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Examining the impact of emotional intelligence on job performance with the mediating role of clinical competence in nurses: a structural equation approach

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Abstract

Background Emotional intelligence, clinical competence, and job performance are increasingly becoming critical areas of focus for organizations navigating turbulent and complex environments. This study aims to examine the impact of emotional intelligence on job performance, mediated by the clinical competence of nurses working in hospitals affiliated with Jiroft University of Medical Sciences in southern Iran in 2024.

Methods This cross-sectional descriptive-analytical study was conducted on 385 nurses. Standardized questionnaires on emotional intelligence, clinical competence, and job performance were used for data collection. To analyze the data, descriptive tests and structural equation modeling (SEM) using partial least squares (PLS) were employed with the help of Smart PLS3 and SPSS23 software.

Results The results showed that emotional intelligence positively affects nurses' job performance ($p=0.001$, $\beta=0.53$). Emotional intelligence also has a positive impact on clinical competence ($p=0.001$, $\beta=0.46$). Furthermore, clinical competence was found to positively affect job performance ($p=0.001$, $\beta=0.57$). Ultimately, emotional intelligence, through the mediating role of clinical competence, has a significant positive effect on job performance ($P<0.001$).

Conclusion Based on the findings, the favourable status of nurses' emotional intelligence and clinical competence can improve their job performance. It is recommended that hospital managers facilitate related training courses and workshops to improve nurses' emotional intelligence and clinical competence, which can, in turn, enhance their job performance.

Clinical trial number Not applicable.

Keywords Emotional intelligence, Clinical competence, Job performance, Nurse, Iran

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Introduction

Humans need various skills and abilities, including intelligence, to succeed in their tasks [1]. Emotional intelligence is defined as the knowledge or competence to effectively use emotions to regulate social and emotional behaviours [2]. Like general intelligence (IQ), emotional intelligence is considered a relatively stable individual ability, which can be improved through educational interventions and learning [3]. Its significance lies in the fact that those who employ emotional intelligence are more adaptable to their environment, exhibit greater self-confidence, and are more aware of their abilities [4]. Additionally, individuals with high emotional intelligence can overcome challenges and solve problems successfully, maintaining their performance at an acceptable level [5]. They are skilled at managing their emotions, which helps preserve the quality of their performance in service delivery [6]. Conversely, employees with low emotional intelligence tend to be less aware of their emotions and have reduced capacity to cope with their feelings, which negatively affects their performance in stressful situations [7]. Therefore, emotional intelligence, as a personal trait, plays a crucial role in predicting behaviour, task performance, and overall job outcomes [8]. According to research, emotional intelligence is one of the inherent factors influencing success, accounting for about 60% of performance across all professions [9–11, 12].

In healthcare organizations, emotional intelligence is especially important, as it enables individuals to think clearly under pressure and avoid time-wasting emotions like anger, anxiety, and fear, allowing for inner clarity and creativity [13]. In healthcare settings such as hospitals, nurses are expected to empathize with patients, respond to their suffering effectively, and demonstrate compassionate concern. They must manage their emotions when interacting with patients, as emotional management is a prerequisite for the nursing profession [14]. Nurses with high emotional intelligence can make better, goal-oriented decisions in emotional situations, while low emotional intelligence negatively impacts nurses' happiness and health, making it more difficult for them to manage conflicts [15]. Studies have shown that nurses with higher emotional intelligence demonstrate better clinical competence and job performance compared to their peers [16–18]. In high-stress environments like hospitals, low emotional intelligence among nurses can lead to a failure to assert their capabilities, fostering negative attitudes towards the profession and reducing job satisfaction [16]. In contrast, high emotional intelligence not only improves performance and quality care but also reduces the gap between theory and practice, increases work commitment, and builds resilience against challenges [17]. Experts believe that low emotional intelligence plays a significant role in depression, anxiety, stress, neuroticism, and ultimately poor performance [18].

Some studies highlight the relationship between emotional intelligence and nursing performance [19]. Job performance can be defined as a set of behaviors and activities performed by an individual to bring the organization and its collective goals closer to achievement. The performance of human resources and employees in their roles is a determinant factor in organizational performance. Thus, this concept holds a prominent position in organizational performance management [20]. In this regard, the optimal job performance of hospital nurses ensures the quality of healthcare services provided to patients and contributes to their satisfaction [21]. Moreover, according to one study, nurses are the driving force behind hospital operations, and their appropriate job performance is a significant factor in accelerating the treatment process and patients' recovery [22]. On the other hand, poor job performance among nurses can lead to errors in patient recovery processes, extended hospitalization periods, and increased costs, which may result in severe harm or even patient death [23].

