

Understanding Patient Satisfaction: The Predominant Influence of Professionalism over Emotional Intelligence in Nursing Students' Clinical Performance

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ABSTRACT

Background: Professionalism and emotional intelligence (EI) are essential attributes in nursing that significantly shape patient care experiences. While these traits are well-studied among practicing nurses, limited research has explored their impact when demonstrated by nursing students during clinical training. **Objectives:** This study aimed to investigate the relationship between nursing students' emotional intelligence and professionalism and patients' perceptions of professionalism and treatment satisfaction in a clinical education setting. **Methods:** A descriptive correlational cross-sectional design was employed. The study involved 100 final-year nursing students from Ninevah University, Iraq and 100 patients who had received care from these students. Standardized self-report tools were used to assess students' emotional intelligence and professionalism. Patients evaluated their perceptions of students' professionalism and their satisfaction with care. Descriptive statistics, Pearson correlation, and multiple linear regression analyses were conducted using SPSS version 25. **Results:** Emotional intelligence and professionalism were both positively and significantly correlated with patient-perceived professionalism ($r = 0.42$ and 0.53 , respectively; $p < 0.001$) and patient satisfaction ($r = 0.36$ and 0.47 , respectively; $p < 0.01$). Regression analysis further demonstrated that emotional intelligence ($\beta = 0.28$, $p = 0.002$) and professionalism ($\beta = 0.44$, $p < 0.001$) were significant predictors of patient satisfaction, with professionalism exerting a stronger influence. Although patients rated students in surgical wards and female students slightly higher in satisfaction and perceived professionalism, these differences were not statistically significant. **Conclusion:** Nursing students' emotional intelligence and professionalism play an important part in determining patients' perceptions of care and satisfaction, even during their training. These findings highlight the importance of integrating emotional and professional competency development into nursing education to promote patient-centered care.

Keywords: Nursing Students; Emotional Intelligence; Professionalism; Patient Satisfaction

INTRODUCTION

The quality of patient care is profoundly influenced not only by clinical competence but also by the interpersonal characteristics of healthcare providers, particularly nurses (Huang *et al.*, 2024). Among nursing students who represent the future frontline of patient care, the development of key professional traits, such as emotional intelligence (EI) and professionalism, is essential (Arrogante *et al.*, 2025). These traits play a significant role in shaping patients' perceptions of care and their overall satisfaction with treatment outcomes (Zahran *et al.*, 2025).

Emotional intelligence, defined as the ability to recognize, understand, and manage one's own emotions and those of others, has been increasingly recognized as a core competency in nursing practice (Hathurusinghe

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& Dassanayake, 2025). High levels of EI in nurses are associated with improved communication, empathy, stress management, and teamwork—factors that directly influence patient experiences and trust (Dal Santo *et al.*, 2025). Similarly, professionalism in nursing, encompassing ethical behavior, accountability, competence, and respect for patients, serves as a foundation for therapeutic relationships and the delivery of quality care (Kokubun *et al.*, 2025).

Patients' perceptions of professionalism and their satisfaction with care are critical indicators of healthcare quality (Khedr & Alshammari, 2025). These perceptions often guide their trust in the healthcare system and influence their adherence to treatment plans (Cankara *et al.*, 2025). As nursing students engage in clinical training and direct patient interactions, their professional demeanor and emotional responsiveness become observable and impactful elements of the care experience (Yeung *et al.*, 2025).

Context: Nursing Students at Ninevah University

The College of Nursing at Ninevah University, a public university established in 2014 in Mosul, Iraq, offers strong undergraduate programs in both Clinical and Basic Nursing Sciences, continuing to grow and develop a cohort of 90 students (Hamarash *et al.*, 2025). These programs are taught by an experienced faculty committed to overseeing theoretical coursework and supervised clinical practice. The college offers foundational and advanced nursing education to equip students with the skills to deliver holistic care in diverse healthcare settings, emphasizing professionalism, emotional intelligence, and ethical decision-making, which are emphasized as key components of the curriculum (Abdullah *et al.*, 2019).

