



## Prevalence and associated factors of care needs among patients after thyroid surgery at the National Hospital of Endocrinology

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### ABSTRACT

**Objective:** To determine the prevalence of care needs and identify related factors among patients after thyroid surgery at the National Hospital of Endocrinology. **Subjects and methods:** A cross-sectional descriptive study was conducted on 216 patients who underwent thyroid surgery at the National Hospital of Endocrinology from April to June 2025. **Results:** The majority of study participants were female (65.7%), with males accounting for 34.3%. The highest care needs were medical care (88.0%), followed by psychological care (83.3%) and physical care (79.2%). Social care needs had the lowest percentage (73.1%). Regarding general care needs, 98.1% of patients had care needs, and only 1.9% did not. The related factors are as follows: Age is associated with the patient's medical care needs; occupation, education, place of residence, and disease stage are linked to the need for physical care; education level and disease stage are related to the need for mental care; and disease stage is associated with the need for social care. **Conclusion:** The study shows that the care needs of post-thyroid surgery patients at the National Hospital of Endocrinology are very high, especially for medical, psychological, and physical care. Factors such as age, occupation, education level, place of residence, and disease stage significantly influence the various care needs.

**Keywords:** Thyroid surgery; Care needs; National Hospital of Endocrinology.

### INTRODUCTION

In recent years, thyroid disorders have increased globally, affecting over 200 million people, especially women. Thyroid cancer, in particular, has seen a sharp rise, with over 821,000 new cases and approximately 47,500 deaths worldwide in 2023 <sup>1, 2</sup>. In Vietnam, there were approximately 10,000 new cases of thyroid disease in 2022, with a thyroid cancer incidence rate of 16.5 per

100,000 population, ranking sixth among the most common cancers, with approximately 858 deaths annually <sup>3</sup>.

The rate of thyroid surgeries has been increasing, especially in large hospitals. At the National Hospital of Endocrinology, more than 50 thyroid surgeries are performed daily <sup>4</sup>. Post-surgery patients face many risks of complications (respiratory failure, vocal cord damage, hypocalcemia,

etc.), psychological issues, and social difficulties, leading to a high demand for care. The Ministry of Health emphasizes that the patient is the center of care; however, research on factors related to the care needs of post-thyroid surgery patients in Vietnam is still limited <sup>5</sup>. At the National Hospital of Endocrinology - a leading institution in this field - over 50 thyroid surgeries are performed daily. This situation underscores the urgent need for high-quality post-surgery care. Patients not only face complications such as respiratory failure, vocal cord damage, and hypocalcemia but also suffer from psychological stress (anxiety, fear of recurrence) and social difficulties (treatment costs, administrative procedures, language barriers). Clarifying these factors will help improve care quality, reduce complications, and increase patient satisfaction. Therefore, we conducted this study to determine prevalence of care needs some related factors among patients after thyroid surgery at the National Hospital of Endocrinology.

## SUBJECTS AND METHODS

**Study Subjects:** Post-Thyroid Surgery Patients at the National Hospital of Endocrinology.

*Inclusion criteria:* Patients aged 18 years and older who have undergone thyroid surgery at the National Hospital of Endocrinology within 24 hours during the period from April to June 2025.

- Patients capable of independently answering research questions.

*Exclusion Criteria:* Patients with acute illnesses (e.g., coma, emergency surgery, emergency procedures, etc.)

- Patients unable to provide information due to psychiatric disorders (e.g.,

depression, phobias, personality disorders, schizophrenia, etc.).

- Patients who do not agree to participate in the study.

**Study period:** From April 2025 to June 2025.

**Setting:** Department of General Surgery, Department of Thyroid Surgery, and Department of High-Tech Surgery - National Hospital of Endocrinology.

**Study design:** Cross-sectional descriptive study.

**Sample size:** The sample size is determined using the formula for estimating a proportion in the population:

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

n: the minimum sample size required. Z = 1.96 for a 95% confidence level. d = 0.05 is the margin of error. Based on a study of Nguyen Thị Thanh Mai (2021) <sup>6</sup>, the proportions for medical and social care needs were quite high at 85.0% and 79.0%, respectively. So that, choose p = 0.85.

The minimum sample size calculation gives n = 196.

An additional 10% was added to the sample size. In fact, all patients after thyroid surgery who met the sampling criteria were selected during the study period until 216 patients participated in the study and no ballots were dropped.

