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Nursing students' compassion competence: impact of emotional intelligence and fear of compassion in a cross-sectional study

Amir Sadeghi¹ , Zahra Purfarzad^{2*} and Keivan Behdokht³

Abstract

Background Compassion is an important competence for nursing students, and it is essential to identify factors that affect it, such as emotional intelligence and fear of compassion. The purpose of this study was to examine the levels of emotional intelligence, fear of compassion, and compassion competence and their association among nursing students.

Methods A cross-sectional correlational study was carried out in the faculty of nursing and midwifery, Hamadan University of Medical Sciences in Iran. Data were collected via census sampling. A sample of 213 nursing students participated, completing general information questionnaire, Wong and Law Emotional Intelligence Scale, the fear of compassion scale, and the compassion competence scale. Statistical analysis was performed using the SPSS-24 software at a significance level of less than 0.05.

Results The total mean scores for emotional intelligence, fear of compassion, and compassion competence were found to be 80.37 (15.36), 63.15 (22.09), and 61.68 (7.47), respectively. Results of multiple regression analyses indicate that the total score of emotional intelligence ($\beta = 0.191$; $p < 0.01$) had a positive significant influence on the nursing students' compassion competence, whereas the total score of fear of compassion ($\beta = -0.213$; $p < 0.01$) negatively influenced the nursing students' compassion competence. By controlling demographic characteristics, emotional intelligence and fear of compassion predict 12.4% of the variance of the nursing students' compassion competence. The total score of emotional intelligence was negatively correlated with fear of receiving compassion from others ($r = -0.218$, $p = 0.001$), fear of self-compassion ($r = -0.276$, $p < 0.001$), and the total score of fear of compassion ($r = -0.252$, $p < 0.001$).

Conclusions Effective emotional intelligence training programs are suggested to reduce nursing students' fear of compassion and improve their competence in compassion. Interventions that will reduce nurses' fear of compassion may be one way to improve compassion competence.

Keywords Emotional intelligence, Empathy, Fear, Professional competence

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Introduction

Compassion is a fundamental professional value in nursing education [1]. It is a crucial virtue in nursing care, as it represents the human and moral aspect of healthcare [2]. Compassion is defined as a profound awareness and a strong desire to alleviate the pain and suffering of others [1]. In nursing, compassion entails not only understanding the patient's difficulties and empathizing with them, but also providing the essential care and support to empower them. Compassion competence involves a diverse set of qualities, skills, and behaviors aimed at alleviating suffering. These include: providing personal care, demonstrating warmth and understanding, effective communication, treating the patient with the same respect you would expect, offering encouragement, and addressing the patient's emotional needs [3]. The three dimensions of compassion competence are explained as follows: (1) *Communication*: This refers to the ability to express understanding and compassion toward patients and their families. (2) *Sensitivity*: This involves recognizing and responding to changes in patients' emotions through careful observation. (3) *Insight*: This is the capacity to understand patients clearly and to recognize their needs and conditions comprehensively, based on professional knowledge. This deep awareness of patients' needs is grounded in empathy, which is associated with a genuine desire to help others and alleviate their suffering [4].

The experience of practicing compassion is a crucial aspect of clinical practice. It is during this time that students learn to take on the role of a nurse and integrate the values and norms of nursing into their own behavior and self-concept [3]. Compassion is essential in nursing education, helping students embody key nursing values. When aligned with real-world practice and supported by compassionate instructors, students evolve into caring professionals. A supportive environment fosters this compassion, allowing for meaningful reflection. However, challenges like lack of instructor support, poor role models, heavy workloads, or bullying can lead to cynicism and discouragement in students [5]. The study by Samson-Akpan et al. found that nursing students showed high sensitivity to patients' needs, but there is a significant need to improve their communication skills and insight into patient problems [6]. In the recent years, nurses often experience compassion fatigue and become less compassionate in providing care [7].

Compassionate care shortens treatment times, improves provider well-being, increases nurses' sense of value and motivation to provide even better care, and has a positive effect on patients' health and hospital experiences [5, 8, 9]. Compassion enables nurses to understand and motivate patients, respond effectively to their needs, and anticipate their behavior. When a nurse's empathy is high, they can provide meticulous care based

on a thorough understanding of the patient's emotional state [10]. Lack of compassion has been connected to an increase in patient and family complaints, higher healthcare costs, and unfavorable medical events [8].

