

# Relationship Between Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri, Borno State, Nigeria

Isaac Stephen Bwala, Fatima Abubakar Ma'aji

Department of Social Science Education, Faculty of Education, University of Maiduguri, Borno State, Nigeria

DOI: <https://doi.org/10.51244/IJRSI.2026.1306000413>

Received: 24 April 2026; Accepted: 30 April 2026; Published: 15 July 2026

## ABSTRACT

The study determined the relationship between causal attribution and academic achievement of undergraduate students, University of Maiduguri, Borno state Nigeria. The objectives of the study were to determine the causal attributions (locus, stability and controllability dimensions) of undergraduate students, University of Maiduguri, relationship between causal attribution components individually and collectively with academic achievement and gender differences in the relationship between causal attributions individually and collectively with academic achievement. The study answered one research question and tested eight hypotheses on causal attribution and its relationship with academic achievement. The population of the study consisted of all 47,530 undergraduate students, University of Maiduguri 2018/2019 academic session. The sample for the study was 423 undergraduate students at 4% of the sampled population. Stratified random sampling was used to select 22 departments' out of the twelve (12) faculties and one college of medical science where proportionate and random sampling techniques were used to select 303 males and 120 females as sample for the study. The Academic Causal Attribution Scale which was adapted was used for data collection. Chronbach Alpha reliability index of the instrument was .764. Students CGPA was used as a measure of academic achievement. Descriptive statistics of frequency counts, mean and percentages were used to answer the research question raised in the study. Pearson Product Moment Correlation analysis, Multiple Regression Analysis and Fisher Z Score were used to test the eight hypotheses. The results showed that causal attribution of the undergraduate students, University of Maiduguri was high with reference to Internal (95.3%, SD= 2.27499) locus of control success which is Unstable (64.1%, SD= 2.83908) towards success and Uncontrollable (53.2%, SD= 3.73998). There was a significant relationship between internal locus of control success and academic achievement ( $r = .101$ ,  $p > 0.05$ ) and a significant relationship between stability of failure and academic achievement ( $r = -.104$ ,  $p > 0.05$ ) however, there was no significant relationship between controllability and academic achievement ( $r = -.025$ ,  $p > 0.05$ ) and no significant relationship between uncontrollability and academic achievement ( $r = -.091$ ,  $p > 0.05$ ). The results also revealed that there was a significant relationship between causal attribution and academic achievement which accounted for 4.1% to the variance (adjusted  $R^2 = 2.0$ ,  $F(df. 9, 413) = 1.953$ ),  $p = .043$ . There was also no significant gender difference in the relationship between the causal attribution components and academic achievement among undergraduate students, University of Maiduguri. It was concluded that the causal attributions of the undergraduate students, University of Maiduguri was high. Causal attribution was a significant predictor of academic achievement. There was a significant relationship between causal attribution and academic achievement. Gender was not found to be a moderator of academic achievement among undergraduate students, University of Maiduguri. It was recommended that Psychologists should pay more attention to students' causal attributions as to actual competence through intervention programs and seminars. Counselors, Lecturers, parents and significant others should also know to what factors children attribute their learning in school so they can provide necessary guidance and support. Students should also bank more on effort if they are to be successful in their academic endeavors than other factors.

## INTRODUCTION

Education remains the greatest legacy a nation can give to its citizens, especially the youth, as national and community development depends largely on the quality of education provided. Most nations believe that the basis for development must commence with building human resources (Mensah & Amponsah, 2025). Quality education has become an essential factor for personal progress, and the social and economic development of a country is directly linked with students' academic achievement. It plays an important role in producing quality graduates who become leaders and skilled manpower for the country (Kesim & Yilmaz, 2025). Furthermore, it is because of this importance that parents desire their children to perform well in school. Nwafor and Okonkwo (2026) state that parents show this desire by providing the necessary moral and financial support to help their children secure better jobs after graduation and become useful to themselves and society.

Academic achievement is generally defined as the knowledge acquired or skills developed in school subjects, usually determined by test scores or marks assigned by teachers (Prasetyo & Santoso, 2024). It is a recognized yardstick for measuring success, holding the assertion that a child whose performance is good in academic work will also be successful in life endeavors. However, poor academic achievement is a global concern. In the United States, Smith and Kim (2025) reported that despite many initiatives and reform measures by the government and schools, a significant number of students fail to achieve expected standards. Their study further highlighted that variables influencing academic achievement include students' causal attributions, classroom management, and relationships with teachers and peers (Smith & Kim, 2025). In Africa, poor academic achievement is a recurring challenge across many nations. In Nigeria, Eze and Okeke (2025) reported that there is widespread worry over the declining quality of educational outputs at all levels. Their findings indicate that educational systems fall short of desired goals, which has triggered questions about what makes some students perform well while others do not—whether the cause lies with the students themselves, the school, the home, or the government (Eze & Okeke, 2025). Most historical research has concentrated on cognitive factors, but modern researchers argue that affective and socio-emotional aspects must receive equal attention (Igwe & Johnson, 2025).

Causal attribution is the process of making inferences about the causes of one's own behaviour and that of others, such as inferring traits or ascribing success or failure (Chen, 2025). Causal Attribution theory refers to how students make causal explanations for their academic achievements. As demonstrated by Hassan and Yusuf (2026), it is deeply concerned with how individuals interpret events and how this relates to their psychological thinking and academic behaviours.

### Statement of the Problem

The researcher through interactions with students, have observed that students' performance has been on a low level of academic excellence. There seems to be a large number and of undergraduate students of university of Maiduguri proceeding to the next level of education with many carry over courses and weak grades. Some undergo probation or are even withdrawn from their courses of study due to poor academic achievement. To explain factors responsible for these, researchers have studied different factors at different times. Research reports reveal that poor study habit, gender, age, parents' level of education among a host of other variables has been studied. Interrelationship of these variables have also been investigated. However, studies that focus on factors influencing students' academic achievement have not seem to be focused specifically on students' psychological variables such as causal attribution and its interaction with academic achievement in the areas of the studies. Therefore, this study determined the relationship between causal attribution and academic achievement of undergraduate students' University of Maiduguri.

### Objectives of the Study

The objectives of the study were to determine:

1. Levels of causal attribution (locus, stability and controllability dimensions) of undergraduate students, University of Maiduguri.
2. relationship between causal attribution and academic achievement of undergraduate students, University of Maiduguri.

3. relationship between each of the components of causal attribution and academic achievement of undergraduate students, University of Maiduguri.
4. significant contributor to the variance of academic achievement among the components of causal attribution of undergraduate students, University of Maiduguri.
5. gender differences in the relationship between causal attribution and academic achievement of undergraduate students, University of Maiduguri.
6. gender differences in the relationship between each of the components of causal attribution and academic achievement of undergraduate students, University of Maiduguri.

## Research Questions

This research question guided the study:

1. What are the levels of causal attribution (locus, stability and controllability dimensions) of undergraduate students, University of Maiduguri?

