A STUDY OF ACADEMIC PROCRASTINATION IN MIDDLE-SCHOOL AGED CHILDREN

by

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

A STUDY OF ACADEMIC PROCRASTINATION IN MIDDLE-SCHOOL AGED CHILDREN

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Adviser: Professor Vera S. Paster

This study explored the affective correlates, reasons, personality factors, and prevalence of procrastination in middle-school aged students. A small but significant percentage of students indicated problems with procrastination as originally defined for this study. Three times as many students admitted to worrying about procrastination than admitted to actually engaging in procrastination behavior. Two distinct aspects, "the affect and the activity" of procrastination were found in this population. Self-reported procrastination was positively correlated with anxiety and depression. A factor analysis of the reasons for procrastination indicated that the task aversiveness factor accounted for most of the variance. No distinctive personality factor or profile was significantly correlated with procrastination. There was no significant gender difference on any index of, or reason for, procrastination, but there were significant age differences between the ten and eleven year old middle-school students and the thirteen and fourteen year old middle-school students on the task aversiveness factor, and the Junior Procrastination Assessment Scale-Behavior. The results of this study indicate that procrastination is multidimensional, and is experienced and manifested differently in middle school aged children than among college aged adults.

DEDICATION

This dissertation is dedicated to my wonderfully supportive immediate family: Samuel, Juliet, Coleridge, Jeffrey, Linda, Rudy, Aunty Popsy, Aunt Gwen, Karl, Kimlyn, Carl, Marva, and Kelly. They were all instrumental in bringing me to this point. My eternal gratitude and love.

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confidence to achieve and live up to my highest expectations. I thank you, and I love you all very much.

CHAPTER I

INTRODUCTION

Procrastination, the act of needlessly delaying tasks to the point of experiencing subjective discomfort (Solomon & Rothblum, 1984), can be an insidious and enfeebling affliction that may affect anyone: the student, the professional, the athlete, the successful, and the failure (Burka & Yuen 1983). Called the "psychopathology of everyday life" by Silver and Sabini (1981), procrastination is a pervasive and pernicious problem in our time oriented culture. Almost everyone has been minimally affected by procrastination, and a sizable segment of our population is chronically afflicted by it, yet there is only a smattering of articles in the psychological literature on procrastination.

For many, procrastination has been a life-long struggle, oftentimes shrouded in secrecy and shame. These procrastinators cannot remember exactly when their problems started, but they can recall the distress of their early personal and academic work. Their struggles, not easily forgotten, surfaced even before they grasped the concept of time, but with the acquisition of a greater sense of autonomy, during the middle school years, their procrastination became more overt and debilitating.

On university and college campuses, where most of the studies have been done, procrastination has been recognized as a major concern. Hill, Hill, Chabot, and Barrall (1978) found that 27% of their student sample reported that they frequently or usually procrastinated, while 18% of their faculty sample reported similar problems with procrastination. Incidentally, in this study, the faculty's and student's perceptions of students procrastination were very different, with the faculty estimating that 42% of their students procrastinated. Results from a study by Solomon and Rothblum (1984) indicated that 46% of their student sample reported nearly always or always procrastinating on an

assigned paper. Rothblum, Solomon, and Murakami (1986) found that more than 40% of their student sample reported a high level of procrastination, and Ellis and Knaus (1977) estimated that 95% of all college students procrastinated.

Significance of the Study

Most of the research on procrastination has been based on the behavior of students in college and counseling settings, and the majority of this research has approached procrastination from a remediative perspective. The reported findings of this research on college students leaves one to wonder where this tendency or habit began. This writer assumes that the difficulty with procrastination does not appear only in young adulthood, but like other conditions, may have its beginnings and similar manifestations in childhood or adolescence. However, little is known about patterns of procrastination in the earlier stages of development. No one knows how it develops with age, or whether a younger population relates differently to issues of procrastination as compared to college aged adults.

Statement of the problem

Do middle school aged children, age 10-14, procrastinate in patterns similar to that found among college aged students, and do they evidence similar frequency, personality characteristics and concomitant affective vulnerability? If they do, then procrastination with this younger population should be significantly related to fear of failure, task aversiveness, anxiety, depression, and Eysenck's factor analytic personality factors: extraversion/introversion, neuroticism, and psychoticism, since these issues have been found to apply to young adult procrastinators.

Definitions

Procrastination will be defined for this study as "the self-reported tendency (a) to nearly always or always put off... tasks, and (b) to nearly always or always experience problematic levels of anxiety associated with this procrastination" (Rothblum, Solomon, & Murakami,1986,p.387). In this study, academic procrastination will be measured by the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged children from the Procrastination Assessment Scale - Students (PASS, Solomon & Rothblum, 1984). Scores will range from 6 to 30, with scores 24 and above classified as procrastination scores.

Fear of Failure is defined as having evaluation anxiety, overly perfectionistic standards for one's performance, and low self-confidence. In this study, the Fear of Failure factor will be differentiated by the use of factor analysis on the questions in section V of the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged children from the Procrastination Assessment Scale -Students (PASS, Solomon & Rothblum, 1984).

Task Aversiveness is defined as the view of academic tasks as unpleasant, a dislike of those academic activities, a lack of energy for such tasks, and laziness. In this study, the Task Aversiveness factor will also be differentiated by the use of factor analysis on the questions in section V of the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged children from the Procrastination Assessment Scale - Students (PASS, Solomon & Rothblum, 1984).

Middle-School Aged Children are defined as children between the ages of 10 and 14 years who are in the 6th, 7th, and 8th grades.

Extraversion/Introversion, as hypothesized by Hans Eysenck, are seen as opposite ends of a single pole. **Extraversion** is defined as the quality of being sociable, lively, active, assertive, spontaneous, optimistic, sensation-seeking, carefree, dominant, quick tempered, surgent, and venturesome. **Introversion** is defined as the quality of being reserved, quiet, retiring, introspective, bookish, somewhat pessimistic, orderly, serious, ethical, reliable, diffident, and controlled (Eysenck, 1985). Extraversion/Introversion will be measured by the Eysenck Personality Questionnaire-Junior (EPQ-J) (1975).

Neuroticism is defined as the quality of being anxious, depressed, worried, guilty, tense, shy, moody, overly emotional, and deficient in self-esteem (Eysenck, 1985). Neuroticism will be measured by the Eysenck Personality Questionnaire-Junior (EPQ-J) (1975).

Psychoticism is defined as the quality of being aggressive, cold, egocentric, impersonal, impulsive, antisocial, isolated, tough-minded, insensitive, unemphatic, and creative. (Eysenck, 1985). Psychoticism will be measured by the Eysenck Personality Questionnaire-Junior (EPQ-J) (1975).

CHAPTER II

RELATED LITERATURE REVIEW

Although there is a relative paucity of psychological literature on procrastination, there are two major areas within this body of work: procrastination in everyday life and academic procrastination. More work has been done on academic procrastination than "procrastination in daily living" (Milgram, Sroloff, & Rosenbaum, 1988). The principal reason for this discrepancy is probably the proximity and accessibility of college students to researchers. Consequently, college students' classroom related procrastination behavior has been the primary spark for the psychological inquiry into procrastination.

