Original Research

THE RELATIONSHIP AND GENDER-BASED DIFFERENCE BETWEEN EMOTIONAL INTELLIGENCE, PERSONALITY TRAITS AND ACADEMIC ACHIEVEMENT OF UNIVERSITY STUDENTS IN BANGLADESH

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ABSTRACT

Introduction: Emotional intelligence (EI) and personality traits (PT) have an impact on academic achievement (AA) of university students. The purpose of this study was to explore the relationship and gender-based difference between EI, PT, and AA among university students.
Method: This cross-sectional study involved 400 university students selected using a multistage random sampling technique. EI, PT, and AA were the primary variable of this study. The Bangla-translated Emotional Intelligence Scale (EIS) and the Bangla-adapted Ten Item Personality Inventory (TIPI) were used to evaluate the participants' emotional intelligence and personality traits. The AA was measured by participants' academic result. Pearson correlation, independent sample t-test, and multiple regression analysis were used for this study purpose.
Results: Among 400 students, 34% were male, and 66% were female. The mean age was 19.09 ± 2.80 and ranged from 17 to 26. Firstly, we found that AA was not significantly correlated with EI or five personality traits. However, EI was significantly associated with three personality traits, conscientiousness (r = 0.20, p<0.01), emotional stability (r = 0.23, p<0.01), and openness to experience (r = 0.28, p<0.01). Secondly, male students exhibited significantly higher EI compared to female students. Finally, EI and PT did not considerably influence the AA of the participants.
Conclusions: Although EI and PT were correlated but does not guarantee higher AA because this correlation was not so strong or direct and complex interplay of other variables such as motivation and learning strategies. University authorities can utilize these findings to enhance students' academic performance.

Keyword: Emotional intelligence; Personality traits; Academic achievement; Bangladeshi students.

1. INTRODUCTION

Emotions have an essential role in how business works, influencing things like performance, promise, and stress resilience (Shafait & Huang, 2023). The ability to identify, control, and manage emotions is referred to as emotional intelligence or EI. This ability promotes adaptability in thinking and understanding the importance and consequences of emotions (Nazari & Emami, 2012). According to the theories of learning and educational psychology,

these abilities ought to be favorably correlated with academic achievement and be a vital instrument to avert academic failure (Howard et al., 2021).

Emotional intelligence is an important predictor of various elements of health, general quality of life, and well-being (Maalouf et al., 2022; Shafait et al., 2021). Emotional intelligence is frequently regarded as crucial for both personal and professional settings. It influences the capacity to control behavior, manage challenging social situations, and execute individual decisions that contribute to positive results.

EI can strengthen over time, in contrast to cognitive intelligence is often constant throughout life (Dhliwayo & Coetzee, 2020).A study suggested that emotional intelligence influences academic achievement, but it is not considered the main predictor (Song et al., 2010). Overall, additional research suggests that the correlation is either nonexistent or lacks statistical significance (Yasmeen et al., 2023). As a result, researchers disagree on the significance of EI in controlling or anticipating academic performance. As an enduring psychological attribute, personality has a considerable impact on academic achievement. One personality dimension, emotional stability can hamper pupils' learning accomplishments, whereas another personality dimension conscientiousness may facilitate advanced learning (Chamorro-Premuzic & Furnham, 2003).

Academic achievement negatively correlated with neuroticism and positively correlated with extraversion, agreeableness, and openness to experience (Laidra et al., 2007; Lounsbury et al., 2003). However, these findings were not consistent with other studies and found no association between academic achievement and extroversion, neuroticism, agreeableness, and openness to experience (Bratko et al., 2006; Hair & Graziano, 2003; Wolfe & Johnson, 1995).

Previous studies found a significant correlation between EI and personality traits (Ghiabi & Besharat, 2011; Mahasneh, 2013; Petrides et al., 2010). Specific research emphasizing Bangladeshi university students may be limited.Inconsistent results were found in emotional intelligence regarding gender. Males reported lower openness to experience, agreeableness, order, self-discipline, and neuroticism, whereas women reported lower openness to ideas and assertiveness (Costa et al., 2001; Feingold, 1994). These results were not

congruent with different cultures, no considerable gender difference exists in conscientiousness (Costa et al., 2001).

