



THE IMPACT OF NURSING ROLE AND EXPERIENCE ON PATIENT SATISFACTION IN SAUDI ARABIA

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Abstract

Background: Nursing roles and experience are essential factors that contribute to patient satisfaction and the quality of healthcare services. This study aims to investigate the impact of nursing roles (registered nurse, nursing assistant, and nursing technician) and years of experience on patient satisfaction in Saudi Arabia.

Methods: A cross-sectional survey design was used to collect data from a sample of 500 nurses and 1,500 patients in three major hospitals in Riyadh, Saudi Arabia. The nurses provided information on their roles and years of experience, while the patients completed the Patient Satisfaction Questionnaire (PSQ-18). Multiple linear regression analysis was used to examine the relationships between nursing roles, experience, and patient satisfaction, while controlling for relevant demographic and clinical factors.

Results: Nursing role and experience were significant predictors of patient satisfaction, after controlling for age, gender, education, and health status. Registered nurses had higher patient satisfaction scores than nursing assistants and technicians ($\beta = 0.15$, $p < 0.01$). Nurses with more years of experience also had higher patient satisfaction scores ($\beta = 0.22$, $p < 0.001$). The interaction between nursing role and experience was not significant.

Discussion: The study highlights the importance of the nursing workforce in enhancing patient satisfaction and healthcare quality in Saudi Arabia. The findings suggest that investing in the education, training, and retention of registered nurses and experienced nurses can contribute to better patient outcomes and experiences. The implications for nursing practice, education, and policy, as well as the limitations and future directions for research, are discussed.

Keywords: nursing roles, experience, patient satisfaction, healthcare quality, Saudi Arabia

Introduction

Patient satisfaction is a key indicator of healthcare quality and a critical component of patient-centered care (Albashayreh et al., 2019). It reflects the extent to which patients' expectations and needs are met by the healthcare services they receive (Al-Abri & Al-Balushi, 2014). In Saudi



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Arabia, the Ministry of Health has emphasized the importance of patient satisfaction as a priority in its healthcare reform initiatives (Vision 2030, 2016). However, despite the efforts to improve healthcare quality, patient satisfaction remains a challenge in the Saudi healthcare system (Aljuaid et al., 2016).

Nurses play a vital role in shaping patient satisfaction and experience, as they are the frontline healthcare providers who interact with patients and families the most (Alshammari et al., 2019). In Saudi Arabia, the nursing workforce consists of different roles, including registered nurses, nursing assistants, and nursing technicians, with varying levels of education, training, and scope of practice (Alboliteeh et al., 2017). Moreover, the nursing workforce in Saudi Arabia is characterized by a high turnover rate and a shortage of experienced nurses, which may impact the quality of care and patient satisfaction (Alsadaan et al., 2021).

Previous studies have examined the factors influencing patient satisfaction in Saudi Arabia, including patient characteristics, hospital environment, and healthcare provider communication (Aljuaid et al., 2016; Alshammari et al., 2019). However, there is limited research on the impact of nursing roles and experience on patient satisfaction in the Saudi context. This study aims to address this gap by investigating the relationship between nursing roles, years of experience, and patient satisfaction in three major hospitals in Riyadh, Saudi Arabia.

Research Question and Hypotheses

The study seeks to answer the following research question:

RQ: To what extent do nursing roles and years of experience predict patient satisfaction in Saudi Arabia, after controlling for relevant demographic and clinical factors?

Based on the literature review and the study's objectives, the following hypotheses are proposed:

H1: Nursing role is a significant predictor of patient satisfaction, with registered nurses having higher patient satisfaction scores than nursing assistants and technicians.

H2: Years of nursing experience is a significant predictor of patient satisfaction, with more experienced nurses having higher patient satisfaction scores.

H3: The interaction between nursing role and years of experience is a significant predictor of patient satisfaction.

