

ABSTRACT

AN EXPLORATION OF THE TRIADIC MODEL OF PROCRASTINATION: AROUSAL, AVOIDANT, AND DECISIONAL PROCRASTINATION IN ADULTS

This study explored correlates and predictors of procrastination in a large sample of adults. It explored procrastination as a multidimensional construct consisting of arousal, avoidant, and decisional procrastination. These sub-forms of procrastination make up the triadic model of procrastination. Procrastination research has primarily focused on academic procrastination due to high prevalence rates of student procrastinators in academic settings. A shift in procrastination research has now examined procrastination in non-academic domains. The current study examined the responses of 404 adults who resided in the United States. Multiple regression analyses were conducted between the five factor model of personality and the triadic model of procrastination as well as between three sub-forms of perfectionism (self-oriented, other-oriented, and socially prescribed perfectionism) and the triadic model of procrastination. Personality traits as well as sub-forms of perfectionism were identified as significant predictors of arousal, avoidant, and decisional procrastination. These findings further our knowledge and understanding of the nature of arousal, avoidant, and decisional procrastination in adults. The current study provided a more comprehensive analysis of the triadic model of procrastination and its relationship with personality traits and dimensions of perfectionism.

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AN EXPLORATION OF THE TRIADIC MODEL OF
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AND DECISIONAL PROCRASTINATION
IN ADULTS

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TABLE OF CONTENTS

	Page
LIST OF TABLES	vii
CHAPTER 1: INTRODUCTION	1
Procrastination.....	1
CHAPTER 2: LITERATURE REVIEW	4
Procrastination Defined.....	4
CHAPTER 3: METHODOLOGY.....	18
Participants.....	18
Programs and Platforms.....	18
Design and Procedure	20
CHAPTER 4: RESULTS AND DISCUSSION	25
Arousal Procrastination and Personality.....	25
Avoidant Procrastination and Personality.....	26
Decisional Procrastination and Personality.....	28
Arousal Procrastination and Perfectionism.....	29
Avoidant Procrastination and Perfectionism.....	30
Decisional Procrastination and Perfectionism	32
Additional Analyses.....	33
CHAPTER 5: GENERAL DISCUSSION	42
Limitations and Future Recommendations	44
Conclusion.....	47
REFERENCES	48
APPENDICES	54
APPENDIX A: CONSENT FORM	55

APPENDIX B: BIG 5 PERSONALITY INVENTORY 57

APPENDIX C: PROCRASTINATION SCALE 61

APPENDIX D: ADULT INVENTORY OF PROCRASTINATION 63

APPENDIX E: DECISIONAL PROCRASTINATION SCALE..... 65

APPENDIX F: MULTIDIMENSIONAL PROCRASTINATION SCALE 67

APPENDIX G: DEMOGRAPHIC QUESTIONNAIRE..... 70

LIST OF TABLES

	Page
Table 1 <i>Regression Coefficients Between Arousal Procrastination and Personality</i>	26
Table 2 <i>Regression Coefficients Between Avoidant Procrastination and Personality</i>	27
Table 3 <i>Regression Coefficients Between Decisional Procrastination and Personality</i>	29
Table 4 <i>Regression Coefficients Between Arousal Procrastination and Perfectionism</i>	30
Table 5 <i>Regression Coefficients Between Avoidant Procrastination and Perfectionism</i>	31
Table 6 <i>Regression Coefficients Between Decisional Procrastination and Perfectionism</i>	33
Table 7 <i>Hierarchical Regression Analysis Predicting Arousal Procrastination</i>	34
Table 8 <i>Hierarchical Regression Analysis Predicting Avoidant Procrastination</i>	36
Table 9 <i>Hierarchical Regression Analysis Predicting Decisional Procrastination</i>	37
Table 10 <i>Descriptive Statistics and Intercorrelations of Procrastination Measures</i>	38
Table 11 <i>T-Test for the Mean Differences Between Men & Women Procrastination Scores</i>	39
Table 12 <i>Correlation Matrices Between Procrastination, Personality, & Perfectionism</i>	41

CHAPTER 1: INTRODUCTION

Procrastination

Procrastination is the purposeful delay or conscious decision to put off completing unpleasant tasks or assignments. Procrastination often occurs in many different domains of adult life including home, school, and work. Procrastination can be evoked by any task, such as a homework assignment, an important work deadline, or even completing daily chores around the house. Procrastination may occur chronically or sporadically in individuals. Although some procrastination is likely to occur from time to time for most individuals, chronic or habitual procrastination for individuals can be problematic. Procrastination can have negative consequences such as increased levels of anxiety, stress, and depression and it is rarely referred to as a positive behavioral tendency. The degree to which individuals procrastinate, the negative effects of procrastination, the correlates of procrastination and multidimensional forms of procrastination are explored in this thesis.

Previous procrastination research has focused on procrastination in students due to its high prevalence rates within student populations (Harriot & Ferrari, 1996). Approximately 90% of all students admit to engaging in procrastination at some point in time while receiving their education (Ellis & Knaus, 1977; Yockey, 2016). Approximately one fourth of all students have stated that procrastination has been a problem in their lives (Rothblum, Solomon, & Murakami, 1986). These findings have led researchers like Klassen and his colleagues (2009) to believe that it is important to gain a better understanding of the phenomenon of procrastination within academic environments. Researchers Solomon and Rothblum (1984), Clark and Hill (1994), and Tice and Baumeister (1997) speculated that procrastination

would continue to be a problematic behavior for students. Yockey (2016) supported these notions indicating that the number of students engaging in procrastination may still be rising.

While procrastination is prevalent in student populations, it is also fairly prevalent in adult populations. Harriott and Ferrari (1996) indicated that approximately 20% of all adults chronically engage in procrastination. They stated that individuals who engage in procrastination often experience emotional and psychological distress. These negative stressors can have a significant impact on the overall wellbeing of an individual. Procrastination research consistently finds that procrastinators experience low levels of self-esteem, low levels of confidence, self-defeating thoughts as well as depression and anxiety (Ellis & Knaus, 1977; Ferrari, 1991; Klassen et al., 2010; Solomon & Rothblum, 1984; Steel, 2007; Tice & Baumeister, 1997). These stressors can have serious long-term effects on individuals and pose a direct threat to an individual's emotional, physical, and psychological well-being. Prolonged stress due to persistent procrastination may lead to health problems such as high blood pressure and coronary disorders as well as psychological health problems such as depression, anxiety, and substance abuse (Tice & Baumeister, 1997). Studying the effects of procrastination within adults is important as it may lead to effective treatment and intervention strategies for chronic procrastinators.

Past procrastination research has primarily conceptualized procrastination as a unidimensional construct. More recently, studies have shifted focus to conceptualizing procrastination as a multidimensional construct, consisting of several types of procrastination (Ferrari, 1992; Ferrari, Barnes, & Steel, 2009; Ferrari, Doroszko, & Joseph, 2005; Ferrari, O'Callaghan, & Newbegin, 2005; Ferrari, Özer, & Demir, 2009; Freeman, Cox-Fuenzalida, & Stoltenberg; 2011).

The three types of procrastination—arousal, avoidant, and decisional—are often referred to collectively as the triadic model of procrastination. Past research attempting to identify predictors and correlates of the triadic model of procrastination have yielded inconsistent results. The present study is an attempt to explore the domain of procrastination to better understand its underlying structure and its relationship to other constructs. The following section will review the procrastination literature in six areas. First, an examination of the prevalence of procrastination in adults will be conducted. Second, research in the area of academic procrastination will be explored. Third, the negative effects of procrastinating will be examined. Fourth, the triadic model of procrastination will be discussed. Fifth, the relationships between procrastination and personality characteristics will be examined. And sixth, the relationships between procrastination and perfectionism will be discussed.

CHAPTER 2: LITERATURE REVIEW

Procrastination Defined

Whether it is having to pay a bill, do daily chores, or complete academic assignments, procrastination can occur in any situation. Many definitions of procrastination exist, all of which primarily characterize procrastination as a means of deliberately delaying action or purposefully putting off a task until a later date or time (Wilson, 2012). Procrastinators are often characterized as either chronic or sporadic procrastinators. For some, their tendency to procrastinate is chronic or trait-like, frequently and regularly engaging in procrastination across a wide range of situations, while other individuals may tend to engage in procrastination only rarely or sporadically.

Prevalence of Procrastination

The vast majority of students, between 80% and 90%, admit to engaging in procrastination at some point throughout their academic career. Previous research has also indicated that approximately 20% to 30% of all adults chronically engage in procrastination (Ellis & Knaus, 1977; Harriott & Ferrari, 1996). Procrastination research has primarily focused on academic populations; however, recent procrastination research has been shifting to explore procrastination within adult populations. Contemporary research has shifted from examining procrastination within the academic domain to business, household, and financial domains.

Several studies have indicated that procrastination may be more problematic than originally believed in adults. McCown and Johnson (1989) surveyed 146 adults and discovered that over a quarter of them reported that procrastination was a “significant problem” in their lives. Approximately 40% of the individuals studied reported that their procrastination resulted in financial

setbacks. Ferrari (1993) surveyed 240 adults and discovered that those with higher procrastination scores delayed starting to shop for Christmas gifts until days before the holiday. Those with higher procrastination scores were also more likely to delay using a mall gift certificate after receiving it.

Harriott and Ferrari (1996) examined the prevalence of procrastination in a sample of 211 adults. Results indicated that the overall prevalence of procrastination in adults sampled within the community was about 20%. Ferrari (2010) suggested that his findings also indicated that 20% of U.S. men and women are chronic procrastinators. These are individuals who repeatedly delay completing tasks at home, work, school, and in relationships.

