

Original Article

The Relationship Between Perceptions and Experiences of Diploma Nursing Students in Chronic Disease Patient Education in Community Settings: A Cross-Sectional Study



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ABSTRACT

Background: The increasing burden of chronic diseases requires nurses to play an active educational role in empowering patients and supporting self-management. Therefore, nursing students must develop appropriate perceptions and gain practical experience in patient education. This study aimed to analyze the relationship between perceptions and experiences of Diploma Nursing students in providing chronic disease education in community settings.

Methods: A quantitative cross-sectional study was conducted in accordance with the STROBE guidelines. The study involved 73 final-year Diploma Nursing students who had completed family and community nursing practice. Participants were selected using proportionate stratified random sampling. Students' perceptions of patient education were treated as the independent variable, while their educational practice experiences were considered the dependent variable. Data were collected using a structured questionnaire with confirmed validity and reliability, and were analyzed using Pearson's correlation test with a significance level of 0.05.

Results: The majority of students demonstrated high perceptions regarding the importance of chronic disease patient education in community settings (76.8%) and reported favorable educational practice experiences (65.7%). Statistical analysis revealed a significant positive correlation between perceptions and experiences ($r = 0.612$; $p < 0.001$), indicating a moderate to strong association.

Conclusion: Positive perceptions of the nurse's educational role are associated with better educational practice experiences among Diploma Nursing students in community settings. These findings highlight the importance of strengthening community-based nursing education and integrating theoretical learning with practical patient education experiences to enhance students' preparedness to function as effective health educators.

Keywords: Chronic disease patient education; Perception; Experience; Diploma nursing students; Community nursing.

Implications for Practice:

- Strengthening students' understanding of the nurse's educational role in family and community nursing can enhance their engagement and effectiveness in delivering chronic disease education to patients and families.
- Family and community nursing placements

Implications for Practice:

- should provide structured opportunities for students to conduct patient and family education during home visits and community health activities, supported by appropriate clinical supervision, role modeling, and constructive feedback.
- Emphasizing therapeutic communication, family empowerment, and self-management



Implications for Practice:

support, and integrating patient and family education into routine practice, can better prepare Diploma Nursing students to function as effective health educators at the community level.

Introduction

Chronic diseases continue to represent a major public health challenge worldwide, particularly within community health systems where long-term care and continuity of services are essential. Unlike acute illnesses, chronic conditions require ongoing management over extended periods and often involve complex interactions between physical symptoms, psychological well-being, social functioning, and overall quality of life. Recent studies have emphasized that individuals living with chronic illness frequently experience multidimensional care needs, making fragmented and purely biomedical approaches insufficient for effective disease management ([Hajdarevic et al., 2025](#)).

Contemporary models of chronic disease management increasingly emphasize patient involvement and shared decision-making. The self-management approach positions patients as active partners in their care, supported by healthcare professionals who facilitate learning, problem-solving, and behavioral change. Strengthening patients' self-management capacities has been associated with improved disease control, treatment adherence, and sustained health outcomes ([Huang et al., 2024](#)). Within this framework, patient education plays a central role in enabling patients to understand their conditions, make informed decisions, and engage in daily self-care practices.

Nurses play a pivotal role in delivering patient education, particularly in community settings where long-term relationships with patients and families are established. Nurse-led educational

interventions are effective in improving chronic disease management across various healthcare contexts. Through structured and continuous education, nurses support patients in recognizing health risks, adopting healthier behaviors, and maintaining self-management strategies over time ([Bashir & Ahmad, 2024](#)). As frontline providers in community health services, nurses are uniquely positioned to integrate educational activities into routine care.

Community nursing practice emphasizes health promotion and disease prevention through collaboration with individuals, families, and communities. In this setting, nurses function not only as care providers but also as health educators who facilitate patient empowerment and long-term engagement in care. Previous research has highlighted the importance of the educational role of community nurses in supporting chronic disease management and improving patient outcomes ([Albarnawi et al., 2023](#)).

