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Factors Affecting Academic Procrastination

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FACTORS AFFECTING ACADEMIC PROCRASTINATION

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FACTORS AFFECTING ACADEMIC PROCRASTINATION

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CONTENTS

LIST OF TABLES

FACTORS AFFECTING ACADEMIC PROCRASTINATION

John Paul Reynolds   August 2015   59 Pages

Directed by: Sally Kuhlenschmidt, Ph.D, Elizabeth Jones, Ph.D, and Carl Myers, Ph.D

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This study sought to understand the relationships among locus of control, parenting style, academic procrastination, and financial independence with a population of undergraduate students. A sample of 61 students (39 females, 21 males, 1 other) completed measures of demographics, locus of control, parenting style, and academic procrastination. Participants were recruited within the last two weeks of the semester. Therefore, the sample probably contained a higher percentage of procrastinators than the general population. There were no significant correlations across the total sample. There was a significant positive correlation between higher scores on the Parental Authority Questionnaire authoritative scale and the Procrastination Assessment Scale Student Frequency scores for individuals who were financially dependent. There was also a significant negative correlation between the authoritarian and authoritative parenting style scores for those who were financially dependent.

Introduction

Two common definitions of procrastination are "the purposive delay in the beginning and/or completion of an overt or covert act, typically accompanied by subjective discomfort" (Ferrari, 1998, p. 281) and "to voluntarily delay an intended course of action despite expecting to be worse off for the delay" (Steel, 2007, p. 66). These two definitions reflect the assumptions that procrastination is something that an individual is knowingly doing, and that it is a dysfunctional form of delaying. If procrastination causes one to be worse off, why do more than 40% of college students enrolled in an introductory psychology course engage in this behavior (Rothblum, Solomon, & Murakami, 1986)?

Researchers have examined internal contributors to procrastination such as locus of control and emotional intelligence (Deniz, Tras, & Aydogan, 2009), emotional intelligence and self-efficacy (Hen & Goroshit, 2014), and self-awareness and emotional responses (Nicholson & Scharff, 2007). These studies found that overall, individuals with high emotional intelligence procrastinate less than those with lower emotional intelligence (Deniz et al., 2009), and that individuals with higher self-efficacy procrastinate less than those with lower self-efficacy (Hen & Goroshit, 2014). However, only three studies have examined external factors that increase one's likelihood to engage in procrastinating behaviors (Ferrari & Olivette, 1993; Frost, Lahart, & Rosenblate, 1991; Pychyl, Coplan, & Reid, 2002;).

One external factor that has been studied, although minimally, is the effect of parenting style on one's likelihood to procrastinate. Research has shown that in adolescents, parenting style does play a role in procrastination (Ferrari & Olivette, 1993;

1

Pychyl et al., 2002). Frost et al. (1991) in a study with 63 female undergraduate college students found that high perceived parental expectations and criticism were linked to perfectionism. Additionally, perfectionism was found to be positively correlated with procrastination. The outline of this Introduction will be to first examine procrastination, then locus of control, then other internal factors contributing to procrastination, then external contributing factors to procrastination, followed by the present study and hypotheses.

Nature of Procrastination in College Students

Steel (2007) conducted a meta-analysis of procrastination's possible causes and effects, by looking at 216 separate works about procrastination (7 book chapters, 7 conference proceedings, 3 unpublished papers, 5 electronic sources, 141 journal articles, and 53 theses) for a total of 691 correlations across student, general, and adolescent/child populations. The Hunter and Schmidt psychometric meta-analytic procedure was used to analyze the data. Steel concluded that procrastination is correlated with low conscientiousness and self-regulatory failure. This indicates that procrastination largely accounts for the relationship of conscientiousness to performance, and that procrastination is strongly associated with distractibility, poor organization, low achievement motivation, and an intention-action gap. Additionally, agreeableness and sensation seeking traits generated low correlations with procrastination. One possible way to decrease procrastination for tasks is to increase expectancy of success, or self-efficacy by verbal persuasion, emotional arousal, and modeling. Steel (2007) also concluded that task aversiveness, or decreasing the value of a task, increases the frequency of procrastination. Procrastinators tend to be impulsive, distractible, and

lacking in self-control. Due to procrastination's association with distractibility and

organization, two potential methods of reducing distractions include stimulus control and

automaticity. Stimulus control may help prevent distractibility by helping people

surround themselves with cues that confirm their goals and banish signs that remind them

of temptation. Automaticity may help people maintain goal pursuit and stay away from

procrastination, because it limits decision making to only the relevant tasks at hand.

Solomon and Rothblum (1984) studied 291 college students and their frequency

of procrastination on academic tasks, along with their reasons for procrastination

behavior. The researchers administered the Procrastination Assessment Scale - Students

(PASS) and self-paced quizzes. Self-reported procrastination was positively correlated

with the number of self-paced quizzes students took late in the semester, and with

participation in an experimental session offered late in the semester. Course grades were

not significantly correlated with self-reported procrastination. A homogenous group of

participants who consisted of 6% to 14% of the participants endorsed items on the fear of

failure factor. These items correlated significantly with self-report measures of

depression, irrational cognitions, low self-esteem, delayed study behavior, anxiety, and

lack of assertion. A larger heterogeneous group of participants consisting of 19% to 47%

of participants reported procrastinating as a result of the aversiveness of the task; this

factor did not correlate with anxiety or assertion, but did significantly correlate with

depression, irrational cognitions, low self-esteem, and delayed study behavior. This

indicates that procrastination is not solely a deficit in study habits or time management,

but involves a complex interaction of behavioral, cognitive, and affective components.

Rothblum et al. (1986) evaluated 379 university students enrolled in introductory psychology. The researchers administered the PASS, the Test Anxiety Scale, the Causal Dimension Scale, the Rosenbaum Self-Control Schedule and self-paced quizzes to examine the relationship between academic procrastination and academically related trait measures. Results showed that more than 40% of the students reported a high level of procrastination. Self-reported procrastination was positively correlated with delay in taking self-paced quizzes, and was negatively correlated with grade point average. High procrastinators were significantly more likely than low procrastinators to report more test anxiety, weekly state anxiety, and weekly anxiety related physical symptoms. High procrastinators were also significantly more likely than were low procrastinators to attribute success on exams to external and unstable factors. As exam deadlines approached, both high and low procrastinators perceived exams to be less difficult, less important, and less anxiety provoking. High procrastinators and women perceived themselves to have less delay of gratification, lower self-efficacy, and less control over emotional reactions. When looking at weekly behavioral measures, weekly delay and low frequency of study behavior occurred for most students. High procrastinators did not differ from low procrastinators in their study behavior or negative cognitions as much as they differ on anxiety, so interventions for procrastination that focus on anxiety reduction may be important. Finally, weekly behavioral measures showed that most students, including low procrastinators, had a low frequency of study behavior in the weeks before exams due to their fear of failure, task aversiveness, and view that exams were difficult.

Ackerman and Gross (2005) studied 198 undergraduate college students from two large public universities in the southwestern United States. The researchers administered

a self-report measure where participants were asked about their own overall proclivity to

procrastinate, an assignment-related measure that included questions about task

importance (norms, deadlines, rewards, and interdependence, task appeal (interest level

and skill variety), and task difficulty (knowledge required, scope of task, and clarity), and

a behavioral measure of procrastination which measured actual procrastination behavior

on a previous class assignment. They found that participants who were low on

procrastination reported more interest in the assignments compared to those who

procrastinated more. This supports the idea that interest is an important motivator, and

that if instructors were to develop and use assignments perceived by students as being

interesting, procrastination could possibly decrease. Additionally, tasks that require

students to use a greater variety of skills to complete an assignment may also be

perceived as being interesting, which may motivate students to start earlier. Therefore,

while it may be difficult to create assignments that appeal to all students, if the

assignment allows the use of a variety of skills, the perceived interest is thought to be

greater. Clarity of instructions was also a factor that was found to be significant. The

researchers also found that unambiguous instructions that enabled students to understand

exactly what was expected and required to succeed on an assignment could reduce the

fear of starting. Procrastination was also found to decrease when there were rewards or

incentives for starting early. Ackerman and Gross (2005) also found that building

interdependence into the structure of a course, such as breaking assignments down into

small interdependent parts, can reduce procrastination. Finally, they found that social

norms had a large impact on procrastination. For example, normative influence coming

from other students who either set a standard for promptness or procrastination influenced the behavior of other students, whether it was positive or negative.

