

# Emotional Intelligence and Academic Achievement: A Meta-Analysis

G. Manimozhi, P. Srinivasan \*

Department of Education, Central University of Tamil Nadu, Thiruvavur, India

\*Corresponding author: [srinivasanp@cutn.ac.in](mailto:srinivasanp@cutn.ac.in)

**Abstract** A meta-analytic review investigated the relationship between emotional intelligence and Academic achievement. In this study, the sample consists of 25 reviews from different journal articles. The sample of the reviews based on inclusion criteria such as emotional intelligence and academic achievement. Meta-analysis related detail was collected by quantitative method reviews. Author name, Title of the study, sample size, correlation value and findings of each review was noted in table. The meta-analysis is on the relationship between emotional intelligence and academic achievement. Therefore the researchers categorized the quantitative studies based on criteria. A meta- analysis of research papers were formed the conclusion.

**Keywords:** *emotional intelligence, academic achievement, meta analysis*

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## 1. Introduction

In 21<sup>st</sup> century highly competitive world, students face a variety of academic problems such as exam stress, attending classes and the inability to understand the subject. Such stress can result in some kind of psychological or physical problems like depression, anxiety, nervousness and stress-related problems. Anxiety and stress have a considerable negative effect on children’s social, emotional and academic success. Students experience disappointment and failure to

achieve their goals. The [1] states that India has the world’s highest suicide rates for youth. If students can able to control the emotions, they will achieve the academic goals as well. Students depend on the strength of courage to control their negative thoughts and emotions.

According to NCRB (National Crime Records Bureau) every hour’s one student commits suicide in India. [2] explained the article “A Student Commits suicide Every Hour in India” in India Spend. [2] Compared the student suicide level in every year from 2011-2015. From the below Figure 1: explain the student’s suicides level in 2011-2015.

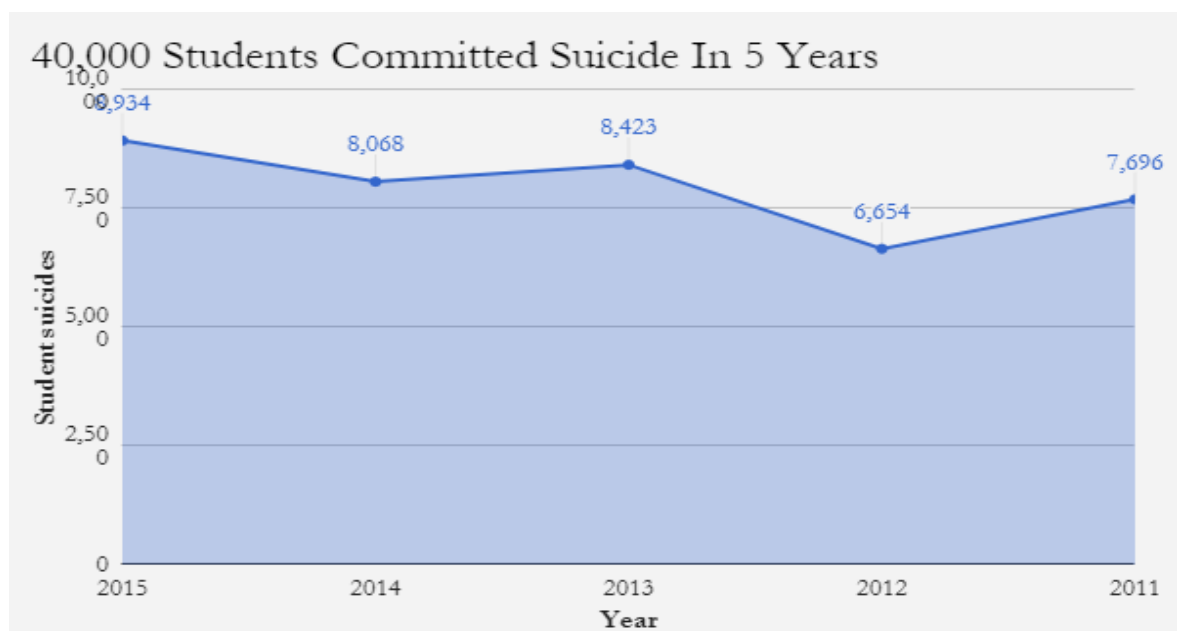


Figure 1. A Student Commits suicide Every Hour in India

From above information, Students are emotionally week for improve our academic achievement. For that, reason emotional intelligence positively correlate with academic achievement. Researcher's wants to prove statistically, emotional intelligence and academic achievement are correlate significantly.

