

The effect of the COVID-19 pandemic on the professional perception and image of nursing among nurses working in surgical units: An online study

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Abstract.

BACKGROUND: Understanding the effects of the COVID-19 pandemic on the perception and image of the profession are key factors in nurses' perceptions regarding their roles and their future.

OBJECTIVE: The purpose of this study was to determine the effect of the COVID-19 pandemic on the perception and image of the nursing profession among nurses working in surgical units.

METHODS: This cross-sectional, correlational study was conducted with 216 nurses using the random sampling method between 10 and 30 March, 2022. The study data were collected using an information form, the Perception of Nursing Professional Scale (PNPS), and the Scale for the Image of the Nursing Profession.

RESULTS: The nurses' mean age was 32.53 ± 9.16 years (min 21, max 57) and their mean professional experience was 16.44 ± 9.80 years (min 1, max 44). The mean PNPS score was 73.12 ± 9.46 , and the mean Scale for the Image of the Nursing Profession score was 171.11 ± 11.16 . Female nurses had significantly higher positive perceptions of nursing levels than male nurses. Gender, having a history of COVID-19, marginalization during the pandemic, and perception of the nursing profession significantly affected image perceptions of nursing at multiple linear regression analysis. These variables explained 43% of the total variance.

CONCLUSION: Nurses working in surgical units during the COVID-19 pandemic exhibited a good level of professionalism and image perception concerning nursing.

Keywords: Perception, image, nurses, COVID-19, healthcare

1. Introduction

The COVID-19 pandemic has adversely affected numerous spheres, but particularly the health sector. Nurses, who work day and night on the front

line and who constitute the greatest numbers in the health sector, assumed major responsibilities during the pandemic [1, 2]. The nursing profession has existed for hundreds of years and has shown itself to be indispensable, and the importance of this essential occupation re-emerged with the COVID-19 pandemic [3, 4]. Intense workloads were experienced in all clinical fields because of the pandemic, with surgical clinics and surgical intensive care units, with their high circulation and complex technologi-

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cal equipment, emerging as priority areas facing the greatest difficulties [5, 6].

The nursing profession has been regarded as a feminine occupation ever since the time of Florence Nightingale. The professional perception and image of nursing, an occupation equated with the maternal role, have been adversely affected for many years. Although nurses assume important health-related responsibilities they have not been valued as they deserve, in terms of either societal or professional image. A focus on perception and image is essential in order to raise the societal respect awarded to the profession and to strengthen positive perceptions of it [7, 8]. If the prestige enjoyed by a profession is evaluated in terms of the service it provides for the community, nursing should enjoy a high level of prestige. Yet its worth is still not fully recognized. Moreover, studies report that despite their accumulated professional knowledge, nurses are not sufficiently appreciated and are still regarded as assistants to physicians [8].

Nursing, a profession whose importance has once again been demonstrated, essentially focuses on the maintenance and preservation of human health, and is therefore directly affected by societal factors and phenomena [9]. The concept of perception of the profession has emerged in association with such factors as ensuring coordination of care during the pandemic, maintaining mental health, and affecting the quality of care given to critically ill patients [10, 11]. Nurses' perceptions of their own profession is of great importance in terms of their doing their jobs willingly, being well motivated, and feeling safe. Factors such as anxiety, burnout, and sleeplessness, that reached very high levels during the pandemic, can impact adversely on perception and on the quality of care provided by nurses, the organization they exhibit, and their resilience [12]. If nurses harbor positive perceptions of their profession, they will be able to affect the lives of patients at a time when people are afraid even to approach each other, and will be able to play a key role in ending the pandemic if given appropriate support.

Another concept closely linked to perception is the image of nursing. Every profession's image is of great importance to its own members. Image is important because it impacts on work-related attitudes and behaviors, and has also been described as one of the concepts affecting the professionalization of nursing [13].

The image of nursing was adversely affected by its long being regarded as a female activity, low numbers of male nurses, a scarcity of independent roles,

and nurses being regarded as doctors' assistants [14]. However, despite problems such as nurse shortages, heavy workloads, and insufficient autonomy, in addition to nurses' basic responsibilities in the COVID-19 pandemic, a grateful and affectionate attitude toward nursing being portrayed in the media, and nurses being identified as central to health services, have also positively affected the perception of the profession [15].

