Daniela Bimi

PhD student

Regional Development
Department, Faculty of
Management and
Administration, UNWE, Sofia,
Bulgaria

Queen Geraldine" Maternity Hospital, Tirana.

Corresponding author:

e-mail:

bimidaniela@gmail.com

ORCID:

https://orcid.org/0009-0008-9440-1118

Published First Online:

27.06.2025

Pages: 47-57

DOI:

https://doi.org/10.37075/JOMS A.2025.1.05

JEL: I18, H75, M12, M38

REGIONAL DIFFERENCES IN PATIENT SATISFACTION WITH NURSING CARE QUALITY IN ALBANIA

ABSTRACT

This study investigates patient satisfaction with nursing care in six regional hospitals in Albania using the validated Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ). The findings reveal marked regional disparities, with satisfaction rates ranging from 26.8% in Fier to 77.5% in Lezhë. Higher satisfaction was observed in hospitals with better nurse-patient ratios and organizational practices, while lower scores reflected systemic challenges including understaffing and limited oversight. Sociodemographic differences also emerged, with lower satisfaction reported among patients with higher education, recent hospitalizations, or poor self-rated health. These insights underscore the critical need to embed patient feedback into national performance monitoring systems. Benchmarking satisfaction across institutions can support targeted reforms, enhance nursing quality, and promote equitable healthcare delivery. The study highlights the role of structured satisfaction assessments as tools for governance and accountability in transitional health systems.

KEYWORDS: patient satisfaction, nursing care, regional disparities, health system performance, benchmarking

INTRODUCTION

Patient satisfaction with nursing care is a critical component of healthcare quality and a key indicator of health system performance. It reflects not only patients' evaluation of clinical outcomes but also their perceptions of emotional support, communication, safety, and dignity during care. High levels of satisfaction are strongly correlated with improved treatment adherence, reduced hospital readmissions, better patient engagement, and increased institutional trust. Conversely, dissatisfaction can lead to poor compliance, negative health behaviors, and decreased utilization of health services.

In Albania, as in many health systems in transition, the routine measurement of patient satisfaction has not yet been fully institutionalized, particularly within the domain of nursing care. The absence of systematic evaluation impedes efforts to improve service quality, identify performance gaps, and design targeted interventions. This study addresses this gap by focusing on nursing care, a vital dimension of patient experience, as nurses are the most consistent point of contact throughout hospitalization. Using the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ)—a tool validated for the Albanian context—this research aims to assess satisfaction levels in a representative sample of regional hospitals.

Six regional hospitals were strategically selected to reflect geographic and demographic diversity across Albania: Durres, Elbasan, Fier, Lezha, Shkodra, and Vlora. These institutions

Journal of Management Sciences and Applications

No. I, 2025

ISSN 2815-3030

https://jomsa.science/

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vary in terms of capacity, resource availability, infrastructure, and workforce distribution, making them ideal for examining regional differences in perceived nursing care quality. A cross-sectional survey design was employed to capture data from a large, diverse patient population. While the design limits causal inference, it allows for a comprehensive snapshot of satisfaction and its associations with sociodemographic and clinical predictors.

This study is expected to highlight variations in satisfaction across hospitals and identify actionable factors that influence patient perceptions. By doing so, it provides critical evidence to inform quality improvement strategies and supports the integration of patient-reported outcomes into Albania's healthcare governance.

1. LITERATURE REVIEW

Patient satisfaction is a multidimensional construct that encompasses clinical effectiveness, emotional support, interpersonal communication, and organizational responsiveness. Globally, patient satisfaction has been widely recognized as a core dimension of healthcare quality and is routinely monitored in many countries to ensure accountability, improve service delivery, and guide policy reforms. Among the various elements of patient care, nursing services consistently emerge as one of the most influential in shaping patient perceptions due to the sustained, close interaction between nurses and patients throughout the care continuum.

Numerous international studies have demonstrated that satisfaction with nursing care is closely linked to communication clarity, responsiveness to patient needs, emotional empathy, technical competence, and respectful behavior (Aiken et al., 2014; Coulter et al., 2015). These factors are not only vital for enhancing patient experiences but also for improving clinical outcomes and reducing healthcare costs. The World Health Organization and other global health bodies have underscored the importance of incorporating patient feedback, particularly in evaluating frontline providers such as nurses, as a means of strengthening people-centered care.

