

Academic Procrastination and Self-Regulation Among College Students

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ABSTRACT

Undergraduate students are expected to face demands of academic and environmental changes. This group is vulnerable to adopt maladaptive methods to overcome temporarily and regulate themselves in this period of transition. The purpose of the study was to examine the relationship between Academic Procrastination and Self-Regulation among 2nd and 4th year undergraduate students pursuing traditional fields of engineering, medicine and the contemporary field of design/ fine arts. The current study was conducted on a sample of 430, 2nd and 4th year undergraduate students pursuing engineering, medicine and design/ fine arts. The Academic Procrastination Scale (McCloskey, 2011) was administered to measure academic procrastination levels. The Self-Regulation Questionnaire (Miller & Brown, 1999) was administered to assess various self-regulatory processes through self-report. Results of the t-test showed no significant difference in the levels among the total sample of undergraduates between men and women. Results of ANOVA showed a significant difference in the levels among the total sample of undergraduates based on the streams. There is also a significant difference in the levels of the variables among the 4th year students and also present in 2nd year students based on streams. Correlational analysis showed a significant negative relationship between Academic Procrastination and Self-Regulation.

Keywords: *Academic Procrastination, Self-Regulation, Undergraduate students.*

The pursuit of higher education is a time of transition marked by a set of unexpected socio-cultural and environmental challenges. The fields of engineering design/ fine arts and medicine have become mainstream and every 5th student is pursuing one of these courses in under graduation. With exceeding demands to excel in academics, this age group is vulnerable to academic stress and may be forced to adopt maladaptive coping strategies to deal with these demands and procrastinate to complete the work assigned. In this setting of education, competitiveness prevails. Students have to face and excel in several academic and environmental challenges, of various intensities, as they progress from the 1st year to the final year. Students take deliberate control of their thoughts and actions to

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achieve goals and respond to environmental demands, which is described as self-regulation (Schunk & Zimmerman, 1998). The academic value of the students in the first semester will be higher than the academic value in the last semester which is influenced by the habit of procrastinating academic tasks. If the tasks are delayed, it affects the academic value of the student (Mustika, 2017). A study by Reddy (2018) concluded that there is a streamwise difference in stress, levels of procrastination and self-regulation due to academics. The levels also vary due to differences within the streams and also different years of the same stream.

Procrastination is derived from the word 'procrastinate', where pro means the forward movement and 'crastinus' means belonging to tomorrow. According to Sirin (2011), procrastination has been typically defined as a trait or behavioural disposition to postpone or delay performing a task or making decisions. Balkis (2013) defines academic procrastination, a form of situational procrastination, as a pervasive and potentially maladaptive behaviour for many college students resulting in feelings of psychological distress. Janssen and Jill (2015) have proposed three criteria for a behaviour to be classified as academic procrastination which are counterproductive, needless and delaying. Rozentel and Carlbring, (2014) found that procrastination is "to voluntarily delay an intended course of action despite expecting to be worse off for the delay". More often than not, students try to delay their work either due to lack of interest, lack of proper guidance or complete ignorance of the notion of the importance of completing it on time. According to a study by Balkis (2013), twenty-three percent of students reported that they procrastinate on academic tasks and over seventy percent of university students admit that they procrastinate regularly. This study also indicated that procrastination is related to higher stress, less effort on the task, and poor academic performance. A study by Mustika (2017), has said that the consequences of procrastination of duties become dormant, even when it is settled, it will not be maximized. This condition is what causes many students, especially in the last semester to often postpone work, until the last minute. They tend to wait for the right time and the right mood. This delay also results in losing out on several opportunities.

According to Zimmerman (2001), self-regulation is referred to as the self-directive process through which learners transform their mental abilities into task-related skills. Self-regulation is an innate part of the socialisation process and it is also seen as an intrapersonal process of the individual by controlling actions, thoughts, opinions, tenacities and goal-directed behaviour. According to Bandura (2008), self-regulation refers to the ability to use one's knowledge of appropriate behaviour and use that ability to achieve goals. According to Zimmerman (2000), self-regulation refers to self-generated thoughts, feelings, and actions that are planned and systematically adapted to affect one's motivation and learning. Self-regulation is the way individuals intentionally try to control their minds and action to achieve goals and respond depending on the demands surrounding their environment. Self-regulation is the process of continuously monitoring progress towards a goal, checking outcomes, and redirecting unsuccessful efforts (Berk, 2003). For students to be self-regulated they need to be aware of their thought process and be motivated to actively participate in their learning process (Zimmerman, 2001). According to Spates and Kanfer (1977), self-regulation consists of three related sets of activities: (a) self-monitoring, (b) self-evaluation and (c) self-reactions. Miller and Brown (1991) formulated a seven-step model of self-regulation. In this model, behavioural self-regulation may falter because of failure or deficits in any of these seven steps: (1). Receiving relevant information; (2). Evaluating the information and comparing it to norms; (3). Triggering change; (4). Searching for options; (5). Formulating a plan; (6). Implementing the plan; (7). Assessing the plan's effectiveness.

