



# Determinants Of Academic Procrastination Among Nursing Students: The Role Of Time Management, Self-Esteem And Psychological Flexibility

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## Abstract

**Background:** Academic procrastination is a common issue among students, marked by the deliberate postponement of academic responsibilities despite awareness of possible negative outcomes. This behaviour has received considerable focus on educational psychology because it impacts students' academic success, mental health and overall satisfaction.

**Objective:** This study investigates the prevalence and determinants of academic procrastination among nursing students.

**Methodology:** A quantitative descriptive study was conducted with 1027 students from six nursing colleges in Punjab, India between August to September, 2023. The study employed the Procrastination Assessment Scale for students, the Student Time Management Scale, Acceptance and Action Questionnaire-II and Rosenberg self-esteem scale. Multiple regression analysis was performed to identify the relationship between academic procrastination and key predictors like time management, self-esteem and psychological flexibility.

**Results:** The results revealed that 21.4% of nursing students engage in procrastination with poor time management and low self-esteem being significant predictors. Students with better time management and higher self-esteem demonstrated lower levels of procrastination.

**Conclusion:** The study concludes that time management and self-esteem are critical in reducing procrastination behaviors among nursing students. Therefore, implementing strategies aimed at improving these areas could effectively reduce procrastination, leading to better academic outcomes and improved mental well-being among nursing students.

**Keywords:** Acceptance and commitment therapy, academic procrastination, time management, psychological flexibility and nursing students

## Introduction

Procrastination is a common and persistent behaviour which is found in different areas of human activity. It is related to deliberate delay in completing the tasks until the deadlines. It is assumed that every individual procrastinates some or other activities like exercising, medical appointments but it becomes problematic when it occurs on a regular basis.(1)It leads to negative consequences in the frequent users and may also affect others especially in collaborative learning. Procrastination encompasses various components like behavioral, emotional and cognitive. The common factors related to procrastination are fear of failure, avoidance behaviour, parenting styles, fear of success, failure of self-regulation or control and is associated with the reduced self-efficacy.(2)(3)

Procrastination is explained as a conflict between the limbic system which processes emotions (pleasure centre) and the prefrontal cortex (internal planner). Emotions constitute a dominant reason for procrastination. Negative emotions like anxiety, fear of failure is often linked with procrastination which in turns leads to the activation of amygdala and a concern to regulate the mood. Immediate mood regulation leads to the engagement of individual in mood boosting activities inspite of focusing on the desired task.(4) Research highlights the need for paying attention to emotions particularly at school or college.(5)

Academic procrastination is a domain-specific behaviour which is related to delay in the academic tasks like completing assignments, studying for the exams, and writing term papers despite of knowing the exact deadline



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for their completion. Estimated prevalence of academic procrastination is 80% among the college students, ranging from 10%-70%.(6)(7)(8)(9) New technology also played a pivotal role in academic procrastination. It is related to higher usage of electronic media like watching TV, internet surfing, playing video games. There is a strong association of academic procrastination and smartphone addiction. Moreover, COVID-19 pandemic has brought alteration in the teaching-learning activities through the shift to online learning. Students experience procrastination during the online learning as they spend much of their time on internet. Academic procrastination has attracted many researchers due to the extended period of confinement caused by COVID-19 pandemic. During and after this period significant increase in the academic procrastination among the students has been observed due to increased stress, decreased face-to-face interaction between students and instructors. COVID-19 had brought long lasting impact on academic procrastination as students faced difficulties in time management and reduce motivation. (10)(11)

Academic procrastination is commonly associated with less dedication in learning, poor achievement of learning objectives, task aversion, task difficulty and less attractive teacher characteristics. Students who procrastinate they faces negative consequences, it may negative affect like stress, anxiety, depression and impairment of physical health. It can lead to detrimental effect on academic performance, mental well-being and overall success of the students. Procrastination is also related to low self-esteem as the students who fails to meet the deadlines, develop feeling of inadequacy or guilt which can impact their self-worth.(12)(13)(14)

