



## PSYCHOLOGICAL ASSESSMENT OF EMOTIONAL INTELLIGENCE ON UNDERGRADUATE STUDENTS' ACADEMIC PERFORMANCE IN KATSINA STATE

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### Abstract

*The study investigated the psychological assessment of emotional intelligence on academic performance of undergraduate students in Katsina state. An ex-post-facto research design was adopted. The population consists of undergraduate students of universities in Katsina state, while the target population consists of the 300 Level students of Faculties of Education of 2021/2022 academic session. A total of 225 were selected for this study through simple random sampling techniques, the sample consists of one hundred and twenty 120 (53.3%) male and one hundred and five 105 (46.7%) female respectively. The instrument used consists of two sections: section "A" contained personal data of respondents; section "B" contains adopted Indigenous Emotional Intelligence Scales (IEIS), adopted from Adebayo (2017), test re-test reliability of 0.79 was also established for the scale. The cumulative grade point average (CGPA) was used for academic performance with highest CGPA score of 5.00. One research question was formulated and four research hypotheses were generated and tested at 0.05 alpha level of significance. Result indicates a good level of prediction.  $R^2 = .026$  which is equivalent to 2.6%, indicating the level of shared variance between the dependent variable and the independent variables ( $F_{c=224, .832} < 0.05$ ). Psychological assessment of emotional intelligence factors had significant positive correlation with academic performance and there is significant difference in emotional intelligence factors based on gender. Based on these findings, it was recommended that University authority should employ more counselling Psychologists in university counselling centre to create an enabling environment where students can achieve positively in their life endeavour.*



**Keywords:** Psychological Assessment, Emotional intelligence, Undergraduate students, Academic performance

## Introduction

Psychological assessment is an important aspect of testing/examining an individual with combination of techniques to help him arrive at some assumptions about his behaviour, personality and capabilities. This is a psychological testing, or performing of psychological battery on individual. Psychological assessment contributes important information to the understanding of individual characteristics and capabilities, through the collection, integration, and interpretation of information about an individual (Groth-Marnat, 2009). Such information is obtained through a variety of methods and measures, with relevant sources determined by the specific purposes of the evaluation. Emotional intelligence is the ability to understand, use, and manage your own emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges and defuse conflict. Emotional Intelligence is an array of interrelated emotional and social competencies and skills that determine how effective individuals understand and express themselves, understand others and relate with them, and cope with daily demands, challenges and pressures (Bar-On, 2010). Emotional intelligence helps individual build stronger relationships, succeed at school and work, and achieve your career and personal goals. It is also help to connect with feelings, turn intention into action, and make informed decisions about what matters most to individual. It is therefore expected that individuals who show high levels of emotional intelligence exhibit behaviour that tend to delay gratification, by exercising self-control in the face of immediate gratification in an attempt to maximize gratification over an extended period of time. The Goleman (1995) model four domains include: self-awareness, self-management, social awareness and relationship management. According to Adebayo (2017) emotional intelligence factors/dimension include interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility. This factor was formulated from the work of Bar-On (2010) and Goleman (1995) models. Goleman (1995) claimed that emotionally intelligent individual exhibit a high sense of self-interest through activities that are beneficial to the individuals themselves and the society in general. In group situations, individuals with high emotional intelligence tend to find it easier to sustain relationships. Also, individuals who show high emotional intelligence tend to exhibit high self-awareness, that incorporates healthy life styles and pro-sociality. Psychological assessments of emotional intelligence factors of Adebayo (2017) include the following:

**Interpersonal skills** are the ability to accurately notice the emotions of other individuals and relate effectively in “read” situations appropriately. It is about sensing what other individuals are doing, thinking and feeling to be able to take their perspective using your capacity for empathy.

**Stress tolerance** is referred to the ability to take self own emotions, the emotions of other individuals, and the context to manage and tolerates social interactions successfully. This can be known as “friendliness with a purpose” or getting desired responses when relating with other



individuals. Ability to managing stress is the core and the first step to building emotional intelligence.

**Optimism** is referred to emotional experience that reflection on early life experience of individual which determined the ability to manage core feelings such as anger, sadness, fear, and joy often depends on the quality and consistency of individuals life. It's emotions that having a moment-to-moment connection with your changing emotional experience in order to understanding how emotion influences your thoughts and actions.