## Hypotheses

The following null hypotheses were tested in the study at 0.05 level of significance:

- H0<sub>1</sub>: There is no significant relationship between causal attribution and academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>2</sub>: There is no significant contributor to the variance of academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>3</sub>: There is no significant relationship between locus of control and academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>4</sub>: There is no significant relationship between stability and academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>5</sub>: There is no significant relationship between controllability and academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>6</sub>: There is no significant gender difference in the relationship between causal attribution and academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>7</sub>: There is no significant gender difference in the relationship between locus of control and academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>8</sub>: There is no significant gender difference in the relationship between stability and academic achievement of undergraduate students, University of Maiduguri.
- H0<sub>9</sub>: There is no significant gender difference in the relationship between controllability and academic achievement of undergraduate students, University of Maiduguri.

## METHODS

### Design

The study used correlational design. The researcher used this design because, Correlational research design determines the strength and direction of relationships between two or more variables without researcher manipulation of variables (Creswell & Creswell, 2024).

## Participants

The target population of the study consisted of all the 47,530 undergraduate students, University of Maiduguri 2018/2019 academic session (Unimaid Academic Planning Unit, 2019) who were enrolled into 12 faculties (Agriculture, Arts, Education, Engineering, Law, Management, Pharmacy, Science, Social Science, Allied Health Science, Basic Medical Science and Veterinary Medicine) and college of medical science of the University. Stratified sampling is a probability sampling technique in which the population is divided into distinct subgroups (strata) based on shared characteristics (e.g., gender, age, school type), and samples are randomly selected from each stratum to ensure that the sample accurately reflects the entire population (Taherdoost, 2023). This method enhances the representativeness and precision of estimates by reducing sampling error and ensuring that all relevant subgroups are proportionately represented in the study sample (Leavy, 2024). Stratified sampling increases the likelihood that estimates of population parameters are unbiased and improves statistical efficiency, it is widely recommended in quantitative research designs where inference about relationships among variables is central to the study (Lee & Lien, 2025).

Stratified random sampling was used to select twenty two (22) departments from the twelve (12) Faculties and one college of medical sciences. Proportionate and random sampling techniques was used to select 423 students (males= 303 and females= 120) at 4% of the population. Proportionate sampling technique involves dividing a target population into subgroups (strata) and selecting a sample from each subgroup in proportion to its size, with random selection of the students within strata to ensure that the sample mirrors the population structure and thus enhances representativeness and generalizability of findings (Dinku, Singh & Singh (2024). The ideal minimum sample size to be used for an empirical research study for a population that falls between 40,000—49,000 is 380 (Krejcie & Morgan, 2006). However, 423 undergraduate students were selected in order to ensure greater representativeness of the total population.

## Research Instruments

The Academic Causal Attribution Scale (ACAS) for measuring causal attribution was used as research instrument for the study. The Academic Causal Attribution Scale (ACAS) was developed by Balarabe in 2010 and was adapted for the study. The instrument consisting of two sections (A & B), contained only four (4) subdivisions of section B with 10 items each. Its Cronbach Alpha reliability was .8718. The original instrument contained information on the Internal/External locus dimension of causality only. The instrument was slightly modified in one area. Item questions answering the stability and controllability dimensions of causal attribution were added to the instrument. The modified and adapted Academic Causal Attribution Scale (ACAS) contains two sections (A&B). Section A consist of demographic data of the respondent such as; name, sex, school and year level. Section B consist of six (6) sub-divisions (A—F). Each subdivision contains 10 items rated on an agreement 5 point Likert type scale: Strongly Agree (SA) = 5, Agree (A) = 4, Not Sure (NS) = 3, Disagree (DA) = 2, and Strongly Disagree (SDA) =1.

The instrument (Academic Causal Attribution Scale) was pilot tested on a sample of 100 students from a Department not used in the study (third year level students of English education) 2017/2018 academic session. Third year level students were chosen because the study used academic achievement summarized as undergraduate students' CGPA which is a representation of knowledge and skills students acquired and developed over the years in the school courses they studied. Cronbach Alpha reliability index was .764. Experts in the field of Educational Psychology and Measurement and Evaluation in the Department of Education University of Maiduguri corrected and validated the instrument (Academic Causal Attribution Scale). Student academic achievement (results) summarized as Cumulative Grade Point (C.G.P.A) was used as a measure of students' academic achievement collected on a proforma titled: Proforma of Students' Academic Achievement.

## Procedures

The researcher collected introduction letters from the Department of Education to the offices of each Dean of the sampled faculties for the study in order to obtain Permission for data collection. Each Dean referred the researcher to the offices of the Heads of Departments sampled for the study. The researcher requested and

collected the lecture timetables of the students in order to meet them and ask them to answer the instrument. Four postgraduate students were briefed to serve as research assistants by the researcher. They helped in the administration of the instruments in order to avoid unnecessary biases that may be encountered in the cause of administration and retrieval of the instrument. Before the participants answered the instrument, they were given a consent letter to sign and a brief speech concerning the ethical principles guiding the rights and privileges of a research participant (Autonomy, non-maleficence, beneficence and justice). The participants were also briefed about the ethical rules for conducting research by a researcher to guarantee them veracity, privacy, confidentiality and fidelity. Four hundred and thirty questionnaires were administered and collected in two weeks. However, seven questionnaires were found invalid. Students' academic achievement summarized as Cumulative Grade Point Average (CGPA) was also collected from the offices of the Heads of Departments sampled for the study. This was carried out on presentation of an introductory and cover letter indicating the reason and purpose for which the information required will be used for.

## RESULTS

**Research question 1:** What are the levels of causal attribution of undergraduate students, University of Maiduguri?

The results of the analysis that answered this research question are presented in table 4.1

**Table 4.1. Levels of Causal Attribution of Undergraduate Students, University of Maiduguri.**

| Causal Attribution components | High attribution (frequency) | (%)  | Low attribution (frequency) | (%)  | Mean  |
|-------------------------------|------------------------------|------|-----------------------------|------|-------|
| AILCS                         | 403                          | 95.3 | 20                          | 4.7  | 20.43 |
| AELCS                         | 258                          | 61   | 165                         | 39   | 15.13 |
| AILCF                         | 324                          | 76.6 | 99                          | 23.4 | 18.86 |
| AELCF                         | 67                           | 15.8 | 256                         | 84.2 | 17.49 |
| ASTBLS                        | 225                          | 53.2 | 198                         | 46.8 | 17.15 |
| AUNSTBLS                      | 271                          | 64.1 | 152                         | 35.9 | 18.47 |
| ASTBLF                        | 185                          | 43.7 | 238                         | 56.3 | 16.69 |
| AUNSTBLF                      | 229                          | 54.1 | 194                         | 45.9 | 17.7  |
| ACTRL                         | 193                          | 45.6 | 230                         | 54.4 | 16.89 |
| AUNCTRL                       | 225                          | 53.2 | 198                         | 46.8 | 16.02 |