To summarize, procrastination is associated with low conscientiousness and self-regulatory failure. Additionally, reasons for procrastination include factors such as fear of failure and aversiveness of the task, with no difference in study habits or time management. Additionally, individuals who procrastinate report more test anxiety, weekly state anxiety, and weekly anxiety-related physical symptoms. Future interventions for procrastination should look at reducing anxiety levels. Now we are going to look at internal contributors to procrastination, such as locus of control and other personality factors.

Internal Factors Contributing to Procrastination

Locus of control. Locus of control is defined as "the degree to which the individual perceives that a reward follows from, or is contingent upon, his own behavior or attributes versus the degree to which he feels the reward is controlled by forces outside of himself and may occur independently of his own actions" (Rotter, 1966, p. 1). According to Beretvas, Suizzo, Durham, and Yarnell (2008), perceiving an event as contingent on one's effort or ability marks an internal locus of control, whereas perceiving it as contingent on luck, chance, fate, or the control of powerful others indicates an external locus of control. Locus of control is rooted in social learning theory, which states that when a behavior is reinforced, the expectancy that this behavior will be similarly reinforced in the future is strengthened (Rotter, 1966). Reinforcements perceived as outside of one's personal control are less likely to raise expectancies for

future reinforcements following successes that are perceived to be within one's personal control.

Deniz et al. (2009) studied 435 undergraduate college students who attended a Turkish university. The researchers administered the Emotional Intelligence Scale, the Academic Procrastination Behavior Scale, and the Rotter Locus of Control Scale (LOC). They found that there was a significant negative relationship between procrastination and internal locus of control with the intrapersonal, interpersonal, adaptation, coping with stress, and mood subscales on the Emotional Intelligence Scale. Results also showed that individuals with an internal locus of control procrastinate less and complete their homework earlier than those with an external locus of control. There was a positive correlation between procrastination and coping with stress, where procrastination serves as a tool for coping with stress. Problems relating to school, health, and family may be associated with procrastinating behavior in students. Individuals who can overcome stress are able to take precautionary measures to prevent the behavior of procrastination. Additionally, there was a positive correlation between procrastination and anxiety, where anxiety increased the tendency of procrastination; therefore, anxiety was a predictive factor in procrastination. This supports the findings of Rothblum et al. (1986) that were discussed earlier, which indicated that high procrastinators were significantly more likely to report more test anxiety, weekly state anxiety, and weekly anxiety related physical symptoms compared to low procrastinators. Possible ways to reduce the anxiety include making an organized study schedule, disputing unhealthy thoughts, and practicing breathing exercises.

Janssen and Carton (1999) researched 42 undergraduate students who attended a Midwestern college in the United States; the researchers administered the Academic Locus of Control Scale. The participants were randomly assigned a task similar to a typical college homework assignment and were asked to complete it. Procrastination was measured by calculating the time it took for the participants to begin, complete, and return the assignment. Analyses revealed that students with an internal locus of control began working on the assignment sooner than students with an external locus of control. Also, students with an internal locus of control completed and returned the assignment sooner than students with an external locus of control. This supports the notion that having an external locus of control is related to poor time-management skills.

To summarize, locus of control is the degree to which an individual perceives that a reward follows from, or is contingent upon, his or her own behavior or attributes versus the degree to which he or she feels the reward is controlled by forces outside of him or herself. Additionally, individuals with an internal locus of control were found to procrastinate less and complete their homework earlier than those with an external locus of control. This supports the idea that having an external locus of control is positively correlated with procrastination. In addition to locus of control, other personality factors have been examined for their contribution to procrastination.

Other personality factors. Internal factors contributing to procrastination are factors that have a psychological component which is associated with procrastination. Nicholson and Scharff (2007) studied 60 undergraduate college students who were recruited from a psychology department participant pool. The participants were administered the Aitken Academic Procrastination Inventory and the Diener and

Emmons' Composite Affect Scale; additionally, the researchers randomly assigned participants into two types of rooms. The first type of testing room contained a mirror placed at eye level to increase the self-awareness of participants. The second type of testing room contained a poster at eye level. The researchers hypothesized that individuals who were chronic procrastinators with high self-awareness would score negatively on a measure of internal emotion when placed in a room with a mirror, and that regardless of procrastination level, individuals with low self-awareness would score positively on a measure of internal emotion when placed in a room without a mirror. As predicted, chronic procrastinators with high self-awareness reported negatively on a measure of internal emotion when placed in a room with a mirror; this suggests that a chronic procrastinator's mood may be affected negatively when made aware of their emotional state. In contrast to the hypothesis, individuals who were less chronic procrastinators, but had high self-awareness reported positive internal emotion when placed in a room with a mirror.

Hen and Goroshit (2012) studied 287 second-year undergraduate students from a university in Israel where 35% of the participants had previously been classified as having some kind of learning disorder (LD). The researchers administered the Schutte Self-Report Emotional Intelligence Test, the College Academic Self-Efficacy Scale, an academic procrastination scale, and a measure of grade point average. The researchers found that LD students had lower emotional intelligence and academic self-efficacy, and higher academic procrastination than non-LD students. LD students had lower self-regulated learning behaviors and self-efficacy for self-regulation, and higher frequency of academic procrastination. Furthermore, the indirect effect of emotional intelligence on

academic procrastination in LD students was stronger than non-LD students; this

suggests that for LD students, the ability to regulate their emotional states is very

important for less academic procrastination, and for improved performance in academic

tasks.

Beswick, Rothblum, and Mann (1988) studied 245 undergraduate college students

who were taking a first-year Psychology course. The study examined three psychological

explanations for procrastination: indecision, irrational beliefs about self-worth, and low

self-esteem. The researchers administered the PASS, the Ellis Scale of Irrational

Cognitions, the Beck Depression Inventory, the Rosenberg Self-Esteem Scale, and the

State-Trait Anxiety Inventory. Additionally, a behavioral measure of procrastination was

given to the participants in the form of having them complete an outline of a term paper,

the term paper itself, and a packet which contained the research questionnaires previously

mentioned. The study showed that 46% of the students indicated that they nearly always

or always procrastinate on writing term papers. Also, 35% of the students reported that

procrastination on term papers was always a problem, and 62% reported that they would

like to decrease procrastination on term papers. The researchers found that there was a

significant correlation between self-reported procrastination and actual procrastination in

submitting work. They also found that self-reported procrastination was significantly

correlated with poorer performance. Out of the three psychological explanations for

procrastination, the factor of irrational beliefs yielded no correlation with time taken to

turn in the term paper; however, there was a significant correlation with self-reported

frequency of procrastination ($r = .20, p < .01$). Indecision and self-reported

procrastination on academic tasks were also correlated significantly ($r = .32, p < .01$).

Finally, low self-esteem was found to be the factor which was most strongly correlated with behavior delay and self-reported procrastination ($r = .35$, $p < .01$). The researchers indicated that individuals who procrastinated had low self-esteem, reported being indecisive, held irrational beliefs about personal standards, and tended to be more anxious and depressed.

Bosato (2001) studied archival data from 323 undergraduate college students who were taking an introductory course in Psychology. The study examined time perspective, or the way we partition time into past, present and future in relation to academic motivation style and procrastination. The researcher administered the Academic Motivation Scale, the Zimbardo Time Perspective Inventory, and a self-report procrastination scale. The researcher found that there was a significant positive relationship between having a future time orientation and intrinsic motivation. Additionally, there was a significant negative relationship between having a future time orientation and low motivation. Individuals who held a present time orientation displayed higher degrees of procrastination than those with a future time orientation. There was also a significant positive relationship between procrastination and low motivation, and a significant negative relationship between procrastination and intrinsic motivation. To summarize, individuals who have a future time orientation are more intrinsically motivated, and those who have intrinsic motivation procrastinate less.