**Data collection:** The data collection questionnaire was developed based on a questionnaire used in the study of Nguyen Thi Thanh Mai et al (2021) <sup>6</sup> and the Ministry of Health's care needs framework. The questionnaire are divided into two parts based on:

**Demography part:** This section gathers patient information from electronic medical records, including gender, age, religion, ethnicity, occupation, education level, residence, economic status, insurance type, and disease stage.

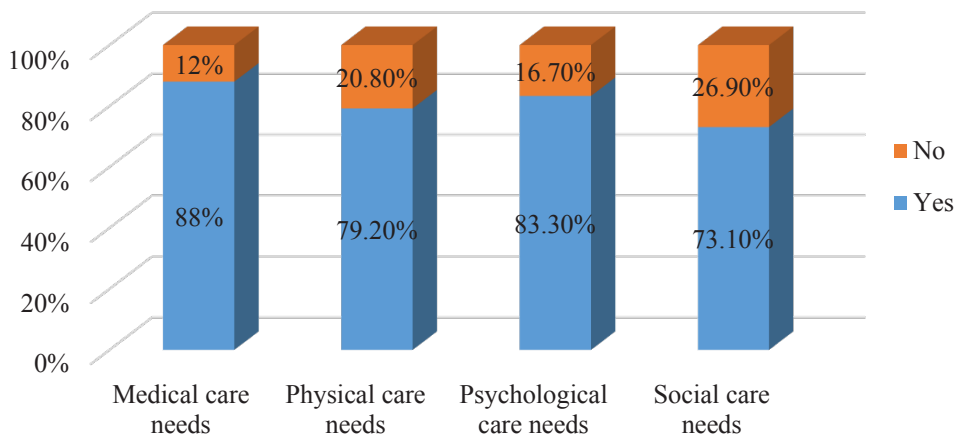
**Care needs part:** This section includes 23 items, divided into 4 groups including: Medical care needs (4 items), physical care needs (7 items.), psychological care needs (7 items), social care needs (5 items). Patients select responses to each item using a yes/no format. A “Yes” response indicates that the patient has a care need, while “No” means there is no care need at the time of the survey.

**Data analysis:** Data was entered in Excel and coded and cleaned using SPSS 20. The frequency of variables will be calculated, and logistic regression will be used to identify significant factors related to demographic variables and care needs.

**Research ethics:** All study participants provided informed consent, and their information will only be used for scientific research purposes and kept confidential. The study was approved by the Ethics Committee of Nam Đĩnh University of Nursing, with decision number 605/GCN-HDDD dated March 5, 2025, and authorized by the leadership of the National Hospital of Endocrinology to proceed.

## RESULTS

The study was conducted on 216 patients, with the majority being female (65.7%) and male patients accounting for 34.3%. The age distribution showed that 51.9% of the participants were under 55 years old, while 48.1% were aged 55 years or older. Regarding education level, 51.9% of participants had completed at least high school, while 48.1% had less than high school education. The results are as follows:



**Figure 1. Classification of the care needs of the study subjects (n = 216)**

Medical care needs were the highest (88.0%), followed by psychological care needs (83.3%) and physical care needs (79.2%). Social care needs had the lowest percentage (73.1%)

**Table 1. General care needs of the study subjects (n = 216)**

General care needs	Frequency	Percentage
Yes	212	98.1
No	04	1.9

98.1% of patients reported having general care needs, while only 1.9% did not have care needs.

**Table 2. Relationship between demographic characteristics and medical care needs**

Characteristic	Medical care need	Yes		No		OR (95%CI)	p
		n	%	n	%		
Age	< 55	90	80.4	22	19.6	0.165 (0.05 – 0.52)	0.002*
	≥ 55	100	96.2	4	3.8		

Age was significantly related to medical care needs ( $p = 0.002$ ), with patients aged 55 years and older showing a higher need for medical care.

**Table 2. Relationship between demographic characteristics and physical care needs**

Characteristics	Physical care needs	Yes		No		OR (95%CI)	p
		n	%	n	%		
Occupation	Officer	72	71.3	29	28.7	0.409 (0.19 – 0.88)	0.022*
	Others	99	86.1	16	13.9		
Education level	≤ high school	86	82.7	18	17.3	2.473 (1.13 – 5.42)	0.024*
	> high school	85	75.9	27	24.1		
Place of residence	Urban	96	89.7	11	10.3	0.257 (0.12 – 0.57)	0.001*
	Rural	75	68.8	34	31.2		
Disease stage	Benign	67	87.0	10	13.0	2.737 (1.16 – 6.45)	0.021*
	Cancer	104	74.8	35	25.2		

The results indicated that occupation ( $p = 0.022$ ), education level ( $p = 0.024$ ), place of residence ( $p = 0.001$ ), and disease stage ( $p = 0.021$ ) were significantly related to physical care needs.

