

Original Research

Received 30 May 2026

Revised 20 June 2026

Accepted 18 July 2026

Natural Resources for Human Health 2026, Vol. 6 (9s): 181–201

KEYWORDS:

Aggression, Academic Achievement, Higher Secondary Students, Gender, Locality.

Academic Achievement of Science and Arts Students at Senior Secondary Level in Relation to Aggression

¹Puneet Kour Raina, ²Dr. Baby Nilam

¹(Research Scholar), Department of Education, CT University,

²(Supervisor), Department of Education, CT University, Ludhiana, Punjab.

ABSTRACT: The present study was conducted to study the relationship between aggression and academic achievement among the science and arts students of senior secondary level. To achieve this objective, 600 students of class XII were selected as sample from six higher secondary schools affiliated to the state board of Higher Secondary Education in Jammu District Jammu and Kashmir. The researchers adopted the Aggression Scale developed and standardised by Mathur & Bhatnagar (2004). Academic achievement scores has been taken from the result of XII Examination of the selected students. Pearson Product Moment Method was used to find out the relation between the variables. The study found that there is a negative and significant relationship between aggression and academic achievement of the students.

INTRODUCTION

Academic achievement is impacted by aggression, academic anxiety, hostility, and self-efficacy. When students receive low test and task scores, it causes them to engage in mental processing to explain to themselves why the outcomes are as they are. When students perform well, they frequently credit two internal factors: their own aptitude and their own effort. When they don't succeed, they blame these internal characteristics, or they may begin to rationalize and dismiss their failure to external circumstances like severe tasks, dirty conditions, or simply bad luck. This propensity to attribute achievement to one's own skills and efforts fosters success and gives kids the confidence they need to take on obstacles.

Students learn more and gain greater control over things like their goals, attitudes, and attention spans when they are more conscious of their thought processes. Self-regulation follows self-awareness. Students are more likely to succeed in all they do if they are aware of their talents and shortcomings. They also become more focused and aware of their priorities in life rather than being aimless. The following is the conceptual framework for all the variables that are part of this study: aggression and academic anxiety.

ACADEMIC ACHIEVEMENT: -

Academic achievement is defined by Carter (1959) in his Dictionary of Education as the information or skills acquired in the disciplines taught in school, typically ascertained by test results, teacher-assigned grades, or both.

Knowledge, comprehension, or abilities gained through instruction and training in classes or fields of study are referred to as academic performance. Every student differs from his followers in a variety of ways. Even identical twins are unique; no two people are alike in the world. All psychological traits, physical and mental capacities, knowledge, habits, and other personality traits vary from person to person.

Achievement is defined as a successful performance or gain made by an individual or group upon finishing a task, whether it be social, academic, manual, or personal. Achievement, then, refers to all of the behavioral changes that occur in an individual as a result of learning experiences of all types.

CONCEPT OF AGGRESSION: -

One of the most significant issues facing teenagers is aggression. Aggression is defined as behavior meant to inflict pain or injury. One definition of aggression is a negative trait of a child's or other people's personalities that manifests itself in behavior when the circumstance calls for it. Any behavior intended to cause harm or injury to another living being who is motivated to avoid such treatment is considered aggression, according to **Baron (1994)**. Aggression is "behavior meant to injure another living being, either physically or emotionally," according to **Berkowitz (1998)**.

Academic achievement can be described as the educational objective that a student attains after receiving instruction during a specific time period. This objective may vary from person to person and can be assessed through exams or ongoing evaluations.

Numerous research have revealed that a wide range of factors influence academic achievement. Psychological imbalance is the most crucial element. One form of psychological imbalance is aggression. Numerous studies have demonstrated that bad lecturers predict bad behavior, which hinders the advancement of education (**Chen et al., 2010; Christle, Jolivet, & Nelson, 2005; Schwartz, Chang, & Farver, 2001**). In their research, **Barriga and his colleague (2002)** verified that there were broad zero-order relationships between the indicators of educational accomplishment and violent conduct syndromes. **Connor (2004)** found a strong correlation between violence and educational failure. Numerous social behaviors, academic achievement, and psychological adjustment are all significantly impacted by aggressive behavior. Children's social behavior and academic success have been linked in countless research. Research has consistently shown that academic achievement is negatively correlated with antisocial behavior, including violence. In addition to harming social interaction and learning processes, this behavior fosters a negative social and classroom environment that eventually lowers the social and academic performance of aggressive kids.

OBJECTIVES OF THE STUDY: -

The specific objectives of this study were –

- To investigate the relationship between academic achievement and aggression of the science students of senior secondary level in terms of their gender and locality.
- To investigate the relationship between academic achievement and aggression of the arts students of senior secondary level in terms of their gender and locality.

HYPOTHESES: -

- There will be no significant relationship between academic achievement and aggression of the science students of senior secondary level in terms of their gender and locality.
- There will be no significant relationship between academic achievement and aggression of the arts students of senior secondary level in terms of their gender and locality.

RESEARCH METHODOLOGY: -

The process of conducting an investigation in a methodical and organized manner is known as research methodology. To measure and evaluate the aggression with academic accomplishment of senior secondary science and arts students, as well as to determine the relationship between this factor and academic achievement in terms of their gender, locality, science and arts streams, the normative survey method of descriptive research will be used in this study. Tools and techniques are selected based on the circumstances. A number of ideas have operational definitions. Scales or indicators are used in measurement. The questionnaire has these. Analysis is done on the information gathered from the surveys. Surveys, experiments, and participant observation may occasionally be used.

POPULATION, SAMPLE AND SAMPLING TECHNIQUE

All the science and arts students studying senior secondary in government schools of Jammu district constitute the population of the study. Science and arts students studying at class XII of all the government senior Secondary Schools in Jammu district was treated as the population of the present study. The total sample of the study was randomly selected and consisted of 600 students (total urban-300 & rural-300 divided in two groups (boys and girls) each group has 150 students. further

these two groups are equally subdivided into two more groups (science and arts) with 75 students in each group from 6 government higher secondary schools of Jammu

TOOLS USED IN THE STUDY

1 DESCRIPTION OF AGGRESSION SCALE BY DR. G.P.MATHUR AND DR. RAJ KUMARI BHATNAGAR ():

For assessing the level of Aggression in students, the investigator has used aggression scale developed by Dr. G.P. Mathur and Dr. Raj Kumari Bhatnagar. The present scale intends to assess the level of aggression in any age group (above 14 years). Aggression scale is finally prepared. Now it consists of 55 statements. Each statement describes different forms of individual's aggression in different situations. It is a Likert type 5 point scale. In this scale, statements are in two forms, i.e., positive and negative. Reliability co-efficient of the aggression scale was calculated by 'Test Retest Reliability' method. To assess the reliability of the statements, 300 males and 300 females of urban areas have been re-administered the scale. Reliability was .88 in males and .81 in females. To obtain concurrent validity co-efficient of the aggression scale, the scale was compared with "statements in questionnaire of aggression" borrowed from Murray. Validity is .80 in males and .78 in females.

