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ORIGINAL RESEARCH

Emotional Intelligence and Critical Thinking Motivation among Nursing Students: Exploring Key Predictors and Demographic Influences

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Abstract

Background: Emotional intelligence (EI) and critical thinking motivation (CTM) are crucial for nursing students' development, particularly in patient care and clinical decision-making. However, empirical evidence on these constructs remains limited among nursing students in Saudi Arabia.
Purpose: This study aimed to investigate the relationship between EI and CTM among nursing students and to explore demographic variations and predictors of CTM.
Methods: This cross-sectional study included 215 undergraduate students from Saudi Arabia, recruited via convenience sampling. EI was assessed using the Schutte Self-Report Emotional Intelligence Test, and CTM was measured using the Critical Thinking Motivational Scale (CTMS). Data were analyzed using descriptive statistics, Chi-square tests, and multiple regression, with the significance level set at $p < .05$.
Results: A total of 215 participants were included in the analysis. EI and CTM scores varied, with 51.6% of participants exhibiting moderate levels of both. Higher EI was significantly associated with higher CTM scores ($\chi^2 = 29.9$, $p < .001$), with students with low EI demonstrating lower CTM and those with high EI demonstrating higher CTM. Demographic analysis showed that EI was higher among students living with their families ($p = .01$), while CTM scores were higher among older students ($p = .019$) and those in higher academic years ($p < .001$). Multiple regression identified EI, education level, and residence as positive predictors of CTM, while male gender was a negative predictor ($R^2 = .29$, $p < .001$).
Conclusion: These findings indicate that EI is significantly associated with CTM, suggesting that promoting EI and fostering supportive learning environments may enhance students' motivation to engage in critical thinking and contribute to their academic and professional development. Future research should employ longitudinal and intervention designs to examine causal relationships and explore potential mediating factors.

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1. Introduction

Emotional intelligence (EI), critical thinking (CT), and critical thinking motivation (CTM) are core constructs in nursing education that contribute to students' ability to make sound clinical decisions and provide safe, effective care. EI refers to the ability to perceive, understand, manage, and use emotions effectively in oneself and others, supporting emotional regulation and interpersonal competence in complex clinical environments (Dogham et al., 2025). CT is a cognitive ability that involves the systematic analysis, evaluation, and synthesis of information to form reasoned judgments and guide clinical decision-making (Görücü et al., 2025). CTM reflects the motivational disposition, including students' internal drive, interest, expectancy, and value, to engage in CT processes, such that higher motivation enhances the likelihood that students will apply their CT abilities when facing academic and clinical challenges (AlOtaibi et al., 2023). The distinction between CT as a cognitive skill and CTM as a motivational disposition is important because students may possess the cognitive capacity to think critically but use it only when motivated or when they see value in engaging in reflective reasoning. Together, these skills enable

nursing students to handle emotional challenges, make informed decisions in complex settings, and improve academic and clinical performance (ALmegewly et al., 2022; Budler et al., 2022). Research emphasizes their relationship and impact on shaping effective healthcare professionals (Deng et al., 2023; Li et al., 2021).

It is important to distinguish between critical thinking (CT) and critical thinking motivation (CTM). CT refers to the cognitive abilities involved in analyzing, evaluating, and synthesizing information to make informed, reasoned decisions (Facione, 2011), whereas CTM reflects students' internal drive, interest, and willingness to engage in critical thinking processes. While CT assesses what students can do cognitively, CTM evaluates how motivated students are to apply these skills in problem-solving and decision-making contexts. In this study, the Critical Thinking Motivation Scale (CTMS), developed by Valenzuela et al. (2017), was used to measure students' motivation toward critical thinking, thereby complementing the assessment of cognitive abilities in nursing education (Valenzuela et al., 2017).