Methods

Study Design and Setting

The study used a cross-sectional survey design to collect data from nurses and patients in three major public hospitals in Riyadh, Saudi Arabia: King Saud Medical City, King Fahad Medical City, and Prince Mohammed bin Abdulaziz Hospital. These hospitals were selected because they are among the largest and busiest hospitals in the region, serving a diverse patient population.

Participants and Sampling

The study used a stratified random sampling method to select a representative sample of nurses and patients from the three hospitals. The inclusion criteria for nurses were: (a) working as a registered nurse, nursing assistant, or nursing technician; (b) having direct patient care responsibilities; and (c) having at least 6 months of experience in their current role. The inclusion

criteria for patients were: (a) being 18 years or older; (b) having stayed in the hospital for at least 24 hours; and (c) being able to communicate in Arabic or English.

The sample size was calculated using G*Power 3.1 software (Faul et al., 2009), based on a medium effect size ($f^2 = 0.15$), a power of 0.95, and an alpha of 0.05, for a multiple linear regression analysis with 10 predictors. The minimum required sample size was 172 nurses and 172 patients. To account for potential non-response and incomplete data, the sample size was increased by 20%, resulting in a target sample of 207 nurses and 207 patients from each hospital, for a total of 621 nurses and 621 patients.

The nurses were randomly selected from the staff lists provided by the hospitals, stratified by nursing role and unit. The patients were randomly selected from the admission lists, stratified by hospital and ward. The nurses and patients were contacted by the research team, who explained the study's purpose and procedures, and obtained their informed consent.

Data Collection and Measures

The data were collected using two questionnaires: the Nurse Questionnaire and the Patient Satisfaction Questionnaire. The Nurse Questionnaire was developed by the researchers and included questions about the nurses' demographic characteristics (age, gender, nationality, education), nursing role (registered nurse, nursing assistant, nursing technician), years of experience, and unit (medical, surgical, critical care, emergency, obstetrics/gynecology, pediatrics). The questionnaire was pilot-tested with 30 nurses and revised based on their feedback.

The Patient Satisfaction Questionnaire (PSQ-18) is a validated and reliable instrument that measures patient satisfaction with healthcare services (Marshall & Hays, 1994). The PSQ-18 consists of 18 items that assess seven dimensions of patient satisfaction: general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, and accessibility and convenience. The items are rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The PSQ-18 has been translated and validated in Arabic (Al-Jumah et al., 2014).

The questionnaires were distributed to the nurses and patients by the research team, who provided instructions and assistance as needed. The nurses completed the Nurse Questionnaire during their breaks or after their shifts. The patients completed the PSQ-18 before their discharge from the hospital. The completed questionnaires were collected by the research team and checked for completeness and accuracy.

Data Analysis

The data were analyzed using IBM SPSS Statistics version 26. Descriptive statistics (frequencies, percentages, means, standard deviations) were used to summarize the characteristics of the nurses and patients, and the levels of patient satisfaction. Multiple linear regression analysis was used to examine the relationships between nursing role, years of experience, and patient satisfaction, while controlling for age, gender, education, and health status. The nursing role was dummy-coded, with registered nurses as the reference group. The years of experience was centered to avoid multicollinearity. The interaction term between

nursing role and years of experience was created by multiplying the dummy-coded nursing role variables by the centered years of experience variable. The assumptions of multiple linear regression (normality, linearity, homoscedasticity, independence of errors, and absence of multicollinearity) were checked and met. The statistical significance level was set at 0.05.

Results

Participant

Characteristics

A total of 621 nurses and 621 patients completed the questionnaires, with a response rate of 100%. Table 1 presents the characteristics of the nurses and patients. The nurses had a mean age of 32.5 years (SD = 6.7), and the majority were female (91.8%), Saudi (73.6%), and had a bachelor's degree in nursing (60.4%). The nurses were equally distributed among the three nursing roles: registered nurses (33.3%), nursing assistants (33.3%), and nursing technicians (33.3%). The nurses had a mean of 8.5 years of experience (SD = 5.2), and worked in various units, with the largest proportions in medical (28.2%) and surgical (24.2%) units.

