

IMPACT OF EMOTIONAL INTELLIGENCE AND EDUCATIONAL MEDIUM ON ACADEMIC ANXIETY AMONG THE ADOLESCENTS

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Abstract:

Research Background: EI refers to the capacity to identify, understand, and regulate emotions in oneself and others. Educational medium refers to the language or mode of communication used to deliver educational content within academic institutions. Anxiety is a type of performance-related anxiety that can negatively influence cognitive functioning, learning efficiency, and overall academic outcomes. Emotional Intelligence, academic anxiety, and educational medium are key factors influencing students' learning and performance. That way in this study, find out the impact of emotional intelligence and educational medium on academic anxiety of the adolescents.

Objectives: The study objective was to find out the effect of emotional intelligence on academic anxiety of adolescents. Another objective was to examine the effect of educational medium on academic anxiety of adolescents. Further, the objective was to study the significant interaction effect between emotional intelligence and educational medium on the academic anxiety of adolescents.

Procedure: The study included 200 adolescents, with 100 having high emotional intelligence and 100 having low emotional intelligence. Each group was evenly split between English and Marathi medium schools. In the study, the purposive sampling technique was used for the selection of the samples. Emotional intelligence and educational medium were independent variables, while academic anxiety was a dependent variable. The study emotional intelligence scale developed by A. K. Singh and Shruti Narain, and academic anxiety scale developed by Dr. M. Abid Siddiqui and Dr. Atieq Rehman has been used.

Conclusions: It can be concluded that adolescents with low emotional intelligence exhibit higher levels of academic anxiety compared to those with high emotional intelligence. Adolescents from English-medium and Marathi-medium schools show similar levels of academic anxiety. Additionally, no significant interaction effect was found between emotional intelligence and educational medium on the academic anxiety of adolescents.

Keywords: Emotional Intelligence, Educational Medium, Academic Anxiety, Adolescents.

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Introduction:

Emotional Intelligence (EI) refers to the capacity to identify, understand, and regulate emotions in oneself and others. The foundation of Emotional Intelligence emerged in early studies on social intelligence by Thorndike in the 1920. However, Emotional Intelligence gained scientific clarity when Mayer and Salovey formally defined

it in 1990. Salovey and Mayer first introduced Emotional Intelligence as a form of social intelligence that involves monitoring emotions and using emotional information to guide actions. Later, the construct was widely popularized by Goleman, who related Emotional Intelligence to success in leadership, work, and life. The term became mainstream after Daniel Goleman's 1995 book *Emotional Intelligence*, which emphasized its importance in personal achievement, mental health, and leadership performance. According to, Salovey & Mayer's (1990), Emotional Intelligence as a subset of social intelligence involving the ability to monitor one's own and others' emotions, to discriminate among those emotions, and to use emotional information to guide thinking and actions. Emotional Intelligence contributes significantly to both personal and professional functioning. Emotional Intelligence contributes significantly to both personal and professional functioning. Individuals with higher Emotional Intelligence demonstrate better self-control, resilience, adaptability, and stress management. In social contexts, Emotional Intelligence facilitates empathy and strengthens relationships, leading to more effective communication and cooperation. In the workplace, Emotional Intelligence is linked to leadership effectiveness, teamwork, productivity, conflict resolution, and organizational success.

Educational medium refers to the language or mode of communication used to deliver educational content within academic institutions. Educational medium, often referred to as "medium of instruction," is defined as the language used to teach subjects in schools, colleges, and universities. The medium of instruction plays a significant role in shaping learning outcomes, comprehension, cultural identity, and cognitive development. In multilingual nations like India, debates often arise over whether regional languages or English should serve as the primary instructional medium, especially in higher education. According to Cummins (2000), the instructional language influences cognitive academic language proficiency, which in turn affects conceptual learning. UNESCO (2016) emphasizes that learners perform more effectively when instructed in their first language, especially during foundational stages of education.

