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Population Health

Correlates of Satisfaction among Hospitalized Patients in Kosovo

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Abstract

Background: The aim of our study was to assess selected sociodemographic correlates of satisfaction among hospitalized patients in Kosovo.

Methods and Results: A cross-sectional study was conducted in May-June 2022, including a representative sample of 508 hospitalized patients (58.1% women and 41.9% men) aged ≥18 years. A structured 19-item questionnaire about patient satisfaction with hospital services was used for data collection. Each item was measured on a Likert scale ranging from 1 (very satisfied) to 5 (very unsatisfied). A summary score was calculated for all 19 items related to the level of satisfaction among hospitalized patients ranging from 19 (highest level of satisfaction) to 95 (lowest level of satisfaction). Binary logistic regression was used to assess the association of the summary score of satisfaction (19-item instrument, dichotomized in the analysis into "satisfied" vs. "unsatisfied" based on the median value of the summary score) with sociodemographic factors, general health status, and duration of hospitalization.

In multivariable-adjusted logistic regression models controlling in a backward stepwise procedure for all sociodemographic factors, health status, and duration of hospitalization, patients' unsatisfaction was significantly associated with urban residence (OR=1.52, 95%CI: 1.00-2.31), income level (OR$_{[low vs. high income]}$=2.44, 95%CI: 1.18-5.06) and health status (OR$_{[poor vs. good health]}$=7.95, 95%CI: 4.43-14.24).

Conclusion: Our findings point to a significantly higher unsatisfaction level among urban patients, low-income individuals, and patients with poor general health status. Healthcare providers and policymakers in Kosovo and other similar countries should be aware of the importance of continuous quality improvement of hospital services to increase, among other things, the satisfaction level of hospitalized patients.**(International Journal of Biomedicine. 2023;13(1):156-160.)**

Keywords: healthcare • hospitals • Kosovo • patient satisfaction

Introduction

Patient satisfaction is determined by the opinions of the patients regarding the overall experience of health care received from health professionals.[1] As such, patient satisfaction is naturally connected with the quality of care provided by health professionals and the organizational environment of the concerned health institutions/facilities.[2,3]

It has been convincingly argued that patient satisfaction influences adherence to treatment, utilization of health services, and general attitudes toward the healthcare system.[1] Furthermore, patient satisfaction provides valuable clues about medical care and is recognized as an important dimension of quality of care in hospital settings and beyond, also including such factors as communication and interaction with medical staff.[4-6]

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Indeed, the manner in which the medical staff communicates with patients has a significant effect on patient satisfaction, by not applying a dominant position, being caring and committed to patients, and exhibiting positive attitudes – which all have a strong influence on the functioning of the relationship between health personnel and patients.[7,8]

Kosovo is a small country in the Western Balkans that is still striving for international recognition almost 15 years after declaring its independence. Even with the ongoing profound reforms in the health sector, mainly aiming toward establishing a social health insurance system, the health status of the general population in Kosovo exhibits worse indicators than do members of the European Union.[9,10] Current reforms in the health sector in Kosovo are also concerned with the hospital services, which absorb most of the health care funds. A previous report has documented a range of factors influencing patient satisfaction in hospital settings in Kosovo, including age, education, length of hospitalization, and related cost.[11] However, to date, there is no systematic documentation of patient satisfaction in hospital settings in Kosovo, particularly assessments based on a solid methodology, including representative samples of patients and standardized measuring instruments.

In this context, our aim was to assess selected sociodemographic correlates of satisfaction among hospitalized patients in Kosovo.

Methods

A cross-sectional study was conducted in May-June 2022, including a representative sample of hospitalized patients in the following three main regions of Kosovo (Gjakova, Peje, and Prizren). More specifically, our study included a consecutive sample of 520 patients aged ≥18 years who were hospitalized in the regional hospitals during the aforementioned period. The minimum sample size necessary for inclusion in this study was calculated as 476 patients, but we decided to approach 520 patients to account for potential non-response. Of 520 patients invited, 508(97.7%) of them agreed to participate, and 295(58.1%) were women.