ANALYSIS AND INTERPRETATION OF THE DATA

1 To investigate the relationship between **Academic Achievement and Aggression of the Science students** of Senior Secondary level in terms of their gender and locality

Stream : **Science**

Gender : **Boys**

Locality : **Rural**

N = 75

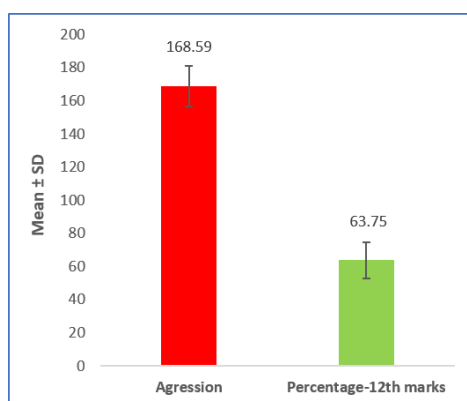


Figure 1: Graph showing mean values for Aggression and Academic achievements (Percentage 12th marks) of Rural Science Boy students of Higher Secondary schools

Statistic (PPMCC), analysis and t-test.	Regression Value
N	75
SD (Aggression, Academic Achievement)	(12.29, 10.80)
r	-0.1373
df	73

t-value	-1.1841
p-value	0.2402 (> 0.05)
R ²	0.0188
Variance Explained	1.88%

TABLE 1 A Pearson Product Moment Correlation was executed to evaluate the connection between violence and scholastic success among rural male science pupils (N = 75). The study indicated a slight negative association between aggression and educational success ($r = -0.137$). The connection found was not statistically significant, $t(73) = -1.18$, $p > 0.05$.

The mean aggression score of the students was 168.59 (SD = 12.29), while the mean academic percentage was 63.75 (SD = 10.80). The coefficient of determination ($R^2 = 0.0188$) indicated that aggression accounted for only 1.88% of the variance in academic achievement. There is a **weak, negative and statistically non-significant relationship** between Aggression and Academic Achievement among Rural Science Boy students. Aggression cannot be considered a meaningful predictor of Academic performance among Rural Science Boys. Therefore the null hypothesis number 1a stated that There will be no significant relationship between Academic Achievement and Aggression of the Science students of Senior Secondary level in terms of their gender and locality. This study is supported by **Y Akman (2021)** The results showed that students' aggressive behaviors and their opinions of the school atmosphere had weak and statistically non significant negative association.

The results show that among rural scientific boys, aggressiveness had no discernible effect on academic performance. The link was quite weak, despite the fact that a negative relationship was found. This implies that pupils who are more aggressive might not always do poorly academically.

Other factors that frequently have a greater impact on academic success than aggression alone, such as intelligence, study habits, motivation, parental support, socioeconomic status, school environment, and emotional regulation, could be the cause of the lack of a significant relationship.

Aggression only accounts for a very small percentage of the diversity in academic achievement, as further shown by the low coefficient of determination. As a result, in the current sample, aggression cannot be regarded as a significant predictor of academic achievement.

1. To investigate the relationship between **Academic Achievement and Aggression** of **Science students** of Senior Secondary level in terms of their gender and locality.

Stream : **Science**

Gender : **Girls**

Locality: **Rural**

N = 75

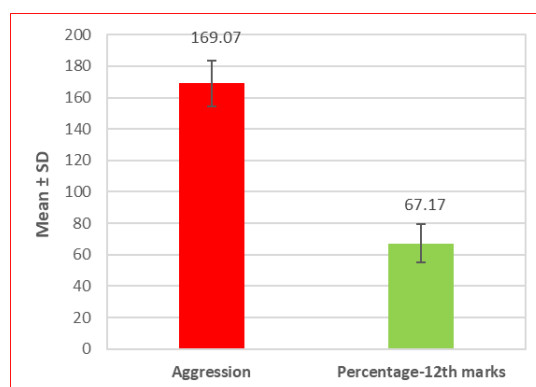


Figure 2. Graph showing mean values for Aggression and Academic achievements (Percentage 12th marks) of Rural Science Girl students of Higher Secondary school.

TABLE 2 Pearson's Product Moment Correlation was calculated to investigate the connection between academic success and hostility among rural science female students. A weak positive connection ($r = 0.009$) between academic achievement and aggression was found in the investigation.

Statistic (PPMCC), Regression Value analysis and t-test.	
N	75
SD (Aggression, Academic Achievement)	(14.67, 12.26)
r	0.0087
df	73
t-value	0.0744
p-value	0.9409 (>0.05)
R²	0.000076
Variance Explained	0.0076%

The t-test was used to determine whether the obtained correlation coefficient was significant. With 73 degrees of freedom, the computed t-value was 0.074, which was less than the crucial value needed for significance at the 0.05 level. Consequently, it was shown that there was no statistically significant correlation ($p > 0.05$) between academic achievement and violence.

Aggression barely accounted for 0.0076 percent of the variance in academic achievement, according to the coefficient of determination ($R^2 = 0.000076$). Therefore, it was discovered that aggression had almost no effect on rural science girls' academic performance.

There is a negligible, positive and statistically non-significant relationship between Aggression and Academic Achievement among Rural Science Girl students. Therefore, Aggression was not found to be a significant predictor of Academic Achievement among Rural Science Girl students. Therefore the null hypothesis number 1a stated that there will be no significant relationship between Academic Achievement and Aggression of the Science students of Senior Secondary level in terms of their gender and locality. Similar results have been found in the study conducted by **JE Chung, G Song, K Kim, J Yee, JH Kim, KE Lee(2019)** there were no significant relationship on the basis of gender and locality as far as aggression is concerned.

The current study examined the connection between academic success and violence among rural science girls. The results showed that the two variables had a very weak positive connection. The obtained connection was statistically non-significant, suggesting that among the kids in the study, academic achievement is not significantly influenced by aggression

Aggression only explained 0.0076 percent of the variation in academic achievement, according to the coefficient of determination. This result implies that variables other than aggression have a greater impact on academic achievement. Academic accomplishment may be more significantly influenced by factors including IQ, study habits, motivation, parental support, socioeconomic situation, school environment, and learning resources.

According to the results, students who are more aggressive may do just as well academically as those who are less aggressive. Therefore, among rural scientific girls, violence cannot be regarded as a significant predictor of academic achievement.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Science students** of Senior Secondary level in terms of their gender and locality.