Brownlow and Reasinger (2000) studied 96 undergraduate college students. The study examined the impact of intrinsic and extrinsic motivation toward academic work, and personality variables such as fear of failure, perfectionism, and locus of control on academic procrastination. The researchers administered the PASS, the Work Preference

Inventory, the Brief Fear of Negative Evaluation Scale, the Burns' Perfectionism Scale, the Rotter Locus of Control Scale, and the Multidimensional-Multiattributional Causality Scale. The researchers found that motivation toward school tasks and personality orientation do impact academic procrastination. Low extrinsic motivation, external attributional style, and external locus of control predicted the general tendency to procrastinate on academic tasks. Perfectionism was also a strong predictor of procrastination, but only for women. Additionally, the data indicated that procrastinators have difficulty regulating themselves, and need to be externally motivated in order to get their work done. Finally, the reasons for procrastinating for males and females was different. For males, procrastination had to do with their low intrinsic motivation toward academics and their little inherent satisfaction in school work. For females, perfectionism was a strong predictor for procrastination.

To summarize, less chronic procrastinators may be better at regulating their emotions when under stressful situations, and individuals who are able to cope with stress are less likely to procrastinate. Also, the lower the emotional intelligence and academic self-efficacy that LD students had, the higher academic procrastination they reported. Procrastinators showed to have lower self-esteem, reported being indecisive, and held irrational beliefs about personal standards. Finally, individuals with a future time orientation are more intrinsically motivated and less likely to procrastinate. Internal factors are not the only contributors to procrastination. Researchers also believe that there are external factors, such as parenting style that contribute to procrastination.

External Factors Contributing to Procrastination

External factors contributing to procrastination are factors that originate outside of people and which are associated with an increased likelihood of procrastination. One external factor thought to contribute to procrastination is parenting style. According to Baumrind (1971), there are three types of parenting styles: permissive, authoritarian, and authoritative. Permissive parents are caregivers who make fewer demands on their children than do other parents, and allow for their children to regulate their own activities as much as possible. Authoritarian parents are caregivers who tend to be highly directive with their children, and value unquestioning obedience in their exercise of authority over their children. Being detached and less warm than other parents are characteristics of an authoritarian parent. Authoritative parents are caregivers who fall between these two extremes, and provide clear and firm direction for their children, but disciplinary clarity is moderated by warmth, reasonable flexibility, and verbal give-and-take.

Pychyl et al. (2002) studied 105 middle and high school students from the ages of 13 to 15 who were taking part in a one week "enrichment program." The researchers administered the Parental Authority Questionnaire (PAQ), the Self-Perception Profile for Adolescents, a demographics questionnaire, and the General Procrastination Scale. There were no significant results found for any analyses involving maternal and paternal permissive parenting (see Table 1). Authoritarian parenting from mothers showed no significant relationships; however, authoritarian parenting from fathers showed a significant positive relationship with procrastination with sons and daughters (see Table 1). Authoritative parenting from mothers showed a significant negative correlation with procrastination for both boys and girls (see Table 1).

Table 1

Parenting Style Effects on Procrastination in Sons and Daughters

Child Gender	Parent Gender	
	Father	Mother
Son	Permissive 0	Permissive 0
	Authoritarian +	Authoritarian 0
	Authoritative 0	Authoritative -
Daughter	Permissive 0	Permissive 0
	Authoritarian +	Authoritarian 0
	Authoritative -	Authoritative -

0. Has No Effect on Procrastination
+. Increases Procrastination
-. Reduces Procrastination

     Authoritative parenting from fathers was not significantly related to procrastination for boys; however, there was a significant negative relationship found between authoritative parenting from fathers and procrastination in girls (see Table 1). Additionally, self-worth was not correlated to procrastination for males; however, there was a significant negative correlation between self-worth and procrastination for females.

     Ferrari and Olivette (1993) studied 86 female college students at a small private college who were enrolled in an introductory developmental psychology course. The researchers administered the Decisional Procrastination Scale and the Parental Authority Questionnaire. They sought to investigate the three Baumrind (1971) parenting styles to see if they had an effect on procrastination. They found that a major source of the

development of decisional procrastination tendencies in females was due to the home

environment one grew up in. Authoritarian parents who exercised overcontrol and

inflexibility of authority were perceived by their daughters as having a parental style that

increased their inclination toward indecision. Having authoritative parents and

permissive parents was unrelated to decisional procrastination scores. This demonstrates

that parenting style may have an important influence on personality development and

decisional procrastination. This research is consistent with the Baumrind (1971) research

that studied 146 preschool children and their families. In the Baumrind (1971) study, the

researchers administered the Stanford-Binet IQ Test, a parent behavior rating scale, and

the Parent Attitude Inquiry (PAI). There was also a team of seven observers who

recorded all interpersonal and social behavior of the children as they engaged in activities

in the nursery school. The data indicated that daughters of authoritarian parents were

significantly less independent and somewhat less achievement-oriented than daughters of

authoritative parents, while sons of authoritarian parents were somewhat less independent

than sons of authoritative parents. Perhaps it can be interpreted that the decisional

procrastination that Ferrari and Olivette (1993) studied in females, which stemmed from

the authoritarian parenting style, could also be linked to the achievement-orientation and

independence from the Baumrind (1971) study. Accordingly, when it comes to parenting

style, individuals who perceived their mothers as being authoritative displayed a

significant negative correlation with procrastination, while those with authoritarian

fathers displayed a significant positive relation with procrastination. Additionally,

females with authoritative parents were more likely to be independent and achievement-

oriented while females who perceived their parents to be authoritarian were more likely to experience an inability to make decisions.

The Present Study

The connection between parenting and procrastination is still largely unresearched, and out of four articles that have examined parenting style and procrastination, three have used an adolescent population. Although the adolescent period of development is one that is characterized by a shift in influence from the adolescents' parents to their peers, parents still play a large role in the development of adolescents (Brown, Mounts, Lamborn, & Steinberg, 1993). One important question that remains is how parenting style from people's childhood affects them after they grow into adulthood and become physically and financially independent from their parents.

The present study evaluated whether having an external locus of control had an effect on college students' frequency of self-reported academic procrastination, whether the authoritarian and authoritative parenting styles had an effect on college students' frequency of self-reported academic procrastination, and whether financial independence had an effect on college students' frequency of self-reported academic procrastination. Permissive parenting will not be examined as the prior literature did not support a relationship.

Hypotheses

1. Undergraduate university students with an external locus of control are more likely to procrastinate than those with an internal locus of control.
2. Undergraduate university students who perceived their caregivers' parenting style as being authoritarian are likely to self-report higher frequency of

academic procrastination, while those who perceived their parents as being authoritative are likely to report lower frequency of academic procrastination. The literature does not support any relationship with permissive parents, so that variable will not be examined.

3. Individuals who are financially dependent are more likely to procrastinate than those who are financially independent.

Method

Participants

Participants, who were at least 18 years old, were recruited through the Psychology Department Study Board. The Study Board is an automated online system for scheduling research participants. The Study Board is a software platform that allows professors and graduate students to post research studies, and undergraduate students are able to register to participate. Students in Introductory Psychology are required to participate in research. All participants received Study Board credit toward their course. The sample was collected in the last two weeks of the semester.

Participants included 63 students, consisting of 41 females, 21 males, and 1 individual who identified as other. As a manipulation check and prior to examining the data, the researcher measured the time it took to respond to all of the questionnaires without reading anything. It took just under three minutes to complete the assessments. Therefore, the two participants who took three minutes or less to complete the questionnaires were excluded from the data for a final N of 61 (39 females, 21 males and 1 other).

The two individuals who were excluded from the data due to completing the questionnaires in three minutes or less did not answer most of the demographics questions; therefore, information about them is unknown. The mean age of the final sample was 20.33 years ($SD = 2.5$). The overall sample of participants mostly self-identified as Caucasian ($n = 48$; 78.7%; see Table 2).

Table 2

Ethnicity – Total Sample

Ethnicity	Number Selecting	Percent
Asian	1	1.6%
Black or African American	7	11.5%
Hispanic or Latino	4	6.6%
Two or more races	1	1.6%
White or Caucasian	48	78.7%

A majority of the sample indicated that the United States of America was their country of origin (*n* = 56; 91.8%; see Table 3).