Furthermore, according to some studies, emotional intelligence in nurses and managers is associated with increased job satisfaction, professional achievements, and clinical competence [24]. Clinical competence refers to the ability to solve complex problems through the integration of knowledge, attitude, and practical skills [25]. The need for quality patient care has made clinical competence a key focus in educational and clinical settings [26]. Various factors, including rapid changes in health monitoring systems, the need for safe and cost-effective services, increased public awareness of health issues, rising expectations for quality services, and the desire of healthcare providers to employ skilled personnel, have increased attention to clinical competence [27]. Clinical competence involves the prudent and consistent application of technical and communication skills, knowledge, clinical reasoning, emotions, and values in clinical settings [28]. According to some scholars, this competency can influence job performance, the delivery of safe services, and the proper fulfilment of professional responsibilities in practice [29]. It appears that nurses with appropriate clinical competence, by skilfully applying technical and communication skills, knowledge, clinical reasoning, emotions, and values in clinical settings, demonstrate optimal job performance as well [30]. In fact, clinical competence, defined as the ability to perform a task with the best and most desirable outcomes, can also contribute to achieving optimal job performance [31]. Moreover, clinical competence is influenced by various factors, including experience, environment, opportunities, motivation, theoretical knowledge, personal characteristics, and, most importantly, emotional intelligence

[32]. Nurses with higher emotional intelligence are likely to exhibit better clinical competence, which can empower them and improve their job performance [8, 33]. Emotional intelligence affects problem-solving abilities, with individuals having higher emotional intelligence demonstrating better problem-solving skills [34]. Thus, emotional intelligence is essential for the development and integration of professional identity and competence [35].

A review of previous studies indicates that the three variables—emotional intelligence, clinical competence, and job performance of nurses—have primarily been examined separately, with limited studies investigating two or all three variables simultaneously. Considering the significance of emotional intelligence, clinical competence, and job performance in delivering high-quality and satisfactory healthcare services, and the scarcity of studies exploring these three variables using a structural equation modeling approach, this study was conducted to examine the impact of emotional intelligence on job performance, with the mediating role of clinical competence, among nurses working in hospitals affiliated with Jiroft University of Medical Sciences in southern Iran in 2024. Jiroft University of Medical Sciences is one of the medical universities in Kerman Province, southern Iran. The university is responsible for providing educational, health, and medical services across seven southern counties of the province. In the healthcare sector, the mission of Jiroft University of Medical Sciences is to deliver the highest quality services in alignment with global standards. In Iran, significant emphasis is placed on the nursing profession and nurses as one of the most critical contributors to the delivery of healthcare services. They play a pivotal role in ensuring service quality and patient and family satisfaction. Therefore, exploring the behavioral, managerial, and organizational aspects of nurses is of great importance.

This study not only incorporates specific methodological innovations but also contributes to expanding knowledge about the examined variables within the hospital setting. It enhances healthcare managers' and policymakers' understanding of these variables and their relationships within the nursing community. Moreover, considering the primary objective of this research, the findings can serve as a foundation for planning improvements in nurses' job performance.

Based on the theoretical framework discussed, the conceptual model of the study is presented in Fig. 1.

Based on this conceptual model, the following hypotheses are tested in this study:

Hypothesis 1 Emotional intelligence has a positive and significant effect on nurses' job performance.

Hypothesis 2 Emotional intelligence has a positive and significant effect on nurses' clinical competence.

Hypothesis 3 Clinical competence has a positive and significant effect on nurses' job performance.

Hypothesis 4 Emotional intelligence, through the mediating role of clinical competence, has a positive and significant effect on nurses' job performance.

Methods

Design and setting

This cross-sectional descriptive-analytical study was conducted on nurses working in hospitals affiliated with Jiroft University of Medical Sciences, including six hospitals in southern Iran from January to April 2024.

Participants

The study population consisted of nurses employed in Imam Khomeini [305 people], Kahnuj [130 people], Kashani [42 people], Manujan [35 people], Rudbar-e Jonubi [36 people], and Qalehganj [39 people] hospitals. The sample size was estimated at 385 individuals using the following formula with a 5% error level. The number of nurses needed for each hospital was determined by dividing 385 by the total number of nurses and multiplying the result by the number of nurses in each hospital.