Studies also found women exhibited higher scores in positive emotions, warmth, and gregariousness and men exhibited higher in excitement seeking and assertiveness (Costa et al., 2001; Feingold, 1994). However, a study found no significant gender difference in reporting personality traits and also their academic achievement (Hakimi et al., 2011). In terms of level of ability EI, girls showed higher compared to boys but self-reported EI was higher in boys than girls (D'Amico & Geraci, 2022). However, another study indicated no significant difference between males and females in the total EI scores (Meshkat & Nejati, 2017). A study conducted in Pakistan, where the findings suggested female students were less emotionally intelligent than male students (Ali et al., 2021).

Studies conducted in developed countries found women surpass males in nearly every field of the educational ladder (Morita et al., 2016; Perez-Felkner et al., 2012). Workman and Heyder suggested that girls appear to outperform males in language and the arts, whereas males dominant in natural sciences (Workman & Heyder, 2020). Significant gender differences were not found in terms of academic achievement (Goni & Bello, 2016). Most of the research conducted in Western culture and some of the study in South Asian country but limited study conducted in Bangladesh about the relationship and gender difference between EI, PT, and AA. A previous study suggested that emotional intelligence and personality traits were influenced by cultural and regional factors and also have gender difference (Dubey et al.). The study (Dubey et al.) suggested regional and cultural influences of EI and PT. So, the study aimed to investigate the correlation among EI, PT, and AA of university students. The present study also aimed to explore the gender-based difference of EI, PT, and AA as well as examine whether EI and five PT significantly predicted AA of the respondents.

2. MATERIALS AND METHODS

2.1. Design

We use cross-sectional design for this study because we collect data at a single point in time from university students. In this study, the participants were university students from three institutions: two public universities and

one private university located in the Rajshahi division, specifically Rajshahi University, Rajshahi University of Engineering and Technology, and Varendra University. These three universities had about 46,000 students from various regions of Bangladesh. We selected university students as population because university students are at a crucial phase of personal, emotional, and intellectual growth. Their personality traits and emotional intelligence are often still evolving, making it exciting to investigate how these factors relate to academic achievement. The inclusion criteria as a sample for this study were (i) undergraduate and graduate university students, and (ii) university located in Rajshahi division. The exclusion criteria for this study were (i) foreign students, and (ii) students who were suffer from any psychiatric disorder (diagnosed by psychiatrist).

2.2. Population and Sampling

We used multistage random sampling for this study. Firstly, we randomly selected three universities (two public universities and one private university) from the Rajshahi division. We approach 440 students from the three selected universities for collectig data considering non-response rate. Among 440 students, 27 did not agree to participate in the study and 13 did not provide full information; so, they were not included in the final analysis. So, the final sample size was 400. We determined sample from the equation, $n = \frac{z^2 pq}{d^2}$ Here, n = sample size; z = 1.96; p = prevalence of EI (49%) (Taneja et al., 2020); q = 1-p; d = 0.05.

$$n = \frac{1.96^2 0.49 \times 0.51}{0.05^2}$$

n = 384

The formula provides 384 samples required for the study.

2.3. Variable

In the present study, we collected information about age, gender, academic year, residence, mother's education, and father's education. We also collection information about participants EI, PT, and AA; these three variables were measured using an emotional intelligence scale, a ten-item personality inventory, and cumulative GPA (CGPA).

2.4. Instrument

Emotional Intelligence Scale (EIS)

EIS was used to assess the emotional intelligence of the participants (Schutte et al., 1998). This scale was frequently used in Bangladesh to measure the EI of Bangladeshi students (Emon et al., 2023). This scale consists of 33 items measured on a 5-point Likert scale. The item score ranged from 1 (strongly disagree) to 5 (strongly agree), with a total score ranging from 33 to 165. The Cronbach's alpha for this scale was 0.91 in the present study representing high reliability (Pérez et al., 2005).

The Ten-Item Personality Inventory (TIPI)

Bangla-adapted TIPI was used to assess the personality traits of university students (Islam, 2019). This scale consisted of 10 items, each scored from 1 (strongly disagree) to 7 (strongly agree). This scale consisted of five dimensions of personality traits: extraversion (1,6), agreeableness (2,7), conscientiousness (3, 8), emotional stability (4, 9), and openness to experience (5, 10). Each dimension consisted of 2 items and the even item scored reversely. The Cronbach's alpha of extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience were 0.72, 0.78, 0.82, 0.70, and 0.71 indicating good reliability.