**KEY:** Scores between 12-25: HIGH and Scores between 11-1: LOW

**AILCS**= Attribution Internal Locus of Control Success, **AILCF**= Attribution Internal Locus of Control Failure, **AELCS**= Attribution External Locus of Control Success, **AELCF**= Attribution External Locus of Control Failure, **ASTBLS**= Attribution Stability Success, **ASTBLF**= Attribution Stability Failure, **AUNSTBLS**= Attribution Instability Success, **AUNSTBLF**= Attribution Instability Failure, **ACTRL**= Attribution Controllability, **AUNCTRL**= Attribution Uncontrollability

The results in table 4.1 showed that 95.3% of the students (SD= 2.27) have scores high on frequency count which means the students believe they have attribution internal locus of control Success with a mean of 20.4374, while 61.0% of the students (SD= 2.66) also have scores high which means the students believe they have attribution external locus of control success with a mean value of 15.13. 76.6% of the students (SD=2.98786) have attribution internal locus of control failure, while 15.8% of the students (SD= 2.63) have attribution external locus of control failure on frequency count which means the students believe they have attribution stability of success with a mean of 17.15, while 64.1% of the students (SD= 2.83) also have scores high on frequency count which means the students believe they have attribution instability of success with a mean value of 18.47. 43.7% of the students (SD=2.83) believe they have attribution stability of failure, while 54.1% of the students (SD=2.99) also believe they have attribution instability of failure on frequency count. The results also showed that 45.6% of the students (SD= 2.91) believe they have attribution controllability,



while 53.2% of the students ( $SD=3.73$ ) have scores high on frequency count which means the students believe they have attribution uncontrollability with a mean value of 16.02.

Based on the results, the causal attribution of the undergraduate students, University of Maiduguri is high with reference to internal (95.3%) locus of control success which is unstable (64.1%) towards success and uncontrollable based on Internal (95.3%) Locus of Control Success which is Unstable (64.1%) towards success and Uncontrollable (53.2%). This implies that the undergraduate students attributed their academic successes to factors within them (ability and self-effort) which was unstable through self-effort and translated to growth in academic achievement but it was uncontrollable over time due to task difficulty and low ability.

**H0<sub>1</sub>:** There is no significant relationship between causal attribution and academic achievement of undergraduate students, University of Maiduguri. The results of the analysis in respect of this null hypothesis are presented in tables 4.2 table and 4.3.

**Table 4.2 ANOVA of the Relationship between Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Model      | Sum of square | Df  | Mean of square | F     | Sig.              |
|------------|---------------|-----|----------------|-------|-------------------|
| Regression | 6.431         | 9   | .715           | 1.953 | .043 <sup>b</sup> |
| Residual   | 151.110       | 413 | .366           |       |                   |
| Total      | 157.541       | 422 |                |       |                   |

Dependent variable: Cumulative Grade Point Average

Predictors: (constant), Total of Uncontrollability Dimension, Total of Unstable Dimension of Success, Total of Internal Locus of Control Failure, Total of External Locus of Control Success, Total of Internal Locus of Control Success, Total of Instability of Failure, Total of Stability Dimension of Failure, Total of Controllability Dimension, Total of External Locus Of Control Failure

**Table 4.3 Model Summary of the Relationship between Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Model | R                 | R square | Adjusted R | F     | P-level |
|-------|-------------------|----------|------------|-------|---------|
| 1     | .202 <sup>a</sup> | .041     | .020       | 1.953 | .043    |

- Dependent variable: Cumulative Grade Point Average
- Predictors: (Constant), Total of Uncontrollability Dimension, Total of Unstable Dimension of Success, Total of Internal Locus of Control Failure, Total of External Locus of Control Success, Total of Internal Locus of Control Success, Total of Instability of Failure, Total of Stability Dimension of Failure, Total of Controllability Dimension, Total of External Locus of Control Failure.

A stepwise multiple regression was conducted to determine the relationship between all the three dimensions of causal attribution (locus, stability and controllability) and academic achievement. Causal attribution was entered as independent variable, while academic achievement was entered as a dependent variable. Table 4.2 represents the four-way ANOVA analysis which showed a significant relationship between causal attribution and academic achievement. A cursory look at the ANOVA in table 4.2 and the summary in table 4.3 revealed that there was a significant relationship between causal attribution and academic achievement which accounted for 4.1% to the variance (adjusted  $R^2 = 2.0$ ,  $F(df. 9, 413) = 1.953$ ,  $P = .043$ ).

**H0<sub>2</sub>:** There is no significant contributor to the variance of academic achievement of undergraduate students, University of Maiduguri.

The results revealed that internal locus of control for success contributed 11.8% ( $\beta = .118$ ,  $p = .019$ ) significantly positively to the variance of academic achievement of undergraduate students, University of Maiduguri.

**H03:** There is no significant relationship between locus of control dimension and academic achievement of undergraduate students, University of Maiduguri. The results of the analysis in respect of this null hypothesis are presented in table 4.4.

**Table 4.4 Pearson Product Moment Correlation Results of the Relationship between Locus of Control Dimension of Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Causal Attribution Components and Academic Achievement | Mean  | SD   | N   | r     | P    | Remark   |
|--------------------------------------------------------|-------|------|-----|-------|------|----------|
| ILCS                                                   | 20.43 | 2.27 | 423 | .101  | .039 | Sig.     |
| Academic A.                                            | 3.18  | .611 | 423 |       |      |          |
| ELCS                                                   | 15.13 | 2.66 | 423 | .026  | .590 | Not sig. |
| Academic A.                                            | 3.18  | .611 | 423 |       |      |          |
| ILCF                                                   | 18.86 | 2.98 | 423 | -.603 | .195 | Not sig. |
| Academic A.                                            | 3.18  | .611 | 423 |       |      |          |
| ELCF                                                   | 17.49 | 2.63 | 423 | .002  | .968 | Not sig. |
| Academic A.                                            | 3.18  | .611 | 423 |       |      |          |

#### KEY:

**ILCS**= Internal Locus of Control Success, **ILCF**= Internal Locus of Control Failure, **ELCS**= External Locus of Control Success, **ELCF**= External Locus of Control Failure, **A**= Achievement

Results in table 4.4 revealed a significant positive correlation between internal locus of control success and academic achievement ( $r = .101$ ,  $P > 0.05$ ). This means that there is a significant positive relationship between internal locus of control for success and academic achievement of undergraduate students of University of Maiduguri. This further implies that the more students attribute their successes to factors within them (ability and self-effort), the more their academic achievement grows. However, the results further showed that there was no significant relationship between external locus of control success and academic achievement ( $r = .026$ ,  $P > 0.05$ ), no significant relationship between internal locus of control failure and academic achievement ( $r = -.603$ ,  $P > 0.05$ ), and no significant relationship between external locus of control failure and academic achievement ( $r = .002$ ,  $P > 0.05$ ). Therefore based on the results, the null hypothesis which states that there is no significant relationship between locus of control and academic achievement of undergraduate students of University of Maiduguri was rejected only with reference to the significant relationship between internal locus of control success and academic achievement ( $r = .101$ ,  $p > 0.05$ ).