Academic anxiety is a psychological state marked by ongoing fear and worry related to academic performance, often manifesting as emotional distress and mental preoccupation over academic tasks and evaluation. This form of anxiety is a type of performance-related anxiety that can negatively influence cognitive functioning, learning efficiency, and overall academic outcomes. According to Sarason (1984), this anxiety occurs when the academic demands surpass a student's perceived capability to manage them. It is distinct from general anxiety, as academic anxiety is more context-specific and linked directly to academic performance rather than encompassing broader life concerns, as noted by Zeidner (1998). This phenomenon poses significant challenges to students' emotional well-being and academic success, often arising from various personal, social, and educational pressures. Research underscores that implementing effective emotional regulation strategies, nurturing supportive environments, and utilizing evidence-based interventions can significantly mitigate the effects of academic anxiety.

Emotional Intelligence, academic anxiety, and educational medium are key factors influencing students' learning and performance. High Emotional Intelligence help students manage stress, regulate emotions, and approach academic challenges confidently. Academic anxiety can hinder cognitive functioning and lower achievement,

while the choice of educational medium affects comprehension and conceptual understanding. Studying the interaction of these variables can provide valuable insights into improving academic outcomes and overall well-being in educational settings. In this study, an investigator has focused on finding out the impact of emotional intelligence and educational medium on academic anxiety of adolescents.

Significance of the Study:

Research on the impact of emotional intelligence and educational medium on academic anxiety among adolescents offers valuable insights into how these factors influence students' emotional and cognitive functioning. Emotional intelligence and educational medium can affect adolescents' ability to manage stress, cope with academic challenges, and develop confidence in their abilities. Understanding these effects can help design effective intervention programs to reduce academic anxiety in the adolescents. The study can help educators and parents create supportive learning environments tailored to students' emotional and educational needs. The present study can help to understand how emotional intelligence and educational medium influence academic anxiety among high and low emotional intelligence as well as English and Marathi medium adolescents. The present study can help to understand differences in adolescents' self-regulation and academic confidence based on language of instruction and emotional competencies.

Objectives of the Study:

1. To study the effect of emotional intelligence on academic anxiety of adolescents.
2. To study the effect of educational medium on academic anxiety of adolescents.
3. To study the significant interaction effect between emotional intelligence and educational medium of adolescents in terms of their academic anxiety.

Hypothesis of the Study:

1. Adolescents of low emotional intelligence would be high academic anxiety than adolescents of high emotional intelligence.
2. There will be no significant effect of emotional intelligence on academic anxiety of adolescents.
3. There will be no significant interaction effect between emotional intelligence and educational medium of adolescents in terms of their academic anxiety.

Research Procedure:

➤ Variables of the Study:

Independent Variables		Dependent Variable
Emotional Intelligence	Educational Medium	a) Academic Anxiety
a) High Emotional Intelligence	a) Marathi Medium	
b) Low Emotional Intelligence	b) English Medium	

➤ Sample Size and Selection Procedure:

The study two hundred adolescent were selected from the different secondary schools. Out of this sample, one hundred adolescents were selected from high emotional intelligence, in it, fifty samples were selected from English medium schools and fifty samples were selected from Marathi Medium schools. Same way,

one hundred adolescents were selected from low emotional intelligence, in it, fifty samples were selected from English medium schools and fifty samples were selected from Marathi Medium schools. The purposive sampling technique has been used for the selection of the samples. The study level of emotional intelligence and educational medium were independent variables and academic anxiety was dependent variable. The study emotional intelligence scale developed by A. K. Singh and Shruti Narain, and academic anxiety scale developed by Dr. M. Abid Siddiqui and Dr. Atieq Rehman has been used.

➤ **Research Design:**

In this research 2x2 research design has been used as follows,

Educational Medium	Emotional Intelligence		Total
	High Emotional Intelligence	Low Emotional Intelligence	
English Medium	50	50	100
Marathi Medium	50	50	100
Total	100	100	200

➤ **Operational Definitions:**

a) **Emotional Intelligence:**

In this study, adolescents who achieve the minimum scores on the Emotional Intelligence Scale, as per the manual, has been referred as low emotional intelligence adolescents. On the other hand, adolescents who achieve the maximum scores on the Emotional Intelligence Scale, as per the manual, has been referred as high emotional intelligence adolescents.

b) **Academic Anxiety:**

In this study, adolescents who achieve the minimum scores on the Academic Anxiety Scale, as per the manual, has been classified as low academic anxiety adolescents. On the other hand, adolescents who achieve the maximum scores on the Academic Anxiety Scale, as per the manual, has been referred as high academic anxiety adolescents.

c) **Adolescents:**

In this study, boys and girls between the ages of 13 and 20, who are studying in English or Marathi medium schools, has been referred to as adolescents.