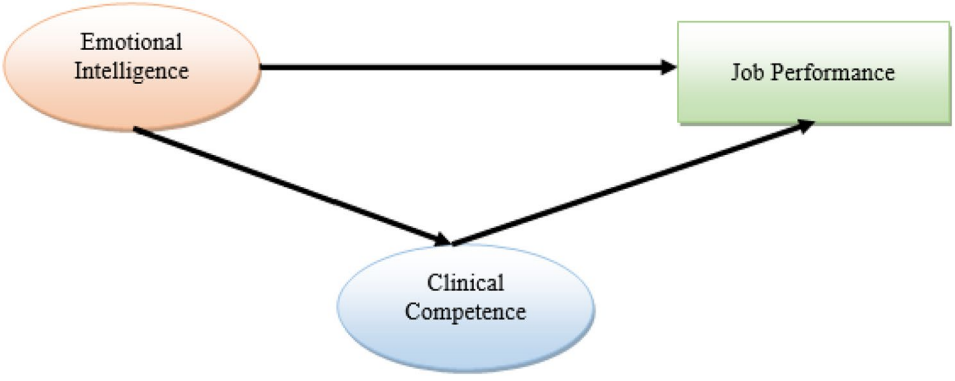

Fig. 1 Conceptual research model

To determine the sample size, the effect size and statistical power level were considered equal to 0.15 and 0.80, respectively.

$$n = \frac{\left(Z^2_{\frac{\infty}{2}} \times S^2\right)}{d^2}$$

In the formula:
z = 1.96
d = 0.05

In each hospital, nurses were selected using stratified random sampling based on the number of nurses in each department and their personnel numbers using the lottery.

For this purpose, each nurse was assigned a unique code, which was then written on a piece of paper. These coded papers were placed into a lottery container, and one by one, papers were drawn, and the corresponding codes were recorded. This process continued until the number of selected papers matched the required sample size. Once the sample size was reached, the lottery process was concluded, and the selected nurses were identified and chosen based on the recorded list.

Inclusion criteria

- At least one year of work experience in the hospital,
- A minimum of a bachelor's degree,
- Employment in clinical departments, and.
- Willingness to participate in the study.

Exclusion criteria

- Employment in administrative or non-clinical departments (non-nursing roles),
- Experiencing a major life event (e.g., death of a loved one, divorce) within one month of the study, and.
- Unwillingness to participate in the study.

Instruments

The data collection tool was a four-part questionnaire. The first section collected demographic information such as age, gender, marital status, employment type, and work experience. The second section used the Emotional Intelligence Questionnaire by Imani et al. [55], which contains 60 items across five subscales: Intelligent Resilience (23 items), Empathy (15 items), Spirituality (8 items), Situational Self-Control (7 items), and Information Clarification and Compliance (7 items). Responses were scored on a 5-point Likert scale ranging from "Never" to "Always," with scores from 1 to 5. Regarding the score, the general state of emotional intelligence was categorized as poor (60–119), moderate (120–179), good (180–239), and excellent (240–300) [36]. The validity and reliability of this questionnaire were confirmed by Imani et al. with a Cronbach's alpha of 0.96 [36]. In addition to the confirmation of the validity of this questionnaire in previous studies [36], in the present study, the face validity was approved by 10 members of the faculty in the field of healthcare management in Iran. Content validity with CVR = 0.72 and CVI = 0.84 and convergent validity with AVE = 0.77 were confirmed. Also, Cronbach's alpha coefficient with a pre-test of 30 people was calculated to confirm reliability for the dimensions of intelligent resilience, empathy, spirituality, situational self-control, and clarification and compliance as 0.91, 0.88, 0.89, 0.87, and 0.90, respectively, and for the entire questionnaire as 0.87.

The third section contained the nurses' clinical competence questionnaire by Ghorbani et al. [30], consisting of 23 items across four dimensions: Evaluation (5 items), Communication (5 items), Clinical Judgment (7 items), and Safety (6 items). Each item was scored on a 5-point scale, ranging from "Not assessable" to "Always," with scores from 0 to 4. To determine the overall clinical competence, poor (0–22), moderate (23–45), good (46–68), and excellent (69–92) categorise were used [37]. The validity and reliability of this questionnaire were confirmed by Hayden et al. (2014) with a Cronbach's alpha of 0.92 [38]. In addition to the confirmation of the validity of this questionnaire in previous studies [38], in this study, face validity was approved by the aforementioned experts. Moreover, content validity with CVR = 0.76 and CVI = 0.88 and convergent validity with AVE = 0.79 were confirmed. Moreover, to confirm reliability, Cronbach's alpha coefficient for the evaluation, communication, clinical judgment, and safety dimensions was 0.78, 0.83, 0.79, and 0.80, respectively, and for the entire questionnaire it was 0.81.