**H04:** There is no significant relationship between stability dimension of causal attribution and academic achievement of undergraduate students, University of Maiduguri.

The results of the analysis in respect of this null hypothesis are presented in table 4.5

**Table 4.5 Pearson Product Moment Correlation Results of the Relationship between Stability Dimension of Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Causal Attribution Components and Academic Achievement | Mean  | SD   | N   | R     | P    | Remark   |
|--------------------------------------------------------|-------|------|-----|-------|------|----------|
| STBLS                                                  | 17.15 | 3.48 | 423 | -.031 | .519 | Not sig. |
| Academic A.                                            | 3.18  | .611 | 423 |       |      |          |
| UNSTBLS                                                | 18.47 | 2.83 | 423 | .001  | .984 | Not sig. |
| Academic A.                                            | 3.18  | .611 | 423 |       |      |          |

|             |       |      |     |       |      |          |
|-------------|-------|------|-----|-------|------|----------|
| STBLF       | 16.69 | 2.83 | 423 | -.104 | .032 | Sig.     |
| Academic A. | 3.18  | .611 | 423 |       |      |          |
| UNSTBLF     | 17.70 | 2.99 | 423 | -.084 | .084 | Not sig. |
| Academic A. | 3.18  | .611 | 423 |       |      |          |

# KEY:

**STBLS**= Stability of Success, **STBLF**= Stability of Failure, **UNSTBLS**= Instability of Success, **UNSTBLF**= Instability of Failure, **A**= Achievement

The results in table 4.5 revealed that there was a significant positive correlation between stability of failure and academic achievement ( $r = -.104$ ,  $p > 0.05$ ). This means that there is a significant positive relationship between stability of failure and academic achievement of undergraduate students of University of Maiduguri. This also implies that the more students attribute their academic successes to internal or external stable factors (ability and task difficulty), the less their academic achievement grows. However, there was no significant relationship between stability of success and academic achievement ( $r = -.031$ ,  $p > 0.05$ ), no significant relationship between instability of success and academic achievement ( $r = .001$ ,  $p > 0.05$ ) and no significant relationship between instability of failure and academic achievement ( $r = -.084$ ,  $p > 0.05$ ). Based on the results, the null hypothesis which states that there is no significant relationship between stability dimension of causal attribution and academic achievement of undergraduate students of University of Maiduguri was rejected only with reference to the significant relationship between stability of failure and academic achievement of undergraduate students of University of Maiduguri ( $r = -.104$ ,  $P > 0.05$ ).

**H0<sub>5</sub>:** There is no significant relationship between controllability dimension of causal attribution and academic achievement of undergraduate students, University of Maiduguri.

The results of the analysis in respect of this null hypothesis are presented in table 4.6.

**Table 4.6 Pearson Product Moment Correlation Results of the Relationship between Controllability Dimension of Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Causal Attribution Components and Academic Achievement | Mean  | SD   | N   | r     | P    | Remark   |
|--------------------------------------------------------|-------|------|-----|-------|------|----------|
| Controllability                                        | 16.89 | 2.91 | 423 | -.025 | .608 | Not sig. |
| Academic Achievement                                   | 3.18  | .611 | 423 |       |      |          |
| Uncontrollability                                      | 16.02 | 3.73 | 423 | -.091 | .062 | Not sig. |
| Academic Achievement                                   | 3.18  | .611 | 423 |       |      |          |

The results in table 4.6 revealed that there was no significant relationship between controllability (self-effort and luck) and academic achievement ( $r = -.025$ ,  $p > 0.05$ ) and no significant relationship between uncontrollability (ability and task difficulty) and academic achievement ( $r = -.091$ ,  $p > 0.05$ ). Based on the results, the null hypothesis which states that there is no significant relationship between controllability dimension of causal attribution and academic achievement of undergraduate students, University of Maiduguri was accepted with reference to the null significant relationship found between controllability dimension of causal attribution and academic achievement.

**H0<sub>6</sub>:** There is no significant gender difference in the relationship between causal attribution and academic achievement of undergraduate students, University of Maiduguri. The results of the analysis in respect of this null hypothesis are presented in tables 4.7 and 4.8.



**Table 4.7 ANOVA for Male Differences in the Relationship between Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Model      | Sum of square | Df  | Mean of square | F     | Sig.              |
|------------|---------------|-----|----------------|-------|-------------------|
| Regression | 6.137         | 10  | .614           | 1.631 | .097 <sup>b</sup> |
| Residual   | 109.873       | 294 | .376           |       |                   |
| Total      | 116.010       | 302 |                |       |                   |

a. Dependent Variable: Cumulative Grade Point Average

b. Predictors: (constant), Attribution Uncontrollability Total, Attribution External Locus of Control Failure Total, Attribution Stability of Success Total, Attribution External Locus of Control Success Total, Attribution Internal Locus of Control Success Total, Attribution Stability of Failure Total, Attribution Instability of Failure Total, Attribution Controllability Total, Attribution Instability of Success Total, Attribution Internal Locus of Control Failure Total.

**Table 4.8 ANOVA for Female Differences in the Relationship between Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Model      | Sum of square | Df  | Mean of square | F     | Sig.              |
|------------|---------------|-----|----------------|-------|-------------------|
| Regression | 3.802         | 10  | .380           | 1.109 | .362 <sup>b</sup> |
| Residual   | 37.365        | 109 | .343           |       |                   |
| Total      | 41.167        | 119 |                |       |                   |

a. Dependent Variable: CGPA

b. Predictors: (Constant), Attribution Uncontrollability of Total, Attribution Internal Locus of Control Success Total, Attribution Stability of Success Total, Attribution Instability of Failure Total, Attribution External Locus of Control Success Total, Attribution Instability of Success Total, Attribution Stability of Failure Total, Attribution Internal Locus of Control Failure Total, Attribution Controllability Total, Attribution External Locus of Control Failure Total.

The results of the four-way ANOVA analysis for gender in tables 4.7 and 4.8 indicated that; male differences in the relationship between causal attribution and academic achievement accounted for 5.3% of the variance (adjusted  $R^2 = 2.0$ ,  $F$  (df. 10, 292) = .097) while; female differences in the relationship accounted for 9.2% of the variance (adjusted  $R^2 = 0.9$ ,  $F$  (df. 10, 109) = .362). Based on the results, the null hypothesis which states that there is no significant gender difference in the relationship between causal attribution and academic achievement of undergraduate students of University of Maiduguri was accepted with reference to the null significant gender difference found in the relationship between causal attribution and academic achievement of undergraduate students of University of Maiduguri.

**H0<sub>7</sub>:** There is no significant gender difference in the relationship between locus of control dimension of causal attribution and academic achievement of undergraduate students, University of Maiduguri. The results of the analysis in respect of this null hypothesis are presented in tables 4.9.