**Assertiveness** refers to individuals interpersonal encounter such as defense, of rights refusal behaviour, ability to ask for positive favour and ability to initiate and maintain reasonable conversation which combination of appropriate, timely, verbal and non-verbal behaviour which can be exhibited in society.

**Problem solving** refers to an approach to find solution to problem concern individuals in relating to other behaviour. It's an aware of the fact that there is an orderly procedure or stages in thinking and doing thing positively in resolving challenges with others.

**Flexibility** refers to relating and work well with other individuals with emotional awareness and ability to recognize and understand what other individuals are experiencing either positive or negative responses. Its self emotional awareness that plays effectively developing social/emotional skills that involved in maintain good relationships more effective, communicate clearly, inspire and influence others, fruitful, and fulfilling manage conflict control.

Academic performance is a measurable behavioural expectation from the scores earned by students in terms of the quality and quantity of students work. According to Adebayo (2017) emotional intelligence influences individual academic performance and such individuals in this group are said to be more of extrovert, sociable, friendly, easy going and talkative than introvert. Emotional Intelligence may act as a moderator of the effects of cognitive skills on academic performance (Fernandez, Alcaide, Extremera & Pizarro, 2006).

Gender refers to the socially determined ideas and practices of what it is to be female or male (Ukoh & Okeke, 2017). It emerges in human life as a source of determining individual as well as social identity. A wealth of research findings indicates that emotional intelligence correlates with academic performance. Naderi, Shahrir, and Tengku (2010) conduct research study on intelligence and academic achievement: An investigation of gender differences. They study examining relationship that exists between intelligence and academic achievement and the relationship differs between males and females. It's indicated that intelligence was not related to academic achievement for both males and females. Brunietal (2006) examined the relationship between academic performance, demographic and psychology factors. Brunietal's study shows that, females had higher academic achievement as compared to males. However other studies by Herbert and stipek (2005) found there were no gender differences in achievement. Naderi, Abdullah, Hamid and Sharir (2008) examined intelligence and gender as predictors of academic performance among Iranian undergraduate students. the result Naderi, et al (2008) found that intelligence and gender are partially correlated and correlation between academic achievement and emotional intelligence. In addition to study conducted by Austin, Evans, Magnus and



O'Hanlon (2007) on medical students; Bada, Jimoh and Mary (2022) on mathematics achievement of secondary school students, their findings revealed that females have higher emotional intelligence than their male's counterparts. Also, in the study of Naderi, Abdullah, Tengku, Sharir and Kumar (2009) study Iranian undergraduate students revealed that neither intelligence nor creativity is significant predictor of academic achievement among undergraduate students' scores as measures of student achievement.

Gender difference in academic achievement seems to vary depending on the subject or course being considered. The findings of Koleoso, Uwadiae and Nnakife (2019) showed that gender did not significantly influence emotional intelligence. The findings of Ritu and Azimmudin (2013) revealed that, there is a significant influence of Intelligence on academic achievement whereas gender has not significantly influenced the academic achievement. In addendum to the findings of Salami and Ogundokun (2009) indicated that gender did not significantly influence the academic performance of the students. The results of study by Witt-Rose (2003) found that no significant relationship existed between gender and academic performance. Therefore, emotional intelligence as a positive way of overcoming challenges of self and others helps individual to build stronger relationships, succeed in academic pursuit regardless of gender and social-economics status of individual.

### **Statement of the Problem**

The academic performance of students admitted into universities has been an issue of concern to students, lecturers, parents/guardians, university administrator and the community at large. The variation in academic performance might be attributed to inherent ability of an individual or due to some personal, economical, environmental and social factors (Yaro & Saifullahi, 2018). Inherent ability of emotional intelligence and students motives to achieve affects students' academic performance positively or otherwise to a wider extent. Therefore, academic performance of undergraduate students is evaluated in a number of ways such as students demonstrate their knowledge by presentation, submission of assignment, project presentation, participating in class activities, group discussions, taking written or oral examinations and regular grading of students at the end of programme. Emotional Intelligence is one of the most important elements that explain the success or failure of students in their academic work and it directly proportional to their cognitive and affective domains. It also identifies that emotional problems in poor performing students as both cause and effect of poor academic performance, for a student who has extremely poor academic potentials on the other hand may be admitted into program best suited to his temperament, thus possibly saving him from frustrations of attempting academic studies for which he is ill fitted. Therefore, to buttress the above facts, it has been observed with keen interest that some students are serious and committed about their studies but turn out with poor academic performance while some perform very wonderfully in their academic work. The variation in academic performance among undergraduate students could not be explained without proper recourse to psychological assessment of emotional intelligence, some domains are associated with high academic performance and some are associated with poor performance. This desire to see this problem solved, give rise to this study and researcher aimed to investigate



the impact of psychological assessment of emotional intelligence on academic performance of undergraduates' students in Katsina state.