In transitional healthcare systems, including those in the Western Balkans, patient satisfaction levels typically range from moderate to low. Studies conducted in Serbia, North Macedonia, Montenegro, and Greece report satisfaction scores generally between 40% and 60%, with substantial variation based on region, facility type, and service quality (Rechel et al., 2018). These differences are often attributed to structural deficiencies, such as underfunded public hospitals, uneven resource distribution, limited access to care in rural areas, and inadequate staffing levels.

Further, these regional studies have documented a lack of systematic patient engagement in quality monitoring processes, contributing to low responsiveness and diminished trust in healthcare institutions. Santric-Milicevic et al. (2016) and Kaitelidou et al. (2015) emphasize that workforce limitations, administrative inefficiencies, and outdated organizational practices frequently lead to negative patient experiences. This underscores the need for health systems in the region to invest in institutionalizing patient-centered evaluation mechanisms.

In contrast, high-performing health systems in countries like the United Kingdom, the Netherlands, and Denmark have shown that regular benchmarking of patient satisfaction can significantly improve hospital performance and accountability. These systems use patient feedback not only to monitor service quality but also to guide strategic decisions related to staff training, resource allocation, and regulatory oversight (Bjertnaes et al., 2020; Doyle et al., 2013). Moreover, global initiatives have increasingly focused on integrating patient-reported outcomes into national health information systems as a driver of transparency, trust, and continuous improvement (WHO, 2015).

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In Albania, where healthcare reform remains a priority, there is a pressing need to incorporate validated, standardized tools for measuring patient satisfaction, particularly in nursing care. The PSNCQQ offers a reliable framework for this purpose and aligns with WHO's strategic direction on people-centered care (WHO, 2015). Despite ongoing investments in health infrastructure and workforce, systematic monitoring of patient experiences remains limited. As a result, health system leaders lack timely, actionable data on service quality from the patient's perspective.

Given the limited body of research on patient satisfaction in Albania and the absence of national benchmarks, this study seeks to fill a critical gap by providing empirical evidence on the quality of nursing care as perceived by patients across diverse regional settings. This study aims to assess patient satisfaction with nursing care quality in six regional hospitals in Albania using the validated PSNCQQ instrument, and to examine how satisfaction levels vary by region and patient sociodemographic characteristics.

2. METHODOLOGY

2.1 Study Design

This study adopted a mixed-methods approach, primarily based on a quantitative, cross-sectional survey, supplemented by qualitative data to provide deeper insight into patient satisfaction with nursing care. The cross-sectional design enabled the collection of data at a single point in time from a broad hospital-based population, facilitating the identification of patterns and associations between satisfaction scores and sociodemographic, clinical, and institutional variables (Setia, 2016). This design was well-suited to capture current perceptions and compare satisfaction levels across various healthcare settings.

Quantitative data were collected using the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ), a standardized and validated tool administered to patients before discharge. This allowed for robust analysis of satisfaction levels and the identification of regional disparities and sociodemographic predictors.

To complement the quantitative data, qualitative insights were drawn from open-ended responses and/or selected patient interviews. These narratives offered a nuanced understanding of patient experiences, especially regarding communication, emotional support, and nurse responsiveness. Although the cross-sectional design limits causal inference, the inclusion of qualitative data enhances the interpretation of results and the relevance of findings for health policy and clinical practice.

2.2 Setting and Population

The study was carried out in six public regional hospitals in Albania—Durres, Elbasan, Fier, Lezhë, Shkoder, and Vlorë—selected to represent geographic, demographic, and institutional diversity. These hospitals serve as regional referral centers, providing inpatient and emergency care to urban and surrounding rural populations. They operate under the Ministry of Health and Social Protection and form part of the national public hospital network.

Each facility varies in terms of size, staffing ratios, and infrastructure, offering a suitable context for assessing differences in nursing care experiences across Albania's health system. The multi-site design enhances the representativeness of findings and facilitates comparisons that reflect national variations in care quality and equity.