Knowing how nurses perceive themselves is of great importance in establishing a positive image of nursing. This will also shape the image that members portray to those outside the profession. Studies have suggested that the affection and gratitude felt toward nurses, who were with the health teams in the front line against the many difficulties experienced during the COVID-19 pandemic supports the development of a positive perception of the profession [15]. Professional image perception is formed through a combination of nurses' perceptions, opinions, and attitudes toward their profession, and affects their job satisfaction, performance, and retention rates. Understanding the effects of the COVID-19 pandemic on the perception and image of the profession are key factors in nurses' perceptions regarding their roles and their future. The benefits bestowed by nurses on the community will also increase when these factors can be rendered positive. The adverse effects of nurses' perceptions of their professional image during the pandemic may result in alienation from the profession, decreased job satisfaction, and poorer quality of care.

The importance of the nursing profession emerged very clearly with the COVID-19 pandemic, and it has become an indispensable component of individual, family, and community health. This has had significant impacts on societal perception and image [11, 12, 15]. Image and perception are known to have an enhancing effect on the trust and prestige enjoyed by the profession. Its value in the eyes of society will also rise as a result of that image and perception. The purpose of this study was to determine the professional perception and image of surgical nurses working in clinics with high circulation during the pandemic.

2. Methods

2.1. Study design

The research was planned as a cross-sectional, correlational study. The STROBE checklist was employed during writing.

Research hypotheses:

1. The COVID-19 pandemic affects nurses' image of the profession.
2. The COVID-19 pandemic affects nurses' professional perception.
3. Nurses' descriptive characteristics affect their Perception of Nursing Professional Scale and Scale for the Image of the Nursing Profession scores.
4. The perception of the nursing profession adversely affects its image.

2.2. Research population and sampling

The research population consisted of nurses working in surgical units in hospitals in Turkey. Data were collected from nurses consenting to participate in the study between 1 and 30 March, 2022, using the random sampling method. Data collection forms prepared using Google Forms were sent to nurses' mobile phones using messaging software. Data from 216 nurses were included in the research (response rate: 80%).

2.3. Data collection and the tools employed

The study data were collected using an information form, the Perception of Nursing Professional Scale (PNPS) and the Scale for the Image of the Nursing Profession. Following receipt of the requisite ethical committee approval, the forms were completed online by nurses consenting to take part in the study.

2.3.1. Nurse information form

This form consisted of eight questions concerning sociodemographic characteristics such as the nurse's age, sex, education level, length of work experience, and history of COVID-19 and disease-related characteristics.

2.3.2. Perception of Nursing Professional Scale (PNPS)

Developed by Eşer, Khorshid, and Denat, the PNPS is a 22-item five-point Likert-type scale consisting of two subdimensions: Professional Qualities and Professional Status [16]. The statements used to determine degrees of perception are 1 - I Strongly Disagree, (1 point), 2 - I Disagree (2 points), 3 - Undecided (3 points), 4 - I Agree, and 5 - I Strongly Agree. The highest possible score on the scale is 110 and the lowest possible score is 22. The highest

possible score in the 17-item Professional Qualities subdimension is 85 and the lowest is 17, while the highest and lowest possible scores on the five-item Professional Status subdimension are 25 and 5, respectively. Higher total scores indicate a higher professional perception. The Cronbach Alpha coefficient of the scale in the present study was 0.763, with values of 0.756 for the Professional Qualities subdimension and 0.798 for the Professional Status subdimension.

2.3.3. Scale for the image of the nursing profession

This scale consists of 42 statements evaluating the image perception of the profession. It was developed by Dost and Bahcecik and consists of six subdimensions – professional quality (11 items), working conditions (10 items), gender (8 items), education (5 items), professional status (5 items), and external appearance (3 items). Five points are given for the 'I strongly agree' statement on this five-point Likert-type scale, and one point for 'I strongly disagree.' Scores on the scale range between 42 and 210, with scores of 42–75 indicating a very weak image perception, 76–109 weak image perception, 110–143 moderate image perception, 144–177 good image perception, and 178–210 very good image perception [9]. Higher scores indicate a more positive image perception. The scale's Cronbach Alpha coefficient in this study was 0.748.

