

## RESEARCH ARTICLE

# Patients' satisfaction with nursing care quality and associated factors: A cross-section study

Hanan Fahad Alharbi<sup>1</sup>  | Naif S. Alzahrani<sup>2</sup>  | Abdulaziz Mofdy Almarwani<sup>3</sup>  |  
Saeed A. Asiri<sup>4</sup>  | Fahad M. Alhowaymel<sup>5</sup> 

<sup>1</sup>Department of Maternity and Child Health Nursing, College of Nursing, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia

<sup>2</sup>Department of Medical Surgical Nursing, College of Nursing, Taibah University, Medina, Saudi Arabia

<sup>3</sup>Department of Psychiatric Nursing, College of Nursing, Taibah University, Medina, Saudi Arabia

<sup>4</sup>Department of Nursing Administration and Education, College of Nursing, King Saud University, Riyadh, Saudi Arabia

<sup>5</sup>Department of Nursing, College of Applied Medical Sciences, Shaqra University, Shaqra, Saudi Arabia

## Correspondence

Hanan Fahad Alharbi, Department of Maternity and Child Health Nursing, Princess Nourah bint Abdulrahman University, College of Nursing, Riyadh, 11671, P.O. Box 84428, Saudi Arabia. Email: [hfalharbi@pnu.edu.sa](mailto:hfalharbi@pnu.edu.sa)

## Funding information

Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia, Grant/Award Number: RI-44-1223

## Abstract

**Aim:** This research aimed to evaluate patients' satisfaction with the nursing care quality during their hospitalization.

**Design:** Quantitative cross-sectional descriptive design.

**Methods:** A convenience sample of 238 patients were recruited from hospitals in two provinces in Saudi Arabia. Patient satisfaction was measured by the Arabic version of the Patients' Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ-Ar).

**Results:** Significant differences were found between Saudi provinces regarding the overall quality of nursing care ( $M = 4.65$ ,  $p < 0.001$ ). The study revealed mean significant variations between patient satisfaction with nursing care and sociodemographic factors, including age ( $p = 0.002$ ), education level ( $p = 0.047$ ), marital status ( $p = 0.017$ ), employment status ( $p = 0.038$ ), urban vs. suburban residence ( $p = 0.006$ ), length of hospitalization ( $p = 0.001$ ), and accompaniment by a family member ( $p = 0.014$ ). Improving patients' experience during their hospitalization requires regular examination of the quality of nursing care services.

**Patient Contribution:** This research enhances our understanding of patients' satisfaction toward the quality of nursing care received during hospitalization.

## KEYWORDS

nursing, nursing care, patient satisfaction, quality of care

## 1 | INTRODUCTION

Access to quality nursing care is an essential human right and is considered a significant factor in patients' well-being (Fuseini et al., 2022). Delivering nursing care that satisfies quality standards is crucial for providing patients with high-quality care (Karaca & Durna, 2019). The quality of nursing care can be measured by assessing patients' level of satisfaction (Gishu et al., 2019), and patient satisfaction can be increased through proper nursing care (Aiken et al., 2021). Measuring

patients' satisfaction helps in gaining important information regarding hospitals' performance as well as assessing the quality management of health organizations (Hepsiba & Bhattacharjee, 2021). Patients' satisfaction with their care can lead to patient loyalty and trust (Liu et al., 2021); satisfied patients are loyal and more inclined to return to the same hospital or health care provider in the future and may suggest them to other relatives and friends (Setyawan et al., 2020).

Patient satisfaction captures different aspects of health care, such as professionalism, the technology used, and the overall quality

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2022 The Authors. *Nursing Open* published by John Wiley & Sons Ltd.

and level of care received (Hepsiba & Bhattacharjee, 2021). Having a balance between patients' satisfaction and quality improvement is critical because it affects patients' survival, safety, and health in the long term (Rahim et al., 2021). Health care providers compete to deliver high-quality services to their patients (Fatima et al., 2018).

Hospitalization has negative consequences on patients' abilities to cope and adjust, which exacerbates their emotions and increases their feelings of anxiety and depression (Alzahrani, 2021). Therefore, increasing patient satisfaction through nursing care is essential to improve health outcomes. Moreover, patients satisfied with nursing care tend to strictly adhere to treatment regimens, which positively affects their health and decreases the length of stay in hospitals (Aiken et al., 2021; Traiki et al., 2020). Patient satisfaction with nursing care is important in maintaining health care costs and preventing their increase. Patients have expressed dissatisfaction with nursing care due to leaving necessary care incomplete (White et al., 2019). This led to the deterioration of patients' health conditions and increased their hospital stay for extended periods, which eventually increased the cost of health care (Brooks Carthon et al., 2021).

Focusing on the quality of nursing care is vital because nurses are on the frontline with patients and are predominant in the health care field (World Health Organization [WHO], 2020a). Nurses constitute around 50% of the health workforce globally (WHO, 2020b). In Saudi Arabia, nurses constitute nearly 42% of health care providers (Ministry of Health, 2018). Therefore, hospitals and other health care facilities strive to deliver high-quality nursing care because it contributes to the system's efficacy and provides insights for legislators and policymakers (Brooks Carthon et al., 2021). Alongside this process, understanding patients' satisfaction with nursing care can help nurses and hospital managers have a better understanding of patients' satisfaction and dissatisfaction factors that might affect the overall quality of nursing care (Lotfi et al., 2019).

