



Original Article

Assessment of Nursing Image and Associated Factors as Perceived by Hospitalized Patients: A Descriptive Cross-Sectional Study

Zahra Hasani ¹, Azar Avazeh ^{1*}, Batoul Allahloei ², Kourosh Amini ³

¹Operating Room and Anesthesiology Department, Nursing and Midwifery School, Zanjan University of Medical Sciences, Zanjan, Iran

²Medical Surgical Nursing Department, School of Nursing and Midwifery, Zanjan University of Medical Sciences, Zanjan, Iran

³Psychiatric Nursing Department, Nursing and Midwifery School, Zanjan University of Medical Sciences, Zanjan, Iran

Received: 15 Dec. 2025

Revised: 20 Jan. 2026

Accepted: 28 Feb. 2026

Published: 10 Mar. 2026

Article Info

Keywords:

Nursing Image,
Patients,
Hospitalization,
Cross-Sectional,
Zanjan.

*Corresponding author:

Azar Avazeh

Operating Room and
Anesthesiology Department,
Nursing and Midwifery School,
Zanjan University of Medical
Sciences, Zanjan, Iran.
Email: nurse@zums.ac.ir

How to Cite This Article:

Hasani Z, Avazeh A, Allahloei B, Amini K. Assessment of Nursing Image and Associated Factors as Perceived by Hospitalized Patients: A Descriptive Cross-Sectional Study. Prev Care Nurs Midwifery J. 2026;16(1):64-73.

Abstract

Background: Nursing image refers to the public perception of the nursing profession and is closely related to nurses' professional identity and role. A positive image can enhance motivation and job satisfaction, whereas a negative perception may reduce confidence, motivation, and professional commitment among nurses.

Objectives: This study aimed to evaluate the nursing image and identify demographic and clinical factors associated with it as perceived by hospitalized patients in Zanjan, Iran.

Methods: This descriptive cross-sectional study was conducted among 698 adult patients hospitalized in medical-surgical wards of hospitals in Zanjan. Patients were selected via randomly scheduled hospital visits. Data were collected using a demographic questionnaire and the Nursing Image Questionnaire (NIQ), consisting of 30 items scored on a five-point Likert scale (1–5), with total scores ranging from 30 to 150; higher scores indicate a more positive perception of nursing. Data were analyzed using SPSS version 16.

Results: The mean nursing image score was 116.31 (SD = 11.29) out of 150, indicating a relatively positive perception of nursing among patients. Older patients, those with lower educational levels, and urban residents reported significantly higher nursing image scores. Additionally, patients with more frequent prior hospitalizations and those who had an inherent interest in the nursing profession showed more positive perceptions ($p < 0.05$).

Conclusion: These findings provide evidence for hospital administrators and medical universities to design targeted interventions that strengthen the positive image of nursing while meeting both patients' expectations and nurses' professional needs.

Implications for Nursing and Midwifery Preventive Care

- The findings indicate that strengthening the positive image of nursing through educational, managerial, and communicative strategies is essential.
- These improvements may contribute to better preventive care, increased patient trust, and improved continuity of care.



Copyright © 2026, This is an original open-access article distributed under the terms of the Creative Commons Attribution-noncommercial 4.0 International License which permit copy and redistribution of the material just in noncommercial usages with proper citation

Introduction

An image reflects a phenomenon's reality and constitutes a set of observable perceptions derived from individuals' professional behavior, encompassing their competencies and ethical conduct [1, 2]. The nursing image reflects societal perceptions of the nursing profession and is intrinsically linked to a nurse's identity and role [3]. This image is constructed based on collective knowledge, experiences, attitudes, and beliefs [4], spanning a spectrum from positive to negative [5]. Despite the professional advancement of nursing, nurses continue to face significant challenges regarding their professional image [6], which can subsequently impact professional power, self-esteem, public standing, and the quality of nursing care [2, 7].

