

Influence of family environment on the academic achievement of senior secondary school students

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Abstract

This study looks at the connection between senior secondary students' academic performance and their household environment. Students' educational outcomes are greatly influenced by their family environment, which includes elements like parental support, socioeconomic position, family structure, and interpersonal interactions. Standardized questionnaires measuring academic performance and family environment were used to gather data from a sample of senior secondary students using a descriptive research methodology. The results show that higher academic accomplishment is significantly correlated with a favourable family environment, which is defined by emotional support, encouragement, and a supportive learning environment. On the other hand, poorer academic achievement was linked to elements including parental disengagement, financial instability, and family stress. The study underscores the importance of fostering a supportive family environment to enhance students' educational success and suggests interventions to assist families in creating an academically enriching atmosphere for their children.

Keywords: Academic achievement, family environment, senior secondary students

Introduction

One important predictor of students' learning outcomes and future success is their academic performance. Academic achievement becomes even more important at the senior school level since it influences job paths and prospects for further study. Although several factors affect students' academic performance, their motivation, cognitive growth, and overall educational attainment are significantly shaped by their familial environment (Jeynes, 2007; Epstein, 2011). A student's capacity to succeed academically is influenced by the family, which acts as the main socializing agent and offers emotional support, intellectual stimulation, and socioeconomic stability (Bradley & Corwyn, 2002). According to research, learning results are greatly impacted by parental participation, family income, parental education, and the emotional atmosphere at home (Deslandes & Bertrand, 2005). While a stressful or unsupportive home environment can result in poor motivation, poor focus, and academic underachievement, a supportive family environment promotes discipline, self-confidence, and a positive attitude toward school (Sirvani, 2007).

Even though the significance of family variables has been acknowledged, more research is still necessary, especially for senior secondary students who are under more academic pressure. With an emphasis on important elements including parental support, socioeconomic background, and home learning settings, this study attempts to investigate the connection between senior secondary students' academic accomplishment and their family environment. The results will advance our knowledge of how family dynamics affect academic achievement and could assist educators and decision-makers in creating focused interventions to assist students from a range of family types.

Family Environment

Although the importance of family factors has been recognized, further study is still required, particularly for senior secondary pupils who are subjected to greater academic demands. This study aims to explore the

relationship between senior secondary students' academic achievement and their family environment, with a focus on crucial components such as parental support, socioeconomic background, and home learning environments. Our understanding of how family dynamics impact academic achievement will grow as a result of the findings, which may also help educators and policymakers develop targeted interventions to support students from various family types.



A healthy family environment offers not only material resources but also psychological security, intellectual stimulation, and role modeling—all of which are essential for academic success, according to contemporary educational research (OECD, 2021). In assessing educational outcomes, it is now acknowledged that the standard socioeconomic indicators are just as significant as the quality of parent-child relationships, routine consistency, and the general emotional atmosphere. Three important indicators of academic success—motivation, self-control, and resilience—are fostered in a supportive home setting.

Review of Related Literature

The family environment continues to have an impact on students' academic performance, according to recent studies. Zhang and Li (2022) discovered that senior secondary students' performance during hybrid education was much enhanced by digital parental participation, or the monitoring

of online learning. Their research highlights how parenting responsibilities are changing in technologically advanced classrooms.

According to a 2023 meta-analysis by Gupta *et al.*, parental education is the best predictor of academic achievement in 15 developing countries, and family socioeconomic status (SES) explains 32% of the variation in academic results. This supports the OECD's (2021) conclusion that achievement inequalities were made worse by income loss brought on by the epidemic. Notably, Alam & Khan (2021) found that for Indian teenage learners, emotional assistance was more important than financial help. Despite financial obstacles, students who had strong family support performed 18% better on-board exams.

The "Family Academic Culture" construct was introduced by Chen *et al.* (2020) in a cross-cultural study, which showed that families that prioritize intellectual conversations improve critical thinking abilities more than those who only concentrate on grades. Last but not least, a Brazilian longitudinal study (Silva *et al.*, 2024) showed that regular family routines (such as mealtimes and sleep schedules) were associated with better STEM performance, indicating that non-academic family aspects are important.

These studies collectively underscore that modern family dynamics—digital mediation, emotional resilience, and structured home environments—are redefining traditional notions of academic support.

Statement of The Study

"Influence of Family Environment on the Academic Achievement of Senior Secondary School Students"

Operational definitions

Academic Achievement

Knowledge attained or skill developed in the school subjects, usually designated by test Scores or by marks assigned by teachers. In the present study percentage of marks obtained by the students in the matriculation examination was taken as the academic achievement.