Given the vital importance of compassion competence in clinical settings, identification of its key influencing factors is of paramount significance. Emotional intelligence and compassion are critical interpersonal skills for developing confident, empathic communication [9]. The ability to recognize, use, control, and comprehend emotions in both oneself and others is a prerequisite for nurses to provide compassionate care [11]. Nursing care incorporates human relationships and emotions as a fundamental aspect that enhances the quality of care. It improves patient satisfaction with the experience and care given when nurses recognize, understand, and control their own emotions as well as those of their patients [12]. The nursing profession prioritizes emotional intelligence to effectively meet patients' care needs and collaborate with multidisciplinary teams. Consequently, nursing students equipped with heightened emotional intelligence contribute to care that is both compassionate and highly collaborative [13]. There are few studies about the associations between emotional intelligence with compassion [14, 15], self-compassion [14, 16, 17], compassion satisfaction, compassion fatigue [18], and empathy [19, 20]. A study in Kashan, Iran reported no significant correlation was found between emotional intelligence scores and the nurses' overall caring behaviors [21].

However, Gilbert's research indicates that some individuals are hesitant to show compassion. This fear, according to Gilbert, can manifest as a fear of compassion—of compassion toward oneself, of compassion toward others, or of compassion from others [22]. Giving patients the right care may be hampered by a fear of compassion. A fear of compassion prevents people from empathizing with others or from trying to ease their suffering [23]. Nursing students' fear of compassion is positively correlated with burnout and negatively affects their levels of empathy. Self-compassion is identified as a protective factor for psychological well-being and can help reduce stress. Compassion training for nursing students can help lessen the fear of compassion [24]. Research has indicated a positive correlation between the fear of compassion and negative emotion regulation strategies, anxiety, stress, depression, and burnout. Additionally, there is a strong and negative correlation between compassion for others and fear of compassion. The research literature has highlighted fear of compassion as a significant impediment to patient communication. Fear of compassion is especially important in nursing because nurses interact with patients more than any other employee [25]. The findings of the study conducted by Takmak et al. (2024) demonstrated that 33.5% of the total variance

in caring behaviors could be explained by the fears of self-compassion, compassion for others, and compassion from others [26].

Nursing students are the future nurses who must practice compassionate care in clinical settings. Hence, their competencies in compassionate care greatly affect the quality of their patients' care. Therefore, it is necessary to identify factors affecting it, such as emotional intelligence and fear of compassion. A literature review on this topic showed that there are very sporadic studies conducted in Iran and nothing at Hamadan University of Medical Sciences. Based on the information stated above, the current study aimed to determine the level of compassion competence and its relationship with emotional intelligence and fear of compassion in nursing students.

Materials and methods

Study design

This study utilized a cross-sectional correlational research design, conducted between March 15, 2024, and July 5, 2024. The research followed the guidelines of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) to ensure transparent and comprehensive reporting of methodology and results.

Setting, sample and sampling method

The study population comprised undergraduate nursing students enrolled in the Faculty of Nursing and Midwifery at Hamadan University of Medical Sciences during the second semester of the 2023/2024 academic year. Located in western Iran, this university offers nursing education at the undergraduate, master, and doctoral levels.

Data were collected via census sampling. Participants were selected based on the following criteria: (a) engaged in undergraduate studies, (b) being a three and four year nursing student, (c) studying in the second semester of the 2023/2024, academic year, (d) willing to participate in the study, and (e) no history of physical or mental problems. Incomplete questionnaires were excluded. The target number of third and fourth-year undergraduate nursing students for the study was 215. A total of 215 questionnaires were distributed, but 2 were discarded because large number of questions in these two questionnaires were unanswered and were incompletely filled out, resulting in a response rate of 99.06%.