### **Objectives of the Study**

The study specifically investigated the:

1. composite contribution of emotional intelligence factors (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility) on undergraduate students' academic performance.
2. individual contribution of emotional intelligence factors (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility) on undergraduate students' academic performance.
3. difference in emotional intelligence factors (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility) among undergraduate students' academic performance based on gender (male and female).
4. difference in undergraduates' students' academic performance based on gender (male and female).

### **Research Questions**

The following question was generated to guide the study:

1. To what extent does students' emotional intelligence (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility) jointly contribute to the prediction of academic performance?

### **Research Hypotheses**

The following research hypotheses were formulated for the study:

- HO<sub>1</sub>: There is no significant composite contribution of emotional intelligence factors (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility) on undergraduates' students' academic performance.
- HO<sub>2</sub>: There is no significant individual contribution of emotional intelligence factors (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility) on undergraduates' students' academic performance.
- HO<sub>3</sub>: There is no significant difference in emotional intelligence factors (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, and flexibility) among undergraduates students academic performance based on gender (male and female).
- HO<sub>4</sub>: There is no significant difference in undergraduates' students' academic performance based on gender.

### **Methodology**

This study adopted a research design of the *ex-post facto* type. The design is such that the researcher could not control the independent variables because they have already occurred and they cannot be manipulated. The study explores the prediction of academic performance from emotional intelligence and gender among undergraduates student in university. The population of this study comprised undergraduate student based on their ownership (federal, state and private)





Federal University Dutsin-ma, Umaru Musa Yaradua University, Katsina and Al-Qalam University Katsina. These institutions were selected to ensure that information on research variables are properly generated for the study. The target population for this research consists of the 300 Level undergraduate students of Faculties of Education of 2021/2022 academic session; they were selected due to the fact that, they are more emotionally stable in term of academic pursuits. A total of 225 were selected for this study through simple randomly sampling technique as follows; eighty (80) students were selected from Federal University Dutsin-ma, one hundred (100) students were selected from Umaru Musa Yaradua University, Katsina and forty-five (45) students were selected from Al-Qalam University Katsina. Therefore, the sample consists of one hundred and twenty 120 (53.3%) male and one hundred and five 105 (46.7%) female respondents. The instrument used to collect data is questionnaire, this questionnaire was divided into two sections; Section A: contained students information such as name of school, gender, course of study and CGPA, while Section B: contained Indigenous Emotional Intelligence Scales (IEIS), adopted version of Afolabi(2017). It is a 40 item, modified and structured in four point modified Likert Scale such as Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1. The Indigenous Emotional Intelligence Scales (IEIS) items measured six (6) factors/dimensions (Interpersonal skills, Stress tolerance, Optimism, Assertiveness, Problem solving, and Flexibility). The instrument has a reliability index of alpha with test re-test reliability of 0.79 was also established for the scale, this showed that the overall measure and its dimensions are reliable. The CGPA of 300 level research participants was used as measure of academic performance. The highest possible CGPA score for any student is 5.00. The instrument was validated by two experts in the area of Educational Psychology and Counselling of the Faculty of Education, Federal University Dutsin-ma, Katsina state. Face, content and construct validity of the instruments were ensured by the experts. The instrument was pilot tested using twenty (20) students from other Faculty that are not part of the study, for the period of three weeks interval in order to prevent instrument contamination during the main research. The internal consistency was determined using Alpha Cronbach Coefficient analysis for test re-test reliability index of 0.79 was obtained from Indigenous Emotional Intelligence Scales (IEIS). The researcher administered the questionnaire to students in their lecture hall with help of course representatives, the questionnaire was distributed with the assistance of course representatives and filled questionnaires were collected instantly. The current Cumulative Grade Point Average (CGPA) score of the respondents was obtained from the students who participated in the study. Data analysis was carried out using descriptive statistics of average means and percentage for research question. Multiple regression analysis was used to analyze hypothesis one and two, hypothesis three and four was analyzed using t-test. All the hypotheses were tested at 0.05 alpha level of significant.



