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THE EFFECT OF LOCUS OF CONTROL ON THE
PROCRASTINATION BEHAVIOR OF COLLEGE STUDENTS

A Thesis Submitted to the Graduate School in Partial
Fulfillment of the requirements for the
Degree of Master of Science

By

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PITTSBURG STATE UNIVERSITY

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ABSTRACT

The purpose of the present study was to examine the relationship between locus of control and the procrastination behavior of individuals in an academic setting. Investigated in this study was the relationship between the two aspects of procrastination, the delaying of a task and the psychological distress that results from that behavior, and locus of controls in terms of an internal or external generalized belief.

The Adult Nowicki - Duke Locus of Control scale and the Procrastination Assessment scale - Students were given to 267 undergraduate students between the ages of 17 and 48 at Pittsburg State University. The data were analyzed using Pearsons Correlation and an analysis of variance.

Results of the study indicate that those individuals with an external locus of control self-report procrastinating to a higher degree and self-report a higher degree of psychological distress due to this behavior than those individuals with an internal locus of control. Suggestions for further research are also discussed.

CHAPTER I

INTRODUCTION

The significance of the belief in fate, chance, or luck has been discussed by various social scientists over a long period of time. Veblen (1899) asserted that a belief in luck or chance represented a barbarian approach to life and was generally characteristic of an inefficient society. Although Veblen was not concerned with individual differences, he believed that a belief in chance or luck as a solution to one's problems was characterized by less productivity and was similar to a general belief in fate. B. F. Skinner (1971) argues that humans must surrender their belief in freedom and self-determination and come to accept the fact that they are controlled by forces outside themselves. Whether people believe that they can determine their own fates, within limits, is of critical importance to the way in which they can cope with stress and engage in challenges (Lefcourt, 1976).

A generalized attitude, belief or expectancy regarding the nature of the causal relationship between one's own behavior and the consequences that result from it might affect a variety of behavioral choices. These generalized expectancies may result in characteristic differences in behavior in situations categorized as chance determined versus skill determined and may

produce individual differences within these situations (Rotter, 1966). Social learning theory provides the general theoretical background for the conception of the nature of relationships, and the effects of the reinforcement of its consequences. According to social learning theory a reinforcement acts to strengthen an expectancy (Rotter, 1954). It would seem likely that depending upon the individual's history of reinforcement, people would differ in the degree to which they attribute reinforcements to their own actions (Rotter, 1966). It should be noted however that the effect of reinforcement is not a simple stamping-in process, but dependent on whether or not individuals perceives a causal relationship between their own behavior and the reinforcement (Nowicki & Duke, 1974; Nowicki & Strickland, 1973; Rotter, 1966). The experience of personal control, the perception of the ability to do something, has vast implications for human behavior (Lefcourt, 1976; Gregory, 1981). Perceived control is defined as a generalized expectancy for internal as opposed to external control of reinforcements. It is not the simple registering of success and failure experiences that is important, but rather it is the interpretation of the cause of those experiences that becomes significant (Lefcourt, 1976). Locus of control describes the beliefs of individuals,

transcending specific circumstances, about the likelihood that they can effect their fates if they choose to do so. In other words, locus of control refers to a personality construct which focuses upon individuals' expectancies that they can help to determine the outcomes of experiences in which they are engaged (Lefcourt, 1984).

Perhaps one of the major variables which has a strong relationship to the belief in internal versus external control is that of achievement (Rotter, 1966). A common assumption in the relationship between locus of control and academic achievement states that, if individuals believe that their own successes and failures are due to the result of their own behavior, they will be more likely to exhibit initiative and persistence in seeking achievement goals (Lefcourt, 1976; Rotter, 1966). Locus of control may also be a variable that is related to goal commitment (Hollenbeck & Klein, 1987). Self-directed individuals, internally controlled individuals, seem to gain control by construing their world in such a way that their goals are under their control. The achievement of these goals were completed to a higher degree when individuals, internally controlled, viewed outside influences as minimal (Kolb & Boyatzis, 1970). A primary influence on task behavior is the conscious intentions or goals of

the individual. A significantly challenging and personally relevant goal will increase the individual's level of effort and thus relative performance (Locke, 1968). According to Hollenbeck and Brief (1987), the positive relationship between goal setting and task performance is one of the most replicable findings in organizational literature.

Procrastination, the act of needlessly delaying tasks to the point of experiencing subjective discomfort, is an all-to-frequent problem in an academic setting (Solomon & Rothblum, 1984). Students problems linked to procrastination include lack of goal setting and poor study habits (Green, 1982). Therefore locus of control, the belief of an individual, can be linked to goal setting, task performance, and achievement. They are linked through the idea that the end result is a consequence of one's own actions and thereby potentially under personal control.