2.5. Procedure

Firstly, we clarify the purpose and advantages were explained to the participants. Secondly, we assure the participants confidentiality about their reported data. Thirdly, written informed consent were taken before the data collection. Finally, participants who agree to provide their data voluntarily, we collect data from them. Data were collected anonymy to secure respondents' privacy and respondents also have the right to leave the study at any time if they decided to do so.

2.6. Analysis

This study sample employed descriptive analysis to present the frequency of gender, academic year, residence, mother's education, and father's education. We checked the normality distribution of the data by Kolmogorov-Smirnov and Shapiro-Wilk tests. We applied person correlation analysis to find the correlation among academic achievement, emotional intelligence, and the five personality dimensions. We used independent sample t-test

to assess the difference of EI, five PT, and AA in terms of gender difference among university students. We applied multiple regression analysis whether EI and five PT significantly predicted AA of the participants. For analysis we consider significant level below 0.05.

2.7. Ethical Clearance

We obtained ethical permission from Department of Psychology, University of Rajshahi, Bangladesh, with a reference number [ERCRP-PSYRU-3(4)24]. For this study, we follow the 1964 Helsinki Declaration and its recommended ethical guidelines and along with its later amendments or equivalent norms.

3. RESULT

Table 1 shows the participants' demographic characteristics. Among 400 students 34% were male and 66% female. Out of 400 respondents, the majority (45%) of students were in their first year, and the lowest percentage (2.5) was from the second year. Respondents came from rural areas (64%) and urban areas (36%). Regarding the father's education, 8.5% belong to no schooling, 3.5% belong to the primary level, only 3% completed JSC, 22% completed HSC, 23% completed Honor's, and 16.5% completed master's degree. Regarding mother's education, 5% had no schooling, 31% completed SSC, and only 5% completed masters. The details of sample characteristics are presented in Table 1.

We applied Pearson correlation because the data were continuous, and the data were normally distributed because both Kolmogorov-Smirnov and Shapiro-Wilk tests were insignificant. Here the relationship between variables were linear and found no significant outliers. The results of the correlation analysis presented in Table 2. Findings showed no significant correlation exists between academic achievement and emotional intelligence. However, some personality characteristics such as conscientiousness ($r = 0.20$, $p<0.01$), emotional stability ($r = 0.23$, $p<0.01$), and openness to experience ($r = 0.28$, $p<0.01$) significantly correlated with EI. Some personality traits were found to be correlated with each other. Conscientiousness significantly correlated with agreeableness ($r = 0.38$, $p<0.01$), emotional stability ($r = 0.24$, $p<0.01$), openness to experience ($r = 0.29$, $p<0.01$), and extraversion ($r = 0.21$, $p<0.01$). Agreeableness

and openness to experience positively correlated ($r = 0.34$, $p<0.01$).

The result of the t-test presented in Table 3. The results showed only emotional intelligence differs significantly between male and female students. Male students (mean 133.24) had higher emotional intelligence than female students (mean 128.36). This mean difference of 4.88 was significant ($t = 2.37$, $p<0.05$). There was no significant difference between male and female students in terms of academic achievement ($t = 1.03$, $p> 0.05$). Findings also suggested conscientiousness ($t = 1.70$, $p>0.05$), agreeableness ($t = 1.25$, $p>0.05$), emotional stability ($t = 1.35$, $p> 0.05$), openness to experience ($t = 0.48$, $p>0.05$), and extraversion ($t =0.87$, $p>0.05$) do not significantly differ in terms of gender.

The results of the multiple regression analysis presented in Table 4 suggest that emotional intelligence ($\beta = 0.008$; 95% CI: -0.004, 0.004) does not significantly predict academic achievement. The five dimensions of personality traits conscientiousness ($\beta = -0.006$; 95% CI: -0.021, 0.020), agreeableness ($\beta = -0.019$; 95% CI: -0.025, 0.019), emotional stability ($\beta = 0.043$; 95% CI: -0.014, 0.025), openness to experience ($\beta = 0.090$; 95% CI: -0.009, 0.032), and extraversion ($\beta = -0.114$; 95% CI: -0.028, 0.003) do not significantly predict the academic achievement of the respondents.