The foregoing may account for the interest in academic procrastination, but intuitively, one might think that procrastination behavior would not only be confined to academic settings, but would also manifest itself at home and in the workplace. One also might think that procrastination would not magically appear fully-formed on college campuses, but would most likely have its origins in childhood or adolescence. But to date, little attention has been paid to procrastination outside of academic settings (Coote, 1987; Milgram, Sroloff, & Rosenbaum 1988). And to this writer's knowledge, only one person (Morse, 1987) has studied procrastination in children, and no one has looked at procrastination in middle-school aged children.

While professional literature on procrastination continues to be lacking, it is plentiful in the popular media with books, articles, and self-help workshops on the subject (Aitken, 1982; Briody, 1979; McKean, 1990; & Milgram, 1989). There is even a Procrastinators Club of America that is based in Philadelphia, PA. According to Gagliardi (1984, p 79-80), the club had about 4,400 members in 1984 with its president stating, "half a million will be joining, as soon as they

got around to it." This writer can be included in above mentioned "half a million" (date of Procrastinators' Club of America's application's arrival, 7/92; date of completion of application, still pending).

Even though there has been an increase in journal articles on procrastination in the last decade (McKean,1990; Milgram, 1989), and public interest has not abated, the psychological literature still narrowly confines itself to studying predominantly neurotic indecision, "the repeated postponement of major life decisions" and academic procrastination as manifested in college students (Milgram, Sroloff, & Rosenbaum, 1988, p. 197). With the aforementioned increase in journal articles on procrastination, quantity has improved, but quality is still lacking. Many of the recent studies have continued to be atheoretical, empirically questionable, and adult centered. The procrastination literature has been criticized for its, "poorly understood behavioral syndromes" and "abundance of unsubstantiated 'explanations'" based on "undocumented clinical folklore." (McCown, Johnson, & Petzel 1989, p. 197), and it continues to have no particular developmental focus. This study will be developmentally centered in middle-school aged children's preadolescence and early adolescence.

Developmental Literature

Adolescence has been defined as the developmental period of transition between childhood and adulthood which involves biological, cognitive, and social changes (Santrock, 1993). In the United States and most other affluent European cultures, adolescence begins approximately at 10 to 13 years of age and ends between the ages of 18 and 22. Early adolescence corresponds to roughly the middle school or junior high school years and includes pubertal changes, while Middle and Late Childhood is the developmental phase that

ranges from about 6 to 11 years of age. This developmental phase is often called the elementary school years (Santrock, 1993).

Since this study's sample consists of students who are in their preadolescence or late childhood, and others who are in their early adolescence, the developmental literature review will highlight the two contiguous stages of development which characterizes the sample of this study.

Jean Piaget's Theory of Development

Piaget posited a stage theory of cognitive development, where the stages were conceived as universal and immutable. These stages were reached by the reciprocity of interaction between the organism and the environment (Ginsburg and Opper, 1969). Piaget believed that humans understood the world through the processes of assimilation and accommodation. He felt that all knowledge was the consequence of individuals' purposeful interaction with their surroundings. For Piaget, development progressed according to the principles of hierarchical integration and differentiation. Development was understood as proceeding through a sequence of stages of organization, where subsequent stages incorporate previous stages and these later stages exhibit qualities that transcend the characteristics of the earlier stages (Ginsburg and Opper, 1969).

Specifically, Piaget believed that cognitive development was a process which involved a gradual progress through four stages: sensorimotor, preoperational, concrete operational, and formal operational. The third stage called the Concrete Operational stage lasted from approximately 7 to 11 years of age. In this stage, children can perform operations where their logical reasoning replaces intuitive thought, even though their logical reasoning can still only be applied to concrete examples. The fourth stage, the formal operational stage which lasts from approximately 11 to 15 years, is the fourth and final stage

according to Piaget. In this stage, adolescents can engage in abstract thought, think in a more abstract and logical manner, and transcend concrete experiences (Ginsburg & Opper, 1969).

The two final stages of Piaget's theory of development underscore the importance of, and give further evidence for, the increasing capacity of adolescents to think and act with more freedom from parents, teachers, and other figures of authority. Adolescents for the first time have more autonomy in deciding how, what, and when to perform tasks. Thus, these two stages and the shifts in between, and adolescents' incipient ventures into autonomous purposeful interactions with their environment, can provide fertile ground for procrastination behavior.

Psychodynamic Theory of Development

There is no one psychodynamic theory of adolescence. There are several major views of adolescent development within the psychodynamic school. There is Anna Freud's, Peter Blos's, Erik Erikson's, Object Relations's and the original classical view of Sigmund Freud's.

According to these psychodynamic theorists, development is primarily unconscious and is overwhelmingly affected by emotion. These theorists believe that behavior is only a superficial manifestation of the latent contents of the mind, and that early experiences with parents or significant caretakers are the primary determinants in development (Adelson and Doehrman, 1980).

Sigmund Freud

Incredibly, Freud did not theorize extensively about adolescence, even though some of his patients would now be termed late adolescents. Freud (1905) believed that, adolescent and adult development was determined in the first five

years of life. Consequently, he placed little emphasis on pubescence and adolescence.

For Freud, the momentary and incomplete resolution of the Oedipal conflict of the phallic stage flowed into the latency period, the fourth stage of psychosexual development. According to Freud, during latency, the child represses interest in sexuality and develops social and intellectual skills and the capacity for affection (Freud, 1905). For Freud, pubertal development consists of the resurfacing of the libido and its localization in the genital area. This occurred in the genital stage, the fifth of Freud's psychosexual stages. This stage, according to Freud, begins during puberty and is characterized by a sexual reawakening and establishment of healthy sexual pleasure outside of the family (Freud, 1905).

The result of this development is the emotional upheaval of adolescence. Freud believed that adolescents lived lives filled with tension and conflict due to the reemergence of unresolved conflicts with parents. This concept was expanded by the work of Anna Freud, Erik Erikson, and Peter Blos.

Freud's exposition of the tension and conflict occurring between adolescents and parents continues the theme of the emancipation of adolescents from the strictures of indisputable parental rule, and the concomitant evolution of adolescents verbal and behavioral expression. Procrastination is one of the possible avenues of unconscious expression for adolescents in their struggle with parents and parent surrogates for independence. The work of the following psychodynamic theorists also illustrate the different processes in which procrastination can become an unconscious behavior choice of adolescents as they progress from dependence to greater independence.

Anna Freud

Childhood and adolescence have been major concerns of Anna Freud. She extended Freud's recapitulation theory of adolescence and was one of the first psychoanalysts to emphasize the significance of the unique physical and psychological changes occurring during puberty (Draguns, 1991). For Anna Freud, during adolescence, the relationship between the id , the ego , and the superego underwent significant qualitative changes. Physical and sexual maturity led to an imbalance and instability among the id, the ego, and the superego. Consequently, conflict during the adolescent period increased, and intense anxiety was the result of this increased conflict. Due to the resultant discomfort, the adolescent had to find a way or ways to manage this discomfort, anxiety, or psychic pain. This was accomplished through the defense mechanisms of the past and present (A. Freud, 1966)

In sum, Anna Freud (1958) placed the role of the defense mechanisms in the forefront of adolescent adjustment, and felt that defense mechanisms were not necessarily pathological. She felt that adolescent tumult, because of the pubertal reawakening of the sexual drive, was developmentally requisite and universal (A. Freud, 1966).

