# COVID-19 Patients' Satisfaction Levels with Nursing Care: A Cross-Sectional Study

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# Abstract

**Introduction:** COVID-19 is the most recent coronavirus diseases that was first identified in December 2019 and began its exponential spread globally. The critical role of nurses can be severely impacted during pandemics such as COVID-19 when the world is less prepared.

**Objective:** To investigate and measure COVID-19 patients' satisfaction levels with the quality of nursing care provided in the Riyadh Province of Saudi Arabia.

**Methods:** The study used a cross-sectional questionnaire to collect data from COVID-19 patients who were hospitalized or quarantined for at least 48 h or more. The study utilized the Arabic version of the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ-Ar) to assess patients' satisfaction levels with nursing care. Descriptive statistics, Mann-Whitney U, and Kruskal-Wallis tests were performed to examine the objectives of the study.

**Results:** Ninety-six patients reported relatively high satisfaction levels with the overall nursing care. Patients also reported high satisfaction levels with the provided care, and the information that was provided. There were statistically significant differences in the mean score of patients satisfaction in relation to age, educational level, where patients are originally from, and patients recommendation of the hospitals.

**Conclusions:** Individual characteristics and attributes played a role in the process of evaluating nursing care services. Measuring nursing care quality clarified the significant role of nurses during the COVID-19 pandemic. This study provides valuable information that could help in identifying weaknesses and reinforcing strengths about nursing care to be fully prepared against pandemics and other health-related crises and emergencies in the future.

#### **Keywords**

COVID-19, nursing care, patients satisfaction, cross-sectional study, nursing

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# Introduction

The COVID-19 disease is a result of the coronavirus strain SARS-CoV-2, also known as a severe acute respiratory syndrome. It was first identified in Wuhan, China in December 2019 and began its exponential spread, affecting over 224 countries around the globe (Lu et al., 2020; Wang et al., 2020). COVID-19 has no clear definition, but it is related to the Coronaviridae family of viruses where the genome is found in the form of RNA (Alhazzani et al., 2020; Lu et al., 2020). The genetic relationship is what made scientists and researchers conclude that the current coronavirus 2019 strain is an evolved generation of the SARS-CoV (Alhazzani et al., 2020). On March 11th, 2020, the World Health Organization (WHO) declared the outbreak of

COVID-19 as a pandemic and an international public health emergency (Lam et al., 2020; World Health Organization, 2020a). In Saudi Arabia, the first COVID-19 case was identified on March 2nd, 2020. Since then, the numbers have been increasing and reaching to relatively

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Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access page (https://us.sagepub.com/enus/nam/open-access-at-sage). high numbers of reported COVID-19 cases (Ministry of Health (MOH), 2021).

# **Review of Literature**

Nurses are essential operators on the frontline and constitute the largest segment of the healthcare workforce (Freitas et al., 2014; World Health Organization, 2020b). In Saudi Arabia, where this study was conducted, nurses constituted 41.7% of all healthcare providers in the country (MOH, 2018). Nurses play a critical role in providing proper care for patients and spend the most amount of time with them compared to the rest of the medical force. Therefore, it is important to ensure that nursing care is of the highest quality. Measuring nursing care quality would help in assessing how successful and effective healthcare systems are in providing high-quality services to patients (Freitas et al., 2014). As previously mentioned, nurses represent the majority of healthcare providers; thus, the measurement of nursing care quality is essential to improve overall healthcare practices. Therefore, understanding the quality of nursing is a cornerstone for healthcare providers, administrators and legislators (Albashayreh et al., 2019). The importance escalates drastically during widespread health crises such as the COVID-19 pandemic when the world is not prepared and, in many cases, unable to cope with its repercussions. Therefore, measuring nursing care quality helps to navigate the weaknesses and reinforce the strengths of nursing care services for more readiness against pandemics and other health-related emergencies in the future.