Considering the access to resources in an education system that is reorganizing and recovering from conflict, the college has assessed and evaluated the curriculum in line with the organizations mentioned above. The program ultimately emphasizes providing equitable education to a region in need, with accountability and assurance (Ko & Fong, 2026). Although these traits of professionalism and EI are recognized as foundational attributes of good practice, the literature on the interrelatedness of nursing students' professionalism and EI concerning patient outcomes, such as perceived professionalism and satisfaction, is limited (Machado *et al.*, 2026). Therefore, a deeper understanding of this relationship will inform pedagogical decisions on how to develop nursing students as holistic nurses (Ibrahim & Ibrahim, 2025).

This study will therefore be important for identifying how emotionally intelligent (EI) and professional individuals have an impact on patient perception and patient satisfaction. The research is also needed to help address a major void in the literature and provide evidence that can specifically inform curriculum content, enhance the quality of clinical experience, and improve nursing education programs' ability to prepare clinically competent and empathetic (emotionally sensitive) nurses. The purpose of this research study is to examine the associations between nursing students' EI professionalism and their patients' perceptions of professionalism and overall satisfaction with care. If nursing students possess the right background emotions and professionalism, perhaps these emerging behaviors will be reflected in patients' perceptions of professionalism and satisfaction with care—specifically within the context of Ninevah University. The intention for this study is to contribute to the evidence-based literature that supports nursing education in promoting patient-centered care and fostering the development of future nurses who are emotionally intelligent and professional.

METHODOLOGY

Study Design

This research employed a descriptive correlational cross-sectional design to investigate the relationships between nursing students' traits, specifically professionalism and emotional intelligence, and patients' perceptions of professionalism and treatment satisfaction. The design was chosen to allow for the simultaneous examination of multiple variables and their relationships at a single point in time (Alneama & Ibrahim, 2025).

Study Setting

The study was conducted at Ninevah University College of Nursing, located in Mosul, Iraq. Clinical training sessions affiliated with hospitals within the Mosul region served as the primary settings for data collection, allowing direct access to both nursing students and patients who had recently interacted with them.

Study Population

The population is comprised of two main groups:

Nursing Students

Final-year undergraduate nursing students (4th stage) who have completed at least one semester of clinical training.

Patients

Hospitalized patients who had received care or interaction from the participating nursing students during their clinical training.

Sample Size and Sampling Technique

A total of 100 nursing students and 100 patients were selected using a purposive sampling technique. Eligibility criteria for nursing student participants included enrollment in the fourth year at the University of Nineveh; completion of clinical education in either Internal Medicine or Surgical Wards; and willingness to provide informed consent to participate. Eligibility criteria for patient participants included being an admitted patient to the same clinical ward that the nursing students provided care for, ability to be conscious and oriented, ability to assess his/her health-care experience, and willingness to give informed consent to participate. The sample size was selected based on previous research. The sample size was determined based on previous similar studies (Ibrahim & Ibrahim, 2025) to ensure sufficient statistical strength.

Data Collection Instruments

Nursing Student Questionnaire

Emotional Intelligence Scale: A validated self-report tool, e.g., Schutte Self-Report (EI Test), measuring self-awareness, emotion regulation, motivation, empathy, and social skills (Acebes-Sánchez *et al.*, 2025). Nursing Professionalism Scale : Adapted from the professionalism inventory by the registered nurses association, covering domains such as ethics, accountability, and communication (Çatak & Sönmez, 2025).

Emotional Intelligence Scale

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Nursing Professionalism Scale

Adapted from the professionalism inventory by the registered nurses association, covering domains such as ethics, accountability, and communication (Çatak & Sönmez, 2025).

Patient Questionnaire

Patient Perception of Professionalism Scale

Evaluates the patient's view of the student's conduct, communication, empathy, and respect (Erden *et al.*, 2025).

Patient Satisfaction Scale

Based on standardized tools like the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ), modified to reflect short-term care from students (Xiao *et al.*, 2025).

All instruments were translated into Arabic and reviewed by a panel of experts for content validity. A pilot study was conducted with 10 students and 10 patients to test clarity and reliability.

Data Collection Procedure

Nursing students were invited to complete the self-report questionnaire during supervised sessions at the university. Patients were approached within 24–48 hours of their interaction with students by trained data collectors who explained the study and administered the questionnaire in a face-to-face interview format. Data collection took place over a period of two months to allow sufficient time for interaction and follow-up.