Need for the study

The concept of productivity in relation to human behavior has been a topic of concern in our society. The concept of procrastination is pervasive in many human behaviors, it affects how we live and how we progress. In our society the elimination or decrease of procrastination behavior could be beneficial to us in terms of maximizing productivity, and relieving the

anxiety or distress that comes along with the delaying of a task that needs to be completed. It is important to demonstrate the correlation between a generalized expectancy, locus of control, and procrastination in the area of applied psychology, industrial and organizational psychology, and in educational systems.

Research conducted in the area of procrastination has consisted mostly of investigations of the effects of behavioral and cognitive interventions for decreasing procrastinating actions of the students, in order to improve their academic performance. Yet procrastination involves more than deficient time management, poor study skills, and inadequate goal setting. The investigations into the area of procrastination suggest that there are also cognitive and affective components involved (Solomon et al., 1984). The connection of locus of control, a personality construct, to procrastination may provide useful information for the identification of students who may face these academic difficulties. This could potentially be used to help identify and classify behaviors and individual styles that respond differently to procrastination. This information can then be used to help develop appropriate and effective interventions/strategies which could improve the academic efforts of students who experience problems with procrastination.

Statement of the Problem

The purpose of the present study is to investigate whether locus of control is a variable that correlates with the procrastination behavior of individuals in an academic setting.

Definition of Critical Terms

1. Locus of control. A personality construct which involves a generalized expectancy that reflects the consistent individual differences among individuals in the degree to which they perceive contingencies or independence between their behavior and subsequent events.

2. External control. When a reinforcement is perceived by the subject as following some action of their own but not being entirely contingent upon their action. It is perceived as the result of luck, chance, fate, under the control of powerful others, or as unpredictable because of the great complexity of forces surrounding them.

3. Internal control. When a reinforcement is perceived by the subject as following some action of their own and the event is contingent upon their own behavior or their own relatively permanent characteristic.

4. Procrastination. Involves the self-reported tendency to nearly always or always put off academic

tasks and to nearly always or always experience psychological distress associated with this behavior.

Hypotheses

The objective of this study is to determine what contribution locus of control has on an individuals' procrastination behavior in an academic setting.

Specific hypothesis to be statistically tested are:

1. There will be no differences in procrastination scores in males and females based on locus of control.
2. Locus of control will correlate positively with procrastination behavior in an academic setting.
3. Locus of control will correlate positively with procrastination related psychological distress in an academic setting.
4. Individuals with an internal locus of control will have lower procrastination scores than externals in an academic setting.
5. Individuals with an internal locus of control will have a lower degree of procrastination related psychological distress than externals in an academic setting.

Limitations

1. This study cannot be generalized to other populations outside the college academic setting.
2. There will be no cause and effect demonstrated between locus of control and procrastination behavior.

3. This study can not be generalized to other variables outside of locus of control and procrastination.

CHAPTER II

Review of Literature

There can be little doubt that a person's concept of self or identity is composed of a variety of components. Individuals differ in their general environmental orientation, some being more oriented to the external and others to the internal environment (Sampson, 1978). In general, positive self-concepts are more likely to be associated with internal attributions of personal control (Gadzella, Williamson & Ginther, 1985).

Rotter's (1966) construct of generalized expectancy, internal-external locus of control, grew out of the social learning theory, which was influenced by the earlier work of Hull. Both formulations contain concepts which refer to tendencies toward overt response (behavior potential and reaction potential), to learning (expectancy and habit strength), and to motivation (reinforcement value). Gregory (1981) proposes that the locus of control belief can be treated as an expectancy variable that leads to engaging (or not engaging) in particular behaviors when a situation is perceived as potentially controllable (or not). Learning theory has recognized that differences in subject behavior are related to task differences along a dimension of skill and chance (Rotter, 1966). Focus has also been on

decision making and approach perceived control as a generalized expectancy with regard to specific types of situations (including processes and outcomes) (Adelman, Smith, Nelson, Taylor & Phares, 1986). "Man strives to be a causal agent, to be the primary locus of causation for, or the origin of, his behavior; he strives for personal causation" (DeCharms, 1968, p. 269). A study by James and Rotter (1958) found that the perception of control predicted the manner in which people would respond to their performance outcomes. There is considerable evidence supporting the view that believing one has control may be even more important than actually exercising particular overt responses to bring about desired outcomes (Langer, 1983). Some persons with extremely fatalistic outlooks (externality) may not believe there is anything they can do which will effect what happens in their lives. On the other hand, persons with an internal locus of control are more apt to feel they can effect their lives (Lefcourt, 1984).

Because numerous factors in the educational environment can threaten students' perceived control, this effect (locus of control) can place some students at risk academically. Due to the fact that locus of control is a generalized expectancy it will increase the probability that the lack of control will also generalize to different instructors, students,

classrooms, and courses (Perry & Magnusson, 1987).

