

PREOPERATIVE ANXIETY AND PSYCHOLOGICAL SUPPORT NEEDS AMONG PATIENTS WITH THYROID SURGERY IN VIETNAM

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ABSTRACT

Objective: Psychological support for patients has been paid currently attention to and implemented in many medical facilities. The study aims to describe preoperative anxiety and the need for psychological support among patients with thyroid surgery and related factors. **Subjects and method:** A cross-sectional descriptive design was used with a convenience sample of 197 patients at the National Hospital of Endocrinology with thyroid surgery from April to June 2022. **Results:** The results indicated that 71.6% of patients had mild anxiety, 16.2% of patients had moderate anxiety, 11.7% of patients had no anxiety, and 0.5% of patients had severe anxiety. Common anxieties of patients undergoing thyroid surgery were postoperative complications (65%), postoperative pain (58.4%), unconsciousness after anesthesia, or surgery (46.7%), thyroid tissue remaining after surgery (44.2%), and death of anesthesia and surgery (41.1%). The average score of the need for social support was 24.02 (SD 6.01) of which family support was 12.88 (SD 3.93), and medical staff's support was 11.14 (SD 2.73). 43.7% of patients had high support needs, 39.1% of patients had medium support needs, and 17.3% of patients had low support needs. Factors associated with patients' anxiety included age, education level, marital status, waiting time for surgery, number of caregivers during the hospital stay, health insurance, cancer diagnosis, previous surgical history, chronic comorbidities, history of Covid19, number of Covid - 19 vaccine shots, and psychological support needs. **Conclusion:** The nurses should implement interventions to reduce anxiety before surgery for patients such as shortening the waiting time for surgery, regularly listening to the patient's opinion, and consulting relevant information about the surgery

Keywords: Anxiety; psychological support; thyroid surgery; Vietnam

1. INTRODUCTION

Currently, psychological support for patients has been paid attention to and implemented in many medical facilities throughout the world [1]. Especially cancer patients have received special psychological care to help them control their emotions,

actively face the disease, and reduce stress, which contributes to improving the effectiveness of treatment and quality of life [2]. However, in Vietnam, this issue has not been paid enough attention to. For a long time, psychological care as well as funding for it was mainly concentrated in mental hospitals. In 2003, the Ministry of Health of

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Vietnam issued a directive on strengthening comprehensive care to improve the quality of inpatient treatment in hospitals [3]. Since then, although it has been carried out in many medical facilities, according to the report of the Ministry of Health, about 50% of hospitals have not yet implemented comprehensive patient care or only focused on it in some key departments such as emergency resuscitation and surgery [4]. Noticeably, the content of comprehensive care for patients does not focus much on mental and psychological health care but on encouragement and explanation [5]. This can greatly affect the effectiveness of care and treatment.

There are about 200 million people who have thyroid disease globally [5]. Particularly in Vietnam, only at the National Hospital of Endocrinology, the number of patients with thyroid disease coming for examination and treatment has increased by 4 times just within 4 years from 2014 to 2017. According to a study by Tran Ngoc Luong (2012), the vast majority of thyroid diseases are treated conservatively with oral drugs or with radioisotope I131 (about 60%), and about 30% of patients need surgery because conservative treatment does not work or causes complications such as thyroid cancer., etc, and 10% of patients have surgery for the cosmetic purpose [6]. Like other cancer patients, thyroid cancer patients have significant unmet needs in the preoperative period [7]. An international survey of 2,300 thyroid cancer survivors found that less than 10% of them received psychological support at the time of diagnosis and less than 40% of them received information about the disease or treatment in writing. However, it is known little about the specific needs and values of the patient before surgery. In addition, in

the complicated situation of the Covid-19 pandemic, patients are also worried about the risk of contracting Covid-19, restricting their mobility and caregivers during treatment [8].

Therefore, understanding the need for psychological support for thyroid surgery patients is essential. To improve the efficiency of comprehensive care, responding well to the wishes and needs of patients to offer measures to help them relieve anxiety and stress, reduce fear, and have psychologically ready preparation for surgery, the study was conducted to describe preoperative anxiety and the need for psychological support among patients with thyroid surgery at the National Hospital of Endocrinology and related factors”.