**Table 3. Relationship between demographic characteristics and psychological care needs**

Characteristics	Psychological care needs	Yes		No		OR (95%CI)	P
		n	%	n	%		
Education level	≤ high school	78	75.0	26	25.0	0.259 (0.14 – 0.59)	0.001*
	> high school	102	91.1	10	8.9		
Disease stage	Benign	59	76.6	18	23.4	0.419 (0.19 – 0.92)	0.03*
	Cancer	121	87.1	18	12.9		

Education level ( $p = 0.001$ ) and disease stage ( $p = 0.03$ ) were significantly related to psychological care needs. Patients with higher education levels and those in the cancer stage had greater psychological care needs.

**Table 4. Relationship between demographic characteristics and social care needs**

Characteristic	Social care needs	Yes		No		OR (95%CI)	P
		n	%	n	%		
Disease stage	Benign	50	64.9	27	35.1	0.47 (0.25 – 0.9)	0.023*
	Cancer	108	77.7	31	22.3		

Disease stage ( $p = 0.023$ ) was significantly related to social care needs, with cancer patients having a higher demand for social care.

Note: \*  $p < 0.05$

## DISCUSSION

**Care needs of post-thyroid surgery patients:** The study found that post-thyroid surgery patients had high care needs in all four major categories (Figure 1): Medical care needs (88.0%): Patients needed close monitoring of vital signs and complications such as hoarseness, respiratory failure, hypocalcemia, pain control, wound care, and medication guidance. Physical care needs (79.2%): Common issues included restricted movement in the neck area, difficulty swallowing, and numbness in the

limbs due to calcium disorders. Patients needed assistance with daily activities, rehabilitation exercises, and position changes. Early mobilization and functional recovery were important to reduce hospitalization time. Psychological care needs (83.3%): Anxiety and depression were common, especially among younger patients and those with thyroid cancer. Continuous psychological support, counseling, and stress-relieving activities were necessary. This need also highlighted deficiencies in current care practices. Social care needs

(73.1%): Patients faced financial difficulties and required consultation on insurance payments, hospital fees, and desired fair treatment. The role of nursing was not only technical but also included providing social and psychological support. Post-thyroid surgery patients are a unique group with multidimensional care needs, requiring a comprehensive and individualized nursing care model that combines medical, physical, psychological, and social care to improve recovery outcomes and quality of life <sup>7,8</sup>.

**Factors related to care needs:** Medical care needs (Table 2): Age was statistically significant in relation to medical care needs. Patients aged 55 and older had significantly higher medical care needs (96.2%) compared to those younger than 55 (80.4%), with a p-value of 0.002. The odds ratio (OR) of 0.165 (CI: 0.05–0.52) indicates that older patients are more likely to require medical care due to slower recovery, higher complication rates, and accompanying comorbidities.

**Physical care needs:** Physical care needs were also an important factor in recovery after thyroid surgery. In this study, 79.2% of patients reported high physical care needs. Analysis of demographic factors showed that occupation ( $p = 0.022$ ), education level ( $p = 0.024$ ), place of residence ( $p = 0.001$ ), and disease stage ( $p = 0.021$ ) were significantly related to physical care needs.

**Psychological care needs:** Education level was statistically significant for psychological care needs ( $p = 0.001$ ). Specifically, those with higher education (above high school) had higher psychological care needs (91.1%) compared to those with education below high school (75.0%), with an OR of 0.259 (95% CI: 0.14–0.59). This suggests that patients with higher education levels are more likely to recognize emotional

care needs and seek more systematic mental health support.

**Social care needs:** Social care refers to community and social support, such as respect, fair treatment, financial assistance, and safety in the treatment environment. This group had the lowest care needs among the four surveyed categories but was highly influenced by the patient's environment, social relationships, and healthcare system. Analysis showed that disease stage was the only demographic factor statistically significant for social care needs ( $p < 0.05$ ).

## CONCLUSION

The study results show that post-thyroid surgery patients at the Central Endocrinology Hospital in 2025 have high care needs in all four categories: medical care (88.0%), physical care (79.2%), psychological care (83.3%), and social care (73.1%). The general care needs were reported by 98.1% of patients. Key factors influencing care needs include gender, age, occupation, education level, place of residence, and disease stage. This highlights the need for a comprehensive, individualized nursing care model that addresses all aspects of patient care.

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