Identifying factors which affect academic achievement is of great interest to researchers. In a review of the research between locus of control and academic achievement, Findley and Cooper (1983) reported that more internal beliefs are associated with greater academic achievement. Internals are more apt to push on in the face of obstacles and remain energetic in their pursuit of goals. Internals, therefore, demonstrate greater academic success than do externally controlled individuals (Lefcourt, 1984; Prociuk & Breen, 1974).

Along the same line, research has also shown that internally controlled individuals when compared to externals obtain higher grades (Brown & Strickland, 1972). When given information pertinent to a task just completed, internally controlled individuals use this information to determine their performance estimate. On the other hand, externals attributing performance to factors beyond their control do not use the information provided as a major factor in estimating their performance. Internals therefore become more accurate predictors of academic performance than externals (Steger, Simmons, & Lavelle, 1973).

Several authors have confirmed the prediction that individuals attribute responsibility for success and failure outcomes in a manner consistent with their locus

of control (Gilmer & Reid, 1979; Lefcourt, Hogg, Struthers, & Holmes, 1975). Internals experience their successes and failures as more meaningful events than do externals. Internals make more internal attributions for success and more external attributions for failures than do externals, who seem to externalize the cause for success and accept the blame for failures (Lefcourt et al., 1975). Battis and Waters (1973) found that achievement motivation is influenced by one's perceived control over situational influences. Most studies of locus of control involving a task employing motivation indicate that internals reject various types of motivational instruction, preferring to choose their own internal motivation, while externals accept various levels of motivation and respond accordingly to the relevant task (Dixon, 1973). This may be an important factor in selecting appropriate interventions to decrease procrastination behavior in an academic setting.

Setting a goal is a deliberate choice of an individual, one that leaves him or her in control (DeCharms, 1981). Personal variables are likely to lead to various levels of commitment and goal attainment. These variables, such as locus of control, are classified as personal in the sense that variation occurs from individual to individual, and from within

each individual, dealing with constructs such as needs, beliefs, attitudes and personality traits (Hollenbeck et al., 1987). Those who hold internally controlled beliefs about achievement would be expected to exhibit more planned behavior (Lefcourt, 1981). Nelson and Phares (1971) reported that subjects exhibiting externality tended to have lower expectations in achieving their goals than did the subjects who exhibited internality. A central aspect of the capacity for self-direction is the individuals ability to conceptualize clear personal goals and commit themselves to these goals (Kolb et al., 1970). Hall and Foster (1977) suggest that goals were related to effort, and performance of those goals were related to success. These goals were then linked to increased involvement, and more commitment to challenging future goals and completing them. This completed the cycle of goal effort and commitment.

It would be unusual to expect individuals characterized by an external locus of control to set challenging future goals. For this subgroup, task performance is perceived as being a product of a whole host of factors beyond their control. As goals become more difficult, the number of outside factors that would have to come together simultaneously to achieve these goals increases to the point where externals would find

their attainment improbable (Hollenbeck et al., 1987).

One of the factors related to goal attainment is psychological safety. Low psychological safety can lead to a decreased awareness which in turn leads to a decreased sense of self control, which leads to fewer expectations of success, all which are found in the thinking of an individual that has an external locus of control (Kolb et al., 1970; Lefcourt, 1984; Prociuk et al., 1974). If individuals experience low psychological safety they are likely to distort their weaknesses and be unable to commit to new goals (Kolb et al., 1970). Individuals with an external locus of control, because of their perceived inability to affect their future would tend to show low goal commitment. Individuals with an internal locus of control, on the other hand, when faced with a difficult goal would perceive this as achievable, merely requiring more effort (Hollenbeck et al., 1987). The setting of goals leads subjects to direct their actions in line with goal requirements to expend effort in proportion to goal difficulty and /or to persist in a given task until the goal is reached (Locke, Frederick, Lee, & Bobko, 1984).

In an academic context achievement may be presumed to be primarily a function of effort and ability. Thus internally oriented students have a greater affective response, such as anxiety or fear of success, than will

externally oriented students (Keller, Sutterer, & Goldman, 1978). Bass, Ollendick, and Vuchinich (1974) found that study habits are an important factor in locus of control and academic achievement. Internals started studying earlier than externals, and they evenly spaced their studying throughout the semester. Keller, et al (1978) found similar results, in that internals had better study habits and attitudes than those individuals who were externally controlled. These studies, while similar in nature, do not include the component of psychological distress in their operational definition of procrastination. In a college or university setting the study behavior of concern is usually that which occurs outside of the classroom and which usually requires students to manage their own behavior (Bristol & Sloane, 1974). Poor study habits and a lack of goal setting are aspects of procrastination (Green, 1982).