Stream : **Science**

Gender : **Boys and Girls**

Locality: **Rural**

N = 150

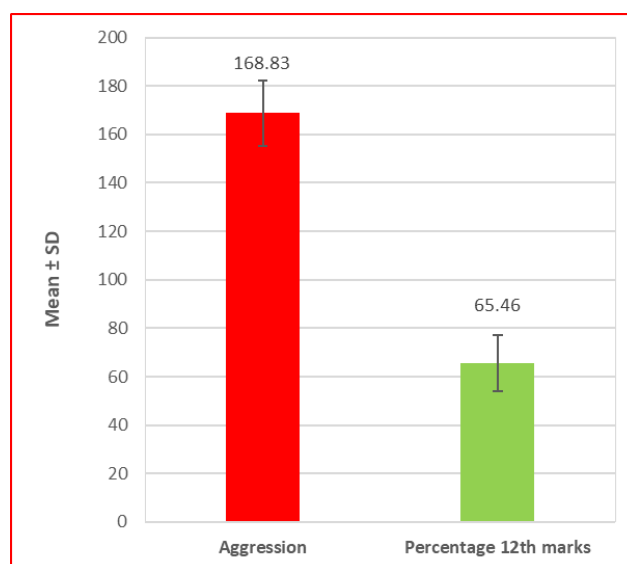


Figure 3. Graph showing the mean values for Aggression and Academic achievements (Percentage 12th marks) of Rural Science Boys and Girl students together of Higher secondary school.

TABLE 3 Pearson's Product Moment Correlation was calculated to investigate the connection between academic success and violence in rural science students. Aggression and academic success had a very small negative connection ($r = -0.050$), according to the analysis.

Statistic (PPMCC), Regression Value analysis and t-test.	
N	150
SD (Aggression, Academic Achievement)	(13.49, 11.64)
r	-0.0501
df	148
t-value	-0.6098
p-value	0.543
R ²	0.0025
Variance Explained	0.25%

The t-test was used to determine the correlation's significance. With 148 degrees of freedom, the computed t-value was -0.610. The p-value of 0.543 that was achieved was higher than the significance level of 0.05. As a result, it was determined that there was no statistically significant correlation between academic success and aggression.

Only 0.25 percent of the variation in academic achievement was explained by violence, according to the coefficient of determination ($R^2 = 0.0025$). Therefore, it was discovered that among rural scientific students, aggressiveness had very little predictive value for academic achievement.

The regression equation that resulted from a basic linear regression analysis is as follows: Academic Performance = 72.755 – 0.043 (Aggression)

According to the regression coefficient, for every unit rise in the aggression level, academic success drops by roughly 0.043 percentage points.

Among Rural Science Boy and Girl students, there is a weak, negative, and statistically insignificant correlation between academic achievement and aggression. Academic achievement among rural science students (boys and girls combined) is not substantially correlated with aggression. Thus, according to the null hypothesis number 1a, there will be no meaningful correlation between academic achievement and aggression among senior secondary science students based on their gender and location.

The current study examined the connection between academic success and violence in rural science students. The results showed that the two variables had a very modest negative connection. The magnitude of the link was incredibly minor and statistically non-significant, despite the direction of the relationship suggesting that students with greater aggression ratings tended to get somewhat lower academic achievement scores.

Aggression only explained 0.25 percent of the variation in academic achievement, according to the coefficient of determination. This result suggests that among rural scientific students, hostility is not a significant predictor of academic achievement.

The findings imply that, rather than just aggression, a variety of cognitive, motivational, familial, social, and environmental factors affect academic attainment. A student's academic success may be more significantly influenced by factors including IQ, study habits, academic motivation, parental participation, socioeconomic status, and school climate.

As a result, in the current study, aggression cannot be regarded as a significant predictor of academic success.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Science students** of Senior Secondary level in terms of their gender and locality.

Stream : **Science**

Gender : **Boys**

Locality : **Urban**

N = 75

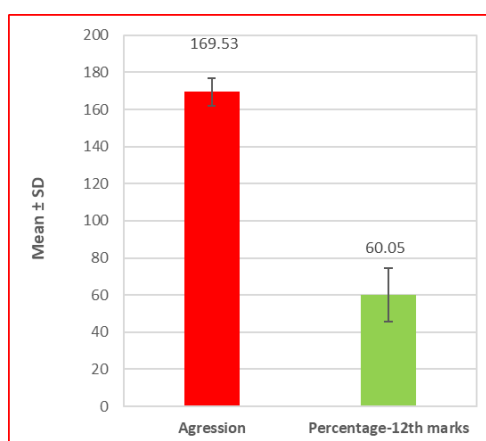


Figure 4: Graph showing mean values for Aggression and Academic achievements (Percentage 12th marks) of Urban Science Boy students of Higher Secondary schools

TABLE 4 Pearson's Product Moment Correlation was calculated to investigate the connection between academic success and violence among urban science boy students. Aggression and academic success were found to have a modest negative connection ($r = -0.009$).

Statistic (PPMCC), Regression analysis and t-test.		Value
N		75
SD (Aggression, Academic Achievement)		(7.47, 14.41)
r		-0.0090
df		73
t-value		-0.0770
p-value		0.9388 (> 0.05)
R ²		0.000081
Variance Explained		0.008%

The t-test was used to determine the correlation's significance. With 73 degrees of freedom, the computed t-value was -0.077. With a corresponding p-value of 0.939, the significance level of 0.05 was exceeded. Consequently, it was determined that there was no statistically significant correlation between academic success and violence.

Aggression barely accounted for 0.008 percent of the variance in academic achievement, according to the coefficient of determination ($R^2 = 0.000081$). Therefore, it was discovered that among urban scientific boy students, hostility had almost little effect on academic achievement.

The regression equation that resulted from a basic linear regression analysis is as follows: Academic Performance = 62.997 – 0.017 (Aggression)

According to the regression coefficient, for every unit rise in the aggression level, academic success falls by roughly 0.017 percentage points.

There is a **negligible, negative and statistically non-significant relationship** between Aggression and Academic Achievement among Urban Science Boy students. Aggression was found to have practically no influence on Academic Achievement among Urban Science Boy students. Therefore the null hypothesis number 1a stated that there will be no significant relationship between Academic Achievement and Aggression of the Science students of Senior Secondary level in terms of their gender and locality. . Similar results have been found in the study conducted by **R Hardani, S Bavi (2026)** there were no significant relationship on the basis of gender and locality as far as aggression is concerned.

The current study examined the connection between academic success and violence among male urban science students. The results showed a very slight negative relationship between academic success and violence. The found association was statistically non-significant, suggesting that this group's academic performance is not greatly impacted by hostility.

Aggression only explained 0.008 percent of the variation in academic achievement, according to the coefficient of determination. This implies that characteristics other than aggression, such IQ, motivation, study habits, parental support, socioeconomic situation, and school environment, have an impact on academic accomplishment.

