

Original Article

Impact of Academic Procrastination on Self-esteem among Dental and Medical Undergraduate Students

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Abstract

Objective: The aim of the current study was to investigate the prevalence of academic procrastination among medical and dental students and to determine the relationship between academic procrastination and self-esteem status in this population.

Methodology: A cross-sectional study was conducted among 312 medical and dental undergraduates at Army Medical College Rawalpindi and Armed Forces Institute of Dentistry Rawalpindi from February 2022 to April 2022. Data were collected through a questionnaire using the Rosenberg self-esteem scale and the Procrastination Assessment Scale-Student (PASS). The data collected were analysed using SPSS software version 24.0. Descriptive tests, t-test, ANOVA, and Pearson's correlation test were performed.

Results: The results indicated that a weak positive correlation ($r = 0.022$, $P < 0.64$) existed between academic procrastination scores and self-esteem scores. The mean difference between self-esteem scores ($p=0.59$) and academic procrastination scores ($p=0.75$) among males and females was not significant. The mean self-esteem score of the MBBS students was higher than BDS students. Similarly, the mean academic procrastination score of BDS students was higher than MBBS students.

Conclusion: The current study concluded that academic procrastination leads to low self-esteem among undergraduate students.

Keywords: Academic procrastination, dental undergraduates, medical students, self-esteem

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Introduction

Procrastination is a self-regulatory failure causing a failure to set goals or goal preferences causing a

delay in task completion or meeting deadlines.¹ Procrastination comes from the Latin word “procrastinates” meaning pending the task for tomorrow.² It is a hindrance to students’ success as the objective of learning various academic levels is badly impaired by delaying the completion of different tasks and accomplishing academic duties. Studies indicate that successful students manage time properly and practice self-regulation.³ Prior studies conclude procrastination to be troublesome behaviour among

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college students.⁴ Academic procrastination incidence ranges from 13.8 to 49.9% for different academic responsibilities among undergraduate health professions.¹ Approximately 13.8–49.9% of students who adopt health care as a major in college procrastinate in completing academic tasks until the last minute.⁵

Fear of failure, task antagonism, faulty time management, baseless beliefs, low self-esteem, demotivation, neuroticism and casual attitude are a few of the most cited causes of procrastination.⁶ Temporal motivation theory proposes that the trait of procrastination is exercised when difficult tasks with uninspiring qualities present themselves. The incidence of procrastination is more when dealing with high-value tasks and immediate lucrative incentives.⁷ Academic procrastination deviates the learner from the task and causes disinterest often causing a negative outcome like lower well-being.⁸ During research in literature, reports of studies indicate that academic procrastination of students is linked with low self-esteem.^{9,10}

Rosenberg describes self-esteem as a trait that is characterized by a one-dimensional method with positive or negative approaches toward the self-transcending evaluations of explicit areas of work.¹¹ Studies report that self-esteem mediates the connection between an individual's procrastination and self-efficacy and academic procrastination is predicted by self-esteem.⁹ High self-esteemed students muddle through challenges, whereas low self-esteemed students likely face emotional challenges due to a limited number of coping mechanisms.^{2,12}

In Pakistan, very few researches have been undertaken to probe the correlation between procrastination and self-esteem among medical and dental undergraduates. The study is conducted to address this gap in the literature with the objective to investigate the prevalence of procrastination among medical and dental undergraduates and find its correlation with self-esteem status in this population.

An effort is made to improve this correlation because the World Federation of Medical Education's (WFME) essential standards, as practised by Pakistan Medical Commission (PMC), deem it compulsory to safeguard the psychological and social well-being of the students for a better environment during their academic years. The current study discusses academic procrastination and its effects on self-esteem among medical and dental undergraduate students.

Methodology

A cross-sectional study was conducted among 312 medical and dental undergraduates at Army Medical College Rawalpindi and Armed Forces Institute of Dentistry Rawalpindi from February 2020 to January 2021. Approval to conduct this study was taken from the Dean of institutes and ethical committee approval was taken from Institutional Review Board (No: 905/TrgABP1K2).