Given the centrality of patient education in community nursing, preparing nursing students to assume this role is a key objective of nursing education programs. Nursing education aims to equip students with theoretical knowledge, practical skills, and professional attitudes required for real-world practice. Family and community nursing placements provide contextual learning environments where students can apply patient education concepts through direct interaction with patients and communities, thereby fostering experiential learning and professional development ([Procter et al., 2025](#)).

Students' engagement in patient education during clinical practice, however, is influenced not only by the availability of learning opportunities but also by their perceptions of the nurse's educational role. Positive perceptions toward patient education have been associated with

greater readiness, motivation, and confidence in delivering health education, whereas less supportive perceptions may limit students' participation in educational activities. Professional perceptions developed during nursing education are, therefore, considered important determinants of students' competency development ([Mariyanti et al., 2022](#)).

In addition to perceptions, students' practical experiences in delivering patient education constitute a critical component of nursing education. Direct exposure to community practice allows students to encounter real-world challenges, including communication barriers, sociocultural diversity, and variations in health literacy among patients. Qualitative evidence suggests that meaningful educational practice experiences contribute to strengthening students' educational roles and preparing them for professional practice ([Shi & Cleofas, 2023](#)).

Despite the acknowledged importance of both perceptions and practical experiences, empirical studies examining the relationship between these two constructs among nursing students remain limited. This gap is particularly evident in community settings within low- and middle-income countries such as Indonesia. Moreover, research focusing specifically on Diploma Nursing students who represent a substantial proportion of the community healthcare workforce remains scarce. Most existing studies have explored students' perceptions or experiences separately, without empirically examining their interrelationship in the context of chronic disease patient education.

Therefore, this study aims to analyze the relationship between perceptions and experiences of Diploma Nursing students in delivering chronic disease patient education in community settings using a cross-sectional design. By examining this relationship, the study seeks to provide

empirical evidence to inform the development of more integrated community nursing education strategies and to enhance students' preparedness to perform their roles as health educators in chronic disease management.

Methods

Study Design

This study employed a quantitative cross-sectional design to examine the relationship between perceptions and experiences of Diploma Nursing students in delivering chronic disease patient education in community settings. Data were collected at a single time point without any intervention by the researchers. The reporting of this study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for observational research.

Participants

The study population consisted of final-year Diploma Nursing students who had completed family and community nursing practice. A total of 73 students participated in the study. Participants were selected using proportionate stratified random sampling based on community practice locations to ensure balanced representation across practice sites. The inclusion criteria were: (1) active enrollment in a Diploma Nursing program, (2) completion of family and community nursing practice, and (3) willingness to participate in the study. Students who were on academic leave or who did not complete community nursing practice during the study period were excluded. All returned questionnaires were complete and included in the analysis, resulting in a response rate of 100%. Data collection was carried out on 3 January 2026 among students undertaking family and community nursing practice within the service areas of primary health centers in



Serang Regency and Cilegon City, Banten Province, Indonesia.

Instruments

Data were collected using a structured self-administered questionnaire developed by the researchers based on relevant theoretical frameworks and previous empirical studies. The questionnaire comprised three sections: demographic characteristics, students' perceptions of chronic disease patient education, and students' experiences in delivering patient education during family and community nursing practice. Students' perceptions were measured using 15 items rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Students' experiences were assessed using 10 items rated on a five-point Likert scale ranging from 1 (never) to 5 (always). Total scores for each variable were calculated and categorized into low, moderate, and high levels based on score distribution. Content validity was assessed through expert judgment by three faculty members with expertise in family and community nursing. Reliability testing demonstrated good internal consistency, with Cronbach's alpha values of 0.89 for the perception scale and 0.86 for the experience scale. A pilot test was conducted among 10 students with similar characteristics; data from the pilot test were excluded from the final analysis.

