

Antecedents of Procrastination: Examining the Role of Academic Identity and Self-Esteem

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ABSTRACT

Procrastination is a widespread problem among students, yet feasible solutions have remained elusive. Recognizing the detrimental impact of procrastination on students' potential, this study aims to investigate the underlying factors contributing to this problem. Specifically, this study explores the associations between academic identity, self-esteem, and procrastination in both male and female participants. Previous research suggests a negative correlation between self-esteem and procrastination. There has been substantially less research examining the relationship between academic identity types (i.e., achieved, foreclosed, moratorium, and diffused academic identity) and procrastination. The current study surveyed 244 college students about their personality habits, academic identity, and self-esteem. It was hypothesized that self-esteem would moderate the relationship between achieved academic identity and procrastination. Multiple regression was used to test the relationship between multiple theorized predictors of procrastination, specifically, self-esteem, achieved academic identity, and self-reported procrastination. Regression analysis supports the hypotheses. Specifically, there was a significant interaction effect between self-esteem and achieved academic identity. Regression results suggest self-esteem is more predictive of procrastination when achieved academic identity is low. Additionally, results suggest students who have not made a commitment to academic goals and values are more likely to procrastinate. Theoretical implications for studying academic identity and procrastination will be discussed, along with intervention recommendations for college students.

KEYWORDS: academic identity, self-esteem, procrastination

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Dr. Carolyn Murray was a Full Professor in UCR's Psychology Department for 40 years, she focuses on emotions in her research, particularly examining anxiety's effects on academic performance preparation. Currently, she serves as Professor of the Graduate Division, and is the founder and Executive Director of the University STEM Academy (USA).



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INTRODUCTION

Procrastination, delaying or postponing an important task, is a prevalent problem among college students. There are varying definitions surrounding the action of procrastination. The most common definition, and one we will be using in this paper is to “voluntarily delay an intended course of action despite expecting to be worse off for the delay” (Steel, 2007, p. 66). Procrastination is an issue that impacts 70-95% of students, making it a stumbling block for far too many college students (Steel, 2007). This issue is significant enough that it may increase stress and anxiety, resulting in lowered academic performances, lower grades, loss of scholarship, and academic suspension/probation (Korstange et al., 2019). Considering these factors of procrastination, this study intends to investigate two antecedents of procrastination: academic identity and self-esteem in college students.

Procrastination has been investigated as a personality trait. This means that procrastination can be a habitual part of someone’s personality and can bleed into their academic life. In the Big Five Factors Personality, studies show that procrastination is largely related to a lack of conscientiousness (Schouwenburg & Lay, 1995). Lack of conscientiousness is often described as a lack of goal-setting, planning, and responsibility. The association between procrastination and conscientiousness should not be overlooked; goal setting would be a variable associated with someone’s sense of achieved academic identity. Previous literature shows a positive correlation between achieved academic identity and conscientiousness (Burbidge et al., 2018), which is rational as achieved academic identity is characterized by commitment and planning towards specific academic goals. Personality traits are predictive of adaptive and maladaptive outcomes and can be adaptable. Previous literature shows that personality traits change, especially among the age of young adulthood (20-40 years; Roberts & Mroczek, 2008).

Ultimately, personality traits are malleable and can be improved, most notably for the age group we are studying; therefore, exploring the direct relationship between procrastination and academic identity is crucial as literature on these variables is currently missing.

Self-Esteem

Low self-esteem is another personality trait that is highly predictive of procrastination (Yang et al., 2021). Low self-esteem is characterized by feelings of fear of failure that contribute to the inability to initiate action to avoid negative implications of failure (Yang et al., 2021). Previous literature shows that individuals with low self-esteem tend to have a negative opinion of themselves, and self-esteem is a key characteristic of habitual procrastination (Steel, 2007). Importantly, the literature consistently suggests a negative relationship between procrastination and self-esteem. The relationship between self-esteem and procrastination has also been shown to be mediated by other factors such as fear of failure.