According to the results, students who score higher on aggression may not always fare worse academically than those who score lower. Therefore, among urban scientific boy students, violence cannot be regarded as a significant predictor of academic achievement.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Science students** of Senior Secondary level in terms of their gender and locality

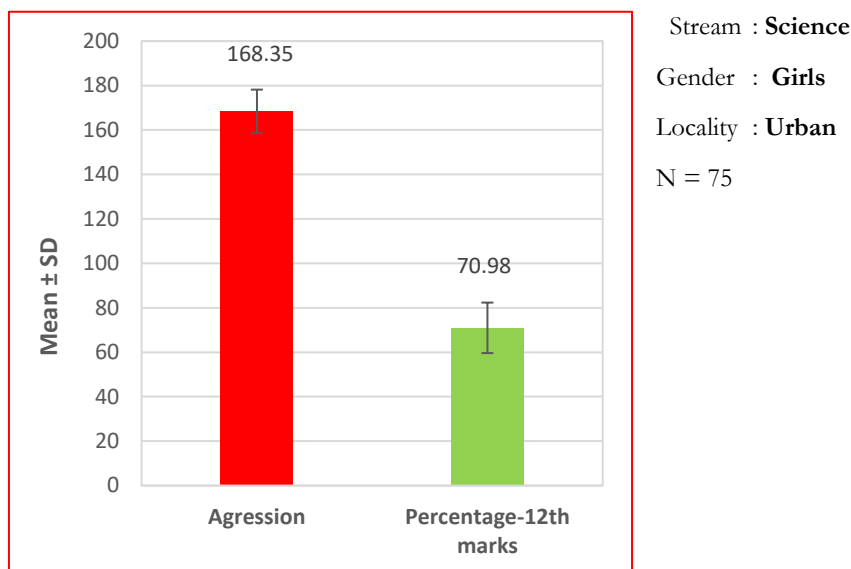


Figure 5. Graph showing the mean values for Aggression and Academic achievements (Percentage 12th marks) of Urban Science Girl students of Higher Secondary schools

TABLE 5 To examine the relationship between aggression and academic achievement among urban science girl students, Pearson's Product Moment Correlation was computed. The analysis revealed a weak positive correlation between aggression and academic achievement ($r = 0.123$).

Statistic (PPMCC), Regression analysis and t-test.		Value
N		75
SD (Aggression, Academic Achievement)		(9.81, 11.36)
r		0.1228
df		73
t-value		1.0573
p-value		0.2939 (> 0.05)
R ²		0.0151
Variance Explained		1.51%

The significance of the correlation was tested using the t-test. The calculated t-value was 1.057 with 73 degrees of freedom. The obtained p-value was 0.294, which was greater than the 0.05 level of significance. Therefore, the relationship between aggression and academic achievement was found to be statistically non-significant.

The coefficient of determination ($R^2 = 0.0151$) indicated that aggression explained only 1.51 percent of the variance in academic achievement. Thus, aggression was found to have limited predictive value for academic achievement among urban science girl students.

A simple linear regression analysis yielded the following regression equation:

$$\text{Academic Achievement} = 47.039 + 0.142(\text{Aggression})$$

The regression coefficient indicated that academic achievement increased by approximately 0.142 percentage points for every one-unit increase in aggression score. There is a **weak, positive and statistically non-significant relationship** between Aggression and Academic Achievement among Urban Science Girl students. Aggression does not significantly influence Academic performance among Urban Science Girls. . Therefore the null hypothesis number 1a stated that there will be no significant relationship between Academic Achievement and Aggression of the Science students of Senior Secondary level in terms of their gender and locality. Similar results have been found in the study conducted by **TL Hope, KL Bierman(1998)** there were no significant relationship on the basis of gender and locality as far as aggression is concerned.

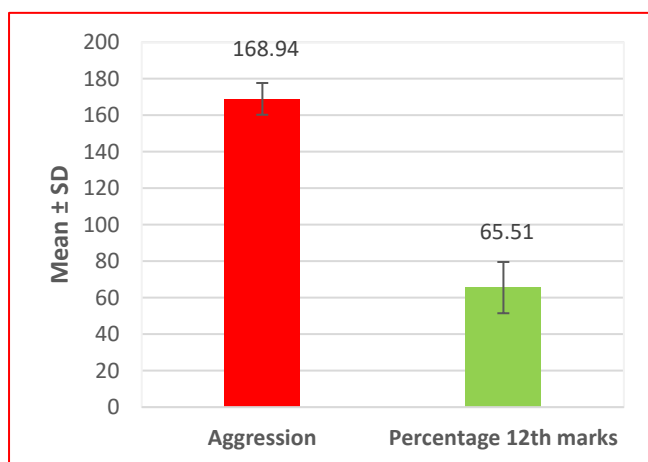
The present study investigated the relationship between aggression and academic achievement among urban science girl students. The findings revealed a weak positive correlation between aggression and academic achievement. the relationship was statistically non-significant, shows that aggression does not significantly influence academic achievement in group.

The coefficient determination indicated that aggression accounted only 1.51 percent of the variance academic achievement. This implies other factors such as intelligence, study habits, academic motivation, parental support, socioeconomic status and school environment are playing a major role in academic achievement.

Although the direction of correlation was positive, the magnitude was too small to support the conclusion that aggression contributes meaningfully to academic success. Thus, aggression cannot be treated as a significant predictor of the academic achievement of urban science girl students.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Science students** of Senior Secondary level in terms of their gender and locality.

Stream : **Science**



Gender : **Boys and Girls**

Locality : **Urban**

N = 150

Figure 6. Graph showing the mean values for Aggression and Academic achievements (Percentage 12th marks) of Urban Science Boy and Girl students together of Higher Secondary schools.

TABLE 6 To examine the relationship between aggression and academic achievement among urban science students, Pearson's Product Moment Correlation was computed. The analysis revealed a negligible positive correlation between aggression and academic achievement ($r = 0.025$).

Statistic (PPMCC), Regression analysis and t-test.		Value
N		150
SD (Aggression, Academic Achievement)		(8.71, 14.04)
r		0.0249
df		148
t-value		0.3036
p-value		0.7618 (>0.05)
R²		0.000623
Variance Explained		0.062%

The significance of the correlation was tested using the t-test. The calculated t-value was 0.304 with 148 degrees of freedom. The obtained p-value was 0.762, which was greater than the 0.05 level of significance. Therefore, the relationship between aggression and academic achievement was found to be statistically non-significant.

The coefficient of determination ($R^2 = 0.000623$) indicated that aggression explained only 0.062 percent of the variance in academic achievement. Thus, aggression was found to have practically no predictive value for academic achievement among urban science students.

A simple linear regression analysis yielded the following regression equation:

$$\text{Academic Achievement} = 58.719 + 0.040(\text{Aggression})$$

The regression coefficient indicated that academic achievement increased by approximately 0.040 percentage points for every one-unit increase in aggression score.. There is a negligible, positive and statistically non-significant relationship between Aggression and Academic Achievement among Urban Science Boy and Girl students. Aggression is not significantly related to Academic Achievement among Urban Science (Boys and Girls together) students. . Therefore the null hypothesis number 1a stated that there will be no significant relationship between Academic Achievement and Aggression of the Science students of Senior Secondary level in terms of their gender and locality.

