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THE IMPACT OF ACADEMIC PROCRASTINATION ON PSYCHOLOGICAL WELLBEING AMONG UNIVERSITY STUDENTS

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Abstract

Objective: *To determine the relationship between academic procrastination and psychological well-being among university students, assessed whether academic procrastination predicts psychological well-being, and explored gender differences in procrastination.*

Methods: *A cross-sectional survey was conducted among 400 undergraduate students (aged 18–24 years) at the University of Sindh, Jamshoro. All the responses were summed to obtain a total score ranging from 12 to 60, with higher scores indicating greater procrastination, while the mean item score was calculated, ranging from 1 to 5 alternatively. Furthermore the Psychological well-being was measured by using Ryff's Scales of Psychological Well-being (PWB). All the relevant data were entered and analyzed using SPSS version 26. .*

Results*: Of the 400 participants, 27.0% were aged 18–20 years, 49.0% were aged 21–23 years, and 24.0% were older than 23 years. Males and females were equally represented (50.0% each). Academic procrastination was negatively correlated with overall psychological wellbeing ($r = -0.18$, $p < 0.001$), most strongly with purpose in life ($r = -0.27$, $p < 0.001$) and environmental mastery ($r = -0.26$, $p = 0.001$). After adjusting for demographic and academic factors, procrastination remained a significant predictor of lower wellbeing ($\beta = -0.18$, $p = 0.001$) and explained an additional 3.2% of the variance ($\Delta R^2 = 0.032$). Students with high wellbeing had the lowest*

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procrastination scores (p =0.001).

Conclusion: *Overall, academic procrastination observed highly prevalent among university students regardless of their background, and associated with lower psychological wellbeing, specifically a weak sense of control over daily life and a weak sense of purpose.*

INTRODUCTION

Procrastination is the voluntary delay of an intended course of action despite expecting to be worse off for the delay. It is one of the most widespread self-regulatory difficulties in higher education.[1] In the university students it usually takes the form of academic procrastination: putting off assignments, exam preparation and other study tasks until deadlines create pressure. University life offers many openings for this kind of delay, including flexible schedules, self-directed learning and constant digital distraction. Recent evidence also shows that procrastination stays fairly stable across the academic year rather than appearing only near examinations.[2]

Psychological wellbeing has been described as having six dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth.[3] It is increasingly seen as a core outcome of higher education rather than a by-product of academic success, and a growing body of research suggests that academic procrastination undermines it. In a cohort of 3,525 Swedish university students, higher procrastination predicted greater depression, anxiety and stress nine months later, along with poorer sleep, loneliness and physical inactivity.[4] A three-wave German study similarly found that procrastination led to later depression and anxiety symptoms. Perceived stress did not mediate this effect, which shows that the underlying mechanisms are still not fully understood.[5] Procrastination driven by fear of failure also predicted perceived stress among students facing heavy demands for self-organised learning.[6] A recent meta-analysis of 18 studies found moderate associations between bedtime procrastination and psychological distress, with stronger effects in Asian samples.[7] Students themselves appear to recognise the problem: among German first-year students, procrastination was the most widely accepted target for mental health interventions.[8]

The issue is particularly relevant in Pakistan, where exam-focused assessment and competitive academic environments may increase both delay and its emotional costs. Local studies show that perfectionism significantly predicts academic procrastination among Pakistani university students.[9] Academic procrastination has also been found to positively predict depression, anxiety and stress among students in Multan.[10] However, most local work has focused either on what causes procrastination or on symptoms of distress. Few studies have examined the positive dimensions of psychological wellbeing. The present study therefore examines the impact of academic procrastination on psychological wellbeing among university students. By focusing on wellbeing rather than on pathology alone, it aims to provide evidence that can inform counseling services, time-management programmes and institutional policies that support students' academic functioning and mental health.

MATERIAL AND METHODS

This study cross-sectional, analytical survey design study was comprised undergraduate university students from all departments at

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Sindh University, Jamshoro. Study was conducted during a period of six months from May 2025 to October 2025. All the undergraduate and postgraduate students enrolled for a degree programme (BS, MSc/MA or MPhil), aged between 18 and 30 years, have been completed at least one semester at the university with experience of academic deadlines, can understand the instruction English as the medium and willing to participate in the study were included. However the students who were currently diagnosed with psychiatric disorders and those who were not willing to take a part of study were excluded. A stratified random consecutive sampling technique was used.