2. MATERIALS AND METHODS

2.1. Participants and settings

This cross-sectional descriptive study employed a convenience sampling method to recruit participants. 197 thyroid surgery patients who were admitted to the hospital from April 2022 to June 2022 and eligible for the study were selected from three departments of the National Hospital of Endocrinology namely the General Surgery Department, Thyroid Surgery Department, and the High-tech Department. Inclusion criteria for participant selection were age above 18, hospital admission for thyroid surgery, and more than 1 day of hospital stay before surgery. Patients with mental disorders and severe acute illnesses were excluded from the study.

2.2. Research instruments

Hospital Anxiety Depression Scale - Anxiety (HADS-A). HADS-A was developed by Zigmond and Snaith (1983)

[9]. It was translated into Vietnamese and used to measure the level of preoperative anxiety of patients in many research in Vietnam with Cronbach's alpha of 0.81 [10]. The HADS-A consists of 7 items, each of which is scored on a Likert/ response scale with four alternatives ranging between 0 and 3. The total score is the sum of the respective seven items ranging from 0 to 21, in which 0 means no anxiety, 7 means mild anxiety, 8-14 means moderate anxiety, and more than 15 means severe anxiety.

The multi-Dimensional Support Scale (MDSS) was developed by Winefield. H et al [11]. The MDSS have 11 items with 6 items of family/ friends support and 5 items of medical staff support. The participants were asked to rate on a 4-point rating scale from 0 (never) to 3 (always). The higher total score indicates better social support as patients' perception. The Cronbach's alpha of the total and subscale in the study were 0.74; 0.80 and 0.79 respectively.

The MOS Social Support Survey (MOS) was used to measure the Social support need of the patients. The scale was developed by Sherbourne (1991) consists of 20 items with three domains of the need for feeling/ information support (12 items), the need for practical activity support (4 items), and the need for emotional support (4 items) [12]. Each item contains a 5-point rating from 1 (never) to 5 (all time). The maximum total score of 20 items is 100. The higher total score indicates higher social support need of the patients. The Cronbach's alpha of the scale in the study was 0.84.

Data collection

At the department, the research team approached the participants met the selection criteria. The investigator collected

data after completing the medical record for the patients admission.

Ethical consideration

This research was approved by Ethic Boards at Nam Dinh University of Nursing and the board of management of the National Hospital of Endocrinology. All personal information about the participants was kept confidential, and the collected data and information were only for research purposes.

2.3. Data analysis

Data were entered on Epi Data 3.1 software and analyzed on SPSS version 20.0 software. Descriptive analysis was used to describe variables of patients' information and disease information, the level of anxiety, anxieties, social support, and patients' need for psychological support in terms of frequency and proportion. Pearson and T-test correlation tests were used to validate the association of the level of preoperative anxiety with patients' information, disease information, and social support. Any difference was considered statistically significant when $p < 0.05$ with a 95% confidence interval.

3. RESULTS

3.1. Participants' characteristics

A total of participants were 197 thyroid surgery patients. Most of them were female (87.8%) with a mean age of 46.6 years (SD = 11.0). The participants having comprehensive health insurance, partial health insurance, and no health insurance respectively accounted for 67.5%, 26.9%, and 5.6%. 48.7% of them were diagnosed with cancer. The details presented in Table 1

Table 1. General information on patients with thyroid surgery

	Number	%
Sex		
Male	24	12.2
Female	173	87.8
Mean age. min. max		
	46.6 ± 11.0 (22 - 74)	
Insurance status		
No health insurance	11	5.6
Comprehensive health insurance	133	67.5
Partial health insurance	53	26.9
Diagnosis of cancer		
Yes	96	48.7
No	101	51.3

3.2. Results of preoperative anxiety and psychological support needs of the patients with thyroid surgery

- The level of preoperative anxiety of the patients with thyroid surgery

Of the 197 participants, the rate of no anxiety, mild anxiety, moderate anxiety, and severe anxiety accounted for 11.7%, 71.6%, 16.2%, and 0.5% respectively (as in Table 2).