Procrastination is present in various occupational settings as well. Procrastinators in the workplace delay completing tasks in a timely manner, postpone work-related meetings, and put off addressing work-related issues (Caruth & Caruth, 2003). These factors can result in significant financial setbacks for big and small businesses alike. From these findings, researchers speculate that procrastination is a problematic behavior for roughly one in five adults (Ferrari, 2010; Harriott & Ferrari, 1996). It is evident that procrastination is prevalent in adults and exists in non-academic domains as well.

Procrastination in Academia

While the present study is primarily focused on procrastination in adults, it is important to discuss procrastination among students. Academic procrastination can occur at any stage of education ranging from grade school children to doctoral students. In fact, a significant percentage of students indicated that they often engaged in some sort of procrastination throughout the course of their academic career (Clark & Hill, 1994; Solomon & Rothblum, 1984). In addition to this, 20-

30% of students have indicated that their procrastination had, to some degree, become detrimental to their daily lives (Day, Mensink, & O'Sullivan, 2000).

With upwards of about 90% of students identifying themselves as procrastinators (Clark & Hill, 1994; Day et al., 2000; Ellis & Knaus, 1977; Solomon & Rothblum, 1984), it is alarming just how widespread this behavior really is. A study conducted by Solomon and Rothblum (1984) attempted to measure the prevalence of procrastination as well as what tasks students procrastinate on among Caucasian American college students. Results indicated that between 30-40% of students procrastinated on academic tasks and assignments. Twenty to 24% of students reported that their procrastination has been problematic in their daily lives. A significant number of students, between 55-65%, expressed a desire to decrease their tendency to procrastinate. One explanation for this trend may be that students are aware that they procrastinate, yet do not feel that it is a detrimental problem; however, if given the opportunity, they would like to decrease their procrastination behavior (Solomon & Rothblum, 1984).

Clark and Hill (1994) attempted to replicate Solomon and Rothblum's (1984) procrastination study. They attempted to measure the prevalence of procrastination as well as what tasks students procrastinate on, in a sample of African American college students. The results supported Solomon and Rothblum's (1984) findings and extended them by determining that students tended to procrastinate mostly on tasks such as studying for exams, writing term papers, and completing reading assignments (Clark & Hill, 1994; Solomon & Rothblum, 1984).

One speculation as to why procrastination is prevalent in students, is that students often develop poor behavioral habits and practices over the course of their

academic careers. These poor behavioral habits and practices could be similar to procrastinatory behaviors. As students complete their education and transition as adults into the workforce, they retain their level of procrastination. It is likely that students who are chronic procrastinators in college, are also likely to be chronic procrastinators out in the workforce. Therefore, it would be reasonable to anticipate that the adult rates of procrastination would reflect those of the student population.

Negative Effects of Procrastination

Procrastinators often experience negative effects due to their behavior. Evidence has indicated that adults experience negative consequences such as depression, anxiety, stress (Chu & Choi, 2005), and neuroticism (Milgram & Tenne, 2000) as a result of engaging in procrastination (Solomon & Rothblum, 1984).

Self-esteem, self-efficacy, and achievement motivation have been found to be negatively correlated with procrastination (Cerino, 2014; Effert & Ferrari, 1989). Effert and Ferrari (1989) surveyed 111 junior college students to examine correlates of decisional procrastination. They found a negative relationship between decisional procrastination and self-esteem ($r = -.39, p < .05$). Cerino (2014) examined 101 undergraduate students and found that academic motivation made a significant contribution when predicting procrastination, $F(7,93) = 6.54, p < .001$. Cerino (2014) also indicated a significant negative relationship between procrastination and self-efficacy ($r = -.36, p < .001$). This suggests that an individual's sense of self-efficacy can play an important role when approaching unpleasant tasks and assignments. Ellis and Knaus (1977) and Boysan and Kiral

(2016) found similar negative relationships between procrastination and variables such as self-esteem, self-efficacy, and achievement motivation.

Individuals who procrastinate may also experience self-defeating thoughts or attitudes as well as engage in self-handicapping thoughts or behaviors. Baumeister and Scher (1988) identified three types of self-destructive behaviors of individuals, which consist of primary self-destruction, tradeoffs, and counterproductive strategies. The most relevant of the three are tradeoffs (Baumeister & Scher, 1988).

A “tradeoff” is the act of consciously choosing a particular response behavior that has some benefits as well as some self-harmful costs to an individual (Baumeister & Scher, 1988). In this case, the individual is cognizant of the potential self-harm but does not seek to deliberately harm themselves. For example, students who choose to go to a late-night party instead of studying for an upcoming exam engage in tradeoffs by choosing the more favorable task (fun at a party; beneficial goal) despite knowing the potential setbacks that can occur (poor grade on their exam; self-harmful cost). In this case, it is not that students want to deliberately do poorly on their upcoming exams, it is simply that they have accepted the possible harmful cost as a consequence to obtaining an alternative immediate goal (fun at a party).

To some degree, these behaviors are not mutually exclusive. Rather, procrastinating may be described as a “tradeoff.” For example, adults who choose to engage in online shopping at work rather than preparing for an upcoming business presentation for potential clients can be considered to be engaging in procrastination. These individuals have accepted the potential harmful costs (presenting a poor performance to potential clients) as a result of procrastinating in favor of an immediate, more desirable goal or task (online shopping).

No matter the term used, many individuals engage in self-handicapping thoughts and behaviors to rationalize their decisions to explain why they chose to do what they did. This is evident when examining procrastination and health related situations. Many individuals forego seeing the dentist or doctor for long periods of time, delay seeking medicine, and often put off scheduling follow-up appointments (Tice & Baumeister, 1997). Individuals often downplay the severity of their health problems or often state that they are too busy. As a result, procrastination is believed to be a significant contributor to health problems in adults. Sirois, Melia-Gordon, and Pychyl (2003) surveyed 122 university students to measure the relationship between procrastination and health related problems. Results indicated that procrastination related to poorer health, perceived stress, as well as treatment delay ($r = .20$, $r = .20$, $r = .19$, all $p < .05$). Furthermore, Tice and Baumeister (1997) found that procrastinators reported more overall negative health symptoms than non-procrastinators, including increased visits to the doctors, greater illnesses, and acute health problems. Similar findings were noted by White, Wearing, and Hill (1994) and Sirois (2015). Previous research has examined the negative effects of general procrastination; however, additional research is needed to examine the negative effects of various types of procrastination.

Types of Procrastination

While procrastination had been traditionally viewed as a unidimensional construct, Harriott and Ferrari (1996) conceptualized procrastination as consisting of three distinct domains: arousal, avoidant, and decisional procrastination. Arousal procrastination is the tendency to purposefully put off completing certain tasks until the last moment. Individuals working under the intense pressure of a

pending deadline often receive the sensation of an “adrenaline rush,” which they believe assists them in completing tasks under time constraints (Hensley, 2016; Ferrari, Barnes, & Steel, 2009; Ferrari, O’Callaghan, & Newbegin, 2005; Ferrari, Özer, & Demir, 2009). Avoidant procrastination is characterized as fear of failure, task aversiveness, and/or fear of success. First, fear of failure is the notion that avoidant procrastinators put off completing tasks due to the belief that they lack the proper skills or abilities to complete the task. Second, task aversiveness is the notion that avoidant procrastinators have a genuine dislike for the task, therefore, they put it off. Lastly, some individuals fear success due to the increased responsibilities and expectations that success may bring (Ferrari, Barnes, & Steel, 2009; Ferrari, O’Callaghan, & Newbegin, 2005; Ferrari, Özer, & Demir, 2009). Finally, decisional procrastinators often put off making decisions. This tendency is characterized by an individual's inability to make a decision about a task or behavior in a timely manner (Ferrari, 1991; Ferrari, Özer, & Demir, 2009). This inability to make decisions may be due to a number of factors, including the perceived complexity of the task, the potential conflict with other individuals that a decision may evoke, and the tendency to protect one’s self-esteem or self-confidence (Effert & Ferrari, 1989; Janis & Mann, 1977).

Harriott and Ferrari (1996) explored avoidant, arousal, and decisional procrastination in individuals with different occupations (211 total: 122 women and 89 men). Participants were individuals employed in non-corporate positions ($n = 64$), business professionals employed by corporations ($n = 54$), bank employees ($n = 59$), and university managers ($n = 34$). Individuals employed in noncorporate positions scored higher decisional ($F(3, 194) = 8.2, p < .001$), avoidant ($F(3, 194) = 5.1, p < .001$), and arousal ($F(3,194) = 3.4, p < .02$) procrastination than other groups.

Ferrari, O'Callaghan, and Newbegin (2005) examined arousal, avoidant, and decisional procrastination in three English speaking countries. They surveyed 207 adults from the United States, 239 adults from the United Kingdom, and 214 adults from Australia. Results indicated that adults from the United Kingdom had higher arousal procrastination scores ($M = 52.47, SD = 10.01$) than adults from the United States ($M = 48.01, SD = 9.91$) and Australia ($M = 42.72, SD = 8.76$). Adults from the United Kingdom also had higher avoidant procrastination scores ($M = 40.91, SD = 5.51$) than adults from the United States ($M = 35.67, SD = 4.43$) and Australia ($M = 33.97, SD = 5.33$).

Ferrari, Doroszko, and Joseph (2005) used the General Procrastination scale (GP; Lay, 1986) and the Adult Inventory of Procrastination (AIP; McCown & Johnson, 1989) to examine arousal and avoidant procrastination in corporate settings. They found that there was a significant difference between corporate professional and non-corporate professional scores for avoidant procrastination ($F(1,87) = 4.97, p < .05$), but not for arousal procrastination. Corporate/business employees reported significantly higher avoidant procrastination scores than arousal procrastination scores when compared to other non-corporate professionals. Ferrari, Doroszko, and Joseph (2005) also found a significant difference between sales employees' procrastination scores and mid-level managers' procrastination scores ($F(1,213) = 3.86, p < .05$). Sales employees reported significantly higher avoidant procrastination scores than arousal procrastination scores when compared with mid-level managers.

