-assess understanding over time, creating a continuous feedback loop [43]. These modalities break down the barriers of time and geography, allowing the nurse educator to maintain a supportive presence in the patient's life beyond the clinical encounter. They are particularly effective in reinforcing knowledge, promoting adherence, and early identification of knowledge decay or new learning needs, thereby maintaining patient awareness at an optimal level [44].

However, the effective deployment of these strategies is contingent upon a supportive environment. Nurses require training to master techniques like MI and teach-back, which are specific clinical skills. Institutional support in the form of time allocated for education, access to high-quality multi-lingual and low-literacy materials, and integrated technology platforms is essential [45].

## 5. Measuring the Impact: Patient Awareness as a Catalyst for Improved Health Outcomes

The ultimate validation of nurse-led health education lies in its demonstrable effect on patient health and healthcare system efficacy. Patient awareness, cultivated through structured education, is not an endpoint in itself but a critical catalyst that activates a chain of positive outcomes. This heightened state of understanding and self-efficacy empowers patients to become active agents in their care, translating knowledge into sustained action. Measuring this impact requires looking beyond simple satisfaction surveys to concrete, quantifiable indicators across clinical, behavioral, and systemic domains [45]. The evidence robustly illustrates that when nurses successfully elevate patient awareness, the ripple effects manifest in improved biomedical markers, enhanced self-management behaviors, reduced acute care utilization, and superior quality of life, thereby affirming the profound return on investment in nursing pedagogy.

The most direct evidence of impact is observed in **Improved Clinical and Biomedical Outcomes** across a spectrum of chronic conditions. For instance, in diabetes management, nurse-led educational interventions focusing on glucose self-monitoring, dietary choices, and medication understanding have been consistently linked to significant reductions in HbA1c levels, a key marker of long-term glycemic control [46]. Similarly, for patients with heart failure, education on daily weight monitoring, sodium restriction, and medication adherence leads to better stabilization of symptoms, reduced peripheral edema, and improved cardiac function metrics [47]. In hypertension management, patients who receive thorough education from nurses about the nature of their condition and the importance of consistent medication intake achieve better blood pressure control compared to those who receive standard information alone [48]. These improvements are not coincidental; they are the direct result of patients applying their acquired awareness to daily decisions—choosing appropriate foods, recognizing early signs of decompensation, and adhering to complex pharmaceutical regimens—demonstrating a clear cause-and-effect pathway from education through awareness to tangible physiological benefit.

A crucial intermediate outcome that directly stems from increased awareness is **Enhanced Self-Care Behaviors and Adherence**. Awareness provides the "why" and the "how," making prescribed behaviors meaningful and actionable. Studies show that patients who can accurately describe the purpose and side effects of their medications are significantly more likely to adhere to them [49]. A patient with COPD who understands the mechanism of their inhaler and the consequence of improper use is more likely to demonstrate correct technique. Furthermore, awareness fosters proactive symptom management. A nurse-educated post-operative patient, aware of signs of infection, will seek timely help, preventing complications [50]. This domain also encompasses lifestyle modifications. Awareness of the link between dietary sodium and fluid retention in heart failure makes dietary choices conscious rather than arbitrary. These behavioral outcomes are measurable through tools like medication possession ratios, validated self-efficacy scales, direct observation of skill performance, and self-reported adherence logs, all of which show positive correlations with the depth and quality of prior patient education [51].

From a systemic perspective, one of the most significant impacts of effective education is the **Reduction in Healthcare Utilization and**

**Associated Costs**, particularly through decreased hospital readmissions. A lack of understanding about post-discharge care is a major driver of preventable readmissions. Comprehensive nurse-led discharge education, utilizing teach-back and tailored planning, has been proven to drastically reduce 30-day readmission rates for conditions like pneumonia, acute myocardial infarction, and heart failure [52]. When patients are aware of warning signs, medication schedules, and follow-up procedures, they can manage their recovery effectively at home and intervene early, avoiding crises that necessitate rehospitalization. This translates to substantial cost savings for healthcare systems and reduces the physical and emotional burden on patients [53]. Additionally, increased awareness promotes appropriate use of services; patients are better equipped to manage minor issues independently while knowing when to contact their provider or seek urgent care, optimizing the use of primary care over emergency department visits [54].