The nursing image is significantly correlated with nurses' self-esteem, job satisfaction, and professional identity [8]. A positive nursing image encourages students to remain in the profession [2], enhances nurses' self-confidence [9], improves the quality of therapeutic relationships, and increases patient satisfaction [10, 11]. Conversely, a negative nursing image can lead to declines in self-confidence, self-esteem, and motivation, creating a cycle that can reinforce negative societal perceptions of nursing [12]. Establishing a positive nursing image requires collaboration among nurses, healthcare organizations, policymakers, and society, and a shift in nurses' internal perceptions and professional self-confidence to elevate the true value of this profession within the community [7].

Despite the continuous advancement of the nursing profession, public perception remains entangled with outdated stereotypes, which can adversely affect recruitment, social standing, and health policies [13]. International studies indicate that, in many countries, society's image of nursing is inaccurate, limited, or contradictory [1, 9]. In many instances, nurses are still perceived merely as physician assistants, lacking professional autonomy [14]. For instance, in the United Kingdom, parents and career advisors often hold a negative attitude toward nursing and are less likely to encourage students to pursue it as a career. Conversely, in the United States, the profession

enjoys high social prestige and is widely recognized as a highly recommended career choice [9, 15].

Studies conducted in Iran indicate that nursing image is not at an optimal level, a factor that has significantly impacted nurses' motivation and professional performance [3, 6, 16]. These findings suggest that the socio-cultural context and media policies of each country largely influence nursing image. In Iran, the professional image, job dissatisfaction, and nursing shortages have been reported as the most critical challenges within the nursing field [3]. Many nurses believe they do not receive adequate respect and appreciation [6], a situation that has culminated in decreased job satisfaction, diminished self-esteem, increased burnout, and a decline in retention rates in the nursing profession [17].

Recent research has addressed several gaps in the concept of the nursing image. These gaps include the lack of a unified definition by redefining professional and behavioral dimensions [13], the absence of structural analysis concerning the role of health system policies and conditions in shaping the professional image, with a focus on systemic factors and health policies [18], and inadequate evidence on the impact of media and the coronavirus disease 2019 (COVID-19) pandemic on the public perception [19].

Nevertheless, the nursing image from the perspective of hospitalized patients remains under-researched. Most studies have focused on quality of care and patient satisfaction [20, 21], while existing research on the nursing image is limited and has been conducted primarily outside the hospital environment [22, 23]. In Iran, the professional and social dimensions of this concept have also received less attention [20, 24], underscoring the need for the current study.

Objectives

This study was conducted to assess the nursing image and identify demographic and clinical factors influencing it from the perspective of hospitalized patients in Zanjan, Iran, and to analyze patient perceptions of the nursing profession and the underlying components influencing it.

Methods

Study Design

The present study was a descriptive cross-sectional study.

Setting and Participants

This research was conducted among patients hospitalized in the medical-surgical wards of five hospitals in Zanjan, namely Vali-e-Asr, Mousavi, Imam Hossein, Artesh, and Bahman, during July and August 2021.

Inclusion and Exclusion Criteria

The inclusion criteria for this study consisted of being hospitalized in the medical-surgical wards of the selected hospitals for a minimum of 24 hours, having experienced three consecutive nursing shifts, being over 18 years of age, maintaining full consciousness, possessing the cognitive and verbal ability to respond to questions, and providing written informed consent. Conversely, the exclusion criteria included withdrawal of consent at any stage of the research, clinical deterioration or worsening of the patient's condition that precluded the completion of the questionnaire, and significant questionnaire incompleteness.

The minimum sample size was calculated to be 663 participants, based on an estimated standard deviation (SD) of the nursing image score ($\delta = 9.2$) derived from previous similar studies regarding nursing image from the perspective of hospitalized patients [14, 25]. This calculation was performed with a 95% confidence level of 1.96 ($Z = 1.96$) and a precision of 0.7 ($d = 0.7$). Accounting for a potential attrition rate of 10%, the final sample size was determined to be 730 participants. Sampling was conducted over five weeks in July and August 2021 using a random-time-point sampling approach. First, the sequence of hospital visits was determined through simple random sampling among the five selected hospitals. For each hospital, specific data collection time blocks were randomly selected using a random number table. The generated numbers were matched with the list of weekdays and the three routine work shifts (morning, evening, and night) to determine the exact days and shifts for data

collection. During each selected time block, the researcher visited the medical-surgical wards of the respective hospital and recruited eligible patients who met the inclusion criteria and agreed to participate in the study. For patients with low literacy or illiteracy, the questionnaires were completed through face-to-face interviews conducted by the researcher. Patients transferred from the operating room were approached only after regaining full consciousness. The use of randomly selected hospitals, days, and work shifts ensured that the timing of data collection was not predetermined or systematic. This approach increased the likelihood of including patients admitted at different and unpredictable times, thereby helping to address the inherent unpredictability of hospital admissions and reducing potential time-related selection bias.