## 2 | BACKGROUND

Measuring patients' satisfaction with nursing care quality is a vast topic, extensively studied globally. However, in Saudi Arabia, little research has examined patients' satisfaction with nursing care. Alhwaymel et al. (2022) reported a high level of patient satisfaction with overall nursing care during the COVID-19 pandemic, with a mean score of 4.25 out of a possible 5. Another study conducted in southwest Saudi Arabia revealed lower patient satisfaction. Around 80% of study participants reported high satisfaction with hospital services; specifically, 78% were satisfied with nursing care services (Elias et al., 2022). Another study revealed higher levels of patient satisfaction in one national hospital located in four provinces in the country (Fozan, 2013). In contrast, a study conducted at a hospital in Tabuk found low-to-medium patient satisfaction with the quality of nursing care (Al Qahtani & Al Dahi, 2015).

The quality of nursing practices can be influenced by many factors. Issues that may adversely influence the quality of nursing care include nursing working hours and job satisfaction (Putra

et al., 2021; Son et al., 2019). According to Brešan et al. (2021), the nursing working environment correlates with the quality of nursing care provided to patients. The working environment could include nurses' working hours, shifts, and job satisfaction (Putra et al., 2021). Another factor the world is currently experiencing is the COVID-19 pandemic (Labrague et al., 2022), during which more overtime hours, leave, and absences have been reported among nurses (Nymark et al., 2022). Because many factors contribute to and influence nursing practice efficiency, they vary over time. Therefore, it is necessary to continually measure patients' satisfaction with the quality of nursing care because it may provide health care managers and policymakers indicators of the health care quality provided to patients. Consequently, the current research aimed to appraise patients' satisfaction with the quality of nursing care during hospitalization in Saudi Arabia. Specific aims of this study included assessing patients' satisfaction levels with the quality of nursing care and examining the interrelationships between patients' sociodemographic features and medical history and their levels of satisfaction with nursing practice. Several such studies have been conducted in Saudi Arabia from different provinces. However, to our knowledge, none has focused on Medina province, and only one recent study was conducted in Riyadh province, which measured COVID-19 patient satisfaction with nursing care.

## 2.1 | Research questions

The study sought to answer the following questions:

1. What is the level of patient satisfaction with the quality of nursing care during their hospitalization in Saudi Arabia?
2. Does a significant difference exist between patients' sociodemographic factors, previous hospitalization, and satisfaction with the quality of nursing care services?

## 3 | METHODS

### 3.1 | Study design

A quantitative cross-sectional, descriptive design examined patients' satisfaction with the quality of nursing care provided to them during their hospitalization.

### 3.2 | Setting

The study was conducted in two provinces in Saudi Arabia: Riyadh (the capital) and Medina. One prominent hospital in Riyadh is considered one of the largest medical cities in Saudi Arabia and the Middle East, with 1200 beds. The hospital serves more than 30,000 inpatients every year. Four hospitals in Medina were included in the data collection: one hospital with 280 beds, another specialized hospital

for maternity and children with 500 beds, one general hospital with 500 beds, and one hospital with 50 beds. Those hospitals were chosen based on the level of health services provided, including tertiary and secondary hospitals.

### 3.3 | Sampling and data collection

A convenience sampling method was used to survey hospitalized patients at multiple hospitals in the Riyadh and Medina Provinces. The sample size was estimated by G\*Power software using the following parameters: effect size ( $f^2$ ) = 0.25, alpha = 0.05, and power = 0.95; accordingly, the total sample size would be 210 participants. The effect size of 0.25 is considered conservative in determining any differences in the sample. A total of 400 questionnaires were disseminated, and 238 were completed, with a response rate of 70%. The data collection phase took place between November and December 2021. Data were collected from inpatients at multiple departments, including medical, surgical, dialysis, pediatric, maternity, and rehabilitation, from different hospitals within the two provinces. The inclusion criteria for this study were inpatients who were hospitalized for at least 48 h, aged 18 years or older, who were oriented, not too ill to understand and complete the survey, and could read and understand Arabic.

### 3.4 | Measurements

A demographic questionnaire was used to collect data on gender, age, marital status, work status, and duration of hospital stay. Patients' satisfaction with nursing care was measured using the Arabic version of the Patients' Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ-Ar; Albashayreh et al., 2019). This questionnaire was adapted and translated from the PSNCQQ (Laschinger et al., 2005). The PSNCQQ-Ar is self-administered and includes 21 items to measure PSNCQ during a hospitalization, based on their perceptions. The PSNCQQ-Ar contains two factors (domains): the patient's satisfaction with the nursing care provided and the patient's satisfaction with the information provided. Besides these two factors, the questionnaire measures the overall nursing practice quality and the motivation to refer relatives and friends to the hospital. The questionnaire uses a 5-point Likert scale varying from "poor" to "excellent." The interpretation uses composite scoring for the overall PSNC quality or domain-based scoring (Albashayreh et al., 2019; Laschinger et al., 2005). The original PSNCQQ had an adequate internal consistency reliability (Cronbach's alpha  $\alpha$  = 0.97; Laschinger et al., 2005). The PSNCQQ-Ar also had adequate internal consistency reliability in Oman and Saudi Arabia, (Cronbach's alpha  $\alpha$  = 0.96 and 0.97; Albashayreh et al., 2019; Alhowaymel et al., 2022, respectively). For the sample of this study, the PSNCQQ-Ar had adequate internal consistency reliability (Cronbach's alpha  $\alpha$  = 0.96).

