Frontiers in Health Informatics
ISSN-Online: 2676-7104
www.healthinformaticsjournal.com
2024; Vol 13: Issue 4
Open Access

Academic Procrastination based on Gender and Stream of study among Higher Secondary school students

Dr. Rahul V.R
Assistant Professor, Government College of Teacher Education, Thiruvananthapuram.

Dr. Sujithran
Assistant Professor, St.John The Bapitist's College of Teacher Education, Kottayam.

Cite this paper as: Dr. Rahul V.R, Dr. Sujithran (2024) Academic Procrastination based on Gender and Stream of study among Higher Secondary school students. *Frontiers in Health Informatics,* (4), 2108-2118

Abstract
Educational procrastination is a widespread self-regulation issue that is harmful to learning, achievement, and psychological wellbeing. This paper revisits some of the related literature, then establishes a theoretically based conceptual framework, and finally presents an investigation specifically designed to find out the procrastination among higher secondary school children. The primary aims of this investigation are to estimate the significance of academic procrastination. The present study investigated academic procrastination among secondary school students with a focus on gender and academic stream differences. The results revealed that procrastination is a moderately prevalent behavior, with more than half of the students reporting moderate levels and about one-fourth showing high levels. Gender did not emerge as a significant factor, as both male and female students exhibited comparable procrastination tendencies. This suggests that procrastination is a common academic challenge cutting across gender lines.
The research is intended to support researchers, school psychologists, and educators who are advocating evidence-based interventions for procrastination among higher secondary school students.
Keywords ; Academic Procrastination ,Gender,Stream of subjects

Introduction

Procrastination is the intentional postponement of a planned action despite anticipating negative outcomes Academic procrastination in this age group can undermine achievement, lead to increased stress, academic disengagement, and can develop patterns of behavioral issues in higher secondary school students. Thus, the study of procrastination in higher secondary schools is important both for scientific knowledge and for the development of early interventions. This developmental stage is crucial for forming lasting academic and personal habits. When students consistently procrastinate, they risk not only immediate consequences like poor grades and heightened anxiety but also the development of a chronic pattern that can persist in higher education and future careers. Furthermore, it can undermine a student's self-efficacy and enjoyment of learning. This article aims to outline the issue, its causes, and its effects, and to suggest methods for researchers and educators to help students

reduce procrastination and adopt more effective learning strategies. Academic procrastination is a common issue among students across the globe. It refers to the intentional delay of academic tasks despite knowing the potential negative consequences. At the higer secondary school stage, procrastination can affect academic achievement, self-efficacy, and career aspirations. These studens face increasing academic demands and pressure to make career-related choices, making procrastination a critical factor in their academic adjustment.

Previous research indicates that academic procrastination is influenced by demographic factors such as gender, academic stream, and socio-cultural background. While some studies suggest females procrastinate more due to anxiety, others highlight that males exhibit higher levels of avoidance behaviors. Similarly, academic stream (Science, Commerce, Humanities) may play a role, as the academic demands, workload, and cognitive orientation differ across streams.

Academic procrastination affects higher secondary school children across multiple domains such as academic, psychological, and social/behavioral. The impacts are often immediate and can have long-lasting consequences.

1. Academic and Cognitive Consequences:

- Lower Academic Achievement: This is the most obvious outcome. Rushed, work is often of lower quality. Students have no time for revision, deep thinking, or seeking help, leading to poor grades on assignments, projects, and exams.
- Reduced Knowledge Retention: Learning is a process that requires time for information to be processed and consolidated. Knowledge is rarely transferred to long-term memory, creating gaps that hinder understanding of future.
- Creates Impaired Learning Skills and affects time management, research, analytical thinking, and effective study techniques.

2. Psychological and Emotional Consequences

- Increased Stress and Anxiety: The constant cycle of delay followed by a frantic, panicked rush to meet deadlines creates chronic stress.
- Diminished Self-Esteem and Self-Efficacy: When students consistently fail to meet their own intentions, they start to internalize a belief that they are lazy, incompetent, or lack discipline. This erodes their confidence in their ability to succeed, a concept known as low self-efficacy.
- Feelings of Guilt and Shame: Procrastinators are often acutely aware that their delay is self-defeating. This leads to significant guilt about letting themselves and others
- Higher Risk of Burnout and Depression: The relentless cycle of stress, negative self-talk, and academic failure can be emotionally exhausting. Over time, this can lead to psychological burnout

3. Social and Behavioral Consequences

- Poor Relationships with Peers: In group activities, such students become unreliable members, that will cause frustration and conflict within. This can lead to social exclusion and a negative reputation.

