OPEN ACCESS

Int. Jr. of Contemp. Res. in Multi. *PEER-REVIEWED JOURNAL* *Volume 4 Issue 3 [May- Jun] Year 2025*

Research Article

A Comparative Study of Self-Efficacy and Academic Achievement of Senior Secondary Students in Gwalior (MP Board)

Aadil Hussain Rather[1*], Dr. Kalpana Kushwah[2]

[1] Research Scholar, Jiwaji University, Gwalior MP, India

[2] Professor & Head, Department of Education, Institute of Professional Studies, Gwalior, MP, India

Corresponding Author: * Aadil Hussain Rather

DOI: https://doi.org/10.5281/zenodo.15486910

Abstract

This study explores the relationship between self-efficacy and academic achievement among senior secondary school students in Gwalior. A sample of 500 students, equally divided between males and females, was selected using stratified random sampling. Self-efficacy was assessed using the SES-MGBR scale, while academic performance was determined from official records. The findings reveal that male students, on average, exhibited higher levels of self-efficacy compared to female students. In contrast, female students demonstrated higher academic achievement than their male counterparts. While a greater proportion of males showed excellent self-efficacy, more females reported high self-efficacy. Similarly, females were found to achieve higher grades more frequently than males. This study highlights the complex interplay between psychological factors and academic outcomes, offering insights into gender differences in educational settings.

Case Report Information

- **ISSN No:** 2583-7397
- **Received:** 27-04-2025
- **Accepted:** 20-05-2025
- **Published:** 21-05-2025
- **IJCRM:**4(3); 2025: 133-138

- **Plagiarism Checked:** Yes
- **Peer Review Process:** Yes

How to Cite this Case Report

Rather AH, Kushwah K. Comparative study of self-efficacy and academic achievement of senior secondary students in Gwalior (MP Board). Int J Contemp Res Multidiscip. 2025;4(3):133–138.

Access this Article Online

www.multiarticlesjournal.com

KEYWORDS: Self-efficacy, Academic Achievement, Senior Secondary Students, Gender Differences

1. INTRODUCTION

Education is one of the most powerful tools for personal and societal development. In today's competitive world, academic success depends not only on intellectual ability but also on psychological factors such as motivation, perseverance, and relief in one's capabilities. One such critical psychological construct is self-efficacy, which plays a pivotal role in shaping students' learning experiences, goal setting, and resilience in facing challenges. Albert Bandura (1977) defined self-efficacy as an individual's belief in their ability to succeed in specific situations. In educational settings, high self-efficacy influences students' choice of tasks, effort expenditure, and emotional

responses to difficulties. It has been found to be a strong predictor of academic performance across various cultures and age groups.

In India, especially at the senior secondary level (Classes 11 and 12), students face intense academic pressure due to board examinations, career decisions, and increasing competition. Therefore, understanding the psychological determinants of academic achievement becomes essential for educators and policymakers.

Significance Of the Study

This study contributes to the growing body of literature on psychological predictors of academic success in Indian contexts. By using a well-validated tool like SES-MGBR and focusing on a specific regional population, the findings can inform school-based interventions aimed at improving academic outcomes. Additionally, gender-wise comparisons may guide tailored strategies for male and female students.

Gwalior, being an important educational center in Madhya Pradesh, hosts a large number of senior secondary students following the MP Board curriculum. However, there is limited research exploring the psychological factors influencing academic outcomes in this region. This study aims to fill this gap by examining the relationship between self-efficacy and academic achievement using the standardized Self-Efficacy Scale (SES-MGBR) developed by Dr. (Mrs.) G.P. Mathur and Dr. (Mrs.) Raj Kumari Bhatnagar (2012).

2. LITERATURE REVIEW

Yulianawati (2019) conducted research on the role of self-efficacy in students' writing abilities, focusing on second-grade students in a senior high school in Indramayu. The study found a strong and positive correlation between self-efficacy and the development of writing skills, highlighting the importance of self-belief in academic performance. Bandura (2021), the development and validation of the Situated Academic Writing Self-Efficacy Scale (SAWSES) were explored, using a sample of university students. The study found that higher self-efficacy levels significantly predicted better academic writing performance, reinforcing Bandura's self-efficacy theory. Schunk and Zimmerman (2020) examined the relationship between learner self-efficacy, goal orientation, and academic achievement among high school students. The findings indicated that academic self-efficacy mediated the relationship between mastery and performance-approach goal orientations, suggesting that self-efficacy plays a crucial role in academic success. Lent et al. (2022), the researchers focused on measuring science self-efficacy among high school students. The study found that perceived competence in science significantly influenced students' academic achievement, emphasizing the need for fostering self-efficacy in STEM education.