It is estimated that 95% of college students engage in procrastination and that it results in detrimental academic performance, including poor grades and course withdrawal (Solomon et al, 1984). It is expected that the student who is encumbered by an externally imposed study schedule will be involved in behaviors such as cramming for exams, and in delaying the completion of assignments as the semester progresses (Green, 1982; Santogrossi & Roberts, 1978). High reliability values

have been found to exist between the student's self-reporting of study behavior, and their actual study behavior (Bristol et al., 1974; Rothblum, Solomon, & Murakami, 1986). Procrastination has been reduced through such behavioral and cognitive efforts as developing study guidelines and imposed deadlines, contingency contracting, self-control procedures and self-paced instruction (Bristol et al., 1974; Green, 1982; Greiner & Karody, 1976; Harris & Trujillo, 1975; Heffernan & Richards, 1981; Jackson & Van Zoost, 1972; Keenan, Bono, & Hursh, 1978; Keller et al., 1978; Santogrossi et al., 1978).

Some of the probable reasons for procrastination include evaluation anxiety, difficulty in making decisions, rebellion against control, lack of assertion, fear of the consequences of success, perceived aversiveness of the task, and overly perfectionistic standards about competency (Galman & Michael, 1983; Goh & Mealiea, 1984; Knaus, 1973; Rothblum, et al., 1986; Solomon, et al., 1984). Womens procrastination behavior was significantly correlated, to a higher degree than mens, with the concept of fear of success, a major reason for procrastination (Galman et al., 1983; Goh et al., 1984). A significant positive correlation between self-reported procrastination and a variety of clinical factors such as depression, and trait anxiety have also

been found. This suggests that procrastination is more than a study skills deficit; it also includes cognitive and affective components. To regard it as a one-dimensional construct is to ignore its complexity (Rothblum, et al., 1986; Solomon, et al., 1984).

Students' levels of procrastination fluctuate over time as deadlines approach. There is evidence that high procrastinators may be motivated to decrease delay only when their anxiety and worry reach peak levels. There is also evidence that supports the idea that the longer individuals are in school the higher their procrastination rate will be (Solomon, Murakami, Greenburger, & Rothblum, 1983). Rothblum et al (1986) found that more than 40% of all subjects reported nearly always or always procrastinating on exams, to the point of experiencing considerable anxiety. This is a reflection of the current student stress in today's society and educational systems, and an area of concern for universities. There was also a significant negative correlation between self-reported procrastination and grade point average, itself a stressor. This further supports the concept that procrastination is related to poor academic performance (Rothblum, et al., 1986).

Affective, cognitive and behavioral factors are all associated with academic procrastination. High and low procrastinating students differ from each other in each

of the domains. Regarding affective measures, high procrastinators report more test anxiety. High procrastinators are also more likely to report state anxiety on a weekly basis and the presence of physical symptoms. Low procrastinators did not report much anxiety at any time (Rothblum, et al., 1986).

Procrastinators are affected by negative appraisal, fear of failure and task aversiveness. Regarding cognitive trait measures a negative correlation between academic procrastination and self-esteem was found (Solomon, et al., 1984).

Results from the behavioral measure indicated that high procrastinators perceive themselves to have less delay of gratification, lower self-efficacy, and less control over emotional reactions. The behavioral measures also indicated that weekly delay and a low frequency of study behavior occur for most students (regardless of whether they report procrastinating) (Rothblum, et al., 1986).

Investigation is needed to see if high procrastinators are more likely to attribute success in academics to more external and fleeting circumstances, than internals do. High procrastinators may be attributing success to unstable factors rather than their own ability or effort. In this way they cannot take credit for success or failure. In either case,

procrastination may protect individuals from a true test of their abilities (Rothblum, et al., 1986). If procrastination is attributable to generalized expectancy, and since locus of control can be measured, then appropriate and effective interventions may be selectively applied to this problem.

CHAPTER III

METHOD

Subjects

A total of 264 undergraduate students at Pittsburg State participated in this study. Their ages ranged from 17 to 48. With the cooperation of the instructors, volunteers were solicited from classes in the Department of Psychology and Counseling. All volunteers received the same instruments in normal classroom conditions. There were no incentives or negative consequences contingent upon participation or non-participation in the study. All volunteers were treated in accordance with the "Ethical Principles of Psychologists" (American Psychological Association, 1981). The procedures utilized in this study were approved by the Pittsburg State University and Department of Psychology and Counseling Rights of Human Subjects Committees.

Apparatus

All individuals participating in the study received two paper questionnaires stapled together and a lead pencil.

Instruments

The Adult Nowicki-Duke Locus of Control Scale was used to assess each person's locus of control (see Appendix A). This scale measures one's belief about whether events are

controlled internally or externally. Forty items comprise the scale. Items describe reinforcement situations across interpersonal and motivational areas such as affiliation, achievement, and dependency.