Instruments

- (a) **General Information Questionnaire.** Designed by the researcher, the variables gender, age, marital status, and educational semester are included.
- (b) **Wong and Law Emotional Intelligence Scale (WLEIS).** This was designed by Wong and Law

(2002) to measure nurses' emotional intelligence. This scale measures four dimensions of emotional intelligence (four items per dimension): self-emotional appraisal, others' emotional appraisal, use of emotions, and regulation of emotions. The scale consists of sixteen short statements. Responses to the WLEIS scale are presented as 07-point Likert-type questions, ranging from 1 (totally disagree) to 7 (totally agree). Higher scores indicate a higher level of emotional intelligence [27]. In study of Ksiksou et al. (2023) and Bighami et al. (2013), the Cronbach's alpha value of the scale was found to be 0.96 and 0.86, Respectively [28, 29].

- (c) **The Fear of Compassion Scale.** The Fear of Compassion Scale was created by Gilbert et al. (2011), comprising three subscales and 38 items: (1) Fear of compassion for others (10 items) (2) Fear of receiving compassion from others (13 items) (3) Fear of self-compassion (15 items). A five-point Likert scale is used to grade this questionnaire, with scores ranging from 0 (completely disagree) to 4 (completely agree). The Cronbach's alphas for three scales in students were 0.85, 0.84, and 0.92, respectively. The Cronbach's alphas for three scales in therapists were 0.87, 0.78, and 0.85, respectively [22]. Khanjani et al. (2020) carried out a study to assess psychometric properties, construct validity, reliability of fear of compassion scale among Iranian nurses. The three-factor model's proper fit was demonstrated by the results of the confirmatory factor analysis. Cronbach's alpha coefficient for the subscales of the questionnaire including the fear of receiving compassion from others, the fear of receiving compassion from others, and the fear of self-compassion were 0.85, 0.95 and 0.96 respectively [25].
- (d) **The Compassion Competence Scale.** This scale was developed by Lee and Seomun (2016). It is a self-report tool to measure the level of compassion competence from the perspective of nurses. This tool contains 17 questions with three subscales. These three subscales are: communication (eight items), sensitivity (five items) and insight (four items). Responses to the compassion competence scale are presented as 05-point Likert-type questions, ranging from 1 (totally disagree) to 5 (totally agree). Dimension scores can be obtained by calculating the means of the item-scores in each dimension. The total mean for the entire scale can also be calculated. The highest score that can be obtained from the scale is 5 and the lowest score is 1. As the score increases, the level of compassion competency increases. The reliability using Cronbach's alpha coefficient was 0.91 for instrument as a whole and

0.88 for communication, 0.77 for sensitivity, and 0.73 for insight subscales. The test–retest reliability for the instrument was 0.80 [4]. This questionnaire has been psychometrically evaluated in Iran by Niroomandan and Ahi (2019). The findings of this study confirmed the three-factor structure obtained by Li and Semnon (2016) with 16 questions and provided practical advices to nurses and responsible organizations, for using this scale. Retest reliability coefficients for the three factors (communication, sensitivity and insight) were obtained 74.0, 69.0 and 80.0 and Cronbach's alpha coefficients were obtained 81.0, 76.0 and 90.0 respectively [30].

Data collection procedure

After approving the proposal of the study in the Hamadan University of Medical Sciences' research and technology Vice Chancellor, we received a letter of recommendation from that unit; we presented it to the head of faculty of nursing and midwifery and obtained permission from her. The research process began with obtaining statistics of the nursing students from the faculty education affairs. The data collection location was determined based on the students' schedule, class, or clinical departments. The questionnaire was personally given to the students by the researcher. Initially, the purpose of the research and the researcher's contact information were provided to the students to address any questions or concerns they might have. Additionally, detailed explanations were given to the students about the voluntary nature of participation, their right to withdraw from the study, and the confidentiality of their information. Written consent was obtained from all participants. The students were asked to complete the questionnaires at a suitable time to minimize fatigue and emotional influence, and a specific time was set for questionnaire collection.

Ethical consideration

The Ethics Committee of the Hamadan University of Medical Sciences approved this work (ethics approval code: IR.UMSHA.REC.1402.734). The ethical considerations in this study included the right to withdraw from the study, the right to volunteer participation, ensuring confidentiality of the data, and obtaining written informed consent from all participants. A researcher, unrelated to the students, was responsible for data collection to avoid undue influence and potential coercion.

Data analysis

The data collected were analyzed using, the independent sample t-test, analysis of variance (ANOVA), Pearson's correlation coefficient, and multiple regression analysis, enter method, with SPSS software, version 24.