➤ **Study Materials:**

- **Emotional Intelligence Scale:** In this study, emotional intelligence scale developed by A. K. Singh and Shruti Narain has been used. The scale consists of 31 items. This scale has been designed to measure emotional intelligence in individuals aged 12 years and above. This scale has been widely used in research and educational settings due to its simplicity, clear scoring, and ability to capture multiple dimensions of emotional intelligence. The total score ranges from 0 to 31. Reliability studies report a Cronbach's alpha of 0.86.

- **Academic Anxiety Scale:** In this study, academic anxiety scale developed by Dr. M. Abid Siddiqui and Dr. Atieq Rehman has been used. The scale consists of 44 items. The scale's minimum possible score would be 44, and the maximum possible score is 132. Given the three-point format, actual observed means in different studies typically fall somewhere in the mid to high range of this scale.

Statistical Analysis and Results:

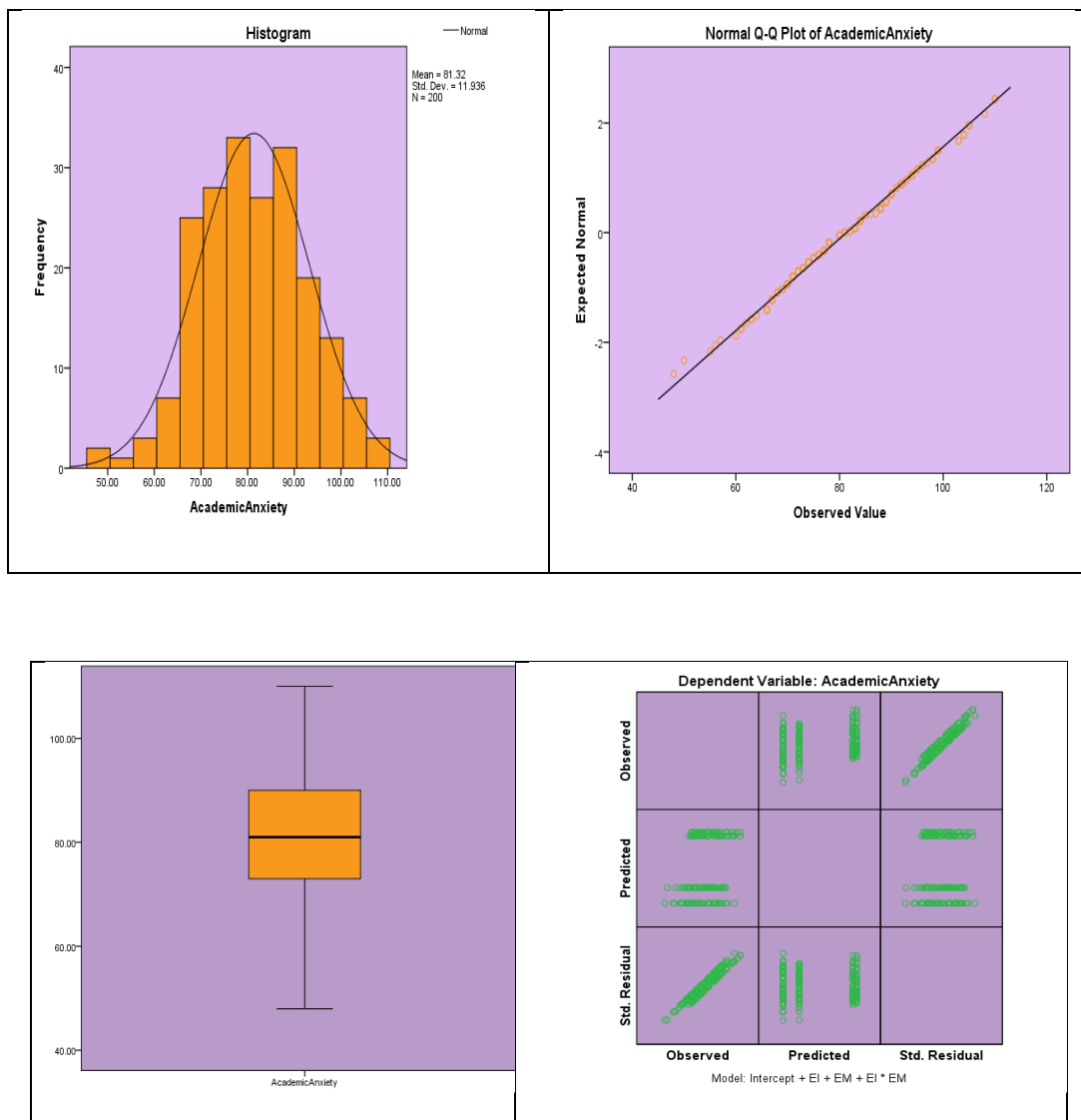
In this part, the investigator has explained impact of level of emotional intelligence and educational medium on academic anxiety of adolescents. The investigator has analyzed the data in following manner.

