

Satisfaction with nursing care and its related factors in patient with COVID-19

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Abstract

Background: Patients' satisfaction is a fundamental factor in the quality of nursing care. The emergence of the novel coronavirus (COVID-19) and the highly contagious virus can affect nursing care by increasing the number of care-seekers. This study aimed to determine the patients' satisfaction and related factors in patients with COVID-19 hospitalized in Taleghani Hospital, Urmia-Iran, in 2020.

Methods: This descriptive correlational study was conducted on 196 patients with COVID-19 hospitalized in Taleghani Hospital, Urmia. Purposive convenient sampling was used to recruit participants. Study participants completed Patient Satisfaction Instrument (PSI) and demographics questionnaires. Data were analyzed with SPSS software version 25.0.

Results: The majority of patients (68.9%) were moderately satisfied with nursing care. Based on Pearson Correlation Analysis, only residential status had a significant inverse relationship with satisfaction level in patients with COVID-19 ($r = -0.0238$, $P=0.001$).

Conclusion: The patients' satisfaction with nursing care was mostly at a moderate level. Thus, there is a need to educate health personnel and nurses in particular and motivate them to have active participation in achieving patients' satisfaction with COVID-19. Notably, only the institutes that take patients' satisfaction as a top priority can succeed in a competitive market of health services.

Background

Patients have a fundamental right to considerate care that safeguards their dignity and, patients' satisfaction with care service indicates that the health personnel finds it an incumbent upon themselves to make sure of patients' satisfaction. The personnel also need to have adequate information about the biological, mental, and social needs of patients [1]. Patients' satisfaction is a key factor of the quality of health cares and one of the predictors in measuring health outcomes and the quality of cares in a health center [2].

Patients' satisfaction is the outcome of a complicated set of factors and, achieving it entails coordination in different aspects of services such as nursing, medicinal, and backup services. Organizational wards need to function in a coordinated manner and respect patients' rights in all aspects to ensure a proper environment to increase satisfaction in patients [3]. The satisfaction level is defined as the difference between what is expected and what is realized [4]. Patients tend to accept a treatment program more easily when their satisfaction is at a desirable level [5]. In fact, the higher satisfaction in patients, the faster mental and physical recovery in them. On the other hand, dissatisfaction increases irritability and anxiety in patients, which prolongs recovery and hospitalization. Consequently, medication cost increases, and more beds remain occupied [6].

The patient's satisfaction level is measured based on several factors that are mostly reported by the patient. Based on satisfaction level, researchers can introduce new policies and plans and improve

patients' satisfaction level and achieve better outcomes [7]. These factors cover all services by health personnel, including nurses, and represent the attitude of patients about general appearance, cleanliness, peace, and waiting time [2]. Patients' satisfaction is affected by mental perception, patients' awareness of their rights, personnel's communicational abilities to establish a mental relationship with patients, and several other factors such as cultural, social, economic, and personality background. In addition, demographical factors such as age, gender, and education level can affect the satisfaction level [8]. Lee et al. in Canada showed that there is a significant relationship between age and education and satisfaction level in patients; so that satisfaction level in educated patients was less than that in patients with lower education level [9].

Studies have shown that nurses with higher professional commitment and communicational skills achieve a higher level of patient satisfaction. In addition, where nurses are given more independence, have a stronger role in decision-making, and cooperating with other health personnel, they achieve a higher level of patient satisfaction [10, 11]. Besides, quality and safety of care and patients' satisfaction with the hospital environment require management's support for nursing care, good nurse-physician relationship, nurses' participation in decision-making, and priority of quality care from the nurses' viewpoint [12]. Patient satisfaction measurement is a complicated and multifaceted phenomenon, including, among many, relationships with medical personnel, physical environment, and specification of health care organization [13].

The nursing profession is one of the highly stressful jobs as the nurse is in charge of controlling and supervising patients and constantly exposed to several stressors [14]. Since nurses have the main role in providing health care in hospitals, equipment and environmental safety have a direct effect on the quality of care and patients' satisfaction [15, 16].