Quality of nursing care can be measured and evaluated using different ways - mainly through feedback from nurses and patients. Providing patients with satisfactory services is the ultimate desired outcome of healthcare systems and a vital indicator of the quality of healthcare (Laschinger et al., 2005). In Saudi Arabia, patients' satisfaction levels with nursing care are ambiguous and understudied (Atallah et al., 2013). Despite the low number of Saudi studies on this topic, there is a discrepancy in the reporting of patients' satisfaction levels with nursing care services. In a study that surveyed patients from a hospital in Tabuk, Saudi Arabia, researchers claimed that patients reported low to moderate satisfaction with nursing care services (Al Qahtani & Al Dahi, 2015). However, a few studies from different hospitals in different settings found that patients' satisfaction levels with nursing care services were at a higher level (Al Fozan, 2013; Alasad et al., 2015; Alsaqri, 2016; Atallah et al., 2013). Although there were some similiarities, these studies were carried out differently which might have influenced the outcomes. For example, two studies collected data from only one hospital (Alasad et al., 2015; Al Qahtani & Al Dahi, 2015; Atallah et al., 2013), while one study recruited participants from three hospitals in one region (Alsaqri, 2016), and the other from four hospitals in four different regions (Al Fozan, 2013). In addition, participants'

groups (target population) were different across these studies. Two studies used only patients to evaluate the quality of nursing care (Alasad et al., 2015; Atallah et al., 2013), one study used patients and family caregivers for evaluaiton (Al Fozan, 2013), and one study collected data from patients and head nurses (Alsaqri, 2016). These factors may explain the specific differences between these studies and further explain the need for more studies on this topic.

Since the COVID-19 pandemic began, several studies have covered and reported many aspects related to COVID-19. Few of them have measured the general quality of healthcare provided to patients. For example, Deriba et al., (2020) reported very low levels of satisfaction among chronic patients during the pandemic in North Shoa, Ethopia. Another two studies investigated patients' satisfaction with virtual clinics in Riyadh, Saudi Arabia (Alharbi et al., 2021) and telemedicine visits in Los Angeles, USA (Orrange et al., 2021) during COVID-19; both studies reported high levels of patient satisfaction.

As previously reported in the literature, the general quality of healthcare can be influenced by different factors such as work hours and the risk for infection (Griffiths et al., 2014). These factors have put a strain on nurses during the COVID-19 pandemic considering the urgent need for nurses to serve high volumes of patients who require special care (Tsay et al., 2020). Besides the abovementioned facts and research outcomes, pandemics can severely impact the healthcare system including the workforce (i.e., nurses) through exposure (Ives et al., 2009; Seale et al., 2009). A recent study conducted in Stockholm, Sweden (Nymark et al., 2021) during the first wave of the COVID-19 pandemic revealed more overtime hours and absence from work amongst registered nurses and nurse assistants. Also, patient safety and quality of care were perceived worse among them (Nymark et al., 2021). This is an example of how nurses and nursing care are susceptible to be negatively influenced during pandemics.

Yet, the quality of nursing care that is provided to patients during pandemics, specifically with the most recent pandemic (COVID-19), is unclear and has not been studied. Therefore, the purpose of this study is to investigate and measure COVID-19 patients' satisfaction levels with the quality of nursing care services that are provided to them in Riyadh Province in Saudi Arabia.

# Methods

# Study Design, Setting, and Respondents

We utilized a cross-sectional, descriptive design to examine COVID-19 patients' satisfaction levels with nursing care quality in the Riyadh Province, Saudi Arabia. The Riyadh Province contains the capital of Saudi Arabia (Riyadh city) that makes it the first distination for most interests. The Riyadh Province is the second largest province, the second most populated province in the country, the major financial center, and the most diverse province (Ministry of Interior (MOI), 2021). The data for this study were collected from patients who were diagnosed with COVID-19. A self-administered tool was delivered to patients using two methods: (a) an online electronic platform and (b) a personal interview. Inclusion criteria to this study included: (a) being diagnosed with COVID-19; (b) hospitalized in one of the Riyadh Province hospitals or being in quarantine for 48 h or more; (c) aged 18 years or older; (d) were able to read and speak the Arabic language, and (e) able to respond to the survey. Exclusion criteria included (a) patients who were not able to give consent and fill out the questionnaire.