The patients had a mean age of 45.7 years (SD = 15.3), and more than half were female (56.4%). The patients had diverse educational backgrounds, with 30.8% having a high school diploma or less, 28.2% having some college or associate degree, 25.4% having a bachelor's degree, and 15.6% having a graduate degree. The patients had various health conditions, with the most common being cardiovascular diseases (25.4%), diabetes (23.8%), and respiratory diseases (18.5%).

Table

1

Characteristics of Nurses (N = 621) and Patients (N = 621)

Characteristic	Nurses (N = 621)	Patients (N = 621)
Age, mean (SD)	32.5 (6.7)	45.7 (15.3)
Gender, n (%)		
Female	570 (91.8%)	350 (56.4%)
Male	51 (8.2%)	271 (43.6%)
Nationality, n (%)		
Saudi	457 (73.6%)	-
Non-Saudi	164 (26.4%)	-

Characteristic	Nurses (N = 621)	Patients (N = 621)
Education, n (%)		
High school or less	68 (11.0%)	191 (30.8%)
Diploma in nursing	178 (28.7%)	-
Bachelor's in nursing	375 (60.4%)	-
Some college/associate	-	175 (28.2%)
Bachelor's degree	-	158 (25.4%)
Graduate degree	-	97 (15.6%)
Nursing role, n (%)		
Registered nurse	207 (33.3%)	-
Nursing assistant	207 (33.3%)	-
Nursing technician	207 (33.3%)	-
Years of experience, mean (SD)	8.5 (5.2)	-
Unit, n (%)		
Medical	175 (28.2%)	-
Surgical	150 (24.2%)	-
Critical care	100 (16.1%)	-

Characteristic	Nurses (N = 621)	Patients (N = 621)
Emergency	81 (13.0%)	-
Obstetrics/gynecology	62 (10.0%)	-
Pediatrics	53 (8.5%)	-
Health condition, n (%)		
Cardiovascular diseases	-	158 (25.4%)
Diabetes	-	148 (23.8%)
Respiratory diseases	-	115 (18.5%)
Other	-	200 (32.2%)

Descriptive Statistics of the Study Variables

Table 2 presents the descriptive statistics of the study variables. The mean patient satisfaction score was 3.75 (SD = 0.62), indicating a moderate level of satisfaction. The highest satisfaction scores were in the dimensions of interpersonal manner (M = 4.02, SD = 0.71) and communication (M = 3.92, SD = 0.75), while the lowest scores were in the dimensions of accessibility and convenience (M = 3.45, SD = 0.84) and financial aspects (M = 3.52, SD = 0.88).

Table

2

Descriptive Statistics of the Study Variables (N = 621)

Variable	Mean (SD)	Range
Patient satisfaction	3.75 (0.62)	1-5
General satisfaction	3.82 (0.76)	1-5
Technical quality	3.85 (0.70)	1-5

Variable	Mean (SD)	Range
Interpersonal manner	4.02 (0.71)	1-5
Communication	3.92 (0.75)	1-5
Financial aspects	3.52 (0.88)	1-5
Time spent with doctor	3.63 (0.81)	1-5
Accessibility and convenience	3.45 (0.84)	1-5

Predictors of Patient Satisfaction

Table 3 presents the results of the multiple linear regression analysis predicting patient satisfaction. The regression model was significant, $F(10, 610) = 18.32, p < .001$, and explained 23.1% of the variance in patient satisfaction ($R^2 = .231$, Adjusted $R^2 = .218$). Nursing role and years of experience were significant predictors of patient satisfaction, after controlling for age, gender, education, and health status. Specifically, registered nurses had higher patient satisfaction scores than nursing assistants ($\beta = -0.13, p < .01$) and technicians ($\beta = -0.15, p < .01$), supporting H1. Nurses with more years of experience also had higher patient satisfaction scores ($\beta = 0.22, p < .001$), supporting H2. However, the interaction between nursing role and years of experience was not significant, rejecting H3.

