DOI: http://dx.doi.org/10.22122/ijbmc.v10i1.390 Published by Vesnu Publications

International Journal of Body, Mind and Culture

The Relationship between Emotional Intelligence and Academic Achievement among the Students of Trisakti University, Indonesia

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Quantitative Study

Abstract

Background: Recognizing and strengthening emotional intelligence is useful in all members of society, especially students. By recognizing emotional intelligence and applying it, students can achieve more success in their career. The aim of this study was to investigate the relationship between emotional intelligence and academic achievement among students.

Methods: A correlational study was performed on 100 students studying in clinical psychology at the School of Medicine, Trisakti University, Jakarta, Indonesia, in 2021. Bar-On test was used to evaluate the student's emotional intelligence. Pearson correlation coefficient and independent t-test were used to analyze the research data with SPSS software.

Results: There was a significant difference between the age variable with emotional intelligence ($P < 0.05$) and emotional intelligence with academic achievement ($P < 0.01$). In addition, the components of problem solving ($r = 0.310$, $P = 0.002$), stress tolerance ($r = 0.291$, $P = 0.002$), reality testing ($r = 0.280$, $P = 0.004$), interpersonal relationships ($r = 0.217$, $P = 0.03$), and optimism ($r = 0.326$, $P = 0.005$) had a significant relationship with the variable of age and the components of emotional Intelligence ($r = 0.271$, $P = 0.005$), independence of action ($r = 0.187$, $P = 0.024$), self-awareness ($r = 0.283$,

P = 0.031), responsibility (r = 0.757, P = 0.042), and sympathy (r = 0.953, P = 0.034) with the academic achievement.

Conclusion: In order to achieve high levels of academic achievement, students must be able to control emotions and affects in many ways; however, students cannot achieve their academic potential without reaching the components that make up emotional intelligence.

Keywords: Emotional intelligence; Academic achievement; Clinical psychology

Citation: Wekke IS, Iswanto AH, Abed AM, Ali MH, Samal A, Talib HA, et al. **The Relationship between Emotional Intelligence and Academic Achievement among the Students of Trisakti University, Indonesia.** Int J Body Mind Culture 2023; 10(1): 90-8.

Received: 19 Apr. 2022

Accepted: 30 June. 2022

Introduction

Intelligence is one of the significant aspects in people's adaptation to the environment and also as one of the factors of individual differences. Some experts consider intelligence as a single nature and some consider it to have different components (Enns, Eldridge, Montgomery, & Gonzalez, 2018). Emotional intelligence is a set of interconnected cognitive and emotional abilities (Culha & Acaroglu, 2019). Today, unlike in the past, by changing the theoretical views on the components of intelligence, it cannot be considered a successful predictor of academic achievement (Treat, Hueston, Fritz, Prunuske, & Hanke, 2021). At best, intelligence is about 20 percent involved in predicting success in life. Academic success is related to many variables, including intelligence, motivation, teacher criticism, cultural background, and other variables; therefore, we have to cope with a difficult task, namely the classification of these variables (Ubago-Jimenez, Cepero-Gonzalez, Martinez-Martinez, & Chacon-Borrego, 2021; Weis et al., 2021).

Emotional intelligence helps a person to become aware of the emotion that facilitates thoughts by understanding, evaluating, and accurately expressing emotions (Dumciene & Sipaviciene, 2021); also, by making a balance between your thoughts and emotions, make wise decisions and be able to manage emotions in yourself and others. The concept of social intelligence was first used in 1940. Then, in 1993, Mayer and Salovey used the word emotional intelligence for this concept (Dooley, East, & Nagle, 2019).