**Table 4.9 Gender Differences in the Relationship between Locus of Control Dimension of Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Causal Attribution Component and Academic Achievement | Gender | R     | P-Level | Z | Remark   |
|-------------------------------------------------------|--------|-------|---------|---|----------|
| ILCS Academic A.                                      | Male   | .080  | .167    |   | Not sig. |
|                                                       | Female | .160  | .080    |   | Not Sig. |
| ELCS Academic A.                                      | Male   | .087  | .133    |   | Not sig. |
|                                                       | Female | -.129 | .160    |   | Not sig. |

|                     |        |       |      |  |          |
|---------------------|--------|-------|------|--|----------|
| ILCF<br>Academic A. | Male   | -.050 | .388 |  | Not sig. |
|                     | Female | -.098 | .289 |  | Not sig. |
| ELCF<br>Academic A. | Male   | .034  | .554 |  | Not sig. |
|                     | Female | -.075 | .413 |  | Not sig. |

### KEY:

**ILCS**= Internal Locus of Control Success, **ILCF**= Internal Locus of Control Failure, **ELCS**= External Locus of Control Success, **ELCF**= External Locus of Control Failure, **A**= Achievement.

The results in table 4.9 revealed that there was no significant gender difference in the relationship between internal locus of control success and academic achievement (males:  $r = .080$ ,  $P > 0.05$ ; females:  $r = .160$ ,  $P > 0.05$ ), no significant gender difference in the relationship between external locus of control success and academic achievement (males:  $r = .087$ ,  $P > 0.05$ ; females:  $r = -.129$ ,  $P > 0.05$ ), and no significant gender difference in the relationship between internal locus of control failure and academic achievement (males:  $r = -.050$ ,  $P > 0.05$ ; females:  $r = -.098$ ,  $P > 0.05$ ). The results also showed that there was no significant gender difference in the relationship between external locus of control failure and academic achievement (males:  $r = .034$ ,  $P > 0.05$ ; females:  $r = -.075$ ,  $p > 0.05$ ). Based on the results in tables 4.9, the null hypothesis, which states that there is no significant gender difference in the relationship between locus of control dimension of causal attribution and academic achievement, was accepted. This is with reference to the null significant gender difference found in the relationship between locus of control dimension of causal attribution and academic achievement of undergraduate students, University of Maiduguri.

**H0<sub>8</sub>**: There is no significant gender difference in the relationship between stability dimension of causal attribution and academic achievement of undergraduate students of University of Maiduguri. The results of the analysis in respect of this null hypothesis are presented in tables 4.10.

**Table 4.10 Gender differences in the relationship between stability dimension of causal attribution and academic achievement of undergraduate students of University of Maiduguri.**

| Causal Attribution component and Academic Achievement | Gender | r     | P-level | Z | Remark   |
|-------------------------------------------------------|--------|-------|---------|---|----------|
| STBLS<br>Academic A.                                  | Male   | -.021 | .718    |   | Not sig. |
|                                                       | Female | -.076 | .407    |   | Not sig. |
| UNSTBLS<br>Academic A.                                | Male   | .030  | .597    |   | Not sig. |
|                                                       | Female | -.085 | .356    |   | Not sig. |
| STBLF<br>Academic A.                                  | Male   | -.114 | .048    |   | sig.     |
|                                                       | Female | -.078 | .395    |   | Not sig. |
| UNSTBLF<br>Academic A.                                | Male   | -.131 | .022    |   | Sig.     |
|                                                       | Female | .027  | .768    |   | Not sig. |

### KEY:

**STBLS**= Stability of Success, **STBLF**= Stability of Failure, **STBL**= Stability, **UNSTBL**= Instability, **A**= Achievement.

The results in table 4.10 also revealed that there was no significant gender difference in the relationship between stability of success and academic achievement (males:  $r = -.021$ ,  $P > 0.05$ ; females:  $r = -.076$ ,  $P > 0.05$ ), and no significant gender difference in the relationship between instability of success and academic achievement (males:  $r = .030$ ,  $P > 0.05$ ; females:  $r = -.085$ ,  $P > 0.05$ ). The results also showed that there was a significant gender difference in the relationship between stability of failure and academic achievement among

males (males:  $r = -.114$ ,  $P > 0.05$ ) however, there was no significant gender difference in the relationship among females (females:  $r = -.078$ ,  $P > 0.05$ ). The results also showed that there was a significant gender difference in the relationship between instability of failure and academic achievement among males: ( $r = -.131$ ,  $P > 0.05$ ) however, there was no significant gender difference in the relationship among females ( $r = .027$ ,  $P > 0.05$ ). Based on the results in tables 4.10, the null hypothesis which states that there is no significant gender difference in the relationship between stability dimension of causal attribution and academic achievement was accepted. This is with reference to the null significant gender difference found in the relationship between stability dimension of causal attribution and academic achievement of undergraduate students of University of Maiduguri.

**H0<sub>9</sub>:** There is no significant gender difference in the relationship between controllability dimension of causal attribution and academic achievement of undergraduate students, University of Maiduguri. The results of the analysis in respect of this null hypothesis are presented in tables 4.11

**Table 4.11 Gender Differences in the Relationship between Controllability Dimension of Causal Attribution and Academic Achievement of Undergraduate Students, University of Maiduguri.**

| Causal Attribution Components and Academic Achievement | Gender | R     | P-Z Level | Remark   |
|--------------------------------------------------------|--------|-------|-----------|----------|
| CTRBL<br>Academic p.                                   | Male   | -.011 | .851      | Not sig. |
|                                                        | Female | -.064 | .490      | Not sig. |
| UNCTRBL<br>Academic p.                                 | Male   | -.054 | .349      | Not sig. |
|                                                        | Female | -.197 | .031      | sig.     |

#### KEY:

**CTRL**= Controllability, **UNCTRL**= Uncontrollability, **P**= Performance

The results in table 4.11 also showed that there was no significant gender difference in the relationship between controllability and academic achievement (males:  $r = -.011$ ,  $P > 0.05$ ; females:  $r = -.064$ ,  $P > 0.05$ ) and no significant gender difference in the relationship between uncontrollability and academic achievement among males: ( $r = -.054$ ,  $P > 0.05$ ). However, there was a significant gender difference in the relationship among females: ( $r = -.197$ ,  $P > 0.05$ ). Based on the results in tables 4.1.9, the null hypothesis which states that there is no significant gender difference in the relationship between controllability dimension of causal attribution and academic achievement was accepted. This is with reference to the null significant gender difference found in the relationship between controllability dimension of causal attribution and academic achievement of undergraduate students of University of Maiduguri.

Z score analysis for the gender differences in the relationship was not determined due to the null significant gender differences in the relationship between the components of causal attribution (locus, stability and controllability dimension) and academic achievement of undergraduate students, University of Maiduguri.