### 3.5 | Data analysis

Data were analyzed using IBM-SPSS version 28.0. Descriptive statistics included means, standard deviation, frequencies, and percentages. Additionally, t-tests and one-way ANOVA were used to determine differences in PSNCQ based on patients' demographic characteristics. A  $p$ -value of  $\leq 0.05$  was considered statistically significant.

### 3.6 | Ethical considerations

Before data collection, approval was gained to use the PSNCQQ-Ar for this study (Albashayreh et al., 2019). Ethical approval to perform this research was achieved from the Institutional Review Board (IRB) from (Princess Nourah bint Abdulrahman University and The Ministry of Health). Furthermore, patients voluntarily signed consent forms to participate in the survey; to maintain complete privacy, the researchers did not collect any identifiable personal information from them.

## 4 | RESULTS

### 4.1 | Sample description

A total of 238 participants completed the questionnaire. The average ( $\pm$ SD) age of participants was  $43.29 \pm 17.64$  years. Approximately 76.9% of the participants were 28 years of age or older. More than 53% of the participants were male, and around 47% were female. Around 60% of the participants had a high school level of schooling or below, whereas 40% had a college degree. Most of the participants were unemployed, and 60% were married. More than 60% were from Riyadh city, and the majority of the participants (70%) were from urban areas. Almost 86% of the sample had previously been hospitalized from 1–3 times, and around 53% had been hospitalized for more than 6 days on their latest hospitalization. More than 51% of the participants shared a hospital room with others, and 48% had a family member with them during their hospitalization. Over 40% of the participants were hospitalized in the surgical department. More than 90% were enthusiastic to suggest the hospital to friends and families if they needed it (Table 1).

### 4.2 | Patients' satisfaction

The overall patient satisfaction with nursing care was high ( $M = 4.43 \pm 0.76$ ). Specifically, the patients' satisfaction with the provided care was high ( $M = 4.43 \pm 0.78$ ), and the patients' satisfaction with provided information was high ( $M = 4.45 \pm 0.81$ ). When analyzing items individually, the patients scored nurses' quickness to help the lowest ( $4.23 \pm 1.09$ ). On the other hand, nurses' clearness and completeness about relevant procedures, and the way nurses dealt

TABLE 1 Sociodemographic characteristics of participants (N = 238)

Variables	N	(%)
Age (mean = 43.26; SD = 17.64) years		
18-27	204	23
28-37		21.6
38-47		15.2
48-57		17.6
≥58		22.5
Gender		
Female	231	46.8
Male		53.2
Education		
High-school or below	227	59.9
College or above		40.1
Employment		
Employed	157	39.5
Unemployed		60.5
Marital status		
Single	231	29.4
Married		61.0
Divorced or widowed		9.5
Province		
Riyadh	237	64.1
Medina		35.9
Geographic location		
Urban	228	71.9
Nonurban (suburban or rural)		28.1
Previous hospitalization (No. of times)		
1-3	212	85.8
4-6		7.5
>6		6.6
Length of stay (days)		
2-3	220	29.5
4-6		17.7
>6		52.7
Hospital accommodation		
Single room	226	48.7
Shared with others		51.3
With family		
No	233	51.9
Yes		48.1
Department		
Maternity, labor, and delivery	232	10.3
Surgery		40.9
Medical		21.6
Other		27.2

TABLE 1 (Continued)

Variables	N	(%)
Hospital recommendation		
Do not recommend	235	8.5
Recommend		91.5

with and interacted with them, were scored the highest ( $4.56 \pm 0.86$ ;  $4.56 \pm 0.83$ , respectively; [Table 2](#))

### 4.3 | Patient satisfaction and associated factors

A significant difference was observed in the mean PSNC score among age groups ( $p = 0.002$ ); participants who were aged 58 years and older were more satisfied with the quality of nursing care ( $M = 4.67$ ). The average score differed significantly between individuals according to their education level ( $p = 0.047$ ). Participants with a high school education or below were more satisfied with the nursing practice ( $M = 4.49$ ). Unemployed participants showed a significantly higher level of satisfaction with nursing practice efficiency ( $p = 0.038$ ,  $M = 4.49$ ). A significant variation existed in the participants' average scores by marital status, where divorced or widowed patients were significantly more satisfied with the quality of the nursing care ( $p = 0.017$ ,  $M = 4.59$ ). Participants who were living in Riyadh city were significantly more satisfied with nursing care than those who were living in Medina ( $p < 0.001$ ,  $M = 4.65$ ), and participants residing in non-urban areas were significantly more satisfied with the nursing care ( $p = 0.006$ ,  $M = 4.61$ ).

Additionally, a statistically significant difference existed in the mean PSNC score concerning the length of hospitalization, where participants with more than 6 days of hospitalization were more satisfied than those with a shorter length of stay ( $p < 0.001$ ,  $M = 4.65$ ). Participants who stayed in a single room had significantly higher satisfaction with nursing practice than those who shared their room with others ( $p < 0.001$ ,  $M = 4.61$ ). A statistically significant difference existed in participant satisfaction levels by whether their family was staying with them ( $p = 0.014$ ,  $M = 4.49$ ).