Research indicated that academic procrastination is pronounced among the nursing students which can be due to demanding nature of nursing education marked by clinical responsibilities and high-stakes assessments. Approximately 60% of nursing students procrastinates which can affect their professional performance and workforce readiness. (15)(16)The attributes related to the increased prevalence of procrastination in nursing students can be related to multiple factors like heavy workload, external distractions and demanding nature of nursing programs including coursework, clinical postings and practical examinations. This behavioral tendency among nursing students can compromise their clinical competence and may affect the patient care and safety. Thus, reduction in procrastinatory behaviour would likely to support students in their academic achievement. Students who have psychological flexibility are able to manage their time, able to handle stress and are able to complete their task constructively. (17)

The understanding of the interrelationships among academic procrastination, self-esteem, time management, psychological flexibility suggests that it not only affects academic success but also poses challenges to physical and psychological health. The cycle of procrastination can be halted by addressing the strategies to improve self-esteem, psychological flexibility and stress management strategies, which further can foster resilience and improve their academic outcomes. (18) (19) (20) (21)

Therefore, the research was undertaken to determine the relationship between academic procrastination with self-esteem, psychological flexibility and time management among nursing students. The study hypothesize that there will be significant relationship between academic procrastination, time management, self esteem, psychological flexibility among the nursing students at 0.05 level of significance.

### Materials and methods

**Research Approach:** Quantitative research approach with a descriptive design was employed in the present study. The study was conducted at six private nursing colleges under Baba Farid University of Health Sciences of Punjab, India.

**Participants:** Sample size for the study was calculated based on 5% type I error level, anticipating a 27% prevalence of academic procrastination among college students, along with a precision level of 5%, which led to a total sample size of 1027.

From August to September 2023, 1027 students from six nursing colleges of Punjab, India were recruited to screen for academic procrastination. Participants selection was based on the minimum score of 48 on the academic procrastination scale and those who demonstrated willingness to participate in the study. Students who were on any psychotherapy or psychotropic drugs were excluded from the study.

**Instruments:** Academic procrastination was measured by Procrastination Assessment Scale-students (Solomon and Rothblum, 1984)(22). The scale consists of two parts: the first assesses the frequency of academic procrastination while the second explores the reasons behind it.

Student time management scale was used to measure the time management skills of students(23). Higher the score, more are the time management skills. Students' psychological flexibility was measured by Acceptance and action questionnaire-II (AAQ-II)(24). Higher the score, more is the psychological inflexibility and lesser score means more psychological flexibility.



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The Rosenberg self-esteem scale assessed the students' self-esteem which has score range of 10-40. A score of less than 25 indicates low self-esteem.

Demographic characteristics comprised of age, gender, year of study, program name, place of residence, birth order, academic grade. Life style habits like ongoing substance use, hours of mobile usage, playing online video games, part-time work, frequency of internet use and access to social media platform were also taken into consideration.

**Ethical considerations:** Ethical clearance had been obtained from institution ethics committee (IHEC/DHR/CU/PB/22/112 dated 16/11/2022) and formal administrative approvals were taken from principals of nursing colleges. Permission has been obtained from the original authors to use the instruments. Participants informed written consent was taken after giving the complete information about the study and assurance was made about their confidentiality and anonymity.

**Data Analysis:** Analysis of the data was done using the statistical analysis software SPSS 24 version. Data was reviewed for outliers and missing values. Multiple regression analysis was done to find relation between academic procrastination, time management, psychological flexibility and self-esteem. The significance level for all tests was established at  $p < 0.05$ .

