The Impact of Procrastination on Academic Self-Efficacy and Self-Esteem among University Students

Zulaikha Jehansher[1], Paghunda Khan[2], Nida Gul[3]

1. BS Student, Department of Psychology, Abdul Wali Khan University Mardan, Email: someijehan1234@gmail.com
2. BS Student, Department of Psychology, Abdul Wali Khan University Mardan, Email: kpaghunda20@gmail.com
3. BS Student, Department of Psychology, Abdul Wali Khan University Mardan, Email: nidagull099@gmail.com

Abstract

The tendency of doing task at the last minute (procrastination) is an extensively studied issue among university students and is related to several academic and psychological problems. This research focused on the assemblage of procrastination, academic self-efficacy, and self-esteem from a sample of 200 college students. Employing a correlational survey research model and standardized self-report measures, the authors found robust negative relationships between procrastination and academic self-efficacy ($r = -0.55$, $p < .01$) and by self-esteem ($r = -0.01$). A mechanism of the effect of procrastination on self-esteem was that procrastination negatively predicted academic self-efficacy, which in turn, was a negative predictor of self-esteem (direct effect: $\beta = -.34$, $p < .01$). These findings would indicate that procrastinating students have less confidence in their academic abilities and are less sure of themselves, which leads to lower self-esteem. Results suggest that procrastination should be treated as more than an issue of behavior, but also a question of cognition and emotion. Emphasizing the practical implications, specific intervention programs to increase academic self-efficacy may be created as a mean of decreasing procrastination and increasing psychological well-being.

Keywords: Procrastination; Academic Self-Efficacy; Self-Esteem; University Students; Mediation; Psychological Well-being; Student Behavior; Academic Motivation

Introduction

Procrastination proposing the voluntary delay or postponement of engaging in tasks despite expecting to be worse-off for it is a behavior that has gained momentum amongst college students where it seems to be on the rise (Steel, 2007). Although commonly considered innocuous, increasing evidence indicates that procrastination may be a reflection of broad self-regulatory failure and is related to a constellation of other educational and psychological difficulties. Performance-orientated university undergraduates who experience difficulties with time management are especially at risk for procrastination, which has the potential to exacerbate their academic performance as well as their personal life (Sirois & Pychyl, 2013). Of the psychological factors influenced by procrastination, academic self-efficacy and self-esteem are two of the most

significant. There is a belief that wells an individual to organize and execute or even bandura 1997) tasks successfully. Students who procrastinate on academic tasks may begin to question their ability to succeed in their studies which can erode their academic self-confidence (Klassen et al. Similarly, a sense of a person's overall self-worth or personal value, or self-esteem, may be affected negatively by the emotions that result from procrastination such as guilt, frustration, and less academic success (Ferrari et al., 1995). There are many theoretical rationales that point to the relationship between procrastination, self-efficacy, and self-esteem. From a social cognitive perspective, people who endorse low self-efficacy are at increased risk of procrastinating as a coping strategy for avoiding failure (Bandura, 1986). Furthermore, chronic procrastination can wear away self-esteem as they blame themselves for their poor academics and they are starting to believe they are not as smart as they think they are. Academic self-efficacy in this regard may function as a crucial mediator why procrastination results in low self-esteem. That is, procrastinating students may have lower self-efficacy, which may lead to lower confidence in their perceived worth. Despite much research on the topic of procrastination; the mediating mechanism of academic self-efficacy in the relationship between procrastination and self-esteem is relatively underexplored. In most of these with attitude have taken these latter variables separately, without considering if cognitive beliefs about academic ability may attend between behavioral tendencies (procrastination) and outcomes (self-esteem). An understanding of this mediating path would have significant implications for interventions aiming at the reduction of procrastination and the facilitation of psychological well-being in academic contexts.

The present study attempts to fill this gap by looking at how the relationships between procrastination and academic self-efficacy, and procrastination and self-esteem, are mediated by each other in university students. In particular, this study tests three hypotheses:

H1: Academic self-efficacy will be negatively correlated with procrastination in university students.
H2: Procrastination will have a detrimental effect on self-esteem in university students.
H3: Academic self-efficacy will partially mediate the association between procrastination and self-esteem.

By understanding these relationships, this study should also contribute to a better understanding of the psychological consequences of procrastination and encourage effective approaches to facilitate students' development and academic resilience.