There are different theoretical perspectives used to examine procrastination and self-esteem. From the cognitive psychology perspective, procrastination is related to low self-worth (Steinert et al., 2021). Specifically, procrastination allows people to discount failure to their procrastination instead of their abilities, helping them avoid feelings of personal failure. Individuals with low self-worth tend to have low expectations for their performance, and delaying the task helps to avoid feelings of inadequacy. Procrastination is also studied from the psychodynamic perspective, which examines subconscious feelings, unresolved conflicts, and opposing needs (Steinert et al., 2021). Self-esteem is a predictor of procrastination as it is a protective layer of self-worth (Topalsan, 2020). Ultimately, self-esteem is a key factor that is directly and indirectly related to procrastination. Thus, understanding it is essential in finding interventions

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for the problem. This study will examine self-esteem as a moderating variable between achieved academic identity, and procrastination.

Academic Identity

Academic identity is defined as the perception of an individual's experiences in the two dimensions of exploration and commitment (Was & Isaacson, 2008; Was et al., 2009). Academic identity is classified in four different facets based on exploration and commitment: diffused, moratorium, foreclosed, and achieved. These facets of academic identity were proposed by Was and Isaacson (2009) derived from Marcia's Theory of Identity Status. An individual can be high, low, or average in any of the facets. Someone that has a diffuse academic identity lacks both exploration and commitment in their academic career. For example, an individual who is in college with an undeclared major might lack the effort to explore and/or commit to any major. In contrast, an individual in moratorium would be in a stage of exploration but still lacking any firm academic commitments. A student high in moratorium may be exploring multiple majors but not committing to any. A person with a foreclosed identity is fully committed to their academics due to external factors (e.g., family, social pressure) but lacks personal exploration. For instance, a student with a foreclosed identity might choose biology without exploring other avenues because their family told them to. Lastly, a person with an achieved academic identity has fully explored and made firm commitments towards their academic goals. This would be someone who has explored potential majors and commits to one due to personal interests (Was & Isaacson, 2008; Was et al., 2009).

Currently there is a need for more literature regarding academic identity and its role in procrastination. A study by Sharifi and Ashouri (2022) reported a strong negative correlation between academic identity and procrastination. Therefore, someone with a high

academic identity was less likely to be associated with high procrastination. In contrast, someone who scores high on the diffused academic scale was more likely to be associated with high procrastination, likely because it is characterized by low commitment and exploration. This suggests that students with low academic identity are more likely to engage in self-handicapping behaviors like procrastination (Chorba et al., 2012). The current study used data collected from 244 undergraduate students regarding procrastination, academic identity, and self-esteem to test the stated hypotheses.

Based on previous research by Chorba et al., (2012) suggesting a positive relationship between academic identity and procrastination, we hypothesize that:

Hypothesis 1a: Diffused academic identity will have a significant positive correlation with procrastination.

Hypothesis 1b: Moratorium academic identity will have a significant positive correlation with procrastination.

Hypothesis 1c: Foreclosed academic identity will have a significant positive correlation with procrastination.

Hypothesis 1d: Self-esteem will have a significant negative correlation with procrastination.

Hypothesis 1e: Achieved academic identity will have a significant negative correlation with procrastination.

Hypothesis 2: Self-esteem will significantly moderate the relationship between procrastination and achieved academic identity.

METHODS

Participants

Participants consisted of 244 students recruited using the SONA pool from a Southern California University. Students participated for course credit. The participants could pick any study to participate in a pool of available

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studies in the SONA participation system or write short essays to satisfy the course credit. IRB approved the current study before data collection. The study comprised 97 males, 145 females, and 2 participants identified as non-binary or other. The mean age of participants was 19.7 (SD = 1.53). The sample was diverse, with 40.98% Asian or Pacific Islander, 38.93% Latinx/Hispanic, 7.37% Multiracial, 4.51% White, 4.09% Middle Eastern, 2.04% African American, 1.23% other, and 0.82% Native American.

