

PREVALENCE OF GENERALIZED ANXIETY DISORDER AND RELATED FACTORS IN PATIENTS WITH CIRRHOSIS PATIENTS AT THE GASTROENTEROLOGY DEPARTMENT - VIET TIEP FRIENDSHIP HOSPITAL IN 2025

Vu Thi Cam Doanh^{1*}, Luong Thi Thu Giang¹, Pham Thi Tuyen¹, Bui Thi Thanh Mai¹, Dong Xuan Ha²

¹Nursing Faculty, Hai Phong University of Medicine and Pharmacy -
72A Nguyen Binh Khiem, Ngo Quyen Dist, Hai Phong City, Vietnam

²Vinmec Ha Long International General Hospital -
10A Le Thanh Tong, Hong Gai Ward, Ha Long City, Quang Ninh Province, Vietnam

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ABSTRACT

Objective: To determine the prevalence and investigate some factors related to anxiety disorders in cirrhotic patients at the Gastroenterology Department - Viet Tiep Friendship Hospital in 2025.

Method: Cross-sectional descriptive study, convenient sampling on 144 cirrhotic patients at the Gastroenterology Department - Viet Tiep Friendship Hospital from January to March 2025.

Results: The prevalence of anxiety disorders was 43,1%; of which patients with mild anxiety disorders accounted for 24,3%. Analysis of some related factors showed: There was a statistically significant correlation between anxiety status and disease stage and frequency of hospitalization in the past year. There was no correlation between anxiety status and age group, gender, cause of disease, or caregiver.

Conclusion: 43,1% of cirrhotic patients had anxiety disorders, of which mild anxiety disorders accounted for 24,3%. There is a correlation between anxiety levels and disease progression and the frequency of hospitalizations in the past year. Therefore, to improve anxiety levels in patients, nurses need to clearly explain the disease, provide emotional support, especially for patients in the decompensated cirrhosis stage.

Keywords: Anxiety disorder, cirrhosis, Viet Tiep Friendship Hospital.

1. INTRODUCTION

According to National Institute of Mental Health: Occasional anxiety is a normal part of life. Many people worry about things such as health, money, school, work, or family. But people with generalized anxiety disorder (GAD) feel extremely worried or nervous more frequently or more intensely about these and other things even when the worry is out of proportion with the situation [1]. GAD is common, affecting approximately 3% of the population over a one-year period [2]. If left undetected and untreated, patients can fall into a state of depression, significantly impacting their quality of life. A review of the literature shows that patients with chronic diseases such as asthma, diabetes, cardiovascular disease, respiratory disorders, chronic pain, cancer, ...have an increased risk of anxiety disorders [3,4,5]. Cirrhosis is chronic disease, there were 1,32 million deaths attributable to cirrhosis in 2017, representing 2,4% of total global mortality [6]. In Vietnam, cirrhosis

is quite common, but there are very few studies on the psychiatric aspects of this group. Therefore, we conducted this study with the aim of determining the prevalence of generalized anxiety disorder and investigating some factors related to generalized anxiety disorder in cirrhotic patients receiving inpatient treatment at the Gastroenterology Department of Viet Tiep Friendship Hospital.

2. SUBJECTS AND METHODS

2.1. Study Subjects

Patients diagnosed with cirrhosis receiving inpatient treatment at the Gastroenterology Department, Viet Tiep Friendship Hospital, from October 2025 to March 2026.

- **Inclusion Criteria:** Confirmed diagnosis of cirrhosis; voluntary participation.

*Corresponding author

Email: vtcdanh@hpmu.edu.vn Phone: (+84) xxx DOI: 10.52163/yhc.v67iE1.5099

- **Exclusion Criteria:** Concurrent hepatocellular carcinoma (liver cancer); refusal to participate.

2.2. Location of the study

Gastroenterology Department, Viet Tiep Friendship Hospital.

2.3. Time of the study

Study Period: October 2025 to March 2026.

Data Collection: November 2025 to February 2026.

2.4. Methodology

Design: Cross-sectional descriptive study.

2.5. Sample size and sample selection

- Sample size: The entire patient population met the selection criteria at Viet Tiep Friendship Hospital from the beginning of November 2025 to the end of February 2026. The total number of study subjects selected was 144 patients.

- Sampling method: Convenient, indeterminate sampling, selecting the entire population within the data collection period

2.6. Variables and Indicators

- Characteristics of the study subjects: age, gender, place of residence, occupation, income, educational level.

- Characteristics of cirrhosis: disease stage, number of hospitalized in the past year, caregiver

- Anxiety status

2.7. Data Collection Methods

The research toolkit consists of 2 parts:

- Part 1: Questions about the general characteristics of the research subjects

- Part 2: GAD-7 anxiety assessment questionnaire [7] consists of 7 questions, each question worth 0-3 points. In which: 0-4 points: Minimal anxiety (normal), 5-9 points: Mild anxiety, 10-14 points: Moderate anxiety, ≥15 points: Severe anxiety.