This questionnaire consisted of three parts. The first included questions about gender, level of education and academic status. Anonymity and confidentiality were ensured, as the names of candidates were not included in this questionnaire. Rosenberg Self-Esteem Scale was used in the second part of the questionnaire to evaluate the participant's self-esteem¹³; it contains a 10-item scale measuring global self-esteem about one's self. Five items of the instrument are reverse scored. Four-point Likert scale is used to rate items, items range from strongly disagree (0) to strongly agree (3), higher sum score on the scale indicates a high level of self-esteem. Procrastination assessment scale student (PASS) made up the third part of the questionnaire. The second part of the PASS scale was not utilized. Solomon and Rothblum¹⁴ produced this scale including 18 items. The level of procrastination in 6 academic domains was measured by the items: 1) writing a term paper, 2) studying for an exam 3) keeping up with weekly reading assignments, 4) performing administrative

tasks, 5) attending meetings and 6) performing academic tasks in general. A 5-point Likert-type scale was used for 6 of these domains each consisting of 3 items. The frequency of procrastination on academic tasks was measured by the first item, the degree to which procrastination on the task was causing a problem for students was measured by the second item, and the amount of students' willingness to decrease their procrastination was measured by the third item. Cronbach's alpha for items of the questionnaire is 0.7, which is acceptable.

A pilot study was conducted and necessary modifications were made to make the study feasible. The sample size was 312 as calculated by Rao soft sample size calculator. The purpose of the study was disclosed and consent was taken from the candidates of the study. Questionnaires were handed out to the study participants with necessary instructions followed by collection after completion.

We used SPSS version 24.0 (SPSS Inc., Chicago, IL, USA) for Windows to evaluate the data. Descriptive tests, t-test, and ANOVA were used to describe the sample, comparing two means, and comparing three means respectively.

Table 1: Descriptive Characteristics of the Participants

Sr#	Variable	N (%)
1.	Gender	
	Male	127 (40.7%)
	Female	185 (59.3%)
2.	Type of Degree	
	MBBS	134 (42.9%)
	BDS	178 (57.1%)
3.	Year of Study	
	1st year BDS	27 (8.7%)
	2nd year BDS	12 (3.8 %)
	3rd year BDS	44 (14.1 %)
	final year BDS	94 (30.1%)
	1st year MBBS	73 (23.4%)
	2nd year MBBS	10 (3.2%)
	3rd year MBBS	15 (4.8%)
	4th year MBBS	22 (7.1%)
	final year MBBS	15 (4.8%)

Results:

312 undergraduate medical students participated in the study. Out of these participants 127(40.7%) were male and 185(59.3%) were female. The majority were from BDS degree 178(57.1%). Out of these 312 students, most of them were from Final Year

Table 2: Comparison of Mean Academic Procrastination Scores and Mean Self-Esteem Scores for Undergraduate Medical Students Across Gender, Degree Type and Academic Year of Study

Sr #	Vari-able	Groups	N	Mean ± SD	Test Value	P value		
1.	Self-Esteem Score	Gender						
		Male	127	17.11 ± 2.89	0.53	0.590		
		Female	185	17.29 ± 2.65				
		Type of Degree						
		MBBS	134	17.70 ± 2.81	2.72	0.007		
		BDS	178	16.85 ± 2.65				
		Year of Study						
		1st year BDS	27	17.07 ± 2.49	1.37	0.206*		
		2nd year BDS	12	16.33 ± 2.83				
		3rd year BDS	44	17.27 ± 3.00				
		final year BDS	94	16.70 ± 2.49				
1st year MBBS	73	17.91 ± 3.20						
2nd year MBBS	10	17.20 ± 2.74						
3rd year MBBS	15	17.20 ± 2.24						
4th year MBBS	22	17.90 ± 2.38						
final year MBBS	15	16.93 ± 2.01						
2.	Academic Procrastination Score	Gender						
		Male	127	35.00 ± 8.25			0.22	0.75
		Female	185	35.30 ± 7.64				
		Type of Degree						
		MBBS	134	34.37 ± 8.39	1.73	0.11		
		BDS	178	35.79 ± 7.44				
		Year of Study						
		1st year BDS	27	33.74 ± 6.14	2.65	0.03*		
		2nd year BDS	12	37.08 ± 8.60				
		3rd year BDS	44	38.06 ± 6.76				
		final year BDS	94	35.17 ± 7.79				
1st year MBBS	73	34.02 ± 8.30						
2nd year MBBS	10	28.90 ± 5.02						
3rd year MBBS	15	36.73 ± 10.87						
4th year MBBS	22	35.50 ± 5.91						
final year MBBS	15	35.66 ± 9.81						

*One way ANOVA p value

BDS 94(30.1%) and 1st Year MBBS 73(23.4%) as shown in Table 1.

Based on mean self-esteem scores (high self-esteem score >15 and low self-esteem score <15), most of the participants had low self-esteem 271(86.0%). Similarly, based on mean academic procrastination scores (>36 high academic procrastination and <35 low academic procrastination), out of 312 participants 152 (48.7%) had high academic procrastination levels. The mean self-esteem score of the MBBS students (17.70 + 2.89) was higher than BDS students (16.85 + 2.65) and the independent samples t-test showed this difference to be statistically significant ($p=0.007$). Similarly, the mean academic procrastination score of BDS students (35.79 + 7.44) was higher than MBBS students (34.37 + 8.39), whereas this difference is not significant ($p=0.11$). The mean difference between self-esteem scores ($p=0.59$) and academic procrastination scores ($p=0.75$) among males and females does not prove to be significant, respectively.