Data Collection

Data were collected online using Google Forms. Before participation, students received detailed information regarding the study objectives, procedures, and ethical considerations, including confidentiality and anonymity. Participation was voluntary, and only questionnaires with complete responses were included in the analysis.

Data Analysis

Data analysis was performed using statistical software. Descriptive statistics were used to summarize participant characteristics and the distribution of perception and experience variables using frequencies and percentages. Pearson's correlation test was applied to examine the relationship between students' perceptions and experiences in delivering chronic disease patient education. Before conducting the correlation analysis, data normality was assessed using the Shapiro-Wilk test. All variables demonstrated normal distributions ($p > 0.05$). Statistical significance was set at $p < 0.05$, and the strength of the association was interpreted based on the correlation coefficient (r).

Ethical Considerations

Ethical approval for this study was obtained from the Ethics Committee of Universitas Faletehan (Approval No. 000640/UNIVERSITAS FALETEHAN/2026). All participants provided informed consent before data collection. Confidentiality and anonymity were maintained by excluding personal identifiers from the questionnaire and all research reports. The study was conducted in accordance with ethical principles for research involving human participants.

Results

Table 1. Participant Characteristics, Perceptions, and Experiences (n = 73)

Variable	Category	n (%)
Age (years)	< 20	14 (19.2)
	20–21	49 (67.1)
	≥ 22	10 (13.7)
Sex	Male	22 (30.1)
	Female	51 (69.9)
Perception of Chronic Disease Patient Education	Low	5 (6.8)
	Moderate	12 (16.4)
	High	56 (76.8)

Variable	Category	n (%)
Experience in Delivering Patient Education	Low	7 (9.6)
	Moderate	18 (24.7)
	High	48 (65.7)

Note: Pearson's correlation analysis indicated a statistically significant positive association between students' perceptions and their experiences in delivering chronic disease patient education ($r = 0.612$; $p < 0.001$).

Table 1 presents the demographic characteristics, perceptions, and experiences of Diploma Nursing students in delivering chronic disease patient education in community settings. Most participants were aged 20–21 years (49; 67.1%), followed by those younger than 20 years (14; 19.2%) and those aged ≥ 22 years (10; 13.7%). The majority of respondents were female (51; 69.9%).

In terms of perceptions regarding chronic disease patient education, most students demonstrated high perceptions (56; 76.8%), while 12 (16.4%) and 5 (6.8%) students reported moderate and low perceptions, respectively. Similarly, students' experiences in delivering patient education during family and community nursing practice were generally favorable, with 48 students (65.7%) reporting high levels of experience, followed by moderate (18; 24.7%) and low (7; 9.6%) levels.

Pearson's correlation analysis revealed a statistically significant positive relationship between students' perceptions and their experiences in delivering chronic disease patient education (**Table 1, Note**).

Discussion

This study demonstrates that the majority of Diploma Nursing students exhibit high perceptions of the importance of chronic disease patient education in community settings. These findings indicate that students have internalized patient education as a fundamental component of family and community nursing practice rather than as an ancillary task. Positive

perceptions reflect the development of students' professional understanding of the nurse's role as a health educator, which is shaped through a combination of formal education and experiential learning. This interpretation is consistent with previous findings, which indicate that academic learning processes and clinical exposure play a central role in shaping nursing students' professional values and role perceptions ([Mujiyanti et al., 2022](#)).

Beyond perceptions, the present study also found that most students reported high levels of practical experience in delivering patient education during family and community nursing practice. Active involvement in both individual and group-based educational activities allowed students to develop essential competencies, including communication skills, empathy, and adaptability to diverse patient conditions. These findings reinforce the importance of practice-based learning as a mechanism for strengthening students' professional competencies, particularly within primary healthcare and community contexts, as previously highlighted ([Procter et al., 2025](#)).