**Results**

**Table 2: Students Emotional Intelligence Factors**

Agree		Disagree				
S/NO	Factors	F	%	F	%	X
1.	Interpersonal Skills	179	79.7%	46	20.3%	2.54
2.	Stress Tolerance	193	85.6%	32	14.4%	2.96
3.	Optimism	168	74.8%	57	25.2%	2.36
4.	Assertiveness	201	89.4%	24	10.6%	2.87
5.	Problem Solving	204	91.1%	21	8.9%	2.68
6.	Flexibility	202	89.9%	23	10.1%	2.72
Average of Means/Percentage Average		191	84.8%	34	25.2%	2.69

The table 1 shows the analysis of students emotional intelligence factors 79.7% of the respondents agreed on interpersonal skills while 20.3% of the respondents disagreed. However, 85.6% of the respondents agreed on tolerate to stress, while 14.4% of the respondents disagreed on stress tolerance. It was also indicated that 74.8% of the respondents agreed on optimistic, while 25.2% of the respondents disagreed on optimistic. On the similar note, 89.4% of the respondents agreed on assertiveness, while 10.6% of the respondents disagreed on assertiveness. Meanwhile, 91.1% of the respondents agreed on problem-solving skills, while 8.9% of the respondents disagreed. Lastly, 89.9% of the respondents agreed on flexible, while 10.1% of the respondents disagreed on flexible. The average mean value of 2.69 implied that emotional intelligence factor influence the academic performance of undergraduate students of university.

**Table 2: Regression Analysis combined influence of emotional intelligence factors, gender and academic performance of undergraduate students.**

Model	R	R Square	Adjusted R Square	Standard Error
1	0.162 <sup>a</sup>	0.026	-0.005	1.01279

  

Analysis of Variance					
Model	Sum of Square	Df	Mean Square	F	S
Regression	5.972	7	.853	.832	.562 <sup>b</sup>
Residual	222.588	217	1.026		
Total	228.560	224			

a. Dependent Variable: Academic Performance.

b. Predictors: (Constant): Interpersonal, Stress, Optimism, Assertiveness, Problem, Flexibility and Gender

As shown in Table 2 above, multiple correlations of 0.162 between emotional intelligence factors, gender and student academic performance were found. This suggests that emotional intelligence factors may have some influence on student academic performance, and an R<sup>2</sup> of 0.026 indicates that emotional intelligence factors and gender accounted for 26% of the total variance seen in the students' academic performance, leaving the remaining 74% to factors that were not considered in the statistical analysis. The table also demonstrated that the integrated variables enabled student academic performance [(F=7; 217) = .832, sign .562 p<0.05]



**Table 3:** Relative effect of the independent variables to the prediction of academic performance.

Variance	Un-standardized coefficients		Standardized coefficients		
	B	Standard Error	Beta	t-value	Sign.
Constant	2.783	.898		3.098	.002
Interpersonal Skill	-.021	.020	-.072	-1.053	.293
Stress Tolerance	.036	.021	.117	1.726	.086
Optimism	-.017	.018	-.066	-.959	.336
Assertiveness	.014	.018	.053	.782	.435
Problem Solving	.002	.015	.008	.112	.911
Flexibility	.005	.015	.022	.332	.741
Gender-.076	.136	-.038	-.561	.576	

a. Dependent Variable: Students Academic Performance (P<0.05)

**Table 3** show the relative contribution of each of the variables to that potent predictors of academic performance: stress tolerance (Beta = 0.117. t = 1.726, p < 0.05), assertiveness (Beta = 0.053. t = 0.782, p < 0.05), problem solving (Beta = 0.008, t = 0.112. p < 0.05), flexibility (Beta = 0.022, t = 0.332. p < 0.05). Interpersonal skill (Beta = -0.072, t = -1.053. p < 0.05), optimism, (Beta = -0.066, t = -0.959 p < 0.05) and gender (Beta = -0.038, t = -0.561. p < 0.05) was not potent in explaining academic performance among respondents.