In addition to cognitive and motivational factors, emotional intelligence (EI) may also influence students' engagement in critical thinking. EI refers to the ability to know, understand, and regulate one's own emotions as well as acknowledge and influence others' feelings. It involves skills such as empathy, self-regulation, and awareness of others, which are central to effective patient care and effective interpersonal communication within healthcare settings (Goleman, 1996). Previous research has demonstrated that higher EI is associated with better academic performance (ALmegewly et al., 2022; Budler et al., 2022) and improved clinical competence (Dou et al., 2022). Sociodemographic factors, such as age, gender, marital status, and level of study, have also been reported to influence EI (Almansour, 2023; Benjamin et al., 2024), with female students often demonstrating higher levels of EI (Deng et al., 2023).

The Ability Model of Emotional Intelligence (Mayer & Salovey, 1997) provides the theoretical foundation for this study, conceptualizing EI as a set of cognitive abilities that enhance thought processes, including the perception, understanding, and regulation of emotions (Mayer & Salovey, 1997). These EI abilities are theorized to support nursing students' CTM by helping them manage emotional responses to challenging situations, evaluate information objectively, and engage systematically in problem-solving. Prior evidence has demonstrated a positive correlation between EI and CT (Aghabarary & Khedmatizare, 2025; Ayed, 2025; Christianson, 2020). However, limited research has examined how EI influences CTM, particularly in relation to demographic factors among nursing students in the Saudi context. By explicitly linking EI abilities to CTM, this study aims to clarify how enhancing emotional competencies may promote more deliberate engagement in critical thinking and, ultimately, improve academic and clinical outcomes.

Building on this theoretical and empirical evidence, existing literature suggests that EI plays an important role in enhancing CTM and clinical competence among nursing students. EI has been linked to improved academic performance, decision-making, and problem-solving abilities, all of which are essential for safe and effective clinical practice. However, most previous studies have examined EI and CT separately, with limited evidence on their combined relationship or on the influence of demographic factors, particularly in the Saudi nursing education context. Understanding these relationships is essential for informing educational strategies. Integrating EI training into nursing curricula may better prepare students to manage the cognitive and emotional demands of nursing practice, ultimately improving patient care outcomes. Therefore, this study aimed to examine the association between EI and CTM among Saudi nursing students and to identify demographic factors associated with CTM.

2. Methods

2.1 Research design

A cross-sectional design was chosen because it allows efficient data collection from a large group of students at a single point in time, making it suitable for examining relationships among variables without requiring follow-up. This design is commonly used in educational and behavioral research where the primary aim is to assess current perceptions, characteristics, or associations rather than causality.

This study is part of a broader research project examining psychological and academic factors among university students. Findings from the same dataset examining academic atmosphere, academic self-perception, and student self-efficacy have been reported elsewhere (Alshowkan et

al., 2026). However, the present study focuses specifically on emotional intelligence and critical thinking motivation, addressing different research questions and analytical objectives.

2.2 Setting and samples

Participants were undergraduate nursing students enrolled in a nursing program in Saudi Arabia during the 2024–2025 academic year. All students from the first to fourth years were invited to participate. A convenience sampling technique was used to recruit participants because it enabled efficient access to all eligible students during the data collection period. The inclusion criteria were: (1) current enrollment in the nursing program at the time of data collection, and (2) informed consent to participate. The exclusion criteria were: (1) students who had withdrawn from the program, (2) students on academic leave during the study period, and (3) students who declined participation or failed to complete the questionnaire.

The sample size was calculated using G*Power (version 3.1), with a target power of 0.80, an α of 0.05, and a medium effect size of 0.5. The effect size was determined based on Cohen's criteria for medium effects (Cohen, 1988), which are commonly used in the social and behavioral sciences in the absence of prior effect size estimates. Consequently, a total of 214 students were recruited to ensure sufficient statistical power and to augment the robustness of the study's findings.