Table 3

Country of Origin – Total Sample

Country	Number Selecting	Percentage
Brazil	1	1.6%
Mexico	1	1.6%
Nigeria	1	1.6%
Saudi Arabia	1	1.6%
Sweden	1	1.6%
United States	56	91.8%

A majority of the sample indicated that they were a native English speaker ($n =$ 57; 93.4%). The remaining sample indicated that they were not native English speakers ($n = 4$; 6.6%). The mean number of primary caregivers they had when growing up was 2.28 ($SD= .84$), and a majority of the participants responded with two ($n = 41$; 67.2%; see Table 4).

Table 4

Number of Primary Caregivers When Growing up – Total Sample

Number	Number Selecting	Percentage
1	6	9.8%
2	41	67.2%
3	5	8.2%
4+	9	14.8%

When asked to identify who their primary caregivers were, a majority of the sample indicated their mother ($n = 58$, 95.1%; see Table 5).

Table 5

Primary Caregivers – Total Sample

Relation	Number Selecting	Percentage
Mother	58	95.1%
Father	45	73.8%
Grandmother	11	18.0%
Grandfather	7	11.5%
Aunt	5	8.2%
Sister	4	6.6%
Step Father	4	6.6%
Uncle	4	6.6%
Brother	2	3.3%
Cousin	2	3.3%
Adopted Mother	1	1.6%
Adopted Father	1	1.6%

The mean on how emotionally close they were to their caregivers on a scale from 1 (*not close*) to 7 (*very close*), there was 5.84 (*SD* = 1.34), and most chose very close (*n* = 26; 42.6%; see Table 6).

Table 6

Emotional Closeness to Primary Caregiver(s) – Total Sample

Rating	Number Selecting	Percentage
1 (Not close)	1	1.6%
2	0	0%
3	1	1.6%
4	11	18.0%
5	6	9.8%
6	16	26.2%
7 (Very close)	26	42.6%

When asked to identify how many miles away their parents were from where they live, most chose 51 to 100 miles away (*n* = 17; 27.9%; see Table 7).

Table 7

Distance Away From Caregiver(s) – Total Sample

Miles	Number Selecting	Percentage
≥10	10	16.4%
11 to 50	9	14.8%
51 to 100	17	27.9%
101 to 175	13	21.3%
176 to 240+	12	19.7%

To check to see if the participants were physically independent from their parents, they were asked if they were currently living separately from their caregiver(s). A majority of the participants responded that they were living independently ($n = 55$; 90.2%), while the rest indicated they were still living with their caregiver(s) ($n = 6$; 9.8%). Participants were also asked if they were financially independent from their caregiver(s). Most participants reported that they were currently financially independent ($n = 34$; 55.7%), while the remaining participants indicated that they were financially dependent ($n = 27$; 44.3%).

When asked how often they initiate communication with their caregiver(s) in a typical week, $n = 22$ (36.1%) chose 1 to 6 times, $n = 22$ (36.1%; see Table 8).

When asked how often their parents initiate communication with them in a typical week, ($n = 23$; 37.7%) chose 1 to 6 times (see Table 8). When asked how many minutes they initiate communication with their caregiver(s) in a typical week, most indicated 1 to 30 minutes ($n = 35$; 57.4%; see Table 9). When asked how many minutes their parents initiate communication with them in a typical week, a majority indicated 1 to 30 minutes ($n = 33$; 54.1%; see Table 9).

Table 8

Frequency of Initiated Contact Per Week – Total Sample

	Participants		Parents	
Frequency	Number Selecting	Percentage	Number Selecting	Percentage
0	2	3.3%	2	3.3%
1 to 6	22	36.1%	23	37.7%
7 to 13	22	36.1%	22	36.1%
14 to 30	12	19.7%	7	11.5%
31+	3	4.9%	7	11.5%

Table 9

Amount of Time Initiating Contact Per Week – Total Sample

	Participants		Parents	
Minutes	Number Selecting	Percentage	Frequency	Percentage
0	2	3.3%	3	4.9%
1 to 30	35	57.4%	33	54.1%
31+	24	39.3%	25	41.0%

The mean of how full their life was with tasks during a typical week on a scale from 1 (*relaxed*) to 7 (*overwhelmed*), there was 5.10 (*SD* = 1.18), and most chose 4 (*n* = 22; 36.1%; see Table 10).

Table 10

Life Fullness Rating – Total Sample

Rating	Number Selecting	Percentage
1 (Relaxed)	0	0.0%
2	0	0.0%
3	2	3.3%
4	22	36.1%
5	16	26.2%
6	10	16.4%
7 (Overwhelmed)	11	18.0%

Measures

Participants were asked to complete a randomly ordered sequence of self-report questionnaires, including demographic information, a measure of locus of control, a parental authority questionnaire, and a measure of procrastination. Questionnaires were administered through Qualtrics, a website which allows researchers to upload assessments to the internet.

The two-page demographic questionnaire covered information about age, gender, ethnicity, country of origin, native language, number of caregiver(s), biological relation

or label of one's caregiver(s), emotional closeness to one's caregiver(s), distance from one's caregiver(s), physical and financial independence from one's caregiver(s), frequency of initiating and receiving contact with one's caregiver(s), minutes of initiating and receiving communication with one's caregiver(s), and a life fullness rating (see Appendix A). An option of "other" was provided for the gender and ethnicity categories.

Rotter's Locus of Control Scale (LOC; Rotter, 1966) is a 29-item test that measures the extent to which people believe they can control the events affecting them (see Appendix B). This assessment requires individuals to choose between two statements, and pick the one they agree with most. This scale includes six filler items, and 23 items that focus on the construct of locus of control, regarding achievement, affection, social attitudes and political perspectives (Rotter, 1966). The scale's internal consistency is adequate, ranging from $r = .65$ to .79, along with its test-retest reliability, which ranged from $r = .49$ and .83 (Rotter, 1966). A total of 23 is the highest an individual can score. Individuals with low scores have an internal locus of control, while those with high scores have an external locus of control.

The Parental Authority Questionnaire (PAQ; Buri, 1991) is a 30-item assessment used to measure the three parental authority prototypes proposed by Baumrind (1971): permissive, authoritarian, and authoritative (see Appendix C). The items within the measure are grouped into three subscales containing 10 items that assess each parental authority prototype. Each item is rated on a 5-point, Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Respondents are asked to complete the questionnaire with their primary caretaker in mind; however, there is nowhere to identify the gender of the primary caretaker. To determine the scores for each parenting style,

one must add up the 10 questions which endorse one of the three parenting styles. Therefore, the range for each subscale is 10 to 50, with higher scores reflecting the parenting style that the endorsed items represent.

The PASS (Solomon & Rothblum, 1984) is a 44-item 5-point Likert scale used to evaluate one's academic procrastination in two-parts (see Appendix D). Only the first part of the scale was used in the study, and it evaluates the frequency with which one procrastinates in writing a term paper, studying for an exam, keeping up with reading assignments, performing administrative tasks, attending meetings, and performing school tasks (Solomon & Rothblum, 1984). The frequency of procrastination is calculated from 12 items. For each area, participants were asked to complete three rating scales that indicate the degree to which they procrastinate on each task, ranging from 1 (*Never procrastinate)* to 5 (*Always procrastinate*), whether procrastination on the task is a problem, ranging from 1 (*Not at all a problem*) to 5 (*Always a problem*), and whether they want to decrease their procrastination in the future, ranging from 1 (*Do not want to decrease*) to 5 (*Definitely want to decrease*). The alpha coefficient of the first part is .75 (Howell et al., 2006). On the frequency section of the PASS, the highest score an individual can receive is an 85. The higher the score an individual has, the more self-reported procrastination he or she indicates. Nothing in the literature indicates what a typical score is.

Procedure

Prior to the study, Institutional Review Board (IRB) approval was granted (see Appendix E). Participants participated online via personal computer; they were electronically given an informed consent form prior to testing (see Appendix F). These

individuals were informed about confidentiality policies, the procedure of the study, and

that they could discontinue the study at any time. Afterwards, the participants completed

a randomly ordered battery of self-report measures, including the demographic

questionnaire, the LOC, the PAQ, and the PASS.

