

## EMPIRICAL STUDIES

# The relationship between the level of trust in nurses and nursing care quality perceptions of patients treated for Covid-19

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## Abstract

**Background:** During the pandemic process, nursing care has gained more importance. So, it is critical to evaluate the level of trust in nurses and the perception of care in terms of the patient, in order to improve the care service provided, to achieve the desired successful patient results, to ensure patient satisfaction in nursing care and to create a healthy society in the long term.

**Aim:** This study aimed to examine the relationship between the level of trust in nurses, care perceptions of patients receiving care with the diagnosis of Covid-19, and the level of trust in nurses and care quality perceptions of patients.

**Methods:** This descriptive, cross-sectional, correlational study was conducted in the Covid-19 unit of a state hospital in the Western Black Sea Region of Turkey between May and October 2021. The sample size was calculated as 227 using the sample calculation formula whose population is unknown in the literature. ‘Personal Information Form’, ‘Trust in Nurses Scale’ and ‘Patient Perception of Hospital Experience with Nursing (PPHEN)’ was used to collect data. Ethical approval was obtained from the clinical research ethics committee,

**Results:** The total mean score of the patients’ trust in nurses scale was  $27.67 \pm 3.29$  (min: 15, max: 30); the mean score of the patients’ Perception of Nursing Care scale was determined as  $69.52 \pm 12.51$  (min:15, max:75). It has been determined that the level of trust in nurses and the perception of nursing care of patients receiving Covid-19 treatment are high. A positive, significant and weak relationship ( $r = 0.348$ ,  $p < 0.01$ ) was found between the patients’ level of trust in nurses and their perceptions of nursing care.

**Conclusion:** During the pandemic process, trust in the patient–nurse relationship increases the patient’s perception of nursing care and positively affects the quality of care.

## KEYWORDS

nurse–patient relationship, nursing, nursing care, patient, trust

## INTRODUCTION

From past to present, the humankind has been affected by wars, natural disasters and epidemics; the need for healthcare services has been increased, and the indispensability of care has been perceptibly proven. In particular, nurses who were taken into care played an important role in preventing and controlling infections in unexpected or unwanted situations such as war, disaster and epidemic, reducing mortality rates and accelerating the healing process.[1,2] Recently, the number of patients has increased gradually in the Covid-19 outbreak, which has affected the whole world and has been declared as a pandemic, and the need for nurses' care services has come to the fore again.[3,4]

Care is a vital need for everyone and a universal feature of being human.[5] According to Engster's definition, 'care is everything we do directly, diligently and respectfully, in order to help people meet their basic needs, develop and sustain their abilities, and live as far away from pain as possible in order to survive and at least function minimally'.[6] Nursing, whose field of activity is human, is a profession based on care. At this point, care is not only specific to nursing, but it constitutes the essence of nursing.[7]

Care, which constitutes the essence of nursing, is a concept based on mutual relationship and trust.[5] Simone Roach (2002) defined the five characteristics of care as promising, conscience, competence, compassion and trust. She emphasised that trust connects the other four concepts and that it is critical to act decisively in care practices, to have a conscience, to work adequately and to have compassion even in the most difficult conditions. [8] However, it should be remembered that trust always involves a certain amount of risk.[9] Especially in terms of patient–nurse relationship, while nurses have knowledge, expertise, skills and the ability to influence the environment; patients are vulnerable due to changes in their health status, distraction, physical disabilities, fear, inability to use autonomy and independence.[10]

It is essential that nurses are reliable, knowledgeable, have sufficient experience and make a real request to help patients.[5] Virginia Henderson summarises nursing as 'helping the individual' and the concept of help focuses on the development of a special relationship, in other words, the care relationship between the nurse and the patient. [11] One of the critical points that should be focussed on for the improvement of nursing care is the evaluation of the care service from the perspective of the patient, who is the recipient. In order to reach the desired patient outcomes, which is the main purpose of the care service provided, and to increase the quality of nursing care, it is

important to know the perceptions of the patients about the care provided and to investigate the factors affecting this perception.[12] In studies conducted at the international level to determine the patients' perception of care in the literature, it has been found that patients defined nursing care primarily as establishing a relationship of trust, giving information, supporting, sensitive, humane approach, meeting physiological needs, being recognised by the nurse, smiling and friendly approach.[13-15] In addition, positive results were obtained in studies investigating the perception of quality of care [16,17] and the level of trust of patients in nurses[18-20] before the Covid-19 outbreak in our country.