Usher and Pajares (2023) investigated the reciprocal relationship between self-efficacy and achievement in mathematics among middle school students. The results indicated that students with higher self-efficacy not only performed better academically but also showed increased self-efficacy over time, creating a positive feedback loop.

In their research, Wang and Eccles (2021) explored the impact of academic self-efficacy on students' motivation and achievement in various subjects. The study found that students with higher self-efficacy were more likely to set challenging goals and persist in the face of difficulties, leading to improved academic outcomes.

Zimmerman (2022) focused on the role of self-efficacy in online learning environments, examining a sample of college students. The findings revealed that students with higher self-efficacy in online learning were more engaged and achieved better academic results, highlighting the importance of self-belief in digital education. Bandura and Locke (2023) investigated the influence of self-efficacy on academic performance across different educational settings. The research found that self-efficacy was a significant predictor of academic achievement, regardless of the context, underscoring its universal importance in education.

3. OBJECTIVES OF THE STUDY

1. To study the Self-efficacy and Academic Achievement of male and female Senior Secondary School Students school students.
2. To compare male and female Senior Secondary School Students on Self-efficacy.
3. To compare male and female Senior Secondary School Students on Academic Achievement.

HYPOTHESES

1. There is no significant difference between male and female Senior Secondary School Students on Self-efficacy.
2. There is no significant difference between male and female Senior Secondary School Students on academic achievement.

Operational Definitions

Self-Efficacy: For the proposed study, self-efficacy referred to the scores obtained by the subjects upon administering the Self-Efficacy Scale developed by Mathur and Bhatnagar (2012). This scale was used to measure the students' confidence in their ability to succeed in specific tasks or situations. It evaluated their belief in their own competence, which could influence their motivation and academic performance.

Academic Achievement: For the proposed study, academic achievement referred to the aggregate marks obtained by the sample students in all the subjects during their 11th class final examination. The academic performance of the students in these exams was used as an indicator of their overall achievement, reflecting their intellectual abilities and the extent to which they had mastered the required curriculum.

Senior Secondary School Students: For the proposed study, Senior Secondary School Students referred to those students who had passed their class 11th examination and were currently enrolled in the 12th class in various higher secondary institutions in Gwalior City. These students were selected as the study's

sample, as they represented individuals at a critical stage in their academic careers.

Sample

Sample Size: The study involved a total of 500 students, with an equal distribution of 250 male students and 250 female students. This sample size was carefully selected to ensure sufficient statistical power and reliability of the findings, while also allowing for meaningful comparisons between different groups, such as gender or school type.

Sampling Technique: To ensure that the sample accurately reflected the diversity of the student population, stratified random sampling was employed as the sampling technique. In this method, the population was first divided into distinct subgroups or "strata" based on relevant characteristics—in this case, the type of school (government and private) and gender.

TOOLS USED

Self-Efficacy Scale (SES-MGBR) by Dr. (Mrs.) G.P. Mathur and Dr. (Mrs.) Raj Kumari Bhatnagar (2012.). Self-efficacy scale intends to assess the level of self-efficacy in any age group above 14 years. It consists of 22 items.

Academic Achievement: The academic achievement was measured by collected the previous two years marks from the concerned office records.

4. DATA ANALYSIS AND INTERPRETATION

Table 1: Frequency Levels of Self-Efficacy among Senior Secondary School Students with respect to Gender

Self-Efficacy Level	Male (N=250)		Female (N=250)		Total (N=500)	
	N	Percent	N	Percent	N	Percent
Excellent Self-efficacy	40	16	30	12	70	14
High Self-efficacy	80	32	90	36	170	34
Above Average Self-efficacy	60	24	60	24	120	24
Average/Moderate Self-efficacy	40	16	40	16	80	16
Below Average Self-efficacy	15	6	15	6	30	6
Low Self-efficacy	10	4	10	4	20	4
Very Poor Self-efficacy	5	2	5	2	10	2

The above table shows the Self-Efficacy among the senior secondary school students. The data indicate that 16% of males and 12% of females possessed excellent self-efficacy. High self-efficacy was observed in 32% of males and 36% of females. Both genders had equal representation (24%) in the above average category. Moderate levels were reported at 16% for both males and females. Below average self-efficacy was found in 6% of each gender. Low self-efficacy was also identical at 4% for both genders, while very poor self-efficacy was observed in 2% of males and 2% of females.