## Results

### Characteristics of participants

In the present study, among 1027 nursing students 220 (21.4%) were having academic procrastination. Among 220 nursing students, most of them 163 (74.09%) were between the ages of 18-21 years with dominance of females 164 (74.5%), majority 116 (98.2%) of them were from B.Sc. Nursing (Basic) program, 87 (39.5%) were from 2<sup>nd</sup> year of study, 114 (51.8%) were living in their homes, 119 (54.1%) were of 1<sup>st</sup> birth order and 92 (41.8%) were having academic grade between 70%-79%. In terms of lifestyle habits majority of students 213 (96.8%) were not misusing any substance, 85 (38.7%) of them use mobile for 3-5 hours/day, 178 (81%) of them don't play online video games, 117 (53.2%) use internet for more than 5 hours and all the students access social media platform (table 1)

**Table 1: Frequency and Percentage of characteristics of nursing students**  
N=220

Characteristics	f	%
<b>Demographic characteristics</b>		
<b>1.Age (in years)</b>		
a. 18-21	163	74.09
b. 22-25	57	25.91
<b>2.Gender</b>		
a. Female	164	74.5
b. Male	56	25.5
<b>3.Program Name</b>		
a. B.Sc. Nursing (Basic)	116	98.2
b. B.Sc. Nursing (Post Basic)	04	1.8
<b>4.Year of study</b>		
a. 1st Year	42	19.2
b. 2nd Year	87	39.5
c 3 <sup>rd</sup> Year	61	27.7
d 4th Year	30	13.6
<b>5.Place of residence</b>		
a Hostel	102	46.4
b Home	114	51.8
c P.G.	-	-
d Rented Accommodation	04	1.8
<b>6. Birth Order</b>		
a. 1 <sup>st</sup>	119	54.1
b. 2 <sup>nd</sup>	69	31.4



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c.3 <sup>rd</sup>	21	9.5	
d. 4 <sup>th</sup> & above	11	5.0	
<b>7. Academic grade</b>			
a. <50%	-	-	
b. 50-60 %	15	6.9	
c. 60-69%	85	38.6	
d. 70-79%	92	41.8	
e. 80-89%	28	12.7	
<b>Lifestyle habits</b>			
<b>8. Ongoing substance use</b>			
a. Yes	07	3.2	
b. No	213	96.8	
<b>9. Hours of mobile usage per day</b>			
a) < 3 hours	81		36.8
b) 3-5 hours	85	38.7	
c) > 5 hours	54	24.5	
<b>10. Do you play online video games?</b>			
a) No	178	81	
b) Yes	42	19	
<b>11. Are you working part-time after college hours?</b>			
a) No	213	96.8	
b) Yes	07	3.2	
<b>12. Frequency of internet use per day (in hours)</b>			
a) < 5	117	53.2	
b) >5	103	46.8	
<b>13. Do you access social media platform?</b>			
a) No	00	-	
b) Yes	220	100	

The frequency and percentage distribution in accordance with the areas of procrastination, for studying in exams, 59.6% of nursing students procrastinate 'nearly always', for writing a term paper, 49.1 % of nursing students report 'nearly always' procrastination. When it comes to weekly reading assignments, 45.9% of them procrastinate 'nearly always'. In academic administrative tasks like filling out forms or registering for classes, 52.6 % procrastinate 'nearly always'. For attendance tasks such as meetings or appointments, 47.3% procrastinate 'always'. For school activities in general, 69.1% of nursing students procrastinate 'sometime', while 61.9% find procrastination 'nearly always' problematic. (table 2)

**Table 2: Frequency and percentage distribution in accordance with areas of procrastination N=220**

S. No	Questions	Never f (%)	Almost Never f (%)	Sometime s f (%)	Nearly Always f (%)	Always f (%)
I.	<b>Studying for exams</b>					
	To what degree do you procrastinate on this task?	0	02 (0.9)	41 (18.6)	131 (59.6)	46 (20.9)
	To what degree is procrastination on this task a problem for you?	0	01 (0.5)	31 (14.1)	140 (63.6)	48 (21.8)
II.	<b>Writing a term paper</b>					
	To what degree do you procrastinate on this task?	0	04 (1.8)	19 (8.6)	108 (49.1)	89 (40.5)