The present study investigated the relationship between aggression and academic achievement among urban science students. The findings revealed an extremely weak positive correlation between aggression and academic achievement. The relationship was statistically non-significant, indicating that aggression does not significantly influence academic performance in this group.

The coefficient of determination showed that aggression accounted for only .062 percent of the variance in academic achievement. Therefore, aggression makes no meaningful contribution to explaining differences in students' academic performance.

The findings suggest that other factors such as intelligence, study habits, academic achievement, parental involvement, socioeconomic status, and school climate are the primary determinants of academic achievement. Thus, aggression cannot be considered a meaningful predictor of academic achievement for urban science students.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Arts** students of Senior Secondary level in terms of their gender and locality.

Stream : **Arts**

Gender : **Boys**

Locality : **Rural**

N = 75

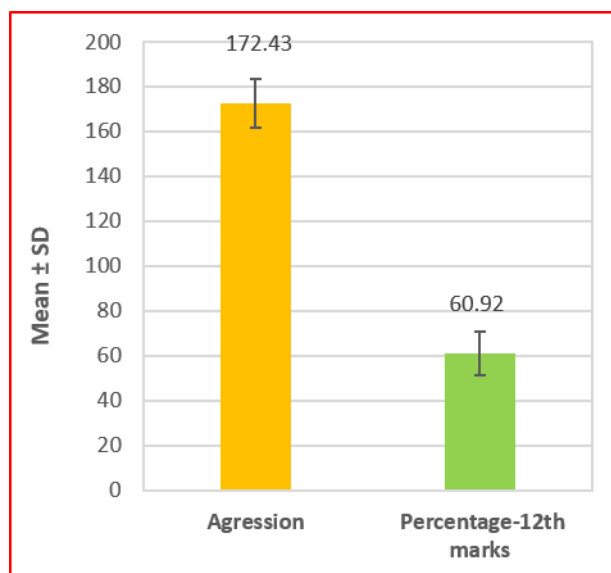


Figure 7: Graph showing mean values for Aggression and Academic achievements (Percentage 12th marks) of Rural Arts Boy students of Higher Secondary schools

TABLE 7 To examine the relationship between aggression and academic achievement among rural arts boy students, Pearson's Product Moment Correlation was computed. The analysis revealed a negligible positive correlation between aggression and academic achievement ($r = 0.015$).

Statistic (PPMCC), Regression Value analysis and t-test.	
N	75
SD (Aggression, Academic Achievement)	(10.94, 9.61)
r	0.0154
df	73
t-value	0.1319
p-value	0.8954 (> 0.05)
R ²	0.00024
Variance Explained	0.024%

The significance of the correlation was tested using the t-test. The calculated t-value was 0.132 with 73 degrees of freedom. The obtained p-value was 0.895, which was greater than the 0.05 level of significance. Therefore, the relationship between aggression and academic achievement was found to be statistically non-significant.

The coefficient of determination ($R^2 = 0.00024$) indicated that aggression explained only 0.024 percent of the variance in academic achievement. Thus, aggression was found to have practically no influence on academic achievement among rural arts boy students.

A simple linear regression analysis yielded the following regression equation:

$$\text{Academic Achievement} = 58.583 + 0.0136(\text{Aggression})$$

The regression coefficient indicated that academic achievement increased by approximately 0.014 percentage points for every one-unit increase in aggression score. There is a negligible, positive and statistically non-significant relationship between Aggression and Academic Achievement among Rural Arts Boy students. Aggression was found to have no significant effect on Academic performance among Rural Arts Boy students. Therefore the null hypothesis number 1b stated that There will be no significant relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in terms of their gender and locality. Similar results have been found in the study conducted by **Colman (2003)** there were no significant relationship on the basis of gender and locality as far as aggression is concerned.

The present study investigated the relationship between aggression and academic achievement among rural arts boy students. The findings revealed an extremely weak positive correlation between aggression and academic achievement. The relationship was statistically non-significant, indicating that aggression does not significantly influence academic performance in this group.

The coefficient of determination convey aggression counted only 0.024 percent of the variance in academic achievement. This prove that aggression provide negligibly to explaining differences in students' academic performance.

The findings imply that academic achievement is sway primarily other factors such as intelligence, study habits, academic motivation, parental involvement, socioeconomic conditions, and school environment. Therefore, aggression cannot be regarded as a meaningful predictor of academic achievement among rural arts boy students.

1(b). To investigate the relationship between **Academic Achievement and Aggression** of the **Arts students** of Senior Secondary level in terms of their gender and locality.

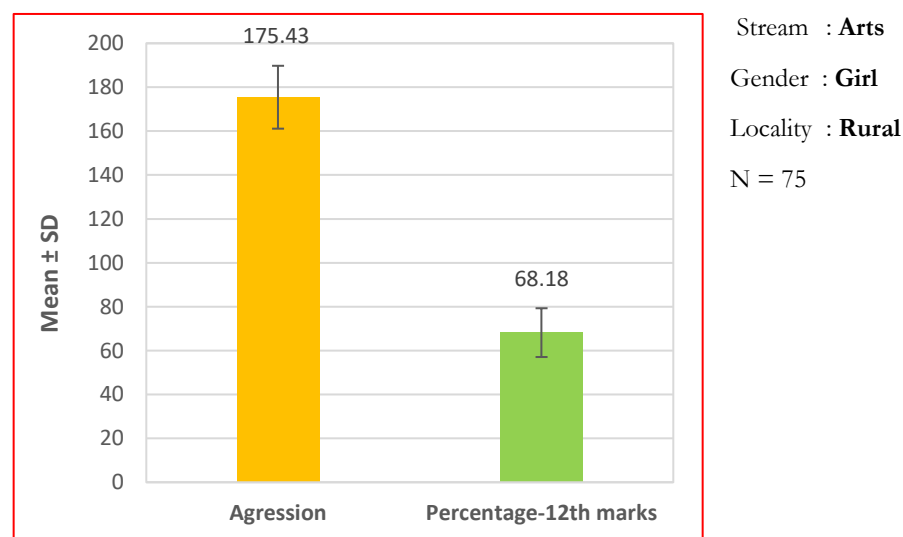


Figure 8: Graph showing mean values for Aggression achievements (Percentage 12th marks) of Rural Arts Girl students of Higher Secondary schools and Academic

TABLE 8 Pearson's Product Moment Correlation was calculated to study the relationship between aggression and academic achievement among rural arts girl students. The analysis showed a low positive correlation between aggression and academic achievement ($r = 0.197$).

Statistic (PPMCC), Regression analysis and t-test.		Value
N		75
SD (Aggression, Academic Achievement)		(14.32, 11.11)
r		0.1975
df		73
t-value		1.7211
p-value		0.0895 (> 0.05)
R²		0.0390
Variance Explained		3.90%

The significance of correlation was tested by t-test. The computed t-value was 1.721 at 73 degrees of freedom. The p-value obtained was 0.089 which was greater than the 0.05 level of significance. Thus, the relationship between aggression and academic achievement was found to be statistically non-significant.