4. DISCUSSION

The correlational analysis of the present study suggested that academic achievement was neither significantly related to nor predicted by emotional intelligence or personality traits. The results of multiple regression suggested that personality traits and emotional intelligence were not significant predictors of academic achievement. This findings was justified because some previous research found that emotional intelligence was not the foremost noteworthy indicator of it (Song et al., 2010). Another research also suggests that lacks or no statistical correlation between emotional intelligence and academic achievement (Yasmeen et al., 2023). These results were due to other factors, such as the particular structure of the education system in Bangladesh; here academic achievement is assessed by exam grades, which may depend on cognitive abilities rather than emotional intelligence. Previous studies also suggested that academic achievement may depend on cognitive ability, self-discipline (Liu et al., 2020; Shi & Qu,

Table 1. Respondents characteristics

Variable	Category	N	Percentage
Age	Mean = 19.09; Standard deviation = 2.80		
Gender	Male	136	34%
	Female	264	66%
Academic year	First-year	180	45%
	Second year	10	2.5%
	Third year	84	21%
	Fourth-year	54	13.5%
	Master's	72	18%
Residence	Rural	256	64%
	Urban	144	36%
Father's education	No schooling	34	8.5%
	Primary	14	3.5%
	PSC	42	10.5%
	JSC	12	3%
	SSC	52	13%
	HSC	88	22%
	Honor's	92	23%
	Master's	66	16.5%
Mother's education	No schooling	20	5%
	Primary	22	5.5%
	PSC	46	11.5%
	JSC	42	10.5%
	SSC	124	31%
	HSC	76	19%
	Honor's	50	12.5%
	Master's	20	5%

Note: SD= Standard deviation

Table 2. Correlation analysis among personality traits, total emotional intelligence, and academic achievement

Variable	AA	EI	C	A	ES	OE	E
AA	1						
EI	0.028	1					
C	0.00	0.20**	1				
A	0.003	0.083	0.381**	1			
ES	0.046	0.227**	0.239**	0.127	1		
OE	0.058	0.284**	0.291**	0.340**	0.027	1	
E	-0.097	0.110	0.214**	0.110	-0.027	0.238	1

Note: **$p < 0.01$; AA = Academic achievement; EI = Emotional intelligence; C = Conscientious; A = Agreeableness; ES = Emotional stability; OE = Openness to experience; E = Extraversion.

Table 3. Gender differences in emotional intelligence, personality trait, and academic achievement

Variable	Male (Mean± SD)	Female (Mean± SD)	df	t
Emotional intelligence	133.24±13.72	128.36±13.81	398	2.37*
Academic achievement	4.83±0.33	4.78±0.36	398	1.03
Conscientiousness	9.72±2.80	10.42±2.72	398	1.70
Agreeableness	11.21±2.61	11.67±2.46	398	1.25
Emotional stability	9.56±3.04	9.00±2.57	398	1.35
Openness to experience	10.12±2.63	9.92±2.88	398	0.48
Extraversion	9.15±3.32	8.71±3.34	398	0.87

Table 4. Predictors of academic achievement

Variable	β	SE	t	p	95% CI
Emotional intelligence	0.008	0.002	0.099	0.921	-0.004, 0.004
Conscientiousness	-0.006	0.010	-0.075	0.940	-0.021, 0.020
Agreeableness	-0.019	0.011	-0.239	0.811	-0.025, 0.019
Emotional stability	0.043	0.010	0.571	0.569	-0.014, 0.025
Openness to experience	0.090	0.010	1.104	0.271	-0.009, 0.032
Extraversion	-0.114	0.008	-1.534	0.127	-0.028, 0.003
$R^2 = 0.018$; $F_{(6, 393)} = 0.603$; $P < 0.728$					

2022). That's why emotional intelligence may not represent a vital role in academic achievement as other elements such as study habits, intellectual ability, and availability of resources.

Personality traits do not correlate with or predict academic achievement. Some previous studies revealed that some personality traits such as extroversion (Bratko et al., 2006; Wolfe & Johnson, 1995), and neuroticism (Hair & Graziano, 2003) were not associated with academic performance. A study conducted in 1995 suggested that academic achievement was not significantly correlated with openness to experience and agreeableness (Wolfe & Johnson, 1995). The reason for this result may be social and family expectations, where exam preparation and memorization are emphasized. In such a setting, external variables such as study materials, social communications, or institutional assistance may have a greater impact on academic achievement than internal personality traits.