## Measurement

The Patient Satisfaction with Nursing Care Quality Questionnaire-Arabic (PSNCQQ-Ar) was used to measure patient satisfaction with nursing care (PSNC) based on perceptions. The PSNCQQ-Ar is a selfpatients' administered tool and consists of 17 items related to PSNC, 4 items related to overall quality rating, and demographic questions (Albashayreh et al., 2019). The PSNCQQ-Ar has been transculturally adapted and translated into the Arabic language from the original 21-item Patient Satisfaction with Nursing Care Quality Questionnaire (PNCQQ) (Laschinger et al., 2005). The transcultural adaptation and translation processes were obtained in a study that was conducted in Oman (Albashayreh et al., 2019). The PSNCQQ-Ar measures PSNC quality during patient hospitalization based on two factors that include, (1) patient satisfaction with the provided care and (2) patient satisfaction with the provided information (Albashayreh et al., 2019). This measure includes a 5-point Likert scale ranging from "poor" to "excellent" where item scores of each domain are summed and averaged to result in a single individual value for each patient. Patient satisfaction with nursing care quality can be interpreted using a composite score (overall PSNC quality) or domain-based score (Albashayreh et al., 2019; Laschinger et al., 2005). The original PSNCQQ and the adapted version PNSCQQ-Ar have adequate overall internal consistency (Cronbach's alpha) with  $\alpha = .97$  and  $\alpha$ =.96, respectively (Albashayreh et al., 2019; Laschinger et al., 2005). As this study was conducted in Saudi Arabia where Arabic is the primary language in the country, the adapted and translated version (the PNSCQQ-Ar) was administered to patients. The PNSCQQ-Ar had excellent internal consistency reliability (Cronbach's alpha) for the sample of this study with  $\alpha = .97$ .

## Data Collection

A 17-item, self-reported PSNCQQ-Ar with additional demographic and overall quality rating questions was distributed to patients who were diagnosed with COVID-19 in the Riyadh Province. As mentioned above, a self-administered tool was delivered to patients using two methods: (a) an online electronic platform and (b) a personal interview. The questionnaire was delivered electronically by scanning a barcode using patients' cellphones or through receiving a link to the questionnaire. Additionally, following the precaution protocols, the researchers collected some data personally by interviewing hospitalized patients utilizing a paper-based questionnaire. Using this method, there was no direct contact with patients considering all levels of COVID-19 precautions. However, data collectors read the questions to the patients then filled out their answers on their behalf.

The questionnaire started with a description of the study, its aims, and inclusion and exclusion criteria. In addition, the researchers clarified that all questions are related to current (or latest) hospitalzaion due to COVID-19, not other previous hospitalizations or hospital experiences. Once agreed to participate, the respondents proceeded to demographic questions about age, gender, marital status, education level, and occupation status. The researchers of this study added additional questions about the geographical location for further analysis and comparisons. Then, the respondents answered questions about hospitalization that included history of previous hospitalizations (including current hospitalization), days of current hospitalization, and hospitalization status. Finally, the respondents proceeded to questions about PSNC and overall quality. The data were collected between June and November 2020.

# Ethical Consideration

Permission to utilize the PNSCQQ-Ar was obtained from the corresponding author (Albashayreh et al., 2019). Approval for conducting this study was obtained from the Institutional Review Board (IRB) of a governmental organization and a tertiary care hospital in Saudi Arabia. To maintain full privacy and confidentiality of the patients, the researchers collected de-identifiers for personal privacy and to protect respondents' information, and did not collect personal information. Also, data was stored in the primary researcher's personal computer and could only be accessed by the researchers of this study.

# Data Analysis

Analysis of this study utilized the Statistical Package for Social Sciences (SPSS) Version 25. Descriptive statistics of all demographic variables were calculated using frequencies, percentages, means, and standard deviations to provide a comprehensive description of the sample. Furthermore, descriptive statistics for PSNC was calculated using means, standard deviations, and average scores. The researchers tested the normality of the data using the Kolmogorov-Smirnova test, which conveyed a non-normal distribution. Thus, Mann-Whitney U, and Kruskal-Wallis tests (non-parametric tests of the inferential statistics) were performed to compare and determine differences in patients' satisfaction levels based on their demographics. The alpha level of  $\leq .05$  was used to determine statistical significance.

# Findings

# Sample Description

The total number of respondents who completed the questionnaire was 96. The mean age of the respondents was 43.18 years, with 50% of respondents aged 28 years and older. The respondents were almost equal in terms of gender, as roughly 50% of them were female and 49% were male, while one respondent did not provide an answer. Of the total sample, most respondents had a college degree or above (64.6%), and almost half of them were employed (49%). Most of the respondents were married (62.5%), and the majority were from the Riyadh Province (76%). In addition, 74% of the total sample had been hospitalized 1-3 times (including current hospitalization), and more than half of the sample (54.2%) had stayed at the hospital for more than six days for their last hospitalization. The majority of the respondents (82.3%) had private rooms, and 57.3% had already been completely treated from COVID-19 (Table 1).