Academic procrastination was assessed using the 12-item Pure Procrastination Scale (PPS) (a self-report instrument to measure the procrastination as dysfunctional or habitual delay). It comprised by selecting items from previously established procrastination measures and includes aspects of decisional delay, implementation delay and the timeliness. The each item of scale was rated on a five-point Likert scale, ranging from 1 (very seldom or not true of me) to 5 (very often true or true of me). All the responses were summed to obtain a total score ranging from 12 to 60, with higher scores indicating greater procrastination, while the mean item score was calculated, ranging from 1 to 5 alternatively. Furthermore the Psychological well-being was measured by using Ryff's Scales of Psychological Well-being (PWB) (an instrument conceptualizes psychological well-being as a multidimensional construct comprising six domains). The 42-item version was selected for this study to provide a more comprehensive assessment than the brief 18-item form. every term was rated using the response options specified for the selected version, and negatively worded terms were reverse-scored according to the official scoring instructions. The score was calculated separately for each of the six domains. The items were rated on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree), and negatively worded items are reverse-scored. Total scores range was from 18 to 126 and each subscale ranges from 3 to 21, with higher scores indicated as better wellbeing. Subsequently the association between procrastination and psychological well-being was measured using the total or domain-specific scores, as prespecified in the statistical analysis plan. All the relevant data were entered and analyzed using SPSS, version 26. Qualitative variables were computed as frequencies and percentages, while numerical variables were computed in terms of means and standard deviations.

RESULTS

Overall th9is stud enrolled the 400 students of the university, with around half (49.0%) were aged 21 to 23 years, followed by (27.0%) were aged 18–20 years and (24.0%) were above 23 years. Study sample was equally divided by gender, with 200 males and 200 females. According to the year of study, second-year students were in majority (34.3%), followed by final-year (28.7%), first-year (23.3%) and third-year students were around (13.8%). majority of the students participants were from the social sciences (84.8%), while (13.8%) from the natural sciences and only (1.5%) were from arts. Urban residents were (50.7%) while rural residents were (49.3%), as presented in table 1.

the Procrastination scores were significantly different across the levels of environmental mastery, personal growth, self-acceptance, purpose in life and the overall psychological wellbeing ($p = 0.001$), while not across the levels of autonomy ($p = 0.164$) or withy positive relations ($p = 0.060$). Out of all significant domains, students with higher wellbeing had the lowest procrastination

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score. However the students who procrastinated less were therefore more likely to feel in control of daily demands, to keep growing as people, to accept themselves and to have a clear sense of purpose. Table: 2.

In this study most of the students reported higher levels of academic procrastination. Around half (45.8%) scored in the high range and 16.0% in the very high range, so about six in ten students procrastinated frequently, while 35.5% students showed moderate procrastination, and only 2.8% showed low procrastination, reflecting that the academic procrastination as a common problem among the university students. **fig: 1**.

There was a weak negative correlation of academic procrastination with overall psychological wellbeing ($r = -0.18$, 95% CI -0.28 to -0.09, $p = 0.001$), along with strongest link to the purpose in life ($r = -0.27$) and environmental mastery ($r = -0.26$), the only two that held on both Pearson and Spearman tests as presented in table 3 and **Fig; 2.**

Table .1 Age groups of the study participants n=400

Variables		Frequency	Percent
Age groups	18-20 years	108	27.0%
	21-23 years	196	49.0%
	Above 23 years	96	24.0%
Gender	Male	200	50.0%
	Female	200	50.0%
Year of the study	First year	93	23.3%
	Second year	137	34.3%
	Third year	55	13.8%
	Final year	115	28.7%
Departments	Social Science	339	84.8%
	Natural Science	55	13.8%
	Art	6	1.5%
Residence	Urban	203	50.7%
	Rural	197	49.3%

Table: 2. Mean comparison of procrastination scores according to psychological Well-Being domains