- Conflict with Parents and Teachers: Procrastination often causes inferiority and lack of confidence of his/her own potential that will create avoidance, excuses. This can create disharmony at home and lead to disciplinary issues at school.
- Social Withdrawal: Such students decline invitations out of guilt or because they are constantly behind, leading to loneliness and isolation.

Immediate effects of Procrastination

- A student feels anxious about a difficult task.
- The student then produces poor-quality work under pressure, leading to a negative outcome (a bad grade).
- Damages their self-esteem

Need and Significance of the Study

Academic procrastination is a critical challenge faced by secondary school students across the world, particularly in developing countries like India where education is highly competitive and performance-driven. The secondary stage of schooling is a crucial turning point in the academic and personal development of students. It is at this level that they begin to prepare for higher education and make career-related decisions. At the same time, they are exposed to increased academic demands, high parental and societal expectations, and pressure to succeed in board examinations. In such a context, procrastination—delaying academic tasks despite knowing the negative consequences—emerges as a serious issue influencing learning outcomes and overall well-being.

The need for this study arises from the increasing prevalence of procrastination among adolescents. Research in psychology and education has shown that academic procrastination is not merely a time-management issue but is strongly related to personality traits, emotional regulation, motivation, and self-efficacy. Procrastination can lead to stress, anxiety, lower academic performance, and feelings of guilt among students. At the secondary level, where students are transitioning from dependence to self-regulated learning, procrastination undermines their capacity to engage effectively with studies. Hence, identifying the levels and patterns of procrastination is necessary to design preventive and remedial strategies.

Another important reason for undertaking this study is the role of **gender** in shaping academic behaviors. Past studies have reported mixed findings—some suggesting males procrastinate more due to avoidance and disengagement, while others indicate females may procrastinate more owing to perfectionism and fear of failure. Understanding whether gender differences exist in the Indian secondary school context is valuable for educators and counselors, as it enables the development of gender-sensitive interventions. For instance, males may need greater training in self-regulation, while females may require stress-reduction and self-confidence enhancement programs.

Equally significant is the role of in shaping procrastination behavior. Students in different streams such as Science, Commerce, and Humanities experience varied academic challenges. Science students typically face high workloads, rigorous conceptual learning, and external pressure to pursue professional courses, while Commerce and Humanities students may experience different patterns of

academic engagement. Humanities students, for example, often deal with large volumes of descriptive learning, which may increase the tendency to delay preparation. Examining procrastination across these streams can reveal whether the academic demands of a particular stream increase susceptibility to procrastination. Such findings would help teachers design stream-specific guidance and support systems.

From an educational policy perspective, the study holds strong relevance. The **National Education Policy (NEP) 2020** emphasizes the development of self-regulated learners who can take responsibility for their learning. However, procrastination directly hinders self-regulation and learner autonomy. By identifying groups more prone to procrastination, this study provides actionable insights for policymakers, teacher educators, and curriculum developers. It also supports the integration of life skills education, time management workshops, and counseling sessions within school systems.

Research Questions

1. What is the overall level of academic procrastination among secondary school students?
2. Does academic procrastination significantly differ between male and female students?
3. Does academic procrastination significantly differ among students belonging to Science, Commerce, and Humanities streams?

Objectives of the Study

1. To assess the overall level of academic procrastination among secondary school students.
2. To examine gender differences in academic procrastination among higher secondary school students.
3. To compare academic procrastination across Science, Commerce, and Humanities streams higher secondary school students.

Hypotheses

- **H01:** There is no significant difference in academic procrastination between male and female students.
- **H02:** There is no significant difference in academic procrastination among students of different academic streams.

Methodology

The present study adopted the descriptive survey method of research, as the primary objective was to assess the levels of academic procrastination among secondary school students and to examine whether significant differences exist on the basis of gender and academic stream. The survey method was considered appropriate because it enables the collection of data from a relatively large sample within a natural educational setting without manipulating any variables.