Design

The design of this study is correlational. We utilized validated survey measures, specifically the PPS (Steel, 2010), AIM (Was et al., 2009), and RSES (Rosenberg, 1965) to measure procrastination, academic identity, and self-esteem. Measuring these variables allowed us to test our hypotheses and determine the relationships between the variables. By utilizing RStudio for hypothesis testing, we conducted a Pearson correlation analysis, a regression analysis, and tested for interaction effects between the variables of procrastination, self-esteem, and academic identity.

Measures

Procrastination. Procrastination was measured using the Pure Procrastination Scale (PPS; Steel 2010). The PPS consisted of 12 items with no reverse-coded items and was measured on a Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). An example item includes “I delay things beyond what is reasonable.” ($\alpha = .90$). The alpha coefficient allows us to evaluate the reliability of the scale, and an alpha of .90 suggests the scale is reliable. Alpha coefficients are calculated by dividing the scale’s average covariance by its average total variance, and all alpha coefficients were calculated using RStudio, a statistical software.

Academic identity. Academic identity was measured using the Academic Identity Scale (AIM; Was et al.,

2009), consisting of 40 items divided between 4 sub-scales. These sub-scales are diffused, moratorium, foreclosed, and achieved. The AIM was measured on a Likert scale from 1 (Not at all like me) to 5 (Very much like me). Example items include “My priorities in school are in transition. Some days, I am serious; other days, I have other priorities.” (Moratorium subscale; $\alpha = .84$); “I’ve never decided on my own about college. I just did what friends and family expected of me.” (Foreclosed subscale; $\alpha = .78$); “A college education is a high priority for me, and I’m willing to make sacrifices.” (Achieved subscale; $\alpha = .75$); and “Sometimes I think the reason I’m in college is I have nothing better to do.” (Diffused subscale; $\alpha = .80$). No items were reverse coded.

Self-esteem. Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES; Rosenberg; 1965). The RSES consisted of 10 items, with five items being reverse-coded. The ranking was calculated on a Likert scale of 1 (Strongly Disagree) to 4 (Strongly Agree). An example item includes “On the whole, I am satisfied with myself.” ($\alpha = .89$).

Procedure

Participants were recruited from the SONA participation pool, and they participated for two research credits. Participants could choose which study they wanted to participate in from a pool of available ongoing studies. All survey measures were administered online via Qualtrics. Participants that signed up for this study received an email with a Qualtrics survey link and instructions to complete the survey measures in one continuous session. Researchers informed participants that the study was about academic experiences. Participants completed the survey measures within two days of receiving the emailed link and instructions. A power analysis was conducted in G*Power 3.1.9.7 (Faul et al., 2007) and results suggest a minimum sample size of 281 is adequate to find a moderate effect size between predictors (i.e., self-esteem and academic

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identity) and outcome (i.e., procrastination). Given our sample size of 244, we conclude this sample has adequate power to find an effect.

RESULTS

Hypothesis 1a-1e

Hypothesis 1a-1e predicted procrastination would have a positive relationship with diffused (1a), moratorium (1b), and foreclosed (1c) academic identities; and a negative relationship with self-esteem (1d) and achieved academic identity (1e). Results suggest procrastination had a significant positive correlation with diffused (r

$= 0.48, p > .001$), moratorium ($r = .55, p > .001$), and foreclosed academic identity ($r = .22, p > .001$). As hypothesized, procrastination showed a significant negative correlation with self-esteem ($r = -.42, p > .001$) and achieved academic identity ($r = -.35, p > .001$). To summarize these results, those who rated themselves higher on diffused, moratorium, and foreclosed academic identities were more likely to report procrastinating, while those who rated themselves higher on achieved academic identity and self-esteem were less likely to report procrastinating. These results are consistent with our hypothesis.