The level of satisfaction of hospitalized patients was based on an adapted version of the EUROPEP instrument,[12] which had been previously validated in the context of primary healthcare services in Kosovo.[13] The adapted measuring instrument included 19 items inquiring about patient satisfaction with the following dimensions: availability of healthcare personnel, medical care received, attitudes of the healthcare personnel, and communication and interaction with the healthcare personnel. Each item of the instrument was measured on a Likert scale ranging from 1 (very satisfied) to 5 (very unsatisfied).

A summary score was calculated for all 19 items related to the level of satisfaction among hospitalized patients ranging from 19 (highest level of satisfaction) to 95 (lowest level of satisfaction). In the analysis, the summary score was dichotomized into "satisfied" vs. "unsatisfied" based on its median value.

Furthermore, information about demographic factors, general self-perceived health status, and duration of hospitalization was collected for all study participants.

Statistical analysis was performed using statistical software package SPSS version 19.0 (SPSS Inc, Armonk, NY: IBM Corp). Fisher's exact test was used to compare differences in sociodemographic factors and general health status between patients who were satisfied and those who were unsatisfied with hospital services. Binary logistic regression was used to assess the association of the summary score of satisfaction (19-item instrument, dichotomized in the analysis into "satisfied" vs. "unsatisfied" based on the median value of the summary score) with sociodemographic factors, general health status, and duration of hospitalization. Initially, crude (unadjusted) odds ratios (ORs), their respective 95% confidence intervals (95%CIs), and P-values were calculated. Subsequently, all variables were entered in a backward stepwise procedure with a P-value to exit set at P>0.10. Multivariable-adjusted ORs, their respective 95%CIs, and P-values were calculated for the variables retained in the final models. In all cases, a probability value of $P \leq <0.05$ was considered statistically significant.

The study was approved by the Ethics Commission and Council of the Faculty of Medicine, University of Gjakova.

Results

The mean age of the hospitalized patients included in this study was 45.4±18.2 years (median age: 45 years; interquartile range: 28-60 years; range: 18-87 years). About two-thirds of participants resided in urban areas; the absolute majority (92%) were ethnic Albanians; 62% were currently married; 35% had 0-8 years of education; 44% were unemployed; 14% were poor, and one out of four participants reported a poor general health status irrespective of the condition leading to current hospitalization.

Female patients were more satisfied than males: 54% vs. 44%, respectively; P=0.03 (Table 1). Furthermore, the prevalence of satisfaction with hospital services was higher among the following categories: ethnic Albanians, compared to the other ethnic groups (51% vs. 35%, respectively; P=0.06); highly educated participants, compared especially with their low-educated counterparts (60% vs. 43%, respectively; P=0.02); employed vs. retired individuals (56% vs. 36%, respectively; P=0.01); high-income participants, compared to their low-income counterparts (67% vs. 23%, respectively; P<0.001); and individuals who reported a good general health status, compared to those who said poor health status (73% vs. 21%, respectively; P<0.001). Conversely, there were no significant differences in the satisfaction level of hospitalized patients depending on their marital status or place of residence (Table 1).

Table 2 presents the crude (unadjusted) and multivariable-adjusted association of the level of satisfaction (dichotomized into "satisfied" vs. "unsatisfied") with sociodemographic factors, general health status, and duration of hospitalization among patients included in this study. In crude binary logistic regression models, patients' unsatisfaction was significantly

related to the male gender (OR=1.48, 95%CI: 1.04-2.11), age (OR$_{\text{[for an increment of 1 year]}}$=1.02, 95%CI: 1.01-1.03), minority groupings (OR=1.96, 95%CI: 1.02-3.76), low education (OR=1.96, 95%CI: 1.23-3.13), retirement (OR=2.26, 95%CI: 1.34-3.81), low income (OR=7.0, 95%CI: 3.69-13.3), and poor general health status (OR=10.26, 95%CI: 6.04-17.4). Conversely, there was no signification association with marital status or place of residence, notwithstanding the higher odds of unsatisfaction among urban residents, compared with their rural counterparts.