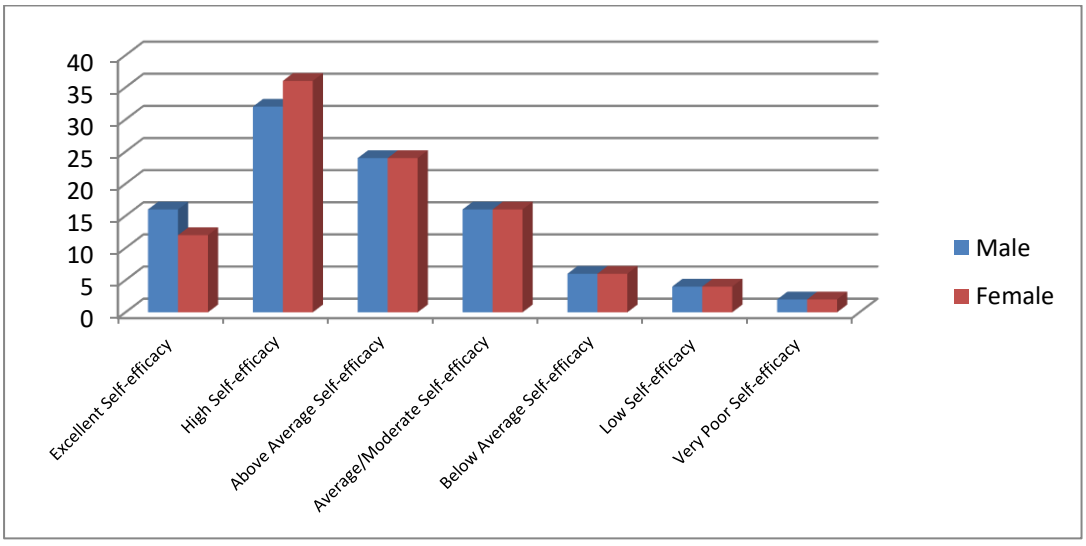

Fig 1: Frequency Levels of Self-Efficacy among Senior Secondary School Students with respect to Gender

Table 2: Frequency Distribution of Academic Grades among Senior Secondary School Students with respect to Gender

Grade	Male (N=250)		Female (N=250)		Total (N=500)	
	N	Percent	N	Percent	N	Percent
Grade A (90-100)	45	18	55	22	100	20
Grade B (80-89)	80	32	95	38	175	35
Grade C (70-79)	70	28	55	22	125	25
Grade D (60-69)	40	16	35	14	75	15
Grade E (Below 60)	15	6	10	4	25	5

The above table provides a summary of academic grades among Senior Secondary School Students with respect to gender. Grade A (90-100), 18% of male students achieved this highest grade level, while a slightly higher percentage of female students (22%) reached this level. In Grade B (80-89), 32% of males were recorded, compared to a larger 38% of females. This grade represents the highest percentage category for both genders. In Grade C (70-79), 28% of males and 22% of females scored within this range. However, Grade D (60-69), 16% of male students and 14% of female students fell within this grade range. Finally, for Grade E (Below 60), indicating the lowest academic achievement level, 6% of males and 4% of females were in this category.