## 2. Back Ground of the Study

Over the past century, intelligence has played central role in illuminating our understanding of human performance. Specifically emotional intelligence played important role for all humans. Emotional intelligence only controls the human behaviour. Academic achievement is vital role for Students to achieve their goals that achievement based on student emotions. Student's positive emotions like happiness, appreciation, peacefulness, interest, anticipate, pride, amusement, inspiration; awe and love help to improve the level of aspiration but negative emotions such as sadness, anxiety, anger, guilt and embarrassment to increase the depression.

The concept of EI was introduced by Mayer and Salovey and later developed by Goleman. Emotional intelligence is the capability to basis with feeling [3].

According to [4], Emotional Intelligence is defined as "an array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures".

Emotional Intelligence can make a unique contribution to a "better understanding of people and also use their potentials to succeed in various aspects of life".

Emotions are often broadly defined as "systems of interacting processes including emotional feelings, cognitive appraisals, physiological processes, expressive behaviour and motivational tendencies in an organism" [5].

Academic Achievement is the one kind of evaluation of education. Achievement means performance in school or college in a consistent series of educational tests. The term is used more generally to desirable performance in the subjects of curriculum and it is concerned to a great extent with the development of knowledge, understanding and acquisition of skills.

In other words achievements are the attainment or accomplishment of an individual in some or particular branch of knowledge after a certain period of training.

From the above statements, researchers can draw several common points. According to these statements there are key points:

- Emotional Intelligence can enhance the perceptive of student's academic achievement.
- Emotional Intelligence can improve the open behaviour of students to attain the goals

- Emotional intelligence can get better cognitive abilities of students to achieve the aspiration.

Researchers on the other hand, find the relationship of academic achievement and Emotional intelligence. This research papers compares twenty five studies using meta-analysis approach and identify the relationship of studies and fixed effect, random effect and Heterogeneity.

## 3. Operational Definition of key terms

Following are the operational definition of key terms,

### 3.1. Emotional Intelligence

Emotional Intelligence means competence to deal with one's own feelings and other's feelings.

### 3.2. Academic Achievement

Academic achievement is the level of attainment in a particular subject/content.

### 3.3. Meta-analysis

Meta-analysis means many related studies are analyzed statistically get there at common solution.

## 4. Objectives of the study

The objectives of the studies are

- To collect the literature review based on emotional intelligence and Academic achievement.
- To identify the statistical values.
- To find the relationship between emotional intelligence and academic achievement.
- To find the fixed effect, random effect and heterogeneity values using by Meta analysis software.

### 4.1. Hypothesis of the Study

There is no significant relationship between Emotional Intelligence and Academic achievement

## 5. Population of the Study

The population of the present study is the Emotional intelligence and academic achievement research papers in Eric, Google scholar and science direct. The sample selection process is included in the below [Figure 2](#).