Table: 1 shows the assessing normality of the variable Academic Anxiety

Variable	Descriptive Statistics		Statistic	Std. Error
Academic Anxiety	Mean		81.3250	0.84398
	95% Confidence Interval for Mean	Lower Bound	79.6607	
		Upper Bound	82.9893	
	5% Trimmed Mean		81.3167	
	Median		81.0000	
	Variance		142.462	
	Std. Deviation		11.93573	
	Minimum		48.00	
	Maximum		110.00	
	Range		62.00	
	Inter quartile Range		17.00	
	Skewness		-0.004	0.172
	Kurtosis		-0.254	0.342

The table 1. Indicates that the trimmed mean value (81.3167) is very close to the simple mean (81.3250). Skewness and kurtosis describe the shape of the distribution and are used with interval and ratio level data. In this table, the skewness value (-0.004) is very close to zero, but it is not zero. The skewness value is negative and indicates that the distribution is somewhat negatively skewed. The kurtosis value (-0.254) is also close to zero, but it is not zero. The kurtosis value is negative, and that distribution is slightly flatter than normal (platykurtic). However, skewness and kurtosis both have fallen well within the acceptable range of ± 1 . So, both value distributions can be considered normal.

Plots: 1: Shows the normality of the data of variable Academic Anxiety.



Above plots indicates of variable academic anxiety. The shape of the distribution is considered normal.

Table:2: Shows descriptive statistics of the academic anxiety on the basis of each cell.

Emotional Intelligence	Educational Medium	Mean	SD	N
High Emotional Intelligence	English Medium	79.1000	11.48424	50
	Marathi Medium	77.5800	13.32037	50
	Total	78.3400	12.39682	100
Low Emotional Intelligence	English Medium	84.1400	11.24860	50
	Marathi Medium	84.4800	10.25241	50
	Total	84.3100	10.70891	100
Total	English Medium	81.6200	11.58960	100
	Marathi Medium	81.0300	12.32346	100
	Total	81.3250	11.93573	200

Table no. 2 is very useful, as it provides the mean and standard deviation for the groups that have been split by both independent variables; these are level of emotional intelligence and type of educational medium. In addition, the table also provides "Total rows," which allows means and standard deviation for groups only split by one independent variable or none at all to be known.

From table no. 2, it is observed that the mean of the adolescents of high emotional intelligence in English medium is 79.100, and the SD is 11.484 on academic anxiety. The mean of the adolescents of high emotional intelligence in Marathi medium is 77.580 and the SD is 13.320. The total mean of the adolescents of high emotional intelligence is 78.340, and the SD is 12.397 on the dependent variable academic anxiety.