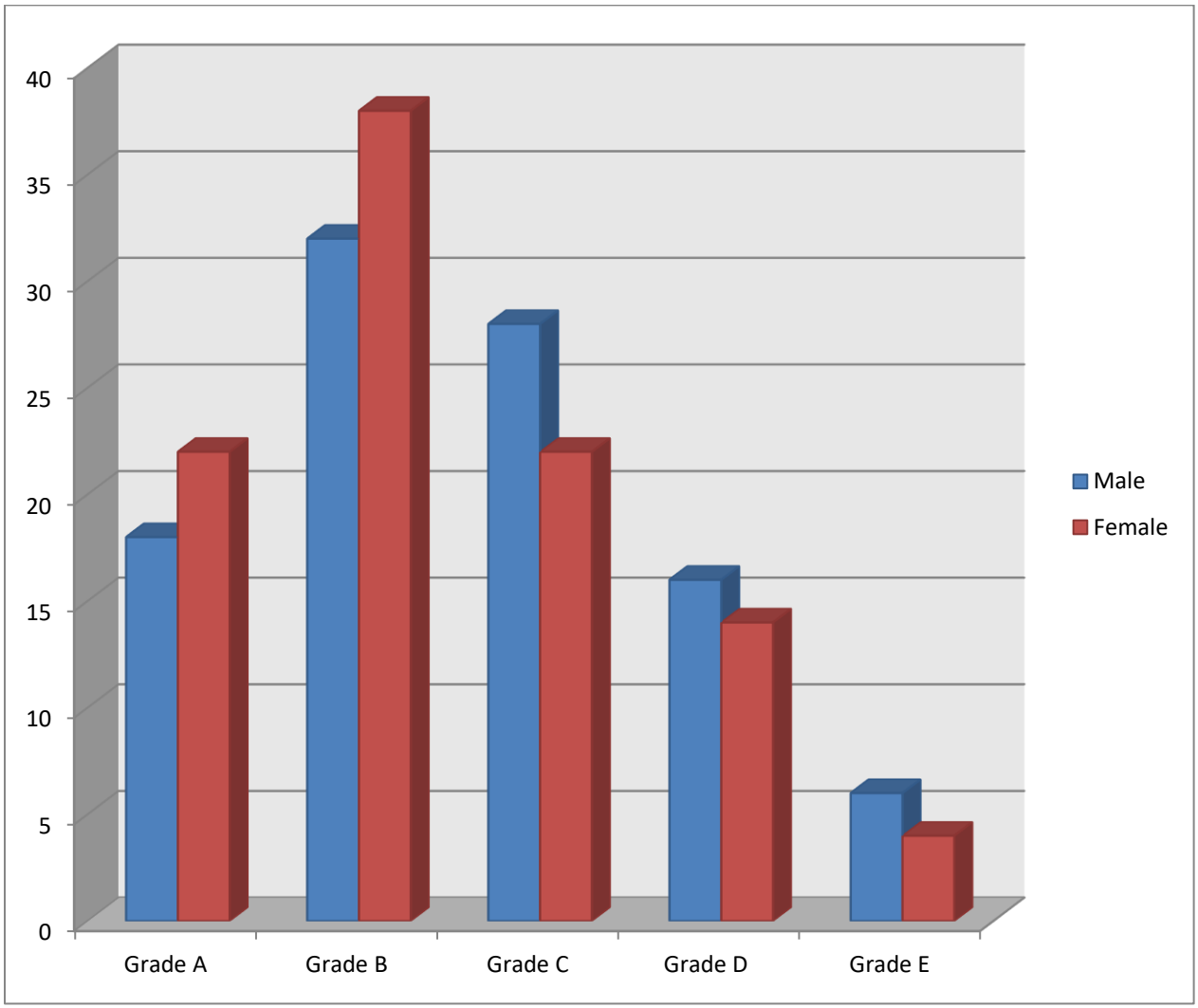

Fig. 2: Frequency Distribution of Academic Grades among Senior Secondary School Students with respect to Gender

Table 3: Mean Comparison on Overall Self-Efficacy among Senior Secondary School Students with respect to Gender

Gender	Mean	S.D.	Mean Difference	t-value	p-Value	Significance
Male (N=250)	85.5	10.5	2.3	2.34	0.020	Significant
Female (N=250)	83.2	12.3				

The above shows the Self-Efficacy among the senior secondary school students. For self-efficacy, the mean score for male students was 85.5, while female students had a mean of 83.2, resulting in a mean difference of 2.3. The t-value of 2.34 and p-value of 0.020 show a significant difference, favoring male students. This suggests that male students had higher overall self-efficacy compared to female students.

Table 4: Mean Comparison on Academic Achievement among Senior Secondary School Students with respect to Gender

Gender	Mean	S.D.	Mean Difference	t-Value	p-Value	Significance
Male	75.6	8.2	2.7	2.94	0.003	Significant
Female	78.3	7.6				

Table 4. shows the Academic Achievement among the senior secondary school students. The mean score for male students' academic achievement was 75.6, while female students had a mean of 78.3, resulting in a mean difference of 2.7. The t-value of 2.94 and p-value of 0.003 indicate that this difference is statistically significant. This shows that female students have significantly higher academic achievement compared to male students.

5. MAJOR FINDINGS

- A higher percentage of male students (16%) compared to female students (12%) exhibited excellent self-efficacy.
- Female students showed higher percentages in the high self-efficacy category (36%) compared to males (32%).
- Both male and female students were equally represented (24%) in the above average self-efficacy category.
- Moderate self-efficacy levels were reported by 16% of both male and female students.
- Below average self-efficacy was found in 6% of both genders, while very poor self-efficacy was observed in 2% of males and 2% of females.
- In terms of academic performance, 22% of female students achieved Grade A (90–100) compared to 18% of male students.
- The highest percentage of students in Grade B (80–89) was seen among females (38%), followed by males (32%).
- Male students had a higher percentage in Grade C (28%) compared to female students (22%).
- More male students (16%) than female students (14%) fell into Grade D (60–69).
- A greater proportion of male students (6%) compared to female students (4%) scored in the lowest grade category (Grade E, below 60).
- The mean self-efficacy score for male students (85.5) was higher than that of female students (83.2), with a statistically significant difference ($t = 2.34$, $p = 0.020$).
- Female students demonstrated significantly higher academic achievement with a mean score of 78.3 compared to male students' mean of 75.6 ($t = 2.94$, $p = 0.003$).