The Adult Nowicki-Duke Locus of Control Scale, requires the respondent to circle either a yes or a no response to the statement printed to the left of the yes and no answers. The scale items are based on items from the Nowicki-Strickland Internal-External control scale for children (Nowicki et al., 1973). Each response is worth one point and scored according to a key that assesses which statements reflect internal control and which statements reflect external control. A score of 0 to 40 points is possible for each participant. Scores ranging from 16 to 40 signify an individual with an external locus of control. Scores ranging from 7 to 15 signify an intermediate group. Scores ranging from 0 to 6 signify an individual with an internal locus of control.

The Adult Nowicki-Duke Locus of Control Scale data were gathered from 766 subjects in twelve different studies. The analysis of the data provided psychometrically sound results. Internal consistency was found using split-half reliability ranging from .74 to .86, $N = 158$. Test re-test reliabilities were measured using a six-week interlude finding $r = .83$, $N =$

48.

Further analyses of the data support the discriminative validity of the scale in that the scores are not related to social desirability scores or intelligence test scores. Support for this construct comes from significant positive correlations between the scale and the Rotter Internal/External locus of control scale ($r = .68$, $df = 47$, $p < .01$; $r = .48$, $df = 37$, $p < .01$; $r = .44$, $df = 33$, $p < .05$), significant relations with the Eysenck Neuroticism scale (males, $r = .36$, $df = 35$, $p < .05$; females, $r = .32$, $df = 46$, $p < .05$), significant relations with the Taylor Manifest Anxiety scale scores (males, $r = .34$, $df = 35$, $p < .10$; females, $r = .40$, $df = 46$, $p < .05$), significant differences found among hospitalized schizophrenics (mean = 16.30), hospitalized nonpsychotics (mean = 11.95), and staff workers (mean = 9.20), and significant but opposite relations for males and females and achievement in three separate studies (females, $r = .63$, $df = 38$, $p < .01$; $r = .62$, $df = 26$, $p < .05$; $r = .39$, $df = 26$, $p < .05$; males $r = -.48$, $df = 36$, $p < .01$; $r = -.42$, $df = 34$, $p < .05$; $r = -.50$, $df = 22$, $p < .01$) (Nowicki et al, 1974).

The Procrastination Assessment Scale - Students (PASS), developed by Solomon and Rothblum (1974), was used to assess procrastination behavior (see Appendix B). The PASS has three purposes: a) to assess the

prevalence of academic procrastination among college students; b) to examine the reasons for academic procrastination; and c) to develop a self-report measure of procrastination that could be compared to behavior indices of procrastination, and to potentially related constructs. The PASS is a self-report measure that contains two parts. The first part assesses the prevalence of procrastination in six academic areas: a) writing a term paper, b) studying for an exam, c) keeping up with weekly reading assignments, d) performing administrative tasks, e) attending meetings, and f) performing academic tasks in general. Subjects indicate on a five-point Likert scale the extent to which they procrastinate on each task (1 = never procrastinate; 5 = always procrastinate) and the extent to which procrastination is a problem for them (1 = not at all a problem; 5 = always a problem). The higher the obtained score the greater the degree of procrastination. Due to the fact that the definition of procrastination includes both behavioral delay and psychological distress, the extent of self-reported procrastination and the extent to which it is a problem are examined for each academic task (scores range from 2 to 10) as well as across the six academic areas (total scores range from 12 to 60). The second part of the PASS describes a procrastination scenario and then

suggests many reasons for procrastination in the task. For each of the reasons, two statements are given. The students rate each statement on a five-point Likert scale according to how much it reflects why they procrastinated the last time.

Normative data on the PASS were obtained from a sample of 323 university students enrolled in psychology courses at the University of Vermont. The sample included 101 males and 222 females. There were no significant gender differences found in any area of academic procrastination as shown in self-reported procrastination. The PASS was compared with other self-report scales. It correlated most significantly, using the total procrastination score, with the Beck Depression Inventory ($r = .44, p < .0005$), the Ellis Scale of Irrational Cognitions ($r = .23, p < .0005$), the Rosenberg Self-Esteem Scale ($r = .23, p < .0005$), and the Delay Avoidance Scale of the Survey of Study Habits and Attitudes ($r = .24, p < .0005$).

There have been no repeated administrations of the PASS to a subject sample. The PASS has been administered in class ($N = 323$) and then readministered to a subject sample consisting of one third of the class ($N = 98$) later in the semester. This yielded a Pearson product-moment correlation coefficient of .57 ($p < .005$) on the total frequency score.

