Correlation between Academic Procrastination and Self-Esteem among Dental students of an institute of Northern India: A Cross-Sectional Survey

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Abstract

Background: Procrastination can be viewed as a self-imposed obstacle to behavior. In educational contexts, academic procrastination refers to postponing academic tasks. Individuals who procrastinate start feeling powerless and hopeless, his confidence suffers and can lead to low self-esteem.

Aim: The aim of the study was to determine the correlation between academic procrastination and self-esteem among undergraduate students of a dental Institute of Northern India.

Materials and method: A descriptive cross-sectional study having structured questionnaire was developed and circulated among dental students of an institute using convenience sampling technique. A total of 239 responses were obtained and evaluated.

Statistical analysis: The data was processed using Microsoft Excel version 7.0. Statistical analysis using independent Student t-test, ANOVA and Pearson's correlation test was performed along with descriptive analysis.

Results: A moderate negative co-relation was obtained among males, females and overall study participants (r=

-0.592, r= -0.634, r= -0.604 respectively). Majority of participants were females and 3rd year students participated to the maximum. No statistically significant difference was seen gender wise and academic year wise with mean procrastination scores and with mean self-esteem scores.

Conclusion: Among dental students, Individuals possessing higher self-esteem tend to procrastinate less, whereas those with increased procrastination possess lower self-esteem. Thus, it is important to guide students after admissions to colleges regarding curriculum deadlines and educational environment.

Keywords: Academic Procrastination, Self-Esteem, Performance, Education, Environment, Stress.

Introduction

Procrastination is a self-damaging trait that occurs when people keep postponing a work they expect to finish likely resulting in decreased productivity, lower morale and heightened stress. The word procrastination comes from the Latin word procrastinatus, which was derived from the prefix pro-, meaning "forward," and crastinus, meaning "of tomorrow".[1]Academic Procrastination is the delay of an educational work by one's own accord which may be finished beyond the due time. An academic obstacle is the common cause of delaying tasks in 75% of students according to the study done by Argiroulou and Ferrari in 2014. Although undergraduate students should be spending their generous time on doing assignments, journal club, projects, extracurricular activities etc. they often end up deferring it due to deadlines/ limited time.[2]This behavior is known to be linked with feeling apologetic, miserable and poor self-worth. People who are self-efficient in meeting their day to day study goals, they are capable of managing their time according to their targets and those who are devoid

of the same, they end up procrastinating and compromised self-esteems.[3]

Self-esteem all together indicate individual's inner judgments about their self-confidence to achieve higher goals in life. Evidence suggests that having higher self-esteem help the person better able to endure challenges, stress and setbacks, whereas low self-esteem leads to emotional damage.

To achieve a set goal in any field, along with hardwork and determination, time management is a key skill. But procrastination becomes a hurdle due to which student's self-esteem gets affected. Therefore, the present study aims to determine the correlation between academic procrastination and self-esteem among undergraduate students of a dental Institute of Northern India so that timely intervention helps students to improve their skills.

Materials and methods

The present study was a descriptive cross-sectional questionnaire based survey in a dental institute of north India. The study protocol was approved by institutional ethical committee with reference number AIDSR/CRC/03/2023/2. A pilot study was done with 20 subjects to check viability of the questionnaire. After testing the feasibility, all dental students who gave informed consent and students using smart phones were included in the study. Students having problem in the comprehension of questionnaire and students who were not willing to participate in the study were excluded.