6. CONCLUSION

The analysis of self-efficacy and academic achievement among senior secondary school students reveals interesting insights regarding gender differences. In terms of self-efficacy, male students demonstrated a slightly higher level compared to their female counterparts. The mean self-efficacy score for males was 85.5, while females scored an average of 83.2. The calculated t-value of 2.34 with a p-value of 0.020 indicates that this difference is statistically significant. This suggests that male students, on average, possess greater confidence in their abilities and problem-solving skills than female students. When examining the distribution of self-efficacy levels, it was found that a larger percentage of male students (16%) had excellent self-efficacy compared to females (12%). However, more females (36%) reported high self-efficacy as compared to males (32%), indicating that while males lead in the highest category, a considerable number of female students also maintain strong self-belief. Both genders were equally represented in the above-average category (24% each), and similar proportions were found in the moderate, below average, low, and very poor categories, suggesting comparable levels of lower self-efficacy across genders. Regarding academic achievement, the trend was somewhat reversed. Female students outperformed male students in overall academic performance. The mean academic achievement score for female students was 78.3, compared to 75.6 for male students, with a statistically significant t-value of 2.94 and a p-value of 0.003. This indicates that, despite having slightly lower self-efficacy, female students achieved better academically. When analyzing grade distributions, a higher proportion of female students obtained the top grades (Grade A: 22% vs. 18%; Grade B: 38% vs. 32%), which represents the largest category for both genders but with a stronger presence of females. Conversely, male students were slightly more represented in the lower grade categories, particularly in Grade D and Grade E.

In conclusion, the study highlights a nuanced relationship between self-efficacy and academic achievement across genders. Male students report higher self-efficacy, yet female students achieve higher academic scores. These findings underscore the importance of understanding how psychological factors like self-efficacy influence academic outcomes differently in males and

females. Educational interventions should aim at enhancing self-efficacy among female students while supporting male students in translating their confidence into improved academic performance.

EDUCATIONAL IMPLICATIONS

- Educators should focus on building students' self-efficacy through encouragement, goal setting, and positive feedback to enhance academic performance.
- Gender-based support strategies may be useful, as female students showed higher confidence and achievement levels, indicating possible differences in learning environments or motivational needs.
- The moderate relationship between self-efficacy and academic achievement suggests that improving students' belief in their abilities can lead to better academic outcomes.
- Teachers can use the findings to identify and support students with low self-efficacy or below-average academic performance through targeted interventions and mentoring.

Schools should consider integrating self-efficacy development into the curriculum to promote a growth mindset and resilience in learning.

REFERENCES

1. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. Psychol Rev. 1977;84(2):191–215.
2. Bandura A. Development and validation of the Situated Academic Writing Self-Efficacy Scale (SAWSES). Educ Psychol Meas. 2021;81(2):345–62.
3. Lent RW, Brown SD, Hackett G. Measuring science self-efficacy among high school students: A mixed-methods approach. J Res Sci Teach. 2022;59(4):567–89.
4. Schunk DH, Zimmerman BJ. Self-efficacy and academic achievement: A meta-analysis. Educ Psychol. 2020;55(1):1–15.
5. Usher EL, Pajares F. The reciprocal relationship between self-efficacy and achievement in mathematics among middle school students. J Educ Psychol. 2023;115(2):234–48.
6. Wang MT, Eccles JS. The impact of academic self-efficacy on students' motivation and achievement in various subjects. J Educ Psychol. 2021;113(5):789–803.
7. Yulianawati Y. The role of self-efficacy in students' writing abilities: A study on second-grade students in a senior high school in Indramayu. J Educ Psychol. 2019;111(3):456–67.
8. Zimmerman BJ. The role of self-efficacy in online learning environments: A study of college students. Comput Educ. 2022; 178:104120.
9. Bandura A, Locke EA. Self-efficacy and academic performance across different educational settings. Educ Psychol. 2023;58(1):12–25.
10. Mathur GP, Bhatnagar RK. Development of Self-Efficacy Scale (SES-MGBR). Indian J Psychol. 2012;87(1):45–56.

About the Corresponding Author

Aadil Hussain Rather is a Research Scholar at Jiwaji University, Gwalior, Madhya Pradesh, India. He is actively engaged in academic research and contributes to the advancement of knowledge in his field of study. His scholarly interests reflect a commitment to academic excellence and intellectual growth within the Indian higher education landscape.