Di Fabio (2006) examined the relationships between decisional procrastination and personality traits in 258 secondary school students. Di Fabio utilized an adaptation of the Melbourne Decision Making Questionnaire (MDMQ; Mann, Burnett, Radford, & Ford, 1997) to assess correlates of decisional

procrastination. Decisional procrastination scores on the MDMQ were significantly positively correlated with cognitive failures ($r = .45, p < .01$), neuroticism ($r = .35, p < .01$), and self-reliance ($r = .28, p < .01$). Decisional procrastination scores on the MDMQ were significantly negatively correlated with self-esteem ($r = -.29, p < .01$), dynamism ($r = -.36, p < .01$), openness ($r = -.21, p < .01$), perseverance ($r = -.38, p < .01$), and emotional control ($r = -.13, p < .05$). Evidence indicates these variables are significantly correlated with decisional procrastination and to some degree may affect the decision-making process of adults who suffer from decisional procrastination.

A better understanding of the domain of procrastination may be gained by mapping out the pattern of the relationships between procrastination, including the sub-forms arousal, avoidant, and decisional procrastination and other variables. A greater understanding of this domain may be helpful to develop strategies to mitigate the negative effects of procrastination in adults.

Procrastination and Personality

There is a considerable amount of evidence suggesting that there are relationships between personality traits and procrastination. Extraversion, for example, has been identified as a predictor of procrastination (Freeman et al., 2011). One explanation as to why extraverts might engage in more procrastination than others is that extraverts might engage in more social activities than non-extraverts. Eysenck and Eysenck (1975) found that extraverts tend to seek out social interactions more than introverts. The amount of time extraverts spend socializing may cause them to delay completing work tasks in favor of socializing, which may lead to higher levels of procrastination in extraverts (Freeman et al., 2011).

Studies suggest that conscientiousness and agreeableness have been shown to be inversely correlated with procrastination. Steel (2007) reported a strong negative correlation ($r = -.62$) between conscientiousness and procrastination and a weak negative correlation ($r = -.12$) between agreeableness and procrastination. Individuals high in conscientiousness are more likely to be focused, reliable, and determined, all of which are qualities that are not characteristic of a procrastinator. Boysan and Kiral (2016) similarly reported that conscientiousness and agreeableness were found to be inversely correlated with procrastination.

Findings about the relationship between procrastination and neuroticism have been less conclusive. Steel (2007) conducted a meta-analysis examining the causes and effects of procrastination. A weak positive correlation between procrastination and neuroticism ($r = .25$) was found. Steel (2007) suggested that this may be a result of facets (sub-traits) of neuroticism as measured by the Neuroticism, Extraversion, Openness Personality Inventory (NEO; Costa & McCrae, 1992) that are closely related to impulsivity.

Previous studies have provided a considerable amount of evidence indicating associations between procrastination and various personality traits (Boysan, & Kiral, 2016; Freeman et al., 2011; Karatas, 2015; Steel, 2007). These findings are important as personality-based intervention and treatment programs may be most effective for chronic procrastinators. Continued research in this area will provide a better understanding of the relationship between procrastination and personality traits.

Procrastination and Perfectionism

Chronic procrastination has been linked to avoidant behavior tendencies relating to a fear of failure or a fear of failure to meet high standards or

expectations (Hewitt & Flett, 1991; Rice, Richardson, & Clark, 2012; Sirois, Molnar, & Hirsch, 2017). Therefore, researchers have begun to examine the relationship between procrastination and perfectionism.

Perfectionism is not a unidimensional construct but rather a multidimensional one (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). This multidimensional construct includes self-oriented, other-oriented, and socially prescribed perfectionism (Hewitt & Flett, 1990). This multidimensional view of perfectionism has played an important role in understanding the motives closely associated with perfectionism. Self-oriented perfectionists have a strong desire to maintain perfection and avoid failure (Hewitt & Flett, 1990). Other-oriented perfectionists set exceedingly high standards or expectations for others (e.g., friends, family, significant others, colleagues; Hewitt & Flett, 1990). Finally, socially prescribed perfectionists believe that others evaluate them critically and that there are high expectations for them to be perfect (Hewitt & Flett, 1990). Frost et al. (1990) described perfectionism as a characteristic which varies on a continuum. This suggests that individuals generally display perfectionist tendencies from time to time. These tendencies are characterized as consisting of perfectionistic strivings (self and other-oriented perfectionism) and perfectionistic concerns (socially prescribed perfectionism) (Frost et al., 1990; Hewitt & Flett, 1991).

Sirois et al. (2017) examined the relationship between the sub traits of perfectionism and procrastination. They found that perfectionistic strivings and perfectionistic concerns are associated with procrastination. Small to medium positive relationships were found between procrastination and perfectionistic concerns ($r = .23$), suggesting that socially prescribed perfectionism is positively associated with procrastinatory tendencies. Small to medium negative

relationships were also found between procrastination and perfectionistic strivings ($r = -.22$), suggesting that self and other oriented perfectionism are negatively associated with procrastinatory tendencies.

Flett, Blankstein, Hewitt, and Koledin (1992) utilized the Multidimensional Perfectionism Scale (Hewitt & Flett, 1990), the Burns Perfectionism Scale (Burns, 1980), the General Procrastination Scale (Lay, 1986), and the Procrastination Assessment Scale - Students (PASS; Solomon & Rothblum, 1984) to examine the relationships between perfectionism and procrastination. They found that socially prescribed perfectionism was associated significantly with both generalized and academic procrastination (generalized: $r(129) = .30, p < .01$; academic: $r(129) = .21, p < .05$). Onwuegbuzie (2000) also examined procrastination and the dimensions of perfectionism finding that only socially prescribed perfectionism significantly related to academic procrastination ($r = .24, p < .01$). These studies provide evidence to suggest that socially prescribed perfectionism may be more closely associated with procrastination than self-oriented and other-oriented perfectionism. It is possible that a perceived external pressure to be perfect may affect the likelihood of individuals to engage in procrastination more than one's own desire for perfection.

Procrastination Summary

Procrastination is a prevalent problem in adult populations. A significant number of individuals chronically engage in procrastination and do so in various domains of adult life, including home, work, and school. The majority of procrastination research has primarily focused on student populations; however, more recent studies have discussed the importance of examining procrastination in non-academic domains. It is reasonable to anticipate that the behavioral habits and

practices of chronic procrastinators in college will remain with them as they transition as adults out in the workforce. As adults continually enter the workforce each year, it is important that research studies continue to examine types of procrastination in various domains of adult life. Examining procrastination as a multidimensional construct consisting of arousal, avoidant, and decisional procrastination, may provide the information necessary to better understand the nature of procrastination as it exists within a variety of domains. Continued procrastination research and its relationship with personality and perfectionism is important as treatment and intervention strategies centered around identifying trait-like behaviors can prove to be most effective in reducing procrastination in adults. The present study will examine three types of procrastination in adults that reside in the United States. The present study will identify predictors as well as correlates of arousal, avoidant, and decisional procrastination. The present study will also identify any relationships between the three types of procrastination and individual characteristics such as personality and perfectionism. These analyses will provide support and clarity to the current area of research about types of procrastination and their underlying relationships with various constructs.

Research Question 1: When taken as a set, does the five factor model of personality significantly predict arousal procrastination?

Research Question 2: Which variables of the five factor model of personality account for a significant amount of the unique variance in arousal procrastination?

Research Question 3: When taken as a set, does the five factor model of personality significantly predict avoidant procrastination?

Research Question 4: Which variables of the five factor model of personality account for a significant amount of the unique variance in avoidant procrastination?

Research Question 5: When taken as a set, does the five factor model of personality significantly predict decisional procrastination?

Research Question 6: Which variables of the five factor model of personality account for a significant amount of the unique variance in decisional procrastination?

Research Question 7: When taken as a set, does the Multidimensional Perfectionism scale significantly predict arousal procrastination?

Research Question 8: Which variables of the Multidimensional Perfectionism scale account for a significant amount of the unique variance in arousal procrastination?

Research Question 9: When taken as a set, does the Multidimensional Perfectionism scale significantly predict avoidant procrastination?

Research Question 10: Which variables of the Multidimensional Perfectionism scale account for a significant amount of the unique variance in avoidant procrastination?

Research Question 11: When taken as a set, does the Multidimensional Perfectionism scale significantly predict decisional procrastination?

Research Question 12: Which variables of the Multidimensional Perfectionism scale account for a significant amount of the unique variance in decisional procrastination?

CHAPTER 3: METHODOLOGY

Participants

A convenience sampling method was used to gather participants from the crowdsourcing internet marketplace Amazon Mechanical Turk (“MTurk”). A total of 438 participants participated in the present study. Only one participant was excluded for not consenting to participate. Thirty-four participants did not complete the questionnaires and their partial data were excluded from the present study. The information from 404 individuals was used in the study. Participants ranged in age from 18 - 75 ($M = 35.32$, $SD = 10.53$), with 207 males (mean age: $M = 33.92$, $SD = 10.42$) and 197 females (mean age: $M = 36.78$, $SD = 10.48$). Of the participants gathered, 76.2 % were Caucasian, 9.7% were African American, 6.7% were Hispanic/Latino, 6.9% were Asian American/Pacific Islander, and .5% identified as “Other.” University college students made up 10.6% of the sample. They spanned the range of academic levels from freshman to graduate students. Participants received \$1.50 USD in compensation if they completed all the items in the questionnaire.

Programs and Platforms

Two platforms were used for the present study; Amazon Mechanical Turk (which was used as a crowdsourcing internet marketplace to gather workers) and Qualtrics (which was used as a platform to create and administer the survey).