2.4. Ethical consideration

Approval for the study was granted by the ethical committee of Gümüşhane University (Date: 2022; No. E-95674917-108.99-21807). Consent was obtained from all participants in the first part of the questionnaire before the research commenced. Participants were able to leave the questionnaire at any time with no explanation being required. The study was conducted in line with the principles of the Declaration of Helsinki.

2.5. Data analysis

Statistical analysis was performed on Statistical Package for the Social Sciences (SPSS) version 23 software. Descriptive statistical methods such as frequency, percentage, mean, and standard deviation, as well as the Kolmogorov-Smirnov distribution test were used to examine the normality of distribution. The data were found to be normally distributed. Student's *t* test and one-way ANOVA were applied to

determine relationships between nurses’ scale scores and sociodemographic variables. Multivariate linear regression analysis (method: enter) was used to determine factors associated with nurses’ image perception of the nursing profession. *p* values <0.05 were regarded as significant.

3. Results

The mean age of the nurses was 32.53 ± 9.16 years (min 21, max 57), 75.9% were women, and 75% were high school graduates. Nurses’ mean working time in the profession was 16.44 ± 9.80 (min 1, max 44) years, 53.7% worked more than 40 hours a week, 61.6% had histories of COVID-19 disease, and 50% reported exclusion from society during the pandemic.

The nurses’ mean PNPS score was 73.12 ± 9.46, with subdimension scores of 61.17 ± 7.95 for professional qualities and 14.87 ± 4.71 professional status. Nurses’ mean Scale for the Image of the Nursing Profession score was 171.11 ± 11.16, with subdimension scores of 43.72 ± 4.30 for professional quality, 36.77 ± 4.01 for working conditions, 29.66 ± 4.03 for gender, 31.95 ± 3.74 for education, 18.39 ± 3.61 for professional status, and 12.16 ± 2.88 for external appearance (Table 1).

Female nurses registered significantly higher PNPS scores than male nurses (*p* < 0.001). In addition, a statistically significant difference was observed in PNPS scores depending on education levels, and further analysis showed that this difference lay between the high school and postgraduate groups.

The mean Scale for the Image of the Nursing Profession scores differed significantly depending on levels of education, being lower among high school graduates than among participants with graduate or postgraduate qualifications (*p* < 0.001).

Examination revealed significantly higher mean Scale for the Image of the Nursing Profession scores in women, nurses working 40 hours or less a week, and nurses with no history of COVID-19 disease (Table 2).

Multiple linear regression analysis showed that nurses’ image perception of the profession is significantly affected by gender, a history of COVID-19, exclusion during the pandemic, and a positive image perception of nursing. These variables accounted for 43% of the total variance (Table 3).

4. Discussion

The results of this study showed that nurses have a positive perception of their profession. Factors such as the media’s characterization of nursing as a problematic profession, the underestimation of nursing, and the fact that the profession is not respected despite although nurses themselves are trusted, have been reported to be capable of adversely impacting perception [17]. A study investigating perceptions involving final-year nursing students during the COVID-19 pandemic reported that the pandemic positively affected the perception of the profession, and identified professional values and autonomy as basic factors in the positive perception of the nursing profession [18]. Another cross-sectional, descriptive study investigating the effect of the pandemic on abandonment of the nursing profession, by Raso et al. reported that despite very difficult working conditions, less than 2% of nurses were thinking of leaving the profession, and that their perception of the profession was not a negative one [19]. Gandhi et al. investigated the effect of the pandemic on mental health, including that of nurses, and reported that nurses held positive perceptions of nursing, and

Table 1
Distributions of mean perception of nursing professional scale and scale for the image of the nursing profession scores (n = 216)

Scale		Mean ± SE	min-max
Perception of Nursing Professional Scale	Professional qualities	61.17 ± 7.95	26–73
	Professional status	14.87 ± 4.71	5–25
	Total score	73.12 ± 9.46	30–90
Scale for the Image of the Nursing Profession	Professional quality	43.72 ± 4.30	19–49
	Working conditions	36.77 ± 4.01	18–42
	Gender	29.66 ± 4.03	17–35
	Education	31.95 ± 3.74	24–38
	Professional status	18.39 ± 3.61	10–24
	External appearance	12.16 ± 2.88	2–14
	Total score	171.11 ± 11.16	129–189

