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Original Article

HEALTH EDUCATION COUNSELING BY NURSES FOR INPATIENTS AT THONG NHAT HOSPITAL IN 2025

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ABSTRACT: Background: Health education is an essential component of patient care, improving knowledge, self-care ability, and treatment adherence. This study aimed to describe health education counseling provided by nurses to inpatients at Thong Nhat Hospital in 2025 and to analyze associated factors. Materials and methods: A cross-sectional descriptive analytical study was conducted from January to August 2025 among 500 inpatients (expanded from a minimum sample size of n = 385, with a 23% non-response buffer) in clinical departments. Data were collected using a structured questionnaire with high internal consistency (Cronbach's alpha = 0.89). Among 500 patients (male 63.2%, aged > 60 years 70.4%), 472 patients (94.4%) reported receiving health education from nurses. The 94.4% rate represents self-reported coverage rather than technical performance. All 15 health education topics exceeded 90.0% reception. Nurses were the primary information source (97.0%). The proportion of patients intending to return or refer others reached 73.0% (365/500), a supplementary indicator of brand loyalty. Multivariable analysis revealed 3 independent predictors: comfort in communication with staff (aOR = 4.88; 95% CI: 2.15–11.08; p < 0.001), convenient technology access (aOR = 2.45; 95% CI: 1.22–4.92; p = 0.012), and absence of psychological stress (aOR = 2.54; 95% CI: 1.31–4.94; p = 0.006). Nurses' health education counseling achieved high coverage. Strengthening communication skills, standardizing content, and introducing supportive digital tools tailored for elderly inpatients are recommended.

Keywords: Health education; counseling; nursing; inpatients; Thong Nhat Hospital.

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1. INTRODUCTION

Health education (HE) is the process of providing planned learning opportunities through communication to improve health literacy, develop self-care skills, and help individuals adopt health-promoting behaviors [1]. In the hospital setting, HE helps patients understand their condition, treatment, safe medication use, diet, and self-monitoring to prevent complications after discharge [2,7]. Following Whitehead's (2004) theoretical framework for HE practice, HE delivered by nurses should go beyond the simple transfer of information and aim at empowerment, enabling patients to actively manage their own health [7].

Nurses play a central role in providing and reinforcing health information for patients. Under Circular 31/2021/TT-BYT on nursing activities in hospitals, HE is a professional duty integral to the care of inpatients [2]. This circular is the current regulation and replaces Circular 07/2011/TT-BYT [2,3]. In addition, the Hospital Quality Assessment Criteria (Decision 4858/QĐ-BYT) set strict requirements for counseling, guidance, and communication by healthcare workers [4].

International and Vietnamese studies have confirmed that nurses' HE competence and quality are strongly influenced by professional knowledge, communication skills, attitudes, and organizational support. Pueyo-Garrigues et al. (2022) emphasized that training in patient-centered counseling skills is decisive for competent HE practice [5]. Kaariainen & Kyngas (2010) and Svavarsdóttir et al. (2016) also showed that the quality of HE in hospitals depends largely on the ability to build a comfortable, interactive relationship between nurses and patients [8,9]. In Vietnam, reports by Chau & Anh (2024) at Thu Duc City Hospital, Tran Thi Thuan et al. (2022) at Can Tho Central General Hospital, and Le Thi Phuong et al. (2023) at Thanh Hoa Provincial General Hospital all confirmed that HE counseling is an essential need of patients and a key component of the quality of inpatient nursing care [6,10,11].

Thong Nhat Hospital is a tertiary general hospital in southern Vietnam that admits a large number of inpatients, of whom older adults (> 60 years) make up the large majority (70.4%). This group has specific physiological and social characteristics: a high rate of chronic multimorbidity, intermittent memory impairment, limited mobility, and limited ability to use information technology. Assessing nurses' HE counseling and identifying associated factors therefore has major practical value for optimizing the care process. For these reasons, we conducted this study to describe HE counseling by nurses for inpatients at Thong Nhat Hospital in 2025 and to analyze associated factors.

2. SUBJECTS AND METHODS

2.1. Study design, setting, and period

A cross-sectional descriptive analytical study was conducted in the inpatient clinical departments (Internal Medicine, Surgery, Cardiology, High-Ranking Officials' Care, etc.) of Thong Nhat Hospital from January to August 2025.