Literature Review
Procrastination is often defined as the voluntary delay of task commencement or completion that exacerbates performance and well-being (Steel, 2007). Academic procrastination to to is very common in university student populations, and is related to negative effects such as low grades, high levels of stress of psychological discomfort (Schouwenburg, 2004). Procrastination has been defined as a lack of self-regulation rather than a time management problem (Sirois & Pychyl, 2013). When individuals having a procrastination problem have to decide whether to study or postpone their study, they overweigh the short-term benefits of mood repair versus the long-term benefits of goals, which harms goal-directed academic behavior (Pychyl & Flett, 2012). It has been consistently found in the empirical studies that 50% to 70% of the college students reported habitual procrastination as a serious or near-serious problem and that their procrastination

appeared to be widely distributed or nearly normal in its distribution (Solomon & Rothblum, 1984; Steel, 2007). Chronic procrastinators who put off their work are more likely to experience stress, anxiety, and guilt, thus feeding into cognitive dissonance and lower self-concept. Academic self-efficacy, which describes the belief that an individual can successfully perform tasks related to performance, is one of the most important factors in student's academic performance (Bandura, 1997). People are more likely to perform behaviour they believe they can carry out (19) as per social cognitive theory. Thus, low self-efficacy can cause a task avoiding as well as self-sabotaging actions such as procrastination (Zimmerman, 2000). There is high evidence of a negative relationship between procrastination and academic self-efficacy. Klassen et al. (2008) showed that college students with low academic self-efficacy experienced higher procrastination. Moreover, Howell and Watson (2007) referred to self-efficacious students as early starters and more efficient in time management, while procrastinators may represent avoidant motivation from fear of failure or failure perceptions. Self-efficacy could also determine how students react to setbacks in their studies. For students with strong self-efficacy, failure is perceived as a challenge they need to surmount, for students with weak self-efficacy, failure is a confirmation of their incompetence and therefore a perpetuation of the procrastination pattern (Bandura, 1993).

The evaluative component of the self: Self-esteem the evaluative component of the self refers to an individual's feelings of worthiness as a person, also known as global self-esteem (Rosenberg, 1965). Studies show that procrastination is strongly linked with self-esteem, especially in a school setting. 'Lack of self-control results in the self-critical thoughts that accompany procrastination (Fee & Tangney, 2000)'. The relation is supported by observational evidence. Ferrari et al. (1995) also reported that habitual procrastinators had lower self-esteem than non-procrastinators. Tice & Baumeister, 1997:94) also found that procrastinators may feel relief initially but through decreased academic performance, ultimately experience heightened stress and decreased self-worth. The emotional consequences of failing to act shame, guilt, and self-blame can erode the self over time (Sirois, Melia-Gordon, & Pychyl, 2013). In our opinion the mediating effect of academic self–efficacy between procrastination and self–esteem is a relevant theoretical contribution. Psychologically, one could also argue that students who procrastinate subsist with an underlying sense of doubts about their capabilities to academically succeed, and in turn, this must eat away at their self-esteem. This implies that procrastination ===> lowered self-efficacy ===> lowered self-esteem. While few studies specifically examined this mediation, a few provided indirect evidence. Owens and Newbegin (1997) suggested that lowered self-efficacy as a result of task postponement is a mechanism underlying the effects of procrastination to academic disengagement and self-evaluation. More recent study of Seo (2008) reported that academic self-efficacy partially mediated the association between self-regulated learning and academic procrastination. This perspective is advocated by above theoretical models, such as Bandura's (2005) triadic reciprocal determinism view which suggests that personal, behavioural and environmental influences affect each other. Procrastination (behavioral) se- I ficates self-ef~cacy (personal) which in turn pervades (another personal factor), and perhaps percolates back into behavior.

Although strong evidence has been found about the relationship between procrastination and academic self-efficacy as well as self-esteem separately, little research has been done about the entire path between the above two variables. Relatively few empirical studies have treated academic self-efficacy as a mediator, and among those that do, some have been under-powered

or conducted on the basis of cross-sectional designs that curtail causal inference. In addition, culture-specific contextual variables, such as academic competition, school expectations, and social comparison, are all excluded from current models. This void highlights the necessity for research that is more integrative and looks not only at the individual effects of procrastination, but also the processes through which effects should occur. By examining academic self-efficacy as a mediator the relationship of procrastination with higher-level self-evaluative and emotional constructs can be clarified.