Table 2. The level of preoperative anxiety of the patients with thyroid surgery

Anxiety level	Number	%
No anxiety	23	11.7
Mild anxiety	141	71.6
Moderate anxiety	32	16.2
Severe anxiety	1	0.5
Total	197	100

- Anxieties of patients with thyroid surgery

The common anxieties among thyroid surgery patients were post-preoperative complications (65%) such as hoarseness, loss of voice, low calcium, chyle leak, and bleeding., etc, Postoperative pain (58.4%); Unconsciousness after general anesthesia, surgery (46.7%); Thyroid tissue remaining after surgery (44.2%); Death due to general anesthesia, surgery (41.1%). Details are presented in Table 3.

Table 3. Anxieties of patients with thyroid surgery

Patients' anxieties	Number	%
Unconsciousness after general anesthesia, surgery	92	46.7
Death due to anesthesia	81	41.1
General anesthesia and local anesthesia in surgery do not work	54	27.4
Postoperative pain	115	58.4
Unsuccessful surgery	70	35.5
Postoperative complications such as hoarseness. loss of voice. Hypocalcemia, chyle leak, bleeding...	128	65.0
Thyroid tissue remaining or growing back after surgery	87	44.2
Surgery affects fertility	12	6.1
Surgery is likely to be postponed	31	15.7
Uncomfortable hospital environment	10	5.1
Long waiting time for surgery	23	11.7
Can't afford hospital fees	12	6.1
No income due to hospital stay	15	7.6
No relatives to take care of	12	6.1
Not interested by medical staff	18	9.1
There is a risk of contracting Covid-19 during treatment	17	8.6

- Social support of patients with thyroid surgery

The total mean score of the need for social support was 24.02 (SD = 6.01) of which family support need was 12.88 (SD = 3.93), and medical workers' support need was 11.14 (SD = 2.73).

Table 4. Social support of patients with thyroid surgery (n = 197)

Social support	X ± SD	Min	Max	Maximum score
Families/ friends' support	12.8 ± 3.93	0	18	18
Medical workers' Support	11.14 ± 2.73	5	15	15
Mean score	24.02 ± 6.01	8	33	33

- Psychological support needs

Of the 197 participants, there were 43.7% patients with high support needs, 39.1% patients with moderate support needs, and 17.3% patients with low support needs (as in Table 5).

Table 5. Psychological support needs of patients with thyroid surgery

Psychological support needs	Number	%
Low support demand	34	17.3
Average support demand 39.1	77	39.1
High support demand 39.1	86	43.7
Total	197	100

3.3. The factors related to the anxiety of patients with thyroid surgery

The number of participants with moderate and severe anxiety in the group of patients over 50 years old; having higher education, single or widowed, and no caregiver during the hospital stay, no health insurance or partial health insurance, being diagnosed with cancer, no previous surgery, chronic comorbidities was significantly higher than the group of patients. Patients who had not been infected Covid - 19 or received less than 2 doses of the Covid -19 vaccine had significantly higher rates of moderate and severe anxiety than the others. The Patients with moderate and severe anxiety would have medium and high support needs higher than the other group with OR = 8.1. The difference was statistically significant with $p < 0.05$. Details are presented in Table 6.

Table 6. Association between anxiety and patients' characteristics

Patients' characteristics	No to mild anxiety		Moderate to severe anxiety		OR (95%CI)	P
	n	%	n	%		
Age group						
≤ 50	110	55.8	16	8.1	2.2 (1.1 - 4.6)	0.045
> 50	54	27.4	17	8.6		
Education level						
School Education	122	61.9	18	9.1	2.4 (1.1 - 5.2)	0.02
Further and higher education	42	21.3	15	7.6		
Marital status						
Married	150	76.1	25	12.7	3.4 (1.3 - 9.0)	0.01
Single/ Widowed	14	7.1	8	4.1		
Caregiver						
≥ 1	160	81.2	29	14.7	5.5 (1.3 - 23.3)	0.02
No	4	2.0	4	2.0		