However, we also found that conscientiousness, emotional stability, and openness to experience were linked with emotional intelligence. Several studies found that personality traits were significantly associated with emotional intelligence (Ghiabi & Besharat, 2011; Mahasneh, 2013; Petrides et al., 2010). A previous study conducted in New Delhi, India revealed that emotional stability was associated with emotional intelligence (Taneja et al., 2020). This relationship was very predictable because an emotionally stable person can control and regulate their emotions, transform unfavorable feelings into more favorable ones, and alter their perspective on various circumstances (Ghiabi & Besharat, 2011). This study suggests conscientiousness was strongly related to EI. A study found that Conscientious individuals tend to be efficient, productive, trustworthy, responsible, and complete, among

other qualities (McCrae & John, 1992). Emotional intelligence increases with the person's level of conscientious (Avsec et al., 2009; Nawi, 2012). A previous study found the same findings conducted in neighboring country (Taneja et al., 2020). Therefore, openness to experience was also favorably linked with emotional intelligence, this scenario was also found in a previous study (Taneja et al., 2020). Someone with a high openness level is imaginative, creative, artistic, perceptive, and so on (McCrae & John, 1992). As a result, they were thought to be emotionally advanced as evidenced by a study (Atta et al., 2013).

The findings from t-test suggested that female students had lower emotional intelligence than female students. A previous study conducted at Malakand University found the same result (Ali et al., 2021). Other studies also confirm this result (Kim, 2020; Petrides & Furnham, 2000). This result may due to different work area such as males have greater expectations and request at work (Reiff et al., 2001). Males exhibit slightly greater assertiveness in traits thought to be associated with competent leadership than females (Franke et al., 1997). Several suggested males overstated, and female underrate their emotional intelligence (Brackett & Mayer, 2003; Brackett et al., 2006; Lumley et al., 2005). A research conducted on police officers showed that male have higher emotional intelligence than females on a self-report assessment (Olugbemi & Bolaji, 2016). A study conducted on British respondents showed females underrate their emotional abilities and males prefer to overstate them (Szymanowicz & Furnham, 2013).

The current study findings also suggested that no gender difference exists in academic achievement and personality traits. A study found no significant difference in academic achievement between male and female students (Goni & Bello, 2016). A meta-analysis also suggested no significant difference of academic

achievement in terms of gender (Else-Quest et al., 2010). Other study also found no gender difference in academic achievement (Ajai & Imoko, 2015). And also another study found no differences between male and female students reporting emotional intelligence and personality traits (Hakimi et al., 2011).

Limitations and future research directions

Firstly, we considered universities situated in the Rajshahi division. Secondly, this was a cross-sectional study. So, establishing cause-and-effect relationships can be difficult. Finally, academic success can be influenced by a few key things, like how many hours you spend studying and how regularly you attend class which variables cannot considered in this study. Future research may consider samples included for their study from all divisional universities in Bangladesh and longitudinal study can overcome the cause-effect relationships problem. Future studies may advantage from examining the role of motivation, learning strategies, and institutional support enhances students' academic achievement. Understanding these dynamics may assist facilitating the developing of more effective educational policies and interventions designed to improve both emotional well-being and academic success.

Theoretical implications

The study findings have some theoretical implications. Firstly, we may rethink about the predictors of academic achievement. Because academic achievement does not influence by emotional intelligence and personality traits, indicating other influential variables such as study habits, motivation and cognitive ability driving academic achievement. Secondly, it raises questions about the effect of emotional intelligence in academic outcomes, possibly suggesting emotional intelligence assist in social and emotional factors, its role on academic outcome may be limited. Thirdly, association between certain personality traits and emotional intelligence supports existing personality theories such as the Big Five theory. This offers opportunities to explore how emotional abilities shaped by personality traits and this connection influences other aspect of life such as communication with others or interpersonal relationships. Finally, this gender difference between male and female students in terms of emotional intelligence indicates contrary results from previous study. This suggests the need for more research into how gender norms influence emotional self-perception and could suggest societal, cultural and methodological effects.

Practical implications

The study findings have some practical implications. Firstly, rethinking about educational interventions in Bangladesh indicating if emotional intelligence and personality traits have no direct effect on academic outcome educators, and policy makers needs to prioritize other variables such as teaching tactics, meta-cognitive abilities and supportive environment, to enhance the academic outcomes of students. Secondly, although emotional intelligence and personality traits may not have a direct effect, the relationship between emotional intelligence and personality traits implies that cultivating emotional awareness still improve students' social abilities, stress management, and well-being. Finally, gender-sensitive approach indicating plan for socio-emotional learning programs for male and female students can reduce gaps and boost harmonious emotional development.