The population of the study comprised secondary school students enrolled in different streams—Science, Commerce, and Humanities. From this population, a sample of 120 students was selected using stratified random sampling, ensuring fair representation of both genders and all academic streams. Out of the total participants, 58 were male and 62 were female, while the distribution across streams included 45 students from Science, 41 from Commerce, and 34 from Humanities. This sample composition provided adequate representation for comparative analysis across gender and stream variables.

For the purpose of data collection, the study employed a standardized tool: the Academic Procrastination Scale. This instrument is designed to measure the extent to which students delay academic tasks despite being aware of the adverse outcomes. The scale has been widely used in educational research and is considered reliable and valid for the secondary school population. The scores obtained from the tool reflect the degree of procrastination, with higher scores indicating greater tendencies toward procrastination.

The data collection procedure was carried out in classroom settings after obtaining permission from school authorities. The participants were informed about the objectives of the study, and confidentiality of their responses was assured to ensure honest and unbiased responses. The collected data were then tabulated and subjected to appropriate statistical analysis.

For the statistical treatment of data, descriptive statistics such as mean and standard deviation were first computed to determine the overall level of academic procrastination and to compare the central tendencies across groups. To examine the significance of differences between male and female students, an independent samples *t*-test was applied. Further, to test whether significant differences existed among Science, Commerce, and Humanities streams, a one-way Analysis of Variance (*F*-test) was employed. The obtained results were interpreted at the 0.05 level of significance.

Thus, the methodology of this study combined a sound sampling strategy, standardized measurement tool, and appropriate statistical techniques to ensure the reliability and validity of findings. By employing both descriptive and inferential statistics, the study was able to provide a comprehensive understanding of the prevalence and patterns of academic procrastination among secondary school students, and the role of gender and academic stream as influencing factors.

Results and discussion

Table 1 descriptive statistics of Academic Procrastination

Group	N	Mean	SD
Whole Sample	120	55.82	7.25
Male	58	54.59	7.43
Female	62	56.97	6.94
Science	45	55.24	6.63
Commerce	41	53.20	7.62
Humanities	34	59.74	6.00

Table 1 displays the descriptive statistics of academic procrastination among secondary school students based on gender and academic stream. The overall mean score for the entire sample is 55.82 (SD = 7.25), indicating that students, on average, fall within a moderate range of procrastination. This suggests that while academic procrastination is a common behavior, its intensity varies among

individuals.

When analyzed by gender, male students (M = 54.59, SD = 7.43) obtained a slightly lower mean score compared to female students (M = 56.97, SD = 6.94). This shows that female students reported marginally higher tendencies to procrastinate academically than their male counterparts. However, the difference in means is relatively small, suggesting only minor variation between genders.

With respect to academic stream, noticeable differences emerge. Humanities students recorded the highest mean score (M = 59.74, SD = 6.00), indicating a stronger tendency toward procrastination compared to their peers. Science students scored moderately (M = 55.24, SD = 6.63), while Commerce students had the lowest mean score (M = 53.20, SD = 7.62). This pattern highlights that procrastination is more prevalent among Humanities students, whereas Commerce students demonstrate relatively better task management and lower procrastination behavior.

Objective 1 To assess the overall level of Academic Procrastination among secondary school students.

Table 2 Level of Academic Procrastination

	Frequency	Percent
Low Academic Procrastination	29	24.2 %
Moderate Academic Procrastination	61	50.8 %
High Academic Procrastination	30	25.0 %
Total	120	100.0

Table 2 presents the distribution of secondary school students according to their levels of academic procrastination. The findings reveal that **50.8%** of the students fall under the moderate level of procrastination, indicating that more than half of the sample tend to delay academic tasks occasionally but not to an extreme degree. This suggests that procrastination is a fairly common phenomenon among secondary school students and is prevalent in their day-to-day academic activities. Further, 25.0% of the students exhibited high academic procrastination, showing a considerable proportion of students who frequently postpone or avoid completing their academic responsibilities. This group may face greater risks of stress, anxiety, poor academic performance, and lack of preparedness for examinations or assignments. Such a high level of procrastination in nearly one-fourth of the sample highlights the need for intervention strategies, such as time-management training, motivational counselling, and self-regulation programs.