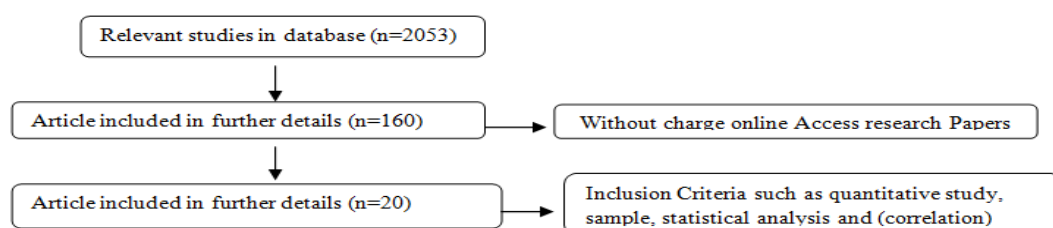


Figure 2. The process of studies inclusion and exclusion of Meta-analysis

Table 1. Characteristics of the study including in the Meta analysis

Author	Topic	Sample size	Correlation value	Findings
[6] Aremu, Tella & Tella	Relationship among Emotional Intelligence, Parental Involvement and Academic Achievement of Secondary School Students in Ibadan, Nigeria.	500 senior secondary school students	0.318	There were significant positive relationship between emotional intelligence and academic achievement.
[7] Kalapriya, & Anuradha.	Emotional Intelligence And Academic Achievement Among Adolescents	100 college students.	0.135	There is significant difference between Emotional Intelligence and Academic Achievement among Adolescents.
[8] Roy, Sinha, & Suman.	Emotional Intelligence And Academic Achievement Motivation Among Adolescents: A Relationship Study	105 class XII students.	0.275	There is low positive correlation between emotional intelligence and academic achievement motivation among XII students.
[9] Ogundokun, & Adeyemo..	Emotional Intelligence and Academic achievement: The moderating influence of age, intrinsic and extrinsic motivation.	1563 school students	0.736	The study revealed emotional intelligence had a significant correlation with academic achievement.
[10] Adetayo & Kiadese.	Emotional intelligence and parental involvement as predictors of academic achievement in financial accounting.	200 SS II financial accounting students.	0.69	The result showed that the relationship between the students' achievement and emotional intelligence scores is very high, positive and significant.
[11] Lawrence & Deepa.	Emotional intelligence and academic achievement of high school students in kanyakumari district.	400 IX and X standards.	0.165	The finding shows that there is no significant difference between emotional intelligence and academic achievement of high school students.
[12] Ghosh.	Emotional Intelligence and Academic Achievement among Advantage and Disadvantage Children	200 of class X <sup>th</sup> of Ranchi.	0.33	The findings of the study reveal positive relationship between emotional intelligence and academic achievement.
[13] Fish.	A Correlational Study Of Building Principal emotional Intelligence and the Connection to Academic Achievement.	100 principals	0.126	There is a small, but statistically significant effect of a building principal's emotional intelligence on student achievement.
[14] Noe.	The Relationship Between Principal's Emotional Intelligence Quotient, School Culture And Student Achievement	24 principals for emotional quotient	-0.626	There is no significant relationship between principal's overall emotional intelligence quotient and student achievement
[15] Kianfar,, Cherati & Enayati.	The Relationship between Emotional Intelligence with the Academic Achievement of Students of Midwifery Faculty of Sari	113 faculty	0.793	Relationship between emotional intelligence and academic achievement is positive and significant.
[16] Nwadinigwe, & Azuka-Obieke.	The Impact of Emotional Intelligence on Academic Achievement of Senior Secondary School Students in Lagos, Nigeria	Sample of 156 students.	0.35	There is a significant relationship between academic achievement and emotional intelligence skills
[17] Jenaabadi.	Studying the relation between emotional intelligence and self-esteem with academic achievement	300 students	0.476	There is no relation between emotional intelligence and academic success.
[18] Khajepour.	Relationship between emotional intelligence, parental involvement and academic performance of high school students	300 students	0.42	There is a positive relationship between emotional intelligence and academic performance.
[19] Dubey.	A study of relationship between emotional intelligence and achievement among undergraduate students.	162 undergraduate students	0.273	There is no relationship between emotional intelligence and achievement in various subjects.
[20] Vandana Jadhav & Ajaykumar.	Emotional Intelligence among student teachers in relation to General intelligence and Academic Achievement.	141 student teacher	0.194	There is no significant relationship between emotional intelligence and academic achievement of student teachers
[21] Shahzada, Ghazi, Khan, Khan & Shah.	The relationship of emotional intelligence with the students' academic achievement.	714	0.602	Positive and significant relationship exists between emotional intelligence and academic achievement of professional course students.
[22] Rani & Kaur	Academic achievement of teacher- trainees in relation to their emotional intelligence.	100 Teacher Trainees	0.174	There is significant relationship between emotional intelligence and academic achievement of teacher trainees.
[6] Aremu, Tella & Tella.	Relationship among emotional intelligence, parental involvement and academic achievement of secondary school students in Ibadan, Nigeria.	500 students	0.542	The emotional well-being cannot be over emphasized in academic success.
[23] Yadav	Emotional intelligence, creativity and their impact on Academic achievement of senior secondary class students.	800	0.676	There is no significant relationship between emotional intelligence and academic achievement.
[24] Abdullah, Elias, Mahyuddin & Uli.	Emotional intelligence and academic achievement among Malaysian secondary students. <i>Pakistan</i>	205	0.187	There is a significant relationship between students overall EQ and Academic achievement.