5. CONCLUSSION

Emotional intelligence and personality traits cannot predict academic achievement. However, some personality traits were associated with emotional intelligence indicating a possible interplay between personality traits and emotional awareness. Male students have higher emotional intelligence than female students. Despite these variations emotional intelligence between male and female students showed no significant difference in their academic achievement highlighting that academic achievement possibly influenced by factors beyond emotional and personality-related characteristics. Future study is recommended to explore additional factors that may contribute to academic achievement in this context.

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Conflict of interest

The authors declare no conflict of interest.

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6. REFERENCES

Ajai, J. T., & Imoko, B. I. (2015). Gender Differences in Mathematics Achievement and Retention Scores: A Case of Problem-Based Learning Method. *International Journal of research in Education and Science, 1*(1), 45-50.

Ali, A., Saleem, N., & Rahman, N. (2021). Emotional Intelligence of University Students: Gender Based Comparison. *Bulletin of Education and Research, 43*(1), 255-265.

Atta, M., Ather, M., & Bano, M. (2013). Emotional intelligence and personality traits among university teachers: Relationship and gender differences. *International Journal of Business and Social Science, 4*(17).

Avsec, A., Takšić, V., & Mohorić, T. (2009). The relationship of trait emotional intelligence with the big five in croatian and slovene university student samples. *Psihološka obzorja, 18*(3), 99-110.

Brackett, M. A., & Mayer, J. D. (2003, Sep). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Pers Soc Psychol Bull, 29*(9), 1147-1158. https://doi.org/10.1177/01461672032 54596

Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006, Oct). Relating emotional abilities to social functioning: a comparison of self-report and performance measures of emotional intelligence. *J Pers Soc Psychol, 91*(4), 780-795. https://doi.org/10.1037/0022-3514.91.4.780

Bratko, D., Chamorro-Premuzic, T., & Saks, Z. (2006, 2006/07/01/). Personality and school performance: Incremental validity of self- and peer-ratings over intelligence. *Personality and Individual Differences, 41*(1), 131-142. https://doi.org/https://doi.org/10.101 6/j.paid.2005.12.015

Chamorro-Premuzic, T., & Furnham, A. (2003, 2003/08/01/). Personality predicts academic performance: Evidence from two longitudinal university samples. *Journal of Research in Personality, 37*(4), 319-338.

https://doi.org/https://doi.org/10.101 6/S0092-6566(02)00578-0

Costa, P. T., Terracciano, A., & McCrae, R. R. (2001, Aug). Gender differences in personality traits across cultures: robust and surprising findings. *J Pers Soc Psychol, 81*(2), 322-331. https://doi.org/10.1037/0022-3514.81.2.322

D'Amico, A., & Geraci, A. (2022, 2022/07/01/). Sex differences in emotional and meta-emotional intelligence in pre-adolescents and adolescents. *Acta Psychologica, 227*, 103594. https://doi.org/https://doi.org/10.101 6/j.actpsy.2022.103594

Dhliwayo, P., & Coetzee, M. (2020). Cognitive intelligence, emotional intelligence and personality types as predictors of job performance: Exploring a model for personnel selection. *SA Journal of Human Resource Management, 18*, 13.

Dubey, D., Kewalramani, S., & Sanyal, S. Cultural Perspective on Emotional Intelligence and Behaviour Patterns Among Adolescents in Gujarat and Maharashtra. *Annals of Neurosciences, 0*(0), 09727531241254154. https://doi.org/10.1177/09727531241 254154

Else-Quest, N. M., Hyde, J. S., & Linn, M. C. (2010, Jan). Cross-national patterns of gender differences in mathematics: a meta-analysis. *Psychol Bull, 136*(1), 103-127. https://doi.org/10.1037/a0018053

Emon, M. M. H., Siam, S. A. J., & Siddique, M. (2023, 03/17). Exploring the Link Between Emotional Intelligence and Academic Performance Among Bangladeshi Private University Students. *Malaysian Mental Health Journal, 2*, 26-28. https://doi.org/10.26480/mmhj.01.202 3.26.28

Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin, 116*(3), 429-456. https://doi.org/10.1037/0033-2909.116.3.429

Franke, G. R., Crown, D. F., & Spake, D. F. (1997, Dec). Gender differences in ethical perceptions of business practices: a social role theory perspective. *J Appl Psychol, 82*(6), 920-934. https://doi.org/10.1037/0021-9010.82.6.920

Ghiabi, B., & Besharat, M. A. (2011, 2011/01/01/). An investigation of the relationship between Personality dimensions and emotional intelligence. *Procedia - Social and Behavioral Sciences, 30*, 416-420. https://doi.org/https://doi.org/10.1016/j.sbspro.2011.10.082

Goni, U., & Bello, S. (2016). Parental Socio-Economic Status, Self-Concept and Gender Differences on Students' Academic Performance in Borno State Colleges of Education: Implications for Counselling. *Journal of Education and Practice, 7*(14), 21-27.