A key finding of this study is the significant positive relationship between students' perceptions and their experiences in chronic disease patient education. This association suggests that students who hold more positive views of the nurse's educational role tend to engage more effectively in educational practice. Although the cross-sectional design does not permit causal inference, the observed relationship underscores the interdependence between professional attitudes and practical engagement. This finding aligns with previous evidence indicating that nursing students' perceptions of professional roles are closely associated with the quality of their engagement in learning and clinical activities ([Bağrıaçık & Dikmen, 2025](#)).

Within the framework of family and community nursing, students' perceptions of patient education have important implications for their readiness to function as health educators. Students who perceive education as a professional responsibility are more likely to deliver health information proactively, tailor educational messages to patients' needs, and establish therapeutic relationships that support behavior change. This interpretation is supported by evidence showing that nurses' capacity to promote patient participation and self-management is strongly influenced by their professional perspectives and level of preparedness ([Hämel et al., 2022](#)).

Students' educational practice experiences must also be interpreted in light of the broader challenges inherent in community healthcare delivery. During community placements, students frequently encounter patients with diverse sociocultural backgrounds and varying levels of health literacy, necessitating flexible and adaptive communication strategies. Patients' perceptions of health education services are strongly influenced by the clarity of communication and the extent to which educational approaches are tailored to patients' contextual conditions ([Xu et al., 2025](#)).

In the Indonesian context, challenges in chronic disease disparities in educational attainment, socioeconomic status, and cultural diversity further intensify patient education. Exposure to these realities during community practice requires students to develop contextual awareness and cultural sensitivity. Patient-centered education that aligns with patients' illness perceptions and contextual conditions contributes significantly to improved engagement in chronic disease management ([Suleman et al., 2025](#)). Furthermore, empowerment-oriented patient education has been shown to enhance self-efficacy among individuals

living with chronic conditions ([Nock et al., 2023](#)), reinforcing the relevance of educational competence in community nursing practice.

The findings of this study have important implications for nursing education at the Diploma level. The observed relationship between perceptions and experiences suggests that the development of professional attitudes should be intentionally integrated with meaningful practical exposure. Family and community nursing curricula should emphasize the nurse's educational role while ensuring sufficient opportunities for students to participate in chronic disease patient education actively. This perspective is consistent with evidence highlighting the role of community-based activities in strengthening nursing students' competencies ([Miguéns et al., 2024](#)).

Several limitations of this study should be acknowledged. The cross-sectional design limits the ability to determine causal relationships between students' perceptions and experiences. In addition, the use of self-reported measures may introduce subjective bias. Previous research indicates that students' perceptions and experiences may evolve with continued clinical exposure and professional development ([Doris & Morrissey, 2025](#)). Future research employing longitudinal or mixed-method designs is therefore recommended to capture changes in students' educational competencies over time.

Overall, this discussion highlights that perceptions and experiences among Diploma Nursing students are closely interconnected in the implementation of chronic disease patient education in community settings. Understanding this relationship is essential for strengthening nursing education programs that are responsive to community healthcare needs

and the increasing burden of chronic disease management.

The synthesis of the study findings indicates that students' perceptions and experiences in chronic disease patient education within community settings are closely interconnected and mutually reinforcing. Positive perceptions of the nurse's educational role provide a critical foundation for students' readiness to engage actively in patient education activities. When education is perceived as an integral element of nursing practice, students are more likely to demonstrate sustained involvement in educational interventions during community placements, thereby enhancing the quality of their learning experiences.

This finding supports evidence indicating that the effectiveness of educational interactions in chronic disease care is strongly influenced by healthcare providers' readiness and professional perspectives (Tunsi et al., 2023). In nursing education, perceptions developed during training play a pivotal role in shaping students' preparedness to assume educational responsibilities in real-world practice.

Community-based educational experiences further enable students to integrate theoretical knowledge with the lived realities of patients managing chronic conditions. Through direct engagement in patient education, students develop a deeper understanding of the nurse's role as a facilitator of long-term care and a supporter of patient self-management. This interpretation is consistent with evidence showing that patients' understanding of chronic illness care and self-management support is highly dependent on the quality of education and communication provided by healthcare professionals (Le Ho Thi et al., 2025).