COVID-19 is a newly emerging viral respiratory disease with a rapid spread worldwide, which has affected the quality of nursing care [17]. The COVID-19 pandemic, also known as the coronavirus pandemic, was first identified in December 2019 in Wuhan, China. Now it has spread all over the world [18]. It is a serious concern for health care personnel including nurses [19-20]. Studies have shown that the disease has affected nurses' mental and spiritual conditions in nurses which can have a negative effect on the quality of service [21, 22].

Given that COVID-19 is an unknown and highly contagious disease and has inflicted a large number of individuals, it can affect nursing care, and the high bed-occupancy rate can cause a heavy financial pressure on the health care system. During the COVID-19 pandemic, nurses are faced with a heavier workload. Taking into account the importance of nursing cares in terms of the patients' outcomes, having a deeper knowledge about patient's problems, and taking measure to improve their satisfaction; and the paucity of studies on this field, the present study aimed to determine the patients' satisfaction and its related factors in patients with COVID-19. Our research questions were:

1. What is the patient's satisfaction level of patients with COVID-19 from nursing care?

2. What factors do affect the patient's satisfaction in patients with COVID-19?

Methods

Study design and setting

This descriptive correlational study was conducted in Taleghani Medical and Educational Center in Urmia, a city in the northwest of Iran, in 2020.

Participants

Our target population was patients with COVID-19 in clinical wards of Taleghani Hospital in Urmia. Based on the previous study [23], the patient satisfaction ratio ($P = 0.85$), maximum error level ($d=5\%$) and confidence level ($1-\alpha=0.95$) using the following formula power, the sample size was estimated, 196 patients. Inclusion criteria included: willingness to participate in the study; age between 18 to 60 years; being conscious and oriented, having the ability to read and write; having no history of hearing, vision problems; having $SPO_2>90\%$, and having no history of mental disorder. Unwillingness to stay in the study was considered exclusion criteria. We used convenient purposive sampling to recruit patients with COVID-19 who were hospitalized in Taleghani Hospital.

$$n = \frac{z_{1-\alpha/2}^2 \times p(1-p)}{d^2}$$

Data collection

Data were collected using a two-part questionnaire. The first part was related to demographic information, including age, gender, marital status, education level, occupational status, Residential status, level of income, and smoking. The second part was Patient Satisfaction Instrument (PSI), which is a self-reported instrument. PSI evaluates the patients' attitudes towards nurses and nursing care. The instrument was developed by Hinshaw and Atwood (1981) [24], consists of 25 items, with a 5-point likert scale, including totally agree (score 5), agree (score 4), I am not sure (score 3), disagree (score 2) and totally disagree (score 1) with a minimum score of 25 and a maximum score of 125. A score less than 78 indicates dissatisfaction, between 78 and 104 is the moderate satisfaction and more than 104 is complete satisfaction. The instrument is divided into three subscales: a) technical-professional care (7 items), b) trust (11 items) and c) patient education (7 items) [24]. The first subscale includes items referring to technical skills, knowledge base and carefulness. The items in the second subscale measure the patient- nurse relationship and the humanity of the nurse. The items related to patient education

measure patient satisfaction with the nurses' teaching and supervision skills and their informativeness. In the technical-professional subscale, a score below 21 is dissatisfaction, between 21-28 is moderate satisfaction, and a score above 28 is complete satisfaction. In the subscale of trust, a score below 39 is dissatisfaction, between 39-52 is moderate satisfaction, and a score above 52 is complete satisfaction. Finally, in the patient education subscale, a score of less than 18 is dissatisfaction, between 18-24 is moderate satisfaction, and score of more than 24 is complete satisfaction. Sensitivity of PIS is 80% [25] and Jagoda et al. (2019) used Cronbach's alpha to confirm the reliability of the instrument ($\alpha=0.88$) [26].

