

The Mediating Role of Emotional Intelligence in the Relationship Between Spiritual Education and Critical Thinking of Secondary High School Students

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Abstract

The purpose of this study was to investigate the mediating role of emotional intelligence in the relationship between spiritual education and the critical thinking among female students of secondary high schools in district 1 of Shiraz. The research was descriptive-correlational. The statistical population of this study included all female students of secondary high schools in district 1 of Shiraz, which were 9080 individuals during the 2024-2025 academic year. The sample size included 368 students, selected through cluster random sampling based on Krejciey-Morgan's table. Data were collected using three standardized questionnaires: the Critical Thinking Skills Questionnaire by Facione and Facione (1990), the Standardized Emotional Intelligence Questionnaire by Goleman (2001), and the Spiritual Education Questionnaire by Bayati et al. (2017). Face validity was confirmed by experts, and reliability was verified by calculating Cronbach's alpha coefficients of 0.86, 0.82, and 0.90, respectively. The collected data were statistically analyzed using SPSS and AMOS software through structural equation modeling. The results of the structural equation modeling indicated that the mediating role of emotional intelligence in the relationship between spiritual education and the critical thinking of female students of secondary high schools in district 1 of Shiraz is confirmed.

Key Words: Spiritual Education, Emotional Intelligence, Critical Thinking, Mediating Role.

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Introduction

Given the rapidly advancing developments in various fields in the contemporary century, educational systems must keep pace with these changes to prepare students to effectively face the challenges they encounter in life. The demands, needs, and competencies required by the new century necessitate new ways of thinking, learning, and teaching. Modern societies need individuals who can critically research and structure information, solve problems using their knowledge and experience, be creative, innovative, possess diverse skills, and have the ability to communicate effectively and collaborate (Sadat & Mohsenpour, 2023).

Critical thinking is a fundamental cognitive skill involving the analysis, evaluation, and reflective questioning of information, ideas, and arguments before accepting or rejecting them. A key characteristic of critical thinking is the ability to think independently and objectively without being easily influenced by biases, emotions, or personal beliefs. This ability enhances informed decision-making and effective problem-solving, enabling the identification and analysis of the validity and reliability of information sources, and consequently, the perception of reality (Ramírez et al., 2021). Individuals with critical thinking skills can distinguish between correct and incorrect information and objectively evaluate stimuli around them beyond existing paradigms, which is crucial for constructing their worldview. Developing critical thinking enables a deeper and more comprehensive understanding of oneself, the decisions one makes, and the impact of one's actions. Furthermore, critical thinking enhances the ability to reason in a coherent and persuasive manner, allowing individuals to construct solid arguments, which in turn promotes social interaction and dialogue (Tobón & Luna, 2021). Students' critical thinking skills are influenced by numerous factors, including spiritual education and emotional intelligence.

Today, the growth and development of spiritual education are taken seriously in many countries worldwide. Conversely, the literature on spiritual education has also become increasingly prevalent in our country in recent decades (Hoshengizadeh et al., 2023). Spirituality means striving to discard mistaken and unrealistic perceptions of the world and to better know one's own soul and psyche, or to relinquish selfishness and egotism and strive to understand life and existence. Those interested in spiritual meaning seek to better know their true selves. Adolescent students, possessing a pure nature like a mirror, if placed under the light of correct and logical education and guidance, can provide a fertile ground for experiencing spiritual delights in adulthood. Today, it is believed that there is a connection and correlation between some deviant behaviors of students and a lack of spirituality. It is worth noting that the discussion of spiritual education, which also encompasses religious education, is one of the most important and fundamental issues needed by families and society. Spiritual education is an innate matter that must be actualized from potentiality and involves cultivating will and faith, moral virtues, as well as

emotions in students, which also includes religious education. In recent years, within the domain of education, significant interest has been generated regarding meaning, purpose, and the aim of life in individuals. Studies show that spirituality and the tendency towards it, meaning spiritual orientation and its application, have spread their umbrella over all aspects of individuals' lives. The key point is that if we want to introduce and improve spirituality in the lives of students and children, it is necessary to understand how they experience and represent spirituality and being spiritual in their daily lives. This knowledge and awareness will be the foundation for starting the work (Hosseinalizadeh, 2022).