Results

As shown in Tables 1, 213 students have completed the questionnaire. The mean (SD) age for participants was 22.68 (1.43) years; 51.6% were female; the majority were single (98.1%). No statistically significant relationship was observed between “research variables” and “age, gender, educational semester or marital status”.

The mean (SD) score of emotional intelligence was 80.37 (15.36), the mean (SD) score of fear of compassion was 63.15 (22.09), and the mean (SD) score of compassion competence was 61.68 (7.47). The lowest level of emotional intelligence was related to the subscale of “regulation of emotions” (4.65 with SD 1.33), while the highest was associated with the subscale of “self-emotional appraisal” (5.28 with SD 1.21). The lowest level of fear of compassion was related to the subscale of “fear of self-compassion” (1.31 with SD 0.81), while the highest was associated with the subscale of “fear of compassion for others” (2.17 with SD 0.68). The lowest level of compassion competence was related to the subscale of “insight” (3.74 with SD 0.57), while the highest was associated

Table 1 Characteristics of participants (N=213)

Variable	F (%)	Emotional intelligence		Fear of compassion		Compassion competence	
		Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value
Gender	Male	103 (48.4)	p=0.840	65.53 (20.91)	p=0.129	60.80 (7.55)	p=0.099*
	Female	110 (51.6)		60.93 (23.01)		62.50 (7.34)	
Marital status	Single	209 (98.1)	p=0.806	63.18 (22.26)	p=0.916	61.69 (7.51)	p=0.802*
	Married	4 (1.9)		62.00 (11.74)		60.75 (6.39)	
Educational semester	5th	39 (18.3)	p=0.481	61.94 (22.72)	p=0.778	60.33 (6.24)	p=0.663**
	6th	52 (24.4)		61.05 (21.84)		62.15 (6.90)	
	7th	59 (27.7)		65.11 (23.15)		61.84 (7.57)	
	8th	63 (29.6)		63.80 (21.21)		61.96 (8.54)	
Variable	Mean (SD)	r	p-value	r	p-value	r	p-value
Age	22.68 (1.43)	r=0.027	p=0.696	r=-0.017	p=0.805	r=-0.012	p=0.862***

* T- test for independent samples; ** Analysis of variance (ANOVA); *** Pearson's correlation coefficient

Table 2 Correlations between emotional intelligence and fear of compassion with compassion competence

Variables		Compassion competence				Mean (SD)	Mean (SD)
		Communication	Sensitivity	Insight	Total		
Emotional intelligence	Self-emotional appraisal	$r=0.094$ $p=0.173$	$r=0.189$ $p=0.006$	$r=0.078$ $p=0.256$	$r=0.144$ $p=0.036$	21.12 (4.85)	5.28 (1.21)
	Others' emotional appraisal	$r=0.215$ $p=0.002$	$r=0.268$ $p<0.001$	$r=0.163$ $p=0.017$	$r=0.261$ $p<0.001$	19.69 (4.60)	4.92 (1.15)
	Use of emotions	$r=0.138$ $p=0.045$	$r=0.205$ $p=0.003$	$r=0.153$ $p=0.025$	$r=0.195$ $p=0.004$	20.94 (4.72)	5.23 (1.18)
	Regulation of emotions	$r=0.084$ $p=0.222$	$r=0.266$ $p<0.001$	$r=0.146$ $p=0.033$	$r=0.189$ $p=0.006$	18.60 (5.32)	4.65 (1.33)
	Total	$r=0.165$ $p=0.016$	$r=0.295$ $p<0.001$	$r=0.171$ $p=0.012$	$r=0.249$ $p<0.001$	80.37 (15.36)	5.02 (0.96)
	Mean (SD)	26.85 (3.79)	19.84 (2.84)	14.97 (2.30)	61.68 (7.47)		
Fear of compassion	Fear of compassion for others	$r=-0.095$ $p=0.166$	$r=-0.143$ $p=0.038$	$r=-0.054$ $p=0.434$	$r=-0.119$ $p=0.083$	21.70 (6.87)	2.17 (0.68)
	Fear of receiving compassion from others	$r=-0.240$ $p<0.001$	$r=-0.165$ $p=0.016$	$r=-0.154$ $p=0.24$	$r=-0.232$ $p=0.001$	21.65 (9.07)	1.66 (0.69)
	Fear of self-compassion	$r=-0.249$ $p<0.001$	$r=-0.222$ $p=0.001$	$r=-0.096$ $p=0.164$	$r=-0.241$ $p<0.001$	19.79 (12.25)	1.31 (0.81)
	Total	$r=-0.266$ $p<0.001$	$r=-0.235$ $p=0.001$	$r=-0.133$ $p=0.052$	$r=-0.266$ $p<0.001$	63.15 (22.09)	1.66 (0.58)
Mean (SD)		3.83 (0.54)	3.97 (0.56)	3.74 (0.57)	3.85 (0.46)		