The fourth section used the job performance questionnaire by Hersey and Goldsmith (1981), with 21 items covering seven components: Clarity (2 items), Ability (3 items), Support (3 items), Motivation (4 items), Evaluation (3 items), Credibility (3 items), and Environment (3 items). Each item was rated on a 5-point scale, ranging from "Very little" to "Very much," with scores from 1 to 5. To determine the overall job performance, poor [21–41], moderate [42–62], good [63–83], and excellent [84–105] categories were used [39]. The validity and reliability of this questionnaire were confirmed by Kamali et al. with a Cronbach's alpha of 0.71 [39]. In addition to the confirmation of the validity of this questionnaire in previous studies [39], in this study, face validity was approved by the experts mentioned in the second part of the questionnaire. Moreover, content validity with CVR = 0.75 and CVI = 0.80 and convergent validity with AVE = 0.73 were confirmed. Also, according to Cronbach's alpha

coefficients for the dimensions of the questionnaire including clarity (0.81), ability (0.76), support (0.78), motivation (0.80), evaluation (0.77), credibility (0.76), and environment (0.75) and for the entire questionnaire (0.78), reliability was confirmed.

Procedures and statistical analysis

Data collection was carried out by one of the researchers (ARY), who visited the hospitals under study on different days of the week during morning, afternoon, and night shifts to distribute and collect the questionnaires. Participation in the study was voluntary, and the nurses were fully informed about the research objectives and confidentiality of their responses. Written consent was obtained from all participants, and the questionnaires were distributed and collected on the same day. The data were then entered into SPSS version 23 for analysis. In the descriptive section, frequency, percentage, and mean statistics were used. Pearson correlation coefficient was used to examine the correlation between emotional intelligence, job performance, and clinical competence. To investigate the impact of emotional intelligence on job performance, with clinical competence as a mediating variable, structural equation modeling (SEM) using partial least squares (PLS) was employed with the help of Smart PLS3 and SPSS26 software. To test the significance of the mediating effect of clinical competence in the relationship between emotional intelligence and job performance, the Sobel Test was used [40]. The formula for the Sobel Test is as follows:

Table 1 Distribution of demographic characteristics of the study participants ($n=385$)

Variables	Category	Frequency	Percent
Age (year)	< 30	241	62.60
	30–40	137	35.58
	> 40	7	1.82
Total	------	385	100
Work experience (year)	< 10	297	77.14
	10–20	81	21.04
	> 20	7	1.82
Total	------	385	100
Gender	Male	129	33.51
	Female	256	66.49
Total	------	385	100
Marital status	Single	121	31.43
	Married	264	68.57
Total	------	385	100
Type of employment	Official	46	11.95
	Temporary-to permanent	14	3.64
	Under -a-contract	37	9.61
	Contractual	246	63.89
	Corporative	42	10.91
Total	------	385	100

$$\mathrm{T.Value} = \frac{ab}{\sqrt{(as_b)^2 + (bs_a)^2}}$$

Where:

- a is the direct effect of the independent variable (emotional intelligence) on the mediator (clinical competence),
- b is the effect of the mediator (clinical competence) on the dependent variable (job performance),
- Sa is the standard error of the effect of the independent variable on the mediator, and.
- Sb is the standard error of the effect of the mediator on the dependent variable.

The indirect effect (ab) represents the effect of the independent variable on the dependent variable through the mediator.

Finally, to assess the structural model fit, we used the Coefficient of Determination (R^2), Predictive Relevance (Q^2), and Standardized Root Mean Square Residual (SRMR). Values of R^2 were classified as weak, moderate, or strong at 0.19, 0.33, and 0.67, respectively [33]. A positive Q^2 indicates good model fit and predictive relevance [41], while an SRMR value below 0.08 indicates adequate model fit [40].

Results

The average age of the participating nurses was 30.41 ± 8.15 years, with most of them (62.60%) under the age of 30. The average work experience was 5.87 ± 4.29 years, and most participants (77.14%) had less than 10 years of work experience. Additionally, 66.49% were female, and 68.57% were married. Most respondents were contractual employees (63.89%) (Table 1).

The mean scores of emotional intelligence, clinical competence, and job performance among the participating nurses were 171.57 ± 11.05 (out of 300), 58.26 ± 6.02 (out of 92), and 75.12 ± 6.37 (out of 105), respectively, indicating a moderate level of emotional intelligence and a good level of clinical competence and job performance (Table 2).

Based on the results, there was a statistically significant positive correlation between emotional intelligence and job performance ($r=0.547$, $P<0.001$), emotional intelligence and clinical competence ($r=0.481$, $P<0.001$), and clinical competence and job performance ($r=0.653$, $P<0.001$) (Table 3).