In relation to table no. 2, it is observed that the mean of the adolescents of low emotional intelligence in English medium is 84.140, and the SD is 11.249 on academic anxiety. The mean of the adolescents of low emotional intelligence in Marathi medium is 84.480 and the SD is 10.252. The total mean of the adolescents of low emotional intelligence is 84.310, and the SD is 10.709 on the dependent variable academic anxiety.

As well, table no. 2 indicates that the mean score of the English medium adolescents is 81.620, and the SD is 11.580. The mean score of the Marathi medium adolescents is 81.030, and the SD is 12.323. Finally, the total mean score of all groups combined (high and low emotional intelligence + English and Marathi Medium) is 81.325 with an SD of 11.936 on the dependent variable academic anxiety.

Table 3: Shows Levene's test of equality of error variances for the variable academic Anxiety.

Variable	F	df1	df2	Sig.
Academic Anxiety	2.077	3	196	0.105

The above table no. 3 presents the results of Levene's Test of equality of error variances for the dependent variable of academic anxiety. The test is used to examine the assumption of homogeneity of variances, which is

an important requirement in Analysis of Variance. In this table, the obtained F-value is 2.077 with degrees of freedom are $df_1 = 3$, and $df_2 = 196$. The corresponding Significance value is 0.105. On the above description that, we have homogeneity of variances of the dependent variable across groups. The Levene's test indicates that the homogeneity of variance assumption has not been violated because the significant value is 0.105 which is greater than 0.05. In other words, there is no significant difference in the variances of academic anxiety scores across the groups formed by emotional intelligence, and educational medium, as well as their interaction (Emotional Intelligence X Educational Medium). Hence, the assumption of homogeneity of variance is satisfied. It is appropriate to proceed with the factorial ANOVA analysis for examining the effects of emotional intelligence, educational medium, and their interaction (Emotional Intelligence X Educational Medium) on the level of academic anxiety.

Table: 4: Shows summary of ANOVA of the academic anxiety

Source	Sum of Squares	df	Mean Square	F	Sig	Partial Eta Squared
Emotional Intelligence	1782.045	1	1782.045	13.177	0.01	0.063
Educational Medium	17.405	1	17.405	0.129	NS	0.001
Emotional Intelligence X Educational Medium	43.245	1	43.245	0.320	NS	0.002
Error	26507.180	196	135.241			
Total	1351101.000	200				
Corrected Total	28349.875	199				

Significant Level, $df(1,196)$ ---- $0.05 = 3.89$ $0.01 = 6.76$

Eta Squared effect size, $0.01 = \text{small}$ $0.06 = \text{moderate}$ $0.14 = \text{large effect}$ (Cohen, 1988)

From table 4, a two-way ANOVA was conducted that examined the effect of emotional intelligence and educational medium on an individual's level of academic anxiety. Our dependent variable, academic anxiety, was normally distributed for the groups formed by the combination of the emotional intelligence, such as the high and low emotional intelligence of adolescents, as well as the educational medium, such as the Adolescents of English and Marathi Medium, as assessed by the histogram, skewness, and kurtosis. There was homogeneity of variance between groups as assessed by Levene's test for equality of error variances.

The main effects analysis showed that the emotional intelligence is significant, $F(1,196) = 13.177$, $p < 0.01$. This indicates that there is a statistically significant difference in the level of academic anxiety between adolescents of high emotional intelligence and low emotional intelligence. As per Table 2, the mean score of

academic anxiety among adolescents of high emotional intelligence is 78.34 with $SD = 12.39$, whereas the mean score among adolescents of low emotional intelligence is 84.31 with $SD = 10.70$. Thus, adolescents of low emotional intelligence have been found higher academic anxiety than the adolescents of high emotional intelligence. The effect size (partial eta square) for the main effect is 0.063, indicating a moderate effect, meaning that emotional intelligence explains 6.3 percent variance in academic anxiety. On the basis of the description in hypothesis no. 1, “*Adolescents of low emotional intelligence would be high academic anxiety than adolescents of high emotional intelligence*” is accepted. Because there is a significant difference in the level of academic anxiety among the adolescents of low and high emotional intelligence. The adolescents with low emotional intelligence have higher academic anxiety. It means emotional intelligence is a contributory factor in deciding the level of academic anxiety among the adolescents.