Data Analysis

Data was entered, coded, and analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics, including means, standard deviations, and frequency distributions, were utilized to summarize the demographic and study variables of the participants. To examine the relationships among key study variables emotional intelligence, professionalism, and patient satisfaction, Pearson correlation analysis was conducted. Furthermore, multiple linear regression analysis was performed to evaluate the predictive value of nursing students' characteristics on patient outcomes, allowing for the identification of significant predictors while controlling for potential confounding variables. All statistical tests were conducted using a significance level set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the Ethical Review Committee at Ninevah University, Iraq, with reference number CCMRE-Nur-23-9 on 28th October 2024. Written informed consent was obtained from all participants. Participation was voluntary, and anonymity and confidentiality were maintained throughout the research process.

RESULTS

Table 1: Descriptive Statistics of Study Variables (n = 100)

Variable	Mean	SD	Range	95% CI of Mean	df
Emotional Intelligence (EI) Score	122.6	10.5	95–145	120.52 – 124.68	99
Nursing Professionalism Score	88.4	7.2	70–100	86.97 – 89.83	99
Patient Perception of Professionalism	82.9	8.1	65–100	81.29 – 84.51	99
Patient Satisfaction Score	84.7	7.8	60–100	83.15 – 86.25	99

SD- Standard Deviation; df- Degree of Freedom

The descriptive statistics of the key study variables are presented in table 1. The mean emotional intelligence score among nursing students was 122.6 (SD = ±10.5; 95% CI: 120.52–124.68). The mean nursing professionalism score was 88.4 (SD = ±7.2; 95% CI: 86.97–89.83). Patients rated nursing students' professionalism with a mean score of 82.9 (SD = ±8.1; 95% CI: 81.29–84.51), while the average patient satisfaction score was 84.7 (SD = ±7.8; 95% CI: 83.15–86.25).

Table 2: Correlation Analysis

Variable Pair	Correlation (r)	p-value
EI and Patient Perception of Professionalism	0.42	< 0.001
EI and Patient Satisfaction	0.36	< 0.01
Professionalism and Patient Perception	0.53	< 0.001
Professionalism and Patient Satisfaction	0.47	< 0.001

*Statistically significant at $p < 0.05$; all the p-values of the different variables are statistically significant

Pearson correlation analysis (Table 2) revealed a statistically significant moderate positive correlation between EI and patient perception of professionalism ($r = 0.42, p < 0.001$), as well as between EI and patient satisfaction ($r = 0.36, p < 0.01$). A stronger positive correlation was observed between nursing professionalism and both patient perception of professionalism ($r = 0.53, p < 0.001$) and patient satisfaction ($r = 0.47, p < 0.001$).

Table 3: Regression Analysis

Predictor Variable	Beta (β)	t-value	p-value
Emotional Intelligence	0.28	3.12	0.002*
Nursing Professionalism	0.44	4.89	< 0.001*

* β - Regression coefficient; t-value- Regression coefficient differs; Statistically significant at $p < 0.05$; all the p-values are statistically significant

The results from this regression model indicated both emotional intelligence and professional nursing practice were statistically significant in predicting the value for the outcome variable. Emotional intelligence had a moderate-size positive relationship to the outcome variable ($\beta = 0.28; t = 3.12; p = 0.002$), which suggests as emotional intelligence increases, there will be an increase in the outcome variable. Professional nursing practice had a strong positive relationship to the outcome variable ($\beta = 0.44; t = 4.89; p < 0.001$); thus, it can be concluded that professional nursing practice is the most important predictor of the outcome variable.

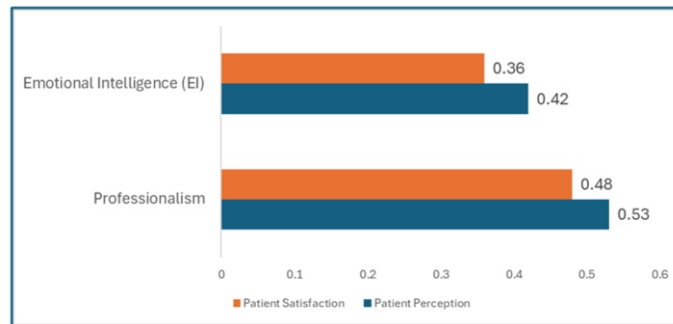


Figure 1: Correlation Strengths Between Emotional Intelligence, Professionalism, and Patient-Reported Outcomes in Nursing Practice

Figure 1 shows the relationship between nursing characteristics—professionalism and EI and patient outcomes. Professionalism shows the strongest relationships with both patient perception (~0.53) and patient satisfaction (~0.48). This means that patients' perceptions of the professionalism of the nursing care they receive and their satisfaction are more likely to be positive when nurses demonstrate professional behaviors. EI also demonstrates moderate positive correlations, primarily for patient perception of professionalism (~0.42) and patient satisfaction (~0.36), suggesting EI adds meaningful value but adds value at a more oblique angle. Overall, the findings describe professionalism as a more direct predictor of patient-reported outcomes, while EI serves a supportive role.