## 6. Sample of the Study

The sample consists of 20 studies based on emotional intelligence and academic achievement. A purposive sampling technique is used for this study. The features of the studies are noted in Table 1.

## 7. Methodology

Quantitative method was used. Therefore the methodology adopted in this study is quantitative approach.

## 8. Data Analysis

The sample selection was based on the emotional intelligence and academic achievement research papers. Every review was collected and correlation values were noted for Meta analysis. Finally the numbers of sample and correlation values are treated for Meta analysis. Table 2 shows the Meta analysis of reviews.

## 8.1. Confidence Interval: Hypothesis Testing

The degrees of heterogeneity determine whether the analysis is performed with a random effects model or fixed effects model. The test of inconsistency index (I<sup>2</sup>) was used to estimate the degree of heterogeneity, which was designated low, moderate, or high according to values of 25%, 50%, and 75%, respectively [25].

Generally, individual can choose between two models of meta-analysis, the 'fixed' model and 'random effect' model. If I<sup>2</sup> ≤ 25%, studies are regarded homogeneous and the fixed effect model of meta-analysis can usually be used. If I<sup>2</sup> ≥ 75% then heterogeneity is very high, and individual should use a random effect model for meta-analysis.

[26] Explained the confidence level of 95% the p-value is smaller than .05. In traditional terminology, this means that the meta-analytic effect is statistically significant. If the aim of the meta-analysis is to test the hypothesis that there is an effect, then the null hypothesis can be rejected and the alternative hypothesis is deemed more likely in this example.

Table 2. Meta analysis Fixed, Random and Heterogeneity value

Model	Effect size and 95% interval				Test of null		Heterogeneity				Tau-squared			
Model	Number studies	Point estimate	Lower limit	Upper limit	z-value	P-value	q-value	df	p-value	I-squ	Tau-squared	Std. error	variance	Tau
Fixed	20	0.541	0.524	0.558	49.301	0.000	587.059	19	0.000	96.764	0.096	0.044	0.002	0.310
Random	20	0.390	0.265	0.502	5.745	0.000								

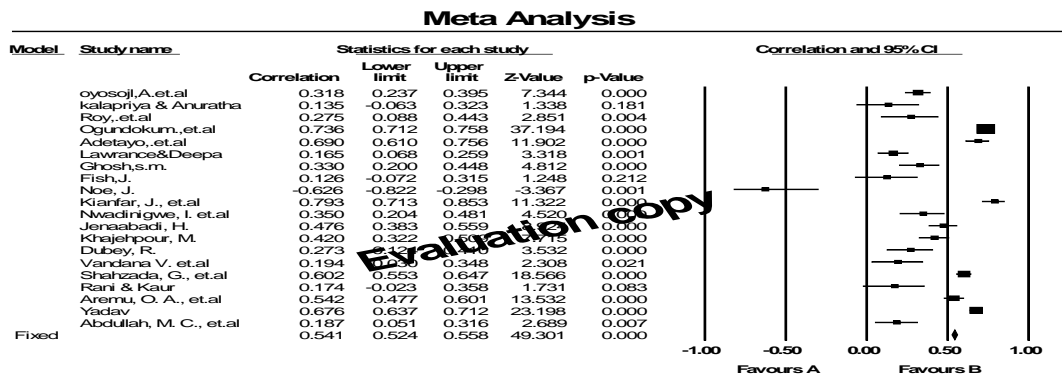


Figure 3. The Forest Plot of Correlation between emotional intelligence and academic achievement through fixed model