2.3 Measurement and data collection

Data were collected through the Schutte Self-Report Emotional Intelligence Test (SSEIT) and the Critical Thinking Motivation Scale (CTMS). The SSEIT, developed by Schutte et al. (1998), is a widely used 33-item scale measuring four domains: (1) perception of emotion, (2) regulation of self-emotions, (3) regulation of others' emotions, and (4) utilization of emotion. Respondents rate each item on a 5-point Likert scale from strongly disagree (1) to strongly agree (5). In the present study, the Arabic version of the SSEIT was used. Previous research has demonstrated reliability and construct validity in Arabic-speaking populations, reporting acceptable factor structures and good psychometric properties (Naeem & Muijtjens, 2015; Zoghlami et al., 2022). In the current study, the scale showed strong internal consistency (Cronbach's alpha = 0.878), supporting its reliability in this sample. These results indicate that the SSEIT provided a dependable measure of EI for the participants.

The CTMS examines the determinants of motivation for critical thinking, focusing on motivational factors rather than attitudes (Valenzuela et al., 2017). It measures five domains, including expectancy, attainment, utility, interest, and cost, across 19 items on a 6-point Likert scale (1 = strongly disagree to 6 = strongly agree). Because no formally validated Arabic version exists, the scale was translated using a forward–backward translation procedure and piloted with a small group of nursing students to ensure clarity and cultural appropriateness. Content validity was further evaluated through expert review, and minor adjustments were made to ensure linguistic and cultural relevance. The CTMS demonstrated strong internal consistency in this study (Cronbach's alpha = 0.905), supporting its reliability. These results indicate that the CTMS provided a valid and reliable assessment of the current sample.

Both instruments have been applied in nursing student populations. For example, SSEIT was used among 322 nursing students at Majmaah University (Saudi Arabia) to explore EI levels and sociodemographic differences (Almansour, 2023). Additionally, undergraduate nursing students in Egypt and Saudi Arabia have used the CTMS to assess CTM, reporting reliable internal consistency (Cronbach's alpha ≈ 0.892) (AlOtaibi et al., 2023).

The classification of EI and Cognitive Testing scores was conducted utilizing a unified percentile-based methodology. Scores were categorized into three distinct levels based on sample-specific percentile cutoffs: Low (≤ 25th percentile), Moderate (26th–75th percentile), and High (≥ 75th percentile). Specifically, EI scores were classified as Low (≤ 117), Moderate (118–137), and High (≥ 138), whereas CT scores were delineated as Low (≤ 67), Moderate (68–84), and High (≥ 85). The application of a singular classification system across these measures ensured uniformity and enhanced the interpretability of the findings.

Demographic data were collected using a researcher-prepared questionnaire based on a literature review, including age, gender, marital status, residence type, and academic year. Students were contacted via university email, which included an invitation letter explaining the study's purpose and procedures. Interested participants completed the self-report questionnaires

by scanning a QR code or by accessing the provided website link. Completion took approximately 20–30 minutes.

2.4 Data analysis

SPSS software was utilized for data entry and analysis. Descriptive statistics summarized participant characteristics, and Chi-square tests and Pearson correlations examined relationships among EI, CTM, and demographic variables. Multiple regression analysis identified predictors of CTM, with significance set at $p < 0.05$. Of the initial respondents, 215 participants were included in the final analysis after data screening. Three participants were excluded for >20% missing responses, consistent with standard survey data handling practices (Graham, 2009). An additional eight participants were excluded for unengaged responses, defined as a low variance (standard deviation ≤ 0.1) across all items, following established methods for identifying inattentive respondents (Meade & Craig, 2012).

Missing values for continuous variables were imputed using the mean, and for categorical variables using the median, in line with recommended approaches for cross-sectional survey data (Little & Rubin, 2019). Outliers were assessed using the Mahalanobis distance test in SPSS, with a critical value of 13.816; no participants exceeded this threshold, indicating no multivariate outliers. Although EI and CTM are continuous scales, they were categorized into low, moderate, and high levels for Chi-square analyses to compare frequency distributions across demographic groups and to facilitate interpretation, consistent with prior nursing education research (Ayed, 2025; Christianson, 2020)

2.5 Ethical considerations

The study received ethical approval from the Institutional Review Board (IRB) at Imam Abdulrahman Bin Faisal University (IAU) under approval number IRB-2024-04-090. Participants were informed of their voluntary participation and the confidentiality of their data. Participation may be discontinued at any time before data analysis without affecting one's enrollment and privileges. Informed consent was obtained electronically before participants accessed the online questionnaires.