DISCUSSION

The "Healthy Iraq 2030 Plan" emphasizes the need for improvement in humanistic care within medical services as nurses develop their humanistic capabilities (Ibrahim & Ibrahim, 2025). Humanistic caring behavior is defined as the deliberate acts of nurses that involve intentional actions focusing on patients' physical needs and emotional well-being, thereby creating a sense of comfort and safety (Alneama & Ibrahim, 2025). A lack of humanistic caring behavior can lead to increased nurse-patient conflict and contribute to professional burnout (Ghanim & Ibrahim, 2024). Nursing education in Iraq is predominantly technical and often lacks humanistic aspects. Most of the education is theoretical, and there is minimal collaboration between nursing schools and practice environments (Hamarash *et al.*, 2023), which results in nursing students not receiving adequate opportunities to practice humanistic care skills in real-world settings. As a result, nursing interns demonstrated a limited ability for humanistic care. As the future of the healthcare workforce, their caring behavior will significantly influence the quality of clinical care over the upcoming years (Hamid & Ibrahim, 2025). The

present study investigated the impact of emotional intelligence (EI) and professionalism on nursing students' perceptions of professionalism and their satisfaction with care. The findings underscore the importance of these personal and professional traits in shaping patient experiences, even during care provided by students still in training.

Table 2 results demonstrated that both emotional intelligence (EI) and professionalism were significantly and positively correlated with patient perceptions of professionalism and satisfaction. These findings are consistent with previous literature, which suggests that nurses with higher EI tend to build more meaningful therapeutic relationships with patients, demonstrating empathy, effective communication, and emotional regulation, which contribute to a more positive patient experience (Maity *et al.*, 2025). The strong correlation between nursing professionalism and patient satisfaction aligns with studies indicating that patients value ethical conduct, respectful communication, and a sense of accountability from their healthcare providers (El Tarhouny *et al.*, 2026). Although nursing students are still developing these competencies, the fact that their professionalism significantly impacted patient perceptions suggests that early professional socialization and role modeling in clinical environments are crucial to shaping future behavior.

Interestingly, in table 3, the regression model indicated that nursing professionalism was a stronger predictor of patient satisfaction than emotional intelligence. This result may be because professionalism encompasses observable behaviors (e.g., being on time, following a dress code, treating others with respect) that a patient can see immediately. EI may also be important, but it is harder to observe and is a key yet subordinate aspect of interpersonal engagement and conflict resolution (Wodwaski & Webber, 2026).

While there was no difference in patient satisfaction scores between internal medicine and surgical wards, this study implies that the clinical context may not be a significant factor in patient perceptions of student nurses as long as the student nurse exhibits a similar level of professional behavior (Attia & Ibrahim, 2023). Notably, the female students had better professionalism scores. Therefore, there may be an element of cultural or gender bias regarding the data, or perhaps their communication styles align more closely with their patients' expectations, highlighting the value of any educational program in helping all students create consistency and equity in professional behaviors. Figure (1) shows the relationship between nursing characteristics, professionalism, and EI and patient outcomes, which indicates that professionalism has the greatest relationships with both patient perception (~0.53) and patient satisfaction (~0.48) outcomes. That is to say, when nurses act in a professional manner, patients are more likely to report satisfaction and positive perceptions of their care. EI has moderate positive correlations as well, especially in relation to patient perception of professionalism (~0.42) and patient satisfaction (~0.36), showing that EI makes an important but somewhat less direct contribution. Overall, the results show professionalism is the better predictor of patient-reported outcomes, and EI has a secondary role.