Validity measures are limited to behavioral measures of procrastination in self-paced quizzes ($N = 161$). Significant positive correlations were found between the number of self-paced quizzes and PASS scores of self-reported procrastination on writing a term paper ($r = .24, p < .001$), studying for exams ($r = .19, p < .01$), and doing weekly readings ($r = .28, p < .0005$).

Research correlating the PASS with students' total grade point average (GPA) resulted in significant negative correlations between total self-reported procrastination on the PASS and GPA (Rothblum et al, 1984).

To date the PASS has been used exclusively with nonclinical populations of college students. The scale can help identify procrastinators, and can also help to determine some affective, cognitive and behavioral basis for the problem.

Procedure

Over a two week period the examiner obtained verbal permission from professors at Pittsburg State University to enter their classroom and solicit volunteers for the study. Five randomly selected classes were used. Each group was exposed to the same standard conditions.

Upon entering the classroom the examiner introduced the study and discussed confidentiality, using a standard set of instructions (see Appendix C). Informed

consent was obtained from all participants in the study (see Appendix D). The informed consent forms were collected before the questionnaires were distributed. Once the informed consent forms were collected the paper and pencil questionnaires were distributed. The instructions for both questionnaires were read out loud before the participants completed them (the locus of control instructions were read first). Any questions were answered at that time. The students completed the questionnaire in 20 to 25 minutes. After the allotted time the questionnaires were collected.

CHAPTER IV

RESULTS

The purpose of this study was to examine the relationship between locus of control and the procrastination behavior of individuals in an academic setting.

The statistical analyses of the data were performed by a Zenith data analysis system computer operated in the computer lab in the Department of Psychology at Pittsburg State University. The statistical program used with the computer to conduct the data analysis was the SAS statistical package.

The data were first examined to see if there was any difference in procrastination behavior between males and females. The hypothesis was tested using an analysis of variance. The results indicated that there was no significant difference $F(1, 266) = .08, p < .78$ between males and females based on locus of control scores. Therefore the data were collapsed for subsequent analyses.

The next analysis looked at locus of control and its correlation with procrastination behavior in an academic setting. The hypothesis was tested using the Pearson product moment correlation. The means and standard deviations are indicated in Table 1. The results indicated that there was a significant

relationship between locus of control and procrastination $r(265) = .28, p < .0001$.

Table 1
Means and Standard Deviations for Locus of Control,
Procrastination and Distress

Variable	N	Mean	S.D.
Locus of Control	267	10.16	4.91
Procrastination	267	34.81	7.36
Distress	267	36.00	7.99

The next analysis looked at how locus of control correlated with procrastination related distress in an academic setting. The hypothesis was tested using the Pearson product-moment correlation. The average means and standard deviations are indicated in Table 1. The results indicated that there was a significant relationship between locus of control and procrastination related distress in an academic setting $r(265) = .24, p < .0001$. The hypothesis was accepted.

The next hypothesis looked at individuals with an internal locus of control (those who score from 0 to 6 on the locus of control scale) and their procrastination scores compared to those individuals with an external locus of control (those who score from 16 to 40 on the locus of control score). The hypothesis was tested using

an analysis of variance. The results indicated that the main effect of locus of control was significant, $F(1, 165) = 10.80, p < .001$. As indicated in Table 2 individuals with an internal locus of control had a lower mean score than those individuals with an external locus of control. The hypothesis was accepted indicating a lower level of procrastination in those individuals with an internal locus of control.

Table 2
Simple Statistics for the Procrastination
Analysis of Variance

Locus of Control	N	Mean
External	75	37.44
Internal	91	33.18

The final hypothesis looked at individuals with an internal locus of control and their degree of procrastination related distress compared to those individuals with an external locus of control. The hypothesis was tested using an analysis of variance. The results indicated that the main effect of locus of control was significant $F(1, 165) = 8.60, p < .004$. As indicated in Table 3 individuals with an internal locus of control have lower mean scores for procrastination related psychological distress than those individuals with an external locus of control. The hypothesis was

accepted thus indicating a lower level of psychological distress for those individuals with an internal locus of control.

Table 3
Simple Statistics for the Distress Analysis
of Variance

Locus of Control	N	Mean
External	75	38.05
Internal	91	34.29

SUMMARY

In Chapter III five hypothesis were presented. An analysis of variance was the statistical procedure employed for hypotheses one, four, and five. Pearson product moment correlation analysis was utilized for hypotheses two and three.

The findings for hypothesis one indicated that there was no significant difference between males and females based on locus of control. The data were then collapsed for further analyses. Hypotheses two and three found significant relationships between locus of control and procrastination, and between locus of control and procrastination related distress. The data analyzed for hypothesis four indicated that there was a significant difference between the scores of internal

and the scores of externals. Internals were found to have lower procrastination scores than externals. The data analyzed for hypothesis five indicated that there was a significant difference between the scores of internals and externals in terms of procrastination related psychological distress. Internals were found to have a lower degree of psychological distress than externals.