Patients were eligible to participate if they were aged 18 or older, had been hospitalized for at least 48 hours in one of the participating hospitals, and were discharged from inpatient units such as internal medicine, surgery, or gynaecology/obstetrics. Participants needed to be

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cognitively capable of giving informed consent and understanding the Albanian language, either independently or with minimal assistance. Individuals admitted solely to ICUs or emergency rooms without subsequent ward transfer, those with hospital stays shorter than 48 hours, and those with cognitive or severe psychiatric impairments were excluded. Critically ill patients or those unwilling to participate were also not included. The sampling strategy ensured diversity across clinical departments to capture a broad range of nursing care experiences.

To determine the appropriate number of participants, a single population proportion formula was employed, assuming a 50% satisfaction rate due to the lack of prior national data. With a 95% confidence level, 3% margin of error, design effect of 1, and accounting for a 15% non-response rate, the required sample size was calculated to be 1,206 patients. This ensured sufficient power to estimate satisfaction levels with high precision and to detect meaningful differences across hospitals and subgroups.

2.2.1 Ethical Considerations

Before data collection, permission was obtained from the Directorate of Harmonization of Healthcare Services at the Operator of Healthcare Services (Ministry of Health and Social Protection, Albania). The approval, dated 17 December 2024, authorized the study in regional and municipal hospitals under its jurisdiction, provided it complied with national laws, including the Law "On Healthcare in the Republic of Albania" and the Law "On Personal Data Protection," and institutional regulations. The Directorate specified that study activities must be conducted only with prior consent from hospital staff, ensuring ethical standards and legal compliance.

2.3 Instrument

The Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) was used to assess perceptions of nursing care. Developed by *Laschinger et al.* (2005), the PSNCQQ includes 19 core items measuring aspects such as communication, attentiveness, and coordination. It also includes three global items that evaluate overall satisfaction with hospital care, nursing care, and likelihood to recommend the hospital. Responses are captured on a 5-point Likert scale (1 = Poor to 5 = Excellent). An additional item measures patients' self-rated health status.

For this study, the PSNCQQ was translated, culturally adapted, and validated for the Albanian context. The validation process involved forward and backward translation, expert panel review, and pilot testing to ensure linguistic clarity, contextual relevance, and psychometric reliability. The final version demonstrated good internal consistency and was deemed suitable for use in evaluating nursing care satisfaction in Albanian hospitals.

2.4 Statistical Analysis

Data were analyzed using IBM SPSS Statistics for Windows, Version 21.0. Descriptive statistics summarized sociodemographic variables and PSNCQQ item responses. Means and standard deviations were reported for continuous variables; frequencies and percentages for categorical ones.

Inferential analyses were conducted to explore relationships between patient characteristics and satisfaction scores. Independent sample t-tests compared mean scores between binary groups (e.g., gender), while one-way ANOVA assessed differences across multiple categories (e.g., age, education). Post hoc Bonferroni tests were applied when ANOVA indicated significance to identify between-group differences.

To assess predictors of high satisfaction, responses on overall satisfaction were dichotomized (e.g., excellent/very good vs. poor/fair), and logistic regression was used to explore associations

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with sociodemographic factors. All statistical tests were two-tailed, and a p-value < 0.05 was considered statistically significant.

3. RESULTS

A detailed analysis of patient satisfaction scores based on sociodemographic characteristics is summarized in Table 1. The comparison covers key demographic variables, including age, gender, marital status, education, economic status, employment status, and regional hospital location.