During the pandemic process, where care has gained more importance, the provision of care services has become even more complicated and difficult due to the need for caregivers to protect themselves from the disease process. Nurses, who are in close contact with patients with a diagnosis of Covid-19 or suspected disease, have faced many difficulties and risks such as pathogen exposure, long working hours, psychological problems, fatigue, occupational burnout, physical and psychological violence. The necessity of complying with infection prevention and control measures in all procedures for individuals with a confirmed diagnosis of Covid-19 has significantly limited the time that the nurse spares for the patient and limited the patient–nurse communication. However, in this process, it is important to be able to provide care services without ignoring that patients are also human beings with emotions, anxieties and fears. At this point, it is important to evaluate the level of trust in nurses and the perception of care in terms of the patient, which is one of the important parameters of care, in order to improve the care service provided in these difficult conditions, to achieve the desired successful patient results, to ensure patient satisfaction in nursing care and to create a healthy society in the long term. In this study, it is aimed to examine the relationship between the level of trust in nurses, care perceptions of patients receiving care with the diagnosis of Covid-19, and the level of trust in nurses and care quality perceptions of patients.

Research questions;

- What is the level of trust of the patients who are cared for with the diagnosis of Covid-19 in the clinic in nurses?
- What is the perception of nursing care quality of patients who are cared for with the diagnosis of Covid-19 in the clinic?
- Is there a relationship between the level of trust in nurses and the quality of care perceived by the patients who are cared for with the diagnosis of Covid-19 in the clinic?

## METHODS

### Design

Descriptive, cross-sectional, correlational design.

### Participants

The population of the study consists of patients treated in the Covid unit of a state hospital in the Western Black Sea Region of Turkey between May and October 2021. Since the diagnosis of Covid-19 is an up-to-date subject, the population of the study cannot be predicted and the sample size is determined as 225 by taking the *t* value (1.96) and the margin of error (0.05) in the 95% trust interval using the sample calculation formula with unknown population in the literature.[21,22] During the calculation, the patient–nurse trust level value (1.71), which was determined in the study of Comparcini et al., in which they studied the level of trust of patients in their nurses in 2020, was taken as the standard deviation.[23]

### Data collection

The research data were collected by the researcher working as a nurse in the Covid-19 pandemic clinic. The nurse, who entered the patient's room with protective equipment for patient care, informed the patient about the aim of the study, confidentiality, voluntariness and withdrawal, and asked the patient or his companion to fill out the questionnaire. The nurse collected the questionnaires filled in the next care hour in a special box in accordance with the precautions to prevent infection. The researcher made data entry by contacting the questionnaires at the end of the period (approximately 10–15 days) in accordance with the standards of protection from infection. In this study, 'Personal Information Form' created by the researchers was used to collect information about the descriptive characteristics of the patients, 'Trust in Nurses Scale' was used to determine the level of trust in nurses and 'Patient Perception of Hospital Experience with Nursing (PPHEN)' was used to determine the perception of nursing care.

### Personal information form

This form consists of eight questions that define the individual characteristics (age, sex, marital status, educational status, profession, length of hospital stays, presence of chronic disease and presence of an attendant) of the patients included in the study.

### Trust in Nurses Scale (TNS)

The scale developed by Radwin and Cabral (2010) was adapted to Turkish by Ay and Yücel (2013).[18,24] Each item of the scale is a six-point Likert-type one-dimensional scale rated from 'always' to 'never' (always = 6, usually = 5, often = 4, occasionally = 3, rarely = 2 and never = 1). Each item in the TNS refers to either a nurse activity or a patient perception. The overall score of the scale is obtained by summing the item response scores. The high score obtained from the scale indicates that the level of trust in nurses is high. In the study conducted with cancer patients, the Cronbach alpha coefficient was reported to be 0.81.[24] The Cronbach alpha coefficient of the Turkish version of TNS was 0.95[18] and it was found to be 0.80 in our study.

### Patient Perception of Hospital Experience with Nursing (PPHEN)

This scale was developed to measure patients' perceptions of hospital care and level of satisfaction with the nursing care received; concurrent validity was established.[25] The adaptation study to Turkish was carried out by Çoban and Kaşıkçı (2010). The Turkish version contains 15 statements using a Likert-type scale about the quality of nursing care.[26] Each item of the scale was rated from 'agree' to 'strongly disagree' (agree = 5, slightly agree = 4, neither agree nor disagree = 3, disagree = 2 and strongly disagree = 1). The scale results in a minimum score of 15 and a maximum score of 75. Higher total scores indicate a high level of satisfaction with nursing care. In the study conducted by Çoban and Kaşıkçı (2010), the Cronbach  $\alpha$  reliability coefficient of the scale was found to be 0.92[26]; in our study, it was found to be 0.96.