Emotional intelligence refers to a type of mental ability, representing an individual's emotional and social competencies that can lead to abilities such as communication, recognizing one's own strengths and weaknesses and those of others (Khalili & Raeisi, 2024). Emotional intelligence means the ability to control one's own emotional impulses, understand the innermost feelings of others, behave calmly and prudently in human relationships with others, self-restraint, enthusiasm, and perseverance (Haddadnia & Jokar, 2016). Emotional intelligence involves perceiving emotions accurately and appropriately, generating and accessing emotions to facilitate thought, understanding emotional knowledge, and flexibly regulating emotions to promote emotional and intellectual growth. As a subset of social intelligence, emotional intelligence enables individuals to manage their own emotions and those of others. Individuals with high emotional intelligence perceive their emotions accurately and use them in an integrated manner (Afsari et al., 2022).

Critical thinking skill, as one of the most important cognitive skills, plays a key role in learning, problem-solving, and decision-making. This skill helps individuals analyze information more deeply, evaluate arguments, and reach logical conclusions. Given the increasing importance of critical thinking skills in today's world, the present study investigates the impact of this skill on the personal and social skills of students. Strengthening critical thinking skills in students brings them numerous benefits. This skill can help them learn better, solve complex problems, make sound decisions, communicate effectively, and participate actively in society (Mousavizadeh et al., 2024). For students to be well-educated and become useful individuals in the future, they must be thoughtful, creative, critical, and possess scientific insight. Strengthening students' thinking skills can empower them to easily face various problems and consequently perform more successfully in their educational and familial duties. Students' thinking skills are one of the issues neglected in the country's educational system, especially in smaller and less developed countries.

Salarvand et al. (2024), in a study, investigated the relationship between emotional intelligence with problem-solving and creative thinking in students. Findings indicated that emotional intelligence has a significant positive relationship with problem-solving ability and creative thinking; meaning that students with higher levels of emotional intelligence have greater ability in problem-solving and demonstrating creativity. Salimi and Noferasti (2024), in

a study, examined the relationship between spiritual education, academic engagement, and emotional intelligence of high school students in Shushtar County. The results of the correlation matrix in this study showed a significant relationship between spiritual education, academic engagement, and emotional intelligence of high school students in Shushtar County. Sarlak (2023), in a study, investigated the impact of teaching spiritual skills on the morale of students and the improvement of creative thinking from the perspective of high school students in Bandar Abbas. The results of structural equation modeling in this study showed that teaching spiritual skills had a positive and significant effect on students' morale and the improvement of their creative thinking. Rezaei et al. (2023), in a study, investigated the relationship between emotional intelligence and creative thinking of teachers. Results showed that emotional intelligence and creative thinking are two concepts aligned with each other. Emotional intelligence can nurture creative thinking because, by controlling emotions and using them appropriately, the mind can better provide more creative solutions when facing challenges and problems. On the other hand, creative thinking can strengthen emotional intelligence because, by generating new and innovative ideas, the best solutions for emotional problems can be found and dealt with effectively. Yazdanpour et al. (2020), in a study, presented a model of the role of critical thinking and emotional intelligence on the academic achievement of students. The research results showed that critical thinking has a significant effect on the academic achievement of student-athletes. Also, the results of the present research showed that emotional intelligence has a significant effect on the academic achievement of student-athletes. Finally, based on the final research model, there was a significant relationship between critical thinking, emotional intelligence, and students' academic achievement.

Hasan and Noor (2024), in a study, investigated the correlation between emotional intelligence and the disposition toward critical thinking among undergraduate nursing students in Saudi Arabia. Results indicated a positive correlation between the two variables. The variables differed among nursing students depending on their academic year. Consequently, higher levels of EI and critical thinking skills in nursing students were associated with improved problem-solving skills and better judgment, which aids in the development of future EI and critical thinking nursing professionals. Li et al. (2021), in a study, investigated the relationship between critical thinking dispositions, emotional intelligence, and conflict management styles among medical students. This research aimed to assess the critical thinking of medical students and examined the correlation of emotional intelligence and five conflict management styles with critical thinking. Results indicated that emotional intelligence was a significant predictor for critical thinking: higher emotional intelligence scores were associated with higher critical thinking scores. Del Castillo (2021), in a study, investigated the relationship between critical thinking skills, emotional intelligence, and teacher performance. Results showed a significant relationship between critical thinking skills, emotional intelligence, and teacher

performance. There was a significant difference in performance and critical thinking skills and the emotional intelligence of the respondents. Mustafa and Muhammad (2020), in research, modeled the relationship between spiritual education, academic engagement, and emotional intelligence of Malaysian students. The results of this study showed that the model established a direct and significant relationship between spiritual education, academic engagement, and emotional intelligence of Malaysian students. Leasa (2018), in a study, investigated the correlational relationship between emotional intelligence, critical thinking skills, and different learning styles of students. The results of this study showed significant relationships between emotional intelligence, critical thinking skills, and different learning styles of students.