Finally, the impact culminates in the paramount goal of **Improved Patient-Reported Outcomes and Quality of Life (QoL)**. Health education empowers patients, reducing feelings of helplessness and anxiety. When patients understand their condition and feel confident in managing it, they experience less illness-related distress and a greater sense of control [55].

## 6. Barriers and Facilitators: Navigating Challenges in Clinical Practice

Despite the unequivocal evidence supporting its value, the consistent and effective implementation of nurse-led health education faces significant real-world challenges. The gap between theoretical ideal and daily practice is often wide, shaped by a complex interplay of individual, interpersonal, and systemic factors. Successfully navigating this landscape requires an honest examination of these pervasive barriers alongside the identification of key facilitators that can enable nurses to fulfill their vital educational role. Understanding this dynamic is essential for moving from merely acknowledging the importance of patient education to creating practice environments where it is sustainably and effectively executed. This section delineates the primary obstacles that constrain nursing pedagogy and outlines the supportive structures necessary to overcome them, framing the issue as one requiring both individual skill development and systemic transformation.

The most frequently cited and pervasive barrier is the **constraint of time and excessive workload**. In environments characterized by high patient acuity,

understaffing, and administrative burdens, patient education is often the first task to be sacrificed or abbreviated. Nurses report feeling that providing comprehensive education is a luxury they cannot afford within the pressures of a standard shift, leading to rushed, fragmented, or omitted teaching moments [56]. This issue is exacerbated in acute care settings with shorter lengths of stay, where the imperative to educate is highest yet the time is most compressed. The resulting "task-oriented" care model prioritizes immediate clinical procedures (e.g., medication administration, wound dressing) over the cognitive work of teaching, despite the latter being crucial for long-term recovery. This environment creates a moral distress for nurses who recognize the educational need but lack the temporal resources to address it adequately, ultimately compromising patient awareness and preparedness for discharge or self-management [57].

A second critical barrier lies in the **deficits in nurses' own pedagogical preparation and confidence**. While nurses are clinical experts, many enter practice and operate for years without formal training in adult learning principles, motivational techniques, or health literacy communication strategies. Nursing curricula may emphasize clinical knowledge over teaching methodology, leaving nurses to rely on intuition or mimicry rather than evidence-based educational practice [58]. This can result in ineffective, lecture-style education that fails to engage patients or assess understanding. A nurse may lack confidence in using techniques like motivational interviewing or may not know how to adapt materials for low-literacy populations. Furthermore, without training, nurses may underestimate the complexity of the educational process, viewing it as a simple transfer of information rather than a skilled intervention requiring assessment, planning, and evaluation. This competency gap directly impacts the quality and effectiveness of the awareness they strive to build [59].

Significant challenges also originate from the **patient and family context**. Low health literacy, which affects a substantial portion of the population, presents a formidable obstacle. When patients have difficulty understanding basic health information, standard educational approaches fail, leading to frustration on both sides [60]. Cultural and language differences can further complicate communication, requiring interpreters and culturally tailored materials that may not be readily available. Additionally, patient readiness—*influenced by factors like denial, anxiety, depression, or competing life priorities*—can impede learning. A patient in shock from a new

cancer diagnosis or overwhelmed by socioeconomic stressors may not be psychologically available to absorb complex management plans, no matter how skillfully the nurse teaches [61]. Nurses must therefore possess not only teaching skill but also the psychosocial acuity to identify and adapt to these barriers, which requires additional time and emotional labor.

At the organizational and systemic level, barriers are deeply entrenched. A **lack of institutional priority and resource allocation** for patient education is a fundamental hurdle. This manifests in the absence of protected time for education within patient assignments, insufficient funding for high-quality multilingual teaching materials, and a lack of dedicated patient educator positions or clinical nurse specialist support [62]. Furthermore, healthcare systems often fail to measure and reward effective patient education. Performance metrics and reimbursement structures typically focus on procedural volume and immediate clinical outcomes, not on the process of patient empowerment or the quality of teaching provided. When education is invisible in an institution's key performance indicators, it is implicitly deemed less valuable, disincentivizing its practice despite policy statements affirming its importance [63]. This systemic devaluation creates an environment where overcoming individual-level barriers becomes a heroic individual effort rather than a standard of care.