The coefficient of determination ($R^2 = 0.039$) showed that aggression accounted for approximately 3.9 percent of the variance in academic achievement. Therefore aggression only contributed a small proportion of the variation of academic achievement among rural arts girl students.

The following regression equation was obtained from the simple linear regression analysis: Academic Achievement = $41.323 + 0.153(\text{Aggression})$

The regression coefficient indicated an increase of approximately 0.153 percentage points in the academic achievement for each one unit increase in aggression score.

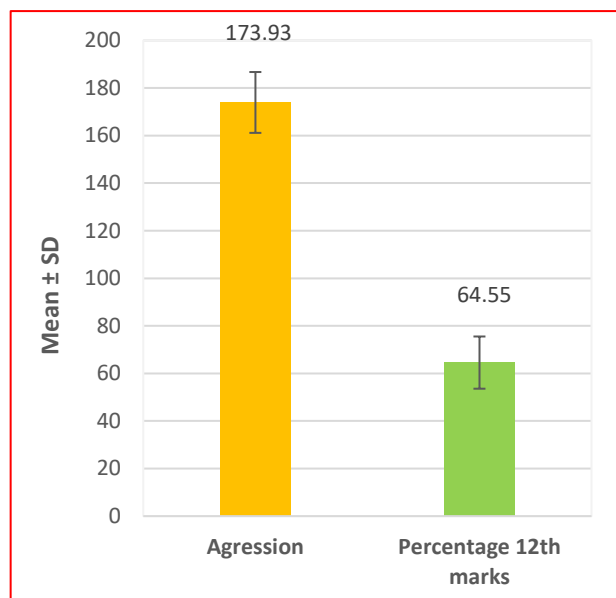
There is weak positive and statistically non-significant relationship between Aggression and Academic Achievement in Rural Arts Girl students. Academic performance among Rural Arts Girls students. There was no significant effect of Aggression. Thus the null hypothesis number 1b was stated as There will be no significant relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in the terms of their gender and locality. Similar results are observed in the study conducted by Archer (2004) where aggression did not show any significant relationship on the basis of gender and locality.

The present study investigated the relation between aggression and academic achievement among rural girls students of arts. The results indicated a weak positive association between aggression and academic achievement. Students with higher aggression scores slightly higher academic achievement scores the relationship was not statistically significant.

The coefficient of determination indicated that aggression considered for about 3.9 percent of the variance in academic achievement. This suggests that aggression has a very small sway on academic performance and a huge portion of the variance is still accounted for by other factors.

Many factors such as intelligence, study habits, academic motivation, parental support, socio-economic background, learning environment and personality characteristics effect academic achievement. aggression alone cannot account for students' academic achievement.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Arts students** of Senior Secondary level in terms of their gender and locality.



Stream : **Arts**

Gender : **Boys and Girls**

Locality : **Rural**

N = 150

Figure 9. Graph showing the mean values for Aggression and Academic achievements (Percentage 12th marks) of Rural Arts Boy and Girl students together of Higher Secondary schools

TABLE 9 Pearson's Product Moment Correlation was used to find out the relationship between aggression and academic achievement of rural arts students. The analysis showed a low positive correlation between aggression and academic achievement ($r = 0.156$).

Statistic (PPMCC), Regression analysis and t-test.		Value
N		150
SD (Aggression, Academic Achievement)		(12.79, 10.97)
r		0.1560
df		148
t-value		1.9212
p-value		0.0566 (>0.05)
R ²		0.0243
Variance Explained		2.43%

The significance of the correlation was determined by t-test. The t-value for the computation was 1.921 with 148 degrees of freedom. The p-value obtained was 0.057 which was just above the 0.05 level of significance. The relationship between aggression and academic achievement was found to be statistically non-significant.

The coefficient of determination ($R^2 = 0.0243$) revealed that aggression accounted for about 2.43 percent of the variance in academic achievement. Thus, aggression accounted for only a small amount of variance in academic achievement for rural arts students.

The simple linear regression analysis produced the following regression equation:

$$\text{Academic Achievement} = 41.283 + 0.134 * \text{Aggression}$$

Results showed the regression coefficient was around 0.134 percentage points for every one-unit increase in aggression score in academic achievement. There is a weak, positive and statistically non-significant relationship between Aggression and Academic Achievement among Rural Arts students of both boys and girls. There is no significant relationship between Aggression and Academic Achievement of Rural Arts Boy and Girl students taken together. Hence the null hypothesis number 1b stated that There will be no significant relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in terms of their gender and locality.

This study examined the relationship between aggression and academic achievement among rural arts' students. There was a low positive correlation between aggression and academic achievement, the results found. Students with higher aggression scores tended to have slightly higher academic achievement scores, but the relationship was not statistically significant using a conventional threshold.

The amount of determination denote that aggression contributed about 2.43 percent of the variance in academic achievement. It demonstrates that aggression explains little of the academic performance and that other factors explain a large part of the variance in academic achievement.

Many factors affect academic achievement, including intelligence, study habits, academic motivation, parental support, socioeconomic background, learning environment, and personality traits. Aggression, then, by itself, cannot account for students' academic outcomes.

Therefore, aggression could not be considered as a significant predictor of academic achievement among the rural arts students.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Arts students** of Senior Secondary level in terms of their gender and locality.

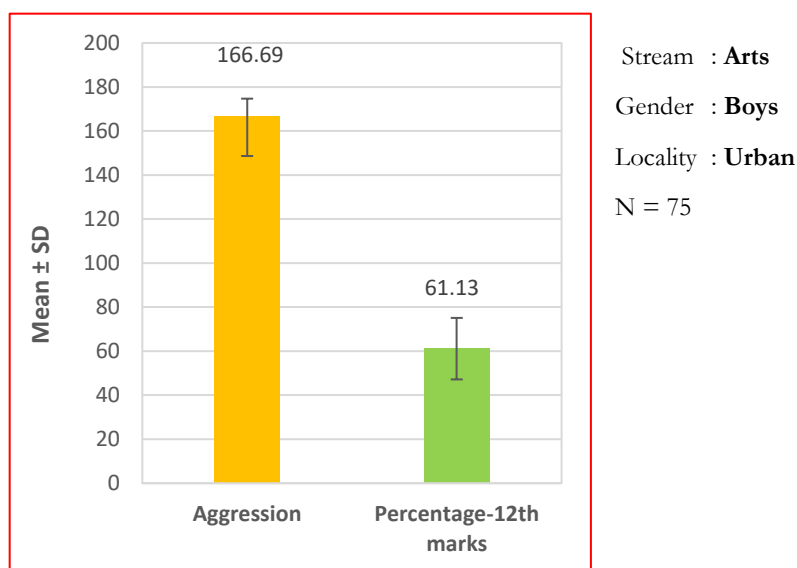


Figure 10: Graph showing mean values for Aggression and Academic achievements (Percentage 12th marks) of Urban Arts Boy students of Higher Secondary schools

TABLE 10 Pearson's Product Moment Correlation was calculated to determine the relationship between aggression and academic achievement of urban arts boy students. The analysis showed a weak positive correlation between aggression and academic achievement ($r = 0.1004$).