Amazon Mechanical Turk (MTurk) is a global web service that allows “requestors” (task creators) to gather information via tasks (i.e., surveys, experiments, etc.) that require human intelligence (a.k.a. Human Intelligence Tasks or “HITs”) (Buhrmester, Kwang, & Gosling, 2011). MTurk is a platform that connects requestors to high-quality, top-performing, on-demand “workers” or

“respondents” (paid task completers) via a global internet marketplace that is active 24 hours a day, 7 days a week (Buhrmester et al., 2011). A requester can create an account on MTurk and begin a project. A requester then defines specific parameters or requirements about specific criteria for applicable workers for the project. Workers who meet the specific criteria can view the post and decide if they wish to participate. Once a worker has completed a task, they are compensated for their participation.

Measures and Scales

Participants completed a consent form (Appendix A) that provided detailed information about the present study and the following scales:

Big 5 Personality Inventory Questionnaire. (Goldberg, 1992, Appendix B). This was used to assess the personality traits of the five factor model of personality (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience). The questionnaire consists of a total of 50 items, 10 items for each trait that assesses the five dimensions of personality. Cronbach’s coefficient alpha was calculated to assess the reliability of each of the five traits (extraversion, .93; agreeableness, .89; conscientiousness, .86; emotional stability, .92; openness to experience, .84).

Procrastination Scale. (Lay, 1986, Appendix C). This is a 20-item scale that assesses arousal procrastination. Participants rate whether the statement is uncharacteristic or characteristic of themselves using a 5-point Likert rating scale (1 = Extremely Uncharacteristic, 5 = Extremely Characteristic). Cronbach’s coefficient alpha was .94 in the present study.

Adult Inventory of Procrastination. (McCown & Johnson, 1989, Appendix D). The Adult Inventory of Procrastination (AIP) is a 15-item scale that assesses avoidant procrastination. Participants rate whether they strongly agree or strongly disagree with each statement using a 5-point Likert rating scale (1 = Strongly Disagree, 5 = Strongly Agree). Cronbach's coefficient alpha was .89.

Decisional Procrastination Scale. (Mann, 1982, Appendix E). The Decisional Procrastination Scale (DPS) is a 5-item scale that assesses decisional procrastination. Participants rate whether the statement is true or not true for themselves using a 5-point Likert rating scale (1 = Not True for Me, 5 = True for Me). Cronbach's coefficient alpha was .91 for the present study.

Multidimensional Perfectionism Scale. (Hewitt & Flett, 1990, Appendix F). The Multidimensional Perfectionism Scale (MPS) is a 45-item scale that assesses multiple types of perfectionism. This was used to assess self-oriented, other-oriented, and socially prescribed perfectionism. Participants rate to what extent they agree or disagree with a particular statement using a 7-point Likert scale. Cronbach's coefficient alpha was calculated to assess the reliability for each of the three dimensions of perfectionism (self-oriented, .83; other-oriented, .79; socially prescribed, .84).

Participants also completed a demographic questionnaire (Appendix G) which included gender, age, race/ethnicity, marital status, and academic standing (i.e., full time/part time standing and class level).

Design and Procedure

An MTurk account was created to recruit participants of the study. Only respondents who met the specific criteria were able to view and access the post.

MTurk provides requestors with the capacity to select participants based on several variables in the MTurk database. In this study, participants were required to have a Human Intelligence Task (HIT) approval rating greater than 90% and reside within the United States.

A HIT Approval Rating is a percentage that indicates a worker's quality of performance on tasks. Every time a worker completes a task, the creator of that task rates the quality of their performance, thus contributing to a worker's overall HIT approval rating. A HIT approval rating greater than 90% was required of workers to ensure that the highest rated and highest quality workers had the opportunity to view and access the post. This also greatly decreased the possibility of including workers who systematically bias their responses merely to receive payment for their submission.

Participation in the study was limited to workers who resided in the United States. This was done for two reasons: 1) the researcher of the present study felt that the United States was a good representation of a racially, ethnically, and economically diverse population of adults, and 2) the researcher of the present study wanted to limit the possibility of conflicting language barriers.

An additional incentive to the participants was giving them a positive approval rating in the MTurk system. Individuals with high overall HIT ratings may qualify to complete other MTurk tasks that have a high approval rating threshold for participation.

Participants who met the inclusion criteria and agreed to participate accessed a link posted on MTurk that directed them to the present study, which was administered through the Qualtrics program. Participants spent between 10 and 15 minutes completing the study.

If workers did not complete the study in its entirety or failed to answer attention check questions within the study correctly, their submission was rejected, and they did not receive payment for their participation. Several attention check questions were placed throughout the study, which instructed workers to select a specific answer. This was done to ensure that participants were not simply putting the same answer for every question and to ensure they were reading and understanding the directions within the study. Once a worker's data were accepted, they were awarded \$1.50 USD for their participation. Remuneration was based on MTurk tasks with similar characteristics; i.e., number of questions, similar time estimate of completion, similar keynote topics (i.e., psychology, personality questions, demographics) etc. Funding for the present study was provided by the Division of Research and Graduate Studies, California State University, Fresno.

Hypotheses

A series of multiple regression analyses were conducted to test the following 12 hypotheses:

Hypothesis 1: When taken as a set, the traits of the five factor model of personality, as assessed by the Big 5 Personality Inventory, will significantly predict arousal procrastination.

Hypothesis 2: The following four traits of the five factor model of personality, as assessed by the Big 5 Personality Inventory, extraversion, agreeableness, conscientiousness, and emotional stability will each account for a significant amount of the unique variance in arousal procrastination.

Hypothesis 3: When taken as a set, the traits of the five factor model of personality, as assessed by the Big 5 Personality Inventory, will significantly predict avoidant procrastination.

Hypothesis 4: The following four traits of the five factor model of personality, as assessed by the Big 5 Personality Inventory, extraversion, agreeableness, conscientiousness, and emotional stability will each account for a significant amount of the unique variance in avoidant procrastination.

Hypothesis 5: When taken as a set, the traits of the five factor model of personality, as assessed by the Big 5 Personality Inventory, will significantly predict decisional procrastination.

Hypothesis 6: The following four traits of the five factor model of personality, as assessed by the Big 5 Personality Inventory, extraversion, agreeableness, conscientiousness, and emotional stability will each account for a significant amount of the unique variance in decisional procrastination.

Hypothesis 7: When taken as a set, the sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, will significantly predict arousal procrastination.

Hypothesis 8: The following two sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, self-oriented and socially prescribed perfectionism will each account for a significant amount of the unique variance in arousal procrastination.

Hypothesis 9: When taken as a set, the sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, will significantly predict avoidant procrastination.

Hypothesis 10: The following two sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, self-oriented and socially prescribed

perfectionism will each account for a significant amount of the unique variance in avoidant procrastination.

Hypothesis 11: When taken as a set, the sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, will significantly predict decisional procrastination.

Hypothesis 12: The following two sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, self-oriented and socially prescribed perfectionism will each account for a significant amount of the unique variance in decisional procrastination.

CHAPTER 4: RESULTS AND DISCUSSION

Arousal Procrastination and Personality

The first hypothesis predicted that when taken as a set, the traits of the five factor model of personality, as assessed by the Big Five Personality Inventory, would significantly predict arousal procrastination. The first hypothesis was supported. A multiple regression analysis between the traits of the five factor model of personality and arousal procrastination was conducted. When taken as a set, the predictors extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience accounted for a significant amount of the variance in arousal procrastination, $F(5,398) = 134.59, p < .001, R^2 = .63$. The overall model accounts for a significant amount of the variance explained in arousal procrastination, suggesting that personality domains are predictors of arousal procrastination.

When testing for individual predictors, the second hypothesis predicted that the following four traits of the five factor model of personality, as assessed by the Big Five Personality Inventory, extraversion, agreeableness, conscientiousness, and emotional stability would each account for a significant amount of the unique variance in arousal procrastination. The second hypothesis was partially supported as agreeableness did not account for a significant amount of unique variance in arousal procrastination. Only extraversion, conscientiousness, and emotional stability accounted for a significant amount of the unique variance in arousal procrastination, suggesting that these variables are significant predictors of arousal procrastination (see Table 1).

Extraversion, conscientiousness, and emotional stability were inversely associated with arousal procrastination (see Table 1). The variables were inversely

related, suggesting that individuals who are more extraverted, more conscientious, or more emotionally stable tend to report being less likely to engage in arousal procrastination.

Table 1

Regression Coefficients Between Arousal Procrastination and Personality

Variable	B	β	<i>t</i>	sig
Extraversion	-.25	-.15	-4.29	.00**
Agreeableness	.07	.03	.85	.40
Conscientiousness	-1.64	-.70	-20.06	.00**
Emotional Stability	-.24	-.14	-3.91	.00**
Openness to Experience	.00	.00	.00	.99

Note: $N = 404$, ** $p < .01$, * $p < .05$

Avoidant Procrastination and Personality

The third hypothesis predicted that when taken as a set, the traits of the five factor model of personality, as assessed by the Big Five Personality Inventory, would significantly predict avoidant procrastination. The third hypothesis was supported. A multiple regression analysis between the traits of the five factor model of personality and avoidant procrastination was conducted. When taken as a set, the predictors extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience accounted for a significant amount of the variance in avoidant procrastination, $F(5,398) = 76.15$, $p < .001$, $R^2 = .49$. The overall model accounts for a significant amount of the variance explained in avoidant procrastination, indicating that personality traits are significant predictors of avoidant procrastination.

When testing for individual predictors, the fourth hypothesis predicted that the following four traits of the five factor model of personality, as assessed by the Big Five Personality Inventory, extraversion, agreeableness, conscientiousness, and emotional stability would account for a significant amount of the unique variance in avoidant procrastination. The fourth hypothesis was partially supported as extraversion and agreeableness did not account for a significant amount of the unique variance in avoidant procrastination. Only conscientiousness and emotional stability accounted for a significant amount of the unique variance in avoidant procrastination (see Table 2).