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Baumeister (2001) says that effective self-regulation will be dependent on three ingredients; first, the individual must have clear and disagreeing standards; second, the individual should keep track of behaviour; third, the individual must have the wherewithal to produce the necessary changes in oneself, which may include willpower or knowledge of effective strategies. If there is any conflict, and one is unable to resolve it, it may lead to disturbance in regulating one's self.

There are many ways and means for an undergraduate to feel pressurized by academic and environmental demands. Generally, students escape from these pressures by delaying day to day efforts regularly. This delay can unknowingly become a habit in the form of unconscious incompetence. This study aims to gain an insight into traditional fields of medicine and engineering, and the contemporary field of design, to understand how the various parameters of academic procrastination and self-regulation vary with the year of study and field of study among undergraduate students.

Hypothesis

- H1: There is no difference in the levels of academic procrastination and self-regulation in undergraduate students based on gender, branch and the year of study?
- H2: There is no difference in the levels of academic procrastination and self-regulation in 2nd year undergraduate students and in 4th year undergraduate students pursuing Design, Engineering and Medicine?
- H3: There is no relationship between academic procrastination and self-regulation in undergraduate students pursuing design, engineering and medicine?
- H4: There is no relationship between academic procrastination and self-regulation in undergraduate students pursuing design/ fine arts?
- H5: There is no relationship between academic procrastination and self-regulation in undergraduate students pursuing engineering?
- H6: There is no relationship between academic procrastination and self-regulation in undergraduate students pursuing medicine?

METHODOLOGY

The present study is a quantitative study with a non-experimental comparative design and between-groups design. The sample consists of 430 undergraduate students from 3 different fields of study - namely 141 Design/ Fine Arts Students i.e., 71 of 2nd year students and 70 of 4th year students, 140 of Engineering Students i.e., 70 of 2nd year students and 70 of 4th year students and 149 of Medical Students i.e., 79 of 2nd year students and 70 of 4th year students. Data collection is done by using stratified random sampling techniques. Data only includes the student from Govt. universities.

Instruments

The Self-Regulation Questionnaire (SRQ): This instrument consists of 63 items, formulated by Miller and Brown & Lawendowski (1999). Items were developed to mark each of the seven sub-processes of the Miller and Brown (1991) model, forming seven rationally-derived subscales of the SRQ. The following items follow reverse scoring '2,3,4,5,6,8,10,12,13,15,119,20,21,24,26,29,31,33,37,40,43,45,50,55,62,63'. The following are ranges for interpreting SRQ total scores with the 63-item scale:

- 239 High (intact) self-regulation capacity (top quartile)
- 214-238 Intermediate (moderate) self-regulation capacity (middle quartiles)

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- < 213 Low (impaired) self-regulation capacity (bottom quartile). Cronbach alpha of the Self-Regulation Questionnaire (SRQ) is .91

Academic Procrastination Scale (APS): Developed by McCloskey, J (2011), consists of 25 items. The items were based on six different characteristics of procrastinators: Psychological belief about abilities, distractions of attention, social factors, time management skills, personal initiative, and laziness. The questionnaire has reversed scoring items that are '1, 8, 12, 14, and 25'. The internal consistency reliability (Cronbach's alpha) is $\alpha = .94$

RESULTS

Table 1 showing the difference in the levels of self-regulation (subscales), academic procrastination based on gender

| | Men Mean (SD) | Women Mean (SD) | t |
|--------------------------|---------------------|-----------------------|------|
| Receiving | 29.47 (4.81) | 30.88 (4.87) | 3.02 |
| Evaluating | 28.09 (4.25) | 28.76 (4.15) | 1.64 |
| Triggering | 28.64 (3.66) | 29.97 (3.64) | 3.78 |
| Searching | 32.09 (4.82) | 32.96 (4.91) | 1.85 |
| Planning | 27.98 (4.62) | 28.74 (5.06) | 1.61 |
| Implementing | 27.87 (5.17) | 28.56 (5.48) | 1.29 |
| Assessing | 29.49 (4.09) | 30.23 (4.16) | 1.87 |
| Self-regulation | 203.63 (18.52) | 210.07 (20.13) | 3.45 |
| Academic procrastination | 79.54 (14.13) | 75.48 (16.02) | 2.78 |

Table 1 shows no significant difference in the levels of self-regulation (subscales), academic procrastination between men and women among the undergraduates of contemporary study field design/ fine arts and traditional study fields of medicine, engineering accepting the hypothesis.