2.2. Study population and inclusion/exclusion criteria

Study population: Patients receiving inpatient treatment in the clinical departments of Thong Nhat Hospital during the survey period. Inclusion criteria: Patients aged 18 years or older, hospitalized for at least 3 days, able to communicate, with normal cognition, and who agreed to participate. Exclusion criteria: Patients in an emergency condition, with severe fatigue, or with psychiatric/cognitive disorders preventing them from answering the interview, or who did not complete the questionnaire.

2.3. Sample size and sampling

The sample size was calculated using the formula for estimating a single population proportion:

$$n = Z_{1-\alpha/2}{}^2 \times \frac{p(1-p)}{d^2} = 385$$

where $Z_{1-\alpha/2}$ = 1.96 (95% confidence level, α = 0.05); p = 0.50 (chosen to maximize the sample size); absolute precision d = 0.05. The minimum sample size was n = 385. Because older inpatients are often discharged early or abandon the survey due to fatigue, the actual sample was expanded to 500 patients to ensure

enough valid questionnaires and to increase the reliability of the regression analysis.

Sampling method: Convenience sampling, allocated in proportion to the number of actual beds in the inpatient clinical departments. All 500 distributed questionnaires were returned complete and valid (response rate 100%).

2.4. Data collection instrument and measurement properties

The structured survey instrument was developed based on the professional framework of Circular 31/2021/TT-BYT and the Hospital Quality Assessment Criteria (Decision 4858/QĐ-BYT) [2,4]. The questionnaire had 3 main parts: Part 1: General demographic and clinical characteristics (age, sex, occupation, place of residence, mode of admission). Part 2: Reception of 15 essential HE topics (measured as 'Clearly understood' vs 'Not clearly understood') and sources of health information. Part 3: Associated factors, including perceived stress and anxiety, comfort in communicating with healthcare workers (HCWs), access to technology, and a supplementary indicator of intention to return to or recommend the hospital. Measurement properties: The questionnaire underwent content validity review by experts in health management and nursing at Thong Nhat Hospital and was approved by the Medical Ethics Committee. A pilot survey of 20 inpatients showed high internal consistency (Cronbach's alpha = 0.89) [5].

2.5. Definition and quantification of the primary outcome

Primary outcome (Y): HE counseling reception among inpatients, assessed across 15 essential HE topics (each topic answered 'Clearly understood' scored 1 point; total reception score 0 to 15 points) [2,6].

Dichotomization:

• Y = 1 (Adequate / Clearly understood): the patient received at least 12/15 topics (reception rate ≥ 80%).

• Y = 0 (Inadequate / Not clearly understood): the patient received fewer than 12/15 topics (< 80%).

2.6. Data processing and analysis

Data were entered, coded, and cleaned in Microsoft Excel, then analyzed with SPSS version 20.0. Descriptive statistics were reported as frequencies and percentages.

Associated factors were analyzed in 2 steps:

1. Univariate analysis (Table 5): The chi-square test (χ^2) was used to assess the association between each independent factor and outcome Y, with crude odds ratios (crude OR), 95% confidence intervals (95% CI), and p values.

2. Multivariable logistic regression (Table 6): Variables with $p < 0.10$ in the univariate analysis were entered into the multivariable model to estimate adjusted odds ratios (aOR) and 95% CI. For every independent variable, the comparison group and the reference group (Ref, aOR = 1.00) were clearly specified.

Multicollinearity: Before building the multivariable model, the variance inflation factor (VIF) was checked among the communication variables. All variables had VIF < 2.5 (meeting the criterion VIF < 5.0), ruling out multicollinearity. Statistical significance was set at $p < 0.05$.

2.7. Research ethics

The study was approved by the Biomedical Research Ethics Committee of Thong Nhat Hospital (Decision No. 738-23/QĐ-BVTN, dated 07/5/2025). Patients were informed of the study purpose, the voluntary nature of participation, and the strict confidentiality of their information.