In multivariable-adjusted logistic regression models controlling in a backward stepwise procedure for all sociodemographic factors, health status, and duration of hospitalization, patients' unsatisfaction was significantly associated with urban residence (OR=1.52, 95%CI: 1.00-2.31), income level (OR$_{\text{[low vs. high income]}}$=2.44, 95%CI: 1.18-5.06) and general health status (OR$_{\text{[poor vs. good health]}}$=7.95, 95%CI: 4.43-14.24) (Table 2).

Table 1.

Distribution of the level of satisfaction by selected socio-demographic factors and health status in a sample of hospitalized patients in Kosovo (n=508)

Sociodemographic factors and general health status	Satisfied (n=253)	Unsatisfied (n=255)	P†
Gender			
Men	94 (44.1)*	119 (55.9)	0.031
Women	159 (53.9)	136 (46.1)	
Place of residence			
Urban areas	160 (48.0)	173 (52.0)	0.305
Rural areas	93 (53.1)	82 (46.9)	
Marital status			
Not married	95 (48.5)	101 (51.5)	0.649
Married	158 (50.6)	154 (49.4)	
Ethnicity			
Other ethnic groups	15 (34.9)	28 (65.1)	0.055
Albanian	238 (51.2)	227 (48.8)	
Education level			
Low	76 (43.2)	100 (56.8)	0.018
Middle	103 (49.3)	106 (50.7)	
High	73 (59.8)	49 (40.2)	
Employment			
Employed	109 (55.6)	87 (44.4)	0.008
Unemployed	112 (50.0)	112 (50.0)	
Retired	31 (35.6)	56 (64.4)	
Income level			
High	116 (67.1)	57 (32.9)	<0.001
Average	121 (45.8)	143 (54.2)	
Low	16 (22.5)	55 (77.5)	
Health status			
Good	154 (73.3)	56 (26.7)	<0.001
Average	73 (41.7)	102 (58.3)	
Poor	26 (21.1)	97 (78.9)	

* Absolute numbers and row percentages (in parenthesis).

† P-values from Fisher's exact test.

Table 2.

Association of patients' unsatisfaction with sociodemographic factors, general health status, and duration of hospitalization: results from binary logistic regression.

Variable	Unadjusted models*			Multivariable-adjusted models†		
	OR	95%CI	*P*	OR	95%CI	*P*
Gender						
Men	1.48	1.04-2.11	0.030			
Women	1.00	Reference				
Age (years)	1.02	1.01-1.03	<0.001			
Place of residence						
Urban areas	1.23	0.85-1.77	0.275	1.52	1.00-2.31	0.049
Rural areas	1.00	Reference		1.00	Reference	
Marital status						
Not married	1.09	0.76-1.56	0.634			
Married	1.00	Reference				
Ethnicity						
Other ethnic groups	1.96	1.02-3.76	0.044			
Albanian	1.00	Reference				
Education level			0.019(2)‡			
Low	1.96	1.23-3.13	0.005			
Middle	1.53	0.98-2.41	0.064			
High	1.00	Reference	-			
Employment			0.009(2)			
Unemployed	1.25	0.85-1.84	0.251			
Retired	2.26	1.34-3.81	0.002			
Employed	1.00	Reference	-			
Income level			<0.001(2)			0.025(2)
Low	7.00	3.69-13.3	<0.001	2.44	1.18-5.06	0.017
Average	2.41	1.61-3.58	<0.001	1.64	1.05-2.57	0.029
High	1.00	Reference	-	1.00	Reference	-
Health status			<0.001(2)			<0.001(2)
Poor	10.26	6.04-17.4	<0.001	7.95	4.43-14.24	<0.001
Average	3.84	2.50-5.90	<0.001	3.15	2.00-4.97	<0.001
Good	1.00	Reference	-	1.00	Reference	-
Duration of hospitalization (days)	1.03	0.99-1.08	0.121			

* Odds ratios (OR: "unsatisfied" vs. "satisfied"), 95%CI and P-values from binary logistic regression. Range of the summary score (dichotomized into satisfied vs. unsatisfied based on its median value) was from 19 (the highest level of satisfaction) to 95 (the lowest level of satisfaction among hospitalized patients).