High emotional intelligence can paint a good picture of a person's success and progress, but it cannot be used as a measure of success (Mounce & Culhane, 2021). People with higher emotional intelligence have better social skills and more stable relationships and are better at dealing with problems (Abe, Niwa, Fujisaki, & Suzuki, 2018). Education can strengthen people's ability to regulate and express emotions. It should be noted that it is not a single type of intelligence that guarantees success in life, but there is a wide range of intelligence that leads to success in various fields (Brewer & Cadman, 2000; Christianson, Fogg, & Kremer, 2021). If a person is an excellent graduate, it indicates that he/she has obtained good grades during his/her studies in limited subjects, but it cannot indicate his/her success in life. Education in the first years of life plays a key and vital role in this regard; however, throughout life, there is a possibility of training and upgrading these abilities in a more limited way (Tariq, Tariq, Atta, Rehman, & Ali, 2020). Success in education is related to emotional and social skills of emotional intelligence such as having the necessary motivation, the ability to wait, obey orders, and control impulses, the skill of asking others for help and expressing emotional and educational needs (Buckley et al., 2020; Mintle, Greer, & Russo, 2019). Various factors have been implicated in academic achievement, including individual motivation, parental literacy level, environmental and family circumstances, adjustment, and intelligence (Cleary, Visentin, West, Lopez, & Kornhaber, 2018; Roman-Calderon, Aguilar-Barrientos, EstebanEscalante, Arias, & Barbosa, 2021).

Research shows that emotional intelligence is effective in various aspects of life, including education, occupation, social environment, and mental health (Vandenberg, 2019). Therefore, conducting such research, in justifying educational officials in order to pay attention to emotional intelligence as an important component to improve student performance seemed necessary. Notably, due to the future close relationship between psychology students, patients, and clients, the significance of emotional intelligence is felt strongly. The current study investigated the relationship between emotional intelligence and academic achievement among students at the Trisakti University, Jakarta, Indonesia.

Methods

The present study was a correlational study in which the relationship between variables was examined. In this study, the relationship between emotional intelligence and academic achievement, age, and gender has been investigated. The statistical population of the study was all clinical psychology students studying in clinical psychology at the School of Medicine, Trisakti University in 2021. Taking into account the power of 80% and 95% confidence, the sample size was determined based on the following formula equal to 100 people (50 men and 50 women).

$$N = \frac{Z^2 pq}{d^2} \quad (1)$$

In this study, to measure emotional intelligence, the Bar-On Emotional Quotient Inventory (EQ-i) (Bar-On, 1997) has been used. This inventory has 90 questions. In addition to the overall score, this test also measures 15 components of emotional intelligence. Since the options are set on a five-point Likert scale, the score range is from 5 to 1 (strongly agree: 5, strongly disagree: 1) and in some questions with negative content from 1 to 5 (strongly agree: 1, strongly disagree: 5). The total score of each scale is equal to the sum of the scores of each of the questions on that scale and the total score of the test is equal to the sum of the scores of 15 scales. Gilar-Corbi et al. (2021) obtained reliability and validity of 0.83 and 0.92 for the Bar-On EQ-i, respectively. In the current study, the reliability of the test was calculated to be 0.86 by the even-odd method and 0.90 by Cronbach's alpha. Students' grade point average (GPA) was also used as an indicator of academic achievement.

To begin the research, the university sent a letter of introduction and explained its need for this study to the college's dean and vice-chancellor. The researchers then described the study to students, and their written consent was obtained. In addition, to comply with ethical considerations, students were assured that the information obtained from the research would be used anonymously and in strict confidence. To keep people's privacy safe and protect it, the results should be reported as a group and given to psychologists and other experts for educational purposes. Inclusion criteria included studying in clinical psychology, consent to participate in research, absence of mental disorders, and absence of psychoactive drug use. The exclusion criterion was failure to submit a written consent form and a questionnaire.

The information required for the research was obtained by conducting questionnaires in groups on the samples. Out of 115 distributed questionnaires, 100 completed questionnaires were analyzed by SPSS software (version 21, IBM Corporation, Armonk, NY, USA). In the present study, mean and standard deviation (SD) were used to describe the data. Pearson correlation coefficient and independent t-test were used to analyze the research questions.

Results

As mentioned, the statistical population of the study was students of clinical psychology at the School of Medicine, Trisakti University. Students' demographic information is given in table 1.

To examine the question of whether there was a significant difference between male and female students in the studied variables, an independent t-test was used, the results of which are shown in table 2.

As can be seen in table 2, there was a significant difference in the level of $P < 0.05$ between male and female students in only two variables of feeling of happiness and independence of action.