3. Results

3.1 Characteristics of participants

The total number of participants eligible for analysis was 215 students. The demographic characteristics of the participants revealed that a significant majority (63.3%) were 20 years of age or younger. The sample was predominantly female, comprising 73.0% of participants. A substantial portion of the participants was single (93.5%). In terms of educational attainment, the largest subgroup consisted of second-year students (33.5%), followed by first-year students (30.2%). Regarding living arrangements, most participants resided with their families (83.3%), while 12.1% lived in school housing, and 4.7% shared an apartment with friends (Table 1).

Table 1. Demographic characteristics of the participants (n = 215)

Variables	Categories	Frequency (f)	Percentage (%)
Age (years)	≤ 20	136	63.3
	>21	79	36.7
Gender	Female	157	73.0
	Male	58	27.0
Marital status	Single	201	93.5
	Married	14	6.5
Education Level	Year 1	65	30.2
	Year 2	72	33.5
	Year 3	53	24.7
	Year 4	25	11.6
Living Status	with his Family	179	83.3
	School Housing	26	12.1
	Apartment with friends	10	4.7

3.2 Descriptive statistics and classification of EI and CTM

The descriptive statistics and classification of EI and CTM scores revealed varying levels among participants. The mean EI score was 127.0, with a median of 127. According to percentile categorization, 26.0% of participants demonstrated low EI, 51.6% fell within the moderate range, and 22.3% exhibited high EI. Similarly, the mean CTM score was 75.1, with a median of 75. The classification of CTM scores indicated that 27.0% of participants had low CTM, 51.6% exhibited moderate CTM, and 21.4% demonstrated high CTM. These findings suggest that the majority of participants displayed moderate levels of both EI and CTM (Table 2).

Table 2. Descriptive statistics and categorization of EI and CTM scores (n = 215)

Variable	Mean (SD)	Median (IQR)	Category	Score Range	Frequency (f)	Percentage (%)
EI	127.0 (13.9)	127 (20.0)	Low	≤ 117 (< 25th percentile)	56	26.0
			Moderate	118 – 137 (25th - 75th percentiles)	111	51.6
			High	≥ 138 (> 75th percentile)	48	22.3
CTM	75.1 (10.7)	75 (17.0)	Low	≤ 67 (< 25th percentile)	58	27.0
			Moderate	68 – 84 (Between 25th and 75th percentiles)	111	51.6
			High	≥ 85 (> 75th percentile)	46	21.4

Furthermore, as presented in Table 3, the result indicated a statistically significant moderate positive correlation between EI and CTM scores ($r = .341$, $p < 0.001$), indicating that higher levels of emotional intelligence are associated with higher levels of critical thinking motivation.

Table 3. Correlations between EI and CTM

Variable	n	1	2
1. EI	215	—	
2. CTM	215	.341**	—

Note. Pearson correlation coefficients are reported. $p < .001$ (2-tailed).

3.3 Association between EI and CTM categories

Table 4 shows a significant association between EI and CTM categories ($\chi^2 = 29.9$, $p < 0.001$). Specifically, students classified as having low EI were more likely to be in the low CTM category (50.0%), whereas those with high EI were more likely to be in the high CTM category (39.6%). These results indicate that higher EI levels were associated with higher CTM performance.

