

## Academic Procrastination and its Association with Academic Performance and Demographic Characteristics of Undergraduate Health Sciences' Students

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### ABSTRACT

**Background:** Academic procrastination is the postponement of educational activities. Most university students try to keep themselves away from academic activities which might lead to procrastination and that may cause unsatisfactory performance.

**Objective:** To assess the level of academic procrastination and its association with academic performance and demographic characteristics of undergraduate students.

**Methods:** This cross-sectional analytical study using convenient sampling technique was conducted on 250 health sciences undergraduate students at Sohail University, Karachi, Pakistan from August to October 2022. Ethical approval and data collection permission were obtained. The Procrastination Assessment Scale for Students was used to gather data. The SPSS version-24 was used for statistical analysis. Simple descriptive statistics, spearman's rank order correlation coefficient tests and independent sample t-test was applied.

**Results:** Mostly participants (53.6%) were female, 93.2% were single, and 46 % in the generic nursing program and 54% were in 3rd & 4th year. Students' academic performance was insignificant with all the domains except writing a term (p-value 0.22, 0.5, 0.26, 0.37, 0.31 and 0.041 respectively). A significant relationship of students' gender, education level and study program with academic procrastination was found (p-value 0.004, 0.021 and 0.002 respectively). Bachelor of Science in Nursing (BSN) and Pharm-D programs did not show as much procrastination as compared to Doctor of Physical Therapy (DPT) program (p-value 0.021).

**Conclusion:** This study showed the considerable behaviour of procrastination among undergraduates. There was a significant association between writing a paper and academic achievement. In addition, academic procrastination was significantly associated with gender and enrolled program of the participants.

**Key Words:** Academic Performance, Association, Procrastination, Undergraduate

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### INTRODUCTION

Academic procrastination is the postponement of educational activities at university level for different reasons.<sup>1</sup> In fact, most of the university students try to keep themselves away from academic activities which might lead to procrastination and this may be the cause unsatisfactory performance.<sup>2</sup> Academic procrastination has been the most searched topic by students of social sciences and the general public due to its serious adverse effect. The academic procrastination accompanies many

factors which include discomfort and uneasiness; even in some cases it may cause the worst effects in the form of suicidal thoughts and depression which may lead towards death.<sup>3</sup> Students are supposed to complete their tasks while practicing on the bed side in order to get exposure; however, most of the students suffer from different complications due to delays in academic activities and it is considered as the biggest challenge for undergraduate medical students.<sup>4</sup> When learners move from school to university, they face a totally different environment where they must complete the clinical side tasks. Medical undergraduates find it the most difficult task due to lack of exposure to the clinical side activities; therefore, there is a chance that the student may delay their academic activities.<sup>5</sup> The students with lazy characters also delay their tasks because of their indolent nature.<sup>5</sup> There are other elements which conclude academic postponement in undergraduate studies: one of them is lack of motivation, which is interpreted as un-attainment and unconcern of students towards the given task which will discourage them to complete the task within a given time.<sup>6</sup> The willpower to do work is very important to prevent students from delays in academic activities.<sup>7</sup> It is observed that students who do not have grip over the external and internal environment, do not have confidence to use their knowledge in the right directions and make appropriate findings in their life.<sup>8</sup> Newly enrolled students in universities are unaware of the university routine so they suffer psychology due to a new phase which results in procrastination.<sup>9</sup>

About 14.1% of the base of suspension of academic activities is stress.<sup>10</sup> Academic stress is most common among university students which results in abnormal analytical thinking and disturbance in their behavior.<sup>10</sup> The proper use of internet is beneficial for students in terms of getting new ideas related to their studies, however: inappropriate internet usage can also distract students from their real goal and that

may be the causes of delaying their academic activities.<sup>11</sup>

Therefore, the objective of this study was to assess the level of procrastination and its association with academic performance among undergraduate health sciences' students.