CHAPTER V

DISCUSSION

This study examined the relationship between locus of control and procrastination behavior of individuals in an academic setting. The study focused upon two specific aspects of procrastination, the self-reported tendency to always or nearly always put off academic tasks, and to nearly always or always experience psychological distress associated with this behavior. Locus of control was examined in terms of an internal locus of control, when a reinforcement is perceived as following the action of an individual and is contingent upon their own behavior; and an external locus of control, when a reinforcement is perceived as following some action of the individual but is not contingent upon their actions, but is perceived as the result of luck, chance, fate or under the control of others.

Past research on locus of control centered around the idea that a generalized attitude, belief, or expectancy regarding the nature of the causal relationship between one's own behavior and the consequences that result from it might affect a variety of behavioral choices. These generalized expectancies may result in characteristic differences in behavior in situations categorized as chance determined versus skill determined and may produce individual differences within

these situations (Rotter, 1966). Research conducted in the area of procrastination has consisted mostly of investigations examining the effects of behavioral and cognitive interventions used to decrease the procrastination actions of students in order to improve their academic performance. This study sought to provide a connection between locus of control, a personality construct, and procrastination to provide information for the identification of students who may face these academic difficulties. That information can then be used to help develop appropriate and effective interventions and strategies which could improve the academic efforts of students who experience problems with procrastination.

The data from this study suggest that there are no significant differences between males and females regarding procrastination behavior based on locus of control. This finding suggests that males and females, in terms of procrastination, can be analyzed together. The second conclusion suggested by the data is that there is a significant relationship between locus of control and procrastination. This suggests that the personality construct, locus of control, may be used as a means of identification for students who may experience difficulty in completing tasks without delay. The nearly always or always delay in completing tasks is

an integral part of procrastination. The data also indicated that there is a significant relationship between locus of control and the psychological distress associated with procrastination. The distress associated with procrastination is also an integral part of procrastination. The mere delaying of a task does not always constitute a problem to individuals. When coupled with psychological distress as in the operational definition of procrastination for this study, an intervention or strategy may need to be applied to relieve the anxiety this behavior causes, and to help alleviate the negative consequences that may result from this behavior. Individuals whose scores indicated an internal locus of control were significantly lower than individuals whose scores indicated an external locus of control in terms of delaying a task. The data suggest that individuals with an internal locus of control have a lower level or lower frequency of delay in completing academic tasks than individuals with an external locus of control. The scores also indicated that there was a significant difference between internals and externals in terms of procrastination related psychological distress. Individuals with an internal locus of control were found to have a self-reported lower degree of psychological distress than those individuals found to have an

external locus of control. This study suggests that individuals with an external locus of control experience a higher level of procrastination and more psychological distress related to that procrastination behavior.

Some limitations to this study include: 1) Generalization of the present data is quite limited due to the specific population used. 2) There was no cause and effect demonstrated between locus of control and procrastination. 3) There may be other factors within an individual that contribute to procrastination behavior.

Suggestions for Future Research

1. The present study should be replicated using a more global and extensive sample of the academic population.
2. The aspect of procrastination related psychological distress should be further explored to determine the intensity, duration and termination of the distress.
3. Future research should be conducted to see if there is a relationship between locus of control and non-academic related procrastination.
4. Further research needs to be conducted to assess additional aspects of an individual (behavioral, cognitive, and affective) which will help to assess a student at risk for academic procrastination behavior.
5. The current educational system and its method of helping the student population in terms of

procrastination behavior needs to be studied.

6. Further research needs to be carried out to determine which strategies and interventions are being used in regard to procrastination, and with which populations do specific strategies and interventions work best.

7. Future research is needed to determine whether age is a factor contributing to the degree of procrastination behavior.

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APPENDIX A

AGE _____

SEX _____

CLASS STANDING _____

Instructions: Answer the following questions the way you feel. There are no right or wrong answers. Don't take too much time answering any one question, but do try to answer them all. One of your concerns may be, "What should I do if I can answer both yes and no to a question?" It's not unusual for that to happen. If it does, think about whether your answer is just a little more one way than the other. For example, if you'd assign a weighting of 51% to "yes" and assign 49% to "no", mark the answer "yes". Try to pick one or the other response for all questions and not leave any blank. Circle your response provided on the left.