Table 4. Association between EI and CTM (n = 215)

Categories		CTM categories			Chi-Square	Sig.
		Low	Moderate	High		
EI	Low (≤ 117)	28 (50.0%)	21 (37.5%)	7 (12.5%)	29.9	< 0.001
	Moderate (118 - 137)	24 (21.6%)	67 (60.4%)	20 (18.0%)		
	High (≥ 138)	6 (12.5%)	23 (47.9%)	19 (39.6%)		

3.4 Comparison of EI and CTM scores across demographic variables

The comparison of EI scores across demographic variables revealed a significant association with residence ($p = 0.01$). Participants living with their families had the highest EI scores (128.2), whereas those in school housing (119.7) and those in apartments with friends (123.0) demonstrated comparatively lower scores. Post hoc analysis using Tukey's Honestly Significant Difference (HSD) test indicated that the difference between individuals living with their families and those in school housing was statistically significant ($p = 0.01$). No other demographic factors, including age, gender, marital status, or education level, were significantly associated with EI scores (Table 5).

For CTM, both age and education level were significantly associated with CTM scores. Older participants (aged 21 or older) had higher CTM scores (M = 77.37) than their younger counterparts (M = 73.82), with $p = 0.019$. Also, education level was significantly associated with CTM scores ($p < 0.001$), with fourth-year students scoring the highest (M = 84.72) compared with lower-year students. Post hoc analysis using Tukey's HSD indicated a significant difference between first-year and fourth-year students ($p < 0.001$). Although residence did not reach statistical significance ($p = 0.080$), students living in school housing had numerically higher CTM scores than those residing in alternative accommodations (Table 5).

Table 5. Comparison of EI and CTM scores across demographic variables

Variable	Category	EI			CTM scores		
		Mean (SD)	t/f	Sig.	Mean (SD)	t/f	Sig.
Age	≤20	127.9 (14.5)	1.40	0.163	73.82 (10.23)	-2.37	0.019
	> 21	125.2 (12.6)			77.37 (11.24)		
Gender	Female	127.2 (13.6)	0.50	0.625	75.34 (10.53)	0.50	0.617
	Male	126.1 (14.7)			74.52 (11.31)		
Marital	Single	127.0 (14.0)	0.31	0.757	75.00 (10.85)	-0.63	0.532
	Married	125.8 (13.4)			76.86 (8.92)		
Education	Year 1	127.4 (16.3)	1.65	0.180	73.49 (10.06)	8.51	<.001[b]
	Year 2	129.1 (13.3)			73.58 (10.78)		
	Year 3	125.2 (11.2)			74.68 (10.55)		
	Year 4	122.8 (13.3)			84.72 (7.73)		
Residence	With Family	128.2 (13.6)	4.76	0.01[a]	74.84 (10.61)	2.56	0.080
	School Housing	119.7 (12.8)			78.81 (11.49)		
	Apartment with Friends	123.0 (16.4)			70.50 (8.78)		

Notes. SD = standard deviation; Sig. = significance value; t = t-statistic; F = F-statistic.

[a]Tukey HSD; Family vs. School Housing ($p = 0.01$).

[b]Tukey HSD; First vs. Fourth ($p < 0.001$).

3.5 Multiple regression analysis examining predictors of CTM

The multiple regression analysis of variables associated with CTM among students (n = 215) showed several significant findings. The overall model was statistically significant ($F = 21.35$, $p < 0.001$) and explained 28.9% of the variance in the CTM scores ($R^2 = 0.29$). EI was the strongest predictor, with a positive and significant effect ($B = 0.32$, $p < 0.001$), indicating that higher EI scores were associated with higher CTM scores. Compared with first-year students, fourth-year students had significantly higher CTM scores ($B = 11.84$, $p < 0.001$), and students living in school apartments had higher CTM scores than those living with their families ($B = 6.90$, $p = 0.002$). In contrast, male students had significantly lower CTM scores than female students ($B = -3.80$, $p = 0.015$). These results suggest that EI, level of education, and residence type were positively associated with CTM, whereas gender was negatively associated with CTM scores (Table 6).