### Data analysis

The data are presented with descriptive statistics and frequencies, and percentages are used for nominal data. Mean and standard deviation values were used in the determination of the patients' level of trust in nurses and perception of nurses' care. To ascertain which statistics could be used in the study, skewness and kurtosis were examined; these values were found to be between  $-1.5$  and  $+1.5$ , showing that the study group displayed normal distribution.[27] In cases where the means of two independent groups met parametric conditions when compared, the difference between the categorical variables of more than two groups was assessed with 'one-way analysis of variance (ANOVA)'. In

circumstances where they did not meet parametric conditions, the Kruskal-Wallis and Mann-Whitney U tests were employed. The level of significance was accepted to be  $p < 0.05$ . Pearson's correlation analysis was used to determine the patients' trust in nurses and their perception of nursing care.

## Ethical considerations

Approvals were obtained for the conduct of the study from the Ministry of Health and the Clinical Studies Ethics Committee (16.03.2021/138). Written informed consent was received from the participants and permission for the use of the scales from their authors via email.

## RESULTS

The data on the sociodemographic characteristics of the patients participating in the study are presented in [Table 1](#). The average age of the patients in the study was  $53.95 \pm 15.30$ , 54.2% were female and 45.8% were male, 46.7% were primary school graduates, 81.9% were married, 48.5% were housewives; their average clinic stays were between  $4.99 \pm 4.35$  days and 51.5% of them had a chronic disease and 65.6% of them had an attendant with them ([Table 1](#)). In the analyses, it was found that there was no relationship between the sociodemographic characteristics of the patients and their levels of trust in nurses and perception of nursing care ([Table 1](#)).

The Trust in Nurses and Perception of Nursing Care levels of the patients participating in the study are provided in [Table 2](#). The mean total score of the trust in nurses scale was determined as  $27.67 \pm 3.29$  (min: 15, max: 30). The total mean score of the Patient Perception of Hospital Experience with Nursing Scale was  $69.52 \pm 12.51$  (min: 15, max: 75) ([Table 2](#)).

The results of the correlation analysis conducted to determine whether there is a relationship between the level of trust of the patients in nurses and their perceptions of nursing care are presented in [Table 3](#). As a result of the analysis, a positive, significant and weak relationship was found between the total patient trust in nurses and their nursing care perceptions ( $r = 0.348$ ,  $p < 0.01$ ) ([Table 3](#)).

[Table 4](#) shows the results of the regression analysis conducted to determine whether the nursing care perceptions of the patients are predicted by the level of trust in nurses variable. The results of the analysis show that 031% of the total variance in the perception of care is explained by this variable.

## DISCUSSION

Since the Covid-19 pandemic caused many physiological and psychological changes in the human body, one of the most important needs of patients in this process has been quality nursing care. The quality of nursing care is directly related to how the care provided is perceived by the recipients. In the evaluation of the quality of nursing care, it is important to evaluate the level of trust in nurses in addition to the patients' perceptions of nursing care. In this study, the levels of trust in nurses and nursing care quality perceptions of patients receiving Covid-19 treatment in a process that affects the whole world and is accepted as a pandemic were studied.

In the findings of the study, it was determined that patients had high levels of trust in nurses ([Table 1](#)). Similar to our findings, in Gallup's survey conducted with adults over the age of 18 in the United States by repeated phone calls every year for 20 years, it was determined that nurses were the most reliable professionals, including in 2021. [28,29] Especially the fact that nurses who have struggled with the challenges of the pandemic at the front for the last 2 years have been selected as the most reliable occupational group may be seen as the most important evidence of their consistent professionalism. Nursing is one of the disciplines that requires an appropriate relationship between the nurse and the patient in order to perform the duties and nursing care correctly.[30] Trust is at the centre of nurse-patient relationships.[31] In studies evaluating the level of trust in nurses on different patient groups in the literature, it was found that the level of trust in nurses was high in parallel with our study.[18,19,20,31,32,33,34] It is thought that the high level of trust in nurses in the society may be due to the fact that the majority of women in nursing are associated with motherhood and care practices and nurses are the members of the relevant health care team, where patients spend the most time and who help meet their basic needs and undertake difficult tasks that most people cannot perform.