3. RESULTS

Table 1. General characteristics of participants (n = 500)

Demographic characteristic	Number (n)	Percentage (%)
Sex		
Male	316	63.2
Female	184	36.8
Age group		
Under 30 years	51	10.2
30–60 years	97	19.4
Over 60 years	352	70.4
Place of residence		
Urban	300	60.4
Rural	197	39.6
Occupation		
Retired / Policy beneficiary with income	308	61.8
Public sector employee	72	14.5
Business, trade, services / Self-employed	72	14.4
Other (farmer, unemployed, dependent)	48	9.6

As shown in [Table 1], of the 500 participants, 63.2% were male and 36.8% were female. Older adults over 60 years made up the large majority (70.4%). Most patients lived in urban areas (60.4%) and were retirees or beneficiaries of social policies with an income (61.8%).

Table 2. Reception of 15 HE counseling topics among patients (n = 500)

No.	Essential health education counseling topic	Clearly understood n (%)
1	Informed of hospital rules and necessary information during the stay	453 (90.6%)
2	Informed about own medical condition	455 (91.0%)
3	Informed of special precautions regarding the disease	455 (91.0%)
4	Encouraged to feel secure about treatment	457 (91.4%)
5	Instructed on cooperating with HCWs in treatment and care	472 (94.4%)
6	Concerns and questions answered promptly	470 (94.0%)
7	Treatment methods and technical procedures explained	475 (95.0%)
8	Instructed on careful, clear medication use	470 (94.0%)
9	Instructed on self-care, monitoring, and disease prevention	475 (95.0%)
10	Counseled/educated directly by nurses during the hospital stay	472 (94.4%)
11	Instructed on early exercise and rehabilitation	473 (94.6%)
12	Instructed on diet during the hospital stay	459 (91.8%)
13	Instructed on diet and lifestyle at home	469 (93.8%)
14	Instructed on taking prescribed medication and follow-up schedule	454 (90.8%)
15	Given thorough instructions before discharge	473 (94.6%)
Total	Overall adequate HE reception (≥ 12/15 topics)	472 (94.4%)

[Table 2] shows that all 15 essential HE topics had a 'Clearly understood' rate above 90.0%. The two highest-rated topics were explanation of treatment methods and guidance on self-care and disease prevention (both 95.0%). Coverage of HE counseling delivered by nurses was 94.4% (472/500 patients). This 94.4% figure reflects self-reported coverage, represent-

ing patients' opportunity to access HE services in the hospital, and does not equate to full professional effectiveness [7,8].

Table 3. Sources of HE information for patients (n = 500)

No.	Source of HE information	Number n (%)
1	Nurses providing direct care	484 (97.0%)
2	Treating physicians	450 (90.2%)
3	Books, newspapers, medical journals	274 (54.9%)
4	Internet, social media, hospital website	261 (52.3%)
5	Television, radio	237 (47.5%)
6	Friends, relatives	219 (43.9%)
7	Posters, leaflets, infographics in the department	155 (31.1%)
8	Trainee students	31 (6.2%)

The data in [Table 3] confirm that nurses were the most common HE channel (97.0%), followed by physicians (90.2%). Modern channels such as the Internet (52.3%) and traditional ones such as books and newspapers (54.9%) also accounted for considerable proportions.

Table 4. Intention to return to or recommend Thong Nhat Hospital (n = 500)

Likelihood of returning or recommending	Number (n)	Percentage (%)
Definitely will never return	15	3.0
Do not want to return but have few options	24	4.8
May return if needed	96	19.2
Definitely will return or recommend to others	365	73.0

According to [Table 4], 365/500 patients would definitely return to or recommend the hospital to others, an exact rate of 73.0% (correcting the 73.4% error in the earlier version). This 73.0% figure is a supplementary indicator of overall experience and customer loyalty, not the primary outcome of the HE model.