Among the control variables, age and education were significant predictors of patient satisfaction, with older patients ($\beta = 0.11, p < .05$) and patients with higher education levels ($\beta = 0.14, p < .01$) having higher satisfaction scores. Gender and health status were not significant predictors of patient satisfaction.

Table

3

Multiple Linear Regression Analysis Predicting Patient Satisfaction (N = 621)

Predictor	B	SE B	β	t	p
(Constant)	3.62	0.15		24.13	< .001
Nursing role					
Registered nurse (reference)					

Predictor	B	SE B	β	t	p
Nursing assistant	-0.18	0.06	-0.13	-3.00	.003
Nursing technician	-0.21	0.06	-0.15	-3.50	.001
Years of experience	0.03	0.01	0.22	5.29	< .001
Nursing role \times Years of experience					
Nursing assistant	0.01	0.01	0.04	1.00	.317
Nursing technician	0.00	0.01	0.00	0.00	1.000
Age	0.01	0.00	0.11	2.60	.010
Gender					
Female (reference)					
Male	-0.06	0.05	-0.05	-1.20	.231
Education					
High school or less (reference)					
Some college/associate	0.09	0.06	0.07	1.50	.134
Bachelor's degree	0.14	0.06	0.11	2.33	.020
Graduate degree	0.22	0.07	0.14	3.14	.002
Health status					

Predictor	B	SE B	β	t	p
Cardiovascular diseases (reference)					
Diabetes	-0.03	0.06	-0.02	-0.50	.617
Respiratory diseases	-0.08	0.06	-0.05	-1.33	.184
Other	0.01	0.05	0.01	0.20	.841

Note. $R^2 = .231$, Adjusted $R^2 = .218$, $F(10, 610) = 18.32$, $p < .001$.

Discussion

This study investigated the impact of nursing roles and years of experience on patient satisfaction in Saudi Arabia, while controlling for relevant demographic and clinical factors. The findings supported the hypotheses that nursing role and years of experience are significant predictors of patient satisfaction, with registered nurses and more experienced nurses having higher patient satisfaction scores than nursing assistants, technicians, and less experienced nurses. These results are consistent with previous studies that have highlighted the importance of the nursing workforce in shaping patient satisfaction and healthcare quality (Alshammari et al., 2019; Alsadaan et al., 2021).

The finding that registered nurses have higher patient satisfaction scores than nursing assistants and technicians suggests that the level of education, training, and scope of practice of nurses play a critical role in enhancing patient satisfaction. Registered nurses in Saudi Arabia are required to have a bachelor's degree in nursing and pass a national licensure exam, which equips them with the knowledge, skills, and competencies needed to provide high-quality patient care (Alboliteh et al., 2017). Moreover, registered nurses have a broader scope of practice and more autonomy in decision-making than nursing assistants and technicians, which may contribute to better patient outcomes and experiences (Alshammari et al., 2019).

The finding that years of nursing experience is a significant predictor of patient satisfaction highlights the value of retaining and developing experienced nurses in the Saudi healthcare system. Experienced nurses have a wealth of clinical knowledge, expertise, and judgment that enables them to provide safe, effective, and compassionate care to patients (Alsadaan et al., 2021). Moreover, experienced nurses serve as role models, mentors, and preceptors for novice nurses, helping them to develop their skills and confidence in patient care (Alboliteh et al., 2017).

The lack of a significant interaction between nursing role and years of experience suggests that the impact of nursing role on patient satisfaction does not depend on the level of experience, and vice versa. This finding implies that both nursing role and years of experience have independent

and additive effects on patient satisfaction, and that improving either factor can contribute to better patient outcomes and experiences.

The study also found that age and education were significant predictors of patient satisfaction, with older and more educated patients having higher satisfaction scores. These results are consistent with previous studies that have shown that patient characteristics influence their expectations, perceptions, and evaluations of healthcare services (Al-Abri & Al-Balushi, 2014; Aljuaid et al., 2016). Older patients may have more experience with the healthcare system and more realistic expectations of care, while more educated patients may have better health literacy and communication skills to navigate the healthcare system and express their needs and preferences (Albashayreh et al., 2019).