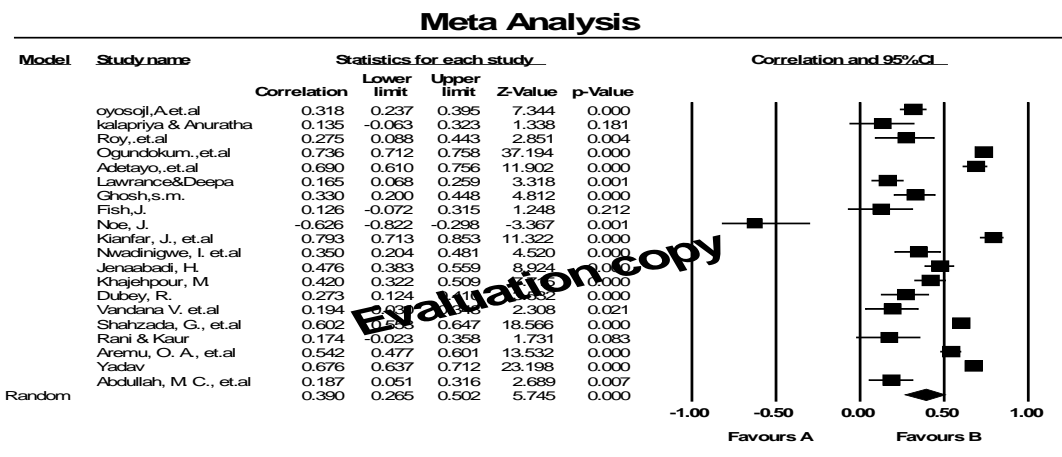


Figure 4. The forest plot of Correlation between emotional intelligence and academic achievement through Random effect model

Figure 3 shows the correlation between emotional intelligence and academic achievement through the fixed model and Figure 4. Shows the correlation between emotional intelligence and academic achievement through the random effect model

From this Table 2-  $I^2 = 96.764$  ( $I^2 \geq 75\%$ ) then heterogeneity is very high, and researcher use a random effect model for meta-analysis. In this study P value is 0.000 is less than 0.05 at 95% confidence level, this means that the null hypothesis rejected. Hence there is a significant relationship between emotional intelligence and academic achievement.

From the above Figure 3 the correlation between emotional intelligence and academic achievement according to the fixed model pooled results was 0.541 and the lower limit and upper limit was 0.524-0.558 at 95% confidence interval.

From the above Figure 4 the correlation between emotional intelligence and academic achievement according to the random effect model pooled results was 0.390 and the lower limit and upper limit was 0.265-0.502 at 95% confidence interval.

## 9. Conclusion

The purpose of this study was to make an analysis of the relationship between emotional intelligence and academic achievement by using a meta-analysis. The results of the study show that the studies emotional intelligence and academic achievement significantly relationship with each other.

Some of the contributions this study has identified are as follows:

- √ Forest plot of correlation between emotional intelligence and academic achievement through fixed model
- √ Forest plot of correlation between emotional intelligence and academic achievement through random effect model.
- √ Heterogeneity value suggests that the studies in this meta-analysis cannot be considered to be studies of the same population.
- √ From this study revealed, there is a significant relationship between student's academic achievement and emotional intelligence.