## METHODS

The analytical cross-sectional study design with convenient sampling technique was used in this study. The willing male and female, 1<sup>st</sup> to 4<sup>th</sup> year undergraduate students of health sciences from (BSN, Pharm-D and DPT) Jinnah College of Nursing, Jinnah College of Pharmacy and Jinnah College of Rehabilitation Sciences, Sohail University, Karachi were included in this study. Whereas those students who were in their 1<sup>st</sup> semester and did not appear in any exam before, at the time of data collection were excluded. This study was conducted from 1<sup>st</sup> August, 2022 to 31<sup>st</sup> October, 2022.

Ethical approval was obtained from the Ethical Review Committee of Sohail University (Protocol #: 000183/22). Permission for data collection was also taken from the Principals of three respective colleges of Sohail University including; Jinnah College of Nursing, Jinnah College of Pharmacy and Jinnah College of Rehabilitation Sciences. Written informed consent forms were signed by each participant. Demographic information of each participant was taken.

The academic performance was assessed by getting record of each student's CGPA from three respective colleges. Moreover, as population of undergraduates of all three colleges of Sohail University was 700, then the total sample size was 248 by using 46% prevalence of procrastination among students, 5% margin of error, and a 95% confidence interval which was estimated through Open-Epi online software but we took 250 round figure participants.<sup>16</sup>

The Procrastination Assessment Scale for Students (PASS) which is a five-point Likert scale (1: never procrastinated to 5: always

procrastinated) was used to gather data.<sup>6</sup> This scale has six areas including: writing a semester paper, studying for an examination, performing administrative tasks, reading assignments, attending meetings and performing academic tasks. The total range of scores was from 18 to 90. The greater score showed higher academic procrastination. The reported internal consistency coefficient of the instrument is 0.84.<sup>6</sup>

### Statistical Analysis

The SPSS Version-24 was used for statistical analysis. Simple descriptive statistics was run for demographic variables. To check correlation between academic performance and procrastination, spearman's rank correlation tests was applied. Independent sample t-test was used to find the difference in score of academic procrastination.

### RESULTS

Our study results revealed that out of 250 participants 134 (53.6%) were female, 240 (96.0%) subjects were in age group 16-25 and 93.2% were single. Besides, 115 (46.0%) of them were in the generic nursing and only 60 (24.0%) were in physiotherapy bachelor's program. However, 115 (46.0%) were studying 1<sup>st</sup> & 2<sup>nd</sup> year and 3<sup>rd</sup> & 4<sup>th</sup> year 135 (54%) (Table1).

In writing a term paper dimension, among 69.6% undergraduates moderate to high procrastination was found. In studying for an exam, around 67.2% of participants were procrastinators at moderate to high level. During reading assignments, 69.7% of undergraduates practiced procrastination. Likewise, in attending meeting 61.4% of participants were moderate to high level procrastinators. While accomplishing the administrative tasks, nearly 58.9% of the students were involved in procrastination from moderate-to-high level. Finally, our study findings revealed that 63.0% were also procrastinating in performing academic tasks (Table 2).

Based on outcomes, 69.7% students thought that in reading assignments their procrastination had been challenging. Furthermore, a significant but weak association was found in writing a paper and academic performance.

On the other hand, the students' academic performance showed an insignificant relationship with academic achievement (Table 3).

Table 4 shows the comparison of academic procrastination with demographics variables. There was a significant relationship between academic procrastination and students' gender (p value=0.004).

The female students procrastinated more than male students did. However, an insignificant relationship of age group and marital status with procrastination was revealed. The academic education level also had significant relationship with academic procrastination (p value= 0.021).

Similarly, the study program showed significant association with academic procrastination (p-value 0.002), BSN and Pharm-D showed less procrastination as compared to DPT program.