From Anna Freud's perspective, procrastination could be thought of as a unhealthy defensive strategy which helps protect adolescents against the feeling of incompetence and vulnerability.

Peter Blos

Peter Blos is considered the most significant modern writer in the psychodynamic literature on adolescent development (Adelson and Doehrman, 1980). For Blos, regressions of drive, ego and superego are considered normal and universal in adolescent development. Blos believed that there was a

progressive repetition of the pre-oedipal and oedipal experiences from early to mid-adolescence, and proposed several stages of adolescence (Blos, 1962). He postulated the division of adolescence into young adolescence, adolescence proper, late adolescence, and post-adolescence. According to Blos each of these phases are instrumental in the mastery of the developmental tasks of adolescence.

Blos (1962) also felt that adolescence signified a second opportunity for individuation. Specifically, he highlighted the following features of adolescent experience: the importance of the negative Oedipus complex, the adolescent's attraction to the same sex parent; the establishment of sexual identity and the resolution of conflicts related to bisexuality; the recognition of imperfections of the self and the object, the evolution of the superego toward greater autonomy from both internal impulses and external pressures; and the creation and formation of personal identity on the basis of all of the above developments. Blos believed that the normal adolescent resolved all of the aforementioned developmental challenges while the troubled adolescent became further fettered and frustrated in the irresolutions of each successive developmental challenge (Blos, 1962). The ability or inability to independently complete assigned tasks, procrastination, would be an example of one of these developmental challenges.

Erik Erikson

Similar to the already mentioned psychodynamic theorists, Erik Erikson's (1959, 1968) theory is an extension of the Freudian theory of psychosexual development. His theory highlighted the significance of the psychosocial in development as opposed to the psychosexual of Freud's. Erikson believed that the social aspect of life had more of an influence than Freud realized. In his epigenetic theory, Erikson postulated eight stages of psychosocial development

characterized by dialectical processes: trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; industry versus inferiority --occurring approximately in the elementary school years --; identity versus identity confusion-- occurring approximately between the ages of 10 and 20 --; intimacy versus isolation; generativity versus stagnation; and integrity versus despair.

A fundamental notion in Erikson's theory (1968) of development is the epigenetic principle, which states "that anything that grows has a ground plan, and that out of this ground plan, the parts arise, each part having its time of special ascendancy, until all parts have arisen to form a functioning whole" (Erikson, 1968, p. 92). Each stage concerns an "ego crisis," where the individual has to develop competence to meet a set of societal demands. The resolution of these "ego crises" is contingent upon the individual's successfully mastering and integrating its competence in these particular social demands(Erikson, 1968).

Because of the epigenetic principle, Erikson believed that each stage depended upon the resolution or lack of resolution of all the preceding stages. Extrapolating from Erikson's work, procrastination in the completion of assigned tasks or academic tasks could also be seen as one of the prototypical ego crises of preadolescence and early adolescence. If this particular ego crisis, is not resolved, incompetence and feelings of inadequacy could become a lifelong concern.

Object Relations

Historically, the acceptance and study of the reawakening of the drives was pivotal in psychodynamic developmental theory, but for today's psychodynamic developmental theory, the self (the ego), and object relations are preeminent. According to object relations theorists like Kohut (1971), the

central concern in early adolescence and adolescence proper is the problem of the self (the ego), its functions, and its relations to others. For Kohut, the beginning of puberty and the change of the ego ideal effectuates the psychological operations of the adolescent process. Kohut felt that the reorganization of the self was the most important function for adolescents to accomplish (Kohut, 1971).

Erikson (1956) and Hartmann (1958) also helped restate the problem of adolescent development. Their explication of autonomous ego functions led to the examination of ego growth without the reliance on drives. For Hartmann and Erikson, the ego is one of complexity, and therefore it cannot be simplistically reduced. Consequently, for the above theorists, the ego (the self) grows in reaction to expected internal and external developmental needs, and not in reaction to conflictual psychosexual exigencies (Erikson, 1956 & Hartmann, 1958).

For object relations theorists, procrastination could be thought of as a result of the internal and external changes in adolescents and their relational field, the home and the school. At this stage, the more autonomous self is expected to reconstitute itself for the daily demands on its efficacy--the ability to perform the expected ego functions which are supportive of the adolescent. If the self is unable to adequately respond to the new challenges in the school setting, procrastination could be one result.

Current Views on The Theory of Adolescent Development

It is important to emphasize the historical mistake that has haunted the theory of adolescence. Adolescent theory has often veered far from the actual experience of adolescence. Psychodynamic literature has consistently given an excessively onesided representation of adolescence. Adolescence has been

characterized by the urgent staving off of the revival of unresolved oedipal anxieties. Other pertinent features of adolescence, such as identity development, hobbies, or peer relationships have been invariably missed or interpreted as derivations of the defenses in order to withstand oedipal threats (Josselson, 1980).

This "turmoil" theory (Josselson, 1980) of adolescent development has been so pervasive that it has misdirected a whole era of adolescent researchers. Increasing evidence has, however, for the most part discredited this theory. Researchers (Rosenberg, 1965; Douvan & Adelson, 1966; Offer, 1969; Westley & Epstein, 1969; and Offer & Offer, 1975) who study normal adolescence have found that the adolescent process is unexceptional and steady, and that most adolescents appear to be ordinary and accommodating.

Procrastination may just be one possible troublesome behavioral response in the spectrum of possible behavioral responses of normal adolescent development.

Summary

The strengths of adolescent psychodynamic developmental theory are its emphasis on the past and the developmental course of personality, its understanding of homeostatic conflict and tension, and its appreciation of the mental representation of interpersonal relations and the environment. The major weaknesses are the difficulty in operationalizing and testing its major concepts, its overemphasis on sexuality and the unconscious mind, its overdependence on retrospective reports, and its serious deficiency in empirical data. Thus, procrastination in preadolescence and early adolescence cannot be examined only from the psychoanalytical or psychodynamic perspective.

Procrastination need not be another topic that is distorted and added to the pejoratized literature of adolescent development. Developmentally, procrastination is not a conundrum, nor the result of the "sturm and Drang" of adolescent development, but it may be a consequent of the transitions in development, the physical and psychological changes, and the increases in independence and autonomy. All of the above theorists agree that preadolescents and early adolescents move from the authority of the parents, to the authority of the self. These theorists may disagree on the speed, the style, and the description of this shift, but there is agreement on its occurrence. This shift can and must have an effect on the way adolescents approach their tasks, especially academic ones. The meaning of these tasks and the consequences of the delay, incompletion, or completion of these tasks may be different for adolescents than it is for children who are under their parents' authority, or for college aged adults who are, for the most part, under their own authority.