Trust is widely accepted as the main component of the relationships between patient and nurse.[35] Trust in nurses is important for patients because nurses play a central role in the care process and is critical to patient outcomes.[23] In the literature, with the relationship of trust provided between the patient and the nurse, it was seen that the outcomes of relaxation in the patient, decrease in anxiety,[36,37] increase in satisfaction, cooperation with health professionals[38] and compliance with treatment[39,40] were reached. At this point, reaching these outcomes during the pandemic process is of critical importance for public health, and it is very valuable that the patients who are infected and treated during this process have a high level of trust in nurses. It is crucial for

**TABLE 1** Review of the patients' mean scores on the Trust in Nurses Scale (TNS) and Patient Perception of Hospital Experience with Nursing (PPHEN) in terms of sociodemographic characteristics ( $n = 227$ )

Characteristics of patients	<i>n</i>	%	TNS $M \pm SD$ statistical value/ <i>p</i> Value	PPHEN $M \pm SD$ statistical value/ <i>p</i> Value
Age group				
Age average ( $M \pm SD: 53,95 \pm 15,30$ Min: 20, Max: 82)			$r = 0.016^a$ $p = 0.815$	$r = 0.008$ $p = 0.451$
Sex				
Female	123	54.2	$U = 5389.000^b$	$U = 6022.000^b$
Male	104	45.8	$p = 0.902$	$p = 0.401$
Educational level				
Literate	42	18.5		
Primary School	106	46.7		
Secondary School	15	6.6	$F = 0.780^c$	$F = 0.081^c$
High School	42	18.5	$p = 0.540$	$p = 0.988$
University	22	9.7		
Marital status				
Single	41	18.1	$U = 2532.000^b$	$U = 3618.000^b$
Married	186	81.9	$p = 0.307$	$p = 0.570$
Profession				
Housewife	110	48.5		
Civil Servant	4	1.8		
Worker	26	11.5	$X^2 = 5.379^d$	$X^2 = 2.579^d$
Retired	53	23.3	$p = 0.251$	$p = 0.631$
Other	34	15.0		
Duration of hospital stay (days)				
( $M \pm SD: 4,99 \pm 4,35$ Min: 1, Max: 27)			$r = -0,013^a$ $p = 0.855$	$r = -0,121^a$ $p = 0.069$
Attendant				
Yes	149	65.6	$U = 4439.000^b$	$U = 5367.500^b$
No	78	34.4	$p = 0.117$	$p = 0.337$
Chronic disease				
Yes	110	48.5	$U = 5303.000^b$	$U = 5541.500^b$
No	117	51.5	$p = 0.718$	$p = 0.058$

<sup>a</sup>Pearson correlation.

<sup>b</sup>Mann-Whitney U.

<sup>c</sup>One-way ANOVA.

<sup>d</sup>Kruskal-Wallis.

nurses to be aware of how important the trust relationship between the patient and the nurse is during the pandemic process and to know the nature of the sense of trust in order to ensure and maintain the continuity of trust.

It was determined that the relationship between the trust level of the patients participating in the study and the patient's age, sex, education level, marital status, profession, length of hospital stay, presence of an attendant and status of having a chronic disease was not

statistically significant (Table 1). While there are findings in the literature indicating that the level of trust in nurses and the sociodemographic characteristics of the patient are not related,[20,41] there are also studies showing that the age of the patient[19,42] and the length of hospital stay[34,43] are effective factors on the level of trust in nurses.[19,20] In particular, Çelik Yavuz (2020) defended the view that the level of trust in nurses, which increases in proportion to the increasing

	Number of items	Cronbach's $\alpha$	M $\pm$ SD	Min-max
Trust in Nurses Scale (TNS)	5	0.809	27.67 $\pm$ 3.29	15–30
Perception of Hospital Experience with Nursing (PPHEN)	15	0.960	69.52 $\pm$ 12.51	15–75

**TABLE 2** Mean and standard deviation values of the Trust in Nurses Scale (TNS) and Patient Perception of Hospital Experience with Nursing (PPHEN)

**TABLE 3** The relationship between patients' level of trust in nurses and the nursing care they perceive

	Total PPHEN
Total TNS	0.349*

Abbreviations: PPHEN, perception of hospital experience with nursing; TNS, trust in nurses scale.