The researcher was a Clinical Psychology graduate student who had read the

directions on how to administer and score the assessments, and had given the assessments

in a practice run. Participants completed each assessment remotely through the internet,

so the environment in which they answered the questions was unknown. Based on a trial

run of the study, the completion of all assessments was predicted to take approximately

30 minutes. After completing all of the assessments, participants were thanked for their

participation and were given contact information if they had any further questions or

concerns regarding the study.

Results

Missing values were replaced by the mean of the entire sample ($n = 61$) on that variable. Two participants were removed from the data set, due to completing the assessment too quickly to have read them, and leaving a majority of the responses blank.

Descriptive Statistics

In order to identify typical performance and the range in performance, means and standard deviations were calculated for all measures.

For the total sample (see Table 11), descriptives for the LOC scale were $M = 11.57$, $SD = 3.77$, and range: 4–21.

For the total sample (see Table 11), the permissive parenting style scores from the PAQ were $M = 26.89$, $SD = 7.11$ and range = 12–50. The authoritarian parenting style scores from the PAQ were $M = 36.39$, $SD = 5.80$, and range: 15–50. The authoritative parenting style scores from the PAQ were $M = 32.71$, $SD = 6.41$, and range: 18–50.

For the total sample (see Table 11), descriptives for the PASS were $M = 35.67$, $SD = 7.05$, and range: 22–51.

When looking at individuals who reported they were financially independent ($n = 34$; see Table 12), the frequency of procrastination on the PASS was high, with $M = 36.32$, $SD = 8.17$, and range: 22–51. Additionally, the score from the LOC scale was $M = 10.97$, $SD = 3.44$, and range: 4–19. When looking at the permissive parenting style scores from the PAQ for the financially independent participants, there was a mean

29

Table 11

Descriptive Statistics – Total Sample

Variable	*n*	*M* (*SD*)	95% CI
LOC	61	11.57 (3.77)	[10.60, 12.53]
Permissive	61	26.89 (7.11)	[25.07, 28.71]
Authoritarian	61	36.39 (5.80)	[34.90, 37.88]
Authoritative	61	32.70 (6.41)	[31.06, 34.35]
PASS-Freq	61	35.67 (7.06)	[33.86, 37.47]

Note. CI = confidence interval; LOC = locus of control; PASS-Freq = Procrastination Assessment Scale Student - Frequency.

of $M = 27.73$, $SD = 7.71$, and range: 12–50. The authoritative parenting style scores from the PAQ were $M = 33.76$, $SD = 6.43$, and range: 21–50. The authoritarian parenting style scores from the PAQ were $M = 35.47$, $SD = 6.18$, and range: 15–50.

Among individuals who were financially dependent ($n = 27$; see Table 12), the frequency of procrastination from the PASS was $M = 34.84$, $SD = 5.38$, and range: 26–46. Additionally, the score from the LOC scale was $M = 12.32$, $SD = 4.10$, and range: 4–21. When looking at the permissive scores from the PAQ, $M = 25.83$, $SD = 6.24$, and range: 13–39. The authoritative scores from the PAQ were $M = 31.37$, $SD = 6.25$, and range: 18–42. The authoritarian scores from the PAQ were $M = 37.56$, $SD = 5.17$, and range: 27–47.

Table 12

Descriptive Statistics – Financially Independent Versus Financially Dependent

Variable	Financially Independent ($n = 34$)		Financially Dependent ($n = 27$)	
	M (*SD*)	95% CI	*M* (*SD*)	95% CI
LOC	10.97 (3.44)	[9.77, 12.18]	12.32 (4.10)	[10.70, 13.94]
Permissive	27.73 (7.72)	[25.03, 30.42]	25.83 (6.24)	[23.36, 28.30]
Authoritarian	35.47 (6.18)	[33.31, 37.62]	37.56 (5.17)	[35.51, 39.60]
Authoritative	33.76 (6.43)	[31.52, 36.01]	31.37 (6.25)	[28.90, 33.84]
PASS-Freq	36.32 (8.17)	[33.47, 39.17]	34.84 (5.38)	[32.70, 36.97]

Note. CI = confidence interval; LOC = locus of control; PASS-Freq = Procrastination Assessment Scale Student - Frequency.

Among individuals who had a high rate of procrastination ($n = 30$; see Table 13), the score from the LOC scale was $M = 11.57$, $SD = 3.58$, and range: 4–17. When looking at the permissive scores from the PAQ, $M = 25.44$, $SD = 6.75$, and range: 12–40. The authoritarian scores from the PAQ were $M = 36.57$, $SD = 6.45$, and range: 15–47. The authoritative scores from the PAQ were $M = 33.29$, $SD = 6.41$, and range: 21–44.

Among individuals who had a low rate of procrastination ($n = 31$; see Table 13), the score from the LOC scale was $M = 11.57$, $SD = 4.00$, and range: 4–21. When looking at the permissive scores from the PAQ, $M = 28.29$, $SD = 7.27$, and range: 17–50. The authoritarian scores from the PAQ were $M = 36.22$, $SD = 5.19$, and range: 27–50. The authoritative scores from the PAQ were $M = 32.14$, $SD = 6.47$, and range: 18–50.

Table 13

Descriptive Statistics – High Procrastination Versus Low Procrastination

	High Rate of Procrastination (*n* = 30)		Low Rate of Procrastination (*n* = 31)	
Variable	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
LOC	11.57 (3.58)	[10.23, 12.90]	11.57 (4.00)	[10.10, 13.04]
Permissive	25.44 (6.75)	[22.91, 27.96]	28.29 (7.27)	[25.63, 30.96]
Authoritarian	36.57 (6.45)	[34.16, 38.98]	36.22 (5.19)	[34.32, 38.13]
Authoritative	33.29 (6.41)	[30.90, 35.69]	32.14 (6.47)	[29.77, 34.51]

Note. CI = confidence interval; LOC = locus of control.

Correlations

In order to examine the relationship among variables, a Pearson Product-Moment Correlation Coefficient matrix was calculated. The scores between the life fullness rating and academic procrastination frequency were correlated to see if participants put things off due to being so busy. There was no significant correlation ($r = .10$, $p = .41$). When correlating scores of the overall sample from the LOC, PAQ, and PASS, no significant correlations were found (see Table 14). Similarly, there were no significant correlations when looking at the financially independent participants (see Table 15). However, when looking at the financially dependent participants ($n = 27$), there was a significant positive relationship between higher scores on the PAQ authoritative scale and the PASS frequency scale, $r = .44$, $p = .02$ (see Table 16). There was also a significant negative

32

correlation between the PAQ authoritarian scale and the PAQ authoritative scale, $r = -.52$,

$p = .01$.

Table 14

Pearson's Correlation Coefficients for the Parameters Studied – Total Sample

Measure	1	2	3	4	5
1. LOC	–				
2. Permissive	.10	–			
3. Authoritarian	-.10	.24	–		
4. Authoritative	.11	.07	-.12	–	
5. PASS-Freq	.21	.10	-.07	.22	–

Note. LOC = locus of control; PASS-Freq = Procrastination Assessment Scale Student - Frequency.

Table 15

Pearson's Correlation Coefficients for the Parameters Studied – Financially Independent Sample

Measure	1	2	3	4	5
1. LOC	–				
2. Permissive	.06	–			
3. Authoritarian	-.14	.28	–		
4. Authoritative	.24	.26	.19	–	
5. PASS-Freq	.34	.07	-.05	.09	–

Note. LOC = locus of control; PASS-Freq = Procrastination Assessment Scale Student - Frequency.

Table 16

Pearson's Correlation Coefficients for the Parameters Studied – Financially Dependent Sample

Measure	1	2	3	4	5
1. LOC	–				
2. Permissive	.24	–			
3. Authoritarian	-.14	.25	–		
4. Authoritative	.06	-.29	-.52**	–	
5. PASS-Freq	.09	.13	-.04	.44*	–

Note. LOC = locus of control; PASS-Freq = Procrastination Assessment Scale Student - Frequency.
*$p < .05$. **$p < .01$.