THE SCALE:

- | | | | |
|-----|----|-----|---|
| YES | NO | 1. | Do you believe that most problems will solve themselves if you just don't fool with them? |
| YES | NO | 2. | Do you believe that you can stop yourself from catching a cold? |
| YES | NO | 3. | Are some people just born lucky? |
| YES | NO | 4. | Most of the time do you feel that getting good grades means a great deal to you? |
| YES | NO | 5. | Are you often blamed for things that just aren't your fault? |
| YES | NO | 6. | Do you believe that if somebody studies hard enough he or she can pass any subject? |
| YES | NO | 7. | Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway? |
| YES | NO | 8. | Do you feel that if things start out well in the morning that it is going to be a good day no matter what you do? |
| YES | NO | 9. | Do you feel that most of the time parents listen to what their children have to say? |
| YES | NO | 10. | Do you believe that wishing can make good thing happen? |

- YES NO 11. When you get punished does it usually seem it's for no reason at all?
- YES NO 12. Most of the time do you find it hard to change a friend's (mind) opinion?
- YES NO 13. Do you feel that cheering, more than luck, helps a team to win?
- YES NO 14. Did you feel that it was nearly impossible to change your parent's mind about anything?
- YES NO 15. Do you believe that parents should allow children to make most of their own decisions?
- YES NO 16. Do you feel that when you do something wrong there's very little you can do to make it right?
- YES NO 17. Do you believe that most people are just born good at sports?
- YES NO 18. Are most of the other people you age stronger than you are?
- YES NO 19. Do you feel that one of the best ways to handle most problems is just not to think about them?
- YES NO 20. Do you feel that you have a lot of choice in deciding whom your friends are?
- YES NO 21. If you find a four leaf clover, do you believe that it might bring you good luck?
- YES NO 22. Did you often feel that whether or not you did your homework had much to do with what kind of grades you got?
- YES NO 23. Do you feel that when a person your age is angry at you, there's little you can do to stop him or her?
- YES NO 24. Have you ever had a good luck charm?
- YES NO 25. Do you believe that whether or not people like you depends on how you act?
- YES NO 26. Did your parents usually help if you asked them to?

- YES NO 27. Have you felt that when people were angry with you it was usually for no reason at all?
- YES NO 28. Most of the time, do you feel that you can change what happens tomorrow by what you do today?
- YES NO 29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?
- YES NO 30. Do you think that people can get their own way if they just keep trying?
- YES NO 31. Most of the time do you find it useless to try to get your own way at home?
- YES NO 32. Do you feel that when good things happen they happen because of hard work?
- YES NO 33. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?
- YES NO 34. Do you feel that it's easy to get friends to do what you want them to do?
- YES NO 35. Do you usually feel that you have little to say about what you get to eat at home?
- YES NO 36. Do you feel that when someone doesn't like you there's little you can do about it?
- YES NO 37. Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you?
- YES NO 38. Are you the kind of person who believes that planning ahead makes things turn out better?
- YES NO 39. Most of the time do you feel that you have little to say about what your family decides to do?
- YES NO 40. Do you think it's better to be smart than to be lucky?

APPENDIX B

INSTRUCTIONS: 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.

AREAS OF PROCRASTINATION

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?

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
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?

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
A	B	C	D	E

6. 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

III. KEEPING UP WITH WEEKLY READING ASSIGNMENTS.

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

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
A	B	C	D	E

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

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
A	B	C	D	E

9. 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

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

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

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
A	B	C	D	E

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

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
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, ECT.

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

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
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

Never procrastinate	Almost never	Sometimes	Nearly always	Always procrastinate
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

APPENDIX C

Hi, My name is Eileen. I am working on my Masters degree in clinical psychology. Part of my program involves a thesis, and that is why I am here. I am looking at the procrastination behavior of college students. I would like for you to fill out some questionnaires for me. Your participation is voluntary and in no way effects your grade in this class. The questionnaires will be completed anonymously. I do ask you for your age, sex, and class standing (freshman, sophomore ect..). I am now going to pass out the informed consent.

PASS THE INFORMED CONSENT OUT

I will read it out loud, if you have any questions regarding this form you can ask them now.

COLLECT THE INFORMED CONSENT

Here are the questionnaires. I will pass them out and then go through them with you, reading the directions.

PASS OUT THE QUESTIONNAIRES

I will now read the directions on the first questionnaire. Follow along with me.

READ THE LOCUS OF CONTROL DIRECTIONS

Turn two pages to the second questionnaire, I will now read these directions. Follow along with me.

READ THE PROCRASTINATION DIRECTIONS

Are there any questions? Please fill them out.

COLLECT THE QUESTIONNAIRES

APPENDIX D

Informed Consent

I agree to participate in the present study which will examine college students procrastination habits. I give my permission to Eileen D. Rudnick and Dr. Donald Ward to use the results of the questionnaires for research purposes. I have been informed that my privacy will be protected and my name will not be attached to the research in any way. I further understand that my participation is voluntary and that I have the right to withdraw from this study at any time. I understand that participation or nonparticipation in this study will not effect my course grade.

Signature

Date