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	To what degree is procrastination on this task a problem for you?	0	0	38 (17.3)	122 (55.4)	60 (27.3)
<b>III</b>	<b>Keeping up with weekly reading assignments</b>					
	To what degree do you procrastinate on this task?	0	14 (6.4)	43 (19.5)	101 (45.9)	62 (28.2)
	To what degree is procrastination on this task a problem for you?	0	05 (2.3)	21 (9.5)	130 (59.1)	64 (29.1)
<b>IV.</b>	<b>Academic administrative tasks: filling out forms, registering for classes, getting Id card</b>					
	To what degree do you procrastinate on this task?	0	01 (0.5)	58 (26.4)	116 (52.6)	45 (20.5)
	To what degree is procrastination on this task a problem for you?	0	01 (0.5)	15 (6.8)	124 (56.3)	80 (36.4)
<b>V.</b>	<b>Attendance tasks: meeting with your advisor, making an appointment with a professor</b>					
	To what degree do you procrastinate on this task?	01 (0.5)	0	32 (14.5)	83 (37.7)	104 (47.3)
	To what degree is procrastination on this task a problem for you?	00	01 (0.5)	34 (15.5)	136 (61.8)	49 (22.3)
<b>VI</b>	<b>School activities in general</b>					
	To what degree do you procrastinate on this task?	0	01 (0.5)	26 (11.8)	152 (69.1)	41 (18.6)
	To what degree is procrastination on this task a problem for you?	11 (05)	06 (2.7)	12 (5.4)	136 (61.9)	55 (25)

The multiple regression analysis with 220 participants examined the relationship between academic procrastination and various predictors including the aversiveness of tasks, poor time management, lack of sincerity and lack of personal initiative. The model has a significant  $R^2$  value of 0.785, indicating that approximately 78.5% of the variability in academic procrastination is explained by the predictors. Among the predictors, aversiveness of the task ( $\beta = 0.515$ ,  $p < 0.001$ ), poor time management ( $\beta = 0.327$ ,  $p < 0.001$ ) and lack of personal initiative ( $\beta = 0.278$ ,  $p < 0.001$ ) significantly contribute to academic procrastination while lack of sincerity shows no significant effect ( $p = 0.150$ ) (table 3)

**Table 3: Multiple linear regression analysis between academic procrastination and reasons of procrastination in nursing students**

	$R^2$	Adjusted $R^2$	Unstandardized Coefficient B	Standard error	Standardized coefficient Beta	t- stat	P value
Constant			1.832	0.785		1.204	0.149
Aversiveness of the task	0.785	0.795	0.337	0.048	0.515	7.827	0.001



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Poor time management	0.184	0.44	0.327	5.624	0.001
Lack of Sincerity	0.205	0.314	0.475	1.322	0.150
Lack of personal Initiative	0.394	0.64	0.278	6.624	0.000

Correlation coefficient between academic procrastination, self-esteem, psychological flexibility and time management of 200 students depicts that there was weak statistically inverse relationship between academic procrastination and self-esteem ( $r = -0.391$   $p=0.04$ ), weak negative correlation was found between academic procrastination and time management ( $r = -0.353$ ,  $p=0.04$ ). These findings revealed that higher procrastination is related to lower self-esteem and poor time management. (table 4)

**Table 4 -Correlation between academic procrastination, time management, self-esteem and psychological flexibility in nursing students N=220**

	Academic procrastination	Self-esteem	Psychological flexibility	Time management
Academic procrastination	1	-	-	-
Self-esteem	<b>-0.391(0.04)</b>	1	-	-
Psychological flexibility	- 0.473 (0.06)	-0.009 (0.471)	1	-
Time management	<b>-0.353 (0.04)</b>	<b>0.627 (0.02)</b>	-0.20 (0.834)	1