Comparison of the Means

To calculate whether differences between conditions were meaningful, an independent sample t-test was conducted. When comparing LOC, permissive, authoritarian, authoritative, and PASS scores between individuals who were financially independent and financially dependent, no significant differences were found (see Table 17). Follow up analyses conducted comparing LOC, permissive, authoritarian, and authoritative scores between individuals who had low procrastination rates and high procrastination rates based on responses to item 1 on the PASS showed no significant differences (see Table 18).

Table 17

Independent Samples t-test – Financially Independent (n = 34) Versus Dependent Sample (n = 27)

Variable	*t*	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% CI of the Difference
LOC	-1.4	59	.17	-1.34	.97	[-3.27, .59]
Permissive	1.04	59	.30	1.90	1.83	[-1.76, 5.57]
Authoritarian	-1.41	59	.16	-2.09	1.48	[-5.05, .88]
Authoritative	1.47	59	.15	2.40	1.64	[-.88, 5.67]
PASS-Freq	.82	59	.42	1.49	1.82	[-2.16, 5.14]

Note. CI = confidence interval; LOC = locus of control; PASS-Freq = Procrastination Assessment Scale Student - Frequency.

Table 18

Independent Samples t-test – High Procrastination (n = 30) Versus Low

Procrastination Sample (n = 31)

Variable	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% CI of the Difference
LOC	-.96	59	.34	-.94	.98	[-2.91, 1.02]
Permissive	1.62	59	.11	2.96	1.83	[-.69, 6.62]
Authoritarian	-.21	59	.83	-.33	1.52	[-3.37, 2.72]
Authoritative	-1.60	59	.11	-2.64	1.65	[-5.94, .65]

Note. CI = confidence interval; LOC = locus of control.

Discussion

This study sought to understand the relationships between locus of control, parenting style, and academic procrastination. Research (Deniz et al., 2009; Janssen & Carton, 1999; Pychyl et al., 2002) has shown that individuals with an external locus of control are more likely to engage in the behavior of procrastination and that a perceived authoritarian parenting style has a positive correlation with the frequency of procrastination. In contrast to previous research, the data from this study did not support the hypothesis that those with an external locus of control are more likely to engage in academic procrastination. Additionally, when comparing whether parenting style has an effect on academic procrastination, the results were nonsignificant. Thus, the first two hypotheses were unsupported. The third hypothesis on the effect of financial dependence on procrastination was also unsupported.

While the data are not consistent with previous research, these findings enhance our understanding on locus of control, parenting style, and academic procrastination, because previous research has focused almost exclusively on younger populations. These data suggest that while there has been a significant positive relationship between parenting style and frequency of procrastination in adolescents, adults may mature or ignore their parents' teachings due to being relatively more independent. Within the data, there was a significant positive relationship between higher scores on the PAQ authoritative scale and the PASS frequency scale for individuals who were financially dependent. This is counterintuitive to previous research. However, due to the sample of students being recruited within the last two weeks of the semester, the mean frequency of self-reported procrastination from the participants was higher than other studies. For

37

example, in the Rothblum, Solomon, and Murakami (1986) study, 46% of participants reported that they nearly always or always procrastinated on writing a term paper, 27.6% procrastinated on studying for exams, and 30.1% procrastinated on weekly reading assignments on the PASS items. In this study, 49.2% of participants reported that they nearly always or always procrastinate on writing a term paper, 55.7% reported that they procrastinate on studying for exams, and 59% reported that they procrastinate on weekly reading assignments. Based on comparison to other research studies, the current sample showed more homogeneity on and a higher level of procrastination.

There was a significant negative correlation between the PAQ authoritarian scale and the PAQ authoritative scale. This was expected, due to the scales measuring different attributes of parenting style.

While the findings of the present study provide a useful addition to the previous research, there are still questions that need to be answered. First, although this study included a sample of both males and females, all participants were university students who willingly signed up for study; this could affect the generalizability of the data. Further research will be needed to determine if the results hold up for individuals from more diverse backgrounds. Second, due to the participants being recruited in the last two weeks of the semester, the overall sample from the present study likely consisted of a higher number of procrastinators, so the study did not have a normative sample. Further research that allows for a greater range of participants is needed. Due to the sample from the study being a more homogenous group of procrastinators, there is a restriction of the range of scores as there were relatively fewer nonprocrastinators; this limits the size of possible correlations.

Parental authority styles were determined by the individuals' perceptions of their parents, not behavioral observation. In the future, it could be helpful to include parent reports of authority styles. The PAQ also does not have a section for participants to indicate who their primary caregiver was when completing the measure. In the future, it might be best to have the participants specify who they are thinking of when completing the measure, so paternal and maternal parenting can be compared. Future research will be needed to determine if academic procrastination behaviors of parents could influence procrastinating behavior in their children. Finally, due to the study relying strictly on self-report measures, the data could be flawed, because participants might be unaware of their actual behavior or have responded differently than their true nature. In the future, it is recommended that a task is given to the participants to complete, where one measures when the participant begins, completes, and turns in the task. This would be a more objective measure of academic procrastination.

While the data from this study conflict with previous studies, it contributes to evaluation of the adult population rather than solely an adolescent population. Additionally, compared to previous research, the overall sample displayed much higher percentages of procrastinating behaviors. Future research should recruit a greater range of participants and use more behavioral and observable measures.

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APPENDIX A: Demographics

What is your age?

[   ]

What is your gender?

[▼]

What is your ethnic or racial background?

○ American Indian or Alaska Native   ○ Two or more races

○ Asian   ○ White

○ Black or African American   ○ Other

○ Hispanic or Latino   ○ Decline to answer

○ Native Hawaiian or Other Pacific
   Islander

What is your country of origin?

[   ]

Are you a native English speaker?

- ○ Yes
- ○ No

Regardless of biological relation or status, when growing up, how many primary caregivers did you have who raised you, provided values for you, displayed emotional support for you, and/or were physically there for you?

1	2	3	4+
○	○	○	○

Regardless of biological relation or status, who do you consider as your primary caregiver(s)? (You may select more than one)

☐ Mother   ☐ Father

☐ Step-mother   ☐ Step-father

☐ Brother   ☐ Sister

☐ Grandmother   ☐ Grandfather

☐ Aunt   ☐ Uncle

☐ Cousin   ☐ Foster Mother

43

☐   Foster Father   ☐   Adopted Father

☐   Adopted Mother

On a scale of 1 to 7 (1 = not close, 7 = very close), rate how emotionally close you feel to your parent(s) or caregiver(s). Circle the rating that applies.

			Moderately Close			Very Close
Not Close						
1	2	3	4	5	6	7
○	○	○	○	○	○	○

How many miles away from your parent(s) or caregiver(s) do you live?

≤10	11 to 50	51 to 100	101 to 175	176 to 240
○	○	○	○	○

Are you currently living separately from your parent(s) or caregiver(s)? (Check line by the statement that applies to you)

- ○ Yes, I am currently living separately from my parent(s) or caregiver(s).
- ○ Yes, I am living independently, but only during the school semester
- ○ No, I am still living with my parents

Are you currently financially independent from your parent(s) or caregiver(s)? (Check line by the statement that applies to you)

- ○ Yes, I am fully independent
- ○ Yes, but only during the school semester
- ○ No, I am still dependent

In a typical week, how often do you initiate communication with your parent(s) or caregiver(s)? (This includes communication through talking on the phone, texting, emailing, Skyping, Facebook messaging, or contact on any other social media website)

0 times	1 to 6 times	7 to 13 times	14 to 30 times	31+ times
○	○	○	○	○

In a typical week, how many minutes do you initiate communication with your parent(s) or caregiver(s)? (This includes communication through talking on the phone, texting, emailing, Skyping, Facebook messaging, or contact on any other social media website)

0 minutes	1 to 30 minutes	31+ minutes
○	○	○

In a typical week, how often do your parent(s) or caregiver(s) initiate communication with you? (This includes communication through talking on the phone, texting, emailing, Skyping, Facebook messaging, or contact on any other social media website)

0 times	1 to 6 times	7 to 13 times	14 to 30 times	31+ times
○	○	○	○	○

In a typical week, how many minutes do your parent(s) or caregiver(s) initiate communication with you? (This includes communication through talking on the phone, texting, emailing, Skyping, Facebook messaging, or contact on any other social media website)

0 minutes	1 to 30 minutes	31+ minutes
○	○	○

On a scale of 1 to 7 (1 = relaxed, 7 = overwhelmed), rate how full your life is with tasks during a typical week (e.g. family, work, school, etc).