Data Collection Tools

The research instrument consisted of two parts:

The Demographic and Clinical Information Questionnaire

The demographic information encompassed age; gender; place of residence; hospitalization day; hospital type and ward; a history of prior hospitalization; educational, occupational, and financial status; relatives employed in the nursing profession; interest in the nursing profession; and the source of the individual's nursing image.

The Nursing Image Questionnaire (NIQ)

The NIQ was originally developed by Hoskins (1983) and subsequently refined by Toth (1998) [26]. This instrument has been extensively used in numerous studies to assess the nursing image across diverse populations, including the general public [14], high school students [25], and nursing university students [27], with its validity and reliability consistently confirmed. The NIQ comprises 30 items designed to evaluate an individual's attitudes toward nursing roles, values, and professional activities. Scoring is based on a five-point Likert scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The NIQ total score ranges from 30 to 150, with higher scores indicating a positive nursing image and lower scores reflecting a negative nursing image. The NIQ

comprises five subscales: role of nurses (10 items), values (7 items), social stereotypes regarding nursing (6 items), professionalism (4 items), and characteristics related to nursing and nurses (3 items) [14, 25, 27, 28]. To utilize the NIQ in the present study, formal permission was obtained from the original developer (Jean C. Toth). Initially, the questionnaire was translated into Persian by two English language experts. The research team selected the most appropriate translation, which was then back-translated into English by a bilingual professor proficient in both Persian and English. Another English expert professor compared the back-translated version with the original to confirm its face validity. Furthermore, the internal consistency of the instrument in this study was established with a Cronbach's alpha coefficient of 0.80.

Procedure

Sampling was conducted over five weeks during July and August 2021. The schedule was structured as "one hospital per week," with the sequence of visits determined by random drawing. In each hospital, the researcher visited all medical-surgical wards over three consecutive days during morning, afternoon, and night shifts to recruit eligible patients who provided informed consent.

For illiterate patients, questionnaires were administered via interviews. Patients transferred from the operating room were evaluated only after achieving full consciousness. A total of 730 questionnaires were distributed, of which 698 were completed and collected from 23 medical-surgical wards (accounting for ward consolidations due to the COVID-19 pandemic). Data were analyzed using SPSS version 16. Since the Kolmogorov-Smirnov test confirmed the normal distribution of the variables, parametric tests, including the independent t-test, analysis of variance (ANOVA), the chi-square test, and post-hoc tests, were employed. Descriptive statistics were used for descriptive objectives, while inferential statistics were applied for comparative analysis. Statistical significance was set at $p < 0.05$.

Result

In this study, of the 730 distributed questionnaires, 698 were deemed valid and analyzed (response rate: 95%).

Demographic and Clinical Characteristics of Participants

The mean age of the participants was 45.01 years (SD = 16.8). Women accounted for 54.2% of the sample, and 70% were urban residents. Regarding education level, over 80% of the patients held a high school diploma or lower. In terms of clinical variables, the mean length of hospital stay at the time of the study was 5.09 days (SD = 5.28), and the majority of patients (82.52%) had a history of prior hospitalization. Furthermore, 71.78% of the participants expressed interest in the nursing profession. According to their viewpoints, the primary source influencing nursing image was "hospitalization" (63.75%). Comprehensive details are presented in Table 1 and Table 2.

Mean Nursing Image Score and Comparison across Hospitals

In this study, the mean nursing image score was 116.48 (SD = 11.37), ranging from 30 to 150, demonstrating a positive nursing image. A statistically significant difference in this score was observed among the five surveyed hospitals ($p = 0.002$). Specifically, the highest mean score was observed at Artesh Hospital (119.64), while the lowest was recorded at Bahman Hospital (114.15) [Table 3].