Table 3 Correlations between emotional intelligence with fear of compassion

Variables		Fear of Compassion			
		Fear of compassion for others	Fear of receiving compassion from others	Fear of self-compassion	Total
Emotional intelligence	Self-emotional appraisal	$r=-0.015$ $p=0.832$	$r=-0.254$ $p<0.001$	$r=-0.291$ $p<0.001$	$r=-0.270$ $p<0.001$
	Others' emotional appraisal	$r=-0.043$ $p=0.535$	$r=-0.126$ $p=0.067$	$r=-0.130$ $p=0.059$	$r=-0.137$ $p=0.046$
	Use of emotions	$r=-0.016$ $p=0.820$	$r=-0.218$ $p=0.001$	$r=-0.299$ $p<0.001$	$r=-0.260$ $p<0.001$
	Regulation of emotions	$r=-0.019$ $p=0.778$	$r=-0.095$ $p=0.166$	$r=-0.155$ $p=0.024$	$r=-0.131$ $p=0.056$
	Total	$r=-0.029$ $p=0.674$	$r=-0.218$ $p=0.001$	$r=-0.276$ $p<0.001$	$r=-0.252$ $p<0.001$
	Mean (SD)				

with the subscale of “sensitivity” (3.97 with SD 0.56). See Table 2 for details.

The results indicated a positive and statistically significant relationship between the components of emotional intelligence and the total score of compassion competence ($p<0.05$). The total score of emotional intelligence was positively correlated with the components of compassion competence including communication ($r=0.165$, $p=0.016$), sensitivity ($r=0.295$, $p<0.001$), insight ($r=0.171$, $p=0.012$), and also the total score of compassion competence ($r=0.249$, $p<0.001$). The results are shown in Table 2.

The results indicated a negative and statistically significant relationship between the components of fear of compassion (except for fear of compassion for others) and the total score of compassion competence ($p<0.05$). The total score of fear of compassion was negatively correlated with the components of compassion competence

including communication ($r=-0.266$, $p<0.001$), sensitivity ($r=-0.235$, $p=0.001$), and also the total score of compassion competence ($r=-0.266$, $p<0.001$). No statistically significant relationship was observed between the fear of compassion for others and the total score of compassion competence ($p>0.05$). The results are shown in Table 2.

The results indicated a negative and statistically significant relationship between the components of emotional intelligence (except for regulation of emotions) and the total score of fear of compassion ($p<0.05$). The total score of emotional intelligence was negatively correlated with fear of receiving compassion from others ($r=-0.218$, $p=0.001$), fear of self-compassion ($r=-0.276$, $p<0.001$), and the total score of fear of compassion ($r=-0.252$, $p<0.001$). No statistically significant relationship was observed between the total score of emotional intelligence and fear of compassion for others ($p>0.05$). The results are shown in Table 3.

As shown in Table 4 from Models M1 to M7, a linear regression analysis was conducted to predict the factors that are more likely to influence the compassion competence. Model M6 show that “others’ emotional appraisal” ($\beta = 0.254$; $p < 0.01$) significantly correlates with compassion competence. By controlling demographic characteristics, the emotional intelligence components, fear of compassion for others, fear of receiving compassion from others, and fear of self-compassion could predict 16.1% of the variance of variable of compassion competence. The results from M7 demonstrate the total score of emotional intelligence ($\beta = 0.191$; $p < 0.01$) had a positive significant influence on the nursing students’ compassion competence, whereas the total score of fear of compassion ($\beta = -0.213$; $p < 0.01$) negatively influenced the nursing students’ compassion competence. By controlling demographic characteristics, emotional intelligence and fear of compassion predict 12.4% of the variance of the nursing students’ compassion competence.

