Comparison of Self-Esteem and Academic Procrastination among Male and Female Healthcare Undergraduates-A Comparative Study.

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Objective: To validate the academic procrastination scale (APS) and Rosenberg Self- Esteem Scale (RSES) and to compare mean score of self- esteem and academic procrastination among male and female students of Southern Punjab.
Methodology: This was the Cross-sectional study conducted among undergraduates of MBBS, Physiotherapy (DPT), Pharmacy (D-Pharmacy) and Allied Health Sciences (AHS) disciplines of private institute of Bahawalpur Medical College (BMC) from January till March-2024. The study tool was comprised of three sections. Section one was about demographic variables like gender, age, graduation program. APS of Tuckman and RSES was used to measure APS and SES in section two and three respectively. For data analysis SPSS version 27 was used. Normality of data was checked with Shapiro-Wilk test. Cronbach's alpha was used to assess the validity of APS and RSES. P-value < 0.05 was considered as statistically significant.
Result: Total n=400 forms were distributed from which n=387 were included for data analysis with 93.6% of response rate There was total n=262 (67.7%) female and n=125 (32.3%) male students. Male students were found to be more procrastinator then female students (39.3 ± 8.17) and (42.72 ± 9.8) respectively. While comparing RSES, there was insignificant difference found. Male students had higher RSES score as compare to female students 27.93 ± 4.6 and 28.6± 4.50 respectively-table.3. APS was found to be validated tool at Cronbach's alpha value of 0.821.
Conclusion: Academic Procrastination Scale was found to be valid tool in local context. Lower APS was found among male students showed more procrastinators then female gender.

Key Words: Academic Procrastination, Procrastination, Self-Esteem, undergraduates.

Procrastination is developed from Latin word Pro means onward, forward, of tomorrow.[1] Procrastination means to delays todays every day job to some other day that is uneasy to start for someone.[2] Procrastination can be temporary or permanent and become the part of the personality and become behavior. Permanent procrastination has an impact over decision making and cognitive output.[3] Delaying or carrying an activity related to academic affairs or delaying the tasks to last minute before performance to accomplish credit or grade is known as Academic Procrastination.[4] Academic procrastination can results in failure of academic achievements on time and will lead to anxiety and depression.[5, 6] Academic procrastination is related to incompetent behavior and create in effective environment.[7] University students having academic procrastination would disregard their academic obligations during their entire period of university program.[8] It is evident from the literature that university students have the tendency to complete the projects, preparing for the exams, submitting the assignment widespread on deadline.[8] It is the deliberate delaying of the academic tasks during training and substantially impact the success of the students.[9, 10, 11]

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Academic procrastination, a prevalent issue among students, has been extensively studied and highlighted related to self-esteem across worldwide.[1-3] Factors such as self-worth, fear of not succeeding and perfectionism are various stages of self-esteem, which have been identified as key influencers of procrastination behaviors.[4]
Furthermore, the association between self-esteem and procrastination has been explored longitudinally, indicating that self-esteem plays a crucial role in the development and persistence of academic procrastination over time.[5] Moreover, the negative association between self-esteem and procrastination has been consistently reported in literature reviews, emphasizing the importance of self-control techniques in mitigating procrastination tendencies.[6,7] These findings collectively underscore the intricate association between academic procrastination and self-esteem, shedding light on the need for interventions to address these issues amid undergraduates.
There were various studies conducted worldwide have used latent growth models and cross-lagged in their longitudinal studies to discover the developmental relationship overtime between self-esteem and academic procrastination.[5] Research has shown significant differences while comparing gender with self-esteem and stages of procrastination in which male students reported higher procrastination score while performing daily academic tasks. Studies have highlighted the impact of , fear of not succeeding as a predictor of academic procrastination among college students, emphasizing its negative relation self-esteem and academic procrastination.[4]
Several studies suggested no significant effect of self-efficacy on academic procrastination amid undergraduates of university in Pakistan, while other studies indicate a noteworthy relationship, with self-efficacy and related

constructs like self-concept, perfectionism, self-esteem, and psychological resiliency influencing or mediating academic procrastination to varying degrees.[4]

Studies conducted in other countries has revealed that academic procrastination and self-esteem are interconnected, with self-esteem influencing procrastination tendencies.[5] Hence this study was aimed to compare the mean score of academic procrastination and self- esteem among male and female undergraduates' and to validate the self- esteem scale and academic procrastination scale students of southern Punjab.