Figure 2; Table 4 show the structural model results for the relationships between the independent variable (emotional intelligence), dependent variable (job performance), and mediating variable (clinical competence),

Table 2 Mean and standard deviation of emotional intelligence, clinical competence, and job performance and their dimensions among the study participants

Variables	Dimension	Range	Mean	SD
Emotional Intelligence	Intelligent Resilience	23–115	77.02	8.93
	Empathy	15–75	36.28	6.62
	Spirituality	8–40	20.19	6.23
	Situational Self-Control	7–35	19.65	5.42
	Information Clarification and Compliance	7–35	18.43	5.49
	Total	**60–300**	**171.57**	**11.05**
Clinical Competence	Evaluation	0–20	9.07	5.36
	Communication	0–20	12.26	4.22
	Clinical Judgment	0–28	19.75	5.78
	Safety	0–24	17.18	4.64
	Total	**0–92**	**58.26**	**6.02**
Job Performance	Clarity	2–10	7.76	6.11
	Ability	3–15	11.81	5.29
	Support	3–15	10.63	5.71
	Motivation	4–20	10.57	6.33
	Evaluation	3–15	10.96	6.44
	Credibility	3–15	11.04	5.39
	Environment	3–15	12.35	5.25
	Total	**21–105**	**75.12**	**6.37**

Table 3 Correlation between emotional intelligence, clinical competence, and job performance among the nurses

Row	Variables	1	2	3
1	Emotional Intelligence	---		
2	Clinical Competence	$r = 0.481^{*}$ $P < 0.001$	---	
3	Job Performance	$r = 0.547^{*}$ $P < 0.001$	$r = 0.653^{*}$ $P < 0.001$	---

*A coefficient between 0.40 and 0.69 indicates moderate correlation [42]

with indicators such as path coefficients and T-values (Fig. 2; Table 4).

Based on the results of the structural model in Fig. 2; Table 4, the following conclusions can be drawn for each of the research hypotheses:

Hypothesis 1 Emotional intelligence has a positive and significant effect on nurses' job performance, as evidenced by a path coefficient of 0.53, a T-value greater than 1.96, and a significance level below 0.01, confirming this hypothesis at a 99% confidence level.

Hypothesis 2 Emotional intelligence has a positive and significant effect on nurses' clinical competence, with a path coefficient of 0.46, a T-value greater than 1.96, and a significance level below 0.01, supporting this hypothesis at a 99% confidence level.

Hypothesis 3 Clinical competence has a positive and significant effect on nurses' job performance, with a path coefficient of 0.57, a T-value greater than 1.96, and a significance level below 0.01, confirming this hypothesis at a 99% confidence level.

Hypothesis 4 The indirect effect of emotional intelligence on job performance through the mediating variable, clinical competence, was calculated as (\ab = 0.26\). By substituting the standard errors from Table 4 into the Sobel Test formula, the standard error of the indirect effect was calculated to be 0.037, resulting in a test statistic of 7.036. Given the significance level of less than 0.01 and a T-value greater than 1.96, the mediating role of clinical competence in the relationship between emotional intelligence and job performance was found to be significant ($P < 0.001$, T = 7.036).

Finally, based on the acceptable ranges of R^2, Q^2, and SRMR indices, it can be concluded that the structural model of this study has a good and acceptable fit (Table 5).

Discussion

The results of the first hypothesis test showed that emotional intelligence has a positive and significant effect on nurses' job performance. Studies by Cheraghi et al., Ranjdoust, and Feiz et al. also confirmed a significant relationship between nurses' job performance and emotional intelligence [43–45]. Raeissi et al. demonstrated that emotional intelligence significantly impacts nurses' behavioural skills and positively influences their communication abilities [46]. Mosadegh Rad emphasized that nurses' emotional intelligence significantly influences many of their behavioral skills. His study highlighted the capability and impact of emotional intelligence and its dimensions on nurses' communication skills [47]. Similarly, part of the findings from Galanis et al. indicated a positive effect of emotional intelligence on nurses' job performance [48]. It appears that higher emotional intelligence in nurses enables them to recognize and manage their own emotions, as well as those of patients, and to establish appropriate and empathetic communication. These abilities, as components of emotional intelligence, can contribute to improved nursing performance [49]. Mafi and Asefzade stated in their study that emotional intelligence plays a crucial role in individuals' success within healthcare organizations. They asserted that nurses with higher emotional intelligence are better able to communicate effectively with patients, leading to improved care quality and increased patient satisfaction. They regarded enhancing emotional intelligence as an effective way to improve nurses' communication skills, thereby improving the quality of clinical nursing care [50]. Furthermore, components of emotional intelligence can positively impact self-efficacy and interpersonal communication, showing a statistically significant