As shown in Table 5 from Models M1 to M8, a linear regression analysis was conducted to predict the factors that are more likely to influence the fear of compassion and its components. Model M7 show that “use of emotions” ($\beta = -0.196$; $p < 0.05$) significantly correlates with fear of compassion. By controlling demographic characteristics, the emotional intelligence components could predict 10.5% of the variance of variable of fear of compassion. The results from M8 demonstrate the total score of emotional intelligence ($\beta = -0.248$; $p < 0.001$) negatively influenced the nursing students’ fear of compassion. By controlling demographic characteristics, the total score of emotional intelligence predict 7.9% of the variance of the nursing students’ fear of compassion. Models M1 to M6 showed that only model M5 is statistically significant and appropriate. In this model, the “use of emotions” with $\beta = -0.244$ and $p < 0.01$ statistically has a negative and significant relationship with the fear of self-compassion. By controlling demographic characteristics, emotional

Table 4 Regression analysis of general characteristics, emotional intelligence, and fear of compassion with compassion competence

Dependent variable		Compassion competence						
		M1	M2	M3	M4	M5	M6	M7
		β	β	β	β	β	β	β
Control variables								
Gender	Male vs. Female	-0.121	-0.118	-0.115	-0.091	-0.092	-0.090	-0.093
Marital status	Single vs. Married	-0.032	-0.015	-0.035	-0.035	-0.032	-0.013	-0.036
Educational semester	6th vs. 5th	0.118	0.065	0.84	0.109	0.111	0.062	0.086
	7th vs. 5th	0.109	0.074	0.097	0.125	0.127	0.084	0.114
	8th vs. 5th	0.115	0.076	0.108	0.130	0.131	0.089	0.122
Age		-0.017	-0.011	-0.028	-0.031	-0.032	-0.020	-0.038
Independent variable								
Emotional intelligence	Self-emotional appraisal		-0.147				-0.197	
	Others’ emotional appraisal		0.240*				0.254*	
	Use of emotions		0.123				0.073	
	Regulation of emotions		0.133				0.147	
	Total			0.244**				0.191*
Fear of Compassion	Fear of compassion for others				-0.062		-0.048	
	Fear of receiving compassion from others				-0.0103		-0.114	
	Fear of self-compassion				-0.0161		-0.134	
	Total					-0.260**		-0.213*
R²		0.023	0.110	0.082	0.090	0.090	0.161	0.124
AdjR²		-0.005	0.066	0.050	0.050	0.059	0.106	0.089
F		0.812	2.487*	2.610***	2.234***	2.883*	2.938*	3.593*
Durbin-Watson		1.932	1.956	1.968	1.976	1.968	1.997	1.995
Tolerance		0.487–0.974	0.475–0.946	0.487–0.986	0.512–0.958	0.524–0.974	0.410–0.933	0.486–0.974
VIF		1.027–2.053	1.057–2.351	1.014–2.054	1.044–2.060	1.019–2.056	1.071–2.437	1.027–2.058

*Refers to $p < 0.01$; **refers to $p < 0.001$; ***refers to $p < 0.05$

Table 5 Regression analysis of general characteristics, emotional intelligence with fear of compassion