Research question

Does emotional intelligence play a mediating role in the relationship between spiritual education and the critical thinking of female students of secondary high schools in district 1 of Shiraz.

Methodology

This research is considered applied and, descriptive- correlational type (due to examining the relationship between independent and dependent variables). The statistical population of this study included all female students of secondary high schools in district 1 of Shiraz, which were 9080 individuals during the 2024-2025 academic year. The sample size included 368 students, selected through cluster random sampling based on Krejcey-Morgan's table. In this study, the following three questionnaires were used to collect statistical data:

-Critical Thinking Skills Questionnaire: The California Critical Thinking Skills Test (CCTST) developed by Facione and Facione (1990) was used. It consists of 26 items and 5 dimensions: analysis, evaluation, inference, deductive reasoning, and inductive reasoning.

-Emotional Intelligence Questionnaire: To measure emotional intelligence, the standardized questionnaire by Goleman (2001) was used. This questionnaire assesses the five dimensions of emotional intelligence, including self-awareness, self-regulation, self-motivation, empathy, and social skills, through 21 questions.

-Spiritual Education Questionnaire: To measure spiritual education, the Spiritual Education Questionnaire by Bayati et al. (2017) was used. This instrument has 32 items and 3 components: feeling of value, feeling of awareness, and mystical feeling.

The face validity of the questionnaires was reviewed and confirmed by specialists. To assess the reliability of the measurement instrument, "Cronbach's alpha" method was used. Since the Cronbach's alpha of the measurement tool was higher than 0.70, the questionnaires were deemed reliable. After completing the questionnaires, the obtained data were analyzed using SPSS software. To determine whether the data were normal or non-normal, the Kolmogorov-Smirnov test was used, and accordingly, inferential tests such as

Pearson's correlation (to examine the relationships between research variables) were employed.

Research Findings

The Kolmogorov-Smirnov test was used to examine the normality of the research variables. The results of this analysis are presented in the table below.

Table 1. Kolmogorov-Smirnov Test for Normality of Research Variables

variable	Statistic	p-value
Spiritual Education	0.01	0.14
Emotional Intelligence	0.040	0.18
Critical Thinking	0.053	0.07

Table 1 shows the Kolmogorov-Smirnov test for the normality of the variables spiritual education, emotional intelligence, and critical thinking. As observed, the test statistic for all three variables is non-significant ($p > 0.05$). Therefore, it can be stated that the assumption of normality was not violated, and parametric tests can be used.

- First hypothesis: Spiritual education has a significant relationship with the critical thinking of female students of secondary high schools in district 1 of Shiraz.

Pearson's correlation test was used to examine the relationship between spiritual education and the critical thinking of female students of secondary high schools in district 1 of Shiraz. The results of this analysis are presented in Table 2.

Table 2. Correlation Matrix between Spiritual Education and Students' Critical Thinking.

Variables	Spiritual Education	Feeling of Value	Feeling of Awareness	Mystical Feeling	Critical Thinking
Spiritual Education	1				
Feeling of Value	0.649**	1			
Feeling of Awareness	0.458**	0.338**	1		
Mystical Feeling	0.581**	0.245**	0.287**	1	
Critical Thinking	0.452**	0.281**	0.334**	0.445**	1
** p < 0.01					

Table 2 shows the correlation matrix of the variables spiritual education and critical thinking among junior high school students in Shiraz. As observed, there is a positive relationship between spiritual education and critical thinking, with a Pearson correlation coefficient of 0.452, which is significant at the 0.01 level. Also, there are positive and significant relationships between the dimensions of feeling of value and critical thinking ($r = 0.281$), feeling of awareness and critical thinking ($r = 0.334$), and mystical feeling and critical thinking ($r = 0.445$) ($p < 0.01$). Based on this finding, it can be said that spiritual education increases, critical thinking increases, and vice versa.

- Second Sub-hypothesis: Emotional intelligence has a significant relationship with the critical thinking of female students of secondary high schools in district 1 of Shiraz.

Pearson's correlation test was used to examine the relationship between emotional intelligence and the critical thinking of female students of secondary high schools in district 1 of Shiraz.