For data collection, we obtained permission from the research and ethics committee of Urmia University of medical science (IR.UMSU.REC.1399.136). Then, we visited the Taleghani Hospital of Urmia and obtained permission from the relevant authorities, and discussed our study process and purpose with the manager. Taking into account that the participants had different levels of education, and to improve the reliability of the data, the questionnaire was filled out based on direct interviews. The interviewer was a nurse who works in the COVID-19 ward of Taleghani Hospital. The executive researcher visited the wards in different work shifts for recruiting the patients that met the inclusion criteria. In this stage, she used convenient purposive sampling to recruit the patients with COVID-19 who were hospitalized in Taleghani Hospital. Then, she invited them to participate in the study. If the patients with COVID-19 agreed to participate in the study, she explained to them the purpose, stages and duration of the study and answered their concerns and questions. She also assured them about their privacy and confidentiality of their information. Next the questionnaire was completed by one of the researchers. During data collection, the research team provided safety measures such as washing and disinfecting hands before and after visiting each patient, wearing an N95 mask, gloves, gown, hat, and shoe cover. Sampling took two months, and the third researcher collected the data of 196 patients with COVID-19.

Data analysis

All 196 patients with COVID-19 were entered into the analysis. We used the Kolmogorov–Smirnov test to determine the normal distribution of data. Data analysis was performed with IBM® SPSS® Statistics 25.0 by using descriptive and inferential statistics. In descriptive statistics, we used frequency and percentage for qualitative variables and mean and standard deviation for normal quantitative variables. In inferential statistics, we used the Pearson correlation test to assess the correlation between patient satisfaction and related factors in patients with COVID-19.

Results

The results showed that the mean age of the patients was 46.19 ± 10.29 . More than one-half of the patients were men (58.7%), and 41.3% were women. In addition, more than one half of the patients (52%) had a university degree, and the majority (61.2%) were officially employed. The majority of the participants had enough income (77%), and also, most of the participants were married (85.7%). Notably, most of the patients were not smokers (63.8%), and 6.7% lived in the city (Table 1).

Based on Pearson correlation analysis, residential status had a significant inverse relationship with satisfaction level in patients with COVID-19 ($r = -0.0238$, $P=0.001$). Moreover, there was no significant relationship between patient satisfaction with nursing care and other demographical variables (Table 1). Also, findings showed that 19.9% of the participants were highly satisfied with nursing care. In addition, the majority of patients (68.9%) were moderately satisfied with nursing care, and 11.2% were dissatisfied. Regarding patients' satisfaction, the findings showed that the majority of the patients were satisfied in terms of technical-professional (68.9%), trust (59.2%), and patient education (58.2%) (Table 2).

Discussion

The majority of the patients with COVID-19 in the study were moderately satisfied with nursing care. Among the demographical variables, only residential status had a significant inverse relationship with satisfaction level in patients with COVID-19.

Consistent with our study, Akbulut et al. (2017) showed that patients' satisfaction with nursing care in oncology wards was moderate. In addition, age, gender, education level, marital status, and income were not significantly related to patients' satisfaction, but the residential status was not significantly associated with patients' satisfaction [27], which this finding is against our result. Kara et al. (2019) in Turkey showed that most patients were highly satisfied with the services provided by nurses. Furthermore, married patients with high education levels, patients with good hygiene conditions, and patients who had been hospitalized more than once were more satisfied with nursing services [28]. Owaith et al. (2018) in Saudi Arabia showed that most patients had a high satisfaction concerning health care services. In addition, male patients and those with higher education levels were more satisfied [2]. Patients' satisfaction in different countries can vary due to various factors, such as available facilities. Moreover, the health system's attention to the factors that might create dissatisfaction in patients and attempts to solve them is a crucial feature of the developed countries' health system. Among the problems that might negatively affect the quality of services is the low nurse/patient ratio and heavy workload on patients [29]. Notably, these findings might be rooted in low expectations of patients with health care services. Consistent with our findings, Kool et al. (2018) indicated that the majority of patients were moderately satisfied with nursing care. They reported no significant relationship between gender, education level, and marital status, and patients' satisfaction [30]. Lee et al. (2008) in Canada showed that most participants were desirably satisfied with services provided [9], which is consistent with our findings. Dzomeku et al. (2013) in Zambia indicated that the patients' satisfaction with nursing care was at a low level [31], which does not confirm our results.