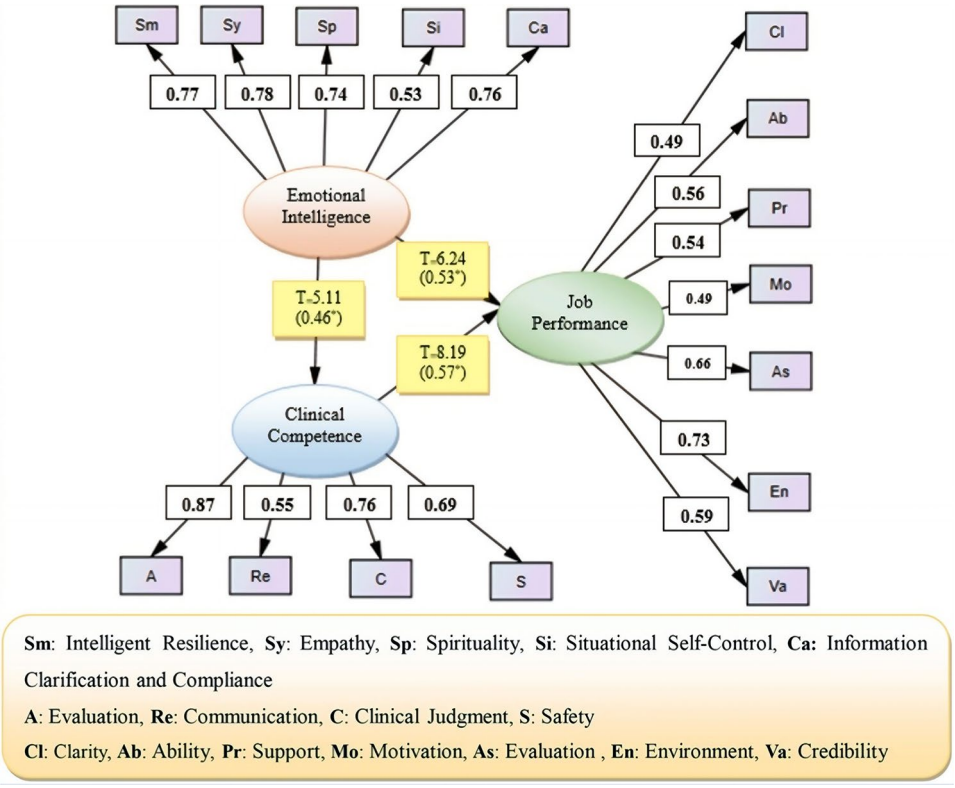

Fig. 2 Structural model of the study

Table 4 Hypothesis testing results

Hypothesis Path	Path Coefficient (β)	T-Value	Standard Error (S.E)	Significance level (*p*)	Result
Emotional Intelligence → Clinical Competence	0.46	5.11	0.069	0.001	accepted
Emotional Intelligence → Job Performance	0.53	6.24	0.052	0.001	accepted
Clinical Competence → Job Performance	0.57	8.19	0.048	0.001	accepted

Table 5 Structural model fit indices

Variables	Coefficient of determination	Adjusted coefficient of determination	Q^2	Standardized Root Mean Square Residual (SRMR)
Job Performance	0.41	0.399	0.23	0.064
Clinical Competence	0.34	0.334	0.19	
Emotional Intelligence	-	-	-	

effect on nurses' clinical performance [51]. In the nursing profession, the development of self-awareness, effective management of emotions, resilience in the face of challenges, and the ability to foster good working relationships with colleagues are of great importance [52]. The study by Heydari and Feizollahi (2016) also confirmed a direct relationship between emotional intelligence and job performance among staff [53]. No studies with findings opposing this section of the research were identified. Evidence suggests that nurses with better emotional regulation and higher emotional intelligence demonstrate greater professional competence compared to their peers [17]. According to some studies, in the nursing profession, high emotional intelligence is associated with job performance, effective managerial styles, and successful teamwork. Additionally, emotional intelligence is linked to positive approaches for managing work-related conflicts and coping strategies. Possessing high emotional intelligence also correlates with increased self-efficacy, improved emotional awareness, and enhanced clinical performance [17, 18, 54]. Emotional intelligence is now recognized as a crucial, teachable, and learnable skill in nursing, which plays a vital role in delivering high-quality care. Emotional intelligence is considered essential for success in professional nursing roles, particularly for performing sensitive responsibilities, as it enhances

job performance [43]. Those with high job performance tend to have very high emotional intelligence, and individuals who work on developing their emotional intelligence often succeed professionally. There is a close link between emotional intelligence and job success. Moreover, individuals with high emotional intelligence tend to display higher self-confidence and better control over their emotions, leading to increased motivation, which enhances performance. Improving emotional intelligence through training can improve employee selection processes and raise their performance levels. High emotional intelligence also fosters innovation, enabling individuals to adapt more quickly to sudden changes and uncertain situations, demonstrating flexibility. These individuals create organizational norms such as mutual understanding, respect for others' perspectives, confidence, identity, and proper behaviour towards patients-all of which improve nurses' performance [45].