A significant difference existed in the average PSNC score among participants who recommended the hospital where they were inpatients and those who did not, with a higher mean score for those who did ( $p < 0.001$ ,  $M = 4.59$ ). Additionally, a statistically significant difference was found in participants' responses by the overall nursing care quality ( $p < 0.001$ ), where most of the participants evaluated the nursing services as excellent, with a mean score of 4.78. A significant difference existed among participants in their evaluation of the overall quality of care, where the majority evaluated it as excellent ( $p < 0.001$ ) with a mean score of 4.59. A significant difference existed in the mean score among participants, where the majority rated their overall health status as excellent ( $p < 0.001$ ,  $M = 4.80$ ). Finally, non-significant differences existed in average PSNC scores

TABLE 2 Patient satisfaction with overall nursing care, provided care, and provided information (N = 238)

PSNCQQ-Ar	M	SD
1 How clear and complete the nurses' explanations were about tests, treatments, and what to expect	4.56	0.86
2 How well nurses explained how to prepare for tests and operations	4.48	0.92
3 Willingness of nurses to answer your questions	4.51	0.92
4 How well nurses communicated with patients, families, and doctors	4.44	0.97
5 How well the nurses kept them informed about your condition and needs	4.24	1.12
6 How much they were allowed to help in your care	4.34	1.09
7 Courtesy and respect you were given; friendliness and kindness	4.56	0.83
8 How often nurses checked on you and how well they kept track of how you were doing	4.55	0.90
9 How much nurses ask you what you think is important and give you choices	4.28	1.09
10 Willingness of the nurses to be flexible in meeting your needs	4.46	0.93
11 How well they adjusted their schedules to your needs	4.39	0.96
12 Ability of the nurses to make you comfortable and reassure you	4.50	0.98
13 How quick they were to help	4.23	1.09
14 How well things were done, like giving medicine and handling IVs	4.46	0.92
15 The teamwork between nurses and other hospital staff who took care of you	4.50	0.88
16 Amount of peace and quiet	4.41	1.02
17 Provisions for your privacy by nurses	4.41	1.09

Abbreviations: M, mean; SD, standard deviation.

regarding gender, previous hospitalizations, and the departments patients were admitted to (Table 3).

## 5 | DISCUSSION

We examined patients' satisfaction with nursing care across two major provinces in Saudi Arabia (Riyadh and Medina). We surveyed hospitalized patients within several departments at five different hospitals in the two provinces. We primarily examined patients' satisfaction with nursing care and secondarily examined the factors influencing their satisfaction. The study revealed some differences and similarities to the existing literature.

The study revealed relatively high reported levels of overall patient satisfaction with nursing care, provided care, and provided information. Our main results are similar to many similar studies nationally and internationally. For example, this result is consistent with a recent study conducted among approximately 100 COVID-19 patients in Riyadh, Saudi Arabia, where high satisfaction with nursing care was reported (Alhowaymel et al., 2022). The results are consistent with other studies conducted in different provinces and hospitals in Saudi Arabia (Alasad et al., 2015; Alsaqri, 2016). In an international context, the results are consistent with research conducted in Oman among over 290 patients (Albashayreh et al., 2019), in Jordan among over 350 patients from thalassemia units (Al-Awamreh & Suliman, 2019), in Turkey among over 600 discharged patients (Karaca & Durna, 2019), and in Spain among 200 intensive care unit-discharged patients (Romero-García et al., 2019). However, our main results are inconsistent with a study conducted in Saudi Arabia among over 400 patients in one hospital, where the

study reported low-to-medium satisfaction levels (Al Qahtani & Al Dahi, 2015). Our results are also inconsistent with those of other international studies. For example, two studies conducted in Ethiopia among over 250 patients (Sharew et al., 2018) and among over 560 patients (Kasa & Gedamu, 2019) both found that under half of the patients were unsatisfied. Another study that examined the satisfaction of patients or caregivers with nurses found moderate levels of satisfaction (Elayan & Ahmad, 2018). A possible explanation for our results is the level of readiness of nurses to deal with patients, which may be influenced by the empowerment of high education and practical levels. These factors would increase nurses' confidence and communication and interaction skills with patients and their colleagues (Alhowaymel et al., 2022; Karaca & Durna, 2019; Zaghini et al., 2020). Another possible explanation for the high satisfaction levels found in this study and other similar studies is that patients, who are not nurses, may lack judgmental skills about nursing care (Elayan & Ahmad, 2018).

Demographic and other factors influenced patients' satisfaction levels in this study. Our results revealed that older patients had higher satisfaction levels than younger patients. This result is consistent with that of another recent study conducted in Saudi Arabia among COVID-19 patients (Alhowaymel et al., 2022). Another study conducted in India among 100 patients found similar results (Shinde & Kapurkar, 2014). However, the result is inconsistent with that of another study conducted in Saudi Arabia, which found no satisfaction differences by age (Shinde & Kapurkar, 2014). Another study conducted in Turkey found that older patients were less satisfied with the quality of nursing care (Karaca & Durna, 2019). Generally, age is associated with patients' satisfaction: with increased age, satisfaction levels increase (Chandra et al., 2019; Chumbler et al., 2016).