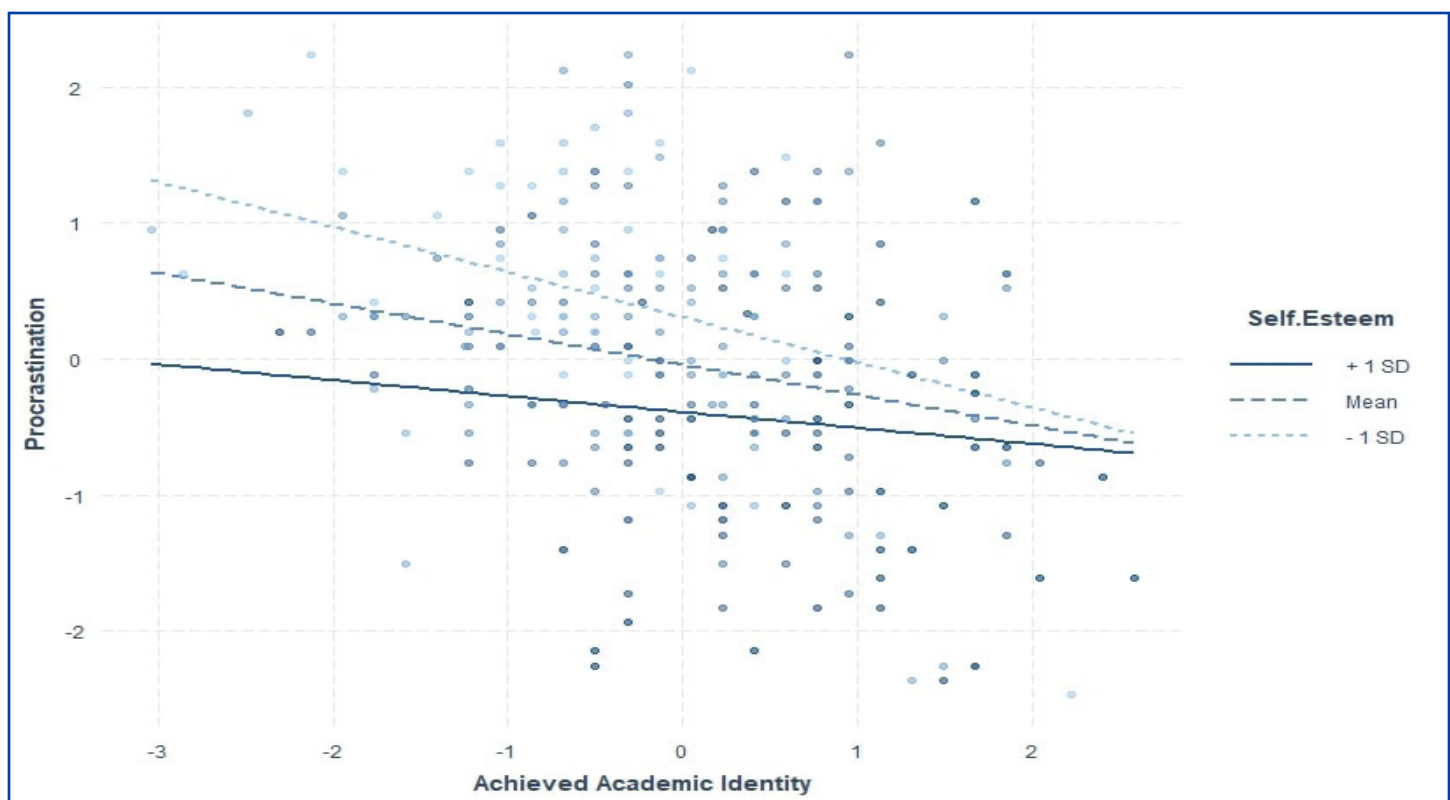


Figure 1. Self-Esteem's Moderating Role Between Achieved Academic Identity and Procrastination

Note. The dark blue line (bottom line) represents students high in self-esteem, the blue line (middle line) represents students average in self-esteem, and light blue line (top line) represents students low in self-esteem. The dots indicate scatter points of participant responses.