Table 5. Univariate analysis of factors associated with HE reception (n = 500)

Factor	Comparison group vs reference group (Ref)	Adequate rate (%)	Crude OR (95% CI)	p
Psychological stress	Perceived stress vs. No stress (Ref)	82.5% vs. 96.2%	0.18 (0.08–0.39)	< 0.001
Communication with HCWs	Not comfortable sharing vs. Comfortable sharing (Ref)	71.4% vs. 96.1%	0.10 (0.04–0.25)	< 0.001
Answering questions	Not willing to answer vs. Willing to answer (Ref)	75.0% vs. 95.2%	0.13 (0.04–0.40)	< 0.001
Access to technology	Difficult access vs. Convenient access (Ref)	85.2% vs. 96.3%	0.21 (0.09–0.48)	< 0.001
Digital device ownership	No digital device vs. Has digital device (Ref)	81.0% vs. 95.8%	0.18 (0.07–0.46)	< 0.001
Age group	Over 60 years vs. Under 60 years (Ref)	93.8% vs. 95.9%	0.64 (0.26–1.58)	0.328

Univariate analysis [Table 5] showed that psychological perception, comfort in

communication, and access to technology were all significantly associated with HE reception ($p < 0.001$). For all variables, the comparison group and the reference group (Ref, OR = 1.00) are specified.

Table 6. Multivariable logistic regression of factors independently associated with HE outcome (n = 500)

Independent factor	Comparison group vs reference group (Ref)	Adjusted OR (aOR)	95% CI	p
Comfort in sharing with HCWs	Comfortable sharing vs. Not comfortable (Ref)	4.88	2.15 – 11.08	< 0.001
Access to technology	Convenient access vs. Difficult (Ref)	2.45	1.22 – 4.92	0.012
Psychological state during treatment	No stress vs. Stress/ Anxiety (Ref)	2.54	1.31 – 4.94	0.006

The multivariable model [Table 6] identified 3 independent predictors. Patients who felt comfortable sharing with HCWs were 4.88 times more likely to achieve adequate HE reception (aOR = 4.88; 95% CI: 2.15–11.08; $p < 0.001$) than those who did not; patients with convenient access to technology were 2.45 times more likely (aOR = 2.45; 95% CI: 1.22–4.92; $p = 0.012$); and patients without psychological stress were 2.54 times more likely (aOR = 2.54; 95% CI: 1.31–4.94; $p = 0.006$). VIF < 2.5 confirmed the absence of multicollinearity in the model.

4. DISCUSSION

The study included 500 inpatients at Thong Nhat Hospital. Men accounted for 63.2% and patients over 60 years for 70.4%. This sample reflects the epidemiological profile of a tertiary general hospital responsible for the health care of officials and the general population in southern Vietnam. These findings closely match those of Chau NTM and Anh NTN (2024) at Thu Duc City Hospital (68.5% older adults) [6] and Tran Thi Thuan et al. (2022) at Can Tho Central General Hospital (65.2% older adults) [10]. Older patients often face a double barrier of age-related memory decline and reluctance to interact; HE counseling therefore requires nurses to be patient, use plain language, and individualize information [1,7,8].

A key finding was that 94.4% of patients reported receiving HE counseling from nurses during their hospital stay. This coverage is similar to that reported by Le Thi Phuong et al. (2023) at Thanh Hoa Provincial General Hospital (92.8%) [11] and higher than in the study by Kääriäinen & Kyngäs (2010) in Finland (88.5%) [8]. However, the 94.4% figure reflects self-reported coverage and is not the same as professional quality or as patients' ability to receive and fully understand the information [7,8]. All 15 HE topics had reception rates above 90.0%, with explanation of treatment methods and guidance on self-care rated highest (95.0%). This result demonstrates strict adherence to the nursing care process set out in Circular 31/2021/TT-BYT [2].

That nurses were the most common source of HE information (97.0%), ahead of physicians (90.2%), has major practical significance. Nurses are the staff closest to patients, in continuous 24/7 contact at the bedside. This finding is fully consistent with the HE competence models of Pueyo-Garrigues et al. (2022) and Svavarsdóttir et al. (2016), which place nurses in the role of 'primary educator' in the health system [5,9]. In addition, the growth of digital information channels such as the Internet (52.3%) calls for the hospital to develop support tools, such as QR codes posted at the bedside and rehabilitation exercise videos, to supplement face-to-face counseling. As recommended by Svensson et al. (2021), technology for HE in older adults should have large-font interfaces and simple operation, and should always be accompanied by nurse guidance [12].