Methodology:

It was a descriptive questionnaire based study conducted among undergraduate students of MBBS, Physiotherapy (DPT), Pharmacy (D-Pharmacy) and Allied Health Sciences (AHS) disciplines of private institute of Bahawalpur Medical College (BMC) from January to March-2024. Institutional ethical approval was obtained from the IRB of BMC/BRLS ref # 01/2024. The study tool was comprised of three sections. Section comprised of demographics like gender, age, graduation program etc. Age was stratified as 18-21 years, 22-25 years and 26 and above. Section two comprised of Academic Procrastination Scale of Tuckman in (1991) having 16 items.[11] The aim of this scale was to measure academic procrastinators and this is most widely used research scale to measure academic procrastination. The 16 items of Tuckman's procrastination scale was rated on four point Likert scale from 1= that's me for sure, 4= to that's not me for sure. The total score was from 16 to 64. The higher procrastination tendency was scored by smaller score.

Third Section was regarding the assessment of self-esteem using Rosenberg Self-Esteem Scale (RSES).[12] RSES comprised of 10 items to evaluate the positive and negative feelings about self. Every item had responses on four-point Likert scale, from (1) strongly disagree to (4) strongly agree, greater levels of self-esteem was denoted with increased sum score on the scale. To check the feasibility of questionnaire, a pilot study was conducted among 20 medical students. The sample size was calculated as 382 by keeping the prevalence of academic procrastination as 46% according to the study of Priya Babu in 2019[11] with the help of standard formula of sample size calculation $n = (Z\alpha/2)\ 2 \times P \times (1 - P) \times D/E2$. Total 400 questionnaires were distributed among undergraduates and graduates of various disciplines. Consent was obtained from the students who were agreed and anonymity of data was assured. It was further assured that their participation will not affect their grades. The data of completed forms were entered on SPSS version 27. Shapiro-Wilk test was used to check the normality of data. Cronbach's alpha was used to assess the validity of APS and RSES in our context. Frequency and percentage was used in descriptive analysis. Association of different variables were assessed by Chi Square Test. Independent T Test was used to compare the potential variation in mean score of APS and RSES among male and female students. Pearson Correlation Analysis was used to calculate the strength and direction of association between age, APS and RSES was performed. P-value < 0.05 was considered as statistically significant.

Result:

Total n=400 forms were distributed among undergraduate's students of various disciplines of the private Institute of Southern Punjab. The response rate was 93.6% as n=387 questionnaires were completed in all aspects.There was total n=262 (67.7%) female and n=125 (32.3%) male students. Majority n=260 (67.2%) students were from age bracket of 18-21 years. Majority students were from MBBS program n=120 (31%) followed by n=99 (25.6%) students from pharmacy program- table-1. Cronbach's alpha value was 0.821 for 17 Items of Academic Procrastination Scale (APS) and 0.714 for ten Items of Self Esteem Scale in this context (table-2). APS tool was found validated in this context. The prevalence of procrastination was found to be 15.76% in our study. While comparing the mean score of APS and RSES among female and male students, there was a significant difference found for APS at p-value 0.001. Higher procrastination score was found amid male then female students (39.3 $\pm$ 8.17) and (42.72 $\pm$ 9.8) respectively. While comparing RSES, there was insignificant statistical difference found. Male students had higher RSES score as compare to female students 27.93 $\pm$ 4.6 and 28.6$\pm$ 4.50 respectively-table.3. There was positive correlation found 1 for APS to APS and negative correlation (-.186) found for APS to RSES and was found to be statistically significant among undergraduates of various disciplines in this study-table-4. Hence, it depicted that APS increases with decreases RSES score-table-4. Pearson correlation of age with APS and RSES was 0.121 and 0.043 respectively and statistically significant p-value of 0.018 found, thereby revealed moderate positive correlation as age increases APS decreases and SES increases-table-5.

Table: 1. Association of various Variables among male and female students N=387.