† All variables presented in the table were entered in a backward stepwise model with a P-value to exit set at P>0.10. Empty cells represent the variables removed from the final model.

‡ Overall P-value and degrees of freedom (in parentheses).

Discussion

The main findings of our study consist of a significantly lower satisfaction level among patients residing in urban areas, individuals with low socioeconomic status, and those who perceived their general health status as poor irrespective of

their current hospitalization. The associations of unsatisfaction with the place of residence and especially with income level and general health status were strong and persisted upon adjustment for a range of other sociodemographic characteristics, including age, gender, educational attainment, employment, ethnicity, and marital status—even after controlling for length of the current episode of hospitalization.

A previous study conducted in Kosovo reported a significant association between satisfaction level and education,[11] whereas, in our study, income level was a more powerful predictor than educational attainment. In a study by AA conducted in Kosovo,[11] length of hospitalization was reported as a significant determinant of patient satisfaction, a finding which was not evident in our study, even in crude (unadjusted) analysis. Our study included patients admitted to public hospitals, whereas a previous study carried out in Kosovo included patients admitted to both public and private hospitals.[11] Therefore, a comparison of the findings between these two studies should be made with caution, because sociodemographic characteristics of the patients admitted to public hospitals in Kosovo may differ from those hospitalized in private facilities.

A study conducted in Spain [14] reported an association of patient satisfaction with age, education level, marital status, sex, and length of hospitalization. Conversely, in our study, none of these factors was significantly related to patient satisfaction in multivariable-adjusted analyses. Instead, low income was strongly associated with patient unsatisfaction in our study. However, the Spanish study did not find any significant association with employment status.

A study conducted in Serbia[15] has not provided information about the association of patient satisfaction with sociodemographic factors but has reported on the most influential institutional/organizational factors for patient satisfaction, that is, the admission process, doctor care, staff care, and technology tools.

In crude (unadjusted) models, age was significantly related to satisfaction level in our study, but in the opposite direction to previous reports from other studies conducted elsewhere.[16,17] Hence, some previous studies have evidenced a higher satisfaction level among older patients, whereas we found an inverse association which, nevertheless, disappeared upon adjustment for other sociodemographic characteristics.

We found a higher satisfaction level among women, a finding compatible with a previous study,[16] whereas some other studies have reported an opposite finding.[14,18,19] Our finding about a higher satisfaction level among rural residents is interesting. Rural patients may report a higher satisfaction level due to their lower expectations, whereas urban residents may have much higher expectations of medical encounters. However, the finding on urban/rural differences in satisfaction levels requires further replication in future studies in Kosovo and other similar settings.

In any case, our study may be prone to several limitations related to sample representativeness, the possibility of information bias, and study design. Our study included a sample of patients pertinent to three regional hospitals in Kosovo; therefore, findings from this study may not be generalizable to all hospitals in Kosovo. The instrument we used to assess satisfaction level has been previously validated in primary healthcare settings in Kosovo.[13] Still, the possibility of information bias cannot be excluded, as hospitalized patients may differ from primary healthcare users. Furthermore, associations observed in cross-sectional studies do not imply causality.

Irrespective of the aforementioned potential limitations, our study provides useful evidence about important sociodemographic correlates of unsatisfaction among hospitalized patients in Kosovo. Our findings point to a significantly higher unsatisfaction level among urban patients, low-income individuals, and patients with poor general health status. Healthcare providers and policymakers in Kosovo and other similar countries should be aware of the importance of continuous quality improvement of hospital services to increase, among other things, the satisfaction level of hospitalized patients.

Competing Interests

The authors declare that they have no competing interests.

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