Table 2 shows the difference in the levels of Academic Procrastination, Self-Regulation (subscales) based on the year of study

| | 2nd year Mean (SD) | 4th year Mean (SD) | t |
|--------------------------|--------------------------|--------------------------|--------|
| Receiving | 30.34 (4.86) | 30.01 (4.92) | .69 |
| Evaluating | 28.92 (3.89) | 27.91 (4.47) | 2.48 |
| Triggering | 29.70 (3.89) | 28.90 (3.47) | 2.27** |
| Searching | 32.80 (5.01) | 32.24 (4.73) | 1.19 |
| Planning | 27.89 (5.14) | 28.86 (4.49) | 2.08 |
| Implementing | 27.75 (5.47) | 28.67 (5.15) | 1.78 |
| Assessing | 29.77 (4.15) | 29.95 (4.14) | .44 |
| Self-regulation | 207.18 (19.83) | 206.54 (19.37) | .33 |
| Academic procrastination | 77.21 (15.45) | 77.80 (15.03) | .40 |

Note: ** $p < 0.05$ level

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Table 2 shows that there is only a significant difference in the levels of triggering (subscale of self-regulation) based on the year of study i.e., 2nd year and 4th year.

Table 3 shows the difference in the levels of Academic Procrastination, Self-Regulation (subscales) based on Branches i.e., Medicine, Design/ Fine Arts and Engineering

| | F |
|--------------------------|---------------|
| Receiving | 2.87** |
| Evaluating | .02 |
| Triggering | 1.57 |
| Searching | 2.59 |
| Planning | .31 |
| Implementing | 3.13** |
| Assessing | 3.41** |
| Self Regulation | 2.39 |
| Academic Procrastination | 2.88** |

Note: ** $p < 0.05$ level

Table 3 shows a significant difference in the levels of receiving, implementing, assessing (subscales of self-regulation) and academic procrastination based on branches i.e., Medicine, Design/ Fine Arts and Engineering.

Table 4 showing the difference in the levels of Academic Procrastination, Self-Regulation (subscales) based on Branch i.e., Medicine, Design/ Fine Arts and Engineering for 2nd year and 4th year students.

| | F 2nd Year | F 4th Year |
|--------------------------|-----------------------------|-----------------------------|
| Receiving | .29 | 3.63* |
| Evaluating | .09 | .025 |
| Triggering | .30 | 2.06 |
| Searching | .17 | 4.11* |
| Planning | .09 | .33 |
| Implementing | .62 | 3.65* |
| Assessing | .41 | 4.46* |
| Self Regulation | .12 | 3.67* |
| Academic Procrastination | 1.85 | 1.39 |

Note: ** $p < 0.05$ level

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Table 4 shows that there is no stream wise difference in the levels of academic procrastination & self-regulation in 2nd year students. But there are significant differences in the levels of self-reflection subscales: receiving, searching, implementing, assessing and self-regulation, among the 4th year students based on branches.

Table 5 showing the correlation between Academic Procrastination, self-regulation (subscales) in undergraduate students pursuing Medicine, Design/ Fine Arts and Engineering

| | Receiving | Evaluating | Triggering | Searching | Planning | Implementing | Assessing | Self Regulation | Academic Procrastination |
|--------------------------|-----------|------------|---------------|---------------|----------------|----------------|---------------|-----------------|--------------------------|
| Receiving | 1 | -.074 | .352** | .384** | .457** | .540** | .436** | .749** | -.473** |
| Evaluating | | 1 | -.031 | .145** | -.267** | -.227** | .097* | .119* | .117* |
| Triggering | | | 1 | .327** | .298** | .230** | .226** | .536** | -.201** |
| Searching | | | | 1 | .311** | .383** | .492** | .724** | -.200** |
| Planning | | | | | 1 | .574** | .277** | .653** | -.433** |
| Implementing | | | | | | 1 | .416** | .727** | -.559** |
| Assessing | | | | | | | 1 | .688** | -.277** |
| Self Regulation | | | | | | | | 1 | -.499** |
| Academic Procrastination | | | | | | | | | 1 |

Note: ** $p < 0.01$ level; * $p < 0.05$ level

Table 5 shows the significant negative correlation between academic procrastination and self-regulation and subscales of self-regulations i.e., receiving, triggering, searching, planning, implementing and assessing and a positive correlation with evaluating (subscale of self-regulation).