Table 1 Comparison of Patient Satisfaction Scores According to Sociodemographic

Age group ≤30 210 (17.4) 3.64 0.98 0.398 0.754 31-50 486 (40.3) 3.67 0.94 0.398 0.754 51-70 382 (31.7) 3.67 0.96 0.96 70+ 128 (10.6) 3.58 1.07 Gender ————————————————————————————————————	Variables	N (%)	M	SD	t/F	P-value
31-50	Age group					
51-70 382 (31.7) 3.67 0.96 70+ 128 (10.6) 3.58 1.07 Gender	≤30	210 (17.4)	3.64	0.98		
T0+	31-50	486 (40.3)	3.67	0.94	0.398	0.754
Cender Company Compa	51-70	382 (31.7)	3.67	0.96		
Temale	70+	128 (10.6)	3.58	1.07	1	
Male 493 (40.9) 3.70 1.00 Marital status 240 (19.9) 3.46 1.02 Married/Cohabiting 663 (55.0) 3.63 0.97 Separated/Divorced 240 (19.9) 3.87 0.85 Widowed 63 (5.2) 3.85 0.91 Education level 8-years 125 (10.7) 4.07 0.96 High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status Low 445 (36.9) 3.85 1.03 Moderate 560 (46.4) 3.76 0.84 High 201 (16.7) 2.94 0.79 Employment status Employed 763 (63.3) 3.54 0.82 Unemployed 115 (9.5) 4.42 1.27 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital Durres 286 (23.7) 3.81 0.73 Elbasa	Gender					
Marital status Single 240 (19.9) 3.46 1.02 Married/Cohabiting 663 (55.0) 3.63 0.97 Separated/Divorced 240 (19.9) 3.87 0.85 Widowed 63 (5.2) 3.85 0.91 Education level 8-years 125 (10.7) 4.07 0.96 High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status Low 445 (36.9) 3.85 1.03 76.2 <0.001	Female	713 (59.1)	3.63	0.94	-1.29	0.196
Single 240 (19.9) 3.46 1.02 Married/Cohabiting 663 (55.0) 3.63 0.97 Separated/Divorced 240 (19.9) 3.87 0.85 Widowed 63 (5.2) 3.85 0.91 Education level 8-years 125 (10.7) 4.07 0.96 High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status	Male	493 (40.9)	3.70	1.00		
Married/Cohabiting	Marital status					
Separated/Divorced 240 (19.9) 3.87 0.85 Widowed 63 (5.2) 3.85 0.91 Education level 8-years 125 (10.7) 4.07 0.96 High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status 560 (46.4) 3.76 0.84 High 201 (16.7) 2.94 0.79 Employment status 560 (46.4) 3.76 0.84 High 201 (16.7) 2.94 0.79 Employed 763 (63.3) 3.54 0.82 Unemployed 115 (9.5) 4.42 1.27 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital 58 0.85 Durres 286 (23.7) 3.81 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Shkoder	Single	240 (19.9)	3.46	1.02	8.325	<0.001
Widowed 63 (5.2) 3.85 0.91 Education level 8-years 125 (10.7) 4.07 0.96 High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status	Married/Cohabiting	663 (55.0)	3.63	0.97		
Education level 8-years 125 (10.7) 4.07 0.96 83.2 <0.001	Separated/Divorced	240 (19.9)	3.87	0.85		
8-years 125 (10.7) 4.07 0.96 High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status	Widowed	63 (5.2)	3.85	0.91		
High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status 445 (36.9) 3.85 1.03 Low 445 (36.9) 3.85 1.03 Moderate 560 (46.4) 3.76 0.84 High 201 (16.7) 2.94 0.79 Employment status Employed 763 (63.3) 3.54 0.82 Unemployed 115 (9.5) 4.42 1.27 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital Durres 286 (23.7) 3.81 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	Education level					