Results showed no significant correlation between age and patients' satisfaction; however, Azizi et al. (2017) indicated that patients' satisfaction was significantly related to age, which the higher age, the higher patients' satisfaction [32]. Chan et al. in Hong Kong showed that aged patients were more satisfied with nursing care [33]. Consistent with our finding, Acikgoz et al. (2013) and Alsaqri et al. (2016) showed that there was no significant relationship between the satisfaction and gender, which indicates that rather than gender, it is the quality of care that determines the level of patients' satisfaction [34, 35]. On the other hand, Alhusban et al. (2009) showed that the satisfaction level with health care was higher in women compared to men [36]. However, Milutinovic et al. (2012) and Shinde & Kapurkar (2014) showed that men had higher satisfaction than women regarding received nursing care [37, 38]. While cultural specifications can be mentioned as a reason for the inconsistent findings, women's higher concern about health and hygiene and higher anxiety in this regard are also notable.

The findings revealed that the highest satisfaction level was related to technical-professional care, and the lowest satisfaction level was associated with patient education. This finding is consistent with Wolf et al. (2003) [39]. Patient education is an important element of nursing care, and it should be provided as continuous service from the admission to the discharge [40].

One of the limitations of this study was the presence of environmental, behavioral, and psychosocial factors that can influence the patients' satisfaction, and the researcher has no control over them. A single measurement method that involved a self-report questionnaire as the sole measurement method was another limitation of this study. The study was conducted in a single public hospital in Iran. Therefore, the results cannot be generalized to all hospitals. Future studies should include more than one hospital in both the private and public sectors, and the nursing care provided in private and public hospitals should be compared. Moreover, the study population consisted only of hospitalized patients. Further studies are required to assess satisfaction with nursing care in COVID-19 outpatients.

Conclusions

The patients' satisfaction with nursing care was moderate. Therefore, hospital personnel's education and nurses in particular and motivating them to have active participation in winning patient's satisfaction should be a top priority for hospital managers. Notably, the competitive health care services market requires that health institute take patients' satisfaction as one of their top priorities. Therefore, the results support the necessity of evaluating the patient satisfaction with nursing care to develop and improve nursing care.

List Of Abbreviations

COVID-19: Coronavirus Disease of 2019

PSI: Patient Satisfaction Instrument

Declarations

Ethics approval and consent to participate

The ethics committee of Urmia University of Medical Sciences approved the study (Ethical code: IR.UMSU.REC.1399.136). The participants were fully informed about the purpose of the study. Each participant provided written consent prior to participation. They were explained regarding their voluntary nature of participation and that they can stop cooperation at any given time. They also assured about their privacy and confidentiality of their information.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing Interest

The authors declare that they have no conflict of interest.

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Authors' contributions

NP, RG, RM, MA, HB, RB: Conceptualization, Methodology, Software. RG, NP, MA: Data curation, Writing-Original draft preparation. RG, NP, RM, MA, HB, RB: Visualization, Investigation NP: Supervision: RG, NP, RM, MA, HB, RB: Software, Validation: RG, NP, RM, MA: Writing- Reviewing and Editing, all authors read and approved the final manuscript before submission.

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Tables

Table 1. Demographic characteristics and their correlation with patient satisfaction

Result	Percent (%)	Frequency (n)	Variable	
P*=0.298	41.3	81	Female	Gender
r = -0.075	58.7	115	Male	
P*=0.795	61.2	120	Employed	Occupational status
r = -0.019	35.7	70	Unemployed	
	3.1	6	Inactive	
	7.7	15	Illiterate	Education level
P*=0.900	8.7	17	Elementary	
r = -0.009	10.2	20	Secondary	
	21.4	42	high school	
	52	102	University	
P*=0.188	14.3	28	Unmarried	Marital status
r = -0.094	85.7	168	Married	
P*=0.001	61.7	121	Urban	Residential status
r = -0.238	38.3	75	Rural	
P*=0.756	36.2	71	Yes	Smoking
r = 0.022	63.8	125	No	
	12.2	24	Not enough	Income level
P*=0.380	77	151	Enough	
r = 0.063	10.7	21	More than enough	
P*=0.250	Standard deviation	Mean		Age
r = -0.083	10.29	46.39		

* Pearson correlation

Table 2. Satisfaction with nursing care in patients with COVID-19 in the study

Very satisfied		Satisfied		Dissatisfied		Patient satisfaction
%	N	%	N	%	N	
9.7	19	68.9	135	21.4	42	Technical- professional care
32.7	64	58.2	114	9.2	18	patient education
25.5	50	59.2	116	15.3	30	trust
19.9	39	68.9	135	11.2	22	Total score