Hair, E. C., & Graziano, W. G. (2003). Self-Esteem, Personality and Achievement in High School: A Prospective Longitudinal Study in Texas. *Journal of Personality, 71*(6), 971-994. https://doi.org/https://doi.org/10.1111/1467-6494.7106004

Hakimi, S., Hejazi, E., & Lavasani, M. G. (2011, 2011/01/01/). The Relationships Between Personality Traits and Students' Academic Achievement. *Procedia - Social and Behavioral Sciences, 29*, 836-845. https://doi.org/https://doi.org/10.1016/j.sbspro.2011.11.312

Howard, J. L., Bureau, J., Guay, F., Chong, J. X. Y., & Ryan, R. M. (2021, Nov). Student Motivation and Associated Outcomes: A Meta-Analysis From Self-Determination Theory. *Perspect Psychol Sci, 16*(6), 1300-1323. https://doi.org/10.1177/1745691620966789

Islam, N. (2019). The Big Five model of personality in Bangladesh: Examining the Ten-Item Personality Inventory. *Psihologija, 52*(4), 395-412. https://doi.org/10.2298/PSI181221013I

Kim, J.-Y. (2020). A longitudinal study of the relation between creative potential and academic achievement at an engineering university in Korea. *Journal of Engineering Education, 109*(4), 704-722. https://doi.org/https://doi.org/10.1002/jee.20365

Laidra, K., Pullmann, H., & Allik, J. (2007, 2007/02/01/). Personality and intelligence as predictors of academic achievement: A cross-sectional study from elementary to secondary school. *Personality and Individual Differences, 42*(3), 441-451. https://doi.org/https://doi.org/10.1016/j.paid.2006.08.001

Liu, S., Wei, W., Chen, Y., Hugo, P., & Zhao, J. (2020). Visual-Spatial Ability Predicts Academic Achievement Through Arithmetic and Reading Abilities. *Front Psychol, 11*, 591308. https://doi.org/10.3389/fpsyg.2020.591308

Lounsbury, J. W., Tatum, H., Gibson, L. W., Park, S.-H., Sundstrom, E. D., Hamrick, F. L., & Wilburn, D. (2003, 2003/06/01). The Development of a Big Five Adolescent Personality Inventory. *Journal of Psychoeducational Assessment, 21*(2), 111-133. https://doi.org/10.1177/073428290302100201

Lumley, M. A., Gustavson, B. J., Partridge, R. T., & Labouvie-Vief, G. (2005, Sep). Assessing alexithymia and related emotional ability constructs using multiple methods: interrelationships among measures. *Emotion, 5*(3), 329-342. https://doi.org/10.1037/1528-3542.5.3.329

Maalouf, E., Hallit, S., & Obeid, S. (2022). Personality traits and quality of life among Lebanese medical students: any mediating effect of emotional intelligence? A path analysis approach. *BMC psychology, 10*(1), 28.

Mahasneh, A. M. M. (2013). Investigation relationship between emotional intelligence and personality traits among sample of Jordanian University students. *Cross-Cultural Communication, 9*(6), 82.

McCrae, R. R., & John, O. P. (1992, Jun). An introduction to the five-factor model and its applications. *J Pers, 60*(2), 175-215. https://doi.org/10.1111/j.1467-6494.1992.tb00970.x

Meshkat, M., & Nejati, R. (2017). Does Emotional Intelligence Depend on Gender? A Study on Undergraduate English Majors of Three Iranian Universities. *Sage Open, 7*(3), 2158244017725796. https://doi.org/10.1177/2158244017725796

Morita, N., Nakajima, T., Okita, K., Ishihara, T., Sagawa, M., & Yamatsu, K. (2016, Sep 1). Relationships among fitness, obesity, screen time and academic achievement in Japanese adolescents. *Physiol Behav, 163*, 161-166.

https://doi.org/10.1016/j.physbeh.2016.04.055

Nawi, N. H. M. (2012). Inter relationship between emotional intelligence and personality trait of educator leaders. *International Journal of Academic Research in Business and Social Sciences, 2*(5), 223.