TABLE 3 Comparisons of PSNCQQ-Ar averages by sociodemographic characteristics of participants (N = 238)

Variables	Mean	SD	t/F	p
Age				
18–27 years old	4.17	0.99	4.518	0.002**
28–37 years old	4.14	0.93		
38–47 years old	4.41	0.63		
48–57 years old	4.61	0.60		
58 years old or older	4.67	0.45		
Gender				
Female	4.46	0.79	0.743	0.229
Male	4.39	0.76		
Education				
High school or below	4.49	0.73	1.685	0.047*
College or above	4.32	0.84		
Employment				
Employed	4.49	0.73	1.782	0.038*
Unemployed	4.27	0.85		
Marital status				
Single	4.20	0.90	4.137	0.017*
Married	4.50	0.72		
Divorced or widowed	4.59	0.55		
Province				
Riyadh	4.65	0.55	5.320	<0.001***
Medina	4.06	0.94		
Geographic location				
Urban	4.36	0.82	-2.530	0.006**
Nonurban (suburban or rural)	4.61	0.61		
Previous hospitalization				
1–3 times	4.36	0.81	2.344	0.098
4–6 times	4.60	0.48		
More than 6 times	4.77	0.38		
Length of stay				
2–3 days	4.08	1.00	12.707	<0.001***
4–6 days	4.33	0.87		
More than 6 days	4.65	0.45		
Hospital accommodation				
Single room	4.61	0.60	3.369	<0.001***
Shared with others	4.28	0.88		
With family				
No	4.01	1.11	-2.305	0.014**
Yes	4.49	0.70		
Department				
Maternity, labor, and delivery	4.21	1.15	2.557	0.056
Surgery	4.38	0.77		
Medical	4.38	0.76		
Other	4.65	0.55		

TABLE 3 (Continued)

Variables	Mean	SD	t/F	p
Hospital recommendation				
Do not recommend	2.75	0.99	-8.168	<0.001***
Recommend	4.59	0.52		
Nursing care quality				
Poor/acceptable	2.31	0.60	258.526	<0.001***
Good/very good	4.06	0.62		
Excellent	4.78	0.30		
Overall quality of care				
Poor/acceptable	3.77	1.54	7.551	<0.001***
Good/very good	4.40	0.72		
Excellent	4.59	0.58		
Health status				
Poor/acceptable	2.49	0.95	231.525	<0.001***
Good/very good	4.01	0.60		
Excellent	4.80	0.27		

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

Additionally, the possibility of being more social and accepting is higher among older people compared with younger ones (Shinde & Kapurkar, 2014).

The study also showed that patients with lower education levels were more satisfied. This result is similar to studies conducted in Saudi Arabia (Alhowaymel et al., 2022), Jordan (Elayan & Ahmad, 2018), and Turkey (Karaca & Durna, 2019), whereas it contrasts with another Saudi study (Al Qahtani & Al Dahi, 2015) and two other studies conducted in Oman (Albashayreh et al., 2019) and India (Shinde & Kapurkar, 2014). A possible explanation for our result could be related to the low level of knowledge among less educated patients, which may lead to low expectations from nurses and a lack of judgmental skills (Roder-DeWan et al., 2019). The study also revealed that unemployed patients reported a greater degree of satisfaction than employed patients. This finding is consistent with that of a study conducted in India (Shinde & Kapurkar, 2014). The difference between this and the present study was that the authors asked the patients about their income, and in our study, we asked whether the patients were employed or unemployed. However, our finding is inconsistent with that of a study conducted in Turkey (Karaca & Durna, 2019). This result may support our previous result about education, where a high education level is often related to higher job opportunities. Thus, unemployed patients may have lower education levels, which affects their satisfaction with nursing care.

The study found that divorced and widowed patients were more satisfied with nursing care than those who were single or married. This result is inconsistent with studies conducted in Turkey (Karaca & Durna, 2019) and Ethiopia (Kasa & Gedamu, 2019), which found that married patients were more satisfied. Alhowaymel et al. (2022) and Al Qahtani and Al Dahi (2015) found no satisfaction differences by patients' marital status. The study also showed that patients staying in a single room had a significantly higher level of

satisfaction regarding nursing care. This result is consistent with Kasa and Gedamu (2019), whereas it is inconsistent with other studies conducted in Saudi Arabia (Alhowaymel et al., 2022), Oman (Albashayreh et al., 2019), and Ethiopia (Kasa & Gedamu, 2019).

Patients living in Riyadh reported a higher satisfaction level than those living in Medina. Additionally, those residing in non-urban areas had higher satisfaction levels than those living in urban areas. These two results are consistent with those of another study in Saudi Arabia (Alhowaymel et al., 2022). This result can be explained by the fact that Riyadh, which is the capital of Saudi Arabia and is mostly urban, has more advanced health services compared to other areas in the kingdom (Alhowaymel et al., 2022).

The study also found that the longer the patients stayed in the hospital, the more they were satisfied. Moreover, those who were staying with their families were more satisfied than those who were not. These two results are inconsistent with those of other studies conducted in Saudi Arabia (Alhowaymel et al., 2022) and in Oman (Albashayreh et al., 2019), which both found no satisfaction differences by these two factors. Our results may be explained by the support that patients receive during their stay from nurses; they may have more interaction during their stay. Additionally, family support is necessary for hospitalized patients for recovery and cure (Bettger et al., 2020). Patients who recommended the hospital they stayed in to others, and patients who perceived their health as excellent, were more satisfied than their counterparts. These results are consistent with another Saudi study by Alhowaymel et al. (2022).

Finally, other factors including gender, previous hospitalizations, and hospital department influenced patient satisfaction in this study. No significant satisfaction differences were found between men and women in this study. Similar findings were reported in studies conducted in Saudi Arabia (Alsaqri, 2016), Oman (Albashayreh et al., 2019), Jordan (Elayan & Ahmad, 2018), and Turkey (Karaca &



Durna, 2019). However, other studies found that satisfaction level was different by gender. Male patients were more satisfied than female patients in studies conducted in Saudi Arabia (Al Qahtani & Al Dahi, 2015) and India (Shinde & Kapurkar, 2014).