## Patient Satisfaction

The total mean score of PSNC amongst the respondents was 4.23. The mean score of patient satisfaction with provided care was 4.25, and patient satisfaction with the provided information was 4.19 (Table 2). The lowest mean score of PSNCQQ items were scored for item 5 (informing family/friends) and item 6 (involving family/friends in your care). The highest mean score of PSNCQQ items were scored for item 7 (concern and caring by nurses) and item 8 (attention of nurses to your condition) (Table 2).

There was a significant difference in the mean score of PSNC between age groups (Kruskal-Wallis H = 10.31, p =.036), respondetns who were aged 48-57 years old were more satisfied with the provided nursing care (M = 4.69), Mean Rank = 63.83). There was a significant difference in the mean score of PSNC between respondetns based on their educational level (Mann-Whitney U = 766, p = .043). Respondents with a high school diploma or below reported significantly higher satisfaction (M = 4.51, Mean Rank =55.79) than those with a college degree or above. Furthermore, there was a significant difference in the mean score of PSNC according to where respondetns were originally living (Mann-Whitney U = 450, p = .004) with higher mean score for those who were not originally from the Riyadh Province (M = 4.65, Mean Rank = 62.57). There was also a significant difference in the mean score of PSNC between respondens who recommended the hospital they were hospitalized at and those who did not make similar recommendations, with higher mean score for those who recommended their hospitals (Mann-Whitney U = 10, p = .000) (M = 4.41, Mean Rank = 51.89). Finally, no significant differences in the mean score of PSNC were found in terms of gender, occupational status, marital status, previous hospitalization, length of stay, hospital accommodation, or recovery status from COVID-19 (Table 3).

# Discussion

We sought to examine COVID-19 patients' satisfaction levels with nursing care in the Riyadh Province of Saudi

**Table I.** Sociodemographic of Participants (N = 96).

Variables	Ν	n (%)
Age (mean = 43.18)	93	
18–27 years old		18 (18.8)
28–37 years old		24 (25)
38–47 years old		18 (18.8)
48–57 years old		9 (9.4)
58 years old or older		24 (25)
Gender	95	
Female		48 (50)
Male		47 (49)
Education	95	( )
High school or below		33 (34.4)
College or above		62 (64.6)
Occupation	95	( )
Employed		47 (49)
Unemployed		31 (32.3)
Retired		10 (10.4)
Student		7 (7.3)
Marital status	95	· · ·
Single		24 (25)
Married		60 (62.5)
Divorced or widowed		(  .5)
Region (where the participant is living)	94	· · · ·
Riyadh (Middle region)		73 (76))
Other regions		21 (21.9)
Previous hospitalization (including latest one)	89	. ,
I–3 times		71 (74)
4–6 times		13 (13.5)
More than 6 times		5 (5.2)
Length of stay	86	· · ·
2–3 days		20 (20.8)
4–6 days		14 (14.6)
More than 6 days		52 (54.2)
Hospital accommodation	95	· · · ·
Private room		79 (82.3)
Shared room		16 (16.7)
Recovery status from COVID-19	95	. ,
Cured		55 (57.3)
Not cured yet		40 (41.7)

**Table 2.** Descriptive Statistics (Means and Standard Deviations) of Patients Satisfaction with Overall Nursing Care, Provided Care, and Provided Information (N = 96).

PSNCQQ-Ar	Mean	SD
I - How clear and complete the nurses' explanations were about tests, treatments, and what to expect	4.25	1.046
2- How well nurses explained how to prepare for tests and operations	4.29	.994
3- Willingness of nurses to answer your questions	4.27	1.041
4- How well nurses communicated with patients, families, and doctors	4.25	1.095
5- How well the nurses kept them informed about your condition and needs	3.86	1.245
6- How much they were allowed to help in your care	3.86	1.236
7- Courtesy and respect you were given; friendliness and kindness	4.43	.992
8- How often nurses checked on you and how well they kept track of how you were doing	4.43	1.074
9- How much nurses ask you what you think is important and give you choices	4.10	1.261
10- Willingness of the nurses to be flexible in meeting your needs	4.25	1.066
11- How well they adjusted their schedules to your needs	4.16	1.089
12- Ability of the nurses to make you comfortable and reassure you	4.26	1.107
13- How quick they were to help	4.09	1.197
14- How well things were done, like giving medicine and handling IVs	4.41	1.111
15- The teamwork between nurses and other hospital staff who took care of you	4.38	.965
16- Amount of peace and quiet	4.32	1.041
17- Provisions for your privacy by nurses	4.37	1.039
Patients' satisfaction with overall quality of nursing care ( <i>items</i> $1-17$ )	4.23	.936
Patients' satisfaction with provided care ( <i>items</i> $6-17$ )	4.25	.954
Patients' satisfaction with provided information (items $1-5$ )	4.19	.945