Comparison of Nursing Image Scores Based on Demographic and Clinical Variables

An analysis of the relationships among various variables and the nursing image score revealed that the score was significantly different by age, education level, place of residence, frequency and total days of prior hospitalizations, interest in the nursing profession, and the source of the nursing image ($p < 0.05$). For instance, older patients (ages 46–60 and 61+) and those with lower levels of education reported a more positive nursing image. Moreover, patients with an interest in the nursing profession, as well as those whose nursing image was "working in a hospital environment" or "social media," exhibited significantly higher scores.

68 Patient Perceptions of Nursing Image

Conversely, variables such as gender, financial status, and prior hospitalization showed no statistically significant correlation with the nursing

image score. Comprehensive details of these comparisons are presented in [Table 4](#).

Table 1. Frequency Distribution of Demographic Variables among Patients Hospitalized in Medical-Surgical Wards of Zanjan Hospitals in 2021 (N=698)

Patients' Qualitative Demographic Variables		n	%
Gender	Male	320	46
	Female	378	54
Age	18-30	146	20.91
	31-45	266	38.10
	46-60	151	21.64
	≥ 61	135	19.35
Place of residence	Urban	470	67.33
	Rural	228	32.67
Education level	Illiterate	155	22.21
	Under high school diploma	277	39.57
	High school diploma	144	20.57
	Bachelor	98	14
	Master	24	3.43
Occupation	Doctoral	0	0
	Labor-farmer	106	15.15
	Self-employed	134	19.14
	Employee	87	12.42
	Medical staff	7	1
	Retired	39	5.57
	Student	30	4.57
	Housewife	295	42.15
Financial status	Good	178	25.42
	Moderate	359	51.28
	Poor	161	23.28

Table 2. Frequency Distribution of Clinical Variables among Patients Hospitalized in Medical-Surgical Wards of Zanjan Hospitals in 2021(N=698)

Patients' Clinical Variables		n	%
A history of prior hospitalization	Yes	576	82.52
	No	122	17.48
Total prior hospitalization days	1-10	291	50.52
	11-29	113	16.62
	≥ 30	172	29.86
Being a patient companion	Yes	488	69.91
	No	210	30.09
Relatives employed in the nursing profession	Yes	240	34.38
	No	458	65.62
Interest in the nursing profession	Yes	501	71.78
	No	197	28.22
Source of the nursing image	Newspaper and magazine	0	0
	Radio and television	146	21.92
	Internet and social media	45	6.45
	Hospitalization	445	63.75
	Relatives employed in the nursing profession	50	7.16
	Working in a hospital environment	12	1.72

Table 3. Frequency Distribution of Patients Hospitalized in Zanjan Hospitals and a Comparative Analysis of Mean Nursing Image Scores across Hospitals (N=698)

Hospital Name	n (%)	Nursing Image Score According to the NIQ Separated by Hospitals				
		Mean Nursing Image Score	SD	Lowest Score	Highest Score	
Vali-e-Asr (academic)	259 (37.10)	118.45	9.30	93	145	F = 4.073
Mousavi (academic)	294 (42.12)	115.09	12.49	54	146	
Imam Hossein (social security)	66 (9.46)	116.55	11.04	97	138	p = 0.003
Bahman (private)	65 (9.32)	114.15	12.44	75	133	
Artesh (military)	14 (2)	119.64	13.15	54	146	

NIQ: Nursing Image Questionnaire; SD: Standard deviation

Table 4. Mean Nursing Image Scores Based on Patients' Demographic and Clinical Characteristics (N = 698)