The multiple regression analysis examined the relationship between academic procrastination (dependent variable) and predictors: time management, self-esteem and psychological flexibility. The model explained that 29.7 % of the variance in academic procrastination ( $R^2 = 0.297$ ) with a significant F change ( $F=48.57$ ,  $p<0.001$ ). Time management ( $\beta = 0.387$ ,  $p=0.000$ ) and self-esteem ( $\beta = 0.415$ ,  $p=0.000$ ) are significant predictors, showing better time management and higher self-esteem reduce procrastination. Psychological flexibility, however is not a significant predictor ( $p=0.94$ ) of academic procrastination. The model suggested that time management and self-esteem are key factors in managing academic procrastination (table 5).

**Table 5: Multiple regression analysis of relationship between academic procrastination, time management, self-esteem and psychological flexibility N=220**

	$R^2$	Adjusted $R^2$	Unstandardized Coefficient B	Standard error	Standardized coefficient Beta	t- stat	P value
(Constant)			2.56	1.863		4.628	0.00
Time management	0.297	0.375	-0.473	0.104	0.387	-6.320	0.000
Self-esteem			-0.305	0.272	0.415	-5.781	0.000
Psychological flexibility			0.065	0.047	0.047	1.281	0.94

### Discussion

The findings of this study revealed a significant prevalence of academic procrastination among nursing students, with 21.4% of the sample reporting such behaviour. These findings show a slight decrease compared to previous reports in the literature, 27 % of dental students were found to exhibit procrastination (9), 29.5 % of medical students displayed academic procrastination (25). This difference may be attributed to the use of varying research instruments. The demographic characteristics of nursing students in the present study indicate a predominantly young female population (74.5%), primarily enrolled in B.Sc. Nursing (Basic) program. The concentration of students in the 18-21 age group aligns with previous research that highlights younger students' vulnerability to procrastination due to the developmental factors and increased academic pressures (26)

The data revealed extensive use of mobile devices and the internet with 38.7% of nursing students spending 3-5 hours daily on mobile phones and 53.2% using the internet for more than 5 hours. These habits could





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contribute to distraction and procrastination, as excessive screen time has been shown to negatively impact time management and academic procrastination.(27)(28)

The findings from the correlation analysis indicate significant relationships between academic procrastination, self-esteem and time management among the 200 nursing students studied. The weak statistically significant inverse relationship between academic procrastination and self-esteem suggests that students who experience higher levels of procrastination tend to have lower self-esteem. This aligns with existing literature that posits low self-esteem can contribute to procrastinatory behaviour, as students with diminished self-worth may avoid tasks, they fear that they cannot compete successfully (29). Additionally, the weak negative correlation between academic procrastination and time management ( $r = -0.353$ ,  $p = 0.04$ ) further underscores the importance of effective time management in academic settings. Students who struggle with procrastination often exhibit poor time management skills, leading to increased stress and decreased academic performance (30). These results highlight the critical role that self-esteem and time management play in influencing procrastination behaviours. Findings suggest that interventions aimed at enhancing self-esteem and developing time management strategies could be beneficial in reducing academic procrastination.

The limitation of the study was that it focused on nursing students from six colleges in Punjab, India. This limits the generalizability of the findings to other regions of students in different fields of study. The strength of the study was that the study utilized well-established standardized instruments which enhances the credibility of the results.

### Conclusion

The study highlights a significant prevalence of academic procrastination among nursing students, with 21.4% of participants engaging in such behaviour. It identifies time management and self-esteem as significant predictors of procrastination, with better time management and higher self-esteem leading to reduced procrastination. The findings suggest that interventions focusing on improving time management and self-esteem could be effective in mitigating procrastination, thereby improving academic performance and psychological well-being.

**Author Contribution:** Manu Kohli, Navita Gupta developed the study concept and design, collected the data. Prabhjot Saini formulated the materials & methods of the study and organized the data. Gaurav Kohli, Parminder Kaur analyzed the data and Manu Kohli and Kanika Guleria developed the manuscript.

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