Figures

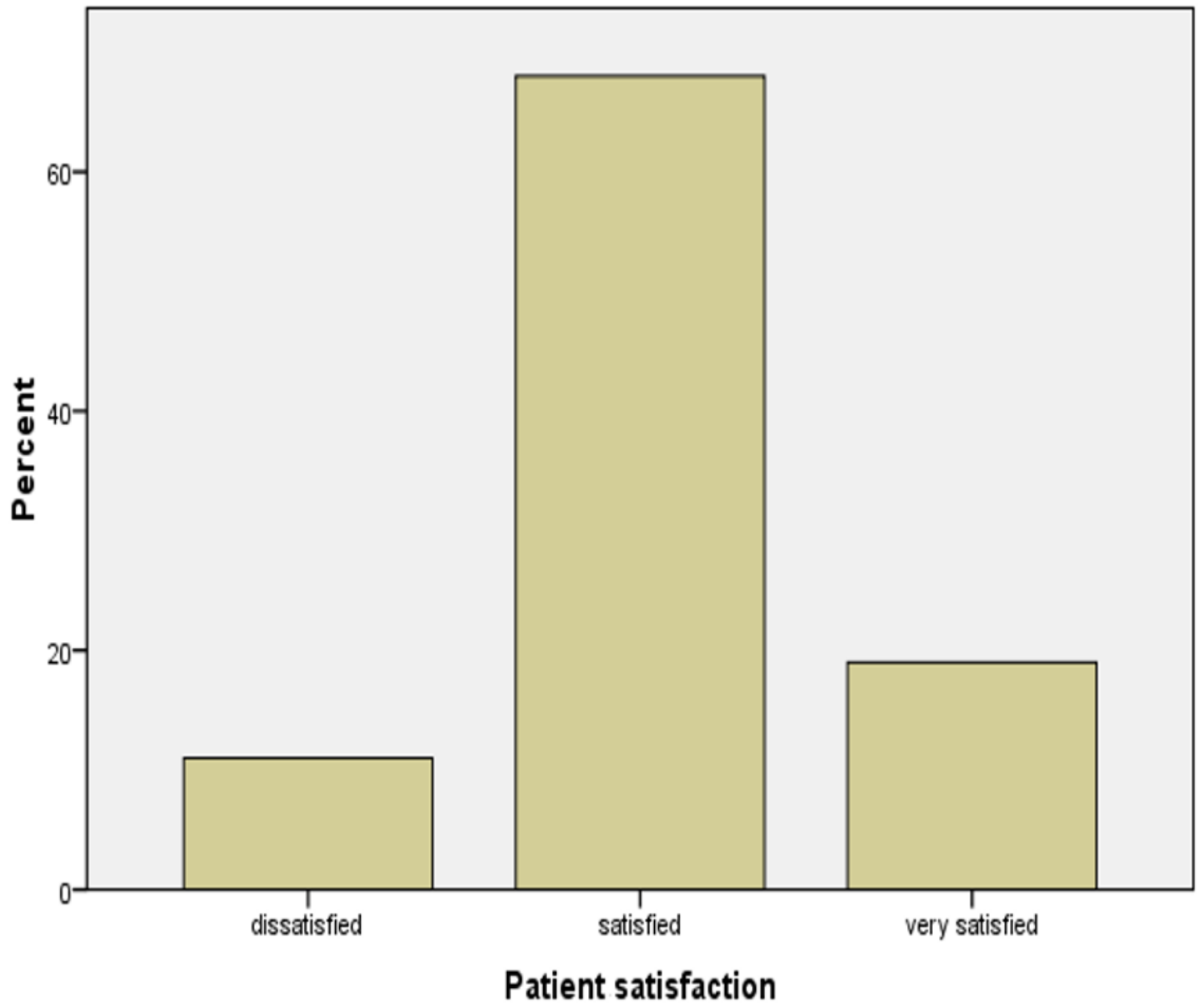


Figure 1

The patients' satisfaction with nursing care