The regression weights presented in Table 2 indicate that conscientiousness and emotional stability were inversely related to avoidant procrastination. Evidence suggests that individuals who are more conscientious or more emotionally stable tend to report being less likely to engage in avoidant procrastination.

Table 2

<i>Regression Coefficients Between Avoidant Procrastination and Personality</i>				
Variable	B	β	<i>t</i>	sig
Extraversion	-.04	-.03	-.86	.39
Agreeableness	-.04	-.03	-.70	.48
Conscientiousness	-.87	-.59	-14.42	.00**
Emotional Stability	-.19	-.18	-4.23	.00**
Openness to Experience	.00	.00	.02	.99

Note: $N = 404$, ** $p < .01$, * $p < .05$

Decisional Procrastination and Personality

The fifth hypothesis predicted that the traits of the five factor model of personality, as assessed by the Big Five Personality Inventory, will significantly predict decisional procrastination. The fifth hypothesis was supported. A multiple regression analysis between the traits of the five factor model of personality and decisional procrastination was conducted. When taken as a set, the predictors extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience accounted for a significant amount of the variance in decisional procrastination, $F(5,398) = 89.16$, $p < .001$, $R^2 = .53$. The overall model accounts for a significant amount of the variance explained in decisional procrastination, suggesting that personality domains are predictors of decisional procrastination.

When testing for individual predictors, the sixth hypothesis predicted that the following four traits of the five factor model of personality, as assessed by the Big Five Personality Inventory, extraversion, agreeableness, conscientiousness, and emotional stability would account for a significant amount of the unique variance in decisional procrastination. The sixth hypothesis was partially supported as agreeableness did not account for a significant amount of the unique variance in decisional procrastination. Only extraversion, conscientiousness, and emotional stability accounted for a significant amount of the unique variance in decisional procrastination, suggesting that these variables are significant predictors of decisional procrastination (see Table 3).

Extraversion, conscientiousness, as well as emotional stability are inversely associated with decisional procrastination (see Table 3). This suggests that individuals who are more extraverted, more conscientious, or more emotionally stable tend to report being less likely to engage in decisional procrastination.

Table 3

Regression Coefficients Between Decisional Procrastination and Personality

Variable	B	β	<i>t</i>	sig
Extraversion	-.05	-.10	-2.57	.01*
Agreeableness	-.00	-.00	-.08	.93
Conscientiousness	-.38	-.55	-14.13	.00**
Emotional Stability	-.13	-.26	-6.49	.00**
Openness to Experience	.01	.01	.36	.72

Note: $N = 404$, ** $p < .01$, * $p < .05$

Arousal Procrastination and Perfectionism

The seventh hypothesis predicted that when taken as a set, the sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, would significantly predict arousal procrastination. The seventh hypothesis was supported. A multiple regression analysis was conducted between sub-forms of perfectionism and arousal procrastination. When taken as a set, the predictors self-oriented, other-oriented, and socially-prescribed perfectionism accounted for a significant amount of the variance in arousal procrastination, $F(3,400) = 28.07$, $p < .001$, $R^2 = .17$. The overall model accounts for a significant amount of the variance explained in arousal procrastination, suggesting that the dimensions of perfectionism, when taken as a set, significantly predict arousal procrastination.

When testing for individual predictors, the eighth hypothesis predicted that the following two sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, self-oriented and socially prescribed perfectionism would account for a significant amount of the unique variance in arousal procrastination. The eighth hypothesis was supported. Self-oriented and

socially prescribed perfectionism accounted for a significant amount of the unique variance in arousal procrastination, suggesting that these variables are significant predictors of arousal procrastination (see Table 4).

Self-oriented perfectionism was inversely associated with arousal procrastination and socially prescribed perfectionism was positively associated with arousal procrastination (see Table 4). These results suggest that individuals who engage in more self-oriented perfectionism tend to report being less likely to engage in arousal procrastination and individuals who engage in more socially prescribed perfectionism tend to report being more likely to engage in arousal procrastination.

Table 4

Regression Coefficients Between Arousal Procrastination and Perfectionism

Variable	B	β	<i>t</i>	sig
Self-Oriented	-.86	-.42	-7.81	.00**
Other-Oriented	.10	.04	.78	.44
Socially Prescribed	1.04	.42	7.03	.00**

Note: $N = 404$, ** $p < .01$, * $p < .05$

Avoidant Procrastination and Perfectionism

The ninth hypothesis predicted that when taken as a set, the sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, would significantly predict avoidant procrastination. The ninth hypothesis was supported. A multiple regression analysis was conducted between the sub-forms of perfectionism and avoidant procrastination. When taken as a set, the predictors self-oriented, other-oriented, and socially-prescribed perfectionism accounted for a

significant amount of the variance in avoidant procrastination, $F(3,400) = 24.63$, $p < .001$, $R^2 = .16$. The overall model accounts for a significant amount of the variance explained in avoidant procrastination, suggesting that domains of perfectionism are predictors of avoidant procrastination.

When testing for individual predictors, the tenth hypothesis predicted that the following two sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, self-oriented and socially prescribed perfectionism would account for a significant amount of the unique variance in avoidant procrastination. The tenth hypothesis was supported. Self-oriented and socially prescribed perfectionism accounted for a significant amount of the unique variance in avoidant procrastination, suggesting that these variables are significant predictors of arousal procrastination (see Table 5).

Self-oriented perfectionism was inversely associated with avoidant procrastination and socially prescribed perfectionism was positively associated with avoidant procrastination (see Table 5). This phenomenon may suggest that individuals who engage in more self-oriented perfectionism report being less likely to engage in avoidant procrastination and individuals who engage in more socially prescribed perfectionism tend to report being more likely to engage in avoidant procrastination.

Table 5

Regression Coefficients Between Avoidant Procrastination and Perfectionism

Variable	B	β	t	sig
Self-Oriented	-.44	-.35	-6.34	.00**
Other-Oriented	.15	.09	1.75	.08
Socially Prescribed	.61	.39	6.47	.00**

Note: $N = 404$, ** $p < .01$, * $p < .05$

Decisional Procrastination and Perfectionism

The eleventh hypothesis predicted that when taken as a set, the sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, would significantly predict decisional procrastination. The eleventh hypothesis was supported. A multiple regression analysis was conducted between the sub-forms of perfectionism and decisional procrastination. When taken as a set, the predictors self-oriented, other-oriented, and socially-prescribed perfectionism accounted for a significant amount of the variance in decisional procrastination, $F(3,400) = 35.05$, $p < .001$, $R^2 = .21$. The overall model accounts for a significant amount of the variance explained in decisional procrastination, suggesting that domains of perfectionism are predictors of decisional procrastination.

When testing for individual predictors, the twelfth hypothesis predicted that the following two sub-forms of perfectionism, as assessed by the Multidimensional Perfectionism scale, self-oriented and socially prescribed perfectionism would account for a significant amount of the unique variance in decisional procrastination. The twelfth hypothesis was partially supported. Self-oriented, socially prescribed, as well as other-oriented perfectionism each accounted for a significant amount of the unique variance in decisional procrastination, suggesting that these variables are significant predictors of decisional procrastination (see Table 6).

Self-oriented perfectionism was inversely associated with decisional procrastination and other-oriented and socially prescribed perfectionism were positively associated with decisional procrastination (see Table 6). These results suggest that individuals who engage in more self-oriented perfectionism tend to report being less likely to engage in decisional procrastination and individuals who engage in more other-oriented perfectionism tend to report being more likely to

engage in decisional procrastination. Individuals who engage in more socially prescribed perfectionism also tend to report being more likely to engage in decisional procrastination.

Table 6

Regression Coefficients Between Decisional Procrastination and Perfectionism

Variable	B	β	<i>t</i>	sig
Self-Oriented	-.20	-.34	-6.37	.00**
Other-Oriented	.09	.12	2.38	.02*
Socially Prescribed	.33	.46	7.83	.00**

Note: $N = 404$, ** $p < .01$, * $p < .05$

Additional Analyses

A hierarchical regression analysis was conducted to determine if dimensions of perfectionism account for a significant amount of the unique variance in the triadic model of procrastination above and beyond personality traits. Table 7 displays the overall results of the hierarchical regression analysis when predicting arousal procrastination. Model 1 includes the five factor model of personality. Model 2 includes the five factor model of personality as well as the sub-forms of perfectionism which were entered into the model second to determine if dimensions of perfectionism accounted for a significant amount of unique variance more than the five factor model of personality when predicting arousal procrastination (see Table 7). The overall hierarchical regression analysis predicting arousal procrastination was significant (Model 1: $F(5,398) = 134.59$, $p < .001$, $R^2 = .62$; Model 2: $F(8,395) = 85.08$, $p < .001$, $R^2 = .63$). The overall hierarchical regression analysis may have been significant; however, there was not a significant change between Model 1 and Model 2 (change in $R^2 = .01$, $F(3,395)$

= 1.59, $p > .05$). This indicates that the sub-forms of perfectionism did not account for a significant amount of unique variance above and beyond the five factor model of personality when predicting arousal procrastination.