3. RESULTS

Table 1. General Characteristics of Study Subjects (n=144)

Variable		n	%
Age	< 60	64	44,4
	≥ 60	80	55,6
	Mean	61,2 ± 10,7	
Gender	Male	128	88,9
	Female	16	11,1
Area	City	86	59,7
	Countryside	58	40,3

Variable		n	%
Education level	Elementary	36	25,0
	Middle school	38	26,4
	High school	47	32,6
	Colleague/ University/ Post graduate	23	16,0
Job	Officials and employees	11	7,6
	workers/farmers	63	43,8
	Unemployed/Others	37	25,7
	Retirement	33	22,9
Stage of the disease	Compensated cirrhosis	48	33,3
	Decompensated cirrhosis	96	66,7
Reason	Alcohol	129	89,6
	Virus/ others	15	10,4
Number of hospitalized	Once	74	51,4
	More than once	70	48,6
Caregiver	Yes	131	91,0
	No	13	9,0

Among the 144 study subjects, the youngest was 43 years old, the oldest 82 years old, and the average age was 61,2 ± 10,7 years. Males constituted the majority, at 88,9%. Study subjects were workers/farmers, accounting for 43,8%. Almost of patients had alcoholic cirrhosis (89,6%), and 66,7% were in the decompensated stage. The majority of patients had a caregiver, accounting for 91%.

Prevalence of anxiety disorder

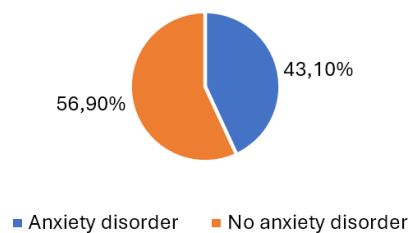


Figure 1. Anxiety prevalence in cirrhosis patients according to the GAD (n=144)

The proportion of participants with anxiety disorders was 43,1%; the proportion of participants without anxiety disorders was higher at 56,9%.

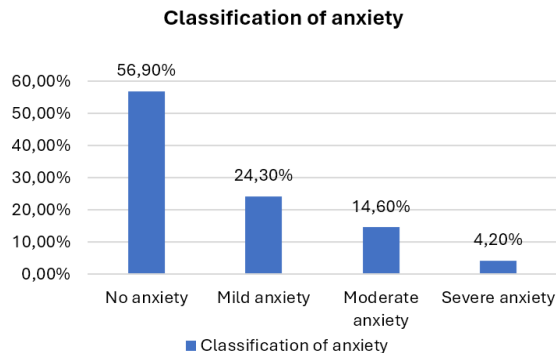


Figure 2. Classification of anxiety severity in patients with cirrhosis (n=144)

The proportion of participants without anxiety disorders was 56,9%; those with mild anxiety disorders accounted for 24,3%; 14,6% had moderate anxiety disorders; and only 4,2% had severe anxiety disorders.

Table 2. Characteristics of anxiety in patients with cirrhosis (n=144)

Characteristics	Mean	SD	Min-Max
Feeling nervous, anxious, or on edge	0,74	0,91	0-3
Not being able to stop or control worrying	0,47	0,79	0-3
Worrying too much about different things	0,76	0,95	0-3
Trouble relaxing	0,97	0,98	0-3
Being so restless that it's hard to sit still	0,50	0,88	0-3
Becoming easily annoyed or irritable	1,03	1,04	0-3
Felling afraid as if something awful might happen	0,42	1,28	0-3
Sum	4,89	5,52	0-21

The average anxiety disorder score of the research team was $4,89 \pm 5,52$. In the GAD-7 domains, "felling afraid as if something awful might happen" and "becoming easily annoyed or irritable" had significantly higher average scores than the others, at 1,28 and 1,04 respectively.

Table 3. Some factors associated with anxiety (n=144)

Variable	No anxiety n (%)	Anxiety n (%)	OR G5%- CI	P
Age group				
30-60 ages	38 (59,3)	26 (40,7)	1,19 (0,61-2,3)	0,59
>60 ages	44 (55)	36 (45)		
Gender				
Male	74 (57,8)	54 (42,2)	1,37 (0,48-3,88)	0,55
Female	8 (50)	8 (50)		
Number of hospitalized in the past year				
One	49 (66,2)	25 (33,8)	2,19 (1,12-4,30)	0,02
More than one	33 (47,1)	37 (52,9)		
Stage of the disease				
Compensated cirrhosis	33 (68,7)	15 (31,3)	2,11 (1,01-4,37)	0,04
Decompen-sated cirrhosis	49 (51)	47 (49)		
Reason				
Alcohol	72 (55,8)	57 (44,2)	0,63 (0,20-1,95)	0,42
Virus/ others	10 (66,6)	5 (33,4)		
Caregiver				
No	72 (54,9)	59 (45,1)	0,36 (0,09-1,39)	0,12
Yes	10 (76,9)	3 (23,1)		

There was a statistically significant correlation between anxiety status and stage of disease (OR= 2,11; $p < 0,05$) and frequency of hospitalization in the past year (OR= 2,19; $p < 0,05$). There was no correlation between anxiety status and age group, gender, cause of disease, or caregiver.