This literature on adolescent development, may not directly address the problem of procrastination, but it provides a scaffold for the understanding of the experience and manifestation of preadolescent and early adolescent procrastination and its attendant affective and personality correlates.

Theories of Procrastination

In addition to the much needed developmental perspective, there needs to be a further examination of the major theories of personality which have been applied in past studies of procrastination in adults (Aitken, 1982; Briody, 1979; Ellis & Knaus, 1977; McCown, Petzel, & Rupert, 1987; McCown, Johnson, & Petzel, 1989; McKean, 1990).

Psychoanalytic Theory

Classical Freudian psychoanalytical theory posits that psychic energy systems, drives, unconscious motivations, and experiences during the first five years of life are the most powerful determinants of human behavior (Freud, 1900, 1905). Freud believed that unconscious motivation was the sine qua non of human behavior, and that unconscious motives permeated all decisions, social behavior, and psychopathology. For Freud, jokes, artistic expression, slips of the tongue, and dreams were considered symbolic manifestations of unconscious impulses (Freud, 1900, 1901, 1905, 1915).

Psychosexual Stages of Development

Freud further hypothesized (1905) that humans were able to experience sexual pleasure from birth and that sexuality was significant to the development of impulse control, human relationships, and the formation of any psychopathology. According to Freud, the individual's distinctive personality is almost completely sculpted during the first three stages of psychosexual development which occurs during the first five years of life (Freud 1905). Thus, Freud considered this time, the most important period of life.

Patterns of procrastination in late childhood, early adolescence, and even in adulthood could be conceived as a consequence of unsatisfactory experiences during any of the five psychosexual stages. For example, the inability to finish particular tasks could be a way of displaying independence, expressing hostility, or concealing low self-esteem by avoiding the risks of performing poorly.

Basic Analytic Principles of Human Behavior

Freud also postulated certain basic principles of human behavior. The pleasure principle, the reality principle (Freud, 1911) and repetition compulsion

(Freud, 1914, 1920) are three of these basic Freudian principles which are relevant to the study of procrastination.

Freud believed that humans are inherently pleasure-seeking, and theorized that human behavior was motivated by both the need for pleasure and the need to avoid pain (Freud 1911). However, this innate drive to preserve a pleasureful and pain-free state is ameliorated by the reality principle, which is learned during childhood. Thus, procrastination can be conceived as resulting from the unrestrained pursuit of pleasure coupled with the circumscribed influence of the reality principle.

Freud also explained the formation of habits by proposing the principle of repetition compulsion (Freud, 1914, 1920). According to Freud, humans have an urge to repeat actions which are pleasureful or successful. The longer a specific behavior is engaged in, the more it becomes indelibly etched as a habit. After these behaviors have become habits, it is almost impossible to erase them. They continue to be repeated in spite of their lack of utility, or lack of success , (Freud 1914, 1920). Here again, a classical Freudian psychoanalytic principle can explain the contradiction of procrastination. Although procrastination has become self-defeating, it still must be repeated.

Structure of Personality

Freud (1923) hypothesized that the human psyche consisted of three separate but interactive structures: the id, the ego, and superego. These three structures differed in intent, function, and manner of operation.

By discerning the functioning of the id, the ego, the superego, and the needs of the individual, procrastination can be explained by the Freudian structure of the psyche. A strong superego, may result in a great amount of anxiety which could obstruct the taking of action and therefore lead to procras-

tination. Or the ego and superego may be quite weak, consequently, the unbounded id could manifest an unconcerned and lackadaisical attitude towards any effortful work, especially academic.

Ego Mechanisms of Defense

Anna Freud (1966) called anxiety, the danger signal of the ego. Anxiety is an unpleasant experience which humans attempt to reduce at whatever cost, or strive to prevent from reoccurring. According to Anna Freud, the ego protects itself from the aforementioned anxiety or threat by creating elaborate means of coping. These means are known as the ego mechanisms of defense and consist of: introjection, isolation, projection, regression, repression, reaction formation, sublimation, turning against the self, undoing, and reversal (A. Freud, 1966, p. 44). These mechanisms are operated by the unconscious and can deny and pervert reality, rationalize failings, displace energy, and forget or repress information. Each means of coping is a way of protecting or defending the ego from material that is deemed overwhelming to the ego. Defense mechanisms are not necessarily pathological, but they can grow to pathological proportions when they are used often and reflexively to distort reality (A. Freud, 1966).

Procrastination, the act of delaying, can be conceived as a defense against taking action and failing. By delaying, the ego is protected from the reality of possible failure.

Topography of the Mind

Freud (1900, 1915) hypothesized that the unconscious, preconscious, and conscious were the three systems that made up the mind. The conscious is the branch of the mind of which people are fully aware; it has the ability to perceive inner and outer stimuli. The branch of the mind which people are unaware of is

called the unconscious. This unconscious, hidden from awareness, serves as a repository of all experience and memory. Information is stored there that influences and motivates behavior (Freud, 1900, 1915).

The topography of the mind has definite ramifications in the study of procrastination. Procrastination, despite its debilitating and self-defeating consequences, could be conceived as a manifestation of important unconscious functions, and would be explained if these unconscious motivations were discernable. Thus, procrastination could be conceived as the result of one or several unconscious motives which continue to be beyond our conscious purview.

Summary

From the Freudian perspective, procrastination can be explained by several of the psychoanalytical precepts. It could stem from pleasure principle motivation resulting from the inefficient learning of the reality principle; it could be seen as a consequence of a failed attempt at resolving the issue of independence and autonomy representative of the oral or anal stages; or it could be understood as a product of defensive behavior unconsciously motivated to protect a fragile ego from additional assault.

In various combinations, the aforementioned Freudian notions may be used to conceptualize and explain procrastination in an infinite number of ways. Although ambitious and untestable, these psychoanalytic formulations and other psychodynamic explanations for procrastination--too demanding or too laissez faire parents (McIntyre, 1964; Missildine, 1964; & Spock, 1971), unresolved oedipal issues, a wish for retaliation against parents (Smith & York , 1981), grandiosity as a result of disrupted narcissistic development (Widseth, 1987),

and unconscious death anxiety (Blatt & Quinlan, 1967)-- have been applied to the phenomenon of procrastination.

Rational Emotive Theory

In their oft quoted popular book, "Overcoming Procrastination" Ellis & Knaus render an account of the theory, treatment, and description of procrastination from a rational emotive perspective (1977). Their work has been the most influential in the psychological study of procrastination. They describe the different kinds of procrastination, the three major causes, and the entire procrastination process from their theoretical standpoint (1977). They hypothesize that there are three areas of procrastination: 1) self-development, 2) personal maintenance, and 3) commitments to others; and there are three causes of procrastination: 1) self-downing 2) low frustration tolerance, and 3) hostility. Ellis & Knaus define procrastination as, "putting off something until a future time-- postponing or deferring action on something you have decided to do" (1977, p. 7), and posit eleven steps that they believe every procrastinator climbs:

1. You want to accomplish a task, although you may not like it, you realize the outcome will be beneficial if you complete the task.
2. You decide to work on the task.
3. You unnecessarily put off working on the task.
4. You realize and experience the drawbacks of putting off the task.
5. You continue to delay on working on the task you decided upon.
6. You castigate yourself for your procrastination, you protect yourself by justifying your delay, or you decide to put the task out of your mind.
7. You persist in your delay.