Previous hospitalization was found in some studies to have a significant relationship with patients' satisfaction (Alsaqri, 2016; Karaca & Durna, 2019). Patients who are admitted to hospital and receive nursing care many times can observe their caring behavior. The results of this study did not show any significant difference in patient satisfaction levels due to the number of prior hospitalizations. Hospital department also did not influence patients' satisfaction with nursing care in this study. This result is consistent with that of a study conducted in Oman (Albashayreh et al., 2019), whereas it is inconsistent with a study conducted in Ethiopia, which found that patients from surgical wards were more satisfied (Kasa & Gedamu, 2019).

This study has revealed vital results about patients' satisfaction with nursing care and related factors. Health organizations use patient satisfaction surveys through which patients provide their perceptions and feedback on the quality of care they receive during their hospital stays. Patient satisfaction is used to give health organizations an idea about the level of the services they provide and identify whether any limitations or gaps exist in the services that could be improved.

## 5.1 | Limitations

The study has several limitations, including the inability to generalize its findings to a broader population due to the use of only two provinces in Saudi Arabia (Riyadh and Medina). However, participants were recruited from five different hospitals in multiple settings in those two provinces. Moreover, convenience sampling might increase the possibility of under-representation of the target population.

## 6 | CONCLUSION

This study aimed to assess patient satisfaction with the quality of the nursing care provided to them during their hospital stay in different hospitals in Saudi Arabia. The results reflect a high level of patient satisfaction with the quality of nursing care in the studied hospitals. The quality of nursing practice in Saudi Arabia was influenced by several factors. Continuous investigation of nursing practice efficiency is needed. Therefore, appraising patients' satisfaction with nursing practice efficiency during hospitalization in Saudi Arabia is recommended, considering demographic variations. In some cases, patients are unable to provide holistic judgement about nursing care, such as those with low education levels. Therefore, we recommend that future research focus on patients with high judgmental skills, such as nurses or others with medical backgrounds, to evaluate nursing care.

## ACKNOWLEDGEMENTS

The authors extend their appreciation to the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project number RI-44-1223. The authors would like to thank the Deanship of Scientific Research at Princess Nourah bint Abdulrahman University for supporting this work.

## CONFLICT OF INTEREST

None.

## ETHICAL APPROVAL

The authors extend their appreciation to the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project number RI-44-1223.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## ETHICAL APPROVAL

The study was approved (21-0318) by the Institutional Review Board (IRB) in Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia. Before data collection, approval to use the PSNCQ-Q-Ar for this study was obtained from the corresponding author. Ethical approval from the Ministry of Health in the Riyadh and Medina regions. Furthermore, patients voluntarily signed consent forms to participate in the study; in order to maintain full privacy, the researchers did not collect any identifiable personal information from them.

## ORCID

Hanan Fahad Alharbi  <https://orcid.org/0000-0003-2500-6700>

Naif S. Alzahrani  <https://orcid.org/0000-0002-2926-2085>

Abdulaziz Mofdy Almarwani  <https://orcid.org/0000-0003-3927-2188>

<https://orcid.org/0000-0003-3927-2188>

Saeed A. Asiri  <https://orcid.org/0000-0003-0441-4625>

Fahad M. Alhowaymel  <https://orcid.org/0000-0002-8664-0353>

## REFERENCES

- Aiken, L. H., Sloane, D. M., Ball, J., Bruyneel, L., Rafferty, A. M., & Griffiths, P. (2021). Patient satisfaction with hospital care and nurses in England: An observational study. *BMJ Open*, 8(1), e019189. <https://doi.org/10.1136/bmjopen-2017-019189>
- Al Qahtani, M. F. A., & Al Dahi, S. (2015). Satisfaction with nursing care from the Inpatients' perspective in Prince Salman armed forced hospital Tabuk, Saudi Arabia. *Middle East Journal of Family Medicine*, 13, 13–17. <https://doi.org/10.5742/MEWFM.2015.92665>
- Alasad, J., Abu Tabar, N., & AbuRuz, M. E. (2015). Patient satisfaction with nursing care: Measuring outcomes in an international setting. *The Journal of Nursing Administration*, 45(11), 563–568. <https://doi.org/10.1097/NNA.0000000000000264>
- Al-Awamreh, K., & Suliman, M. (2019). Patients' satisfaction with the quality of nursing care in thalassemia units. *Applied Nursing Research*, 47, 46–51. <https://doi.org/10.1016/j.apnr.2019.05.007>
- Albashayreh, A., Al-Rawajfah, O. M., Al-Awaisi, H., Karkada, S., & Al Sabei, S. D. (2019). Psychometric properties of an Arabic version