## References

- [1] Patel, V., Ramasundarahettige, C., Vijayakumar, L., Thakur, J. S., Gajalakshmi, V., Gururaj, G., ... & Million Death Study Collaborators. (2012). Suicide mortality in India: a nationally representative survey. *The lancet*, 379(9834), 2343-2351.
- [2] Saha, D. (2017, Apr 16). A Student Commits suicide Every Hour in India. *India Spend*.
- [3] Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality*, 9(3), 185-211.
- [4] Bar-On, R. (1997). Emotional Quotient Inventory: Technical manual. Toronto: Multi-Health Systems.
- [5] Kleinginna, P. R., & Kleinginna, A. M. (1981). A categorized list of emotion definitions, with suggestions for a consensual definition. *Motivation and emotion*, 5(4), 345-379.
- [6] Aremu, O. A., Tella, A., & Tella, A. (2007). Relationship among emotional intelligence, parental involvement and academic achievement of secondary school students in Ibadan, Nigeria. *University Of Ibadan, Nigeria*.
- [7] Kalapriya, C., & Anuradha, K. (2015). Emotional intelligence and academic achievement among adolescents. *International Journal of Advanced Research in Management and Social Sciences*, 4(1), 11-17.
- [8] Roy, B., Sinha, R., & Suman, S. (2013). Emotional intelligence and academic achievement motivation among adolescents: a relationship study. *Researchers World*, 4(2), 126.
- [9] Ogundokun, M. O., & Adeyemo, D. A. (2010, December). Emotional intelligence and academic achievement: The moderating influence of age, intrinsic and extrinsic motivation. In *The African Symposium* (Vol. 10, No. 2, pp. 127-141).
- [10] Adetayo, J. O., & Kiadese, A. L. (2011). Emotional Intelligence and parental involvement as predictors of academic achievement in financial accounting. *American Journal of Social and Management Sciences*, 2(1), 21-25.
- [11] Lawrence, A. S., & Deepa, T. (2013). Emotional Intelligence and Academic Achievement of High School Students in Kanyakumari District. *Online Submission*, 3(2), 101-107.
- [12] Ghosh, S. M. (2014). Emotional intelligence and academic achievement among advantage and disadvantage children. *International Journal of Indian Psychology*, 2(1), 111-117.
- [13] Fish, J. (2012). *A correlational study of building principal emotional intelligence and the connection to academic achievement*. University of Missouri-Kansas City.
- [14] Noe, J. (2012). The Relationship between Principal's Emotional Intelligence Quotient, School Culture, and Student Achievement.
- [15] Kianfar, J., Cherati, J. Y., & Enayati, T. (2015). The Relationship between Emotional Intelligence with the Academic Achievement of Students of Midwifery Faculty of Sari.
- [16] Nwadinigwe, I. P., & Azuka-Obieke, U. (2012). The impact of emotional intelligence on academic achievement of senior secondary school students in Lagos, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(4), 395.
- [17] Jenaabadi, H. (2014). Studying the relation between emotional intelligence and self esteem with academic achievement. *Procedia-Social and Behavioral Sciences*, 114, 203-206.
- [18] Khajehpour, M. (2011). Relationship between emotional intelligence, parental involvement and academic performance of high school students. *Procedia-Social and Behavioral Sciences*, 15, 1081-1086.
- [19] Dubey, R. (2008). A study of relationship between emotional intelligence and achievement among undergraduate students. *Journal of Education Studies, Allahabad*, 6(1), 46-50.
- [20] Vandana, V., Jadhav & Patil, A. B. (2010). Emotional Intelligence among student teachers in relation to General intelligence and Academic Achievement. *Edutracks*. 10(3), 36-37.
- [21] Shahzada, G., Ghazi, S. R., Khan, A., Khan, H. N., & Shah, M. T. (2011). The relationship of emotional intelligence with the students' academic achievement. *Interdisciplinary Journal of Contemporary Research in Business*, 3(1), 994-1001.
- [22] Rani, D., & Kaur, K. (2014). Academic achievement of teacher-trainees in relation to their emotional intelligence. *Edutracks*. 13, 7-11.
- [23] Yadav, M. (2014). Emotional intelligence, creativity and their impact on Academic achievement of senior secondary class students. *Edutracks*. 13, 10-13.
- [24] Abdullah, M. C., Elias, H., Mahyuddin, R., & Uli, J. (2004). Emotional intelligence and academic achievement among Malaysian secondary students. *Pakistan Journal of Psychological Research*, 19(3-4).
- [25] Higgins, J. P., Thompson, S. G., Deeks, J. J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *BMJ: British Medical Journal*, 327(7414), 557.
- [26] Hak, T., van Rhee, H., & Suurmond, R. (2016). How to interpret results of meta-analysis (Version 1.0).
- [27] Adeyemo, D. A. (2007). Moderating influence of emotional intelligence on the link between academic self-efficacy and achievement of university students. *Psychology and developing societies*, 19(2), 199-213.