Family Environment

The family environment is that social unit in which a child learns to adjust according to social Norms and accept

different social roles in the family environment.

Objectives

1. To find out the difference between the academic achievement of boys and girls.
2. To find out the difference between the family environment of boys and girls.
3. To find out the relationship between family environment and the academic achievement of Senior secondary students.

Hypothesis

1. There is no difference between the academic achievement of boys and girls.
2. There is no difference between the family environment of boys and girls.
3. There is no relationship between family environment and the academic achievement of Senior secondary students.

Sample

The sample of this study consists of 100 Secondary School students of Sonapat. 50 girls are selected and 50 boys are selected from the Senior Secondary School.

Tool will be used

The instruments employ a distinctive way of describing and quantifying the data. The Standardized test name "Family Environment SCALE" (FES) was developed by Dr Harpreet Bhatia.

Objectives: 1

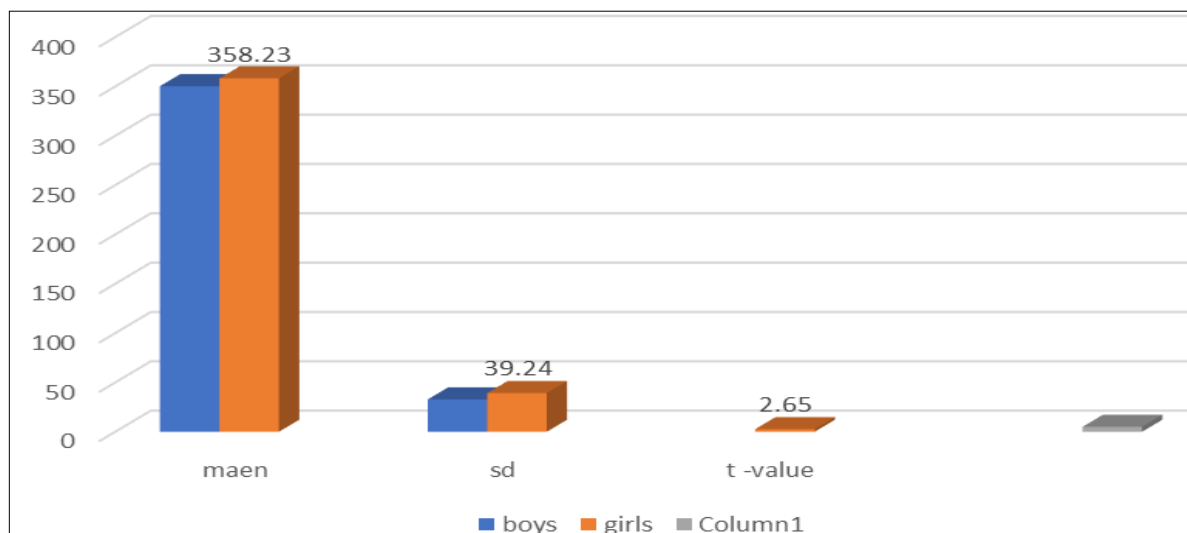
To find out the difference between the academic achievement of boys and girls.

Hypothesis: 1

There is no difference between the academic achievement of boys and girls.

Table: 1

Sr. No.	Group	N	Mean Scores	S.D's	t-value
Academic Achievement	Boys	50	350.28	32.77	2.65*
	Girls	50	358.23	39.24	



Interpretation: The sample consists of 100 students, with 50 boys and 50 girls. The mean academic achievement score for boys' students is 350.28 with a standard deviation (SD) of 32.77, while for girls' students, the mean score is 358.23 with an SD of 39.24. The computed t-value is 2.65.

This statistical classification shows a noticeable difference in the academic performance between the two gender groups. On average, female students have scored higher than boys. The higher mean value of 358.23 for girls indicates better academic achievement compared to their boys' counterparts. The standard deviation values suggest a slightly wider spread of scores among girls, indicating greater variability in their performance compared to boys. The t-value of 2.65 is significant at the 0.05 level, suggesting that the difference in mean scores between boys and girls' students is statistically significant. This means the observed difference is not due to chance, and there exists a

meaningful relationship between gender and academic achievement.