Patients' characteristics	No to mild anxiety		Moderate to severe anxiety		OR (95%CI)	p
	n	%	n	%		
Insurance status						
Comprehensive health insurance	49	24.9	4	2.0	3.1 (1.0 - 9.3)	0.04
No health insurance or partial health insurance	115	58.4	29	14.7		
Diagnosis of cancer						
Yes	78	39.6	23	11.7	2.5 (1.1 - 5.7)	0.02
No	86	43.7	10	5.1		
Number of previous surgeries						
≥ 1	69	35.0	7	3.6	2.7 (1.1 - 6.6)	0.03
No	95	48.2	26	13.2		
Another chronic disease						
Yes	131	66.5	18	9.1	3.31 (1.51 - 7.25)	0.003
No	33	16.8	15	7.6		
History of Covid - 19						
Infected	110	55.8	15	7.6	2.4 (1.1 - 5.2)	0.02
Not infected yet	54	27.4	18	9.1		
History of Covid - 19 vaccination						
Received ≥ 3 doses	143	72.6	23	11.7	3.58 (1.5 - 8.7)	0.005
Received ≤ 2 injections	21	10.7	10	5.1		
Need for psychological support						
Low support needs	33	16.8	1	0.5	8.1 (1.1 - 61.2)	0.04
Medium and high support needs	131	66.5	32	16.2		

4. DISCUSSION

4.1. Anxiety and needs for psychological support of patients with thyroid surgery

Of a total of 197 participants in the study, the rate of patients with anxiety accounted

for 88.3%, of which, 16.2% patients with moderate anxiety, and 0.5% patients with severe anxiety. The results of this study were similar to previous studies using the HADS-A scale and other scales. The study by Hoang Viet Thai in 2021 at Thai Nguyen Central Hospital on fracture patients showed

that 85.6% of the patients had preoperative anxiety, of which 29.65% patients with moderate anxiety, 2.85% patients with severe anxiety [13]. Research by Dang Van Thach on gastrointestinal surgery patients showed that 34.9% of patients had anxiety [8].

Using the STAI scale, the study by Tran Anh Vu in 2018 at Thai Nguyen Central Hospital on patients with abdominal surgery showed that 100% of the patients had anxiety [14]. Using the APAIS (Amsterdam Preoperative Anxiety and Information Scale), the study by Celik et al in 2018 demonstrated that 94% of heart surgery patients had pre-surgical anxiety symptoms, of which 37% of patients with a high level of anxiety [15]. Differences in anxiety rates between the studies may be due to different scale usage and differences in study timing, cultural characteristics, and disease situation.

- Anxieties of patients with thyroid surgery

Previous studies showed that various factors were associated with preoperative anxiety. In this study, to identify different aspects of preoperative anxiety among thyroid surgery patients, the patients were provided with a list of different possible causes of anxiety such as fear of pain, post-surgical complications, death., etc. The results showed that the most common anxieties among patients before thyroid surgery were fear of possible postoperative complications such as hoarseness, loss of voice, low calcium., etc (65%); fear of post-surgical pain (58.4%), fear of unconsciousness after general anesthesia or surgery (46.7%), fear of thyroid tissue remaining after surgery (44.2%) and fear of death due to general anesthesia and surgery (41.1%).

The results of this research were also consistent with the ones of previous studies. In the research by Hoang Viet Thai in 2021 at Thai Nguyen Central Hospital on fracture patients, 50.6% of patients were worried about pain during and after surgery, 44.9% were afraid of complications, and 34.7% were afraid of not having money for treatment [13]. In a study by Vo Thi Yen Nhi in 2017, 37.25% of patients were afraid of post-operative pain, 33.8% of patients were worried about unsuccessful surgery, 27.6% of patients were anxious about unconsciousness after surgery, 24.1% of patients were fear about economic problems [16]. According to Celik et al in 2018, 49.8% of patients were afraid of postoperative pain, and 41.25% of patients were afraid of unconsciousness after surgery [15]. In the research by Mulugeta et al in 2018, the most common factors causing preoperative anxiety were fear of complications (52.4%), worry about family members (50.4%), fear of pain after surgery (50.1%), and fear of death (48.2%) [20]. There were the differences in the anxiety of the patients with operation maybe, because of the difference between the studies in terms of participant characteristics, surgical diseases, and study locations.