Table 6. Multiple regression of predictors of CTM scores among students (n = 215)

Variable	B	SE B	β	Sig.	R^2	F	Adj R^2
(Constant)	33.35	5.92	-	<0.001	0.29	21.35	0.276
EI	0.32	0.05	0.41	<0.001			
Education Level (Ref: First Year)							
Year 4	11.84	1.99	0.36	<0.001			
Residence (Ref: Family)							
School Housing	6.90	2.16	0.21	0.002			
Gender (Ref: Female)							
Male	-3.80	1.55	-0.16	0.015			

4. Discussion

This study aimed to investigate the relationship between EI and CTM among students, explore demographic variations, and identify significant predictors of CTM scores through multiple regression analysis. The findings revealed a moderate positive correlation between EI and CTM scores, indicating that students with higher EI tend to exhibit stronger CTM. Conversely, students with low EI were more likely to encounter difficulties with CTM, whereas those with high EI demonstrated greater proficiency. Demographic analysis indicated that EI was significantly higher among students living with their families, while CTM scores were elevated among older students and those in advanced academic years. Furthermore, multiple regression analysis identified EI, educational level, and residence as positive predictors of CTM scores, whereas male gender was a negative predictor. These results underscore the significance of EI in facilitating CTM and suggest that enhancing EI may improve students' cognitive engagement.

The positive correlation between EI and CT supports the idea that emotionally intelligent individuals are better able to manage their own emotions and understand those of others, which in turn facilitates clearer and more effective thinking (Ayed et al., 2025; Görücü et al., 2025). In the context of nursing, EI equips students with essential emotional regulation skills needed to navigate the complexities of clinical environments, settings where CTM is vital for safe and effective patient care (Dogham et al., 2025). Integrating EI into curricula can help students enhance their emotional regulation, self-awareness, and empathy, which form the foundation for CTM. Hasan and Noor (2024) reported similar findings, showing that nursing students with higher levels of EI exhibited stronger CTM abilities. This result is also supported by an integrative literature review of EI and CT among nursing students (Christianson, 2020), emphasizing that EI is not only crucial for emotional well-being but also enhances cognitive processes central to nursing education. As a profession, nursing demands not only technical expertise but also high-order thinking skills, such as CTM, to support sound clinical decision-making. This includes analyzing complex patient scenarios, evaluating options, and making informed judgments under pressure (Li et al., 2021). The findings of this study highlight that students with stronger EI are better equipped to engage in these demanding cognitive tasks, with greater emotional control and greater resilience when dealing with clinical stressors (Ndawo, 2021; Kaiafas, 2021). Through improved emotional regulation, emotionally intelligent students can think more clearly, manage uncertainty more effectively, and make more rational clinical decisions (Belay & Kassie, 2021). This result may be partially influenced by senior students' exposure to existing EI programs and curricular initiatives in Saudi Arabia, which align with Vision 2030's goals to modernize healthcare and enhance patient outcomes. These factors provide potential explanations for higher scores among advanced students, beyond statistical results.

Conversely, the study found that students with low EI were more likely to encounter difficulties with CTM. This is consistent with findings by Almansour (2023), which highlighted the importance of EI for effective learning and academic achievement among nursing students. Additionally, this finding aligns with previous research positing that low EI is associated with weaker academic achievement and lower clinical competence among nursing students (Dou et al., 2022). Students with low EI may struggle to manage emotions, leading to impulsive or biased decision-making and poor judgment in complex situations (Rodríguez-Leal et al., 2023). Therefore, a lack of EI can hinder students' ability to manage stress, communicate effectively, and engage in reflective thinking, skills essential for CTM. This emphasizes the importance of embedding EI development into nursing education to strengthen students' overall cognitive performance and professional readiness.

The demographic analysis revealed that students living with their families had significantly higher EI. This finding aligns with Baghdadi et al. (2023) and Mahrous et al. (2023), who identified family support and a stable home environment as key factors enhancing EI in students. In Saudi culture, strong familial bonds provide emotional stability and a sense of belonging, fostering higher EI and supporting students' ability to navigate academic and clinical challenges effectively (Ayed et al., 2025; Dogham et al., 2025).