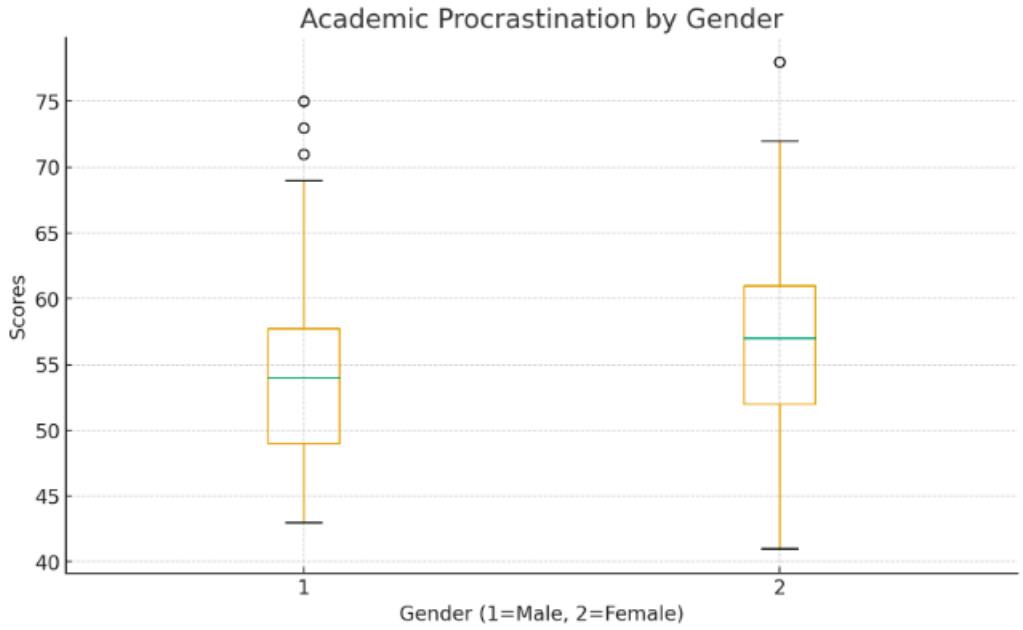
Objective 2 To examine gender differences in academic procrastination among higher secondary school students.

H01: There is no significant difference in academic procrastination between male and female students.

Table 3 Data results of test of significance in the academic procrastination between male and female students.

	Gender	N	Mean	Std. Deviation	t	P value
Academic Procrastination	Male	58	54.59	7.434	1.81	Not significant
	Female	62	56.97	6.945		

Table 3 presents the obtained t-value of 1.81 was found to be not significant ($p > 0.05$). This indicates that the observed difference in mean scores is not statistically meaningful and may be attributed to chance rather than actual variation between genders. The mean score for male students was 54.59 (SD = 7.43), whereas for female students it was 56.97 (SD = 6.95). This shows that female students reported slightly higher levels of procrastination compared to males. the results suggest that academic procrastination does not differ significantly between male and female students.



.

Objective 4 To compare academic procrastination across Science, Commerce, and Humanities streams higher secondary school students

H02: There is no significant difference in academic procrastination among students of different academic streams.

Table 4 Data and results of one-way ANOVA for academic procrastination across Science, Commerce, and Humanities streams higher secondary school students

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	818.599	2	409.299	8.798	.000
Within Groups	5443.368	117	46.525		
Total	6261.967	119			