## DISCUSSION

The study answered one research question and tested eight hypotheses. Discussions of the results follow:

The findings of the study in respect to research question one revealed that the causal attribution of the undergraduate students, University of Maiduguri was high with reference to Internal locus of control success which is Unstable towards success and Uncontrollable. This implies that the undergraduate students attributed their academic successes to factors within them (ability and self-effort) which was unstable through self-effort and translated to growth in academic achievement but it was uncontrollable over time due to task difficulty and low ability. These findings are consistent with **Alvarado-Guzmán and Ramos-Rivera (2024)**, who in their investigation of how students attribute their academic achievement, found that students attribute their academic outcomes to internal or external factors, which could be stable or unstable and controllable or uncontrollable. According to **Alvarado-Guzmán and Ramos-Rivera (2024)**, students who perform poorly often attribute

their failure to external factors, such as examination difficulty and bad luck; while those who perform well attribute their success to internal factors such as being calm and working hard. However, they also attribute their success to some external factors such as having good teachers and easy examinations. Researchers conclude that both external and internal attributes are made when students explain their success, but they seldom attribute internally when explaining their failure.

Recent studies by **Chen and Zhou (2025)** and **Suleiman (2024)** report that of the core attributes in Weiner's attribution theory (ability, effort, task difficulty, and luck), only effort remains entirely under an individual's direct control. This implies that students need to bank more on effort if they are to be successful in their academic endeavours than other attributes, which they may not have direct control over. **Mendoza-García and Santos (2026)** also observed that a student's perception of uncontrollability has the most damaging consequences in terms of academic achievement. In their studies, **Mendoza-García and Santos (2026)** reported that students who perceive themselves to be in control of their academic tasks perform significantly better than those students who attribute their academic achievement to uncontrollable factors

**Null hypothesis 1** tested in this study was on relationship between Causal attribution and Academic achievement of undergraduate students, University of Maiduguri. The results indicated that the four-way ANOVA analysis showed a significant relationship between causal attribution and academic achievement which accounted for 4.1% to the variance (adjusted  $R^2 = 2.0$ ,  $F(df. 9, 413) = 1.953$ ),  $P = .043$ . The results are consistent with the findings of Ariel (2026) in the study of the relationships among university students' attitudinal variables and academic achievement in statistics determined whether causal attribution and psychological variables of academic success and failure predict the academic achievement of university students. In a structurally similar assessment of student metrics, [Uslusoy et al. \(2024\)](#) examined psychosocial and academic determinants where hundreds of university students across multiple majors participated, utilizing adapted versions of achievement and behavioural scales as the core research instruments. Academic performance was measured using the Grade Point Average (GPA). Their linear regression analytics highlighted that internal causal attribution dimensions were significant predictors of academic achievement, and key differences in attribution between high-performing and low-performing students were explicitly identified. The results also showed that personal control was the significant dimension predicting student performance, which means that students' beliefs about their capacity to control causal factors will become a good predictor of their performance. Therefore, the higher students believe they are able to control causal factors, the more it will enhance their academic achievement. Similar findings were also reported in a recent regional study by [Ibrahim \(2025\)](#), who conducted a comprehensive study on the relationship between causal attributions and academic achievement in Nigeria. In that study, students were asked to respond to a self-reporting causal attribution beliefs scale designed to evaluate both controllable and uncontrollable internal and external attributes of success and failure. Participants included a massive regional sample of students drawn across multiple educational districts. The results showed a significant relationship, with students strongly endorsing internal attributions (such as personal effort) as possible reasons for their success as well as failure, rather than external attributes. The influence of external agents like parents and teachers was recognized, but internal effort was considered the most important cause of success as well as failure in core school subjects. Ultimately, the mean difference found was highly significant across almost all primary attributions of academic success and failure.

**Null hypothesis 2** was on the significant contributor to the variance of academic achievement of undergraduate students, university of Maiduguri. The results revealed that Internal locus of control for success contributed 11.8% ( $\beta = .118$ ,  $p = .019$ ) significantly positively to the variance of academic achievement of undergraduate students, University of Maiduguri. The results are consistent with the findings of [Shaini et al. \(2024\)](#), who conducted a study exploring the attributions to which undergraduate students ascribe academic achievement. Attribution theory was used as a means to understand scholastic success and failure, and the study highlighted that an internal locus of control is a core predictor of success. Furthermore, the results corroborate [Umar and Jega \(2025\)](#) who determined whether a student's control of causal factors predicts academic performance. Their simple linear regression analysis highlighted that causal attribution and personal control are significant predictors of academic achievement. The results are also consistent with the findings of [Pratiwi and Santoso \(2025\)](#), who investigated causal attributions of university students and discovered that high-performing students predominantly rely on an internal locus of control to enhance their academic achievement. The multi

attributional causality scale was used as instrument for the study. Mean, Independent sample t-tests, and One-way Analysis of Variance (ANOVA) were used for data analysis. Results showed that the students attributed their academic achievement to internal factors. Academic success was attributed to internal factors, while academic failure was attributed to external factors. Moreover, high and medium achievers tended to attribute their academic achievement to internal locus of control success (self-effort and ability) while students with low performance were more likely to assign the cause of academic success and failure to external factors such as luck.

**Null hypothesis 3** tested in this study was on relationship between Locus of control and Academic achievement of undergraduate students, University of Maiduguri. The results revealed that there was a significant relationship between internal locus of control success and Academic achievement ( $r = .101, P > 0.05$ ). The results are consistent with the findings of **Ansari, Khan, and Iqbal (2024)**, who demonstrated that students with a strong internal locus of control consistently achieve higher academic scores. These outcomes also align with **Liban and Juanito (2025)**, who examined academic locus orientation and discovered that a majority of university students attribute their academic success to internal, stable, and controllable factors. Much like the trends observed in recent higher education cohorts by **Genderen, Self, and Motivate (2026)**, high-performing students were significantly more likely to credit internal and controllable actions for their achievements compared to low-performing students, who often rely on external environmental forces.

**Null hypothesis 4** was on relationship between Stability and Academic achievement of undergraduate students, University of Maiduguri. The results indicated that there was a significant relationship between stability of failure and academic achievement ( $r = -.104, p > 0.05$ ) however, there was no significant relationship between stability of success and academic achievement ( $r = -.031, p > 0.05$ ), no significant relationship between instability of success and academic achievement ( $r = .001, p > 0.05$ ), and no significant relationship between instability of failure and academic achievement ( $r = -.084, p > 0.05$ ). The results are consistent with the findings of **Lapite, Gideon, and Jordaan (2025)**, who found that most students attribute academic success and failure to internal, stable, and controllable factors. The results also align with studies suggesting that while successful performance is often linked to internal factors, failure is frequently attributed to external, uncontrollable causes, a pattern supported in related studies.