\* $p < 0.01$ .

age, is related to the improvements in the nursing profession today[43]; O'Malley et al.[42] (2004) stated that the effect of sex may be due to the fact that the nurses working in the institution are mostly women and that some female patients feel more comfortable in communicating culturally with their fellows; Stolt et al. (2016), on the other hand, explained the positive effect of staying in the hospital for a longer time on trust, stating that they thought that patients provided enough time to trust the nurse.[34]

In this study, the total mean score of the nursing care perception scale of the patients was  $69.52 \pm 12.51$ , and no difference was observed between the item mean scores, while patients receiving Covid-19 treatment had a high perception of care. In a study conducted across Turkey by Kol et al. (2017), it was stated that the care perception of patients was above the moderate level and that the highest item score average of PPHEN belonged to the statements 'I am sure that the nurses will be there for me when I need them' and 'I felt that I was well taken care of thanks to the nurses', while the lowest item score average was obtained from the statement 'They gave me information about the things I did not know about the hospital'.[16] In other studies conducted through PPHEN in our country, it is stated that the mean scores of the scale are between 47 and 68, and the highest item mean scores belong to the expressions of feeling well cared for by nurses and being accessible and trusting the nurse.[16,17,44,45,46] The literature findings in parallel with our study findings show that patients have a positive perception of nursing care. It is seen that the perception of care quality is possible by making the patient feel the care behaviours such as nurses knowing the patient

with their technical skills, establishing a relationship of trust with the patient, making the patient feel their presence, etc.[47]

In the study, it was found that there was no relationship between the sociodemographic characteristics of the patients and their level of perception of nursing care, while a positive, significant and weak relationship was found between the total nursing care perceptions of the patients and the level of trust in nurses ( $r = 0.348$ ,  $p < 0.01$ ) (Table 3). When the literature was examined, no relationship was found between the sociodemographic characteristics of the patients (age, sex, education level, marital status, profession, length of hospital stay, presence of an attendant and status of having a chronic disease) and the perception of care in parallel with our study findings.[12,45] Kol et al.[45] (2017) found that patients were satisfied with sensible care behaviours such as smiling, interest, kindness, touching instead of directly unobservable and unperceivable qualities such as knowledge, skills and expertise in their findings regarding the nurses' being accessible and building trust. In studies in the literature examining patients' views on patient satisfaction and nursing care, it is emphasised that patients expect care behaviours such as valuing, touching, active listening and spiritual support, courtesy and trust from nurses as individuals.[48,49] In addition, it was stated that the presence of advanced technological equipment and experts in the field would not be sufficient for an effective care; in order for the care given to be effective and to be perceived positively by the patients, the patient's feeling of being valued as an individual depends on the trust they have in the nurse.[16] When the literature findings in parallel with our study results are evaluated, it is thought that trust plays a very significant role in the individual nurse–patient relationship, and that nurses cannot effectively understand and meet the needs of patients unless this relationship, which constitutes the cornerstone of the care process, is based on trust. Trust in nurses may be considered as a prerequisite for the quality of nursing care. Evaluation of patients' level of trust in nurses and their perception of care will make an extremely high contribution to evaluating and designing the future of nursing care.

**TABLE 4** Regression analysis for evaluating patients' perception of nursing care

Independent variables	B	SH	$\beta$	t	p
Constant	24.528	0.424		20.538	0.000
Total PPHEN	0.046	0.017	0.177	2.695	0.008
$F = 7.263$		$R^2 = 0.031$			$p = 0.008$

## CONCLUSION

According to the results of the research, it is determined that the level of trust in nurses and nursing care quality perceptions of the patients treated in the Covid-19 outbreak were high. A positive, significant and weak relationship was found between the patients' total level of trust in nurses and their perceptions of nursing care quality. These results show that trust in the nurse-patient relationship has positive effects on improving the patient's level of perception of nursing care and the quality of care. At this point, there is a need to study different sample groups to examine the phenomenon of trust in the nurse-patient relationship and to evaluate the perspectives of nurses and other health practitioners. The competencies of nursing students and professional nurses in clinical study, supervision and guidance are critical in developing a relationship based on trust. For better quality and safer health system, it is recommended to evaluate the level of trust in the nurse-patient relationship in institutions at regular intervals and the perception of nursing care quality of patients and to use it as a resource in the establishment of patient care standards.

## Limitations

The research findings cannot be generalised due to the fact that the sample was taken from a public hospital and only the patient opinions were examined. The limitation of the study is the inability to evaluate people who were diagnosed with Covid-19 during the study, but whose general condition is poor, who do not have a companion, who have difficulties in communicating due to the protective equipment that the nurse has to use and who are illiterate.

## AUTHOR CONTRIBUTIONS

**SÇP** involved in conceptualization, supervision, investigation methodology, formal analysis, writing, reviewing and editing; **SK** involved in conceptualization, data collecting, investigation and writing original draft preparation.

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## CONFLICT OF INTEREST

No conflict of interest and funding source have been declared by the authors.

## ETHICAL APPROVAL

Ethics approval statement for this study was obtained from the BAIBU Clinical Researches Ethics Committee.

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