The results emphasize the necessity to provide nursing students with opportunities to engage and grow both EI and study professionalism skills in their educational programs (Salehs *et al.*, 2026). Since professionalism was the strongest predictor of patient satisfaction and perception of behavior, it is recommended that nursing education programs spend significant time developing students' ethical behavior, communication skills, accountability, professional behavior and practice in structured modules, role modeling, and clinical precepting (Runde *et al.*, 2025). While the role of EI was moderate but still meaningful, it can certainly add value to nursing education through the introduction of reflective practices, empathy, and emotional self-regulation strategies (Pestaner *et al.*, 2026). Simulation-based learning and situations involving patient interactions could be opportunities to develop and enhance these qualities and skills, which would prepare nursing students to provide patient-centered care (Elheet *et al.* 2025).

The implications for nursing education are significant based on the results of this study. Nursing schools and clinical education providers must acknowledge the crucial role of EI and professionalism in their programs. Students are taught to conduct structured workshops, engage in reflective practice, have a mentor, and receive real-time feedback during their clinical practice, allowing those skills to be internalized (Liu *et al.*, 2026). Furthermore, a nursing education institution must not assess students solely on technical-based assessments but also on how they form interpersonal relationships and the quality of their ethics. Over time, this approach is

expected to have a positive impact on the quality of nursing care in the future.

This study has contributed to the limited literature available in Iraq on the relationship between student nurse attributes and patient-centered outcomes, though modest in scope. This study outlines how an educational institution in a post-conflict country, such as Ninevah University College of Nursing, can build meaningful, structured opportunities into its educational programs to help students provide high-quality nursing care.

Limitations

While valuable information was gained from the current research, several limitations should be noted. Due to the cross-sectional nature of the study, a causal relationship could not be established; the research was able to identify relationships between variables but could not make definitive conclusions about causality. Additionally, the assessment of emotional intelligence (EI) and professionalism in students was conducted using self-report tools, which are prone to social desirability bias or inaccurate self-reporting. Another limitation is that the participants were all from Ninevah University, raising questions about the generalizability of the findings to other nursing education institutions or jurisdictions with different training contexts. Furthermore, the participants were limited to the patients seen by final-year students during the trial period, meaning that contributions from a more diverse range of patients and clinical contexts might not have been captured. The nature of the research process also increases the likelihood of an observer effect, where students or patients may alter their behaviors or responses due to being observed or evaluated in clinical settings. Finally, although gender and ward differences were noted, the study did not explore the reasons behind these differences, which could provide valuable insights for future educational or organizational improvements.

Future Scope

Future research should employ longitudinal designs to assess how these traits evolve throughout a student's education and how they impact patient outcomes over time. Comparative studies across multiple nursing schools and healthcare settings are recommended to enhance generalizability. Incorporating patient demographics and cultural factors may deepen understanding of satisfaction determinants in diverse clinical environments.

CONCLUSION

This study demonstrated a significant correlation between EI and professionalism in nursing students, as well as patients' perceptions of professionalism and satisfaction with care. Even in clinical training environments, nursing students make positive contributions to patient experiences. Among the two traits, professionalism emerged as a stronger predictor of patient satisfaction than emotional intelligence. These findings emphasize the urgent need to integrate the development of both EI and professional behavior into undergraduate nursing curricula to enhance patient-centered care.

This study has several implications. In nursing education, nursing curricula should emphasize the development of EI and professionalism through various training, reflective practice, and simulation. Clinical supervisors in the field of clinical practice should serve as mentors, guiding students not only in technical skills but also in emotional intelligence and professional behavior. The institution's policy of education should think about formal reviews of the emotional and competent professional aspects of students' assessed evaluation during clinical placements to underscore their importance.

CRedit Authorship Contribution Statement

A. J. A: Conceptualization, Methodology, Data curation, Investigation, Formal analysis, Writing – original draft, Visualization. Dr. R. H. I: Supervision, Project administration, Conceptualization, Methodology, Validation, Writing – review and editing. S. M. M. A: Data collection, Investigation, Resources, Writing – original draft. Dr. S. H. Al. M: Literature review, Interpretation of results, Validation, Writing – review and editing. O. A. M. A: Data collection, Data entry, Data curation, Writing – original draft support.

AI Assistance Declaration

The authors declare that generative artificial intelligence (AI) tools, including ChatGPT, were used solely

for language enhancement, grammar correction, and improving clarity during manuscript preparation. All AI-assisted content was critically reviewed, revised, and approved by the authors. The authors take full responsibility for the accuracy, integrity, and originality of the final manuscript.

Conflict of Interest

The authors declare that they have no competing interest.

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