Table 6 shows the correlation between Academic Procrastination & self-regulation (subscales) in undergraduate students pursuing Design/ Fine Arts.

| | Receiving | Evaluating | Triggering | Searching | Planning | Implementing | Assessing | Self Regulation | Academic Procrastination |
|--------------------------|-----------|------------|---------------|---------------|---------------|---------------|---------------|-----------------|--------------------------|
| Receiving | 1 | 0.133 | .238** | .221** | 0.133 | .345** | .233** | .608** | -.372** |
| Evaluating | | 1 | 0.085 | .200* | -.187* | -.167* | 0.155 | .288** | 0.039 |
| Triggering | | | 1 | .359** | 0.083 | 0.083 | 0.155 | .501** | -.040 |
| Searching | | | | 1 | .249** | .240** | .302** | .674** | -.057 |
| Planning | | | | | 1 | .463** | 0.152 | .536** | -.306** |
| Implementing | | | | | | 1 | .250** | .618** | -.477** |
| Assessing | | | | | | | 1 | .569** | -.263** |
| Self Regulation | | | | | | | | 1 | -.403** |
| Academic Procrastination | | | | | | | | | 1 |

Note: ** $p < 0.01$ level; * $p < 0.05$ level

Table 6 shows a negative correlation between self-regulation and academic procrastination. Academic procrastination is negatively correlated to receiving, implementing, assessing, and planning. As the levels of academic procrastination levels are high receiving, implementing, assessing, and planning are low. Evaluating is negatively correlated to planning and implementing and positively correlated to self-regulation.

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Table 7 shows the correlation between Academic Procrastination & self-regulation (subscales) in undergraduate students pursuing Engineering.

| | Receiving | Evaluating | Triggering | Searching | Planning | Implementing | Assessing | Self Regulation | Academic Procrastination |
|--------------------------|-----------|----------------|---------------|---------------|----------------|----------------|---------------|-----------------|--------------------------|
| Receiving | 1 | -.348** | .405** | .408** | .633** | .688** | .473** | .773** | -.451** |
| Evaluating | | 1 | -.146 | 0.06 | -.329** | -.368** | 0.025 | -.049 | .232** |
| Triggering | | | 1 | .299** | .396** | .299** | .273** | .546** | -.193* |
| Searching | | | | 1 | .339** | .456** | .614** | .755** | -.228** |
| Planning | | | | | 1 | .681** | .326** | .719** | -.493** |
| Implementing | | | | | | 1 | .474** | .781** | -.581** |
| Assessing | | | | | | | 1 | .744** | -.198* |
| Self Regulation | | | | | | | | 1 | -.462** |
| Academic Procrastination | | | | | | | | | 1 |

Note: ** $p < 0.01$ level; * $p < 0.05$ level

Table 7 shows that there is a positive correlation between Academic Procrastination and evaluating. Academic Procrastination is negatively correlated to receiving, triggering, searching, implementing, assessing and self-regulation. If the levels of procrastination are high, receiving, triggering, searching, implementing, assessing, & self-regulation levels are low. Self-regulation is negatively correlated to academic procrastination and positively correlated to receiving, triggering, assessing, planning, implementing and searching.

Table 8 shows the correlation between Academic Procrastination & Self-Regulation (subscales) in undergraduate students pursuing Medicine.

| | Receiving | Evaluating | Triggering | Searching | Planning | Implementing | Assessing | Self Regulation | Academic Procrastination |
|--------------------------|-----------|------------|---------------|---------------|----------------|---------------|---------------|-----------------|--------------------------|
| Receiving | 1 | 0.044 | .401** | .500** | .553** | .543** | .558** | .818** | -.563** |
| Evaluating | | 1 | -.027 | .213** | -.274** | -.126 | 0.136 | .179* | 0.078 |
| Triggering | | | 1 | .367** | .414** | .312** | .267** | .582** | -.366** |
| Searching | | | | 1 | .349** | .395** | .480** | .732** | -.315** |
| Planning | | | | | 1 | .571** | .349** | .690** | -.497** |
| Implementing | | | | | | 1 | .464** | .741** | -.617** |
| Assessing | | | | | | | 1 | .714** | -.380** |
| Self Regulation | | | | | | | | 1 | -.613** |
| Academic Procrastination | | | | | | | | | 1 |

Note: ** $p < 0.01$ level; * $p < 0.05$ level

Table 8 shows a significant negative correlation between academic procrastination and receiving, triggering, searching, implementing, assessing and self-regulation. Self-regulation is positively correlated to receiving, triggering, searching, implementing, assessing and planning.