**Table 4: Shown t-test Summary of Psychological Assessment of Emotional Intelligence among Undergraduate Students Based on Gender**

Gender	N	Mean	Std. Dev.	Std. Error.	DF	t-val	Sig	P	Remark
Male	120	118.61	10.55	0.96	223	.739	.461	P<.05	Rejected
Female	102	117.65	8.71	0.85					

The result on table 4 shows that t-value = 0.739, p-value = .461, therefore, there is significant difference between male and female emotional intelligence among undergraduate students because .654 is greater than 0.05, thus hypothesis three is hereby rejected. Therefore, male students have significantly higher emotional intelligence mean than their female counterparts.

**Table 5: Shown t-test Summary of Academic performance among Undergraduate Students Based on Gender**

Gender	N	Mean	Std. Dev.	Std. Error	DF	t-val	Sign	P	Remark
Male	120	3.11	1.01	0.92	223	.449	.654	p>.05	Accepted
Female	102	3.05	1.05	0.99					

The result on table 5 shows that t-value = 0.449, p-value = .654, therefore, there is no significant difference between male and female academic performance among undergraduate students because .654 is greater than 0.05, thus hypothesis three is hereby retained.

### Discussion

The purpose of this study was to investigate the impact of Psychological assessment of emotional intelligence on academic performance of undergraduate' students in Katsina state.





The result shows the analysis of students' emotional intelligence factors is over 70% in each factor. This indicated that psychosocial emotional intelligence factors (Interpersonal skills, stress tolerance, optimism, assertiveness, problem solving, flexibility and gender) jointly predicted academic performance among the students. All the predictor variables accounted for 16.2 per cent of the proportion of variance in academic performance. This finding is consistent with the earlier research findings as reported by Koleoso (2019) indicates that the combination of these factors can be used in developing various skills that can contribute to successful academic performance and effective environmental adaptation in later life. This indicates that students are more stress tolerance, optimistic and able to solve problems in their academic pursuit.

The findings of this study showed that assessment of emotional intelligence factors had significant positive correlation with academic performance. This finding is consistent with the research findings of Belanger (2005) agreed that students with high level of emotional intelligence possess high self-efficacy which, in turn, results in outstanding academic performance. This indicates that the ability to manage one's emotions is to validate one's feelings and to solve problems of self and interpersonal natures are more important for being academically successful in school. Also, the findings showed that there is significant difference in emotional intelligence factors based on gender. The finding of Brunietal (2006) study indicates that there are significant differences between males and females. In-contrary to Koleoso (2019) showed that gender did not significantly influence emotional intelligence. Also Ahmad, Bangash and Khan (2009) indicated that emotional intelligence does not respect gender. That is emotionally intelligent students are skilled in problem-solving, interpersonal, stress tolerance, goal achievement and demonstrate personal responsibility in completing assignments and other academic work effectively.

The findings showed that there is no significant difference in academic performance based on gender. The findings in this study indicated that gender did not significantly influence the academic performance of the students. These results support the findings of the previous researchers who found that no significant relationship existed between gender and academic performance (Salami &Ogundokun, 2009). In corroborate of Sabitu and Sani (2016) and Olasehinde and Olatoye (2014) reported that there is no significant difference between the academic achievement of male and female students. Since these results cannot link gender and performance together, differences may not exist between undergraduate students in whether gender influences academic performance which means genders influence may be non-existent in secondary' school students. This indicates that individual's ability to pay attention to their emotions; experience feelings with clarity are able to recover from negative states of mind which will be a decisive influence on student's well-being and his psychological balance in turn to ultimately relatively affect academic performance. An assessment on emotionally intelligent student is better able to manage stressful situation with the effective ability to meet challenges at all level in university.



## Conclusion

Based on the findings of the study, it is concluded that irrespective of gender and academic performance, psychological assessment of emotional intelligence has a combined influence on students' success in university. In addition, there is a significant difference in the psychological assessment of emotional intelligence of students based on gender. This implies that psychological assessment of emotional intelligence and gender are strong variables that influence students' academic performance.

## Recommendations

Based on the findings in this study, the following are recommendations for the study:

8. University authority should employ more counselling psychologists in university counselling centres to create an enabling environment where students can achieve positively in their life endeavours.
9. Counsellor educators should equip undergraduate students with practical application of cognitive restructuring counselling techniques so that they can be able to solve personal problems.

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