Variables	Stratification	Female n=262	Male n=125	Total	P-value
Age	18-21 Years	185	75	260	0.006*
	22-25 Years	56	45	101	
	26 and Above	21	5	26	
Various Disciplines	MBBS	78	42	120	0.0001*
	DPT	73	15	88	
	D-Pharma	69	30	99	
	Allied Health Sciences	42	38	80	
APS	Less than 34	40	21	61	0.402**
	More than 34	222	104	326	
RSES	Less than 20	4	0	4	0.209**
	More than 20	258	125	383	

*Chi square, ** Fischer Exact Test

Table: 2. Reliability Analysis of APS and SES in Pakistani Population			
Scale	Cronbach's Alpha	Cronbach's Alpha Based (Standardized Items)	N of Items
APS	0.821	0.812	17
SES	0.714	0.699	10

Table: 3. Comparing Mean Score of Academic Procrastination and Self Esteem Score among Male and Female Students			
Variables	Gender	Mean ±(SD)	P-Value*
Academic Procrastination Score	Female	42.72 ± 9.8	0.001
	Male	39.3 ± 8.17	
Self Esteem Score	Female	27.93 ± 4.6	0.185
	Male	28.6± 4.50	

Table: 4. Academic Procrastination and Self Esteem Score (Pearson Correlation Coefficient)		
Variable	APS	P-Value*
(R- value)	1	0.0001
SES	-.186	

Table: 5. Age, Academic Procrastination and Self Esteem Score (Pearson Correlation Coefficient)		
Variable	APS	SES
Age (R- value)	0.121	0.043
P-Value	0.018	0.395

Discussion:

It is evident that the healthcare undergraduates experienced over burden, burnout and stress due to the extensive teaching and routine during the entire period of graduate program. This results in ineffective time management, lack of prioritization of tasks and leads to academic procrastination and decline self-esteem.

The current study was focused to compare the APS and RSES among female and male undergraduates of private Institute located in Southern Punjab. The prevalence of procrastination was found to be 15.76% in present study. The aim was to compare the mean score of APS and RSES among female and male students, there was a significant difference found for APS at p-value 0.001. Male students were found to have greater procrastination score than their counter group of female (39.3 ± 8.17) and (42.72 ± 9.8) respectively. This result was in agreement with the study conducted among Turkish undergraduates and reported that male students were more frequent procrastinator while performing academic tasks then female students.[13,14] Male students had higher RSES score as compare to female students 27.93 ± 4.6 and 28.6± 4.50 respectively. This result is coherent with the study of Itbar Kahn et al,[15] 2019 conducted among secondary school students. It was evident in present study that male students had significantly greater self-esteem score than female with significant correlation. Albeit, the result of this study might be due to the family pressure or self-motivation of the students to enhance academic performance.

Similarly, study by S Batool reinforced that procrastinators had lower self-esteem.[16] Excitingly, Zhang et al,[16] reported that among healthcare undergraduates improving self-esteem will decrease academic procrastination and higher score of APS have lower Self-Esteem Score [13] likewise the results of this study.[17, 18]

The secondary objective of present study was to validate the (APS) and self- esteem scale in our context. APS was found valid tool as 0.821 for 17 Items among healthcare undergraduates of Southern Punjab in this study. The same result was found during the study conducted in Turkish undergraduate's students.[13] Moreover, the Academic Procrastination Scale (APS) is a reliable and valid tool for assessing academic procrastination in Brazilian students, with convergent validity and adequate discrimination, difficulty, and information level.[19, 20,21,22,23] Hence this showed the cross cultural validity of academic procrastination scale (APS).

There were various limitations of this study which must be addressed such as academic performance, student's anxiety level, coping strategies, career choices, parental pressure and the self-motivation traits. In a study Procrastination is connected with the feeling of superiority and recoined as purposeful delay.[24] The result of this study would be benefited for the educators and policy makers while formulating curriculum framework. It is recommended that time management; character building, coping strategies, educational psychology and other soft skills must be part of the undergraduate healthcare curriculum.[25] Multi center and multi discipline study must be conducted to further explore the factors related to self-esteem and academic procrastination.

Conclusion:

Lower APS was revealed in male students, depicts male students as procrastinators then female students. Higher score of self-esteem had lower level of academic procrastination scale was found in male gender. Academic Procrastination Scale was found to be valid tool in local context.

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