The main effect analysis showed that the type of educational medium is not significant, $F(1,196) = 0.129$, $p > 0.05$. Therefore, the type of educational medium is not found to significantly influence the academic anxiety of adolescents. The English-medium and Marathi-medium adolescents have been found equal in their level of academic anxiety. As per Table 2, the academic anxiety mean score of English-medium adolescents is 81.62, and SD is 11.58. In contrast, the academic anxiety mean score of Marathi-medium adolescents is 81.03, and SD is 12.32. The effect size (partial eta square = 0.001) for the main effect of educational medium on academic anxiety is extremely small, indicating that the influence of this variable explains a negligible proportion of variance in academic anxiety among the adolescents. Because of the insignificant result, the eta square, the measure of effect size, associated with the main effect is not mentioned here. Therefore, on the basis of the description in hypothesis no. 2, “*There will be no significant effect of emotional intelligence on academic anxiety of adolescents*” is accepted. English-medium and Marathi-medium adolescents do not differ significantly in their level of academic anxiety. It means that the educational medium of adolescents is not a vital dimension in deciding their level of academic anxiety.

The interaction effect analysis revealed that the combined influence of emotional intelligence and educational medium is not statistically significant, $F(1,196) = 0.320$, $p > 0.05$. This indicates that the effect of emotional intelligence on academic anxiety does not differ depending on the educational medium among the adolescents. In other words, the difference in academic anxiety between adolescents of high and low emotional intelligence does not change across English-medium and Marathi-medium groups. The effect size (partial eta square) for the interaction effect is 0.002, indicating an extremely small effect, meaning that only 0.2 percent of the variance in academic anxiety is explained by the combined influence of emotional intelligence and educational medium. Therefore, on the basis of the description in hypothesis no. 3, “*There will be no significant interaction effect between emotional intelligence and educational medium of adolescents in terms of their academic anxiety*” is accepted. It is therefore concluded that no significant interaction effect between emotional intelligence and educational medium on the academic anxiety of adolescents.

Discussion:

The present study found that emotional intelligence has a significant effect on academic anxiety among adolescents. Adolescents of low emotional intelligence have found higher academic anxiety than those of high emotional intelligence. Mayer, Salovey, & Caruso (2008) and Petrides, Frederickson, & Furnham (2004) found that adolescents with higher emotional intelligence are better at recognizing and managing their emotions. In this study, the effect size was found to be moderate, indicating that emotional intelligence explains a considerable portion of the differences in academic anxiety. Goleman (1995), Zeidner (1998), and Extremera & Fernández-Berrocal (2006) observed that adolescents with higher emotional intelligence tend to use adaptive coping strategies, which reduces their anxiety in challenging academic situations.

It was found that, adolescents studying in English-medium and Marathi-medium schools showed similar levels of anxiety. The effect size for educational medium was found extremely small, indicating that the language of instruction does not play a major role in differences in academic anxiety. According to, Cummins (2000) and UNESCO (2016) that while the medium of instruction may influence comprehension or cognitive performance in younger students, it has less effect on emotional outcomes like anxiety.

It was found that the interaction between emotional intelligence and educational medium is not statistically significant. This means that the influence of emotional intelligence on academic anxiety remains consistent for both English-medium and Marathi-medium adolescents. It was reported by Extremera and Fernández-Berrocal (2006) and Petrides et al. (2004) that the positive effects of emotional intelligence in reducing stress and anxiety are consistent across different educational and cultural settings.

Conclusions:

1. Emotional intelligence has a found significant impact on academic anxiety among the adolescents. The adolescents of low emotional intelligence found higher academic anxiety compared to adolescents of high emotional intelligence.
2. Educational medium does not found significantly influence on academic anxiety of the adolescent. The adolescents of English medium and Marathi-medium found similar levels of academic anxiety.
3. There is no found significant interaction effect between emotional intelligence and educational medium on academic anxiety of the adolescents, indicating that the influence of emotional intelligence on academic anxiety remains consistent across different educational mediums.

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