Relaxed			Busy, yet manageable			Overwhelmed
1	2	3	4	5	6	7
○	○	○	○	○	○	○

APPENDIX B: Rotter's Locus of Control Scale

For each question select the statement that you agree with the most

○ Children get into trouble because their patents punish them too much.

○ The trouble with most children nowadays is that their parents are too easy with them.

○ Many of the unhappy things in people's lives are partly due to bad luck.

○ People's misfortunes result from the mistakes they make.

○ One of the major reasons why we have wars is because people don't take enough interest in politics.

○ There will always be wars, no matter how hard people try to prevent them.

○ In the long run people get the respect they deserve in this world

○ Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries

○ The idea that teachers are unfair to students is nonsense.

○ Most students don't realize the extent to which their grades are influenced by accidental happenings.

○ Without the right breaks one cannot be an effective leader.

○ Capable people who fail to become leaders have not taken advantage of their opportunities.

○ No matter how hard you try some people just don't like you.

○ People who can't get others to like them don't understand how to get along with others.

○ Heredity plays the major role in determining one's personality

○ It is one's experiences in life which determine what they're like.

○ I have often found that what is going to happen will happen.

○ Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

○ In the case of the well prepared student there is rarely if ever such a thing as an unfair test.

○ Many times exam questions tend to be so unrelated to course work that studying in really useless.

○ Becoming a success is a matter of hard work, luck has little or nothing to do with it.

○ Getting a good job depends mainly on being in the right place at the right time.

○ The average citizen can have an influence in government decisions.

○ This world is run by the few people in power, and there is not much the little guy can do about it.

○ When I make plans, I am almost certain that I can make them work.

○ It is not always wise to plan too far ahead because many things turn out to- be a matter of good or bad fortune anyhow.

○ There are certain people who are just no good.

○ There is some good in everybody.

○ In my case getting what I want has little or nothing to do with luck.

○ Many times we might just as well decide what to do by flipping a coin.

○ Who gets to be the boss often depends on who was lucky enough to be in the right place first.

○ Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.

○ As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.

○ By taking an active part in political and social affairs the people can control world events.

○ Most people don't realize the extent to which their lives are controlled by accidental happenings.

○ There really is no such thing as "luck."

○ One should always be willing to admit mistakes.

○ It is usually best to cover up one's mistakes.

○ It is hard to know whether or not a person really likes you.

○ How many friends you have depends upon how nice a person you are.

○ In the long run the bad things that happen to us are balanced by the good ones.

○ Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

○ With enough effort we can wipe out political corruption.

○ It is difficult for people to have much control over the things politicians do in office.

○ Sometimes I can't understand how teachers arrive at the grades they give.

○ There is a direct connection between how hard 1 study and the grades I get.

○ A good leader expects people to decide for themselves what they should do.

○ A good leader makes it clear to everybody what their jobs are.

○ Many times I feel that I have little influence over the things that happen to me.

○ It is impossible for me to believe that chance or luck plays an important role in my life.

○ People are lonely because they don't try to be friendly.

○ There's not much use in trying too hard to please people, if they like you, they like you.

○ There is too much emphasis on athletics in high school.

○ Team sports are an excellent way to build character.

○ What happens to me is my own doing.

○ Sometimes I feel that I don't have enough control over the direction my life is taking.

○ Most of the time I can't understand why politicians behave the way they do.

○ In the long run the people are responsible for bad government on a national as well as on a local level.

Instructions: For each of the following statements on the next page, write the number of the 5-point scale (1 = strongly disagree, 5 = strongly agree) that best describes how that statement applies to you and your caretaker(s) in the blank. Try to read and think about each statement as it applies to you and your caretaker(s) during your years of growing up at home. There are no right or wrong answers, so don't spend a lot of time on any one item. Be sure not to omit any items.

If your caretaker(s) were separated or divorced before you reached age 12, think about the caretaker with whom you spent the most time when you answer the questions.

1 = Strongly disagree
2 = Disagree
3 = Neither agree nor disagree
4 = Agree
5 = Strongly Agree

1. While I was growing up my mother felt that in a well-run home the children should have their way in the family as often as the parents do.	**1**	**2**	**3**	**4**	**5**
2. Even if her children didn't agree with her, my mother felt that it was for our own good if we were forced to conform to what she thought was right.	1	2	3	4	5
3. Whenever my mother told me to do something as I was growing up, she expected me to do it immediately without asking any questions.	1	2	3	4	5
4. As I was growing up, once family policy had been established, my mother discussed the reasoning behind the policy with the children in the family.	1	2	3	4	5
5. My mother has always encouraged verbal give-and-take whenever I have felt that family rules and restrictions were unreasonable.	1	2	3	4	5
6. My mother has always felt that what her children need is to be free to make up their own minds and to do what they want to do, even if this does not agree with what their parents might want.	1	2	3	4	5
7. As I was growing up my mother did not allow me to question any decision she had made.	1	2	3	4	5
8. As I was growing up my mother directed the activities and decisions of the children in the family through reasoning and discipline.	1	2	3	4	5

9. My mother has always felt that more force should be used by parents in order to get their children to behave the way they are supposed to.   1 2 3 4 5

10. As I was growing up my mother did not feel that I needed to obey rules and regulations of behavior simply because someone in authority had established them.   1 2 3 4 5

11. As I was growing up I knew what my mother expected of me in my family, but I also felt free to discuss those expectations with my mother when I felt that they were unreasonable.   1 2 3 4 5

12. My mother felt that wise parents should teach their children early just who is boss in the family.   1 2 3 4 5

13. As I was growing up, my mother seldom gave me expectations and guidelines for my behavior.   1 2 3 4 5

14. Most of the time as I was growing up my mother did what the children in the family wanted when making family decisions.   1 2 3 4 5

15. As the children in my family were growing up, my mother consistently gave us direction and guidance in rational and objective ways.   1 2 3 4 5

16. As I was growing up my mother would get very upset if I tried to disagree with her.   1 2 3 4 5

17. My mother feels that most problems in society would be solved if parents would not restrict their children's activities, decisions, and desires as they are growing up.   1 2 3 4 5

18. As I was growing up my mother let me know what behavior she expected of me, and if I didn't meet those expectations, she punished me.   1 2 3 4 5

19. As I was growing up my mother allowed me to decide most things for myself without a lot of direction from her.   1 2 3 4 5

20. As I was growing up my mother took the children's opinions into consideration when making family decisions, but she would not decide for something simply because the children wanted it.   1 2 3 4 5

21. My mother did not view herself as responsible for directing and guiding my behavior as I was growing up.   1 2 3 4 5

22. My mother had clear standards of behavior for the children in our home as I was growing up, but she was   1 2 3 4 5

willing to adjust those standards to the needs of each of the individual children in the family.

23. My mother gave me direction for my behavior and activities as I was growing up and she expected me to follow her direction, but she was always willing to listen to my concerns and to discuss that direction with me.	1	2	3	4	5
24. As I was growing up my mother allowed me to form my own point of view on family matters and she generally allowed me to decide for myself what I was going to do.	1	2	3	4	5
25. My mother has always felt that most problems in society would be solved if we could get parents to strictly and forcibly deal with their children when they don't do what they are supposed to as they are growing up.	1	2	3	4	5
26. As I was growing up my mother often told me exactly what she wanted me to do and how she expected me to do it.	1	2	3	4	5
27. As I was growing up my mother gave me clear direction for my behaviors and activities, but she was also understanding when I disagreed with her.	1	2	3	4	5
28. As I was growing up my mother did not direct the behaviors, activities, and desires of the children in the family.	1	2	3	4	5
29. As I was growing up I knew what my mother expected of me in the family and she insisted that I conform to those expectations simply out of respect for her authority.	1	2	3	4	5
30. As I was growing up, if my mother made a decision in the family that hurt me, she was willing to discuss that decision with me and to admit it if she had made a mistake.	1	2	3	4	5

APPENDIX D: Procrastination Assessment Scale Student

<u>Areas of Procrastination</u>

For each of the following activities, please rate the degree to which you delay or procrastinate. Rate each item on an "a" to "e" scale according to how often you wait until the last minute to do the activity. Then indicate on an "a" to "e" scale the degree to which you feel procrastination on that task is a problem. Finally, indicate on an "a" to "e" scale the degree to which you would like to decrease your tendency to procrastinate on each task.