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Hypothesis 2

Hypothesis 2 predicted that self-esteem would moderate the relationship between achieved academic identity and the outcome variable procrastination. Our data revealed a significant main effect of self-esteem ($\beta (240) = -0.35, p < 0.001$), a significant main effect of achieved academic identity ($\beta (240) = -0.22, p < 0.001$), and a significant interaction effect between self-esteem and achieved academic identity ($\beta (240) = 0.11, p = 0.041$). The graph was obtained by plotting the interaction between self-esteem and achieved academic identity (see Figure 1) with procrastination as the outcome variable. All graphing was done in RStudio. The graph suggests low self-esteem (denoted by -1 SD in the graph) is predictive of more procrastination when achieved academic identity is also low. Additionally, the graph suggests high academic identity is predictive of less procrastination for all levels of self-esteem (see the right side of Figure 1, where self-esteem lines converge).

DISCUSSION

Previous research regarding the relationship between procrastination and academic identity shows a negative correlation. The results of this study suggest that those higher in academic identity are less likely to procrastinate in academic settings, and this relationship is moderated by self-esteem. Specifically, those high in achieved academic identity and low in self-esteem predicted a low likelihood of procrastination. In contrast, those low in both academic identity and self-esteem predicted a high likelihood of procrastination. Additionally, results from this study suggest having diffused, moratorium, and foreclosed academic identities are predictive of more procrastination.

The conclusions of this paper may lead to a new perspective on how academic procrastination is examined, which may change the type of interventions

used to tackle procrastination. Previous literature credits fear of failure, perfectionism, low self-worth, and anxiety as common antecedents of procrastination. These findings are valid and valuable to the study of procrastination, but literature has neglected to investigate the role of identity and academic identity on procrastination. Our study suggests procrastination can manifest itself in students who lack firm commitment and planning in an academic setting. Our study also finds a moderating effect of self-esteem which suggests students with low self-esteem and lack of academic plans may need more attention and intervention to avoid procrastination.

This study offers a new perspective on antecedents of procrastination by using identity theory—Academic Identity Statuses derived from Marcia’s theory of Identity—which is rarely discussed in psychology. Steel (2007) suggests that low self-esteem is one of the common traits related to procrastination because individuals with low self-esteem, or a negative view of oneself, also tend to have a fear of failure. Subsequently, this is related to the way individuals approach tasks. For instance, students with low self-esteem may fear doing poorly on an assignment and maladaptively cope with that fear by avoiding the assignment. Our study suggests self-esteem is not highly predictive of procrastination when academic identity is high, suggesting academic identity plays a valuable role in procrastination in college settings. Our study also suggests a lack of exploration and commitment (diffused identity) are shown to be highly predictive of more procrastination. Therefore, providing students with more outlets to explore their academic interests may resolve habitual procrastination in academic settings.

Sharifi and Ashouri (2022) suggest that students who lack a stable academic identity may become “too hot-tempered” and “nervous” when doing academic assignments, contributing to a lack of concentration.

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This suggests that the lack of academic exploration and commitment may contribute to irrational behaviors that lead to procrastination; therefore, helping students actively explore and commit to their academic pursuits may aid in decreasing their procrastination.

The current study is a unique piece of literature that explores the relationship between academic identity and procrastination across all dimensions of academic identity. It is also the first to explore the relationship between achieved academic identity and procrastination moderated by self-esteem, informing our views of how procrastination and self-esteem are linked. Our study can help students become more aware of their academic identity and understand the benefits of exploring their academic identity. Additionally, our study consisted of a diverse population of students, capturing the experiences and attitudes of students from multiple different ethnic backgrounds.

LIMITATIONS AND FUTURE DIRECTIONS

The current study used survey data to explore the relationship between procrastination, academic identity, and self-esteem. Survey data is valid for such research because concepts like academic identity and self-esteem are best assessed by asking the participants. Additionally, all survey measures were validated, and alpha values for the scales are acceptable. Like many other studies, this study measured procrastination using the PPS scale, which is a validated survey measure. However, survey data is not ideal for concepts like procrastination, as it does not directly study the behavior in action. Therefore, future studies should strive to use behavioral measures of procrastination.

Viable future directions include studying how academic identity changes as students progress through college, utilizing a longitudinal research design. To the authors' knowledge, no such study has been published yet. This

is an important aspect to consider because identity, like personality, is malleable and better understanding how it changes can help researchers make better recommendations to address procrastination in academic environments.

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