Patients' Demographic and Clinical Variables		Mean Nursing Image Score	SD	p
Gender	Male	115.65	11.79	0.131
	Female	117.17	10.97	
Age group (year)	18-30	114.88	12.46	0.000
	31-45	114.08	11.31	
	46-60	119.70	10.77	
	≥ 61	119.32	9.36	
Place of residence	Urban	116.83	11.61	0.017
	Rural	115.76	10.86	
Education level	Illiterate	118.75	8.18	0.000
	Under high school diploma	118.12	11.09	
	High school diploma	113.93	10.89	
	Bachelor	113.33	14.10	
	Master	110.79	15.48	
Financial status	Good	117	9.84	0.751
	Moderate	116.44	11.27	
	Poor	116.07	12.84	
A history of prior hospitalization	Yes	116.63	11.42	0.734
	No	115.75	11.17	
Frequency of prior hospitalizations	2 ≥	115.49	12.69	0.014
	3-5	117.88	9.04	
	≥ 6	118.47	7.68	
Total prior hospitalization days	1-10	114.43	12.32	0.000
	11-29	118.64	12.11	
	≥ 30	119.03	8.27	
Interest in the nursing profession	Yes	117.75	9.57	0.000
	No	113.25	14.54	
Source of the nursing image	Radio and television	117.64	10.55	0.019
	Internet and social media	119.18	12.40	
	Hospitalization	116.14	10.60	
	Relatives employed in the nursing profession	112.66	16.96	
	Working in a hospital environment	120.75	12.53	

Discussion

The primary objective of this study was to assess the nursing image from the perspective of patients hospitalized in medical-surgical wards and to determine the associated individual and clinical factors. Findings revealed that patients held a favorable perception of the nursing profession, which was influenced by certain demographic characteristics and hospitalization-related

experiences. Based on the nursing image scoring range, higher scores were interpreted as a positive perception; consequently, the nursing image within the studied population was assessed as acceptable. Overall, factors such as age, education level, place of residence, prior hospitalization experience, interest in the nursing profession, and the source of image formation demonstrated a significant correlation with the nursing image. Conversely, gender,

financial status, a history of hospitalization, and relatives employed in the nursing profession did not exert a significant impact. Furthermore, while variations were observed across different hospitals, the distinction between academic and non-academic institutions did not yield a notable effect.

Based on the results, advancing age was associated with an improvement in the nursing image; a pattern previously corroborated by international research. For instance, the study conducted by Yavas et al. demonstrated that older individuals hold a more favorable perception of the nursing profession [19], which may be attributed to their increased contact with healthcare services and firsthand experience of nurses' supportive role. Moreover, education level played a significant role, with individuals with lower levels reporting more favorable evaluations. This finding aligns with international studies, such as those by Rubbi et al. [14, 25], suggesting that higher levels of education are typically associated with higher expectations of healthcare providers. Consequently, this may lead to a more critical appraisal of nursing performance.

Place of residence was another associated factor, with urban patients demonstrating a more positive perception. This finding aligns with the results reported by Čukljek [27, 28], potentially stemming from greater access to information, increased exposure to healthcare environments, and greater familiarity with nursing roles. In urban communities, more extensive interactions with medical centers may facilitate a more realistic understanding of the nature of the nursing profession.

A history of prior hospitalization was reported as a significant influencing factor, with patients having more frequent hospitalizations presenting a more positive nursing image.

This finding aligns with the studies by Rubbi and Rubbi et al. [14, 25], which demonstrated that direct and repeated contact with healthcare environments culminated in the formation of a more accurate and professional nursing image. Such experiences allow patients to become more cognizant of the pivotal role nurses play in care delivery and to observe their clinical performance firsthand.

An inherent interest in the nursing profession is also associated with a more positive image of nursing. This point has been corroborated by other studies, including Abdollahi et al. [2]. An intrinsic inclination toward a profession enhances an individual's understanding and attention to the nuances of that profession's practice, thereby fostering a more positive mental image.

Furthermore, the source of image formation played a prominent role. Patients reported more positive perceptions when their self-image was derived from actual hospitalization experiences, clinical encounters within the hospital environment, or from more formal sources such as credible social media. The influence of digital media on the public's image of nursing has gained significant prominence in recent years, particularly following the COVID-19 pandemic. Studies such as those by Gündüz and Coşkun [29] and Sürücü et al. [30] have demonstrated that increased media attention to the role of nurses during the pandemic has led to improved social standing and greater public trust. The alignment of these results with the findings of the present study suggests that society's collective experience during health crises can directly impact nurses' professional representation and public perception.