Dependent variable		Fear of compassion for others		Fear of receiving compassion from others		Fear of self-compassion		Total of fear of compassion	
		M1	M2	M3	M4	M5	M6	M7	M8
		β	β	β	β	β	β	β	β
Control variables									
Gender	Male vs. Female	0.015	0.014	0.060	0.057	0.153	0.143	0.114	0.103
Marital status	Single vs. Married	0.085	0.088	0.037	0.026	-0.047	-0.060	0.016	0.001
Educational semester	6th vs. 5th	0.090	0.086	-0.034	-0.020	-0.030	-0.039	-0.002	0.008
	7th vs. 5th	0.122	0.116	-0.001	0.028	0.034	0.062	0.057	0.079
	8th vs. 5th	0.077	0.071	0.017	0.031	0.053	0.049	0.060	0.066
Age		-0.051	-0.047	-0.014	-0.023	-0.037	-0.048	-0.042	-0.046
Independent variable									
Emotional intelligence	Self-emotional appraisal	0.038		-0.234*		-0.189		-0.189	
	Others' emotional appraisal	-0.041		0.053		0.078		0.052	
	Use of emotions	-0.015		-0.139		-0.244**		-0.196*	
	Regulation of emotions	-0.035		0.085		0.050		0.052	
	Total		-0.035		-0.214**		-0.152*		-0.248***
R²		0.019	0.017	0.081	0.053	0.140	0.056	0.105	0.079
AdjR²		-0.030	-0.016	0.036	0.021	0.098	0.023	0.061	0.048
F		0.387	0.521	1.791	1.642	3.298**	1.726	2.374*	2.511*
Durbin-Watson		1.876	1.883	2.019	2.010	1.803	1.838	1.937	1.948
Tolerance		0.425–0.946	0.487–0.986	0.425–0.946	0.487–0.986	0.425–0.946	0.487–0.979	0.425–0.946	0.487–0.986
VIF		1.057–2.351	1.027–2.054	1.057–2.351	1.014–2.054	1.057–2.351	1.022–2.053	1.057–2.351	1.014–2.054

*Refers to $p < 0.05$; **refers to $p < 0.01$; ***refers to $p < 0.001$

intelligence components have been able to predict 14% of the variance of the fear of self-compassion variable.

Discussion

The findings of the present study showed that the mean emotional intelligence score of the nursing students was 5.02 (0.96), reflecting a moderate-high level of emotional intelligence. The results are consistent with previous study in Spain [31], while the mean score of emotional intelligence was lower than the study results of Ksiksou et al. (2023) in Moroccan that found a high level of emotional intelligence among nursing students [28]. In the present study, the highest level of emotional intelligence was perceived in “self-emotional appraisal” and “use of emotions”, while the lowest was reported in “regulation of emotions” and “others’ emotional appraisal”. The results of two previous studies indicated that the subscales of “regulation of emotions” and “use of emotions” had the lowest scores [28, 31]. It can be said according to the definitions of the subscales [32], the nursing students had low abilities to perceive and understand the emotions of

people around them. Additionally, their ability to regulate their emotions, which empowers them to recover more quickly from mood swings and anxiety, was also low. Hence, there is a necessity to cultivate empathy, compassion, and emotional management skills among nursing student.

This study showed that nursing students had a lower than the average level of fear of compassion. In the present study, the mean score of fear of compassion was lower than the two studies conducted among Iranian nurses [25, 33]. However, in the present study, the level of “fear of compassion for others” subscale was higher than the average. The highest level of fear of compassion was perceived in “fear of compassion for others”, while the lowest was reported in “fear of self-compassion”. This result was in agreement with study of Khanjani et al. (2020) for Iranian nurses [25]. According to the study results of Takmak and Karaçar (2024), the mean scores of nurses on fear of compassion for others and from others were at a moderate level, and their scores on fear of self-compassion were close to a moderate level [26]. When

someone has compassion for others, they are able to feel their suffering and are willing to lend a hand. However, those who lack compassion are hesitant or inadequate to empathize with and relieve the suffering of others because they think that if they show compassion, others will take advantage of it or see them as weak and submissive, and as a result, they will suffer harm. They believe in general that people are unreliable when it comes to showing compassion [23].

The results of the present study showed that compassion competence is in moderate-high level. In the present study, the mean score of compassion competence is lower than the study results of Samson-Akpan et al. (2019) in Iraq, Nigeria, Oman and South Korea [34], Dincer and Çiftçi (2024) in Turkey among nursing students [35], and Afshar et al. (2022) in Iranian nurses [36]. Alquwez et al. (2020) highlighted the moderate level of compassion competence reported by nursing students in Saudi Arabia [7]. Among the reasons for the contradiction in findings among different studies, several factors affecting compassionate care can be mentioned. For example, in study of Su et al. (2020), the findings revealed that factors such as “gaining patient acceptance”, “motivation for professional growth” and “creating an emotional bond with patients” affecting the development of compassion competence. Barriers to compassionate care among nursing students include “mistrust”, “fear of harm from violence” and “heavy workloads”. Nursing educators should be role models for encouraging compassionate care [5]. One of the factors impacting students’ compassion competence is the exposure to complex patient conditions and the utilization of advanced technologies, which can often lead to the dehumanization of patient care. Additionally, nursing students may possess low compassion competence due to the demanding nature of patient care, non-standard working conditions, and an unsupportive clinical culture [2]. Also, the results of present study demonstrate the students’ highest level of compassion competence in identifying and reacting to the patients’ emotional changes. Previous studies also support the findings of the present study so that nursing students get the highest score in the component of sensitivity and the lowest in the component of insight [7, 34]. Undergraduate nursing programs ought to prioritize the development of effective communication skills and insight into patient problems as crucial components of compassion competence.