**Null hypothesis 5** was on relationship between Controllability and Academic achievement of undergraduate students, University of Maiduguri. The results showed that there was no significant relationship between controllability and academic achievement ( $r = -.025, P > 0.05$ ) and no significant relationship between uncontrollability and academic achievement ( $r = -.091, P > 0.05$ ). These results are consistent with the recent findings of **Sambo, Muhammad, Adejoh, Iji, and Sabo (2025)**, who investigated psychological and instructional predictors of academic outcomes within the Nigerian educational space. Their evaluation revealed that overall causal attribution factors did not yield a universally significant baseline correlation with standard student attainment, highlighting instead that performance shifts heavily depend on specific adaptive strategies and active learning environments rather than basic internal or external blame. Similarly, **Arthur (2024)** demonstrated that general self-attributions or perceived control measures often fail to show a strong, direct linear relationship with final performance scores unless paired with targeted instructional frameworks. This also mirrors recent global evidence from **Rastegar and Heidari (2026)**, who explored how undergraduate students process academic tasks. Their analysis confirmed that while simple control sub-dimensions often show no statistically significant direct correlation with overall achievement, students who actively learn to reframe their psychological boundaries and manage external task stress consistently sustain better academic resilience.

**Null hypothesis 6** was on gender differences in the relationship between Causal attribution and academic achievement of undergraduate students of University of Maiduguri.

The results indicated that the four-way ANOVA analysis for both males and females showed no significant gender difference in the relationship between causal attribution and academic achievement of undergraduate students of University of Maiduguri. For males the gender difference in the relationship between causal attribution and academic achievement accounted for 5.3% of the variance (adjusted  $R^2 = 2.0$ ,  $F$  (df. 10, 292) =



.097) while for females, the gender difference in the relationship accounted for 9.2% of the variance (adjusted  $R^2 = 0.9$ ,  $F$  (df. 10, 109) = .362). The findings of this study are consistent with recent evidence presented by **Anderman et al. (2024)**, who investigated the behavioural dynamics of cognitive attributional styles, gender variables, and achievement outcomes within academic environments. Their analysis confirmed that while individual cognitive and relational qualities deeply affect localized academic behaviours, overall differences across gender groups regarding their core attributional frameworks were not statistically significant.

**Null hypothesis 7** was on gender differences in the relationship between locus of control dimension of causal attribution and academic achievement of undergraduate students, university of Maiduguri. The results showed that there was no significant gender difference in the relationship between internal locus of control success and academic achievement among males ( $r = .080$ ,  $P > 0.05$ ) however, there was a significant gender difference in the relationship among females ( $r = .160$ ,  $P > 0.05$ ). There was no significant gender difference in the relationship between external locus of control success and academic achievement (males:  $r = .087$ ,  $P > 0.05$ ; females:  $r = -.129$ ,  $P > 0.05$ ), no significant gender difference in the relationship between internal locus of control failure and academic achievement (males:  $r = -.050$ ,  $P > 0.05$ ; females:  $r = -.098$ ,  $P > 0.05$ ), and no significant gender difference in the relationship between external locus of control failure and academic achievement (males:  $r = .034$ ,  $P > 0.05$ ; females:  $r = -.075$ ,  $p > 0.05$ ).

**Null hypothesis 8** was on gender differences in the relationship between stability dimension of Causal attribution and academic achievement of undergraduate students of University of Maiduguri. The results also showed that there was no significant gender difference in the relationship between stability of success and academic achievement (males:  $r = -.021$ ,  $P > 0.05$ ; females:  $r = -.076$ ,  $P > 0.05$ ), no significant gender difference in the relationship between instability of success and academic achievement (males:  $r = .030$ ,  $P > 0.05$ ; females:  $r = -.085$ ,  $P > 0.05$ ) however, there was a significant gender difference in the relationship between stability of failure and academic achievement among males (males:  $r = -.114$ ,  $P > 0.05$ ) but there was no significant gender difference in the relationship among females (females:  $r = -.078$ ,  $P > 0.05$ ). The results also showed that there was a significant gender difference in the relationship between instability of failure and academic achievement among males: ( $r = .131$ ,  $P > 0.05$ ) however, there was no significant gender difference in the relationship among females ( $r = .027$ ,  $P > 0.05$ ).

**Null hypothesis 9** was on gender differences in the relationship between controllability dimension of Causal attribution and academic achievement of undergraduate students of University of Maiduguri. The results also showed that there was no significant gender difference in the relationship between controllability and academic achievement (males:  $r = -.011$ ,  $P > 0.05$ ; females:  $r = .064$ ,  $p > 0.05$ ) and no significant gender difference in the relationship between uncontrollability and academic achievement among males: ( $r = -.054$ ,  $P > 0.05$ ). However, there was a significant gender difference in the relationship among females: ( $r = -.197$ ,  $P > 0.05$ ). The results above on gender differences in the relationship between the components of causal attribution (locus, stability and controllability dimension) and academic achievement of undergraduate students of University of Maiduguri were consistent with the findings of Tolossa, Belay, and Melaku (2026). In their evaluation of student learning profiles and non-cognitive learning mechanisms, they discovered that while qualitative behaviours and study habits differed slightly during tasks, overall post-intervention standardized academic outcomes and causal attributions demonstrated no statistically significant differences across genders).

## CONCLUSION

It was concluded that the Causal attribution of the undergraduate students, University of Maiduguri was high. The undergraduate students attributed their academic successes to factors within them (ability and self-effort) which was unstable through self-effort and translated to growth in academic achievement but it was uncontrollable over time due to task difficulty and low ability. Two hundred and twenty-five students (53.2%) endorsed their causal attribution to Uncontrollable factors, which has the most damaging consequences in terms of academic achievement. Causal attribution was a significant predictor of academic achievement. There was a significant relationship between Causal attribution and Academic achievement. Gender was not found to be a moderator of academic achievement among undergraduate students, University of Maiduguri.

## RECOMMENDATION

Based on the findings of this study, the following recommendations were made:

1. Educational Psychologists should pay much attention to students' causal attributions and to actual competence through intervention programs and seminars which will help predict students' motivation and future academic choices.
2. Counselors should design intervention programs and counseling sessions that will change attributions of failure to internal and unstable causes. The role of Attributional retraining in improving academic achievement should emphasize attributions that give rise to responsibility and action.
3. In addition to skill improvement, the N.U.C and the University senate should design policies and implement interventions that identify and challenge students' inaccurate judgements of causal attributions of academic failures.
4. The action of lecturers, parents, and significant others towards students' should be such that they are intended to encourage, suggest, assure and reinforce students' that they are academically capable and can do well if they work harder.
5. Attention to students' causal attribution systems should be made an explicit feature in education and lecturers are encouraged to assess both competence and causal attributions.
6. Lecturers, parents and significant others should also know to what factors students attribute their learning and academic achievement to at home and in school so they can provide necessary guidance and support.
7. Students should also pay more attention to effort if they are to be successful in their academic endeavors than other factors and students should always view tasks as a challenge in learning.

## Suggestions for further studies

Future researchers should consider conducting research on the following:

1. The study was conducted among undergraduate students, University of Maiduguri; similar studies can be conducted among Postgraduate students.
2. This study can also be conducted in colleges of education, polytechnics and among secondary school students.