Table 7

Hierarchical Regression Analysis Predicting Arousal Procrastination

Model	Predictor	B	β	t	sig
1	(Constant)	66.76		29.31	.00**
	Extraversion	-.25	-.15	-4.29	.00**
	Agreeableness	.07	.03	.85	.40
	Conscientiousness	-1.64	-.70	-20.06	.00**
	Emotional Stability	-.24	-.14	-3.91	.00**
	Openness to Experience	.00	.00	.00	.99
2	(Constant)	65.01		13.50	.00**
	Extraversion	-.24	-.14	-4.02	.00**
	Agreeableness	.08	.04	.97	.33
	Conscientiousness	-1.61	-.69	-18.05	.00**
	Emotional Stability	-.22	-.13	-3.44	.00**
	Openness to Experience	-.03	-.01	-.35	.73
	Self-Oriented	-.06	-.03	-.70	.48
	Other-Oriented	-.11	-.04	-1.21	.23
Socially Prescribed	.22	.09	2.10	.04*	

Note: $N = 404$, ** $p < .01$, * $p < .05$

Table 8 displays the overall results of the hierarchical regression analysis when predicting avoidant procrastination. Similar to Table 7, Model 1 includes the five factor model of personality. Model 2 includes the five factor model of personality as well as the sub-forms of perfectionism which were entered into the model second to determine if dimensions of perfectionism accounted for a significant amount of unique variance more than the five factor model of personality when predicting avoidant procrastination (see Table 8). The overall hierarchical regression analysis predicting avoidant procrastination was significant (Model 1: $F(5,398) = 76.15, p < .001, R^2 = .49$; Model 2: $F(8,395) = 49.37, p < .001, R^2 = .50$). Results also indicated that there was a significant change between Model 1 and Model 2 (change in $R^2 = .01, F(3,395) = 2.90, p < .05$). This indicates that the sub-forms of perfectionism did account for a significant amount of unique variance above and beyond the five factor model of personality when predicting avoidant procrastination.

Finally, Table 9 displays the overall results of the hierarchical regression analysis when predicting decisional procrastination. Similar to Tables 7 and 8, Model 1 includes the five factor model of personality. Model 2 includes the five factor model of personality as well as the sub-forms of perfectionism. The overall hierarchical regression analysis predicting decisional procrastination was significant (Model 1: $F(5,398) = 89.16, p < .001, R^2 = .53$; Model 2: $F(8,395) = 62.28, p < .001, R^2 = .56$). Results also indicated that there was a significant change between Model 1 and Model 2 (change in $R^2 = .03, F(3,395) = 8.78, p < .001$). This indicates that the sub-forms of perfectionism did account for a significant amount of unique variance above and beyond the five factor model of personality when predicting decisional procrastination.

Table 8

Hierarchical Regression Analysis Predicting Avoidant Procrastination

Model	Predictor	B	β	<i>t</i>	sig
1	(Constant)	43.55		25.93	.00**
	Extraversion	-.04	-.03	-.86	.40
	Agreeableness	-.04	-.03	-.70	.48
	Conscientiousness	-.87	-.59	-14.42	.00**
	Emotional Stability	-.19	-.18	-4.23	.00**
	Openness to Experience	.00	.00	.02	.99
2	(Constant)	35.94		10.17	.00**
	Extraversion	-.03	-.03	-.64	.52
	Agreeableness	-.04	-.03	-.64	.52
	Conscientiousness	-.84	-.57	-12.86	.00**
	Emotional Stability	-.16	-.15	-3.32	.00**
	Openness to Experience	-.02	-.02	-.37	.71
	Self-Oriented	-.04	-.03	-.57	.57
	Other-Oriented	.04	.02	.55	.59
	Socially Prescribed	.18	.11	2.23	.03*

Note: $N = 404$, ** $p < .01$, * $p < .05$

Table 9

Hierarchical Regression Analysis Predicting Decisional Procrastination

Model	Predictor	B	β	<i>t</i>	sig
1	(Constant)	14.16		18.96	.00**
	Extraversion	-.05	-.10	-2.57	.01*
	Agreeableness	-.00	-.00	-.08	.93
	Conscientiousness	-.38	-.55	-14.13	.00**
	Emotional Stability	-.13	-.26	-6.49	.00**
	Openness to Experience	.01	.01	.36	.72
	2	(Constant)	8.06		5.24
Extraversion		-.05	-.09	-2.35	.02*
Agreeableness		.00	-.00	.03	.97
Conscientiousness		-.37	-.53	-12.80	.00**
Emotional Stability		-.10	-.20	-4.97	.00**
Openness to Experience		-.01	-.01	-.36	.72
Self-Oriented		-.01	-.02	-.39	.70
Other-Oriented		.03	.05	1.16	.25
Socially Prescribed		.12	.17	3.50	.00**

Note: $N = 404$, ** $p < .01$, * $p < .05$

Descriptive statistics for the three dimensions of procrastination are presented in Table 10. High correlations were discovered between each of the three measures of procrastination, suggesting that procrastinatory behaviors may covary with one another. Due to this occurrence, procrastination scores were converted into Z scores across the three measures and the researcher of the present study reassessed the associations between the standardized variables.

Table 10

Descriptive Statistics and Intercorrelations of Procrastination Measures

Variable	1	2	3	<i>M</i>	<i>SD</i>	Min	Max
Arousal	-	-	-	48.51	16.80	20	98
Avoidant	.81**	-	-	33.56	10.56	15	72
Decisional	.80**	.73**	-	10.95	4.89	5	25

Note: $N = 404$, ** $p < .01$, * $p < .05$, (1) = Arousal, (2) = Avoidant, (3) = Decisional procrastination

Moderate to high procrastination scores for each sub-form of procrastination were also calculated. Z scores of 1.00 or higher indicated moderate to high procrastination scores across each sub-scale. Moderate to high arousal procrastination scores were reported for approximately 14.85% ($n=60$) of the participants in the present study. Moderate to high avoidant procrastination scores were reported for approximately 16.09% ($n=65$) of the participants in the present study. Finally, moderate to high decisional procrastination scores were reported for approximately 21.29% ($n=86$) of the participants in the present study. Results also indicated that participants reported moderate to high procrastination scores across multiple dimensions of procrastination. This suggests that individuals are moderate to high procrastinators across multiple dimensions. First, 69.3% ($n=280$)

of participants were not moderate to high procrastinators across any dimension of procrastination, suggesting that they are not moderate to high arousal, avoidant, or decisional procrastinators. Second, 14.4% ($n=58$) participants were moderate to high procrastinators on one procrastination dimension. Next, 11.1% ($n=45$) participants were moderate to high procrastinators on two procrastination dimensions. Finally, 5.2% ($n=21$) participants were moderate to high procrastinators on all 3 procrastination dimensions.

There were no significant relationships between age and types of procrastination (arousal: $r = -.06$, $p = .27$; avoidant: $r = -.01$, $p = .77$; decisional: $r = -.06$, $p = .26$). No empirical evidence was found in support for the notion that age is significantly inversely associated with procrastination (Steel, 2007). Results indicated no gender differences in procrastination types (male Arousal: $M = 47.54$, $SD = 16.20$, female Arousal: $M = 49.54$, $SD = 17.38$; male Avoidant: $M = 33.08$, $SD = 10.47$, female Avoidant: $M = 34.06$, $SD = 10.65$; male Decisional: $M = 10.75$, $SD = 4.81$, female Decisional: $M = 11.16$, $SD = 4.97$). A t-test examining the mean differences between men and women procrastination scores are displayed in Table 11. No empirical evidence was provided in support of the notion that men procrastinate more than women (Steel, 2007).

Table 11

T-Test for the Mean Differences Between Men & Women Procrastination Scores

Variable	df	t	sig	95% Confidence Level of the Difference	
				Lower	Upper
Arousal	402	-1.20	.230	-5.29	1.28
Avoidant	402	-.94	.35	-3.05	1.08
Decisional	402	-.85	.40	-1.37	.54

Note: $N = 404$, ** $p < .01$, * $p < .05$

Finally, there were numerous significant negative relationships between procrastination, personality, and perfectionism (Table 12). While many of the variables were significant, the majority of the associations were weak to moderate in nature. The strongest relationships were between the personality factor conscientiousness and all three sub-forms of procrastination (arousal, avoidant, and decisional) (Table 12). Results indicated a strong correlation between the personality factor emotional stability and all three sub-forms of procrastination (arousal, avoidant, decisional) (Table 12). These findings support previously identified associations between procrastination, personality, and perfectionism. (Boysan & Kiral, 2016; Flett et al., 1992; Steel, 2007).

Table 12

Correlation Matrices Between Procrastination, Personality, & Perfectionism

Variable	1	2	3	4	5	6	7	8	9	10	11
1	-	-	-	-	-	-	-	-	-	-	-
2	.81**	-	-	-	-	-	-	-	-	-	-
3	.80**	.73**	-	-	-	-	-	-	-	-	-
4	-.28**	-.18**	-.26**	-	-	-	-	-	-	-	-
5	-.30**	-.30**	-.31**	.33**	-	-	-	-	-	-	-
6	-.76**	-.67**	-.67**	.13**	.34**	-	-	-	-	-	-
7	-.46**	-.43**	-.51**	.34**	.35**	.40**	-	-	-	-	-
8	-.25**	-.22**	-.23**	.27**	.38**	.28**	.22**	-	-	-	-
9	-.18**	-.11**	-.06	.15**	.10*	.27**	-.09	.26**	-	-	-
10	-.15**	.20**	.27**	-.11*	-.08	-.16**	-.24**	-.08**	.24**	-	-
11	.21**	.25**	.34**	-.10*	-.11*	-.16**	-.32**	.08	.54**	.49**	-

Note: $N = 404$, ** $p < .01$, * $p < .05$. (1) = Arousal, (2) = Avoidant, (3) = Decisional, (4) = Extraversion, (5) = Agreeableness, (6) = Conscientiousness, (7) = Emotional Stability, (8) = Openness to Experience, (9) = Self-Oriented, (10) = Other-Oriented, (11) = Socially Prescribed.

CHAPTER 5: GENERAL DISCUSSION

Three sub-forms of procrastination (arousal, avoidant, and decisional) were examined using a sample of adults residing in the United States. The present study attempted to clarify the mixed results from previous studies of the triadic model of procrastination outside the academic realm.