Variables		Procrastination score				
		N	Mean± Std. D	95% CI for Mean Lower	f-value	p-value
Autonomy Domain severity	Low (7–24)	262	39.52 ± 7.80	38.57–40.47	109.93	0.001
	Moderate (25–33)	100	41.22 ± 8.08	39.62–42.82		
	High (34–42)	38	39.08 ± 9.86	35.84–42.32		
Environmental Domain severity	Low (7–24)	210	41.53 ± 6.52	40.65–42.42	195.99	0.001
	Moderate (25–33)	178	38.75 ± 9.17	37.40–40.11		
	High (34–42)	12	28.50 ± 2.07	27.19–29.81		
	Low (7–24)	185	37.19 ± 7.78	36.07–38.32		
	Moderate (25–33)	195	43.78 ± 6.16	42.91–44.66		

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Personal growth domain severity	High (34–42)	20	27.15 ± 2.35	26.05–28.25	448.72	0.001
	Low (7–24)	200	39.83 ± 8.36	38.66–41.00		
	Moderate (25–33)	197	40.15 ± 7.77	39.06–41.24		
	High (34–42)	3	29.00 ± 5.57	15.17–42.83		
Positive relation domain severity	Low (7–24)	181	38.92 ± 8.45	37.68–40.16	371.14	0.001
	Moderate (25–33)	204	41.44 ± 7.37	40.42–42.45		
	High (34–42)	15	31.00 ± 5.67	27.86–34.14		
	Low (7–24)	134	39.75 ± 7.81	38.42–41.09		
Self-acceptance domain severity	Moderate (25–33)	236	41.19 ± 7.81	40.19–42.19	253.08	0.001
	High (34–42)	30	30.50 ± 4.89	28.67–32.33		
	Low (42–143)	143	38.37 ± 8.48	36.97–39.77		
	Moderate (144–203)	246	41.34 ± 7.42	40.41–42.27		
Purpose in life domain severity	High (204–252)	11	27.73 ± 0.90	27.12–28.33	186.61	0.0001
	Low (7–24)	262	39.52 ± 7.80	38.57–40.47		
	Moderate (25–33)	100	41.22 ± 8.08	39.62–42.82		
	High (34–42)	38	39.08 ± 9.86	35.84–42.32		
Overall psychological severity	Low (7–24)	210	41.53 ± 6.52	40.65–42.42	535.43	0.001
	Moderate (25–33)	178	38.75 ± 9.17	37.40–40.11		
	High (34–42)	12	28.50 ± 2.07	27.19–29.81		
	Overall	400	39.91 ± 8.10	39.11–40.70		

Scores 7–24= (Mild negative Psycho well-being), **Scores 25-33=** (Moderate negative Psycho well-being), **Scores 34-42=** (Severe negative Psycho well-being) **CI=** Confidential interval, **Std. D** = Standard deviation

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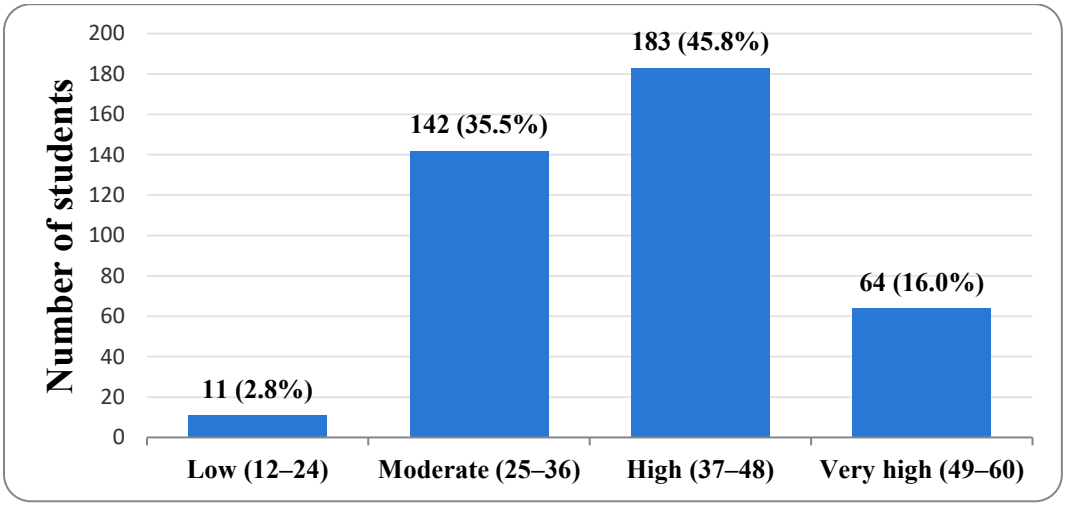