4. DISCUSSION

Table 3.1 shows that, the median age was $61,2 \pm 10,7$ years; 88,9% (n = 128) were men. The research findings are consistent with those of Hernaez R et al. in 2022, who studied 2875 patients regarding depression and anxiety in cirrhosis patients. These results are also consistent with the fact that chronic liver disease, which develops over a long period, is more common in middle-aged and older individuals [8]. Our study found that 43,1% of cirrhotic patients had anxiety disorders. This result is similar to the results of a systematic review by

Abureesh O et al on 23 articles with 979,113 patients, which showed that 53% of cirrhotic patients had anxiety disorders [9]. However, our result is higher than that of Hernaez R et al., who found only 29,4% of cirrhotic patients had anxiety. This difference can be explained by the fact that Hernaez R et al. studied a large population (n=2875) in different geographical areas, so the results are not consistent [8]. Table 3.3 also shows that there is a significantly significant correlation between anxiety status and disease stage (OR= 2,11; p<0,05) and frequency of hospitalization in the past year (OR= 2,19; p<0,05). There was no correlation between anxiety status and age group, gender, cause of disease, or caregiver. Meanwhile, Abureesh O and colleagues showed that age, alcoholism, and viral causes were associated with the incidence of depression, and the incidence of anxiety increased with age in cirrhotic patients (p = 0,02) [9]. These results guide us in expanding our research in subsequent studies.

5. CONCLUSIONS

43,1% of cirrhosis patients experienced anxiety. The prevalence of mild anxiety was 24,3%; moderate anxiety 14,6%; and severe anxiety 4,2%.

There was a statistically significant correlation between anxiety status and stage of disease (OR= 2,11; CI:1,01-4,37; p<0,05) and frequency of hospitalization in the past year (OR= 2,19; CI: 1,12-4,30; p<0,05). There was no correlation between anxiety status and age group, gender, cause of disease, or caregiver.

REFERENCES

- [1] National Institute of Mental Health. Generalized Anxiety Disorder: What You Need to Know. [Internet]. 2025 [cited 2026 May 07]. Available from: <https://www.nimh.nih.gov/health/publications/generalized-anxiety-disorder-gad>
- [2] Kessler RC, Chiu WT, Demler O, et al: Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 62(6):617-627, 2005. doi: 10.1001/archpsyc.62.6.617
- [3] Celano CM, Daunis DJ, Lokko HN, Campbell KA, Huffman JC. Anxiety Disorders and Cardiovascular Disease. *Curr Psychiatry Rep.* 2016 Nov;18(11):101. doi: 10.1007/s11920-016-0739-5. PMID: 27671918; PMCID: PMC5149447.
- [4] Altintas E, Bagir GS, Haydardedeoglu FE, Bag H. Effect of health anxiety on glycemic control in patients with type 2 diabetes mellitus: A single center, cross sectional study. *Acta Endocrinol (Buchar).* 2023 Jan-Mar;19(1):73-80. doi: 10.4183/aeb.2023.73. Epub 2023 Aug 14. PMID: 37601723; PMCID: PMC10439319.
- [5] Amiri S (2024) The prevalence of anxiety symptoms/disorders in cancer patients: a meta-analysis. *Front. Psychiatry* 15:1422540. doi: 10.3389/fpsy.2024.1422540
- [6] GBD 2017 Cirrhosis Collaborators. The global, regional, and national burden of cirrhosis by cause in 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet Gastroenterol Hepatol.* 2020. 5(3), 245-266, [https://doi.org/10.1016/s2468-1253\(19\)30349-8](https://doi.org/10.1016/s2468-1253(19)30349-8).
- [7] Spitzer RL, Kroenke K, Williams JB, Lowe B. A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of internal medicine.* May 22 2006;166(10):1092- 1097. PMID: 16717171
- [8] Hernaez R, Kramer JR, et al. Depression and Anxiety Are Common Among Patients With Cirrhosis. *Clin Gastroenterol Hepatol.* 2022 Jan;20(1):194-203. e1. doi: 10.1016/j.cgh.2020.08.045. Epub 2020 Aug 21. PMID: 32835845; PMCID: PMC8210475.
- [9] Abureesh O, Al-Shraideh A, Sleiman J, et al. Global prevalence and predictors of depression and anxiety in patients with liver cirrhosis: a systematic review and meta-analysis. *Front Epidemiol.* 2026 Apr 17;6:1740227. doi: 10.3389/fepid.2026.1740227. PMID: 42077634; PMCID: PMC13133006.