The minimum sample size obtained was 205 using this formula

Sample size $=n = \dfrac{Z^2_{1-\alpha/2}P(1-P)}{d^2} = \dfrac{(1.96)^2(0.65)(1-0.65)}{(0.05)^2} =$ 205

$Z^2_{1-\alpha/2}=$ Value at specified confidence level = 1.96 (α is 5% at 95% confidence level)

p=Proportion of event in the population = 0.65[Reference of prevalence=65% [4]]

d=Acceptable margin of error in estimating the true population proportion=0.05

The purpose of the study was explained to the dental students during their theory classes and pretested e-questionnaire was forwarded in each batch of dental students through WhatsApp/e-mail. A period of 15days was given to fill the form and reminder was given again after 3 weeks. The total of 239 responses were obtained. The study duration was of 2 months. Questionnaire consists of 3 parts. The confidentiality of the responses was assured to the participants. A structured questionnaire including 3 parts was developed. The 1st part aimed to collects demographic data like gender and academic year of students. The 2nd section was modified Tuckman procrastination scale (1991) which was altered according to dental students to measure procrastination tendencies circumscribed to the academic domain. It consisted of 16 statements, out of which 4 were reverse scored. Four-point Likert scale was used to rate the items from 1 to 4, where score 1 denoted that's me for sure to score 4 that denoted that's not me for sure. The final score extended from 16 to 64 in which smaller score suggests significant procrastination behaviour.[5] The 3rd section is Rosenberg self-esteem scale consisting of 10 questions, a widely used self-report instrument for evaluating confidence in one's own worth/abilities as well as emotional states such as triumph, despair, pride and shame. 4-point Likert scale format ranging strongly disagree (1) to strongly agree (4), is used to rate all the statements where higher score suggests higher self-esteem. Out of 10 items, 5 are reverse scored.[6]The data was processed using Microsoft Excel version 7.0 . Statistical analysis using independent Student t-test, ANOVA and Pearson's correlation test was performed along with descriptive analysis. The level of statistical significance was set at P <0.05.

Results

A total of 239 dental participants were included in the present study in which 77% were females whereas only 23% were males. Majority (28%) of the participants were third year BDS students followed by fourth year (20.5%), second year (18.4%), first year (17.6%) and then interns (15.5%). No statistically significant difference was seen gender wise with mean procrastination scores (p= 0.451) and gender wise with mean self-esteem scores (p=0.198)[Table1]. No statistically significant difference was observed between academic year of participants and mean procrastination score (p=0.388)[Table2]No statistically significant difference was observed between academic year of participants and mean self-esteem score (p=0.971)[Table3].Academic procrastination and self-esteem scores among males, females, and overall study participants shows a moderate negative correlation (r= -0.592, r= -0.634, r= -0.604 respectively)[Table4] and was also statistically significant.

Discussion

Procrastination involves purposefully postponing an intended task. Earlier studies on procrastination have revealed its prevalence among college students.[7]Insufficient time management can result in delaying academic and clinical responsibilities, which may ultimately impact their academic performance. This negatively influences student's academic achievements and overall well-being. Dental students are also susceptible to procrastination as they often need to balance academic, preclinical, and clinical obligations.[8]

In the current study, the number of female participants surpassed that of male participants, maintaining a ratio of 3:1, which aligns with findings from prior research. This trend can be ascribed to the perception among women that they can effectively manage both their professional and personal lives within the dental field. Dentistry provides flexible work schedules that accommodate domestic responsibilities, while also offering opportunities for professional recognition, financial stability, and community service.[9]

In the present study, the mean difference in academic procrastination scores between males and females are not significant, consistent with findings demonstrated by Atalayin et al. [10], Browne [11], Saleem and Rafique[12] within their respective research. Similarly, Beswick et al. and Effert and Ferrari [13] reached the consensus that procrastination tendencies remain consistent regardless of gender. However, an opposing viewpoint is presented by Senecal et al. [14], who reported that males tend to procrastinate more than females, a phenomenon possibly attributed to females displaying a more responsible and organized demeanor.

The average self-esteem scores in present study revealed no statistically significant gender differentiation among the participants, aligning with findings from Babu et al. [5], Marcic et al., and Polce-Lynch et al. [15]. This congruence can be attributed to the unbiased dental curriculum providing equal opportunities to both genders. However, in contrast, Gohil[16] observed that females exhibited notably higher self-esteem levels, with statistical significance. Additionally, Pleck indicated that males might experience diminished self-esteem due to challenges in meeting cultural standards of masculinity [17]. Conversely, females' self-esteem might be adversely affected by societal emphasis on physical appearance, leading to dissatisfaction.