- Social support

The research results showed that the mean score of social support was 24.02 (SD = 6.01), of which the families' support was 12.88 (SD = 3.93), and the medical worker support was 11.14 (SD = 2.73). The study results was similar with the other previous studies. Cuong's study results indicated that the mean score of social support was 21.1 (SD = 4.59), of which the family/friend support was 12.00 (SD = 2.66) and the medical worker support was 9.83 (SD

= 2.53) [10]. According to Vo Yen Nhi, the mean score for social support was 19.5 (SD = 4.7), of which family/friend support was 11.9 (SD = 2.8), and the medical worker support was 7.7 (SD = 2.6) [16]. According to Nguyen Tan Viet, the mean score for family support was 13.2 (SD = 3.2), and one of the health worker's support was 9.4 (SD = 2.7) [4]. The National Hospital of Endocrinology is a national level hospital with high qualification and skill health care providers, who are responsible, and always wholeheartedly for the patients. Patients with confidence in the hospital will also help their psychological well-being and be ready to deal with the illness.

- Need for psychological support of patients with thyroid surgery

The research results showed that there were 43.7% of patients with high support needs and 17.3% of patients with low support needs. The research results were similar to the results of other studies. The research by Nguyen Hien Thanh in 2016 at Hanoi Medical University hospital showed that 38% of pre-operative patients needed psychological support [18]. Research by Sollner on 100 breast cancer patients stated that the psychological support need was 42% [19]. It showed that not only breast cancer patients, and surgical patients but all patients had also a need for psychological support. The level of desire for psychological support among preoperative patients was higher due to the specific nature of each disease. Various studies showed the importance of psychological support for preoperative patients in improving treatment effectiveness as well as patient's quality of life. Treatment results will be good if the patient feels relaxed and understands the treatment process, achieved results, and avoidable complications. Unexpected

results often occur in patients with depression and anxiety, no cooperation in treatment, or change of treatment methods.

4.2. Factors related to the anxiety of patients with thyroid surgery

The results of the study demonstrated that there was a significant association between age, education level, caregivers, marital status, health insurance, cancer diagnosis, surgical history, and chronic comorbidities with patients' anxiety. This result was similar to the results of the previous studies [12], [16], [17], which showed that patients with age, low education level, lack of caregivers, no insurance, thyroid cancer diagnosis, previous surgery and chronic diseases had a high level of anxiety.

Surgery is an intervention with the body, which leaves a physical as well as mental mark on the life of each patient. Therefore, the patient has the right to know all information about the surgery. In the study, patients with moderate and severe anxiety had moderate and high support needs which were significantly higher than the other group with OR = 8.1, the difference was statistically significant with $p < 0.05$. This result showed that when surgical patients were treated in hospitals, the factors of service attitude of medical staff, and trust in doctors were important factors that could affect patients' anxiety. Therefore, the health care providers should consider listening to the worries, and pain, or witnessing the bad condition of another patient. Based on the results of the study, to contribute to improving the efficiency and quality of comprehensive health care for patients, the nurses should develop the interventions and support to reduce pre-operative anxiety for patients, which considering to the related factors.

5. CONCLUSION

This study concludes that the patients had moderate, and severe anxiety respectively accounted for 11.7%, and 0.5%. Common anxieties among thyroid surgery patients were fear of post-surgical complications, postoperative pain, unconsciousness, thyroid tissue remaining after surgery and death. The mean score of social support were 24.02 (SD = 6.01) of which the family support was 12.88 (SD = 3.93), and the medical staff support were 11.14 (SD = 2.73). The rates of patients with high, moderate, support needs were 43.7%, 39.1%, respectively. Factors associated with the patient's anxiety were age, education level, marital status, number of caregivers during the hospital stay, health insurance, cancer diagnosis, previous surgical history, chronic comorbidities, history of Covid - 19, number of Covid - 19 vaccination doses, and the need for psychological support. Future intervention for enhancing psychological support should be considered to develop for the preoperative patients.

Conflict of interest: The authors declare no conflict of interest.

Ethics approval: The study was approved by the leadership of the Vietnam National Hospital of Endocrinology. All personal information about the research participants was kept secret, and the collected data and information were only for research purposes.

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