Conversely, a range of **facilitators can powerfully enable effective nursing education**. Foremost among these is **strong institutional support and a culture of learning**. This includes formal policies that allocate specific time for education during nurse-patient interactions, the integration of patient education as a measurable standard in nursing job descriptions and performance reviews, and the provision of readily accessible, evidence-based teaching resources in multiple formats and languages [64]. Leadership that visibly champions patient education as a core component of quality care sets a tone that empowers staff nurses to prioritize it. Additionally, implementing structured, nurse-led discharge coordination programs or chronic disease management clinics explicitly designed with education as a central component has proven highly effective, as they create a dedicated space and time for this work [65].

Investment in **professional development and skill-building** is another crucial facilitator. Providing nurses with ongoing, mandatory training in health literacy universal precautions, the teach-back method, motivational interviewing, and cultural competency equips them with the tools to educate effectively and efficiently. When nurses feel

confident in their skills, they are more likely to engage in education and persist through challenges [66]. Mentorship from seasoned nurse educators or clinical nurse specialists can also build capacity within units. Furthermore, fostering **effective interprofessional collaboration** is key. When nurses, physicians, pharmacists, and social workers share educational goals and communicate clearly about the patient's learning needs and progress, it creates a consistent, reinforcing message for the patient and shares the responsibility, preventing the nurse from bearing the entire burden alone [67].

## 7. Future Directions: Enhancing Nursing Education for Greater Societal Health Impact

As the evidence solidifies the indispensable role of nurse-led education in cultivating patient awareness and improving outcomes, the imperative shifts from validation to optimization and expansion. The future trajectory of this field must focus on strategically enhancing the capacity, scope, and impact of nursing pedagogy to address escalating global health challenges, from the burden of chronic diseases to pervasive health inequities. Advancing this agenda requires a multi-pronged approach that targets the foundational preparation of nurses, leverages technological innovation, embeds education within broader public health initiatives, and pursues a refined research agenda. By systematically investing in these future directions, the nursing profession can amplify its societal impact, transitioning from a primarily clinical intervention model to a foundational pillar of community health promotion and sustainable healthcare systems.

A primary and foundational future direction is the **transformative reform of pre-licensure and continuing nursing education**. To prepare nurses as expert educators, pedagogical theory and skill development must be deeply integrated into core curricula, moving beyond a single course to become a thread woven throughout clinical training. This includes mandatory instruction in health literacy universal precautions, motivational interviewing, culturally responsive communication, and the use of evidence-based teaching modalities like teach-back [68]. Furthermore, curricula should emphasize population health and the social determinants of health, equipping nurses to educate patients within the context of their lived environment—addressing factors like food insecurity, transportation barriers, or health-related social needs that fundamentally impact a patient's ability to act on clinical advice [69]. Continuing education must then provide lifelong learning opportunities, ensuring practicing nurses can master

emerging educational technologies and adapt to new evidence. Ultimately, the goal is to institutionalize the identity of “nurse as educator” from the first day of training, supported by robust clinical preceptorship that models and reinforces exemplary patient teaching.

Parallel to educational reform is the critical need to **advance and ethically integrate digital health technologies and artificial intelligence (AI)** into nursing pedagogy. The future of patient education is hybrid, blending the irreplaceable human connection of the nurse with the scalability and personalization of technology. Nurses will increasingly serve as curators and interpreters of digital tools, guiding patients toward reputable mobile health applications, interactive online learning modules, and remote monitoring devices [70]. AI-powered clinical decision support can prompt nurses with tailored patient education recommendations based on diagnosis, medications, and even documented health literacy level within the electronic health record. Chatbots and virtual assistants, overseen by nursing professionals, can provide 24/7 reinforcement of educational content and answer routine questions, freeing nurse time for complex counseling [71]. However, this direction demands careful navigation of the digital divide, ensuring equitable access, and maintaining a human-centered approach where technology augments, rather than replaces, the therapeutic nurse-patient relationship and its capacity to build trust and motivate change.