One of the objectives was to assess the mean variations in both procrastination and self-esteem across different academic years among dental students. Notably, there were no statistically significant discrepancies year wise in academic procrastination, in accordance with a preceding investigation. Supporting this, Nagarjuna et al. observed a consistent presence of procrastination among dental students in their 2018 study, emphasizing the perpetual stress dental students endure to meet the rigorous standards set by their instructors, regardless of their academic level [18]. However, in contrast, interns exhibited higher levels of procrastination compared to final-year students, similar to findings by Onwuegbuzie in 2000, highlighting that graduate students displayed a greater tendency to postpone assignments in comparison to undergraduates [19].

The primary objective of this study was to explore the relationship between academic procrastination and self-esteem among dental students. The present revealed a statistically significant moderate negative correlation between academic procrastination scores and self-esteem scores, that is, as academic procrastination increased, self-esteem decreased, in accordance with research carried out by Saleem and Rafique[13]. This observation is consistent with the outcomes of a study by S. Batool[20], which indicated that postponing academic tasks can lead to a reduction in undergraduate students' self-esteem.

Consistently, procrastination has been identified as a detrimental factor affecting students' academic performance. Individuals are prone to procrastination when they perceive themselves negatively. Elevated self-esteem, however, can result in increased confidence to effectively complete tasks. Our study findings validate

this notion, revealing an inverse correlation between academic procrastination and self-esteem. Some proposed that procrastinators often operate under pressure for extended durations, channeling their resources towards a singular goal, which heightens the likelihood of achieving positive outcomes. Through a comprehensive evaluation of existing data, Steel concluded that procrastination tends to be harmful or occasionally neutral, but never beneficial [7]. It is evident from this discussion that further research is required in this field with large sample size.

Table 1: Gender wise comparison of mean procrastination and self-esteem score among study participants								
Scale	Total		Females		Males		t value	p value
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation		
Procrastination	38.50	7.09	38.70	6.87	37.82	7.79	0.757	0.451
Self - esteem	26.25	2.41	26.14	2.41	26.62	2.42	1.297	0.198

Table 2: Academic year wise comparison of mean procrastination score among study participants		
	Mean	Std. Deviation
First year	38.07	6.34
Second year	40.43	6.41
Third year	38.12	7.41
Fourth year	37.78	8.73
Intern	38.32	5.40
Total	38.50	7.09
F value	1.038	
p value	0.388	

Table 3: Academic year wise comparison of mean self-esteem score among study participants		
	Mean	Std. Deviation
First year	26.38	3.04
Second year	26.16	1.75
Third year	26.34	2.72
Fourth year	26.22	2.29
Intern	26.05	1.90

Total	26.25	2.41
F value	0.132	
p value	0.971	

Table 4: Relationship between procrastination and self-esteem score among study participants			
Variable	Values	procrastination score	self-esteem score
Procrastination score (Males)	r	1	-.0.592
	p		<0.01
Procrastination score (Females)	r	1	-0.634
	p		<0.01
Procrastination score (Overall)	r	1	-0.604
	p		<0.01

Limitations

The questionnaire administered gathered information about students' academic procrastination and self-esteem, potentially introducing a social desirability bias. The utilization of a correlational approach prevented the investigation of causation, and the study's participant count among dental students was restricted due to data collection limitations. For enhanced validity and dependability of findings, it is recommended that the research be replicated using a larger sample size. To enhance the comprehensiveness of the study, the incorporation of additional variables like anxiety, self-efficacy, and depression could provide insight into the associated factors of procrastination.

Conclusion

Among dental students, a moderate negative correlation exists between academic procrastination and self-esteem indicating that Individuals possessing higher self-esteem tend to procrastinate less, whereas those with increased procrastination possess lower self-esteem. Thus, it is important to orient the students after admissions to professional colleges regarding curriculum deadlines and educational environment. Psychotherapy, student counselling and group discussion can be conducted at university level for the enhancement of self-esteem.

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