The second hypothesis test revealed that emotional intelligence has a positive and significant impact on clinical competence. Part of the findings of Imani et al.'s study showed a significant positive correlation between emotional intelligence and nurses' clinical competence [55]. In another study by Imani et al., emotional intelligence and clinical competence were found to be positively correlated among anaesthesia students [36]. Ghaedamini et al. also confirmed a positive relationship between emotional intelligence and nursing competence in disaster situations [56]. Similarly, Farshi et al. found a significant correlation between emotional intelligence and clinical competence among nursing students [57]. Rigney and Baernholdt's study concluded that emotional intelligence is vital for nurses' success in coping with job stress. Emotional intelligence influences individuals' problem-solving abilities and clinical competence, as those with higher emotional intelligence are more adept at problem-solving and, consequently, show higher clinical competence. Nurses with strong problem-solving skills can better fulfill their responsibilities toward patients [58]. Additionally, studies by Kim and Han and Wons and Bargiel-Matusiewicz indicated a positive correlation between emotional intelligence, adaptability, problem-solving, and social support. Emotional control and competence help nurses develop active and effective coping strategies when dealing with stress, enhancing their professional competence. These studies concluded that nurses need problem-solving skills, decision-making abilities, effective communication, and good judgment in different situations to achieve professional and clinical competence. Emotional intelligence elevates the quality of nursing services and improves community health. Individuals with higher emotional intelligence can better identify potential stressors and, by recognizing their emotions, avoid negative emotional outbursts during stressful situations [59, 60]. According to Fernandez et al., emotional intelligence is central to clinical and professional performance in nursing, enabling nurses to manage their emotions in a complex clinical environment while offering emotional support to patients and their families [61]. According to a section of the findings from Dehnavi et al., there was a direct and significant correlation between emotional intelligence and the clinical competence of nurses [62]. Similarly, Dou et al. stated in their study that emotional intelligence is essential for enhancing the clinical abilities of nursing students [63]. No studies were identified that contradicted this section of the findings from the present study. It appears that emotional intelligence is highly important for the development and coherence of professional identity and competence, which are fundamentally shaped by effective communication. Emotional intelligence skills enable nurses to better understand their own emotions, behaviors, and reactions when interacting with patients and addressing their problems, facilitating the wise management of nurse-patient relationships [64]. The study by Smith et al. also emphasized the significant role of emotional intelligence in nursing experiences and the quality of patient care [65]. Based on the discussed points, possessing clinical competence and proficiency, along with high emotional intelligence, is critical for nurses in confronting the challenges of the nursing profession [66]. High clinical competence and proficiency in nurses with elevated emotional intelligence are particularly necessary for addressing professional nursing challenges such as job stress, workplace violence, job dissatisfaction, burnout, job conflicts, lack of self-efficacy, occupational engagement issues, lack of adaptability, and ineffective communication and interaction with patients, their families, colleagues, and physicians [67].

The third hypothesis test confirmed a positive and significant effect of clinical competence on job performance. Kalantary et al. found that nurses expressed their highest competence in job-related tasks, which included collaboration, responsibility, independence in performance, and continuous professional development. An important aspect of nursing is teamwork in patient care, which involves providing constructive feedback during care and identifying and supporting needs [68]. Mousavi et al. stated that enhancing clinical competence, even in one area, can improve the quality of nurses' work life [69]. Afra-Ghanbari and Sharif found a significant correlation between nurses' clinical competence and their job conditions in their review study [70]. The findings of Soares et al. also indicated that knowledge, skills, and behavior based on professional performance and ethical values are among the clinical competencies that nurses need to strengthen in order to work effectively in clinical settings [71]. No contradictory findings to this section of the study were identified. Achieving competence increases

nurses' enthusiasm and their sense of accomplishment, reinforcing their commitment to their profession. This motivation pushes them to actively pursue learning, improve their skills, and strive for higher professional positions, ultimately leading to better patient outcomes [72]. Professional competence is, in fact, an inseparable part of the performance of various employees. It reflects the domains of an individual's knowledge, attitudes, and skills, enabling them to perform more effectively in their profession. Essentially, professional competence provides an image of a well-developed individual who is fully prepared in every aspect to perform their job. In this sense, competence can be considered a set of behavioral dimensions that influence job performance. Based on this perspective, professional competence appears to function as an umbrella encompassing everything that directly or indirectly impacts job performance [73].