Arabia. This is in light of the unusual situations that nurses and the healthcare system are experiencing during the COVID-19 pandemic. We considered Riyadh Province because of its geographical and heritage diversity, as well as the differences in healthcare services across the province. Healthcare services are varied based on geographical location and population density. Although that we considered only the Riyadh Province, some respondents in this study were originally from other provinces but received care in Riyadh. We thought that these abovementioned factors may have impacted the nursing care provided to patients during COVID-19. Specifically, the method of communication with patients and families taking into consideration the critical stage of COVID-19.

The respondents in this study were mostly aged over 30, had a college degree or higher, were married, employed,

and from the Riyadh Province. Additionally, they were equally distributed in terms of their gender. Over half of them had been completely treated from COVID-19. Although the sample size is small, these characteristics would give an indication of the good distribution of the respondents on the level of their demographics.

Overall satisfaction with nursing care services was found to be relatively high among COVID-19 patients in the Riyadh Province. This main result is consistent with other studies from different settings in Saudi Arabia (Al Fozan, 2013; Alasad et al., 2015; Alsaqri, 2016; Atallah et al., 2013), and with another study conducted in Turkey (Karaca, & Durna (2019). However, our result is inconsistent with another study that was conducted in the city of Tabuk, Saudi Arabia which found low to moderate patient satisfaction levels (Al Qahtani & Al Dahi, 2015). A notable and main difference between this study and other comparative studies is the purpose. We aimed in this study to investigate and focus on COVID-19 patients only, while others included patients with different conditions. Additionally, some studies surveyed others besides patients to evaluate quality of nursing care such as family caregivers (Al Fozan, 2013) and head nurses (Alsaqri, 2016). In the current study, we recruited patients from numerous hospitals and quarantines. This is similar to (Al Fozan, 2013; Alsaqri, 2016), while different from (Alasad et al., 2015; Al Qahtani & Al Dahi, 2015; Atallah et al., 2013) where they targeted one hospital only. As we measured specific aspects about quality of nursing care that was provided to patients, collecting data from patients themselves would be more reflective to the reality of the situation. Although caring was provided during a critical stage of the COVID-19 pandemic, the reported high level of satisfaction could be attributed to the nurses themselves as they were empowered with information, education, and confidence that would have facilited the delivery of care to patients and increased satisfaction (Abdel Maqsood et al., 2012; Karaca & Durna, 2019).

In this current study, the highest level of satisfaction was "concern and caring by nurses" and "attention of nurses to your condition". This result is consistent with two studies in Oman and Turkey that utilized the same questionnaire (Albashayreh et al., 2019; Karaca, & Durna, 2019), respectivly. Both studies reported "concern and caring by burses" with the highest mean score when evluating quality of nursing care. This indicates the good communication and attitudes of nurses who are providing care for patients (Karaca & Durna, 2019), besides their confidence and information levels (Abdel Maqsood et al., 2012). On the other hand in this current study, both "informing family/friends" and "involving family/friends in your care" items were reported as the lowest among patients. This result is consistent with Albashayreh et al., (2019) and inconsistent with Karaca and Durna (2019) where the latest found that nurses explanations about patients interventions and communication with them were the lowest. A possible explanation to our

Table 3. Comparisons of PSNCQQ-Ar Means by Sociodemographic of Participants (N = 96).