I. WRITING A TERM PAPER

1. To what degree do you procrastinate on this task?

Never Procrastinate	Almost Never	Sometimes	Nearly Always	Always Procrastinate
a	b	c	d	e

2. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

3. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

II. STUDYING FOR EXAMS

4. To what degree do you procrastinate on this task?

Never Procrastinate	Almost Never	Sometimes	Nearly Always	Always Procrastinate
a	b	c	d	e

5. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

6. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want   Somewhat   Definitely
to Decrease   Want to Decrease
a   b   c   d   e

III. KEEPING UP WITH WEEKLY READING ASSIGNMENTS

7. To what degree do you procrastinate on this task?

Never   Almost Never   Sometimes   Nearly Always   Always
Procrastinate   Procrastinate
a   b   c   d   e

8. To what degree is procrastination on this task a problem for you?

Not At All   Almost Never   Sometimes   Nearly Always   Always
a Problem   a Problem
a   b   c   d   e

9. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want   Somewhat   Definitely
to Decrease   Want to Decrease
a   b   c   d   e

IV. ACADEMIC ADMINISTRATIVE TASKS: FILLING OUT FORMS, REGISTERING FOR CLASSES, GETTING ID CARD

10. To what degree do you procrastinate on this task?

Never   Almost Never   Sometimes   Nearly Always   Always
Procrastinate   Procrastinate
a   b   c   d   e

11. To what degree is procrastination on this task a problem for you?

Not At All   Almost Never   Sometimes   Nearly Always   Always
a Problem   a Problem
a   b   c   d   e

12. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

V. ATTENDANCE TASKS: MEETING WITH YOUR ADVISOR, MAKING AN APPOINTMENT WITH A PROFESSOR

13. To what degree do you procrastinate on this task?

Never Procrastinate	Almost Never	Sometimes	Nearly Always	Always Procrastinate
a	b	c	d	e

14. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

15. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

VI. SCHOOL ACTIVITIES IN GENERAL

16. To what degree do you procrastinate on this task?

Never Procrastinate	Almost Never	Sometimes	Nearly Always	Always Procrastinate
a	b	c	d	e

17. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

18. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

Reasons for Procrastination

Think of the last time the following situation occurred. It's near the end of the semester. The term paper you were assigned at the beginning of the semester is due very soon. You have not begun work on this paper. There are reasons why you have been procrastinating on this task.

Rate each of the following reasons on a 5-point scale according to how much it reflects why you procrastinated at the time. Mark your answers on your answer sheet.

Use the scale:

Not At All Reflects Reflects Why I Procrastinated Procrastinated		Somewhat Reflects		Definitely Why I
a	b	c	d	e

19.   You were concerned the professor wouldn't like your work.

20.   You waited until a classmate did his or hers, so that he/she could give you some advice.

21.   You had a hard time knowing what to include and what not to include in your paper.

22.   You had too many other things to do.

23.   There's some information you needed to ask the professor, but you felt uncomfortable approaching him/her.

24.   You were worried you would get a bad grade.

25.   You resented having to do things assigned by others.

26.   You didn't think you knew enough to write the paper.

27. You really disliked writing term papers.

28. You felt overwhelmed by the task.

29. You had difficulty requesting information from other people.

30. You looked forward to the excitement of doing this task at the last minute.

31. You couldn't choose among all the topics.

32. You were concerned that if you did well, your classmates would resent you.

33. You didn't trust yourself to do a good job.

34. You didn't have enough energy to begin the task.

35. You felt it just takes too long to write a term paper.

36. You liked the challenge of waiting until the deadline.

37. You knew that your classmates hadn't started the paper either.

38. You resented people setting deadlines for you.

39. You were concerned you wouldn't meet your own expectations.

40. You were concerned that if you got a good grade, people would have higher expectations of you in the future.

41. You waited to see if the professor would give you some more information about the paper.

42. You set very high standards for yourself and you worried that you wouldn't be able to meet those standards.

43. You just felt too lazy to write a term paper.

44. Your friends were pressuring you to do other things.

Interest in Changing Your Procrastination

45. Would you be interested in attending a program that focuses on overcoming procrastination if such a program were offered next semester?
    a. no
    b. yes

46.   How many program sessions in total would you be willing to attend if a
       procrastination program were offered?
       a. none
       b. less than five
       c. five to ten
       d. more than ten

47.   How many sessions per week would you be willing to attend?
       a. none
       b. one
       c. two
       d. three

48.   What time would be the best for you in scheduling such a program? (Choose one)
       a. none
       b. morning
       c. lunchtime
       d. afternoon
       e. evening

49.   What days would be the best for you in scheduling such a program? (Choose
one)
       a. no days are good
       b. weekdays
       c. weekends

50.   How large a group would you prefer? (Choose one)
       a. I'm not interested in such a program
       b. less than 10 people in a group
       c. 10-20 people in a group
       d. It doesn't matter how large the group is

51.   I feel that a program to improve procrastination habits would be:
       a. unnecessary
       b. somewhat useful
       c. extremely useful
       d. useful, but not for me

52.   What format would be most interesting to you? (Choose one)
       a. I'm not interested in such a program
       b. Group discussion
       c. Lecture
       d. Following a written manual
       e. A combination of the above

APPENDIX E: IRB Approval

WKU INSTITUTIONAL REVIEW BOARD
OFFICE OF RESEARCH INTEGRITY

DATE: March 10, 2015

TO: John Reynolds
FROM: Western Kentucky University (WKU) IRB

PROJECT TITLE: [729942-1] Factors affecting academic procrastination
REFERENCE #:   IRB 15-327
SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: March 10, 2015

REVIEW TYPE: Exempt from Full Board Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt from Full Board Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a *signed* consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or irb@wku.edu. Please include your project title and reference number in all correspondence with this committee.

APPENDIX F: Informed Consent

INFORMED CONSENT DOCUMENT

Project Title: Factors affecting academic procrastination
Investigator: John Paul Reynolds, Psychology Department, 502-208-2199

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to participate in this project.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have. If you then decide to participate in the project, please sign on the last page of this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1.   **Nature and Purpose of the Project:** As a graduate student in the Department of Psychology and under the supervision of Dr. Kuhlenschmidt, Professor in the Department of Psychology at Western Kentucky University, I am conducting research for my thesis project on academic procrastination. The purpose of this this study is to understand the relationships between locus of control, parenting style, gender, and academic procrastination.

2.   **Explanation of Procedures:** I will ask you to complete a sequence of self-report questionnaires, including demographic information, a measure of locus of control, a parental authority questionnaire, and a measure of procrastination.

3.   **Discomfort and Risks:** This study is expected to have minimal risks; however, the potential risks include: loss of time due to participation in the study, the minimal possibility of recalling distressing events about one's family and/or family environment, and the minimal risk of one recalling anxiety provoking thoughts about procrastinating.

4.   **Benefits:** Since you were recruited through Studyboard, you will receive either Studyboard credit, required by your class(es), research credit for your class(es), and/or extra credit in your class(es) for your participation. Outside of this, it is hoped that the information gained through participation will help broaden the knowledge that the psychology field has as a whole.

5.   **Confidentiality:** The questionnaires in this study do not contain any identifiable information, confidentiality is assured, and all data will be reported in the aggregate. Data will be stored in a locked office by the thesis advisor, Dr. Kuhlenschmidt, and no one except the researcher and the instructor will have access to them.

6.   **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.
You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

_____   _____
Signature of Participant   Date

_____   _____
Witness   Date

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129