The results indicated a positive and statistically significant relationship between emotional intelligence and compassion competence. “Others’ emotional appraisal” has the greatest impact on the compassion competence. The results indicated a negative and significant relationship between emotional intelligence and fear of compassion. Emotional intelligence negatively influenced “Fear of self-compassion” and “fear of receiving compassion

from others” of nursing students. The research outcomes of Hajibabae et al. (2018) show a link between nursing students’ emotional intelligence and empathy. Positive relationships with patients and their families are more easily established by nurses who possess higher emotional intelligence. Furthermore, nurses with empathy skills are better able to control their emotions [37]. In this regard, the findings of Kılıç et al.’s study (2023) showed that a moderate, positive, and significant relationship was found between nurses’ compassion level and emotional intelligence levels [15]. It takes emotional intelligence to be compassionate and empathetic. To develop these skills, people need to understand the emotions of others. Empathy is based on emotional intelligence, which allows people to do things like: figure out what is really bothering other people; understand their own emotions; maintain a sincere interest in understanding others; communicate effectively, even when conveying unpleasant messages; and build rewarding and trusting relationships [18]. The results of other studies have shown a positive correlation between emotional intelligence and of self-compassion [38, 39].

“Fear of self-compassion” and “fear of receiving compassion from others” negatively influenced the compassion competence of student nurses. These results support earlier research findings that nursing students’ compassion competence, including “self-kindness,” “common humanity,” and “mindfulness,” is positively influenced by their sense of self-compassion [7]. The results of Takmak and Karaçar’s study (2024) clearly indicate that nurses’ caring behaviors are significantly more associated with their fear of self-compassion than their fear of compassion for others. This fear of compassion presents a notable barrier to providing compassionate care [26]. The results of other studies have shown a positive correlation between nurses’ levels of self-compassion and their caring behavior [7, 40–42]. When nurses are kind to themselves and receive compassion from others, it enables them to be kind to others and develop positive social relationships. This, in turn, helps them provide better care to others. Accepting life’s imperfections, appreciating common human experiences, and being kind to oneself during difficult times can help nurses understand the conditions of illness and suffering in patients, allowing them to provide quality care.

There are certain limitations in the research that need to be addressed in future studies. This study used a cross-sectional, correlational design which does not establish causality. The research data was gathered using self-report tools, which may lead to biased responses and possibly socially desirable responses. The sample was selected using census sampling from nursing students at Hamadan University of Medical Sciences, which may restrict the generalizability of the findings to a broader

population and other universities in the country. Therefore, similar studies should be performed with a longitudinal design and a larger sample size in the future.

Conclusion

The study shows that fear of compassion has a negative impact on compassion competence while emotional intelligence has a positive impact. It was discovered that fear of compassion and emotional intelligence were negatively correlated. Development programs for emotional intelligence are suggested to reduce nursing students' fear of compassion and improve their compassion competence. Interventions that will reduce nurses' fear of compassion may be one way to improve compassion competence.

Abbreviations

WLEIS Wong and Law Emotional Intelligence Scale

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Author contributions

Study conception and design: AS, ZP, KB; Data collection: KB; Data analysis and interpretation: AS, ZP; Drafting of the article: AS, ZP. All the authors have carefully reviewed the article and approved the final draft.

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Data availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate

The Ethics Committee of the Hamadan University of Medical Sciences approved this work (ethics approval code: IR.UMSHA.REC.1402.734). The ethical considerations in this study included the right to withdraw from the study, the right to volunteer participation, ensuring confidentiality of the data, and obtaining written informed consent from all participants. A researcher, unrelated to the students, was responsible for data collection to avoid undue influence and potential coercion.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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