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Original Article

Assessment of the Nursing Image and Its Associated Factors from the Perspective of Hospitalized Patients: A Descriptive Cross-Sectional Study

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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 image of nursing and identify demographic and clinical factors influencing it from the perspective of 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 through randomly scheduled hospital visits. Data were collected using a demographic questionnaire and the Nursing Image Questionnaire (NIQ), which includes 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 (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 useful 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.

Introduction

An image serves as a reflection of 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 mage represents the societal perception 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 leads to a decline 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 the society's nursing image in many countries 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 maintain a suboptimal attitude toward nursing and are less likely to encourage students to pursue it as a career path. 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 the motivation and professional performance of nurses [3, 6, 16]. These findings suggest that nursing image is largely influenced by the socio-cultural context and media policies of each country. 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 nursing profession's retention rates [17].

Recent research has dealt with several gaps regarding 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], highlighting the necessity of the current study.

Objectives

This study was conducted to assess the nursing image and determine the influencing demographic and clinical factors from the perspective of hospitalized patients in the city of Zanjan, Iran, aiming to identify and analyze patient perceptions of

the nursing profession and the underlying components influencing it.

Methods

Study Design

The present research was conducted as a descriptive cross-sectional study.

Setting and Participants

This research was carried out on patients hospitalized in the medical-surgical wards of five hospitals, namely Vali-e-Asr, Mousavi, Imam Hossein, Artesh, and Bahman, in Zanjan 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 during 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 utilized 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 total score for the NIQ ranges from 30 to 150, where higher scores indicate a positive nursing image and lower scores reflect a negative nursing image. The NIQ comprises five subscales, including the 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), chi-square, and post-hoc test, were employed. Descriptive statistics were used for descriptive objectives, while inferential statistics were applied for comparative analysis. The $P < 0.05$ was set for this research.

Result

In this study, out of 730 distributed questionnaires, 698 were deemed valid and subsequently 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 reported to be "hospitalization" (63.75%). Comprehensive details are presented in Tables 1 and 2.

Mean Nursing Image Score and Comparison across Hospitals

In this study, the mean nursing image score was found to be 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 associated with the Artesh Hospital (119.64), while the lowest score was recorded for Bahman Hospital (114.15) (Table 3).

Comparison of Nursing Image Scores Based on Demographic and Clinical Variables

An analysis of the relationship of various variables with the nursing image score revealed that this score was significantly different based on 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 (age groups 46–60 and over 61 years) and those with lower education levels reported a more positive nursing image.

Moreover, patients with an interest in the nursing profession, as well as those whose source of their nursing image was "working in a hospital environment" or "social media," exhibited significantly higher scores. Conversely, variables such as gender, financial status, and a history of 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		Frequency	Frequency Percentage
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
	Doctoral	0	0
Occupation	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		Frequency	Frequency Percentage
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 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	Frequency (%)	Nursing Image Score According to the NIQ Separated by Hospitals				
		Mean Nursing Image Score	SD	Lowest Score	Highest Score	*P*
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: The 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	

SD: Standard deviation

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 scoring range for the nursing image, 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 general history of hospitalization, and relatives employed in the nursing profession exerted no 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 YAVAŞ and ÖZERLİ 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, so that individuals with lower education levels reported more favorable evaluations. The alignment of this finding with international studies, such as those by Rubbi et al. [14, 25] It suggests that higher education levels are typically associated with elevated 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 a higher degree of 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 (2019) 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 nursing image. This point has been corroborated by other studies, including the research conducted by Abdollahi et al. [2]. An intrinsic inclination toward a profession enhances an individual's level of understanding and attention to the nuances of that profession's performance, 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 more formal sources like credible social media. The influence of digital media on the public's nursing image is a subject that has gained significant prominence in recent years, particularly following the COVID-19 pandemic. Studies such as those by Gündüz and Coşkun [29] and Surucu et al. [30] have demonstrated that increased media attention to the role of nurses during the pandemic has resulted in an improvement in their social standing and an increase in public trust. The alignment of these results with the findings of the present study suggests that the collective experience of society during health crises can directly impact the professional representation and public perception of nurses.

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

individual and environmental interactions hold greater significance 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. This discrepancy may be justified by differences in cultural context, 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 presented a similar pattern of improvement in the public nursing image. 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—a trend that is also significantly reflected in the results of the present study. As reported in the studies by Gündüz and Coşkun [29] and Surucu 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 ecause 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, the results of this study reveal that the nursing image from the perspective of hospitalized patients is favorable, with individual and experiential factors playing a significant role in its formation. 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, it is recommended that future research 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 exhibited statistically significant differences 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.

Ethics Consideration

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).

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Conflict of Interest

No conflicts of interest.

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Authors' Contributions

Allah-Louie B: Conceptualization, study design, and data collection

Avazeh A: Supervisor, conceptualization, study design, and data analysis and interpretation
Amini K: Advisor, contribution to all stages of the study
Hasani Z, Allah-Louie B, and Avazeh A: Analysis, interpretation, reporting the results, and preparing the manuscript for publication**.**
All authors contributed to the drafting and critical revision of the manuscript, approved the final version to be submitted to the journal, and met the established authorship criteria.

Artificial intelligence utilization for article writing

In the preparation of this manuscript, artificial intelligence tools were utilized solely for the purpose of editing and improving the structure of Persian and English sentences. No scientific content generation, data analysis, or alteration of results was performed by artificial intelligence. The authors remain fully responsible for the scientific integrity, analyses, and findings presented in this study.

Data Availability Statement

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

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