CTM levels were higher among older students and those in advanced academic years, consistent with a previous study reporting that higher-level nursing students demonstrate more developed CTM skills (Alatawi et al., 2024). This development likely results from greater exposure to complex clinical scenarios and academic challenges that require ongoing application and refinement of CTM (Deng et al., 2023; Li et al., 2021). Progressive exposure, such as simulations,

case studies, and reflective exercises, allows students to integrate knowledge and skills effectively, promoting both cognitive and emotional competencies (Görücü et al., 2025).

Furthermore, EI, educational level, and residence were positive predictors of CTM, whereas male gender was a negative predictor. The association between higher educational levels and stronger CTM supports the importance of a progressive curriculum that enhances cognitive abilities through academic and clinical exposure. Alharbi et al. (2024) emphasized that engagement in activities such as virtual simulations significantly improves nursing students' CTM and decision-making skills. Interestingly, male gender emerged as a negative predictor, highlighting potential gender-related influences on cognitive engagement (Bataweel, 2023). Male students may be less inclined toward reflective and analytical thinking due to cultural or social norms, and societal expectations may limit emotional expression, affecting both emotional regulation and CTM (Deng et al., 2023). Understanding these gender differences can help educators develop targeted strategies to support equitable EI and CTM development across all students.

5. Implications and limitations

The results of this study have important implications for nursing education and curriculum design. Since EI and educational level were identified as significant predictors of CTM, nursing programs should prioritize the development of both EI and CTM throughout students' academic progression. Integrating EI training into nursing curricula can help students enhance emotional regulation, self-awareness, and empathy, which may, in turn, support their motivation to engage in critical thinking. Creating supportive learning environments that foster emotional growth, such as through mentorship programs or student-centered policies, may further strengthen EI and enhance CTM. Additionally, because higher academic levels were associated with stronger CTM, nursing curricula should provide students with frequent opportunities to engage in learning activities that foster CTM as they progress through their programs. Incorporating progressively challenging clinical simulations, case studies, and reflective activities can encourage students' engagement and motivation to apply CT in clinical contexts.

Overall, the findings highlight the importance of cultivating EI within nursing education. Programs that incorporate practice-based learning, simulation experiences, and reflective exercises can help students manage their emotions more effectively while strengthening their motivation to engage in critical thinking. Emphasizing both EI and CTM will better prepare nursing students for the complexities of clinical practice and support motivated, reflective clinical decision-making.

There are a few limitations of the current study that should be noted. First, the cross-sectional study design limits the ability to make causal inferences. Second, self-report questionnaires were used to collect data, which may introduce response bias. Third, the study included only nursing students from a single college in the eastern region of Saudi Arabia; therefore, the findings may not be generalizable to other populations. Consequently, results should be interpreted with caution, and future studies should address these limitations.

It is also important to note that higher EI and CTM scores among senior students may be influenced by curricular programs or national educational initiatives aimed at enhancing EI and clinical exposure. Since this study was not designed as a program evaluation, these factors could act as potential confounders when interpreting the results. Future research could control for such programmatic influences or explicitly evaluate their effects

6. Conclusion

This study investigated the relationship between EI and CTM among nursing students and examined how demographic factors influence these constructs. The findings demonstrate a positive correlation between EI and CTM, indicating that students with higher EI exhibit stronger motivation to engage in critical thinking. Additionally, demographic factors, including age, study level, residence, and gender, were found to significantly influence both EI and CTM. These results underscore the importance of integrating EI development programs into nursing curricula, as enhancing students' emotional skills can strengthen their motivation to engage in critical thinking, support effective clinical decision-making, and ultimately improve patient care outcomes.

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Author contribution

The author confirms sole responsibility for all aspects of this manuscript, including the study conception and design, data collection, analysis and interpretation, and manuscript preparation.

Conflict of interest

The author of this study declares no conflicts of interest.

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