DISCUSSION

Academic Procrastination is the postponement of academic goals to the point where optimal performance becomes highly unlikely, resulting in a state of psychological distress (Jiao, 2011). According to Zimmerman (2008), “self-regulation refers to the way individuals make use of internal and external cues to determine when to initiate, when to maintain, and when to terminate their goal-directed behaviours. It is regarded as self-generated thoughts, feelings, and behaviours that are oriented toward the attainment of personal objectives.”

In the present study H1 is addressed in Table 1, Table 2, Table 3 that there is no significant difference in the levels of academic procrastination and self-regulation in undergraduate students based on gender, there is significance in the difference in the levels of three out of seven subscales of self-regulation – receiving, implementing, assessing and there is a significant difference in the levels of academic procrastination among the students pursuing medicine, engineering and design/ fine arts. There is a significant difference in levels of one of the seven subscales of self-regulation – triggering among the students pursuing medicine, engineering and design/ fine arts based on year of study.

H2 a) there is no significant difference in the levels of the 2nd year undergraduate students studying Design/ fine arts, Medicine and Engineering. Whereas H2 b). There is a significant difference in levels of four out of seven subscales in self-regulation – receiving, searching, implementing, assessing and self-regulation among the students of 4th year undergraduate students pursuing design, medicine and engineering (ref. Table 4).

According to Burka and Yuan (1983), self-regulation is one of the elements that might lead to procrastination behaviour. Based on the calculation of correlation r Product Moment, it is known that there is a negative relationship between self-regulation with academic procrastination of the undergraduate students ($r_{xy} = -0.499$ with $p = 0,000$; $p < 0.005$) this rejects the H3. This says that the lesser the self-control, the more academic procrastination there is. On the other hand, if self-control is good, academic procrastination is reduced.

This study follows the same trend in the relationship between academic procrastination and self-regulation in the students of design/fine arts, medicine and engineering. Hypothesis 4 is rejected in Table 6, there is a negative correlation between academic procrastination and self-regulation in the students of the contemporary field of Design/ Fine arts. Hypothesis 5 is also rejected in Table 7, there is a negative correlation between academic procrastination and self-regulation in the students of the traditional field of engineering. Hypothesis 6 is also rejected as shown in Table 8, there is a negative correlation between academic procrastination and self-regulation in the students of the traditional field of medicine.

The present study results replicated study results of Mustika (2017) that there is a significant negative relationship between self-regulation with procrastination behaviour of final project completion at, Medan Area University in 2012, the higher self-regulation then procrastination behaviour of final work completion will be low and the lower self-regulation hence procrastination behaviour of workmanship will be higher.

Limitations

The limitation of this study was that the sample was taken only from government universities/ colleges. The chosen universities/colleges are from the metropolitan city of Hyderabad, India. A larger sample from other states govt. universities/ colleges could be taken. Different branches within the 3 disciplines were not taken into consideration. The

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results of this study cannot be applied to the whole population due to the dynamic nature of the participants and their environmental and academic demands vary from university curriculum and also the socio-cultural demands vary among the states. There is also a limitation of the inability to generalize the results due to geographical barriers.

CONCLUSION

The purpose of this study was to explore if there was a relationship between Academic Procrastination and Self-Regulation. Pearson's Product Moment Correlation was used to find out if there was any relationship between the variables. The results showed that there is a significant relationship between academic procrastination and self-regulation among 2nd and 4th year students of Medicine, Engineering and design/ fine arts. Academic procrastination is negatively correlated to self-regulation. If the levels of academic procrastination are high, self-regulation is low. There is a significant stream wise difference in the levels of the variables among the 4th year students, which is also present in 2nd year students. The results of this study will help to understand the significance of academic procrastination and unavoidable academic demands among students and how the student is regulating to overcome demands. This study can help design interventions for psychological wellbeing and raise awareness about effective coping strategies/ methods to overcome academic and environmental obstacles and effectively regulate themselves to excel in academic life. This is the first study to investigate the relationship between academic procrastination and self-regulation in traditional and contemporary fields of study in Indian students.

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Conflict of Interest

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