Table 2
Distributions of Perception of Nursing Professional Scale and Scale for the Image of the Nursing Profession scores according to the descriptive characteristics of nurses working in surgical units ($n = 216$)

Variable	n (%)	Perception of Nursing Professional Scale Mean \pm SD	Scale for the Image of the Nursing Profession Mean \pm SD
Gender			
Female	164 (75.9)	74.35 \pm 7.83	172.39 \pm 9.22
Male	52(24.1)	69.23 \pm 12.69	167.07 \pm 15.21
p		0.001	0.003
Education level			
High school ¹	12 (5.6)	64.16 \pm 16.36	175.00 \pm 5.90
Associate degree ²	18 (8.3)	72.88 \pm 7.73	167.66 \pm 10.53
Bachelor's degree ³	162 (75)	73.12 \pm 9.06	171.22 \pm 12.01
Postgraduate degree ⁴	24 (11.1)	77.75 \pm 5.04	171.00 \pm 6.12
p		0.001 (3 > 1, 4 > 1)	0.365
Unit			
Operating room	26 (12)	72.15 \pm 4.86	170.07 \pm 8.93
Surgical clinics	118 (54.6)	74.42 \pm 10.48	170.79 \pm 11.94
Surgical intensive care	72 (33.3)	74.61 \pm 8.84	172.00 \pm 10.60
p		0.261	0.681
Working hours (per week)			
40 or less	100 (46.3)	73.62 \pm 10.56	173.40 \pm 8.44
More than 40	116 (53.7)	72.68 \pm 8.42	169.13 \pm 12.76
p		0.473	0.004
History of COVID-19			
Yes	132 (61.1)	72.74 \pm 8.70	169.90 \pm 12.22
No	84 (38.9)	73.71 \pm 10.57	173.00 \pm 8.99
p		0.463	0.047
Exclusion during the pandemic			
Yes	108 (50)	73.66 \pm 8.96	170.55 \pm 11.29
No	108 (50)	72.57 \pm 9.95	171.66 \pm 11.04
p		0.398	0.046
Age (Mean \pm SD)	32.53 \pm 9.16	r : -0.122 p : 0.210	r : -0.130 p : 0.181
Years in the profession (Mean \pm SD)	16.44 \pm 9.80	r : -0.021 p : 0.761	r : 0.062 p : 0.362

Table 3
Factors significantly affecting the image of nursing among nurses working in surgical units ($n = 216$)

Model	B	SE	95%CI	t	p
Gender	3.92	1.35	1.26–6.58	2.90	0.004
History of COVID-19	2.48	1.18	0.15–4.81	2.10	0.036
Exclusion during the pandemic	4.35	1.17	2.04–6.67	3.70	<0.001
Perception of the nursing profession	3.09	0.258	2.59–3.60	12.02	<0.001

B, unstandardized coefficient. Model $R = 0.664$; $R^2 = 0.441$; Adjusted $R^2 = 0.431$; Durbin-Watson = 1.697, $F = 41.688$; $p < 0.001$. (Dependent variable: Perception of the image of the nursing profession, Independent variables: Gender: 0 Male, 1 Female; History of COVID-19 : 0 Yes, 1 No; Exclusion during the pandemic: 0 Yes, 1 No).

that this perception was affected by the concepts of self-efficacy, optimism, and resilience towards the profession [20]. Based on these findings, it may be concluded that, no matter how difficult the conditions, nursing is a profession requiring self-sacrifice and resilience, and that by its nature, members hold positive perceptions of it.

Nurses exhibited image perceptions toward the profession. The number of previous studies investigating the image of the nursing profession in the

literature is limited. Ten Hoeve et al. reported that nurses' image perceptions are primarily affected by society, and that this is also an important factor in their self-identity and professionalism [13]. In a qualitative study investigating the image of nursing and the factors affecting it, Godsey et al. concluded that the image of nursing is inadequate, and that importance should be attached to professional values in order to improve it [21]. Another study reported negative professional perceptions among nurses, and

that the working field was of great significance in that perception [22]. Another study, from Iran, also reported a negative general perception, although this was better among hospital workers [23]. A study investigating nurses' psychosocial states during the pandemic reported that although nurses were at risk during that time, they had high levels of job satisfaction and regarded their professional satisfaction in a positive light if the requisite resources were provided [24]. Despite nurses' heavy workloads during the pandemic, the results of this study suggest that their perceptions of the profession are still positive.