The results presented in this study indicate that personality traits, as well as perfectionism, significantly predicted both overall procrastination as well as three subdomains of procrastination supporting previous findings in these areas (Boysan, & Kiral, 2016; Ferrari, 1992; Flett et al., 1992; Onwuegbuzie, 2000; Rice et al., 2012). Hypotheses 1, 3, and 5 were supported by the present study; when taken as a set, personality factors predict arousal, avoidant, and decisional procrastination (see Tables 1, 2, and 3, pp. 26-27, 29). Hypotheses 2 and 6, only extraversion, conscientiousness, and emotional stability significantly predicted arousal and decisional procrastination. Hypothesis 4, only conscientiousness and emotional stability predicted avoidant procrastination. Hypotheses 2, 4, and 6 were only partially supported by the present study.

Hypotheses 7, 9, and 11, multiple regression analyses were conducted and indicated that sub-forms of perfectionism significantly predicted procrastination (see Tables 4, 5, and 6, pp. 30-31, 33). Similar findings were indicated by previous studies (Flett et al., 1992; Onwuegbuzie, 2000; Sirois et al., 2017). Hypotheses 8 and 10, self-oriented and socially prescribed perfectionism, significantly predicted arousal and avoidant procrastination types. Hypotheses 8 and 10 were supported by the present study. Hypothesis 12, self-oriented, other-oriented, as well as socially prescribed perfectionism significantly predicted decisional procrastination. Hypothesis 12 was also partially supported by the present study.

A hierarchical regression analysis was conducted to determine the amount of unique variance sub-forms of perfectionism account for above and beyond personality factors when predicting types of procrastination. Results indicated that across each of the hierarchical regression analyses, Models 1 and 2 were significant predictors of arousal, avoidant, and decisional procrastination. Results also indicated that when predicting for avoidant and decisional procrastination, perfectionism account for a significant amount of unique variance above and beyond personality traits, as assessed by the Big 5 Personality Inventory. This suggests that sub-forms of perfectionism made a significant contribution in predicting avoidant and decisional, but not arousal procrastination, more than personality domains. It may be possible that external factors of socially prescribed perfectionism, such as a perceived external pressure to be perfect, may have a more significant effect on procrastinators than internal factors, such as self-oriented and other-oriented perfectionism do.

Previous studies have indicated that men procrastinate more than women (Gropel & Steel, 2008; Steel, 2007; Steel & Ferrari, 2013). However, no gender differences were identified in the present study (see Table 11, p. 39). Procrastination scores also did not significantly correlate with age in the present study. Previous studies have suggested that age and procrastination scores are inversely related, specifically that younger adults have higher procrastination scores than older adults (Steel, 2007; Steel & Ferrari, 2008).

Previous procrastination research about associations between procrastination and personality factors such as agreeableness and openness to experience have produced inconsistent findings. Results of the present study, indicated a moderate negative relationship between agreeableness and all three types of procrastination. Results also indicated a weak to moderate negative

relationship between openness to experience and all three types of procrastination. This may have occurred as traits of the five factor model of personality may be too broad when examining the relationship with procrastination.

Limitations and Future Recommendations

The present study utilized a third party to assist in the data collection process. Aside from setting the minimum requirements for workers, the researcher collected participants by means of a convenience sampling method. A sample size of 404 participants is quite large, however, results indicated that the current sample of the present study was not particularly diverse. The current sample consisted of predominantly middle-age, Caucasian males. While the intention was to collect a diverse sample of adults from across the United States, one major limitation of the present study was the lack of a diverse sample of adults. In addition to this, participants of the current study were members of Amazon Mechanical Turk who had a HIT approval rating $\geq 90\%$, which was a criteria of workers for participation in the present study. Therefore, the current sample of adults may not be an accurate reflection of the adult workers on MTurk nor an accurate reflection of adult procrastinators across the United States.

Amazon Mechanical Turk was also an expensive service. Because of this, limitations were set on the number of participants for collection, the number of criterion variables used for the present study, as well as the amount of compensation selected for paying workers. Future studies may want to consider using a less expensive service if financially restricted.

The use of MTurk posed two additional limitations. First, internet-based studies result in minimal control over participant's environments (Buhrmester et al., 2011). The quality of data may have suffered as a result of a lack of

standardized, controlled testing environments. Second, responses were based solely on self-report measures, therefore, workers may have been dishonest in their responses on particular tasks (Buhrmester et al., 2011). Precautions should be taken for future studies involving strictly internet-based services. This is important considering the lack of control as well as the lack of supervision when conducting online studies.

Additional limitations include the instruments used for the present study as well as the use of strictly self-report responses. Each of the measures used in the present study received Cronbach alpha reliabilities $\geq .70$ and acceptable validity for use as research measures; however, additional measures may have been useful in the assessment of procrastination, personality and perfectionism. For example, procrastination is suggested to be heavily rooted in trait like behavior. As previously mentioned, traits of the five factor model of personality may have been too broad to use in the present study. Instead, future studies should include a narrower set of personality traits in order to more closely examine facets of personality and its relationship with procrastination.

Considering arousal, avoidant, and decisional procrastination measures significantly correlated with one another, it is likely that similar trait characteristics were assessed across each of the measures, thus, limiting the ability to indicate strictly independent procrastinatory tendencies from one another. It is likely that these behaviors are not mutually exclusive. One speculation is that adults sampled in the present study might engage in arousal, avoidant, and decisional procrastinatory tendencies in conjunction with one another rather than independently from one another. Procrastinatory tendencies in the adults sampled may be displayed on a continuum, consisting of arousal, avoidant, and decisional behaviors from time to time.

In addition to this, perfectionism was not assessed using a unidimensional construct, therefore, this may have also contributed to the likely assessment of similar trait characteristics across the dimensions. Like the arousal, avoidant, and decisional procrastination, this may have contributed to the inability to identify strictly separate behavioral tendencies in participants. This is highly likely considering self-oriented and other-oriented perfectionism are characterized by perfectionistic strivings, which likely groups together a number of internal factors that may not be mutually exclusive from one another.

The present study also identified a number of significant predictors of the triadic model of procrastination. Personality traits such as extraversion, conscientiousness, and emotional stability consistently predicted procrastination across analyses. Sub-forms of perfectionism such as self-oriented and socially prescribed perfectionism also consistently predicted procrastination across analyses. Future research should examine the underlying relationship between these predictors and the triadic model of procrastination to better understand these phenomena. It may also be beneficial to better understand these phenomena, as strategies or tactics that target trait-like behaviors may be most effective when developing treatment and intervention plans for chronic procrastinators. Treatment and intervention strategies that are rooted in trait-like behaviors may be most effective as procrastinatory behavioral tendencies are often regarded as trait-like behaviors. Knowledge and understanding trait-like behaviors is important when examining the triadic model of procrastination and its relationship to various constructs such as personality and perfectionism.

Finally, the majority of procrastination research has primarily surveyed student populations. The present study surveyed a large sample of adults that were

not reflective of academic settings. Future studies should continue to survey adult populations to better understand the nature of procrastination in various domains.

Conclusion

The present study attempted to identify predictors as well as correlates of arousal, avoidant, and decisional procrastination. The present study also attempted to provide clear and concise empirical evidence in support of a triadic view of procrastination. Personality and perfectionistic predictors of procrastination were identified. However, strong correlations between the three dimensions of procrastination suggest that procrastinatory behavioral tendencies may not be mutually exclusive. It is evident that although procrastinatory behaviors are prevalent, the present study failed to provide clear and concise supporting evidence for a triadic view of procrastination. The present study did, however, provide evidence to enhance our knowledge and understanding of the relationships of personality and perfectionism, and the dimensions of procrastination (arousal, avoidant, and decisional). Future research is necessary to further circumscribe the domain of procrastination so that more effective treatment and prevention strategies may be developed. Personality-based treatment plans may be most effective due to the moderate to high associations between the two variables. Although procrastination research has primarily revolved around student populations, it is suggested that continued research consider focusing on non-academic populations.

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APPENDICES

APPENDIX A: CONSENT FORM

You are invited to participate in a study conducted by Matthew Islas and Dr. Michael Botwin at California State University, Fresno. We are interested in Personality and correlates of personality traits.

If you decide to participate, you will be directed to an online survey. The following survey consists of demographic questions as well as various scales. The combined measures should take approximately 30 minutes to complete.

No serious risks or harms are expected from your participation. You may experience fatigue or mild boredom. By completing the survey correctly and in its entirety, each participant will receive compensation for their involvement. Each respondent who assists with this study will also be contributing directly to our knowledge on the psychology of personality and its correlates.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. If you give us your permission by signing this consent form, we plan to disclose your information only to the appropriate authorities.

Your decision whether or not to participate in this study will not prejudice your future relations with California State University, Fresno the Department of Psychology nor with the researcher or associates of this study. If you decide to participate you are free to withdraw your consent and to discontinue participation at any time without penalty. This research is for educational purposes only.

If you have any questions, please ask us. If you have any additional questions later, you can contact Dr. Michael Botwin at (559) 278-5099. Questions regarding the rights of research subjects may be directed to Kris Clarke, Chair, CSU Fresno Committee on the Protection of Human Subjects, (559) 278-4468. You may have a copy of this consent form to keep.

**YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE.
YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO
PARTICIPATE, HAVING READ THE INFORMATION PROVIDED ABOVE.**

Date _____ Signature _____ Name (Please Print)

Signature of Investigator

APPENDIX B: BIG 5 PERSONALITY INVENTORY

14. Worry about things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4-)
15. Have a vivid imagination.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5+)
16. Keep in the background.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(1-)
17. Sympathize with others' feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2+)
18. Make a mess of things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(3-)
19. Seldom feel blue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4+)
20. Am not interested in abstract ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5-)
21. Start conversations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(1+)
22. Am not interested in other people's problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2-)
23. Get chores done right away.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(3+)
24. Am easily disturbed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4-)
25. Have excellent ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5+)
26. Have little to say.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(1-)
27. Have a soft heart.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2+)
28. Often forget to put things back in their proper place.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(3-)
29. Get upset easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4-)
30. Do not have a good imagination.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5-)
31. Talk to a lot of different people at parties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(1+)
32. Am not really interested in others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2-)

33. Like order.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(3+)
34. Change my mood a lot.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4-)
35. Am quick to understand things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5+)
36. Don't like to draw attention to myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(1-)
37. Take time out for others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2+)
38. Shirk my duties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(3-)
39. Have frequent mood swings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4-)
40. Use difficult words.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5+)
41. Don't mind being the center of attention.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(1+)
42. Feel others' emotions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2+)
43. Follow a schedule.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(3+)
44. Get irritated easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4-)
45. Spend time reflecting on things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5+)
46. Am quiet around strangers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(1-)
47. Make people feel at ease.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2+)
48. Am exacting in my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(3+)
49. Often feel blue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(4-)
50. Am full of ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(5+)

APPENDIX C: PROCRASTINATION SCALE

People may use the following statements to describe themselves. For each statement, decide whether the statement is uncharacteristic or characteristic of you using the following 5 point scale. Note that the 3 on the scale is Neutral – the statement is neither characteristics nor uncharacteristic of you.

Extremely Uncharacteristic	Moderately Uncharacteristic	Neutral	Moderately Characteristic	Extremely Characteristic
1	2	3	4	5

1. I often find myself performing task that I had intended to do days before.
2. I do not do assignments until just before they are to be handed in.
3. When I am finished with a library book, I return it right away regardless of the date it is due.
4. When it is time to get up in the morning, I most often get right out of bed.
5. A letter may sit for days after I write it before mailing it.
6. I generally return phone calls promptly.
7. Even with jobs that require little else except sitting down and doing them, I find they seldom get done for days.
8. I usually make decisions as soon as possible.
9. I generally delay before starting on work I have to do.
10. I usually have to rush to complete a task on time.
11. When preparing to go out, I am seldom caught having to do something at the last minute.
12. In preparing for some deadlines, I often waste time by doing other things.
13. I prefer to leave early for an appointment.
14. I usually start an assignment shortly after it is assigned.
15. I often have a task finished sooner than necessary.
16. I always seem to end up shopping for birthday or Christmas gifts at the last minute.
17. I usually buy even an essential item at the last minute.
18. I usually accomplish all the things I plan to do in a day.
19. I am continually saying "I'll do it tomorrow".
20. I usually take care of all the tasks I have to do before I settle down and relax for the evening.

APPENDIX D: ADULT INVENTORY OF PROCRASTINATION

These statements are concerned with your opinions on different situations. No two statements are exactly alike, so please consider each statement carefully before responding.

Answer as honestly as possible with the following rating:

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Sometimes disagree/Sometimes agree
- 4 = Agree
- 5 = Strongly agree

1. I pay my bills on time. *
2. I am prompt and on time for most appointments.*
3. I lay out my clothes the night before I have an appointment so I won't be late.*
4. I find myself running later than I would like to be.
5. I don't get things done on time.
6. If someone were teaching a course on how to get things done on time I would attend.
7. My friends and family think I wait until the last minute.
8. I get important things done with time to spare.*
9. I am not very good at meeting deadlines.
10. I find myself running out of time.
11. I schedule doctor's appointments when I am supposed to without delay.*
12. I am more punctual than most people I know.*
13. I do routine maintenance (e.g., changing the car's oil) on things I own as often as I should.*
14. When I have to be somewhere at a certain time my friends expect me to run a bit late.
15. Putting things off till the last minute has cost me money in the past year.

Reverse score*

APPENDIX E: DECISIONAL PROCRASTINATION SCALE

Decisional Procrastination measured using the following 5-point scale:

- 1 = Not True for me
- 2 = Often not true for me
- 3 = Sometimes untrue for me/Sometimes true for me
- 4 = Often true for me
- 5 = True for me

1. I waste a lot of time on trivial matters before getting to the final decision.
2. Even after I make a decision, I delay acting on it.
3. I don't make decisions unless I really have to.
4. I delay making decisions until it's too late.
5. I put off making decisions.

APPENDIX F: MULTIDIMENSIONAL PROCRASTINATION
SCALE

Multidimensional Perfectionism Scale (Hewitt, P.L., & Flett, G.L. (1990). Perfectionism and depression: A multidimensional analysis. *Journal of Social Behavior and Personality*, 5, 423-438.

INSTRUCTIONS: Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree & to what extent. **To score your responses, put the number of your response in the column that is highlighted next to this question.**

		Disagree						Agree	Self Oriented	Other Oriented	Socially Prescribed
1.	When I am working on something, I cannot relax until it is perfect	1	2	3	4	5	6	7			
2.	I am not likely to criticize someone for giving up too easily	7	6	5	4	3	2	1			
3.	It is not important that people I am close to are successful	7	6	5	4	3	2	1			
4.	I seldom criticize my friends for accepting second best	7	6	5	4	3	2	1			
5.	I find it difficult to meet others' expectations of me	1	2	3	4	5	6	7			
6.	One of my goals is to be perfect in everything I do	1	2	3	4	5	6	7			
7.	Everything that others do must be of top-notch quality	1	2	3	4	5	6	7			
8.	I never aim for perfection on my work	7	6	5	4	3	2	1			
9.	Those around me readily accept that I can make mistakes too	7	6	5	4	3	2	1			
10.	It doesn't matter when someone close to me does not do their absolute best	7	6	5	4	3	2	1			
11.	The better I do, the better I am expected to do	1	2	3	4	5	6	7			
12.	I seldom feel the need to be perfect	7	6	5	4	3	2	1			
13.	Anything that I do that is less than excellent will be seen as poor work by those around me	1	2	3	4	5	6	7			
14.	I strive to be as perfect as I can be	1	2	3	4	5	6	7			
15.	It is very important that I am perfect in everything I attempt	1	2	3	4	5	6	7			
16.	I have high expectations for the people who are important to me	1	2	3	4	5	6	7			
17.	I strive to be the best at everything I do	1	2	3	4	5	6	7			
18.	The people around me expect me to succeed at everything I do	1	2	3	4	5	6	7			
19.	I do not have very high standards for those around me	7	6	5	4	3	2	1			
20.	I demand nothing less than perfection of myself	1	2	3	4	5	6	7			
21.	Others will like me even if I don't excel at everything	7	6	5	4	3	2	1			
22.	I can't be bothered with people who won't strive to better themselves	1	2	3	4	5	6	7			
23.	It makes me uneasy to see an error in my work	1	2	3	4	5	6	7			
24.	I do not expect a lot from my friends	7	6	5	4	3	2	1			
SUBTOTALS Page 1									SO =	OO =	SP =
Add up in each column the colored areas to create summary score for each dimension											

		Disagree						Agree	Self Oriented	Other Oriented	Socially Prescribed
25.	Success means that I must work even harder to please others	1	2	3	4	5	6	7			
26.	If I ask someone to do something, I expect it to be done flawlessly	1	2	3	4	5	6	7			
27.	I cannot stand to see people close to me make mistakes	1	2	3	4	5	6	7			
28.	I am perfectionistic in setting my goals	1	2	3	4	5	6	7			
29.	The people who matter to me should never let me down	1	2	3	4	5	6	7			
30.	Others think I am okay, even when I do not succeed	7	6	5	4	3	2	1			
31.	I feel that people are too demanding of me	1	2	3	4	5	6	7			
32.	I must work to my full potential at all times	1	2	3	4	5	6	7			
33.	Although they may not say it, other people get very upset with me when I slip up	1	2	3	4	5	6	7			
34.	I do not have to be the best at whatever I am doing	7	6	5	4	3	2	1			
35.	My family expects me to be perfect	1	2	3	4	5	6	7			
36.	I do not have very high goals for myself	7	6	5	4	3	2	1			
37.	My parent rarely expected me to excel in all aspects of my life	7	6	5	4	3	2	1			
38.	I respect people who are average	7	6	5	4	3	2	1			
39.	People expect nothing less than perfection from me	1	2	3	4	5	6	7			
40.	I set very high standards for myself	1	2	3	4	5	6	7			
41.	People expect more from me than I am capable of giving	1	2	3	4	5	6	7			
42.	I must always be successful at school or work	1	2	3	4	5	6	7			
43.	It does not matter to me when a close friend does not try their hardest	7	6	5	4	3	2	1			
44.	People around me think I am still competent even if I make a mistake	7	6	5	4	3	2	1			
45.	I seldom expect others to excel at whatever they do.	7	6	5	4	3	2	1			
SUBTOTALS Page 2											
Add up in each column the colored squares for each dimension											
SUBTOTALS from Page 1											
SUBSCALE TOTALS									SO =	OO=	SP=

APPENDIX G: DEMOGRAPHIC QUESTIONNAIRE

Please complete the following items:

- 1.) Age_____
- 2.) Sex: Male_____
Female_____
- 3.) What is your Ethnicity?
Caucasian_____
African American_____
Hispanic/Latino_____
Asian/Pacific Islander_____
Native American/American Indian_____
Arab_____
Other_____
- 4.) What is your Martial status?
Single/never been married_____
Married_____
Separated_____
Divorced_____
Widowed_____
- 5.) Are you considered a first-generation college student?
Yes:_____ No:_____
- 6.) Are you enrolled in School? Yes:_____ No:_____
- 7.) Are you considered a Full-Time or Part-Time Student?
Full-Time (12 or more units):_____
Part-Time (Less than 12 units):_____
- 8.) What is your current class level?
Freshman_____
Sophomore_____
Junior_____
Senior_____
Graduate Student_____
- 9.) What is your current GPA?_____
- 10.) Are you considered a Veteran: Yes_____ No_____
- 11.) Including yourself, how many people live within your household?
Please indicate a number_____

- 12.) Are you currently employed? Yes_____ No_____
- 13.) Are you considered a full-time or part-time employee?
- 14.) If you answered yes to the above question, about how many hours a week do you work? Please indicate a number_____