Differences across hospitals were also reported; however, hospital ownership (academic versus non-academic) was not a determining factor. This suggests that the formation of the nursing image is more likely influenced by nurse-patient interactions, ward conditions, and organizational culture than by the hospital's administrative structure. Similarly, the study by Abdollahi et al. [2] reported variations in nursing image across hospital types, yet emphasized that individual and environmental interactions are more significant than structural differences.

The results concerning contradictory studies are also noteworthy. For instance, Ameri's [16] research in Iran reported a negative nursing image, which is inconsistent with the present findings. Differences in cultural context may justify this discrepancy, along with the level of public awareness and the nature of media coverage. In addition, in certain studies such as Elibol [31] and Glerean [4], the presence of a

nurse within the family was associated with a decline in the nursing image. This is likely attributable to a more intimate understanding of professional challenges, high workloads, and actual workplace conditions.

These contradictions highlight the significance of socio-cultural contexts in shaping the formation of the nursing image.

Studies conducted during the COVID-19 pandemic have shown a similar pattern of improvement in public perceptions of nursing.

The increased societal demand for care, the prominent presence of nurses on the front lines, and extensive media coverage of these activities led to an enhanced public perception of nursing. This trend is also significantly reflected in the results of the present study. As reported in the studies by Gündüz and Coşkun [29] and Sürücü et al. [30], the crisis conditions led to an increase in the prestige, status, and trust in the nursing profession.

This study had several limitations, including restricted generalizability because the research was conducted in a single city and solely within medical-surgical wards. Furthermore, the specific circumstances of the COVID-19 era and the widespread media coverage may have influenced patient responses. The scarcity of studies investigating the nursing image from the perspective of hospitalized patients also limited the comparability of the findings.

Overall, this study's results reveal that the nursing image from the perspective of hospitalized patients is favorable, with individual and experiential factors playing a significant role in shaping it. These findings can serve as a valuable resource for healthcare managers and policymakers to enhance the public perception of the nursing profession, design educational interventions, develop programs to improve nurse-patient communication, and optimize the overall patient experience. Moreover, future research should employ multicenter designs across various hospital wards and be conducted in the post-pandemic era to evaluate the stability of this image across different temporal and cultural contexts.

Conclusion

The results of the present study demonstrated a positive nursing image from the perspective of patients hospitalized in the medical-surgical wards of Zanjan hospitals. The majority of patients were hospitalized in two academic hospitals (Mousavi and Vali-e-Asr). Furthermore, the mean nursing image scores differed significantly based on several demographic and clinical variables, including age, education level, place of residence, frequency and total days of prior hospitalizations, source of the nursing image, and interest in the nursing profession.

Ethical Considerations

The present study was approved by the Vice-Chancellor for Research and the Research Ethics Committee of Zanjan University of Medical Sciences (approval code: [IR.ZUMS.REC.1399.346](#)).

Acknowledgements

The current research has been derived from a Master's thesis in Medical-Surgical Nursing. The authors would like to thank the Research Vice-Chancellor of Zanjan University of Medical Sciences, the esteemed professors, and all honorable participants who kindly cooperated in implementing this research.

Conflict of Interest

No conflicts of interest.

Funding

Zanjan University of Medical Sciences funded this study.

Authors' Contributions

Conceptualization: B. Allah Louie, A. Avazeh

Methodology: B. Allah Louie, A. Avazeh

Investigation (Data Collection): B. Allah Louie

Formal Analysis (Data Analysis & Interpretation):

A. Avazeh, Z. Hasani

Writing – Original Draft: Z. Hasani, B. Allah Louie, A. Avazeh

Writing – Review & Editing: B. Allah Louie, A.

Avazeh, K. Amini, Z. Hasani

All authors read and approved the final manuscript.

Artificial Intelligence Utilization

In preparing this manuscript, ChatGPT-4 (OpenAI) was used exclusively for language and structural editing of Persian and English text. The AI played no role in content generation, data analysis, or result modification. The authors bear full responsibility for all scientific content and conclusions.