Statistic (PPMCC), Regression analysis and t-test.		Value
N		75
SD (Aggression, Academic Achievement)		(8.03, 13.97)
r		0.1004
df		73
t-value		0.8618
p-value		0.3916 (> 0.05)
R ²		0.0101
Variance Explained		1.01%

The significance of the correlation was tested by t-test. The t-value calculated was .8618 with 73 degrees of freedom. The p-value obtained was 0.3916 which was greater than the level of significance 0.05. Thus, the relationship between aggression and academic achievement was found to be statistically non-significant.

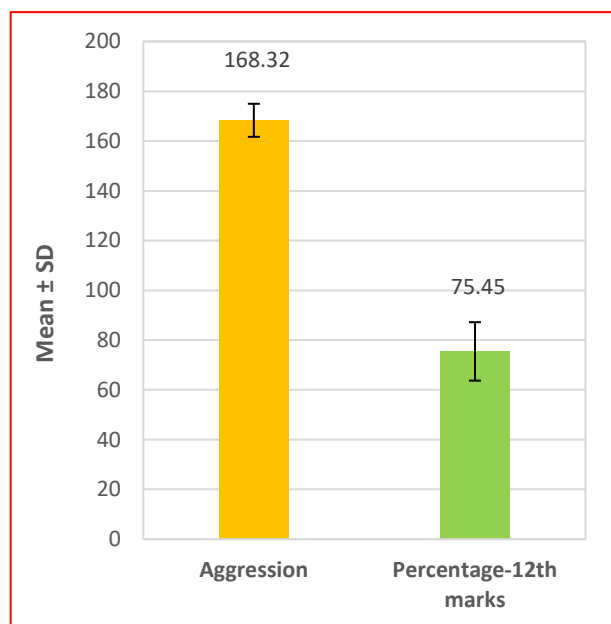
The coefficient of determination ($R^2 = 0.0101$) revealed that aggression accounted for only 1.01 percent of the variance in academic achievement. Thus, aggression had little or no effect on academic achievement in the case of rural arts boy students. The simple linear regression analysis yielded the following regression equation: Academic Achievement = $58.583 + 0.0136$ (Aggression)

The regression coefficient suggested that for each increase in the aggression score by one unit, academic achievement would increase by approximately 0.014 percentage points. suggests that Aggression explained only 1.01% of the variance in Academic Achievement. Urban Arts Boy students show a weak positive and statistically non-significant correlation between Aggression and Academic Achievement. Aggression was not significantly related to Academic performance in Urban Arts Boy students. So, the null hypothesis number 1b was There will be no significant relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in terms of their gender and locality. Similar findings have been found in the study conducted by JH Fowler, CD Kam (2007) there were no significant relationship on the basis of gender and locality as far as aggression is concerned.

The present study explored the association between aggression and academic achievement of urban arts boy students. Results showed a very weak positive correlation between aggression and academic achievement. The relationship was not statistically significant. This shows that aggression has no significant impact on academic performance in this group. The coefficient of determination showed that only .0101 percent of the variance in academic achievement was explained by aggression. These findings suggest that aggression has little explanatory power for students' differences in academic achievement.

The results suggest that other variables such as intelligence, study habits, academic motivation, parental involvement, socio-economic status and school environment are predominantly influencing academic achievement. Therefore, aggression is not a significant predictor of academic achievement of students of urban arts boy students.

1. To investigate the relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in terms of their gender and locality.



Stream : **Arts**
 Gender : **Girls**
 Locality : **Urban**
 N = 75

Figure 11: Graph showing mean values for Aggression and Academic achievements (Percentage 12th marks) of Urban Arts Girl students of Higher Secondary schools

TABLE 11 Pearson's Product Moment Correlation was computed to examine the relationship between aggression and academic achievement among urban arts girls students. The analysis showed a weak positive relationship between aggression and academic achievement ($r = 0.0658$).

Statistic (PPMCC), Regression analysis and t-test.		Value
N		75
SD (Aggression, Academic Achievement)		(6.64, 11.74)
r		0.0658
df		73
t-value		0.5632
p-value		0.5750 (> 0.05)
R ²		0.0043
Variance Explained		0.43%

The significance of the correlation was tested by t- test. T-value was calculated to be 0.8618 with 73 degrees of freedom. The p-value obtained was 0.5632 which was greater than the level of significance 0.05. The relationship between aggression and academic achievement was found to be statistically non-significant.

The coefficient of determination ($R^2 = 0.0043$) revealed that aggression explained only .43 percent of the variance in academic achievement. Thus aggression was found to have almost no effect on academic achievement of rural arts boy students.

The simple linear regression analysis yielded the following regression equation: Academic Achievement = 58.583 + 0.0136 (Aggression)

The regression coefficient indicated that for every one-unit increase in aggression score, academic achievement increased by about 0.014 percentage points. indicates that an Aggression accounted for 0.43% of the variance in Academic Achievement. There is a weak, positive and statistically insignificant relationship between Aggression and Academic Achievement of Urban Arts Girl students. Aggression did not have a significant effect on Academic Achievement for Urban Arts Girl students. Hence null hypothesis number 1b was there would be no significant relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in terms of their gender and locality. Similar results were found in the study conducted by K Yamasaki, N Nishida(2009) there was no significant relationship on the basis of gender and locality as far as aggression is concerned.

The current study examined the relationship between aggression and academic achievement in urban arts boy students. Results showed a very weak positive correlation between aggression and academic achievement. The correlation was not statistically significant, denote that aggression does not a meaningful effect on academic performance in his group. The coefficient of determination indicated that aggression could only account for 0.43 percent of the variance in academic achievement. It indicates that the contribution of aggression in explaining differences in students' academic performance is relatively small.

The results imply that other factors like intelligence, study habits, academic motivation, parental involvement, socioeconomic conditions, and school environment mainly impact academic achievement. Aggression is therefore not a significant predictor of academic achievement among urban arts girls students.

1. To investigate the relationship between **Academic Achievement and Aggression** of the **Arts** students of Senior Secondary level in terms of their gender and locality.