Variables	PSNCQQ Mean	SD	Mean Rank	Mann-Whitney U / Kruskal-Wallis H	df
Age				10.31*	4
18–27 years old	4.33	1.020	52.31		
28–37 years old	3.79	1.159	35.23		
38–47 years old	4.08	.975	42.25		
48–57 years old	4.69	.491	63.83		
58 years old or older	4.51	.535	52.04		
Gender				1119.50	I
Female	4.23	.918	48.18		
Male	4.24	.971	47.82		
Education				766*	
High school or below	4.51	.597	55.79		
College or above	4.09	1.055	43.85		
Occupation				1.41	3
Employed	4.12	1.050	44.65		
Unemployed	4.41	.623	51.55		
Retired	4.43	.688	51.30		
Student	3.97	1.520	50.07		
Marital status				2.86	2
Single	4.38	.898	52.23		
Married	4.12	.995	44.56		
Divorced or widowed	4.56	.598	57.55		
Province (where the participant is living)				450**	I
Riyadh Province	4.11	1.002	43.16		
Other Provinces	4.65	.546	62.57		
Previous hospitalization				.89	2
I-3 times	4.24	.858	43.72		
4–6 times	4.44	.665	49.58		
More than 6 times	4.38	.946	51.30		
Length of stay				3.40	2
2-3 days	4.38	.900	46.85		_
4-6 days	4.66	.357	52.54		
More than 6 days	4.23	.775	39.78		
Hospital accommodation				583.50	2
Private room	4.28	.788	47.39		_
Shared room	3.98	1.490	51.03		
Recovery status from COVID-19				1019	2
Cured	4.16	.957	46.53		-
Not cured yet	4.33	.919	50.03		
Hospital Recommendation			00.00	10***	2
Recommended	4.41	.672	5.43		-
Not recommended	1.95	.841	51.89		

\* p < .05; \*\* p < .01; \*\*\* p < .001.

result is the nurses' belief in patients' privacy during such a critical situation as COVID-19 although engaging families is vital in providing care.

Individual characteristics and attributes played a role in the process of evaluating nursing care services. In this current study, older patients were significantly more satisfied with nursing care compared with younger ones. This result has been generally reported in many studies with similar purposes such as Dzomeku et al., (2013) and Shinde and Kapurkar (2014). However, Karaca, and Durna (2019) found the opposite where younger patients were more satisfied. An explanation to our result is older people are usually more satisfied, accepting, and respectful (Shinde & Kapurkar, 2014). Additionally, old COVID-19 patients are at higher risk of getting sicker due to different factors, thus, nurses migh paid more attention to them and watching them closely to prevent or reduce COVID-19 consequences.

Individuals with high school diplomas or lower had significantly higher satisfaction rates than those with a college education or higher. Similar results were reported by other researchers (Dzomeku et al., 2013; Albashayreh et al., 2019). Oppositely, Karaca and Durna (2019) found that patients with college or university degree were more satisfied. An explanation for our result is education, individuals with low education have lower expectations with healthcare because they lack knowledge (Roder-DeWan et al., 2019). Furthermore, nursing care and services that were actually provided during COVID-19 were beyond their expectations which may have made them highly satisfied.

It is also important to note that individuals who reported being from other provinces than Riyadh had significantly higher satisfaction scores than those from the Riyadh Province. This could be related to the fact that healthcare services in Saudi Arabia differ by nature from one province to another. In addition, the Riyadh Province includes the capital city of Saudi Arabia (Riyadh city) where most government institutions including general, tertiary, and other reputative hospitals are found and the level of provided services is higher compared to other healthcare facilities outside Riyadh. Thus, patients who come from other provinces might view the healthcare services provided in the Riyadh Province hospitals as better than those in their original areas.

# Implications for Practice

This study has important implications for the readiness and preparedness of healthcare systems specifically against pandemics and other health-related crises and emergencies in the future. Although the results showed evidence of high satisfaction levels among COVID-19 patients, there are still areas that need to be improved and explored. Specifically, involving family members while providing care to patients. Training courses can be offered to nurses to show the importance of family participation in healthcare. Moreover, nursing students need to be fully aware of this before entering the field of practice.

# Strenghts and Limitations

A strength to this study includes highlighting nurses role during COVID-19 pandemics by measuring patients satisfaction about nursing care. Limitations to this study include the small sample size of this study. This is because the researchers faced difficulties and obstacles when reaching out to COVID-19 patients. On the one hand, patients themselves were distressed and had no desire to participate. On the other hand, some healthcare facilities were strict in terms of contacting COVID-19 patients. Another limitation is that this study focused on COVID-19 patients in the Riyadh Province only. However, because of the partial and full lockdown that was applied at the time of data collection and other difficulties that the researchers faced, it was hard to obtain samples from other provinces. Including other provinces would have provided more representative results. This study investigated COVID-19 patients' satisfaction levels with the quality of nursing care in the Riyadh Province of Saudi Arabia. A high level of satisfaction with overall nursing care was reported, including provided care and information. The high satisfaction rate can be attributed to the efforts made by nurses who were knowledgeable, responsible and prepared. This study has important implications for the readiness and preparedness of healthcare systems (especially nurses) against pandemics and other health-related crises and emergencies in the future.

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