**Table 1: Demographic characteristics of participants**

<b>Gender</b>	<b>n(%)</b>
Male	116(46.4%)
Female	134(53.6%)
<b>Marital Status</b>	
Single	233(93.2%)
Married	17(6.8%)
<b>Age Group(years)</b>	
16 -25	240(96%)
26 -55	10(4%)
<b>Academic Qualification</b>	
F. Sc.	175(70%)
B.Sc.	75(30%)
<b>Study Program</b>	
Generic BSN	115(46%)
Pharm-D	75(30%)
DPT	60(24%)
<b>Year of Study</b>	
1 <sup>st</sup> & 2 <sup>nd</sup> Year	115(46%)
3 <sup>rd</sup> & 4 <sup>th</sup> Year	135(54%)
<b>CGPA (Academic Performance)</b>	
<3.0	148(59.2%)
3.0 - 4.0	102(40.8%)

**Table 2: Frequency of students' academic procrastination**

Students procrastination behaviors in six domains	Sometimes (%)	Nearly always (%)	Always (%)	Sum (%)
Writing a term paper	41.2	16.1	12.3	69.6
Studying for Exam	31.3	19.5	16.4	67.2
Keeping Up with Reading Assignments	32.4	20.5	16.8	69.7
Performing Administrative Task	28.4	14.9	15.6	58.9
Attending meeting	32.4	14.3	14.7	61.4
Performing Academic task in general	32.3	16.8	13.9	63.0

**Table 3: Correlation between the student's academic performance and their academic achievement**

Academic Assessment	Writing a term paper	Studying for Exam	Keeping Up with Reading Assignments	Performing Administrative Task	Attending meeting	Performing Academic task in general
CGPA	0.117	-0.05	0.00	0.044	0.023	-0.035
p – value	0.041	0.229	0.5	0.266	0.375	0.311

**Table 4: Comparison of academic procrastination with students' demographic variables**

	mean ± SD	p-value
<b>Gender</b>		
Male	41.6±14.3	0.004*
Female	48.2±19.97	
<b>Marital Status</b>		
Single	45.3±17.9	0.759
Married	43.8±15.8	
<b>Age group(years)</b>		
16-25	45.1±17.9	0.877
26-35	46.0±14.6	
<b>Education Level</b>		
F.Sc.	43.4±17.4	0.021*
B.Sc.	49.2±18.2	
<b>Study Program</b>		
Generic BSN	40.8±15.1	0.002*
Pharm-D	46.9±18.5	
DPT	51.4±19.9	

mean score of academic procrastination; t- test was applied; p\* value of less than 0.05 was considered statistically significant

## DISCUSSION

In this study, we determined the academic procrastination among undergraduate health sciences students of BSN, DPT and Pharm- D. Based on the findings, most students tend to delay their academic deeds and assignments; this obeys the same line of past studies.<sup>7, 8, 14, 15</sup>

In present study, 28.4% of partakers report procrastination during writing a semester paper, near to similar results was revealed by few former studies,<sup>6, 10</sup> while some studies reported increased level of the procrastination which was above 40%.<sup>7,8,16</sup> High frequency of procrastination prevails due to some factors

which could be personal, study related, education linked, related to institution, assignment and work related.

Moreover, 37.3% of the students postponed keeping up with weekly readings nearly always or always. Distinctive results were found in two previous studies which reported 68.7% and 21.2% postponement of reading tasks.<sup>6,16</sup>

Our results also expose that 30.5% nursing undergraduates delayed performing their administrative tasks; this percentage is considerably lower than the percentages (60%) reported by a previous study<sup>6</sup> and much higher



than the rates (10.6%) described in a study which was conducted in Vermont, USA.<sup>16</sup>

Professionals claimed that undergraduate students involved in procrastination are undoubtedly displeased with their academic life due to several reasons. Further studies might help to explore the genuine reasons leading to procrastination.<sup>9,11</sup>

Regarding going to attend the meetings, our findings showed that 61.4% of the partakers were procrastinators; this was reported lower in a past study<sup>16</sup> and remarkably higher in another research<sup>6</sup>. Lastly, this study results revealed that 30.7% of the participants behaved like procrastinators while performing their general academic tasks; in past two studies<sup>6,16</sup> procrastination in performing academic tasks was reported as 10.2% and 21.8%, respectively. According to scholars, it might be due to low self-efficacy, fear of accepting the scenarios, dealing with the public and avoiding working with others.<sup>6</sup>