Nazari, K., & Emami, M. (2012). Emotional intelligence: Understanding, applying, and measuring. *Journal of Applied Sciences Research, 8*(3), 1594-1607.

Olugbemi, O., & Bolaji, A. (2016). Psychosocial predictors of emotional intelligence among police officers in Nigeria. *International Journal of Police Science & Management, 18*(2), 126-132.

Perez-Felkner, L., McDonald, S. K., Schneider, B., & Grogan, E. (2012, Nov). Female and male adolescents' subjective orientations to mathematics and the influence of those orientations on postsecondary majors. *Dev Psychol, 48*(6), 1658-1673. https://doi.org/10.1037/a0027020

Pérez, J. C., Petrides, K., & Furnham, A. (2005). Emotional Intelligence: An International Handbook. *Greensboro, NC, USA: Center For Creative Leadership Inc*, 181-201.

Petrides, K. V., & Furnham, A. (2000, 2000/03/01). Gender Differences in Measured and Self-Estimated Trait Emotional Intelligence. *Sex Roles, 42*(5), 449-461. https://doi.org/10.1023/A:1007006523133

Petrides, K. V., Vernon, P. A., Schermer, J. A., Ligthart, L., Boomsma, D. I., & Veselka, L. (2010, 2010/06/01/). Relationships between trait emotional intelligence and the Big Five in the Netherlands. *Personality and Individual Differences, 48*(8), 906-910. https://doi.org/https://doi.org/10.1016/j.paid.2010.02.019

Reiff, H. B., Hatzes, N. M., Bramel, M. H., & Gibbon, T. (2001, Jan-Feb). The relation of LD and gender with emotional intelligence in college students. *J Learn Disabil, 34*(1), 66-78. https://doi.org/10.1177/002221940103400106

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*(2), 167-177.

Shafait, Z., & Huang, J. (2023). Exploring the Nexus of Emotional Intelligence and University Performance: An Investigation Through Perceived Organizational Support and Innovative Work Behavior. *Psychol Res Behav Manag, 16*, 4295-4313. https://doi.org/10.2147/prbm.S422194

Shafait, Z., Khan, M. A., Sahibzada, U. F., Dacko-Pikiewicz, Z., & Popp, J. (2021). An assessment of students' emotional intelligence, learning outcomes, and academic efficacy: A correlational study in higher education. *PLoS One, 16*(8), e0255428. https://doi.org/10.1371/journal.pone.0255428

Shi, Y., & Qu, S. (2022). The effect of cognitive ability on academic achievement: The mediating role of self-discipline and the moderating role of planning. *Front Psychol, 13*, 1014655. https://doi.org/10.3389/fpsyg.2022.1014655

Song, L. J., Huang, G.-h., Peng, K. Z., Law, K. S., Wong, C.-S., & Chen, Z. (2010). The differential effects of general mental ability and emotional intelligence on academic performance and social interactions. *Intelligence, 38*(1), 137-143.

Szymanowicz, A., & Furnham, A. (2013, Jul-Aug). Gender and gender role differences in self- and other-estimates of multiple intelligences. *J Soc Psychol, 153*(4), 399-423. https://doi.org/10.1080/00224545.2012.754397

Taneja, N., Gupta, S., Chellaiyan, V. G., Awasthi, A. A., & Sachdeva, S. (2020). Personality traits as a predictor of emotional intelligence among medical students. *J Educ Health Promot, 9*, 354. https://doi.org/10.4103/jehp.jehp_678_19

Wolfe, R. N., & Johnson, S. D. (1995). Personality as a Predictor of College Performance. *Educational and Psychological Measurement, 55*(2), 177-185. https://doi.org/10.1177/0013164495055002002

Workman, J., & Heyder, A. (2020, 2020/12/01). Gender achievement gaps: the role of social costs to trying hard in high school. *Social Psychology of Education, 23*(6),

1407-1427. https://doi.org/10.1007/s11218-020-09588-6

Yasmeen, R., Shah, A. A., Naseer, S., & Syeda, Z. F. (2023). Teacher-class relationship and emotional intelligence in the academic output and generic competence of higher education students. *PLoS One, 18*(10), e0292120. https://doi.org/10.1371/journal.pone.0292120