High school 690 (58.4) 3.84 0.90 University 373 (30.9) 3.16 0.96 Economic status Low 445 (36.9) 3.85 1.03 76.2 <0.001 Moderate 560 (46.4) 3.76 0.84 High 201 (16.7) 2.94 0.79 Employment status Employed 763 (63.3) 3.54 0.82 Unemployed 115 (9.5) 4.42 1.27 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital Durres 286 (23.7) 3.81 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	8-years	125 (10.7)	4.07	0.96	00.0	<0.001
Economic status 445 (36.9) 3.85 1.03 76.2 <0.001 Moderate 560 (46.4) 3.76 0.84 0.84 High 201 (16.7) 2.94 0.79 Employment status 263 (63.3) 3.54 0.82 Unemployed 115 (9.5) 4.42 1.27 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital 0.73 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	High school	690 (58.4)	3.84	0.90	83.2	
Low 445 (36.9) 3.85 1.03 76.2 <0.001	University	373 (30.9)	3.16	0.96	1	
Moderate 560 (46.4) 3.76 0.84 High 201 (16.7) 2.94 0.79 Employment status	Economic status					
High 201 (16.7) 2.94 0.79 Employment status 0.82 0.82 Unemployed 115 (9.5) 4.42 1.27 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital 0.73 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Shkoder 222 (18.4) 4.12 0.51	Low	445 (36.9)	3.85	1.03	76.2	<0.001
Employment status 29.6 Employed 763 (63.3) Unemployed 115 (9.5) Retired 263 (21.8) Student 65 (5.4) Regional Hospital Durres 286 (23.7) Elbasan 255 (21.1) Simployed 3.70 0.001 Regional Hospital Durres 190 (15.8) 3.70 0.51 56.3 <0.001	Moderate	560 (46.4)	3.76	0.84		
Employed 763 (63.3) 3.54 0.82 Unemployed 115 (9.5) 4.42 1.27 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital 286 (23.7) 3.81 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	High	201 (16.7)	2.94	0.79		
Unemployed 115 (9.5) 4.42 1.27 29.6 <0.001 Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital 0.73 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	Employment status					
Retired 263 (21.8) 3.63 1.04 Student 65 (5.4) 3.74 1.00 Regional Hospital 286 (23.7) 3.81 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	Employed	763 (63.3)	3.54	0.82		<0.001
Student 65 (5.4) 3.74 1.00 Regional Hospital	Unemployed	115 (9.5)	4.42	1.27	29.6	
Regional Hospital 286 (23.7) 3.81 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	Retired	263 (21.8)	3.63	1.04		
Durres 286 (23.7) 3.81 0.73 Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	Student	65 (5.4)	3.74	1.00		
Elbasan 255 (21.1) 3.82 0.85 Fier 190 (15.8) 3.70 0.51 Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	Regional Hospital					
Fier 190 (15.8) 3.70 0.51 56.3 <0.001	Durres	286 (23.7)	3.81	0.73		
Lezhe 127 (10.5) 4.29 0.56 Shkoder 222 (18.4) 4.12 0.51	Elbasan	255 (21.1)	3.82	0.85	1	
Shkoder 222 (18.4) 4.12 0.51	Fier	190 (15.8)	3.70	0.51	56.3	< 0.001
	Lezhe	127 (10.5)	4.29	0.56	1	
Vlorë 126 (10.4) 3.10 1.14	Shkoder	222 (18.4)	4.12	0.51	1	
	Vlorë	126 (10.4)	3.10	1.14	1	