Moreover, community-based learning encourages students to conceptualize

nursing practice holistically, extending beyond clinical care to encompass the promotion of patients' quality of life. Exposure to patients with complex chronic conditions reinforces the understanding that patient education is a continuous, individualized, and context-sensitive process. Similarly emphasized that the success of chronic disease management programs relies heavily on healthcare providers' capacity to empower patients through sustained and responsive educational efforts (Bahari & Kerari, 2024).

Communication challenges remain a central issue in community-based patient education. Students must develop adaptive communication strategies to address differences in sociocultural background and health literacy among patients. Effective educational interactions support patient engagement and foster successful self-management of chronic diseases. High-quality patient-provider communication has been shown to enhance patients' comprehension of health information and strengthen their ability to manage chronic conditions independently (Iroegbu et al., 2025). Accordingly, students' experiences in community-based patient education serve as an essential foundation for the development of professional communication competencies.

Implications and limitations

This study contributes conceptually to the development of nursing education literature by providing empirical evidence on the relationship between nursing students' perceptions of the educational role and their experiences in delivering chronic disease patient education in community settings. The findings support theoretical perspectives suggesting that professional perceptions formed during nursing education are closely associated with students' engagement in clinical learning activities, particularly in

community-based health education. By highlighting the interconnected nature of perception and experiential learning, this study enriches the scientific understanding of how professional attitudes may influence competency development among Diploma Nursing students. However, several limitations should be acknowledged. The cross-sectional design restricts the ability to infer causal relationships between perceptions and experiences. In addition, the use of self-reported questionnaires may introduce response bias and may not fully capture students' actual educational practices. Furthermore, the relatively small sample size and the inclusion of participants from a limited geographic area may reduce the generalizability of the findings to broader nursing student populations.

Relevance to Practice

The findings of this study have practical relevance for nursing practice and community health services, particularly in low- and middle-income countries (LMICs) where nurses play a central role in chronic disease management. The demonstrated association between students' perceptions and their educational practice experiences suggests that strengthening students' understanding of the nurse's role as a health educator can improve the quality of patient education delivered during community care. In practical terms, nursing education institutions and healthcare facilities can integrate structured patient education activities into community nursing placements, such as supervised health education during home visits, chronic disease counseling sessions, and community health promotion programs. Clinical mentors and community nurses should also provide guidance and feedback to support students' communication skills and patient education competence. For health service managers and policymakers in resource-limited settings, incorporating

patient education as a routine component of primary healthcare services and community nursing programs may enhance patients' self-management capacity and support more sustainable chronic disease care at the community level.

Conclusion

This study demonstrates that Diploma Nursing students possess generally positive perceptions and favorable practical experiences in delivering chronic disease patient education within community settings. A statistically significant positive relationship was identified between students' perceptions of the nurse's educational role and their experiences in providing patient education during family and community nursing practice. These findings indicate that professional perceptions are closely linked to the quality of students' engagement in educational activities. The results underscore the importance of fostering positive perceptions of patient education through family and community nursing education that integrates theoretical learning with meaningful practical experiences. Community-based practice plays a critical role in preparing students to function effectively as health educators, particularly in the context of chronic disease management. Strengthening educational strategies that emphasize patient empowerment and self-management is therefore essential to enhance the readiness of Diploma Nursing graduates to meet the demands of community healthcare services.

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CrediT Authorship Contributions Statement

Agus Sustiyono: Conceptualization, Methodology, Formal Analysis, Writing – Original Draft, Writing – Review & Editing, Supervision, and Project Administration.

Fifi Musfirowati: Investigation, Data Curation, Visualization, and Writing – Review & Editing.

Asra: Investigation, Data Processing, Methodological Support, and Writing – Review & Editing.

Conflicts of Interest

The authors declare that there are no financial or personal conflicts of interest that could influence the conduct or the results of this research. This study was carried out independently for academic purposes.

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