To achieve true societal impact, nurse-led education must **expand its setting and scope beyond the individual patient encounter to embrace community-centric and public health models**. This involves nurses taking leadership roles in community-based participatory health promotion programs, designing and delivering education in schools, workplaces, faith-based centers, and via community health worker partnerships [72]. In these roles, nurses address preventative education and chronic disease management on a population level, targeting awareness before acute illness occurs. A powerful future direction is the formal integration of nurses into policy advocacy, using their frontline experience to inform legislation that supports health education, such as mandating plain-language medication labels, funding community wellness programs, or requiring health literacy assessments in care standards [73]. By operating at this macro level, nurses can alter the environmental and policy contexts that shape individual behavior, thereby multiplying the impact of their educational efforts and addressing root causes of poor health awareness at a systemic level. The **development and implementation of robust, standardized**

**metrics and reimbursement models** is another essential frontier. For health systems to prioritize and invest in nursing education, its value must be quantifiable in economic and quality terms. Future work must establish core outcome sets for measuring the effectiveness of patient education interventions, moving beyond process measures (e.g., “education provided”) to validated metrics of sustained awareness, behavioral change, and patient-reported empowerment [74]. Concurrently, advocacy is needed for policy changes that create sustainable financing mechanisms. This could include advocating for Medicare and insurance reimbursement codes specifically for complex, nurse-led patient education and self-management training sessions, similar to reimbursement for diabetic education programs [75]. Demonstrating a clear return on investment—through reduced hospitalizations, improved medication adherence, and decreased complications—is the most persuasive argument for allocating dedicated resources and protected time for nurses to perform this role effectively.

Finally, a targeted **future research agenda** is required to close persistent evidence gaps and guide innovation. Priorities include comparative effectiveness research to determine the most potent combinations of educational strategies for specific populations (e.g., tailored digital intervention plus brief motivational interviewing), and longitudinal studies to understand how to sustain patient awareness over decades of chronic illness management [76]. Implementation science research is crucial to identify the most effective strategies for embedding best-practice education into diverse clinical settings, overcoming the known barriers of time and workflow. Furthermore, research must explore the causal pathways more deeply, using qualitative and mixed methods to understand the patient’s lived experience of education and how awareness translates into action within different cultural and socioeconomic contexts [77].

## 8. Conclusion

In conclusion, this research substantiates the profound and multi-layered impact of nurse-provided health education on patient awareness. The analysis demonstrates that this awareness is not a passive state of being informed but an active, multidimensional construct encompassing knowledge, comprehension, self-efficacy, and the capability for action. Through their unique position in the healthcare system, nurses are optimally placed to cultivate this awareness by employing tailored, evidence-based pedagogical strategies grounded in established behavioral theories. The

evidence is clear: when effectively executed, nurse-led education acts as a powerful catalyst, leading to improved biomedical outcomes, enhanced adherence to treatment plans, a reduction in preventable hospital readmissions, and an elevated quality of life for patients managing acute and chronic conditions.

However, the full potential of this intervention is often constrained by significant barriers in clinical practice, including time limitations, variable levels of pedagogical training among nurses, and a systemic undervaluation of educational work within healthcare economics and metrics. To bridge the gap between evidence and practice, a dual-focused approach is imperative. First, at the institutional level, healthcare systems must prioritize patient education by allocating dedicated resources, integrating it into quality benchmarks, and developing sustainable reimbursement models. Second, the nursing profession itself must champion this role by embedding advanced pedagogical training into both pre-licensure curricula and continuing professional development, ensuring every nurse is equipped as a confident and competent educator.

The future of healthcare, with its emphasis on prevention, chronic disease management, and health equity, demands an empowered patient population. Nurses, as the most trusted and constant healthcare providers, are fundamental to achieving this vision. Therefore, investing in and optimizing nurse-led health education is not merely an enhancement of clinical practice but a strategic imperative for building a more effective, efficient, and humane healthcare system. Future efforts must focus on implementation science, technological integration, and policy advocacy to ensure that every patient interaction is leveraged as an opportunity to educate, empower, and elevate health awareness for all.

## Author Statements:

- **Ethical approval:** The conducted research is not related to either human or animal use.
- **Conflict of interest:** The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper
- **Acknowledgement:** The authors declare that they have nobody or no-company to acknowledge.
- **Author contributions:** The authors declare that they have equal right on this paper.

- **Funding information:** The authors declare that there is no funding to be acknowledged.
- **Data availability statement:** The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.
- **Use of AI Tools:** The author(s) declare that no generative AI or AI-assisted technologies were used in the writing process of this manuscript.

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