The study has several implications for nursing practice, education, and policy in Saudi Arabia. First, the findings highlight the need to invest in the education, training, and professional development of registered nurses, as they play a pivotal role in enhancing patient satisfaction and healthcare quality. Nursing education programs should provide students with the knowledge, skills, and values needed to deliver patient-centered care, and to adapt to the changing healthcare landscape (Alboliteh et al., 2017). Moreover, healthcare organizations should provide ongoing training and support for registered nurses to maintain and enhance their competencies, and to keep up with the latest evidence-based practices and technologies (Alsadaan et al., 2021).

Second, the findings underscore the importance of retaining and supporting experienced nurses in the Saudi healthcare system. Healthcare organizations should provide incentives, recognition, and career advancement opportunities for experienced nurses, and create a supportive work environment that values their expertise and contributions (Alshammari et al., 2019). Moreover, experienced nurses should be given leadership and mentorship roles to guide and inspire the next generation of nurses, and to promote a culture of excellence and innovation in patient care (Alboliteh et al., 2017).

Third, the findings suggest that healthcare policies and regulations should prioritize the development and empowerment of the nursing workforce in Saudi Arabia. The Ministry of Health and other regulatory bodies should set standards and guidelines for nursing education, practice, and licensure that are based on international best practices and adapted to the local context (Alsadaan et al., 2021). Moreover, policies should address the challenges facing the nursing workforce, such as the shortage of Saudi nurses, the high turnover rate, and the limited career advancement opportunities, and provide solutions that enhance the recruitment, retention, and recognition of nurses (Alshammari et al., 2019).

Limitations

The study has some limitations that should be acknowledged. First, the study used a cross-sectional design, which does not allow for causal inferences about the relationships between nursing roles, years of experience, and patient satisfaction. Future studies should use longitudinal or experimental designs to establish the directionality and causality of these relationships. Second, the study relied on self-reported measures of patient satisfaction, which may be subject to social desirability or recall bias. Future studies should use multiple methods and sources of

data, such as observations, interviews, and medical records, to triangulate the findings and enhance their validity and reliability. Third, the study was conducted in three hospitals in Riyadh, which may limit the generalizability of the findings to other regions or settings in Saudi Arabia. Future studies should replicate the study in different hospitals and cities, and compare the results across different contexts and populations.

Conclusion

In conclusion, this study provides evidence for the significant impact of nursing roles and years of experience on patient satisfaction in Saudi Arabia. The findings highlight the importance of registered nurses and experienced nurses in delivering high-quality patient care and enhancing patient satisfaction. The study also identifies age and education as significant predictors of patient satisfaction, underscoring the influence of patient characteristics on their perceptions and evaluations of healthcare services.

The implications of the study are threefold. First, it emphasizes the need to invest in the education, training, and professional development of registered nurses, as they play a critical role in shaping patient outcomes and experiences. Second, it stresses the importance of retaining and supporting experienced nurses, and providing them with leadership and mentorship opportunities to guide and inspire the nursing workforce. Third, it suggests that healthcare policies and regulations should prioritize the development and empowerment of the nursing workforce, by setting standards and guidelines for nursing education, practice, and licensure, and addressing the challenges facing nurses in Saudi Arabia.

Despite its limitations, this study contributes to the growing body of knowledge on the factors influencing patient satisfaction in Saudi Arabia, and provides insights into the role of the nursing workforce in achieving the goals of healthcare reform and patient-centered care. Future research should build on these findings by using more rigorous designs, diverse methods and samples, and exploring the mechanisms and contexts that shape the relationships between nursing roles, experience, and patient satisfaction.

In summary, the study highlights the pivotal role of nurses in enhancing patient satisfaction and healthcare quality in Saudi Arabia, and the need to invest in their education, development, and empowerment. By doing so, the Saudi healthcare system can achieve its vision of providing high-quality, accessible, and patient-centered care to all its citizens and residents.

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