Table 3. Correlation Matrix between Emotional Intelligence and Students' Critical Thinking

Variables	Emotional Intelligence	Self-Awareness	Self-Management	Social Awareness	Relationship Management	Critical Thinking
Emotional Intelligence	1					
Self-Awareness	0.781**	1				
Self-Management	0.766**	0.711**	1			
Social Awareness	0.751**	0.643**	0.721**	1		
Relationship Management	0.791**	0.765**	0.801**	0.782**	1	
Critical Thinking	0.589**	0.517**	0.433**	0.471**	0.479**	1
** p < 0.01						

Table 3 shows the correlation matrix of the variables emotional intelligence and critical thinking among junior high school students in Shiraz. As observed, there is a positive relationship between emotional intelligence and critical thinking, with a Pearson correlation coefficient of 0.589, which is significant at the 0.01 level. Also, there are positive and significant relationships between the dimensions of self-awareness and critical thinking ($r = 0.517$), self-management and critical thinking ($r = 0.433$), social awareness and critical thinking ($r = 0.471$), and relationship management and critical thinking ($r = 0.479$) ($p < 0.01$). Based on this finding, it can be said that as emotional intelligence increases, critical thinking increases, and vice versa.

- Third Sub-hypothesis: Spiritual education has a significant relationship with the emotional intelligence of junior high school students in Shiraz.

Pearson's correlation test was used to examine the relationship between spiritual education and the emotional intelligence of female students of secondary high schools in district 1 of Shiraz. The results of this analysis are presented in the table below.

Table 4. Correlation Matrix between Spiritual Education and Students' Emotional Intelligence.

Variables	Spiritual Education	Feeling of Value	Feeling of Awareness	Mystical Feeling	Emotional Intelligence
Spiritual Education	1				
Feeling of Value	0.531**	1			
Feeling of Awareness	0.436**	0.321**	1		
Mystical Feeling	0.462**	0.347**	0.386**	1	
Emotional Intelligence	0.393**	0.382**	0.369**	0.391**	1
** p < 0.01					

Table 4 shows the correlation matrix of the variables spiritual education and emotional intelligence among junior high school students in Shiraz. As observed, there is a positive relationship between spiritual education and emotional intelligence, with a Pearson correlation coefficient of 0.393, which is significant at the 0.01 level. Also, there are positive and significant relationships between the dimensions of feeling of value and emotional intelligence ($r = 0.382$), feeling of awareness and emotional intelligence ($r = 0.369$), and mystical feeling and emotional intelligence ($r = 0.391$) ($p < 0.01$). Based on this finding, it can be said that as spiritual education increases, emotional intelligence increases, and vice versa.

Main Hypothesis: Emotional intelligence plays a mediating role in the relationship between spiritual education and the critical thinking of female students of secondary high schools in district 1 of Shiraz

To examine the structural relationships between spiritual education, emotional intelligence, and critical thinking among female students of secondary high schools in district 1 of Shiraz, structural equation modeling (SEM) was conducted using AMOS. The results of this analysis are presented in table 5.

Table 5. Results of the Structural Equation Modeling for the Research Variables

Model Path	Direct Effect	Standard Error (SE)	t-value	Indirect Effect via Emotional Intelligence
Spiritual Education → Critical Thinking	0.452**	0.725	5.129	0.189
Spiritual Education → Emotional Intelligence	0.393**	0.689	4.78	
Emotional Intelligence → Critical Thinking	0.589**	0.142**	5.22	

Table 5 shows the results of the structural equation modeling for the final research model. The path coefficients indicate that the path coefficient from spiritual education to critical thinking is 0.452, from spiritual education to emotional intelligence is 0.393, and from emotional intelligence to critical thinking is 0.589. The absolute t-statistic values for all paths are higher than 1.96, indicating significant relationships. Therefore, significant relationships exist between spiritual education, emotional intelligence, and critical thinking among junior high school students in Shiraz County. Spiritual education not only has a direct effect on critical thinking but also has a significant indirect effect on critical thinking through emotional intelligence, with a value of 0.189.

The fit indices for the structural model are presented in table 6.

Table 6. Goodness-of-Fit Indices for the Structural Relationship Model.

Index	Value
CFI	0.932
TLI	0.971
NFI	0.913
GFI	0.957
RMSEA	0.043
CMIN/DF	2.651

As observed in Table 6, the normed chi-square (CMIN/df) is 2.651, where values below 3 indicate acceptable model fit. The Goodness-of-Fit Index (GFI) is 0.932. The Tucker-Lewis Index (TLI) is 0.971, the Comparative Fit Index (CFI) is 0.932, and the Normed Fit Index (NFI) is 0.913. Values exceeding 0.90 for these indices indicate a good model fit. Furthermore, the Root Mean Square

Error of Approximation (RMSEA) is 0.043, which also signifies a well-fitting model.