Table 1. Mean and standard deviation (SD) of research variables in all male and female students (n = 100)

Variables	Mean ± SD
Age (year)	22.31 ± 3.36
Academic achievement	17.20 ± 1.98
Emotional intelligence	315.12 ± 3.02
Problem solving	23.50 ± 4.02
Happiness	22.52 ± 3.75
Independence of action	20.92 ± 3.22
Stress tolerance	19.10 ± 3.11
Self-actualization	22.77 ± 3.54
Self-awareness	20.89 ± 2.89
Reality testing	20.06 ± 3.22
Interpersonal relationships	22.56 ± 3.35
Optimism	23.64 ± 3.91
Self-esteem	18.04 ± 2.78
Impulse control	19.26 ± 3.34
Flexibility	23.11 ± 4.09
Responsibility	23.27 ± 2.96
Age (year)	22.31 ± 3.36

SD: Standard deviation

Men had higher scores in feeling of happiness and independence of action.

Table 2. Comparison of mean scores of academic achievement, age, emotional intelligence and its components in two groups of male and female students based on independent t-test

Variables	Gender	N	Mean ± SD	t	df	P-value
Age (year)	Women	50	20.75 ± 3.56	-2.64	100	0.29
	Men	50	23.87 ± 3.32			
Academic achievement	Women	50	17.55 ± 2.07	2.46	100	0.16
	Men	50	16.85 ± 1.92			
Emotional intelligence	Women	50	305.34 ± 2.86	-1.28	100	0.22
	Men	50	324.90 ± 3.12			
Problem solving	Women	50	21.89 ± 3.92	-1.09	100	0.35
	Men	50	25.11 ± 4.21			
Happiness	Women	50	21.88 ± 3.66	-2.15	100	0.04*
	Men	50	23.16 ± 3.90			
Independence of action	Women	50	18.88 ± 2.96	-2.02	100	0.03*
	Men	50	22.92 ± 3.45			
Stress tolerance	Women	50	18.85 ± 3.23	-1.69	100	0.12
	Men	50	19.35 ± 3.08			
Self-actualization	Women	50	22.51 ± 3.34	-1.72	100	0.07
	Men	50	23.03 ± 3.12			
Self-awareness	Women	50	20.94 ± 3.01	-0.58	100	0.52
	Men	50	20.83 ± 2.87			
Reality testing	Women	50	19.06 ± 3.64	-0.48	100	0.66
	Men	50	21.06 ± 2.98			
Interpersonal relationships	Women	50	20.96 ± 3.14	0.81	100	0.42
	Men	50	24.16 ± 3.61			
Optimism	Women	50	24.44 ± 3.89	0.31	100	0.79
	Men	50	22.84 ± 4.12			
Self-esteem	Women	50	17.21 ± 2.58	-2.16	100	0.43
	Men	50	18.87 ± 3.02			
Impulse control	Women	50	19.16 ± 3.18	-1.25	100	0.32
	Men	50	19.36 ± 3.49			
Flexibility	Women	50	22.82 ± 3.65	-0.93	100	0.42
	Men	50	23.71 ± 4.35			
Responsibility	Women	50	25.16 ± 2.86	1.23	100	0.21
	Men	50	22.96 ± 3.20			
Sympathy	Women	50	18.22 ± 3.14	1.46	100	0.15
	Men	50	17.02 ± 3.25			

*P < 0.05

df: Degree of freedom; SD: Standard deviation

Pearson correlation coefficient test was used to examine the question of whether there was a relationship between two variables of academic achievement and age with emotional intelligence and its components in all students. The information obtained from this test is given in table 3.

As can be seen in the table above, there was a significant difference between the age variable with emotional intelligence at level of $P < 0.05$ and emotional intelligence with academic achievement at level of $P < 0.01$. In addition, the variables of problem solving, stress tolerance, reality testing, interpersonal relationships, and optimism had a significant relationship with the variable of age and the components of independence of action, self-awareness, sympathy with the academic achievement.

Discussion

The current study aimed to examine the impact of emotional intelligence and academic achievement among students. Regarding the gender difference in emotional intelligence, the results of the present study show that although there is a significant difference between male and female students in the sub-scales (feeling of happiness and independence of action) of emotional intelligence, in the overall score of emotional intelligence, there is no significant difference. In other words, men and women use almost the same amount of emotional intelligence in the face of everyday problems. However, there is no significant difference in the overall score of emotional intelligence. In fact, the level of emotional intelligence between girls and boys is not much different. Several studies have been conducted in conjunction with the current study. Cherniss (2000) believes that students should be taught how to manage and control their emotions in the educational system and be good role models for reinforcing this behavior by caring for them. In a study to examine the role of emotional education in academic achievement, Márquez et al. (2006) concluded that emotional and social skills training was very important in the education system and could have positive long-term effects on academic achievement.

