



# Predicting Critical Thinking Based on Emotional Intelligence and Self-Efficacy Beliefs: A Case Study of Nursing Students at Lorestan University of Medical Sciences

\* Akram Dastyari 

\* Assistant Professor, Department of Business Management, Islamic Azad University, Khorramabad Branch, Khorramabad, Iran. [akramdastyari@gmail.com](mailto:akramdastyari@gmail.com)

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## Abstract

This research focuses on predicting critical thinking based on the emotional intelligence and self-efficacy beliefs of nursing students, with the aim of examining the impact relationship of emotional intelligence and self-efficacy beliefs on the critical thinking of nursing students. The main question addressed in this article is: What is the relationship between critical thinking, emotional intelligence, and self-efficacy beliefs? The research method used was correlational, and data was collected using a questionnaire with suitable validity and reliability (Cronbach's alpha for the critical thinking questionnaire was 0.76, the emotional intelligence questionnaire was 0.83, and the self-efficacy beliefs variable was 0.83). A sample of 148 students was selected randomly from the statistical population. The data was analyzed using SPSS software. The results showed that self-efficacy beliefs and emotional intelligence can predict the critical thinking of the students.

**Keywords:** Critical Thinking, Emotional Intelligence, Self-Efficacy Beliefs, Nursing, Multiple Regression.



## Introduction

In today's complex world, where we witness intense competition among various societies to achieve the latest ideas, creative individuals and thinkers with broad, deep, and flexible minds are regarded as valuable assets. These individuals can overcome problems and present new solutions to society with their thought processes in unpredictable situations. In such conditions, universities, as the centers of dissemination of various new sciences, have a significant impact on creating perceptual and cognitive transformations among students. Enhancing cognitive capacity and the skills of thinking and reasoning in university communities is probable, and critical thinking is one of the most essential capacities likely to develop and flourish during the academic period (Dastyari et al., 2021).

In addition to the role of critical thinking in education, another important and influential variable in this domain is self-efficacy, which is a stable and clear emotional sense of competence and capability to effectively cope with many stressful situations. Self-efficacy expectations influence individuals' actual performance, emotions, behavioral choices, and the amount of effort put into an activity (Akbarzadeh, 2004).

Another effective construct on academic progress is emotional intelligence. Goleman defines emotional intelligence as the ability to motivate oneself, persist in the face of frustrations, control impulses, delay gratification, regulate one's moods, and keep hope alive. This theory holds that what can predict an individual's future success and mental health is emotional intelligence (Goleman, 2020).

Given the importance of these topics and the expectation that nursing students and graduates possess such thinking in clinical settings, this study aims to predict critical thinking based on emotional intelligence and self-efficacy beliefs among nursing students at Lorestan University of Medical Sciences. The research hypotheses are as follows:

## Main Hypothesis

Self-efficacy beliefs and emotional intelligence can predict the critical thinking of nursing students at Lorestan University of Medical Sciences.

## Sub-Hypotheses

1. Self-efficacy beliefs can predict and explain the critical thinking of nursing students at Lorestan University of Medical Sciences.
2. Emotional intelligence can predict and explain the critical thinking of nursing students at Lorestan University of Medical Sciences.
3. Optimism can predict and explain the critical thinking of nursing students at Lorestan University of Medical Sciences.
4. Self-awareness can predict and explain the critical thinking of nursing students at Lorestan University of Medical Sciences.
5. Emotion management can predict and explain the critical thinking of nursing students at Lorestan University of Medical Sciences.
6. Social skills can predict and explain the critical thinking of nursing students at Lorestan University of Medical Sciences.

## Methodology

This research is descriptive-correlational in nature and applied in terms of its objective. The statistical population consists of 250 male and female nursing students from Lorestan University



of Medical Sciences. The sample size was determined using the Krejcie and Morgan table, resulting in 148 students being selected through stratified random sampling.

For data collection, the following three standardized questionnaires were used:

1. The Petrides and Furnham (2006) Emotional Intelligence Questionnaire, consisting of 30 items and four dimensions: optimism, self-awareness, emotion management, and social skills.
2. The Ricketts (2003) Critical Thinking Questionnaire, which includes 33 items and three subscales: creativity, maturity, and engagement.
3. The Self-Efficacy Questionnaire by Sherer et al. (1982), based on a five-point Likert scale with 17 items.

Data were analyzed using SPSS24 software, Kolmogorov-Smirnov test, Pearson correlation coefficient, and stepwise regression analysis. It should be noted that the assumption of normal distribution for parametric tests was checked using the Kolmogorov-Smirnov test. Since the significance level for all variables and their components was greater than 0.05, the normality of the data distribution was confirmed, allowing the use of parametric tests.

### Research Findings

The Kolmogorov-Smirnov test for multivariate normality indicated that the significance level for all variables was greater than 0.05, confirming the normal distribution of the variables within the statistical population. Subsequently, Pearson correlation coefficients between self-efficacy beliefs and critical thinking ( $r = 0.025$ ,  $P < 0.01$ ) and between emotional intelligence and critical thinking ( $r = 0.072$ ,  $P < 0.01$ ) showed a positive and significant relationship at an error level of  $\alpha = 0.01$ . This means that an increase in self-efficacy and emotional intelligence among students corresponds with an improvement in their critical thinking, thereby confirming the main hypothesis of the research.

To examine the sub-hypotheses, and the relationship between them and the critical thinking variable, a two-variable linear regression was used. The results, presented in the table below, demonstrate a positive and significant relationship between the sub-components and critical thinking, indicating that these variables can predict critical thinking.

Statistical Index	Regression Model	Correlation Coefficient	Adjusted R	F	Significance Level
Self-Efficacy Beliefs	0.230	0.0530	0.0529	80.569	0.000
Emotional Intelligence	0.147	0.021	0.021	76.502	0.000
Optimism	0.402	0.162	0.162	72.583	0.000
Self-Awareness	0.656	0.431	0.430	88.486	0.000
Emotion Management	0.389	0.151	0.150	79.610	0.000
Social Skills	0.512	0.262	0.261	72.524	0.000



## Conclusion

In explaining the positive predictability of self-efficacy beliefs on critical thinking, it can be said that self-efficacy beliefs regulate human performance through cognition, motivation, thought processes, and decision-making. The findings of this research are consistent with the studies of Mayer and Cobb (2020) and Sadeghi et al. (2016).

Additionally, in explaining the positive predictability of emotional intelligence on critical thinking, the results showed that emotional intelligence has a positive and significant impact on critical thinking. A study conducted by Vahedi et al. (2017) supports these findings.

Furthermore, the findings indicated a positive and significant relationship between optimism and critical thinking, meaning that as optimism increases, the critical thinking of students also improves. Moreover, the results suggest that self-awareness can predict students' critical thinking and has a positive and significant impact on it. This finding is consistent with the studies of Noka and Ahaiuzo (2020) and Sarvari et al. (2017).

The study also showed that emotion management is capable of predicting students' critical thinking. This finding aligns with the research of Noka and Ahaiuzo (2020). The positive predictability of emotion management on critical thinking can be explained by the importance of experiencing and expressing emotions, as emotions play a fundamental role in our reactions and contribute to better critical thinking.

The research findings regarding the relationship between social skills and critical thinking indicate that social skills have a significant impact on critical thinking. These results are in line with the findings of Sarvari et al. (2017), which showed that social skills significantly affect the critical thinking of librarians at the National Library and Archives of Iran.

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