Figure 2. Distribution of academic procrastination levels (N = 400)

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Table 3. Correlations of academic procrastination with psychological wellbeing (N = 400)

Wellbeing outcome	Pearson r	95% CI	p	Spearman ρ	p
Total wellbeing	−0.18	−0.28 to −0.09	< 0.001	−0.02	0.647
Purpose in life	−0.27	−0.36 to −0.18	< 0.001	−0.18	< 0.001
Environmental mastery	−0.26	−0.35 to −0.16	< 0.001	−0.22	< 0.001
Positive relations	−0.11	−0.20 to −0.01	0.034	−0.08	0.093
Self-acceptance	−0.08	−0.18 to 0.02	0.110	−0.02	0.699
Personal growth	−0.06	−0.16 to 0.04	0.227	0.10	0.056
Autonomy	0.03	−0.07 to 0.13	0.559	0.09	0.079

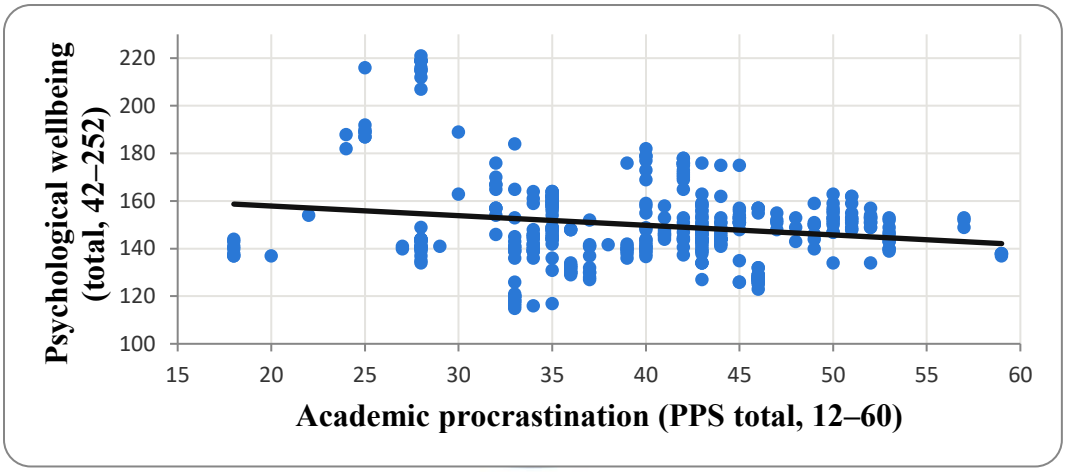


Figure 2. Relationship between academic procrastination and total psychological wellbeing

DISCUSSION

Academic procrastination is a common behavior among the students of university and may be associated with psychological well-being, and consideration of this association is important because the tendency of the students to delay academic tasks may influence both their academic performance and overall psychological health. In this study, 61.8% of students scored in the high (45.8%) or very high (16.0%) range on the Pure Procrastination Scale, while only 2.8% showed low procrastination (mean PPS = 39.91 ± 8.10). Such higher prevalence agrees with recent the evidence as according to a survey of 1,308 Chinese nursing students reported that the academic procrastination was 82.0%, with an overall mean score of 50.4 ± 12.6.[11] Another, recent evidence also estimated around half of university students reported themselves as chronic and severe procrastinators.[12] A slightly lower proportion in this study may reflect differences in measurement tools and cut-off points, subsequently the PPS measures general dysfunctional delay rather than academic delay alone.

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In this study overall mean score of procrastination was not differ significantly according to gender (male = 40.31 ± 8.02 and female students = 39.50 ± 8.18) (p = 0.318). The findings were comparatively related to a large socio-demographic meta-analysis of 193 studies, where males procrastinated was slightly higher than females, while the effect was very small.[13] The findings were further supported by the Swedish cohort in whom gender identity did not influence the procrastination trajectories across the academic years.[2] Findings were also matched by a national study of 405 university students where no significant difference noted in academic procrastination according to gender.[9] Overall both male and female students in the similar institutions face identical academic demands similarly, which may further reduce gender differences.