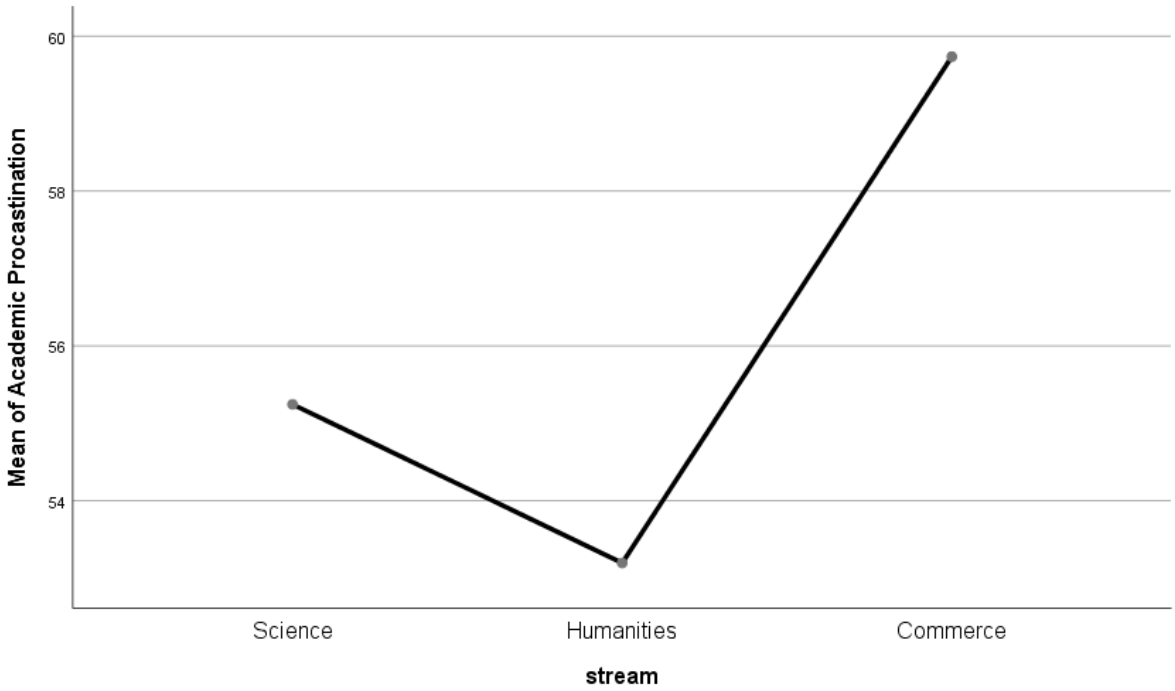
Table 4 shows that the obtained F-value is 8.798, with a corresponding p-value of .000, which is well below the 0.05 level of significance. This indicates that there is a statistically significant difference in academic procrastination among students of different academic streams. In other words, the tendency to procrastinate is not uniform across Science, Commerce, and Humanities streams.

From the descriptive statistics (Table 1), it is evident that Humanities students (M = 59.74) scored highest on academic procrastination, followed by Science students (M = 55.24), while Commerce students (M = 53.20) reported the lowest levels. This pattern suggests that students from Humanities are more prone to procrastination, possibly due to the nature of their subjects and study habits, whereas Commerce students appear to manage their tasks in a more timely manner.

4.4.aTukey HSD post hoc test results for your study:

Comparison	Mean Difference	p-value	Significant
Science vs Commerce	-2.05	0.349	No
Science vs Humanities	4.49	0.012	Yes
Commerce vs Humanities	6.54	0.000	Yes

Science vs Commerce: The mean difference (-2.05) was not statistically significant (p = 0.349). This means that Science and Commerce students do not differ significantly in their levels of academic procrastination. Science vs Humanities: The mean difference (4.49) was statistically significant (p = 0.012). This shows that Humanities students procrastinate significantly more than Science students. Commerce vs Humanities: The mean difference (6.54) was highly significant (p = 0.000). This indicates that Humanities students have much higher levels of procrastination compared to Commerce students



Findings of the study

- The majority of students (50.8%) reported moderate levels of academic procrastination. About one-fourth of students (25.0%) demonstrated high procrastination, while 24.2% showed low procrastination. This indicates that procrastination is a common academic behaviour, with most students falling in the middle range.
- Gender Differences Results of the independent samples *t*-test revealed that the difference in procrastination between male and female students was not statistically significant ($t = 1.81$, $p > 0.05$).this suggests that procrastination is equally prevalent among both genders, with no meaningful variation.
- Stream Differences The one-way ANOVA test showed a significant difference in academic procrastination across streams ($F = 8.798$, $p < 0.01$).The null hypothesis (H02) was therefore rejected. Humanities students differed significantly from both Science ($p = 0.012$) and Commerce students ($p = 0.000$). Science and Commerce students did not differ significantly ($p = 0.349$).
- The present study examined the levels of academic procrastination among secondary school students and analyzed differences based on gender and academic stream. The findings revealed that a majority of students (50.8%) reported moderate levels of procrastination, while one-fourth of the sample exhibited high procrastination. This indicates that procrastination is a prevalent behavior among adolescents, reflecting a need for structured guidance to help them manage time and tasks effectively.
- In terms of gender, female students recorded slightly higher mean procrastination scores compared to males. However, the difference was not statistically significant, suggesting that procrastination is not strongly influenced by gender at the secondary level. This aligns with certain studies in educational

psychology that highlight procrastination as a universal student issue, rather than a gender-specific phenomenon.