We found a significant relationship of students' academic procrastination with the gender; comparable findings have been revealed in a past study.<sup>18</sup> Unlikely, few researchers found an insignificant association between gender and academic procrastination.<sup>10,13,14</sup> Our study depicts that female procrastinated more than male students did which is quite different from some of the previous articles which mentioned male gender as high procrastinator.<sup>1,3,11,18,19</sup> These studies proclaimed female students acted more competitively as compared to their counterparts in academic tasks and found extra motivation for higher grades. They also stated that boys had lower motivation, deficiency in managing their time, increased impulsivity, strength of mind, engagement in self-handicapping and poor study habits and all these influences and contribute to their dilatory attitude.

Furthermore, the academic education level also had a significant relationship with academic procrastination as we found 1<sup>st</sup> and 2<sup>nd</sup> year students delaying their academic tasks

frequently. The academic year have also shown significant association with procrastination in a previous study.<sup>10</sup> Correspondingly, some previously published studies observed moderate to high procrastination in lower level undergraduates.<sup>11,18</sup> On the contrary, undergraduates of higher classes found moderate to high procrastination.<sup>10,17,19</sup> A prior study stated surprising findings that amongst the year one students, they had moderate levels of procrastination and showed marvelous academic performance, contrariwise the year three and four students had moderate levels of procrastination but their academic performance was poor.<sup>21</sup> It is noted during inspections that an increase in the level of study, the healthcare undergraduates became more procrastinators due to decreased motivation, lack of interest, participation in clinical tasks and having fewer chances to follow academic chores.

Additionally, the study program shows significant association with academic procrastination. Nursing and Pharmacy undergraduate students show less procrastination as compared to DPT program. Comparably, a few past studies found significant increase of delaying tactics among nursing students,<sup>1,9,17</sup> whereas previous studies detected increase level of procrastination in undergraduates of other disciplines like basic health sciences<sup>6</sup>, medical program<sup>7,14</sup> and dental program.<sup>10,15,18</sup> The logic for this increased levels of academic procrastination among physiotherapy students may be the difference in the population (medical students vs. physiotherapy students), scope of their study program, their course and syllabus.<sup>22</sup>

Finally, our study found an insignificant association among academic procrastination and their academic accomplishment; this finding is opposite to past studies.<sup>3,6,18</sup> Dissimilarly, academic procrastination and academic performance were adversely associated.<sup>14</sup> The experts specified some reasons like study stress,<sup>17</sup> poor time management<sup>17,20</sup> personal factors and institutional aspects<sup>9,11</sup> behind this delaying behavior. They also suggest that coping

with these disruptive behaviors can enhance the learning experiences and eradicate procrastination among learners. Researchers have emphasized that the low performance by procrastinators can be eliminated by dealing with their test anxiety, academic stress, institutional and personal factors, taking counseling and enhancing teaching and learning strategies.<sup>22</sup>

Current study conducted and one private sector university on a small sample size limits the generalizability of the results. However, this study is novel specifically in health sector because it is the first study conducted in Pakistan that consists of participants from diverse disciplines such as nursing, pharmacy, and physiotherapy.

## CONCLUSION

This study showed considerable behavior of procrastination among undergraduate health science students particularly in writing term papers, studying for exams, reading assignments, attending meetings, and performing administrative tasks. Academic performance was insignificantly associated with procrastination. Gender, education level and study program were significantly associated with procrastination. Findings of current study suggest the need of guidance to reduce the levels of academic procrastination. Future studies are needed to identify the factors leading to academic procrastination.

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**ZI:** Initial drafting, Data collection.

**MF:** Manuscript writing and Analysis of manuscript linguistically.

**OR:** Concept, Literature search, Data collection and entry

**TA:** Critical Analysis of manuscript, Final approval and proof reading

All authors approved the final version and signed the agreement to be accountable for all aspects of the work.

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