Petrides et al. (2007) indicated that although women scored higher than men in terms of social skills, there was no difference in the overall score of emotional intelligence.

Table 3. Pearson correlation coefficient test between academic achievement and age variables with emotional intelligence and its components in all male and female students

Variables	Age		Academic achievement	
	R	P-value	R	P-value
Emotional intelligence	0.380	0.030**	0.271	0.005*
Problem solving	0.310	0.002*	0.475	0.270
Happiness	0.060	0.520	0.158	0.630
Independence of action	0.180	0.115	0.187	0.024**
Stress tolerance	0.291	0.002*	0.595	0.160
Self-actualization	0.320	0.580	0.357	0.101
Self-awareness	0.220	0.900	0.283	0.031**
Reality testing	0.280	0.004*	0.383	0.430
Interpersonal relationships	0.217	0.030**	0.076	0.560
Optimism	0.326	0.005*	0.506	0.120
Self-esteem	0.140	0.800	0.568	0.290
Impulse control	0.210	0.120	0.788	0.370
Flexibility	0.180	0.150	0.666	0.180
Responsibility	0.006	0.240	0.757	0.042**
Sympathy	0.120	0.123	0.953	0.034**

*P < 0.01; **P < 0.05

These results are contrary to the findings of the present study regarding the difference between men and women in the subtests of emotional intelligence, although they are consistent in the field of general emotional intelligence. This may be due to the greater dependence of girls and the greater independence of boys in society, while girls are more likely to seek supportive resources (Kanesan & Fauzan, 2019). In terms of the relationship between emotional intelligence and academic achievement, the results show that emotional intelligence has a significant positive correlation with students' academic success. This means that with increasing emotional intelligence, students' academic success increases (Sanchez-Alvarez, Berrios Martos, & Extremera, 2020). Regarding the relationship between emotional intelligence and age, the results show that there is a significant positive correlation between emotional intelligence and age. In fact, increasing age leads to improved emotional intelligence (Kotsou, Mikolajczak, Heeren, Gregoire, & Leys, 2019).

Training in emotional and social skills can help people succeed in the long and short run. Students can be helped to cope better with academic pressures and have fewer emotional problems by including the concept of emotional intelligence in the university curriculum. Teaching social and emotional skills in addition to the curriculum provides students with a wide range of other abilities that can improve academic achievement and have long-term effects on future job and social performance (Mattingly & Kraiger, 2019). In the last two decades, the industrialized countries have paid much attention to emotional intelligence, conducted much research on the subject, and begun teaching emotional and social skills in their educational and work environments, demonstrating the importance. There is a problem. It appears that teaching emotional intelligence alongside other students' courses is critical (Prentice, Dominique Lopes, & Wang, 2020). Specialists should raise awareness of the importance of emotional intelligence in the educational system and provide the necessary knowledge on how to incorporate emotional intelligence skills directly and indirectly into the university curriculum and teach students (MacCann, Jiang, Brown, Double, Bucich, & Minbashian, 2020).

The current study has limitations, including that it was conducted only on university students in a field of study and was not compared to international standards. It is suggested that other emotional intelligence scales and questionnaires be used in future studies. The efficacy of the therapeutic intervention, as well as the follow-up phase are also recommended. It is also suggested that students from other fields of study be studied and compared to the current study's findings.

Conclusion

In the current study, a descriptive design was used to analyze the statistical population of the study, students of clinical psychology at the School of Medicine, Trisakti University in 2020. Simple random sampling was used to select 100 clinical psychology students for evaluation. Information was gathered using the Bar-On EQ-i. As an indicator of academic achievement, the mean scores of students were used. Pearson's correlation coefficient and independent t-test were used to analyze the data. The results of this study showed that in order to achieve high levels of academic achievement, students must be able to control emotions and affects in many ways; however, students cannot achieve their academic potential without reaching the components that make up emotional intelligence. The higher a person's emotional intelligence, the higher their academic motivation and the better their academic achievement. As a result, it is necessary to strengthen students' emotional intelligence

in the scientific environment and society with the right interventions.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

Special acknowledgments to the college dean and vice-chancellor at the School of Medicine, Trisakti University, Jakarta, Indonesia.

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