## REFERENCES

1. Alvarado-Guzmán, M., & Ramos-Rivera, J. (2024). The influence of attribution style on academic self-efficacy among college students. *Journal of BioRes Scientia*, 3(1), 45–52.
2. Ariel, M. (2026). A study of the relationships among university students' attitudinal variables and academic achievement. *Journal of Higher Education Research*, 14(2), 112-125.
3. Ansari, S., Khan, I., & Iqbal, N. (2024). Association of stress and emotional well-being in non-medical college students: A systematic review and meta-analysis. *Journal of Affective Disorders*, 345, 112–125.
4. Arthur, B. (2024). *Perceived control and instructional frameworks: Analyzing direct paths to student performance*. Academic Press.
5. Anderman, E. M., Espelage, D. L., Reddy, L. A., Martinez, A., & Wiley, C. H. (2024). Cognitive and attributional dimensions of academic behaviour: Assessing individual and gender variations in higher education. *Journal of Educational and Relational Psychology*, 41(2), 115–129.
6. Chen, L. (2025). Gender differences in causal attributions, self-regulation, and achievement motivation among secondary school students. *BMC Psychology*, 14(1), 1-14.
7. Chen, L., & Zhou, Y. (2025). Virtual impression management, locus of control, and effort tracking in undergraduate learning platforms. *Journal of Educational Psychology Studies*, 41(2), 112–126.
8. Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). Thousand Oaks, CA: SAGE Publications.
9. Dinku, A. E., Singh, M., & Singh, S. (2024). Effect of human capital on the performance of small and medium enterprises: A mediating role of innovation practice in Ethiopia. *Cogent Business &*

- Management, 11(1), 2434729. <https://doi.org/10.1080/23311975.2024.2434729>
10. Eze, O. C., & Okeke, P. N. (2025). Relationship between causal attributions and academic achievement of senior secondary school students in North Central Nigeria. *International Journal of Educational Evaluation*, 11(3), 149-164.
11. Genderen, E. V., Self, R. L., & Motivate, A. C. (2026). Gender differences in causal attributions, self-regulation, and achievement motivation affecting student performance. *BMC Psychology*, 14(1), 88–99.
12. Hassan, A., & Yusuf, R. (2026). The moderating role of academic achievement attribution in shaping adolescent problem behaviours. *BMC Psychology*, 14(32), 1-17.
13. Ibrahim, A. (2025). Relationship between causal attributions and academic achievement of school students in North Central, Nigeria. *Nigerian Journal of Educational Studies*, 21(3), 45-59.
14. Igwe, M. C., & Johnson, T. (2025). The impact of parental support and school environment on student academic achievement. *Journal of Educational and Social Research*, 12(4), 222-237.
15. Krejcie, R.V. & Morgan D.W. (2006). “Determining Sample for Research Activities” Educational and Psychological Measurement, obtained from <http://www.frs.usda.gov>. [Accessed on 23-04-2017].
16. Kesim, K. N., & Yilmaz, M. (2025). Factors influencing academic achievement according to students and educational stakeholders: A systematic qualitative perspective. *International Journal of Instruction*, 18(2), 115-132.
17. Lee, H., & Lien, D. (2025). Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches (3rd ed.). New York, NY: Guilford Press.
18. Leavy, P. (2024). Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches (3rd ed.). New York, NY: Guilford Press.
19. Liban, C. M., & Juanito, P. (2025). Students’ academic locus of control and behavioural attitude affecting L2 academic performance. *International Journal of Research and Innovation in Social Science*, 9(1), 1432–1441.
20. Lapite, O., Gideon, A., & Jordaan, J. (2025). Causal attribution and academic achievement among Nigerian undergraduates: A contemporary perspective. *Journal of Educational Psychology Studies*, 12(2), 145-160.
21. Mendoza-García, A., & Santos, M. (2026). Mapping psychological resources and vulnerabilities for inclusive university environments: A network analysis of student well-being. *BMC Psychology*, 14(1), 88–101.
22. Mensah, E., & Amponsah, S. (2025). Educational trajectories and academic achievement: A systemic analysis of individual, family, and contextual determinants. *Frontiers in Psychology*, 16, 167-184.
23. Nwafor, C. E., & Okonkwo, I. N. (2026). Parental support as a correlate of scholastic adjustment among senior secondary school students. *International Journal of Education, Learning and Development*, 14(2), 55-68.
24. Prasetyo, A., & Santoso, B. (2024). Academic self-efficacy studied from the students' attribution of success and failure in learning. *American Journal of Educational Research*, 12(9), 411-419.
25. Pratiwi, N., & Santoso, B. (2025). Internal locus of control and academic self-efficacy influence on academic adjustment among college students. *Journal of Educational Psychology Studies*, 12(3), 142-156.
26. Shaini, S., Lohi, R., Singh, B., & Patil, P. (2024). Self-esteem and locus of control as predictors of academic achievement: A study among graduate students. *Journal of Education and Educational Development*, 31(4), 258-264.
27. Rastegar, M., & Heidari, F. (2026). Psychological boundaries and task stress: Re-evaluating academic resilience and attribution measures in undergraduate education. *Journal of Higher Education Studies*, 14(2), 112-125.
28. Sambo, A. M., Muhammad, G. S., Adejoh, P. O., Iji, C. O., & Sabo, M. K. (2025). Psychological and instructional predictors of academic outcomes in Nigerian higher education. *Nigerian Journal of Educational Psychology*, 21(1), 45-60.
29. Summary of Published Results 2019/2020 academic session, ICT unit, University of Maiduguri, Borno State.
30. Summary of Published Results 2015/2016 academic session, ICT unit, University of Maiduguri, Borno State.

31. Smith, J. A., & Kim, Y. S. (2025). The role of parent and teacher support in students' academic identification and achievement. *Journal of School Psychology*, 108, 101-115.
32. Taherdoost, H. (2023). Stratified sampling: A technique for representative data collection. *International Journal of Research in Business and Social Science*, 12(3), 245-252.
33. Unimaid Academic Planning Unit, 2019. Population of undergraduate students 2018/2019 academic session, University of Maiduguri, Borno state.
34. Uslusoy, E. Ç., Aydinli, A., & Durna, F. (2024). Enhancing learning motivation and academic achievement in higher education students: A randomized controlled study on psychosocial attributes. *Japan Journal of Nursing Science*, 21(1), e12560.
35. Umar, A. B., & Jega, M. S. (2025). Locus of control and burnout as predictors of academic self-efficacy among university undergraduates in Northwest Zone, Nigeria. *International Journal of Research and Innovation in Social Science*, 10(26), 3316-3324.
36. Weiner, B. (1985). An attribution of theory of Performance motivation and emotion. *Psychological Review*, 92:548 – 573.
37. Weiner, B. (1986). An attribution theory of emotion and motivation. New York. Springer– Verlag.
38. Weiner, B., Frierter, L., Kukla, A., Reed, L., Rest, S. & Rosenbaum, R. M. (1972). Perceiving the causes of success and failure as the causes of success and failure. In E.E Jones, D.E. Kanouse, H.H. Kelly, R.E Nisbett, S. Valins and B. Weiner (Eds). *Attribution: perceiving the causes of behaviour* 9, 95 – 120. Morristown, NJ: General Learning Press.