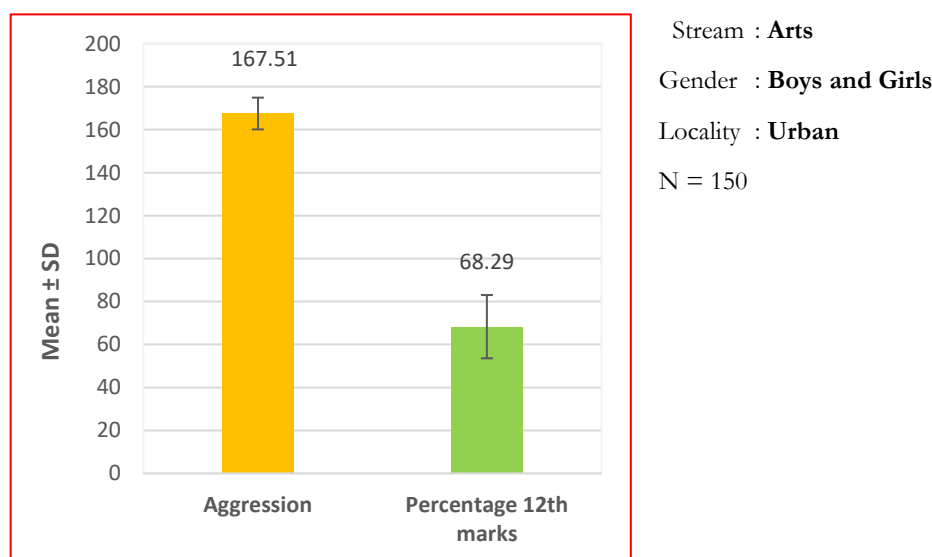


Figure 12. Graph showing the mean values for Aggression and Academic achievements (Percentage 12th marks) of Urban Arts Boy and Girl students together of Higher Secondary schools

TABLE 12 Pearson's Product Moment Correlation was calculated to investigate the relationship between aggression and academic achievement of urban arts students. The analysis showed that the correlation between aggression and academic achievement was weak and positive ($r = 0.129$).

Statistic (PPMCC), Regression analysis and t-test.	Value
N	150
SD (Aggression, Academic Achievement)	(7.39, 14.73)
r	0.1287
df	148
t-value	1.5784
p-value	0.1166 (>0.05)
R ²	0.0166
Variance Explained	1.66%

The significance of the correlation was assessed by a t test. The calculated t-value was 1.578 with degrees of freedom 148. The p-value obtained was 0.117 which was greater than the level of significance 0.05. Consequently, the relationship between aggression and academic achievement was found to be statistically non-significant.

The coefficient of determination ($R^2 = 0.0166$) showed that aggression explained about 1.66 percent of the variance in academic achievement. So, aggression explained a small percentage of the variance in academic achievement of urban arts students.

Simple linear regression analysis achieved a regression equation: Academic Achievement = 25.17 + 0.257 (Aggression). The regression coefficient showed that for every one unit increase in aggression score, academic achievement increased by 0.257 percentage points.

suggests that an Aggression explained only 1.66% of the variance in academic achievement. The study found a positive but statistically non-significant weak relationship between Aggression and Academic Achievement among students of Urban Arts Boy and Girl. Academic Achievement and Aggression among Urban Arts (Boys and Girls together) 0.039 0.070 Not significant Therefore, the null hypothesis No. 1b stated that there will be no significant relationship between Academic Achievement and Aggression of the Arts students of Senior secondary level in terms of their gender and locality.

Results: Objective 1 (1a), (1b).

- The findings of our study show that Aggression was not significantly related to academic achievement in any of the major student groups studied.
- Among the boy and girl (Gender) students of Science stream weak positive and negative correlations were observed and none of the obtained correlation coefficients was statistically significant at 0.05 level.
- Weak positive and negative correlations were found between boy and girl (Gender) students of Arts stream and none of the correlation coefficients obtained were significant at 0.05 level of statistical significance.
- Similarly, weak positive and negative correlations were found across rural and urban (Location) students of Science stream and none of the obtained correlation coefficients reached the \$0.05\$ level of statistical significance.
- Weak positive and negative correlations were found between rural and urban (Location) students of Arts stream. None of the correlation coefficient obtained was statistically significant at 0.05 level.

Therefore, our results concur with our hypothesis and the null hypothesis is accepted indicating that:

- There is no significant relationship between Academic Achievement and Aggression of the students of Senior Secondary level.
- 1(a). There is no significant relationship between Academic Achievement Aggression of the Science students of Senior Secondary level in terms of their gender and locality.
- 1(b). There is no significant relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in terms of their gender and locality.

CONCLUSION:

The findings of our study revealed that **Aggression was not significantly related to academic achievement among any of the major student groups investigated.** Weak positive and negative correlations were observed across boy and girl (Gender) students of Science and arts stream and none of the obtained correlation coefficients reached the 0.05 level of statistical significance. **Therefore, our results concur with our hypothesis and the null hypothesis is accepted indicating that:**

- 1 There is no significant relationship between Academic Achievement and Aggression of the Science students of Senior Secondary level in terms of their gender and locality.
2. There is no significant relationship between Academic Achievement and Aggression of the Arts students of Senior Secondary level in terms of their gender and locality.

REFERENCES:

- [1] Aggarwal, P., & Bihari, S. (2014). Aggression and Academic achievement of Secondary School Students. *Bhartiyam International Journal of Education & Research, A quarterly peer reviewed International Journal of Research & Education*, 4(1), 1-13.
- [2] C.L. Banga (2015). -Aggression of secondary school students in relation to their gender and type of school. *Scholarly Research Journal for Humanity Science & ... - academia.edu*.
- [3] Barati S, Nadary RY, BagheriM (2025) The Impact of Domestic Violence Against Men on Their Children's Social Adjustment, Aggression, and Mental Health: The Mediating Role of Fathers' Mental published online.
- [4] Chen D, sun H (2025) The dynamics from reactive aggression to proactive aggression among adolescents: A multilevel chain mediating model - Personality and Individual Differences, Volume 234, 112950
- [5] Evans SC, Frazer AL, Blossom JB (2019) Forms and function of aggression in early childhood. *Journal of Clinical Child & Adolescent Psychology* Volume 48, 2019 - Issue 5
- [6] Huesmann L. R. (1988). An information processing model for the development of aggression. *Aggressive Behavior*, 14, 13-24.
- [7] Lagerspetz, K.M.J. & Bjorkqvist, K. (1994). Indirect aggression in boys and girls. In *Aggressive Behavior; Current Perspectives* (R. Huesmann, ed.) pp. 131-146. Plenum Press, New York.
- [8] Moeller, T. G. (2001). *Youth aggression and violence: A psychological approach*. Mahwah, NJ. Lawrence Erlbaum Associates. Retrieved from <http://www.questia.com/read/106225815/youth-aggression-andviolence-a-psychological-approach>
- [9] Morrison, E. F. (1993). The measurement of aggression and violence in hospitalized psychiatric patients. *International Journal of Nursing Studies*, 30, 51-64.
- [10] PrescottA. T.SargentJ. D.HullJ. G. (2018). Metaanalysis of the relationship between violent video game play and physical aggression over time. *Proc. Natl. Acad. Sci.*115, 9882–9888. doi: 10.1073/pnas.1611617114.