The fourth hypothesis test demonstrated that emotional intelligence has a positive and significant effect on job performance through the mediating role of clinical competence. In support of this, studies by Ranjbar and Holston and Talor found that high emotional intelligence in nursing is associated with improved job performance and clinical competence [16, 18]. Masoudi and Alavi stated that one of the key roles of emotional intelligence is to enhance individual performance and improve clinical decision-making in nursing [74]. According to Fernandez et al., emotional intelligence positively impacts clinical decision-making and problem-solving, which, in turn, affects nurses' job performance [61]. No studies contradictory to this section of the research findings were identified. To explain this part of the study's findings, it can be stated that, on the one hand, clinical competence enables nurses to perform their duties with appropriate quality, which in turn leads to improved job performance [75, 76]. On the other hand, clinical competence itself is a prominent characteristic that reflects high emotional intelligence in nurses [17]. This is because clinical competence allows nurses to recognize and manage their own emotions and those of their patients, while also establishing appropriate and empathetic communication with others [43].

Regarding the influence of culture on the study variables, it is essential to note that the beliefs, values, norms, attitudes, and convictions of nurses within the Iranian context can impact the study's results. Specifically, in the cultural context of Iran, nurses often exhibit a strong sense of empathy and compassion toward patients, which motivates them to demonstrate a high level of commitment to their professional duties. To this end, they consistently and regularly strive to enhance their clinical competence. Additionally, due to the generally high emotional intelligence reported among nurses in most studies conducted in Iran, nurses tend to respect patients' religious beliefs and make efforts to ensure gender concordance between caregivers and patients when delivering care services. Moreover, nurses in Iran prioritize identifying and assessing patients' cultural needs, ensuring that their care plans align with cultural standards and sensitivities. These cultural considerations are integral to the caregiving process [77]. Finally, it is worth noting that the results of this study may differ in cultural contexts of other countries, given the significant role that cultural differences can play in shaping the outcomes.

Conclusion

Emotional intelligence is a critical skill for nursing professionals, as it can improve job performance and clinical competence. Nurses with higher emotional intelligence are more skilled in using emotions to facilitate job performance and are more aware of how emotions influence their behaviour. To achieve professional and clinical competence, it is necessary to enhance nurses' emotional intelligence. Focusing on emotional intelligence skills leads to improved clinical competence, enabling nurses to better understand patients' needs and deliver patient-centred care. Since emotional intelligence is a teachable and learnable skill, it is recommended that policymakers and nursing education planners incorporate emotional intelligence training into nursing curricula and continuing education programs. This will improve job performance and ultimately lead to higher quality care and increased patient satisfaction.

Healthcare managers and clinical administrators must focus on factors influencing nurses' performance to maintain high levels of clinical competence and performance. Enhancing the nurse evaluation system can play a pivotal role in preserving and improving the quality of care and boosting nurses' motivation to perform effectively. Another factor that can improve clinical competence and subsequently clinical performance is the implementation of in-service training programs tailored to the educational needs of nurses in various departments, which should be prioritized by nursing managers. Furthermore, increasing nurses' motivation, improving clinical performance and competence, refining clinical nurse evaluation systems, and incorporating clinical performance scores into periodic and annual evaluations are recommended. For future studies, it is suggested to conduct similar research in different geographical contexts, use longitudinal methods, or apply the study to larger samples. Additionally, incorporating other mediating variables into the research framework could provide further insights.

Limitations

This study had several limitations. First, the results were based on self-assessments, which might raise questions about the accuracy and reliability of the findings. Second, conducting the study within a limited research population

was another limitation that could affect the generalizability of the results. Specifically, the findings of this study might differ or even contradict when applied to larger or different research populations, making them less generalizable to other settings and contexts. Third, the quantitative methodology used in this study might result in findings that could differ if the same study were conducted using qualitative methods. Fourth, the large number of questions due to multiple questionnaires required significant time for completion. To address this, efforts were made to distribute the questionnaires to nurses at appropriate times. Fifth, the cross-sectional design of this study was another limitation, as it did not allow for establishing causal relationships between the research variables.

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Author contributions
GM was designed the study and prepared the initial draft. SB and ARY are contributed in data collection and data analysis. SB and JB have supervised the whole study and finalized the article. All authors have read and approved the manuscript.

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Data availability
All the data is presented as a part of tables or figures. Additional data can be requested from the corresponding author.

Declarations

Ethics approval and consent to participate
This study is approved by Jiroft University of Medical Sciences Ethics Committee on June 7, 2023 with the ID number of IR.JMU.REC.1402.032. All the methods were carried out in accordance with relevant guidelines and regulations. Meanwhile, the written informed consent was obtained from all the study participants. Also, the Helsinki Declaration has been followed for involving human subjects in the study.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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