Discussion and conclusion

The results of the first hypothesis showed that spiritual education has a significant relationship with the critical thinking of junior high school students in Shiraz. Spiritual education and critical thinking are two related and complementary concepts that can be strengthened together in students. Spiritual education addresses the development of an individual's inner and moral dimensions, while critical thinking enhances the ability to analyze, evaluate, and solve problems. A scientific article has shown that religious teachings can help strengthen critical thinking and moral reasoning in students. Combining these two can help individuals look at spiritual issues with an open and logical perspective while using spiritual values to guide their thinking. Spiritual education can help critical thinking avoid biases and prejudices and seek truth. Overall, it can be said that spiritual education can have a positive effect on students' critical thinking. This spiritual education, by strengthening moral, spiritual values, and responsibility, prepares the ground for logical and critical thinking.

The results of the second hypothesis showed that there is a significant relationship between emotional intelligence and the critical thinking of junior high school students in Shiraz. Emotional intelligence and critical thinking are two fundamental skills that positively influence each other and play an important role in students' success in various fields. Emotional intelligence refers to the ability to understand, manage, and effectively use emotions, while critical thinking involves the ability to evaluate and analyze information logically and objectively. High emotional intelligence helps students manage their emotions when facing problems and seek logical solutions with greater calm. Students with high emotional intelligence usually perform better in managing their attention and concentration, which helps improve their critical thinking. Emotional intelligence helps students avoid biases and hasty judgments by recognizing and understanding their own and others' emotions, resulting in better critical thinking. High emotional intelligence helps students communicate better with others and express their ideas and opinions more effectively, which also contributes to critical thinking. Students with high emotional intelligence usually have more motivation and self-confidence, which helps improve their academic performance and critical thinking. In summary, emotional intelligence, by creating a suitable ground for managing emotions, increasing focus, reducing biases, and strengthening communication skills, significantly contributes to improving students' critical thinking.

The results of the third hypothesis showed that there is a significant relationship between spiritual education and the emotional intelligence of junior high school students in Shiraz. Spiritual education has profound effects on students and can play a significant role in various aspects of their lives. This type of education, in addition to developing personality and ethics, also helps

improve students' academic and social performance. The results of this hypothesis indicate that spiritual education can have a positive effect on students' emotional intelligence. By strengthening spiritual aspects in children, they can be helped to better understand and cope with their own emotions and those of others. This can lead to improved social relationships, increased resilience in the face of problems, and enhanced mental health of students. In summary: spiritual education, by strengthening various aspects of emotional intelligence, helps students become healthier, happier, and more successful human beings.

The results demonstrated that emotional intelligence plays a mediating role in the relationship between spiritual education and the critical thinking of junior high school students in Shiraz. By integrating spiritual education, emotional intelligence, and critical thinking, students can be educated who are not only ethical and responsible but also possess the ability for critical thinking and problem-solving. This can help them perform more successfully in their personal and social lives. These three factors are crucial for student growth and development and are closely interrelated. Spiritual education fosters moral virtues, spirituality, and transcendent values, which can help strengthen emotional intelligence and critical thinking. Emotional intelligence, in turn, helps individuals understand and manage their own emotions and those of others, enabling them to succeed in their relationships. Critical thinking allows individuals to analyze issues logically, evaluate information, and make independent decisions.

Based on the research results, the following is recommended:

To strengthen spiritual education, it is suggested to focus on ethical self-cultivation and avoiding impurities. Furthermore, enhancing patience and forbearance, increasing faith and reliance on God, and establishing a strong emotional and cognitive connection with God can contribute to spiritual growth.

Studying and reflecting upon the Quran and the narrations of the Ahl al-Bayt (AS) can help individuals gain a deeper understanding of religious concepts and strengthen their faith and spiritual education.

Educational workshops aimed at enhancing students' emotional intelligence should be conducted.

Participation in religious gatherings, Quranic sessions, and other spiritual activities can help strengthen spiritual morale and foster connections with others.

Performing good deeds and acts of charity is another way to strengthen spiritual education. These actions can include helping others, engaging in charitable work, and serving the community.

The Ministry of Education, relevant officials, and associated institutions should provide the necessary means for improving students' emotional intelligence and strengthening their spiritual education through various channels, including holding conferences, seminars, training sessions, etc.

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