- of the patient satisfaction with nursing care quality questionnaire. *The Journal of Nursing Research: JNR*, 27(1), 1–9. <https://doi.org/10.1097/jnr.0000000000000273>
- Alhowaymel, F., Abaoud, A., Alhuwaimel, A., Alenezi, A., & Alsayed, N. (2022). COVID-19 Patients' satisfaction levels with nursing care: A cross-sectional study. *SAGE Open Nursing*, 8, 23779608221078164. <https://doi.org/10.1177/23779608221078163>
- Alsaqri, S. (2016). Patient satisfaction with quality of nursing Care at Governmental Hospitals, Ha'il City, Saudi Arabia. *Journal of Biology, Agriculture and Healthcare*, 6(10), 128.
- Alzahrani, N. (2021). The effect of hospitalization on patients' emotional and psychological well-being among adult patients: An integrative review. *Applied Nursing Research*, 61, 151488. <https://doi.org/10.1016/j.apnr.2021.151488>
- Bettger, J. P., Thoumi, A., Marquevich, V., Groote, W. D., Battistella, L. R., Imamura, M., Ramos, V. D., Wang, N., Dreinhoefer, K. E., Mangar, A., Ghandi, D. B. C., Ng, Y. S., Lee, K. H., Ming, J. T. W., Pua, Y. H., Inzitari, M., Mmbaga, B. T., Shayo, M. J., Brown, D. A., ... Stein, J. (2020). COVID-19: Maintaining essential rehabilitation services across the care continuum. *BMJ Global Health*, 5(5), e002670. <https://doi.org/10.1136/bmjgh-2020-002670>
- Brešan, M., Erculj, V., Lajovic, J., Ravljen, M., Sermeus, W., & Grosek, Š. (2021). The relationship between the nurses' work environment and the quality and safe nursing care: Slovenian study using the RN4CAST questionnaire. *PLoS One*, 16, e0261466. <https://doi.org/10.1371/journal.pone.0261466>
- Brooks Carthon, J. M., Hatfield, L., Brom, H., Houton, M., Kelly-Hellyer, E., Schlak, A., & Aiken, L. (2021). System-level improvements in work environments Lead to lower nurse burnout and higher patient satisfaction. *Journal of Nursing Care Quality*, 36(1), 7–13. <https://doi.org/10.1097/NCQ.0000000000000475>
- Chandra, S., Ward, P., & Mohammadnezhad, M. (2019). Factors associated with patient satisfaction in outpatient Department of Suva sub-divisional Health Center, Fiji, 2018: A mixed method study. *Frontiers in Public Health*, 7, 183. <https://doi.org/10.3389/fpubh.2019.00183>
- Chumblor, N. R., Otani, K., Desai, S. P., Herrmann, P. A., & Kurz, R. S. (2016). Hospitalized older Adults' patient satisfaction: Inpatient care experiences. *SAGE Open*, 6(2), 2158244016645639. <https://doi.org/10.1177/2158244016645639>
- Elayan, R. M., & Ahmad, M. M. (2018). A new approach in exploring satisfaction with nursing care by nurses themselves. *Journal of Clinical Nursing*, 27(7–8), e1501–e1507. <https://doi.org/10.1111/jocn.14274>
- Elias, A., Abdalkarim, S. M. W. M., Ali, G. Y., Ahmed, M. M., Khan, M. Y., Faqeeh, H. M., Alhazmi, A. A. A., Ahmad, O. H., Jubran, R. A., & Mahfouz, M. S. (2022). Patient satisfaction and its predictors in the general hospitals of Southwest Saudi Arabia: A cross-sectional survey. *Sudan Journal of Medical Sciences (SJMS)*, 17, 15–27. <https://doi.org/10.18502/sjms.v17i1.10682>
- Fatima, T., Malik, S. A., & Shabbir, A. (2018). Hospital healthcare service quality, patient satisfaction and loyalty: An investigation in context of private healthcare systems. *International Journal of Quality & Reliability Management*, 35(6), 1195–1214. <https://doi.org/10.1108/IJQRM-02-2017-0031>
- Fozan, H. A. (2013). Patients & family caregivers' satisfaction with care delivered by Saudi nurses at National Guard Health Affairs Hospitals in Saudi Arabia. *Journal of Natural Science Research*, 3(12), 67.
- Fuseini, A.-G., Bayi, R., Alhassan, A., & Atomlana, J. A. (2022). Satisfaction with the quality of nursing care among older adults during acute hospitalization in Ghana. *Nursing Open*, 9(2), 1286–1293. <https://doi.org/10.1002/nop2.1169>
- Gishu, T., Weldetsadik, A. Y., & Tekleab, A. M. (2019). Patients' perception of quality of nursing care; a tertiary center experience from Ethiopia. *BMC Nursing*, 18, 37. <https://doi.org/10.1186/s12912-019-0361-z>
- Hepsiba, R. P., & Bhattacharjee, D. T. (2021). A comparative study to assess the level of patient satisfaction on quality of nursing care among parturients admitted in government and private hospitals at Lucknow. *Annals of the Romanian Society for Cell Biology*, 25(7), 31–41.
- Karaca, A., & Durna, Z. (2019). Patient satisfaction with the quality of nursing care. *Nursing Open*, 6(2), 535–545. <https://doi.org/10.1002/nop2.237>
- Kasa, A. S., & Gedamu, H. (2019). Predictors of adult patient satisfaction with nursing care in public hospitals of Amhara region, Northwest Ethiopia. *BMC Health Services Research*, 19(1), 52. <https://doi.org/10.1186/s12913-019-3898-3>
- Labrague, L. J., de Los Santos, J. A. A., & Fronza, D. C. (2022). Factors associated with missed nursing care and nurse-assessed quality of care during the COVID-19 pandemic. *Journal of Nursing Management*, 30(1), 62–70. <https://doi.org/10.1111/jonm.13483>
- Laschinger, H. S., Hall, L. M., Pedersen, C., & Almost, J. (2005). A psychometric analysis of the patient satisfaction with nursing care quality questionnaire. *Journal of Nursing Care Quality*, 20(3), 220–230. <https://doi.org/10.1097/00001786-200507000-00006>
- Liu, S., Li, G., Liu, N., & Hongwei, W. (2021). The impact of patient satisfaction on patient loyalty with the mediating effect of patient trust. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 58, 00469580211007221. <https://doi.org/10.1177/00469580211007221>
- Lotfi, M., Zamanzadeh, V., Valizadeh, L., & Khajehgoodari, M. (2019). Assessment of nurse–patient communication and patient satisfaction from nursing care. *Nursing Open*, 6(3), 1189–1196. <https://doi.org/10.1002/nop2.316>
- Ministry of Health (2018). *Statistical Yearbook*. Ministry of Health. <https://www.moh.gov.sa/en/Ministry/Statistics/book/Documents/book-Statistics.pdf>
- Nymark, C., von Vogelsang, A.-C., Falk, A.-C., & Göransson, K. E. (2022). Patient safety, quality of care and missed nursing care at a cardiology department during the COVID-19 outbreak. *Nursing Open*, 9(1), 385–393. <https://doi.org/10.1002/nop2.1076>
- Putra, K. R., Andayani, T., & Ningrum, E. H. (2021). Job satisfaction and caring behavior among nurses in a military hospital: A cross-sectional study. *Journal of Public Health Research*, 10(2):2212. <https://doi.org/10.4081/jphr.2021.2212>
- Rahim, A. I. A., Ibrahim, M. I., Musa, K. I., Chua, S.-L., & Yaacob, N. M. (2021). Patient satisfaction and hospital quality of care evaluation in Malaysia using SERVQUAL and Facebook. *Healthcare*, 9(10), 1369. <https://doi.org/10.3390/healthcare9101369>
- Roder-DeWan, S., Gage, A. D., Hirschhorn, L. R., Twum-Danso, N. A. Y., Liljestrand, J., Asante-Shongwe, K., Rodríguez, V., Yahya, T., & Kruk, M. E. (2019). Expectations of healthcare quality: A cross-sectional study of internet users in 12 low- and middle-income countries. *PLoS Medicine*, 16(8), e1002879. <https://doi.org/10.1371/journal.pmed.1002879>
- Romero-García, M., Delgado-Hito, P., de la Cueva-Ariza, L., Martínez-Momblan, M. A., Lluch-Canut, M. T., Trujols-Albet, J., Juvé-Udina, M.-E., & Benito, L. (2019). Level of satisfaction of critical care patients regarding the nursing care received: Correlation with socio-demographic and clinical variables. *Australian Critical Care*, 32(6), 486–493. <https://doi.org/10.1016/j.aucc.2018.11.002>
- Setyawan, F. E. B., Supriyanto, S., Ernawaty, E., & Lestari, R. (2020). Understanding patient satisfaction and loyalty in public and private primary health care. *Journal of Public Health Research*, 9(2):1823. <https://doi.org/10.4081/jphr.2020.1823>
- Sharew, N. T., Bizuneh, H. T., Assefa, H. K., & Habtewold, T. D. (2018). Investigating admitted patients' satisfaction with nursing care at Debre Berhan referral Hospital in Ethiopia: A cross-sectional