8. You complete your task extremely close to the deadline with an eleventh hour flourish to finish it, or you complete it after the scheduled date, or you leave it forever unfinished.
9. You feel disturbed, self-conscious, or embarrassed by your procrastination and you chastise yourself for your needless delay.
10. You promise yourself that this delaying behavior will not be repeated in the future, and you are completely and sincerely convinced that you are seriously committed to having it never occur again.
11. Shortly thereafter, if there is a complex, involved, and lengthy task to be finished, you again engage in procrastination (Ellis and Knaus 1977).

Another theorist in the rational emotive school, Leonard G. Rorer (1983) believes that Ellis and Knaus's (1977) descriptions are inadequate. Rorer presents four models of procrastination that integrate psychodynamic ideas into a rational-emotive approach. Rorer believes that Ellis concentrates too much on tasks and their immediate consequences as reasons for procrastination. "Procrastination may often be the result of secondary or tertiary consequences of the action and may have nothing to do with the task itself." (1983, p. 2). For example, Rorer proposed that fear of success was an equally important cause for procrastination. He felt that the fear of success was more about the fear of the ramifications and expectations that result from success, than the fear of the achievement of success (Rorer, p.2 1983).

Rational emotive principles are also found in some explanations for procrastination posited by Bliss (1983) and Burka & Yuen (1983): fear of failure, negative thinking, fuzzy goals, poor self-image, fear of success, and defiance of authority. Ellis and Knaus (1977), Knaus (1979), and Rorer (1983), have devoted much time to procrastination, and have been more inclined than

other psychologists to see it as a legitimate psychological phenomenon worthy of investigation.

Behaviorism and Social Learning Theory

The two major schools of thought within this theoretical orientation are Skinner's behaviorism and Social Learning Theory. Rational Emotive and Psychoanalytic theory can be termed subjective and introspective in nature. Both rely on internal experiences. Behaviorism places the emphasis on behavior which is physically observable and measurable, and not upon the constructs of thoughts, feelings, or "instincts" (Watson, 1969, p.2).

B.F. Skinner posited that neither emotion nor cognition is significant to the understanding of development (Skinner, 1964). The operant theory of learning concentrates on the functional relationship between events which typically occur together in a specific order. Thus, operant theory is concerned with observable and measurable behavior which is elicited as a consequence of reinforcement. Consequently, all behavior is thought of as being predicated on subsequent rewards or punishments (Skinner, 1964).

In social learning theory, cognitive processes are considered equal in importance to the environment as a significant determinant of behavior (Bandura, 1977). According to Albert Bandura (1977) human development is a lifelong process of socialization in which behavior and the psychology of behavior is shaped by modeling and reinforcement. Through modeling, children and adolescents, observe and imitate the behavior of others, and through reinforcement, children and adolescents learn that behaviors that are rewarded are approved, while behaviors that are punished are disapproved. Even though Skinner and Skinnerians may deny the necessity of cognition, social learning

theorists, like Albert Bandura, believe that behavior is controlled through thoughts, beliefs, and values.

Therefore, for Skinnerians, procrastination could be explained as a result of the learning of an inappropriate response where there were more rewards for the individual to delay (procrastinate), or there was a lack of rewards for more persistent goal directed behavior. While for social learning theorists, like Albert Bandura, procrastination could be explained as a consequence of modeling, or as a conscious decision based on possible inadequate thought processes, beliefs, and values.

Eysenck's Theory

Eysenck believed that much of psychoanalytic theory was unfounded and not empirically supported (Eysenck, 1985). His quote, "what is true is not new, and what is new is not true" (Eysenck, 1985, p.131) was directed to many of the psychoanalytic notions promulgated by Freud and his followers. Eysenck felt that only through careful, rigorous, disciplined, empirically based study, could personality and its constituents be accurately understood and explained. For Eysenck, an accurate representation of personality should consist of, "a descriptive and a causal element, and it must be subject to clear-cut predictions and the experimental testing of such predictions" (Eysenck, 1985 p.9). He believed that personality could be subsumed into three major factors of personality. These major dimensions of personality, Psychoticism, Extraversion, and Neuroticism have emerged from large numbers of factor analytic descriptive studies of self-ratings in the United States, Europe, Scandinavia, and Africa, and from many different sources and inventories, such as the Minnesota Multiphasic Personality Inventory, the 16PF, and the Guilford Scales (Eysenck & Eysenck, 1985). The intercorrelational features that

constitute the factor called Psychoticism are: aggressiveness, coldness, egocentricity, impulsivity, antisocial activity, tough mindedness, and unempathic and impersonal reactions; the intercorrelational features that constitute the factor called Extraversion are: sociability, assertiveness, liveliness, activity, and sensation-seeking, carefree, dominant, surgent, and venturesome responses; and the intercorrelational features that constitute the factor called Neuroticism are: anxiety, depression, guilt feelings, low self-esteem, tension, irrationality, shyness, moodiness, and emotionality (Eysenck, 1985).

In 1983, Royce and Powell examined the entire correlational and factor analytic literature on personality and found that there were a finite number of factors which could form a reliable description of personality. For Royce and Powell, these factors could all be subsumed under three principal dimensions of personality. They labeled them emotional stability, emotional independence, and introversion-extraversion. Royce and Powell's principal factors became Eysenck's three superfactors, but were labeled differently . Psychoticism replaced emotional independence. Neuroticism replaced emotional stability, and Extraversion and introversion kept the same label (Eysenck, 1985).

According to Eysenck (1985), his three superfactors, Psychoticism (P), Extraversion (E), and Neuroticism (N), do not purport to explain the entire personality, but they explain more variance than any other three factors in personality research. These "superfactors" of personality were promulgated as superior in their nosology by Eysenck for three important reasons.

The first is their agreement. Although these factors have been labeled differently in hundreds of disparate analyses, their similarity is manifest. These three factors have been discovered, and continue to be discovered, in countless different studies dating back to antiquity according to Eysenck (1985).

The second reason, according to Eysenck, is their universality. These factors are not only relevant for Western Cultures but cut across non-western cultures and countries. Analysis from hundreds of studies with large samples that encompass at least 25 countries from Europe, Africa, and Asia have evidenced the generalizability of these factors across many countries (Eysenck, 1985).

His third reason is the consistency these factors evidenced throughout the lifespan of an individual. This model, or any model of personality would be less robust if the features or factors changed significantly for a person as that person aged. In 1984, Conley examined a large body of work on longitudinal follow-up studies of personality and concluded that Psychoticism, Extroversion, and Neuroticism are consistent over the lifespan. Consequently there is agreement, generalizability, long-term consistency in Eysenck's three superfactors of personality over time (Eysenck, 1985).

The empirical evidence that substantiates the factors' validity, reliability, and utility also make them, a suitable paradigm of personality study, and an appropriate paradigm for the study of personality factors reflected in procrastination (Eysenck 1985; McCown, Petzel, & Rupert, 1987).