In this study the score of procrastination was not significantly statistically according age groups (p = 0.179) or years of study (p = 0.426). The findings were consistent with a Turkish study of 681 health sciences students, where academic year was not significantly associated with procrastination (p = 0.546).[14] A recent meta-analysis of 67 studies also supported the results, in which age did not moderate the link between time management and academic procrastination.[15]

In this study according to the association between procrastination and overall psychological wellbeing, there was a weak and negative correlation with overall psychological wellbeing ($r = -0.18$, $p < 0.001$), while after adjustment for demographic and academic factors, it remained a significant predictor ($\beta = -0.18$, $p = 0.001$) and explained 3.2% of additional variance and overall direction of this correlation agrees with the recent literature, where a cohort of 3,525 Swedish students of the university, a one standard deviation enhanced in procrastination predicted higher depression ($\beta = 0.13$), anxiety ($\beta = 0.08$) and stress ($\beta = 0.11$) nine months later, together with greater loneliness and poorer sleep condition[4]. However according to a three-wave German study similarly reported procrastination led to depression and anxiety symptoms over a year.[5] The procrastination had a significant negative impact on psychological wellbeing in 768 undergraduates at Turkey[16] and was associated with lower subjective wellbeing among students and non-students.[17] Moreover according to a local evidence in 251 student from Multan, academic procrastination positively predicted the anxiety stress and the depression.[10] The correlation in this study was weak compared to the moderate correlations reported in a recent meta-analysis of bedtime procrastination and distress ($r = 0.28$ to 0.38).[7] A number of factors may explain this, like most previous studies estimated the distress including depression, anxiety and stress, while this study measured eudaimonic wellbeing, that reflects longer-term life functioning and may respond less directly to delay every day, and low reliability of the wellbeing scale attenuates observed associations, along with the total-score association was sensitive to a small number of extreme cases (Spearman $\rho = -0.02$), that reflects the overall effect was not consistent across all of the students of University.

In this series the academic procrastination associates to psychological wellbeing selectively instead uniformly, that the clearest effects in the two domains most closely tied to self-regulation. Environmental mastery ($r = -0.26$, adjusted $\beta = -0.26$) and purpose in life ($r = -0.27$, adjusted $\beta = -0.29$, $\Delta R^2 = 0.079$) were both significantly linked to the procrastination. The finding were aligns with a recent meta-analysis reporting a moderate negative correlation between time management disposition and the score of the

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academic procrastination ($r = -0.46$),[15] with the evidence of satisfaction is negatively linked all procrastination dimensions in a bulk of undergraduates.[18] Moreover the German data concerning difficulties in self-organized learning and fear-of-failure procrastination to raised perceived stress.[6] Additionally the purpose in life correlation was meanwhile consistent with temporal motivation theory, which holds that individuals discount temporally distant rewards in favor of immediate gratification;[1,2] the students with the clear sense of direction can link to the present academic tasks to valued long-term goals, while those lacking purpose have little reason to priorities study over more immediately rewarding alternatives, a pattern reflected in the negative correlation between future-oriented time perspective and procrastination.[18] This study possesses several limitations like across-sectional design and the sample was drawn mainly from the social sciences, along with data were collected through self-report questionnaires which limits generalization to other disciplines. Hence future research using longitudinal designs, discipline-diverse samples and multi-method estimation is therefore important to confirm the direction and strength of these relationships.

CONCLUSION

Studies revealed that the higher procrastination was linked to the lower psychological well-being, specifically in terms of environmental mastery and purpose in life, reflecting that the difficulties in management of daily responsibilities and continuing a clear sense of the direction. An overall finding suggests the academic procrastination may be a relevant target for student well-being interventions. Hence the universities should consider time-management training, structured assignment deadlines, strategies of the goal-setting and counseling to address the factors contributing to the procrastination. However based on several limitations further longitudinal and intervention studies using rigorously collected data and culturally appropriate, validated instruments are recommended to validate these associations and explore whether reducing academic procrastination can enhance the psychological well-being.

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