- study. *BMJ Open*, 8(5), e021107. <https://doi.org/10.1136/bmjopen-2017-021107>
- Shinde, M., & Kapurkar, K. (2014). Patient's satisfaction with nursing care provided in selected areas of tertiary care hospital 1. *International Journal of Science and Research (IJSR)*, 3, 150–161.
- Son, Y.-J., Lee, E. K., & Ko, Y. (2019). Association of Working Hours and Patient Safety Competencies with adverse nurse outcomes: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 16(21), E4083. <https://doi.org/10.3390/ijerph16214083>
- Traiki, T. A., AlShammari, S. A., AlAli, M. N., Aljomah, N. A., Alhassan, N. S., Alkhayal, K. A., Al-Obeed, O. A., & Zubaidi, A. M. (2020). Impact of COVID-19 pandemic on patient satisfaction and surgical outcomes: A retrospective and cross sectional study. *Annals of Medicine and Surgery*, 58, 14–19. <https://doi.org/10.1016/j.amsu.2020.08.020>
- White, E. M., Aiken, L. H., & McHugh, M. D. (2019). Registered nurse burnout, job dissatisfaction, and missed Care in Nursing Homes. *Journal of the American Geriatrics Society*, 67(10), 2065–2071. <https://doi.org/10.1111/jgs.16051>
- World Health Organization. (2020a). *State of the World's Nursing Report - 2020*. [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200311-sitrep-51-covid-19.pdf?sfvrsn=1ba62e57\\_10](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200311-sitrep-51-covid-19.pdf?sfvrsn=1ba62e57_10)
- World Health Organization. (2020b). *Nursing and Midwifery*. <https://www.who.int/news-room/fact-sheets/detail/nursing-and-midwifery>
- Zaghini, F., Fiorini, J., Piredda, M., Fida, R., & Sili, A. (2020). The relationship between nurse managers' leadership style and patients' perception of the quality of the care provided by nurses: Cross sectional survey. *International Journal of Nursing Studies*, 101, 103446. <https://doi.org/10.1016/j.ijnurstu.2019.103446>

**How to cite this article:** Alharbi, H. F., Alzahrani, N. S., Almarwani, A. M., Asiri, S. A., & Alhowaymel, F. M. (2023). Patients' satisfaction with nursing care quality and associated factors: A cross-section study. *Nursing Open*, 10, 3253–3262. <https://doi.org/10.1002/nop2.1577>