Data Availability Statement

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

References

- López-Verdugo M, Ponce-Blandón JA, López-Narbona FJ, Romero-Castillo R, Guerra-Martín MD. Social image of nursing. An integrative review about a yet unknown profession. *Nursing Reports*. 2021;11(2):460-474. <https://doi.org/10.3390/nursrep11020043>
- Abdelrahman S. Relationship among public nursing image, self-image, and self-esteem of nurses. *Journal of Nursing and Health Science*. 2018;7(1):10-16. <https://doi.org/10.9790/1959-0701091016>
- Roshangar F, Soheil A, Moghbeli G, Wiseman T, Feizollahzadeh H, Gilani N. Iranian nurses' perception of the public image of nursing and its association with their quality of working life. *Nursing Open*. 2021;8(6):3441-3451. <https://doi.org/10.1002/nop2.892>
- Glerean N, Hupli M, Talman K, Haavisto E. Young people's perceptions of the nursing profession: an integrative review. *Nurse Education Today*. 2017;57:95-102. <https://doi.org/10.1016/j.nedt.2017.07.008>
- Rezaei-Adaryani M, Salsali M, Mohammadi E. Nursing image: an evolutionary concept analysis. *Contemporary Nurse*. 2012;43(1):81-89. <https://doi.org/10.5172/conu.2012.43.1.81>
- Ashraf A, Hamid HM, Taghi SM, Fatemeh H. The public nursing image as perceived by nurses and citizens: a questionnaire survey. *International Journal of Caring Sciences*. 2020;13(3):1611. https://www.internationaljournalofcaringsciences.org/docs/10_nabavi_original_13_3_4.pdf
- Topuz F, Bülbüloğlu S, Filizli Z, Zayin D. Nursing image from the perspective of healthcare professionals during the post-COVID-19 pandemic period: a cross-sectional study. *Journal of Radiology Nursing*. 2023;42(3):334-338. <https://doi.org/10.1016/j.jradnu.2023.02.012>
- Kim Y-H, Kwon Y-C. The effect of self-esteem, major satisfaction, and career identity on nurse image, in nursing students perceive. *Journal of Digital Convergence*. 2018;16(2):215-224.
- Hoeve Yt, Jansen G, Roodbol P. The nursing profession: Public image, self-concept and professional identity: A discussion paper. *Journal of Advanced Nursing*. 2014;70(2):295-309. <https://doi.org/10.1111/jan.12177>
- Son Y-J, Choi J, Lee H-J. Effectiveness of nurse-led heart failure self-care education on health outcomes of heart failure patients: a systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*. 2020;17(18):6559. <https://www.mdpi.com/1660-4601/17/18/6559>
- Kaur P, Maheshwari S, Rawat H. Impact of self-perceived public image of nursing on nurses' work behavior. *International Journal of Psychiatric Nursing*. 2017;3(2):6-11. <https://doi.org/10.5958/2395-180X.2017.00013.5>
- Elmorshedy H, AlAmrani A, Hassan MHA, Fayed A, Albrecht SA. Contemporary public image of the nursing profession in Saudi Arabia. *BMC Nursing*. 2020;19(1):47. <https://doi.org/10.1186/s12912-020-00442-w>
- Duan Y, Feng X, Xiao H. Public image of nursing in modern society: an evolving concept analysis. *Nursing Open*. 2024;11(9):e70033. <https://doi.org/10.1002/nop2.70033>
- Rubbi I, Cremonini V, Artioli G, Lenzini A, Talenti I, Caponnetto V, et al. The public perception of nurses: an Italian cross-sectional study. *Acta Bio Medica: Atenei Parmensis*. 2017;88(Suppl 5):31. <https://doi.org/10.23750/abm.v88i5-S.6884>
- Girvin J, Jackson D, Hutchinson M. Contemporary public perceptions of nursing: a systematic review and narrative synthesis of the international research evidence. *Journal of Nursing Management*. 2016;24(8):994-1006. <https://doi.org/10.1111/jonm.12413>
- Ameri F, Golaghaie F, Harorani M, Poorcheraghi H, Rahbarian A, Jadidi A. The role of the Islamic Republic of Iran broadcasting in people's perspective toward nurses. *Journal of Client-Centered Nursing Care*. 2018;4(4):185-192. <https://doi.org/10.32598/jccnc.4.4.185>
- Ahmadi Chenari H, Zakerimoghdam M, Baumann SL. Nursing in Iran: Issues and challenges. *Nursing Science Quarterly*. 2020;33(3):264-267. <https://doi.org/10.1177/0894318420920603>
- Moghbeli G, Gardashkhani S, Soheili A. Public image of nursing: an integrative review of challenges and solutions. *BMC Nursing*. 2025;24(1):573. <https://doi.org/10.1186/s12912-025-03160-3>
- Yavaş G, Özerli AN. The public image of nursing during the COVID-19 pandemic: a cross-sectional study. *International Nursing Review*. 2025;72(1):e12922. <https://doi.org/10.1111/inr.12922>
- Yusefi AR, Sarvestani SR, Kavosi Z, Bahmaei J, Mehrizi MM, Mehralian G. Patients' perceptions of the quality of nursing services. *BMC Nursing*. 2022;21(1):131. <https://doi.org/10.1186/s12912-022-00906-1>
- Samina M, Qadri G, Tabish S, Samiya M, Riyaz R. Patient's perception of nursing care at a large teaching hospital in India. *International Journal of Health Sciences*. 2008;2(2):92. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3068745/>