Multivariable logistic regression yielded

an important finding: comfort in sharing with HCWs was the strongest factor affecting the HE outcome (aOR = 4.88; p < 0.001). This is consistent with Whitehead (2004) and Kääriäinen & Kyngäs (2010), who showed that trust and empathy in communication are key to removing psychological barriers, making patients willing to disclose difficulties and remember treatment information [7,8]. Controlling for multicollinearity (VIF < 2.5) supports the objectivity of the aOR values. In addition, the 73.0% of patients who would definitely return to or recommend the hospital is evidence of overall satisfaction and reflects brand loyalty toward Thong Nhat Hospital.

5. CONCLUSION

HE counseling by nurses for inpatients at Thong Nhat Hospital in 2025 achieved wide coverage (94.4%). All 15 essential HE topics had reception rates above 90.0%, with explanation of treatment methods and guidance on self-care highest (95.0%). Nurses were the most common source of health information (97.0%). The proportion of patients who would definitely return to or recommend the hospital was 73.0%. Three independent predictors were positively associated with HE reception: comfort in communicating and sharing with HCWs (aOR = 4.88; p < 0.001), convenient access to technology (aOR = 2.45; p = 0.012), and absence of psychological stress (aOR = 2.54; p = 0.006). Recommendations: The hospital should continue to standardize the HE process in line with Circular 31/2021/TT-BYT; strengthen training of nurses in communication and patient-centered counseling; and expand the use of supportive technology (videos, QR codes) suited to older patients.

REFERENCES

[1] World Health Organization. Health education: theoretical concepts, effective strategies and core competencies. Cairo: WHO Regional Office for the Eastern Mediterranean; 2012.

[2] Ministry of Health. Circular No. 31/2021/TT-BYT dated 28 December 2021 regulating nursing activities in hospitals [in Vietnamese]. Hanoi: Ministry of Health; 2021.

[3] Ministry of Health. Circular No. 07/2011/TT-BYT dated 26 January 2011 guiding nursing work on patient care in hospitals [in Vietnamese]. Hanoi: Ministry of Health; 2011.

[4] Ministry of Health. Decision No. 4858/QĐ-BYT dated 03 December 2013 on the pilot issuance of the Hospital Quality Assessment Criteria [in Vietnamese]. Hanoi: Ministry of Health; 2013.

[5] Pueyo-Garrigues M, Pardavila-Belio MI, Canga-Armayor A, Esandi N, Alfaro-Díaz C, Canga-Armayor N. Nurses' knowledge, skills and personal attributes for providing competent health education practice, and its influencing factors: a cross-sectional study. Nurse Educ Pract. 2022;58:103277. doi:10.1016/j.nepr.2021.103277.

[6] Châu NTM, Ánh NTN. Evaluation of health counseling and education for inpatients at Thu Duc City Hospital in 2024 [in Vietnamese]. Vietnam Journal of Community Medicine. 2024;65(Special Issue 12):98-103. doi:10.52163/yhc.v65icd12.1826.

[7] Whitehead D. Health promotion and health education: advancing the concepts. J Adv Nurs. 2004;47(3):311-320. doi:10.1111/j.1365-2648.2004.03095.x.

[8] Kaariainen M, Kyngas H. The quality of patient education in hospital. J Nurs Care Qual. 2010;25(3):272-280. doi:10.1097/NCQ.0b013e3181cd117b.

[9] Svavarsdóttir MH, Sigurðardóttir ÁK, Steinsbekk A. How to become an expert educator: a qualitative study of the experiences of health professionals with patient education. BMC Med Educ. 2016;16(1):1-11. doi:10.1186/s12909-016-0670-1.

[10] Thuan TT, Yen NTK, Bich PTN. Current status and needs for health education among inpatients at Can Tho Central General Hospital in 2022 [in Vietnamese]. Vietnam Medical Journal. 2022;518(2):115-120. doi:10.51298/vmj.v518i2.3412.

[11] Phuong LT, Cuong PV, Ha NT. Effectiveness of nurses' health counseling and education in the clinical departments of Thanh Hoa Provincial General Hospital [in Vietnamese]. Journal of Nursing Science. 2023;6(1):45-52. doi:10.51754/jns.v6i1.215.

[12] Svensson JM, Bjarneby B, Nygren JM. Digital health education interventions for hospitalized older adults: A systematic review. J Med Internet Res. 2021;23(8):e28450. doi:10.2196/28450.