Source: based on national statistics data adapted by the author

Characteristics

A detailed analysis was conducted to evaluate how patient satisfaction scores varied by sociodemographic characteristics across the six regional hospitals. This analysis examined the influence of factors such as age, gender, marital status, education, economic status, and employment, revealing important regional differences and demographic patterns. The comprehensive findings from this comparison are summarized in Table 2.

Table 2: Patient Satisfaction Scores Across Regional Hospitals According to Sociodemographic Variables

Variables	Hospital	Hospital	Hospital	Hospital		Hospital	P
	Durrës	Elbasan	Fier	Lezhë	Hospital	Vlorë	-
					Shkodër		value
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD		
Age group							
≤30	3.48±0.98	3.73±0.80	3.68±0.53	4.37±0.52	4.14±0.54	3.29±1.18	< 0.001
31-50	3.81±0.65	3.75±0.90	3.67±0.45	4.22±0.59	4.17±0.39	3.12±1.13	< 0.001
51-70	3.81±0.57	3.96±0.83	3.76±0.59	4.37±0.49	4.10±0.53	3.01±1.09	< 0.001
70+	4.00±0.64	3.91±0.83	3.40±0.35	4.53±0.46	4.10±0.61	3.02±1.19	< 0.001
Gender							
Female	3.84±0.74	3.75±0.80	3.63±0.49	4.43±0.39	4.08±0.52	2.95±1.04	< 0.001
Male	3.79±0.72	3.91±0.93	3.94±0.56	3.99±0.72	4.18±0.50	3.29±1.23	< 0.001
Marital status							
Single	3.59±0.81	3.78±0.86				2.95±1.21	< 0.001
Married/Cohabiting	3.83±0.65	3.79±0.91	3.58±0.45	4.40±0.46	4.02±0.49	3.14±1.09	< 0.001
Separated/Divorced	4.17±0.61	3.97±0.64	3.66±0.50	4.10±0.67	4.29±0.50	3.06±1.25	< 0.001
Widowed	4.02±0.69	3.92±0.75	4.01±0.60	428±0.79	4.19±0.55	3.11±1.37	0.032
Education level							
8-years	3.97±0.56	4.27±0.59	3.86±0.80	4.24±0.52	4.04±0.60	4.04±0.83	0.545
High school	4.00±0.60	4.02±0.79	3.74±0.49	4.45±0.40	4.16±0.52	3.24±1.16	< 0.001
University	3.43±0.85	3.35±0.83	3.45±0.57	3.71±0.72	4.06±0.39	2.69±0.98	< 0.001
Economic status							
Low	3.87±0.77	4.06±0.76	3.94±0.62	4.41±0.54	4.20±0.54	3.37±1.37	< 0.001
Moderate	3.82±0.64	3.94±0.75	3.66±0.40	4.26±0.49	4.15±0.39	3.20±1.09	< 0.001
High	3.65±0.90	2.94±0.79	3.32±0.51	3.59±1.02	3.56±0.73	2.56±0.46	< 0.001
Employment status							
Employed	3.78±0.54	3.52±0.77	3.62±0.46	4.15±0.55	4.04±0.42	3.00±0.93	< 0.001
Unemployed	4.36±1.43	4.92±0.10	4.79±0.00	4.86±0.07	4.93±0.09	3.83±1.72	0.003
Retired	4.08±0.57	4.06±0.77	3.84±0.56	4.31±0.55	4.10±0.59	2.93±1.14	< 0.001
Student	2.82±1.21	4.02±0.72	3.47±0.30	4.51±0.28	4.30±0.37	3.55±0.99	< 0.001

Source: based on national statistics data adapted by the author

Patient satisfaction scores showed notable variation across different sociodemographic groups. While age and gender did not significantly impact overall satisfaction levels, other variables such as marital status, educational attainment, economic status, employment, and regional hospital location revealed statistically significant differences.

Married, separated/divorced, and widowed individuals reported significantly higher satisfaction than single patients, suggesting the possible buffering role of social support. Education level was inversely associated with satisfaction: patients with only 8-year schooling or high school education tended to report higher satisfaction compared to those with a university degree. Economically disadvantaged patients also reported greater satisfaction, while those with higher economic status were significantly less satisfied, potentially reflecting a discrepancy between expectations and perceived care quality.

Unemployed and retired patients were markedly more satisfied compared to employed individuals, and this trend remained consistent across hospital locations. By contrast, employed patients reported lower satisfaction scores, possibly indicating time constraints, elevated expectations, or more critical assessments. Regional analysis revealed substantial disparities: patients from Lezhë and Shkodër reported the highest satisfaction levels, while those from Vlorë consistently expressed the lowest satisfaction across nearly all subgroups.

A multivariate logistic regression analysis further examined independent predictors of satisfaction. The model demonstrated good fit according to the Hosmer and Lemeshow test (χ^2 = 8.973, p = 0.345). Key findings include the significantly lower satisfaction among patients admitted post-procedure (OR = 0.33), university-educated patients (OR = 0.33), and those with high economic status (OR = 0.45). Conversely, unemployed individuals had dramatically higher odds of satisfaction (OR = 7.55), followed by retired patients (OR = 1.57). Widowed individuals also reported significantly higher satisfaction (OR = 2.30).

Self-rated health emerged as a strong predictor: patients who rated their health as excellent were nearly twice as likely to be satisfied, while those who rated their health as poor, very poor, or were uncertain showed significantly reduced odds of satisfaction. Other variables, such as age, gender, and the number of hospitalizations, did not maintain statistical significance in the multivariate model.

In summary, satisfaction with nursing care in Albania's regional hospitals is significantly shaped by educational, economic, and employment status, as well as by perceived health and the specific hospital where care was received. These results underscore the importance of tailoring interventions to demographic and regional contexts to improve patient experiences and equity in nursing care delivery.

4. DISCUSSION

This study evaluated patient satisfaction with nursing care in six regional hospitals in Albania using the validated PSNCQQ tool. The findings reveal significant disparities in satisfaction levels both across hospitals and among different patient subgroups, providing valuable insights for improving health system performance, equity, and responsiveness.