Objectives: 2

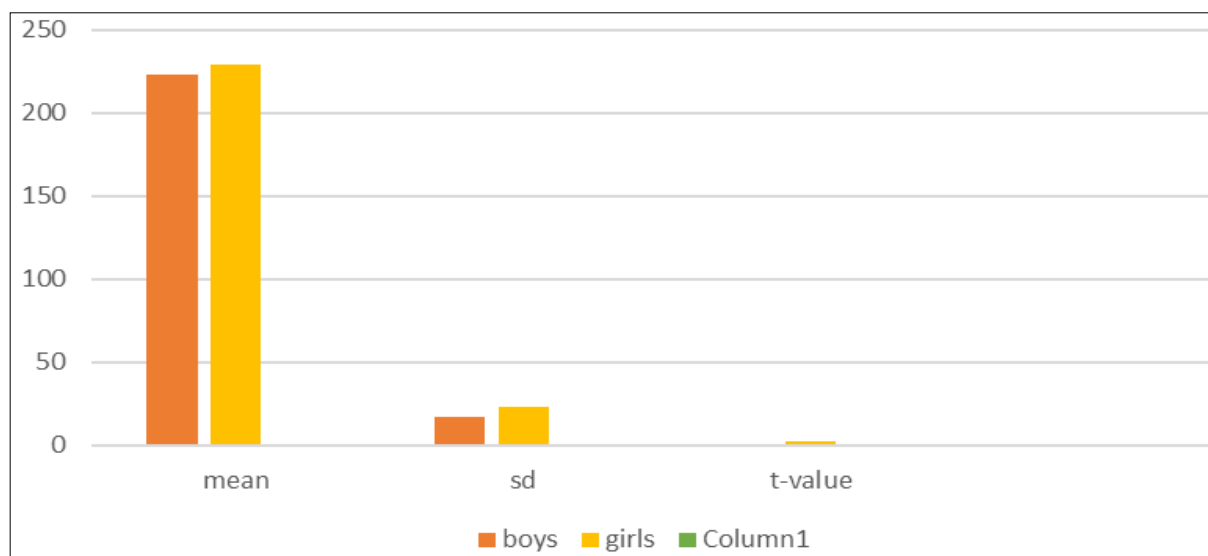
To find out the difference between the family environment of boys and girls.

Hypothesis: 2

There is no difference between the family environment academic achievement of boys and girls.

Table: 2

Sr. No.	Group	N	Mean Scores	S.D"s	t-value
Family Environment	Boys	50	223.22	17.23	2.711*
	Girls	50	229.24	23.34	



Interpretation: The table presents data on the family environment of senior secondary boys and girls, with 50 students in each group. The mean score for boys is 223.22 with a standard deviation (SD) of 17.23, while girls have a higher mean of 229.24 and an SD of 23.34. The calculated t-value is 2.711, which is statistically significant at the 0.05 level (*). This suggests a significant difference in the perceived family environment between the two groups. Girls report a more favourable or supportive family environment compared to boys. The higher mean and greater variability in girls' scores indicate that while many experiences strong family support, there is also a broader range of experiences among them.

The classification implies that girls generally perceive a better family environment, which could positively influence their emotional well-being, motivation, and ultimately, their academic achievement.

Objectives: 3

To find out the relationship between family environment and the academic achievement of senior secondary students.

Hypothesis: 3

There is no relationship between family environment and the academic achievement of senior secondary students.

Table: 3

Variable	N	Mean	S.D"s	Value of Correlation	Remark
Academic Achievement	100	349.96	36.90	-0.0708	Negative Correlation
Family Environment	100	249.79	23.61		

Interpretation

The table presents the statistical relationship between academic achievement and family environment among 100 senior secondary students. The mean academic achievement score is 349.96 with a standard deviation of 36.90, while the mean family environment score is 249.79 with an SD of 23.61. The calculated correlation value is -0.0708, indicating a negative correlation between the two variables. This result suggests that there is a very weak and inverse relationship between academic achievement and family environment. In other words, as the family environment score increases slightly, academic achievement tends to decrease very slightly, but the correlation is so minimal that it is not statistically significant or practically meaningful. Therefore, based on this data, family environment does not

appear to have a strong or direct impact on academic achievement in this sample. Other factors such as personal motivation, peer influence, or teaching quality may play more significant roles.

Conclusion

The present study aimed to explore gender differences in academic achievement and family environment, as well as the relationship between family environment and academic achievement among senior secondary students. The results revealed that girls outperformed boys in academic achievement, as indicated by a significantly higher mean score and a statistically significant t-value (2.65). Similarly, girls reported a more supportive family environment than boys, with a significant difference in the mean scores and a t-value of 2.711. However, when examining the relationship between family environment and academic achievement, a weak negative correlation (-0.0708) was found, indicating no significant relationship between the two variables. This suggests that while family environment may differ by gender, it does not strongly predict academic performance in this sample. The findings imply that other factors beyond family background—such as personal effort, school environment, and peer support—may play a more substantial role in shaping academic success at the senior secondary level.

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