Summary

Of the five personality theories examined, only Rational Emotive and Psychoanalytic theories have been used in definitive expositions of procrastination, but they lack supportive empirical data. The other three theories have not been applied to procrastination. As a matter of fact, the procrastination literature is replete with theoretical suppositions, but is deficient in empirical evidence (Coote, 1987; McCown, Johnson, & Petzel 1989; McKean, 1990). However, according to McCown et al. (1987), Eysenck's theory of three

"superfactors" seems the most promising for the study and advancement of the understanding of procrastination. Accordingly, these three "superfactors" will be tested in this current study.

Psychoeducational and Counseling Approach to Procrastination

This body of literature is predominantly remediative in nature, for example, White (1988) looked at guided imagery as a possible counseling technique to reduce procrastination in college students. Many studies in this literature attempt to reduce procrastination behavior by changing student attitudes towards time management, organization, and study habits (Green, 1982). Most of these studies posit a belief that the student has organizational problems. This body of work has been criticized for its lack of theoretical underpinnings, confounded variables, case study formats, and its overemphasis on studies devoid of control groups which report techniques that purportedly reduce procrastination (Green, 1982; Lay, 1986: McCown, Johnson, and Petzel, 1989; Ziestat, Rosenthal, and White, 1978). Consequently, there persist a need for a body of literature which unites theory and data to validate theoretically relevant procrastination interventions (McKean, 1990).

Efficacious Approaches in Procrastination Research

Some researchers see procrastination not as an unitary concept, but as a complex phenomenon with disparate causes and distinct typology. This body of research exemplified by the work of Lay (1986 and 1987), Rothblum and her colleagues (e.g.Solomon and Rothblum, 1984; Rothblum, Solomon, & Murakami, 1986; Beswick, Solomon, and Mann 1988; Solomon and Rothblum, 1988), and McCown and his colleagues (McCown, Petzel, & Rupert, 1987; McCown, Johnson, & Petzel, 1989) have begun to meld theory and empiricism

to more fully delineate procrastination as a multidetermined and multifaceted construct.

Lay's Research

In 1986, Clarry Lay published a paper that employed three studies that explored `individual and situational correlates of procrastinatory behavior' (Lay 1986). In his first study, Lay measured procrastination among college students using his own procrastination scale (Form G) which is a 20 item true/false non-academic task based questionnaire, and items from subscales of Jackson's Personality Inventories. This resulted in a 128 item measure. The behavioral index of procrastination was the punctuality of students completing and returning the protocols.

The correlational results of this first study showed that procrastination was not significantly related to self-esteem (r= -.03), need for achievement (r= -.09), or energy level (r= -.09), but the results did show that procrastinators scored high on neurotic disorganization (r= .69) and low on organization (r= -.49). Rebelliousness was also found to be significantly correlated with procrastination (r= .34). Twenty-nine percent of procrastinators (as defined by their score on Lay's 20 item procrastination scale--Form G) turned in their protocols late.

The results of his second of three studies found that procrastinators were less inclined to do what they thought others wanted them to do. His third study supported the results of the first study, and additionally found that procrastinators had a more difficult time completing rudimentary assignments on time.

In 1987, Lay used Modal Profile Analysis to examine the data from the aforementioned 1986 studies. Using this statistical procedure, Lay could discern

two significant procrastination profiles that accounted for 47% of the total variance. The first profile was characterized by high procrastination, high neurotic disorganization, and high rebelliousness. The second profile was again characterized by high procrastination and high neurotic disorganization, but rather than high rebelliousness, it was also characterized by low energy level and low need for achievement.

Lay also used Modal Profile Analysis specifically on the personality variables of the 1986 study. This analysis uncovered two profiles for men, and one for women. The first male profile was characterized by high procrastination, high neurotic disorganization, sensitivity to rejection, low organization, other directed self-monitoring, and stimulus screening. While the second male profile was defined by high procrastination, high breadth of interest, private self-monitoring, low organization, other-directed self-monitoring, and stimulus screening. The female profile was characterized by high procrastination, high neurotic disorganization, cognitive failures, low organization, low energy level, and low self-esteem.

Lay looked at these profiles or types of procrastinators from an underachievement perspective. He felt that the first male profile was analogous to the identity disorder underachiever, and the second male profile was similar to the overanxious disorder underachiever. The female profile and the second profile from his earlier study were seen as the standard non-achievement syndrome underachiever.

Though Lay can be accused of post hoc "data snooping," his results reinforce the direction of future procrastination research: the need to clarify the complexity of procrastination, and the need to demonstrate the difference in types of procrastinators.

Rothblum's Research

Solomon and Rothblum's first study of procrastination (1984) sought to find the frequency of, and reasons for academic procrastination among college students. They developed a self-report inventory, the Procrastination Assessment Scale for Students (PASS), to assess the reasons for procrastination. They also included in their study, self-report scales that measured affective, cognitive and behavioral factors that supposedly accompanied procrastination.

Their results showed that the occurrence of self-reported procrastination exceeded the numbers of procrastinators who considered it to be a problem, and a far larger number of students identified procrastination as a behavior they would like to indulge in less. In their sample of 291 undergraduates, 46% reported that they always or nearly always procrastinated when writing a term paper, 30.1% procrastinated reading weekly assignments, and 27.6% procrastinated studying for examinations. Interestingly, many students did not view procrastination as a problem. Only 23.7% reported it was always or nearly always a problem when writing a term paper, 23.7% reported it to be always or nearly always a problem when doing weekly readings, and 21.2% reported it to be always or nearly always a problem when studying for examinations. Although a smaller percentage of students who reported procrastinating felt it was a problem, a larger percentage of students wanted to reduce their procrastinatory behavior: 65% wanted to reduce their procrastination when writing papers, 55.1% when reading weekly assignments, and 62.2% when studying for exams. There were no sex differences.

The correlational analysis of their results found that procrastination, as measured by the Procrastination Assessment Scale-Students, was significantly correlated with (1) anxiety ($r = .13$, $p < .05$), but at even greater levels with (2) depression ($r = .44$, $p < .0005$), irrational cognitions ($r = .30$, $p < .0005$) and

self-esteem (r= -.23, p < .0005). Factor analysis of Part II (assumed reasons for procrastination) of the Procrastination Assessment Scale-Students, yielded two factors that accounted for most of the variance in their study.

Factor I, Fear of Failure, which consisted of questions that pertained to lack of self-confidence, concern about meeting one's own standards (perfectionism), and meeting others expectations (evaluation anxiety) accounted for 49.4% of the variance. Factor II, Task Aversiveness and laziness, which consisted of questions that pertained to lack of energy and task unpleasantness, accounted for 18% of the variance.

Women were more inclined to attribute their procrastination to Fear of Failure, and both male and female students with low self-esteem and anxiety were also likely to attribute their procrastination to Fear of Failure.

Solomon and Rothblum (1984) also did a frequency tabulation, and found that subscription to questions that constituted Factor I varied from 6.3% to 14.1%, while, subscription to questions comprising Factor II varied from 19.4% to 47%. These results revealed two discrete groups of procrastinators. The first group of students who attributed their procrastination to Fear of Failure, was small and very homogeneous. Though only 6% to 14% of these students subscribed to the questions comprising Factor I, it accounted for almost 50% of the variance. Therefore, the students who attribute their procrastination to Fear of Failure, do so to the exclusion of almost all other reasons.