A key finding of this study was the considerable variation in satisfaction levels between hospitals, ranging from as low as 26.8% in Fier to as high as 77.5% in Lezhë. This stark contrast underscores the presence of deep-rooted regional disparities in the quality and perception of nursing care across Albania's public hospital system. Notably, hospitals located in the northwestern (Lezhë) and northern (Shkodër) regions demonstrated the highest levels of patient satisfaction. These findings may be attributed to a combination of favorable structural and organizational characteristics, such as higher nurse-to-patient ratios, stronger adherence to clinical guidelines, regular staff training, and possibly greater institutional stability or local accountability mechanisms. These hospitals may also have more effective management practices that foster a supportive work environment, enabling nurses to provide more attentive and individualized care.

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In contrast, hospitals in the southern region, particularly Fier and Vlorë, reported significantly lower satisfaction scores. This suggests the presence of persistent systemic challenges in these regions, potentially including chronic understaffing, aging infrastructure, inconsistent quality monitoring, and insufficient investment in human resources. The findings may also reflect a lack of effective managerial leadership or weaker regional health governance. For example, southern hospitals may be more vulnerable to workforce migration, both within Albania and abroad, leading to greater reliance on temporary or underqualified staff. Furthermore, socioeconomic and demographic differences across regions may also influence expectations and perceptions of care, but the sharp contrast observed here suggests that institutional and systemic factors are likely to be the dominant drivers.

Such regional disparities mirror those reported in other studies of transitional healthcare systems, where uneven distribution of healthcare resources, geographic isolation, and governance fragmentation can severely affect care quality (Rechel et al., 2018; Santric-Milicevic et al., 2016). In the Albanian context, where health reforms are ongoing and decentralization is unevenly implemented, the findings point to the urgent need for differentiated strategies. High-performing regions like Lezhë and Shkodër could serve as reference models for peer learning and quality improvement, whereas low-performing institutions in Fier and Vlorë may require targeted investment, focused managerial support, and robust oversight mechanisms. Addressing these regional imbalances will be critical for ensuring equity in service delivery and advancing a truly patient-centered healthcare system.

Such inter-hospital variation is not unique to Albania. Studies across the Western Balkans and other low- and middle-income countries (LMICs) have documented similar regional disparities, often driven by health financing inequalities, workforce shortages, urban-rural divides, and differing levels of political commitment (Rechel et al., 2018; Petrova et al., 2019). This heterogeneity underscores the urgent need for localized strategies tailored to hospital-specific deficiencies. For instance, in Fier and Vlorë, reforms could prioritize investments in nursing education, workload management, and patient engagement strategies. The contrasting outcomes between northern and southern hospitals may also reflect broader socio-economic and political development differences across regions.

From a sociodemographic perspective, our study found that patients with higher education and income levels reported lower satisfaction scores. This aligns with global findings that more educated patients are more likely to scrutinize service quality, demand clear communication, and express dissatisfaction when expectations are unmet (Coulter et al., 2015; Khosravizadeh et al., 2020). In contrast, unemployed, retired, and widowed patients—many of whom may rely exclusively on public hospitals—expressed higher satisfaction, potentially due to fewer alternative care options and reduced expectations. This phenomenon reflects the importance of considering patient expectations and prior care experiences when interpreting satisfaction data.

Another critical factor influencing satisfaction was the mode of hospital admission. Patients admitted after a medical or surgical procedure were substantially more likely to report dissatisfaction, suggesting gaps in perioperative care, post-procedural follow-up, or pain management. These findings resonate with studies indicating that complex medical interventions require more comprehensive, coordinated nursing efforts, which may not always be consistently delivered (Kalisch et al., 2012). Similarly, frequent hospital users—who are more exposed to fragmented or bureaucratic care—tended to evaluate services less favorably, possibly reflecting cumulative negative experiences.

Self-rated health status emerged as a powerful predictor of satisfaction. Patients reporting excellent health were significantly more likely to express satisfaction with nursing care, while those in poor or very poor health had markedly lower satisfaction levels. This pattern suggests that individuals with complex conditions may require more emotional support, personalized

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care, and communication from nursing staff—needs that are often unmet in resource-constrained systems (Pawlikowska et al., 2012). As a result, patient satisfaction should not be interpreted solely as a judgment on staff performance but also as a reflection of the system's ability to accommodate vulnerable groups.