Female nurses in the present study exhibited significantly higher positive image perception levels concerning the nursing profession than men. The study reported no gender difference in terms of perception of the profession, and that young nurses working in the mother and child health unit had more positive perceptions [22]. In literature, also observed no difference between the sexes [21]. In literature, it is reported that female nurses exhibited higher emotional intelligence and better stress management than men, and that this positively affected their perceptions of the profession [25]. The perceptions of female nurses may also have been affected by emotional intelligence associated with gender in the present study.

In the present study, female gender and not experiencing exclusion in the pandemic positively affected participants' images of the nursing profession. A qualitative study investigating the perceptions of nursing of first-year female and male nursing students reported that male students identified the nursing profession with female gender and that the majority had entered nursing because of job security [26]. Professional image is of great importance because it affects individuals' behaviors and attitudes toward the profession. Being undervalued or ignored by society can impact adversely on the members of a profession, leading to a decrease in job satisfaction, weakening of organizational commitment, a high level of tension in the work environment, and resignations [27]. A nurse's image of the profession is affected by people's beliefs, opinions, and prejudices concerning it. A positive and realistic image of nursing is reported to create a very great impact on the position of the profession [28, 29]. We therefore think that nurses' perceptions and images concerning the profession can be positively affected through a decrease in perceived difficulties concerning it.

Multiple regression analysis revealed a statistically significant difference between nurses' image

perceptions and perceptions of the profession. Previous studies have shown that the image of nursing is a dynamic factor affected by social phenomena and events. Nurses became a focus of attention during the COVID-19 pandemic, and their caring and protecting roles have been reported to strengthen positive image perceptions [30]. Another study, from Jordan, reported that perception and image are interrelated, that nurses worked under conditions of risk during the pandemic, and strengthened their positive perceptions and image by providing unique support and care for patients and their families [31]. McDonald's study of nurses during the pandemic also emphasized that they were working at high risk, that their risks of infection were very high, but that they remained working on the front-line, and that nurses' enjoyed a highly positive image [32]. This finding indicates that nurses played an important role in the pandemic and contributed to the development of a positive image by performing their duties in the face of risks of all kinds. We think that perception of the nursing profession is one of the most important factors affecting its image.

5. Conclusions

The purpose of this study was to determine the effect of the COVID-19 pandemic on the perception and image of the nursing profession among nurses working in surgical units. The findings of this study showed that nurses, with their heavy workloads during the COVID-19 pandemic, exhibited good levels of professional perception and image. Female nurses had higher perceptions of the profession, and the image of nursing was affected by gender, COVID-19, and exclusion.

We recommended that appropriate effective activities and awareness-raising be carried out together with the media and non-governmental organizations to monitor and improve the perceptions of nurses, the importance of whom has become even more apparent during the COVID-19 pandemic. We also recommend that policy-makers adopt measures at the institutional and legislative level aimed at ensuring that nurses do not feel alone in the fight against the pandemic and at protecting the image of the nursing profession, and that appropriate material and psychological support be provided.

This study has several limitations. In particular, the research is cross-sectional in nature and based on participants' self-reports. It was also performed at a time

of crisis when the effects of the pandemic were felt particularly intensely. In addition, our results could not be compared due to the absence of data for the pre-pandemic period.

Our sample was limited to nurses working in surgical units in Turkey, each with different specialties, between 1 and 30 March, 2021. In addition, the findings of the study are limited to the responses of the participating nurses to the Perception of Nursing Professional Scale and the Scale for the Image of the Nursing Profession, data which were collected online. The results cannot be generalized to the perceptions and image of the nursing profession of all nurses caring for COVID-19 patients in Turkey.

Ethical approval

Approval for the study was granted by the ethical committee of Gümüşhane University (Date: 2022; No. E-95674917-108.99-21807).

Informed consent

The consent was obtained from all participants in the first part of the questionnaire before the research commenced.

Conflict of interest

The authors report no conflicts of interest.

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