The second group of students who attributed their procrastination to Task Aversiveness is much larger, and much more heterogeneous. In the words of Solomon and Rothblum, "aversiveness of task is rarely the only reason why students procrastinate on academic tasks" (p. 508). This is so because 19% to 47% of the students subscribed to at least one of the questions constituting the Task Aversiveness factor. Since students did not exclusively subscribe to the

questions comprising this factor, but subscribed to questions loading on other factors, the Task Aversiveness factor accounted for only 18% of the variance.

In 1986, Rothblum, Solomon with Murakami did another study that sought to find additional affective, cognitive, and behavioral differences between high and low procrastinators. In this study, they concentrated on psychological trait measures specific to academic tasks in contrast to the clinical focus and measures of their 1984 study. They hypothesized that self-reported procrastination would correlate positively with behavioral delay and negatively with academic performance. In addition to the continued use of the Procrastination Assessment Scale-Students (PASS), Rothblum, Solomon, and Murakami used The Test Anxiety Scale (Sarason,1972) as a measure of test anxiety, the affective measure, Russell's (1982) Causal Dimension Scale as a measure of attributions of success or failure, the cognitive measure, and the Rosenbaum Self-Control Schedule (Rosenbaum, 1980) as a measure of self control, the behavioral measure. Departing from almost all other studies on procrastination, Rothblum et al. studied procrastination in weekly sessions, before, during, and after the semester's mid-term and examination period.

The results of this study showed that almost 41% (40.6%) of college students (sample of 379) reported always or nearly always procrastinating on exams and always or nearly always experiencing subjective distress due to it. High procrastinators in this study evidenced more test anxiety, were more likely to attribute favorable results to external and transitory influences, reported less self-control, less mastery of emotional responses, lower self-efficacy, and greater difficulty in delaying gratification. Even though the correlations were modest, the results of this study demonstrated that procrastination, as measured by the Procrastination Assessment Scale-Students (PASS) was positively correlated with behavioral delay as exemplified by the completion of self-paced

quizzes ($r = .15$, $p < .0005$), and was negatively correlated with final grade point average ($r = -.22$, $p < .0001$). These results further support the validity of the Procrastination Assessment Scale--Students (PASS) in assessing academic procrastination.

In a 1988 study, Beswick, Rothblum, and Mann, sought to examine three theoretical explanations for procrastination, and the several possible attendant factors of procrastination: age, academic performance, anxiety, depression, and full-time vs. part-time student status. They studied Janis and Mann's (1977) assumption that indecision and conflict are the reasons for procrastination, Ellis and Knaus's (1977) conviction that irrational beliefs which hold that self-worth is equated with performance on tasks is the belief of people who procrastinate, and Burka and Yuen's (1983) assertion that procrastination is employed to protect fragile self-esteem.

This study again used Solomon and Rothblum's (1984) Procrastination Assessment Scale-Students (PASS) to measure self-reported procrastination. In addition to the PASS, they administered the Ellis Scale of Irrational Cognitions (MacDonald & Games, 1972), the Beck Depression Inventory (Beck & Beamesdorfer, 1974), the Rosenberg Self-Esteem Scale, 1965), and the State-Trait Anxiety Inventory (Spielberger et al., 1968). In addition, Beswick, Rothblum, and Mann used date of submissions of the following as indices of behavioral procrastination: the outline for a term paper, the term paper, and a research packet handed out in class.

Although most of the students in this study met the deadlines of their coursework, there was ample indication of the "last-minute rush" to get outlines and papers in on time. Forty-six percent of the students in this study reported that they nearly always or always procrastinate when they have to write term papers, 31% nearly always or always procrastinate when studying for exams,

and 47% reported procrastinating when keeping up with weekly reading assignments. The majority of the sample, 62%, saw procrastination as a personal problem, and wanted to reduce its occurrence. There was no significant relationship between the date of submission of the term paper and the grade for the term paper, but there was significant negative relationships between self-reported procrastination and the grade for the term paper outline, term paper, and final grade for the course in psychology.

Only weak empirical support for the three theoretical explanations of procrastination was found in this study. Of the three, Burka and Yuen's (1983) procrastination as a protection of a fragile self-esteem hypothesis had the strongest association with self-reported procrastination and delay in submission of course work, next was Janis and Mann's (1977) indecision and conflict, and the weakest and most negligible, Ellis and Knaus's (1977) irrational beliefs. There was a small but significant relationship between Janis and Mann's (1977) decisional procrastination and delay in submission of the term paper ($r = .15$, $p < .05$); and in keeping with Burka and Yuen's (1983) assertion that procrastination protects a fragile self-esteem, there was a modest significant negative relationship between self-esteem and delay in submission of the term paper ($r = -.20$, $p < .01$) and a significant negative one between self-esteem and self-reported procrastination ($r = -.35$, $p < .001$). There was no significant relationship between Ellis and Knaus's (1977) irrational beliefs and delay in the submission of the term paper ($r = .03$, ns), although there was a small but significant relationship between irrational beliefs and self-reported procrastination ($r = .20$, $p < .01$).

There were significant correlations between self-reported procrastination and anxiety, ($r = .40$, $p < .001$), and depression, ($r = .27$, $p < .001$). With respect to age, older students procrastinated less on all academic tasks and evidenced

higher self-esteem and less depression than younger students. There were no significant differences between part-time students and full-time students, and there were no sex differences in self-reported procrastination on academic work.

This study, and the previous two studies further demonstrate the validity and reliability of the Procrastination Assessment Scale-Students (PASS) in accurately assessing self-reported procrastination, and the salience of anxiety and depression as correlates of procrastination. This study also raises the question of age, since older students evidenced fewer problems with procrastination. Will the results be similar for a study with a younger population, or could the outcome be the reverse?

McCown's Research

McCown, Petzel, & Rupert (1987) did a correlational study where they hypothesized that there were different types of procrastinators. They used 200 undergraduates who volunteered for the study. These students were defined as procrastinators if they scored in the highest quartile and as nonprocrastinators if they scored in the lowest quartile on the Aitken's Procrastination Inventory (1982)--nineteen procrastination questions embedded in a larger `dummy' questionnaire. The researchers also wanted to find out what personality factors were most germane to procrastination, so they employed the Eysenck Personality Questionnaire (EPQ) (Eysenck, 1985). In this study, they used only two of the EPQ's three personality factors, extraversion and neuroticism. They omitted psychoticism.

In the results of their study, extraversion significantly correlated with procrastination ($\underline{r}=.63$, $\underline{p}<.001$), and there was a distinct curvilinear relationship between neuroticism and procrastination ($\underline{n}=.78$) i.e., high procrastinators and low procrastinators evidence higher neuroticism scores than

students in the middle quartiles. McCown, Petzel, and Rupert concluded that neuroticism played an important role in explaining procrastination. It seemed that high degrees of neuroticism can either nurture procrastination or encourage a defense against it --"neuroticism will infect with or inoculate against procrastination." (McCown et al., 1987, p.785). In this study, extraversion seemed to mediate between "infection" and "inoculation."