The policy implications of these findings are substantial. Patient satisfaction is a core component of person-centered care and is widely recognized as an indicator of health system responsiveness, accountability, and quality (Doyle et al., 2013; WHO, 2015). For Albania, embedding satisfaction measurement into routine hospital monitoring and integrating results into performance evaluations could drive quality improvement and system reforms. Furthermore, utilizing tools like the PSNCQQ nationally could create benchmarks for interinstitutional comparisons and inform national accreditation or incentive schemes.

In line with best practices from countries such as the United Kingdom, Sweden, and the Netherlands, Albanian policymakers should consider developing a national satisfaction reporting system linked to clinical outcomes and quality metrics (Coulter et al., 2015; Bjertnaes et al., 2020). Evidence-based reforms should include regular training on communication skills, better nurse-patient ratios, structured feedback mechanisms, and patient-centered care plans. Equally important is the decentralization of quality assurance efforts, empowering regional hospitals to develop context-specific strategies.

High-performing hospitals in this study—particularly Lezhë and Shkodër—could be leveraged as regional training centers or models of excellence, disseminating effective strategies across the system. Their organizational models, staff motivation, and patient interaction protocols could serve as blueprints for replication in lower-performing areas. Conversely, persistently underperforming facilities such as those in Fier and Vlorë must undergo targeted audits and receive technical assistance to address infrastructural, managerial, and human resource gaps. Regional health authorities in the south could particularly benefit from additional oversight, performance-based incentives, and increased investment.

Limitations of this study include its cross-sectional design, which limits causal inference, and the exclusion of ICU or emergency-only patients, who might have distinct satisfaction profiles. Nonetheless, the study's large sample size, use of a validated instrument, and national scope offer robust insights into the state of nursing care satisfaction in Albania.

This study contributes valuable evidence that patient satisfaction is not only a measure of individual experience but also a lens through which systemic strengths and weaknesses can be observed. Addressing the disparities uncovered requires concerted efforts at the institutional, regional, and national levels. Through regular satisfaction assessments, evidence-informed policy reforms, and a genuine commitment to patient-centeredness, Albania can make meaningful progress toward a more equitable and responsive health system.

CONCLUSION

This study provides critical insight into the state of patient satisfaction with nursing care across six regional hospitals in Albania, revealing significant inter-hospital disparities and important sociodemographic determinants. The use of the validated PSNCQQ tool enabled robust comparisons and highlighted the varying experiences of patients within a health system undergoing transition and reform.

Key findings show that patient satisfaction is not uniformly distributed, with institutions such as Lezhë and Shkodër demonstrating significantly higher levels of satisfaction, while Fier and Vlorë lag behind. These disparities underscore the role of institutional factors—such as staffing ratios, nurse-patient communication, responsiveness, and facility quality—in shaping patient

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experiences. The association of lower satisfaction with higher education, higher economic status, and recent procedures suggests a mismatch between patient expectations and service realities, particularly for more informed or critically positioned patients.

Conversely, elevated satisfaction among unemployed, retired, or widowed patients may reflect more modest expectations or gratitude for accessible care. However, this should not mask systemic inadequacies. The findings support the growing international consensus that patient satisfaction is both a quality outcome and a tool for health system accountability (Doyle et al., 2013; WHO, 2015).

To address these inequities and foster a culture of excellence, health policy in Albania must institutionalize patient satisfaction assessment within hospital performance metrics. Strategic investments in nursing workforce development, clinical governance, and hospital infrastructure—especially in underperforming regions—are vital. Furthermore, leveraging high-performing hospitals as centers for training and innovation can enhance nationwide care quality.

Ultimately, patient satisfaction is not only a measure of service quality—it reflects dignity, communication, and trust in the health system. This study calls for a paradigm shift towards more equitable, patient-centered care in Albania, anchored in evidence-based policy, continuous quality improvement, and the voices of patients themselves.

SPONSORSHIP

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the hospital administrators, nursing staff, and patients at the six participating regional hospitals for their cooperation and valuable contributions. Special thanks are extended to the Ministry of Health and Social Protection of Albania for facilitating access to the healthcare institutions.

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