One-way ANOVA displayed no significant difference in mean self-esteem scores among different years of study of MBBS and BDS students. However, the mean academic procrastination score of 3rd year BDS was the highest (38.06 + 6.79) and this difference is statistically significant among the year of study groups ($p=0.03$) as shown in Table 2.

For these 312 participants, Pearson Co-relation display very weak negative co-relation ($r = -0.02$) between academic procrastination scores and self-esteem scores, but were not found to be statistically significant ($p=0.64$).

Discussion

Medical and dental Undergraduates experience stress, burnout and over-burden due to a lack of effective time management leading to procrastination and low self-esteem leading to academic underperformance adding to further anxiety.¹²

The null hypothesis of the research was that there is a negative correlation between academic procrastination and self-esteem in medical and dental under-

graduates. The findings of our study display a statistically insignificant weak negative correlation between academic procrastination scores and self-esteem scores. An increase in academic task delay will decrease the self-esteem of an undergraduate. Unlike our study results, a Study done by Babu et al. and El Marsi reported a positive correlation between academic procrastination scores and self-esteem scores.^{2,16} Özge Kınık & Hatice Odacı in their study concluded that self-esteem directly and significantly affected academic procrastination.⁹ Results of a study conducted by S. Batool supported that procrastinators had low self-esteem.¹⁰ Interestingly, Zhang et al. in a study concluded self-esteem being negatively associated with academic procrastination among health professional undergraduates signalling that improving undergraduates' self-esteem will decrease their academic procrastination.¹

In the current study, the mean difference between self-esteem scores and academic procrastination scores among males and females was not significant. Atalayin et al., Ozer and Manhan et al. stated no noteworthy variation in males' and females' mean scores on procrastination.^{6, 17, 18} Contrary to the results of our study, some literature concluded that males had a higher rate of procrastination.^{7,19,20}

The mean self-esteem scores of our study reported no statistically significant gender difference among the study individuals which is in line with the results of the studies conducted by Babu et al., Marcic et al. and Polce-Lynch et al.^{2,21,22} This is due to the fact that their dental curriculum has no bias between males and females and both have identical opportunities.² Population of this study included dental and medical students but did not report any significance in gender response.

The mean self-esteem score of the MBBS students was higher than BDS students and the mean academic procrastination score of BDS students was higher than MBBS students, though, the difference is negli-

gible; academic procrastination is a concept with cognitive and affective dimensions affected by a psychological factor such as self-esteem.⁹ The reason could be that a lot of students opt for BDS not as a personal preference but after MBBS seats are filled and some dental students get into dental college so they can uphold the legacy of someone in the family or safeguard the dental clinic which was run by a senior family member so as to save the family investment. The low procrastination of MBBS students increases their self-assurance, and confidence level leading to high self-esteem whereas Dental students procrastinate more in their academic tasks causing fear of failure, embarrassment and low self-esteem.

Limitations And Recommendations

It is an initial study with a self-reported questionnaire leading to social desirability bias. It needs to be validated in different populations, as a study sample from one medical and dental college cannot be considered to be generality. A longitudinal study is required to study causation; correlation design is inadequate for this purpose. Further research is required so that academic procrastination can be studied in relation to personal factors such as academic self-efficacy, neuroticism and perfectionism etc., which predict academic procrastination.

Timely psychological and therapeutic interventions are required for students who tend to procrastinate. The self-esteem of undergraduate students needs to be boosted by encouragement, motivation and increasing their self-worth. Cognitive Behavioural Therapy protocol like fostering self-regulation, time management and internal motivation needs to be adopted. Counselling the undergraduates at the university level to motivate them is required.

Conclusion

Our study concludes the existence of a slightly weak negative correlation between academic procrastination and self-esteem among medical and dental

undergraduates. An increase in delaying the task will decrease the self-esteem of students. Self-regulation, self-efficacy, motivation, optimism, and anxiety are some variables of academic procrastination which are needed to be further researched among medical and dental undergraduate students.

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Conflict of Interest *None*

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Authors Contribution

VB: Conceptualization of study

HG: Drafting

HG, AH : Critical Revision, Final Approval

EI, MA: Data Collection and Analysis

All authors are equally accountable for accuracy, integrity of all aspects of the research work.