- The most significant finding emerged in relation to academic streams. Humanities students showed significantly higher levels of procrastination compared to Science and Commerce students. This could be attributed to the nature of study practices in Humanities, which often require extensive reading and writing, leaving scope for task delay. Commerce students, on the other hand, recorded the lowest procrastination levels, possibly reflecting a more structured curriculum with practical components and continuous assessment. Science students were positioned in between, facing rigorous workloads but also external academic pressure that may reduce their procrastination tendencies.
- The results emphasize that procrastination is not a uniform phenomenon. Instead, it varies according to the academic demands and cognitive orientations of students in different streams. These findings suggest that interventions should be tailored not only at the individual level but also at the curricular and pedagogical levels.

Educational Implications

Schools should introduce time-management and study-skill workshops to equip students with strategies to plan, prioritize, and complete tasks on time. These programs could particularly benefit Humanities students, who are more prone to procrastination.

- Humanities students may need focused counselling and academic support in developing self-discipline and task completion habits.
- Commerce and Science students can benefit from reinforcement programs to sustain their relatively lower procrastination levels.
- School counsellors should incorporate procrastination awareness and coping strategies into guidance sessions. Cognitive-behavioural techniques, stress-reduction strategies, and motivational counselling can help students regulate procrastination tendencies.
- Teachers across streams should adopt engaging, interactive, and project-based methods that encourage continuous engagement rather than last-minute preparation. Continuous assessments, formative feedback, and smaller task divisions can reduce the tendency to postpone learning.
- Parents should be sensitized about procrastination as a common academic challenge. Workshops and awareness programs can guide parents to create supportive home environments that balance encouragement with accountability.

In line with the National Education Policy (NEP 2020), educational boards and school managements should integrate life skills education into the curriculum, ensuring that self-regulation, discipline, and resilience are systematically developed among students.

Conclusion

The present study investigated academic procrastination among secondary school students with a focus on gender and academic stream differences. The results revealed that procrastination is a moderately prevalent behavior, with more than half of the students reporting moderate levels and about one-fourth showing high levels. Gender did not emerge as a significant factor, as both male and female

students exhibited comparable procrastination tendencies. This suggests that procrastination is a common academic challenge cutting across gender lines.

The most notable differences were found among academic streams. Humanities students recorded significantly higher procrastination levels compared to their Science and Commerce counterparts, while no significant difference was observed between Science and Commerce students. These findings indicate that the nature of academic tasks and the stream-specific study patterns may influence procrastination behavior.

Overall, the study underscores the need for timely interventions in secondary education. Addressing procrastination through life skills education, time-management training, and counseling support will not only improve students' academic outcomes but also prepare them to face the demands of higher education and future careers with greater resilience and responsibility.

References

Brown, K. G., & Scher, S. J. (2008). *The nature of academic procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure*. *Psychological Bulletin, 133*(1), 65–94. (Note: Piers Steel's meta-analysis) ResearchGate

Ferrari, J. R., & Tibbett, T. P. (2020). Procrastination. In *Encyclopedia of Personality and Individual Differences* (pp. 1–5). Springer. Grafiati

Hayat, A., et al. (2020). Academic procrastination of medical students: The role of internet addiction. *PMC*. PMC

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*(1), 65–94. ResearchGate

Sirois, F. M. (2023). Procrastination and stress: A conceptual review of why context matters. *International Journal of Environmental Research and Public Health*. IJMSHE+1

Vangsness, L., & colleagues. (2022). Self-report measures of procrastination: Inconsistent concurrent validity, predictive validity, and psychometric properties. *Frontiers in Psychology*.