22. Scott P, Thomson P, Shepherd A. Families of patients in ICU: a scoping review of their needs and satisfaction with care. *Nursing Open*. 2019;6(3):698-712.
<https://doi.org/10.1002/nop2.287>
23. Ko SQ, Chua CMS, Koh SH, Lim YW, Shorey S. Experiences of patients and their caregivers admitted to a hospital-at-home program in Singapore: a descriptive qualitative study. *Journal of General Internal Medicine*. 2023;38(3):691-698.
<https://link.springer.com/article/10.1007/s11606-022-07765-1>
24. Nadi A, Shojaei J, Abedi G, Siamian H, Abedini E, Rostami F. Patients' expectations and perceptions of service quality in the selected hospitals. *Medical Archives*. 2016;70(2):135.
<https://doi.org/10.5455/medarh.2016.70.135-139>
25. Ivan R, Gianandrea P, Valeria C, Flavio F, Lorenzo G, Federica L, et al. Does student orientation improve nursing image and positively influence the enrolment of nursing students in the university? an observational study. *Acta Bio Medica: Atenei Parmensis*. 2019;90(Suppl 6):68.
<https://doi.org/10.23750/abm.v90i6-S.8568>
26. Toth JC, Dobratz MA, Boni MS. Attitude toward nursing of students earning a second degree and traditional baccalaureate students: are they different? *Nursing Outlook*. 1998;46(6):273-278.
[https://doi.org/10.1016/S0029-6554\(98\)90083-5](https://doi.org/10.1016/S0029-6554(98)90083-5)
27. Čukljek S, Jureša V, Bile CG, Režek B. Changes in nursing students' attitudes towards nursing during undergraduate study. *Acta Clin Croat*. 2017;56(1):36-43.
<https://doi.org/10.20471/acc.2017.56.01.06>
28. Čukljek S, Juresa V, Babic J. The cross-cultural (transcultural) adaptation and validation of the nursing image questionnaire. *Nurse Education Today*. 2017;48:67-71.
<https://doi.org/10.1016/j.nedt.2016.09.006>
29. Gündüz Hoşgör D, Coşkun F. Turkish society's perception of nursing image during the COVID-19 pandemic. *BMC Nursing*. 2024;23(1):91.
<https://doi.org/10.1186/s12912-024-01752-z>
30. Sürücü HA, Topdemir EA, Duman M, Baksi A. Examining the influence of the COVID-19 pandemic process on nurses and society's perception of the nursing image. *Medical Records*. 2023;5(3):648-654.
<https://doi.org/10.37990/medr.1291470>
31. Elibol E, Seren AKH. Reasons nursing students choose the nursing profession and their nursing image perceptions: a survey study. *Nursing Practice Today*. 2017;4(2):67-78.
<https://npt.tums.ac.ir/index.php/npt/article/view/187>