Methodology

This was a quantitative study which used correlational research design to investigate the relationship between procrastination, academic self-efficacy and self-esteem among university students. A convenience sampling, which includes 200 undergraduate students, were selected from different departments of one of the urban universities. Election was not involved, and all participants provided written informed consent before the study was conducted. Three established self-reported instruments, including the Tuckman Procrastination Scale (TPS) for the construct of academic procrastination, the Academic Self-Efficacy Scale of Chemers, et al. (2001), and global self-esteem was measured by the RSES. All scales were scored on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), and all instruments had a good internal reliability (Cronbach's alpha over 0.80) in the present study. Descriptive statistics, Pearson's correlation and mediation analysis as recommendations for regression were conducted. Descriptive statistics were used to present the means, standard deviations, and distribution of all the variables. The direct relationships between procrastination, academic self-efficacy, and self-esteem were examined using Pearson's correlation. To investigate whether academic self-efficacy mediated the link between procrastination and self-esteem, the step-by-step regression procedure of Baron and Kenny (1986) was employed and the indirect effect was tested based on bootstrapping with 5,000 samples (with the hairier being the most developed) to guarantee stable estimates. The statistical analyses of all investigations were processed with SPSS 26, and the significance was defined as $p < .01$ to adjust for Type I error.

Results

Table 1 Descriptive Statistics for Procrastination, Academic Self-Efficacy, and Self-Esteem (N = 200)

Variable	M	SD	Min	Max	Skewness	Kurtosis
Procrastination	3.52	0.98	1.00	5.00	0.21	-0.62
Academic Self-Efficacy	3.80	0.85	1.00	5.00	-0.41	-0.55
Self-Esteem	3.68	0.91	1.00	5.00	-0.12	-0.67

Note. M = Mean, SD = Standard Deviation

Table 1 shows the central tendency and distribution of procrastination, academic self-efficacy, and self-esteem. All the variables had moderate mean levels and satisfactory variation with approximately normal distribution judging from the values for skewness and kurtosis.

Table 2 Pearson Correlations between Procrastination, Academic Self-Efficacy, and Self-Esteem

Variable	Procrastination	Academic Self-Efficacy	Self-Esteem
Procrastination	1.00	-0.55**	-0.47**
Academic Self-Efficacy	-0.55**	1.00	0.62**
Self-Esteem	-0.47**	0.62**	1.00

Note. $p < .01$

Table 2 presents the results of the correlations between the variables in the study. Procrastination was significantly and negatively correlated with academic self-efficacy ($r = -0.55$) and self-esteem ($r = -0.47$) and academic self-efficacy was positively and significantly related to self-esteem ($r = 0.62$), all at $p < .01$.

H1: Procrastination and Academic Self-Efficacy The first hypothesis (i.e., H1) concerned a negative relationship between procrastination and academic self-efficacy claim was supported. There was a significant and negative relation between procrastination and academic selfefficacy ($r = -0.55$, $p < .01$). This means that students who procrastinate more have less academic self-efficacy, what would say that insisting the more delay activity by students, lower is their confidence in relation to academic activity.
H2: Procrastination and Self-Esteem Also supporting hypothesis 2, which proposed a negative correlation between procrastination and self-esteem, were the findings. There was a strong negative relationship between self-esteem and procrastination ($r = -0.47$, $p < .01$). Thus, this indicates that those who display higher levels of procrastination also report lower levels of self-esteem. The regularity of procrastination can lead to guilt, a sense of unworthiness.
H3: Mediating effect of academic self-efficacy. The third hypothesis (proactive academic self-efficacy would mediate the association between procrastination and self-esteem) was examined by the use of casual steps described by Baron and Kenny (1986). The following are the regression paths for testing the mediation effect:
Step 1: Procrastination significantly predicted academic self-efficacy ($\beta = -0.55$, $p < .01$).
Step 2: Procrastination significantly predicted self-esteem ($\beta = -0.47$, $p < .01$).
Step 3: Academic self-efficacy significantly predicted self-esteem ($\beta = 0.62$, $p < .01$), after controlling for procrastination.

Table 3 Mediation Analysis: Procrastination, Academic Self-Efficacy, and Self-Esteem

Step	β	SE	t	p-value
Procrastination → Self-Efficacy	-0.55**	0.06	-9.02	< .01
Procrastination → Self-Esteem	-0.47**	0.07	-6.71	< .01
Self-Efficacy → Self-Esteem	0.62**	0.05	12.47	< .01
Indirect Effect (Procrastination → Self-Esteem via Self-Efficacy)	-0.34**	0.04	-8.11	< .01

Note. $p < .01$

Discussion
We aimed to investigate the associations between procrastination, academic self-efficacy, and self-esteem, with a special focus on the mediating role of academic = self-efficacy among university students. The evidence is strong in favor of all three hypotheses. A correlation ($r = -.55$,

p <. 01), which indicated that students who procrastinate academic activities are less likely to have confidence in the achievement of good academic results. This is consistent with the literature; e.g. the study by Klassen et al. (2008) and Howell & Watson (2007) which has frequently found that procrastinators have lower self-efficacy, perhaps as a result of repeated failure, avoidance tendencies and to some degree of learning not being self-regulated. Theoretically, this finding is consistent with Bandura's (1986) social cognitive theory in which self-efficacy beliefs are taken to be primary predictors of behavior. When students doubt their ability to process academic tasks they may be forced to put them off, generating a circle of procrastination and lowered self-academic feelings. The second major conclusion is the negative correlation between procrastination and self-esteem (r = -.adiaphora). 01). Contributes with additional information about the psychology about procrastination. Consistent with prior research (cf., Ferrari, 1995; Tice & Baumeister, 1997), the emotional costs associated with procrastination (guilt and frustration) may wear away an individual's over-all self-worth. Repeated academic dismissal can cause students to internalize a sense of failure that is transferred to lower levels of self-esteem. In the above study, what is nevertheless especially noteworthy is the support, for the role that academic self-efficacy played as a mediator on the relation between procrastination and self-esteem. Procrastination was found to mediate the effect of time perspective on academic self-efficacy (.56) (β = -.55, p <. 01), and the latter, the quality of life (β = 0.62, p <. 01), and the mediating effect was confirmed (Ineffective α to β : β = -0. 01). This implies that one of the major pathways through which procrastination reduces self-esteem involves a deterioration of students' academic self-concepts. This result broadens previous research by showing that self-efficacy is the psychological route through which procrastination leads to more general negative self-representations, a mechanism that has never been widely considered in past studies.

Theoretical and Practical Implication the theoretical and practical implications of the findings are multi fold. Theoretically, the current research refines the latent models of academic functioning with the integration of self-efficacy theory and self-esteem dynamics in one model. Clinically, these results suggest the importance of addressing academic self-efficacy in the treatment of procrastination and the emotional consequences of procrastination. Interventions focusing on planning, active time-management, and positive rewards may contribute to more student confidence in academic work, less time spent procrastinating, and protect against demoralization. Secondly, the realization that procrastination's main problem is not about managing time properly, but a psychological shortfall, might help educators and counselors devise a more humane way of dealing with it. Further research into the model can aim to replicate these findings using longitudinal or experimental designs in order to confirm potential causal paths, and explore alternative mediators (such as perfectionism, anxiety, and academic burnout).

Conclusion
The results of this research show a strong relationship between procrastination, academic self-efficacy, and self-esteem in university students. All three hypotheses were also supported; procrastination was negatively related to both academic self-efficacy and self-esteem, and academic self-efficacy acted as mediator for the relationship between procrastination and self-esteem. The study concluded that procrastination does more than just impact deadlines it impairs students' sense of their own academic competence, which in turn damages their their self-worth. This study is an extension of the previous research by identifying a psychological mechanism - academic self-efficacy - that accounts for the impact of behavioral disposition such as

procrastination on emotion and cognition. Such findings emphasize the significance of combating procrastination in a multidimensional way, taking into account its repercussions for students' mental and affective functioning.

Recommendations

The following are actionable recommendations as per the findings of the study:

Design Self-Efficacy Trainings: Colleges should offer workshops that enhance academic self-efficacy, with a focus on time management, study skills, and goal-setting techniques.

Include Procrastination Interventions as Part of Student Services: A counseling center should share services that focus on procrastination through the use of CBT, Mindfulness, and restructuring of habits.

Early Detection and Support: Advisers and faculty should be made aware of potential signs of chronic procrastination so that students can be directed to or offered resources to negate such distractions.

Promote Peer Mentorship: Patnering students with more academically self-assured peers might induce self-efficacy through modeling and encouragement.

Encourage a Growth Mindset: Incorporating growth mindset training into academic curricula can enable students to view failures as learning opportunities that defy insecurities and procrastination.

Limitations and Future Research

This study is not without limitations, despite its strengths. First, given the cross-sectional nature of the study, it was impossible to determine causal relationships between the variables. Although the associations were strong and theoretically consistent, longitudinal research is needed to determine the nature of these relationships across time. Second, participants completed only self-report questionnaires that may be biased by social desirability, and possibly did not capture actual student behavior or internal states. Third, the data were collected at a single university, thus the sample may not be representative of all students, particularly in regards to cultural or academic diversity. For future research, it is suggested to replicate the present study with longitudinal or experimental designs, different academic domains or other international student population, and to investigate other mediators or moderators (e.g., academic anxiety, perfectionism, or resilience). Such extensions would promote insight in the way procrastination works in different environments and more focused interventions.

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