In a 1989 follow-up study, McCown, Johnson and Petzel did a principal component analysis to differentiate types of procrastinators. In this study, the researchers developed and used their own Adult Inventory of Procrastination which was significantly correlated with Aitken's Procrastination Inventory (r=.72). Their sample of 227 students had to meet strict criteria of procrastination: "(1) scored in the top quartile distribution of norms for both the Aitken measure and the Adult Inventory of Procrastination; (2) had obtained less than one half of the needed experimental credits by the last month of class: and (3) signed up for the experimental session during the last 3 weeks of available time for completion of the required experimental credits."

The analysis of the results revealed three principal components with eigenvalues greater than one. These three accounted for 55.9% of the variance. The first component, typified by a high score on the psychoticism scale, accounted for 21.4% of the variance. According to McCown et al., (1989) the relationship between psychoticism and procrastination could be due to impulsiveness, preoccupation with one's inner world, and the rebelliousness tapped by psychoticism. The second component accounted for 18.4% of the variance and was characterized by high scores on both the extraversion and neuroticism scales. In the words of the researchers, "This principal component seems to rather clearly represent the category of individuals who are outgoing,

energetic, and slightly nervous, and who just take on too much to complete any of their numerous self-imposed tasks" (McCown et al., 1989, p. 200).

The third and final component accounted for 16.1% of the variance and was characterized by high scores on the neuroticism scale, and the Beck Depression Inventory. Both scales measure lability. "This subgroup of procrastinators would seem to be suffering from clinical depression, or perhaps a subclinical variant" (McCown et al., 1989, p. 201).

In their discussion section, the researchers cite the most important finding of their study, "This study, along with that of McCown et al. (1987) suggests that procrastination in university students, while having a unitary outward behavioral syndrome may be due to differing `amounts' of E, P, and N combining linearly in individuals" (McCown et al., 1989, p. 201). They also go on to cite an equally important finding, "Results such as these would seem to reinforce the belief that more clinical research could benefit from multivariate analysis utilizing the concepts of extraversion, neuroticism and psychoticism since their explanatory power seems so useful in untangling constructs as complex as procrastination" (McCown et al., 1989, p. 201).

Summary

Although there are differences among these researchers with respect to theoretical foundations, variables selected, and statistical analyses, the similarities in their research have been their delineation of different types of procrastinators, their identification of different personality, cognitive, affective, and behavioral concomitants of procrastination, and their suggestions for future research in procrastination. Their research has most importantly demonstrated, in contrast with the past, that theory and empiricism can be successfully synthesized in the professional literature of procrastination (McKean, 1990). The

only failing of this body of work is its limitation to college students as subjects, and the lack of a developmental footing to its studies. This study is an attempt to add a needed developmental scope and focus to the psychological literature of procrastination.

Theoretical Foundation of Study

As the foregoing attests, very little is still empirically known about procrastination. Several authors (Burka & Yuen, 1983; Broadus, 1983; Ellis & Knaus, 1977; Missildine, 1964; and Spock, 1974) have promulgated an array of reasons for procrastination. Many of them believe that procrastination has its beginnings in childhood, but none of the aforementioned theorists have ever empirically tested their notions. According to McCown et al. (1987), Eysenck (1986) presents a model of personality with a broad empirical foundation that is well suited for the study of procrastination. In his theory, Eysenck postulates that all of personality, even through the ages and across cultures, can be seen through the lenses of what he calls three superfactors of personality or the "the P.E.N. paradigm" : psychoticism, extraversion, and neuroticism. Since both McCown et al.'s (1987 & 1989) work with the "the P.E.N. paradigm" and procrastination in college students, and Rothblum et al.'s (1984; 1986; & 1988) work with the Procrastination Assessment Scale- Students (PASS) have proven to be empirically sound, this writer believes that a synthesis of both McCown's and Rothblum's approach with a younger age group would be a significant contribution to the psychological study of procrastination.

Hypotheses

Hypothesis I: There will be a significant percentage of middle-school aged children who will evidence procrastination, i.e. the percentage will be significantly different from zero.

Hypothesis II: Procrastination in middle-school aged children will vary positively with levels of (i) anxiety (ii) depression (iii) task aversiveness and (iv) fear of failure.

Hypothesis III: There will be significant positive relationships between procrastination in middle-school aged children and the following personality factors: psychoticism, extraversion, and neuroticism.

CHAPTER III

METHOD

Subjects

The sample of 286 middle-school students consisted of 140 boys, 145 girls, and 1 unknown. Table 1 presents a summary of the demographical composition of the sample of students. Their ages ranged from 10 to 14, with the modal age being 12 years. One hundred and seven students were enrolled in the 6th grade, 87 in the 7th grade, and 92 in the 8th grade. Two hundred and forty-three students were European-American, 14 were African-American, 4 were Asian-American, and 24 picked "other" in the racial demographic category. One student checked the grade, but omitted the race, gender, and age categories.

Procedures

The data for this study was collected during the seventh week of the fall semester by the principal researcher, and his five volunteer research assistants. Each volunteer research assistant was trained by the principal researcher. One school had two female researchers and one male researcher, and the other school had two female researchers and one male researcher. The students and teachers of the different classes of grades 6, 7, and 8 in each of the schools were asked to volunteer for this study. There were three classes for each grade, with one researcher assigned to one class per grade. Every effort was made to secure a sample of students from all the academic tracks, and every effort was made to achieve an equal number of students from each of the three grades. The object of the study was described to the students and their parents as an exploration into students' approach to their academic tasks. It was explained that all students

Table 1.

Demographic Characteristics of Student Sample

N = 286	Subjects n	Subjects %
Sex		
Males	140	49.0
Females	145	51.0
Age	10	2.4
	11	28.3
	12	32.9
	13	30.4
	14	5.6
Grade		
6th	107	37.4
7th	87	30.4
8th	92	32.2
Race		
European American	243	85.0
African American	14	4.9
Asian American	4	1.4
Latino	0	0
Native American	0	0
Other	24	8.4

would anonymously complete four questionnaires and would experience no academic, physical, or psychological repercussions from either participation or non-participation.

Written permission was required from the parents of the students who agreed to participate in the study (see appendix C). Students who did not receive permission from their parents to participate in the study were allowed to go the library during the administration of the study.

At the beginning of each class, the researchers distributed a coded battery of questionnaires to every study participant. The researchers also reminded the students of their protections and read the instructions as follows:

> You are being asked to help in a research study by a graduate student in psychology who is interested in your honest answers to the following questions. Complete these four questionnaires as best you can and leave no answers blank. There are no "trick" questions, or "right" or "wrong" answers. Choose the answers that best describe you. Your answers to these questions will in no way affect your grade in class. Do not put your name on any questionnaires. All questionnaires are numbered so your name will not be known. These questionnaires will be seen only by the researcher. Remember to answer all the questions.

The students were then told to begin. If questions were asked about the meaning of certain words, they were answered. If students asked how to answer a certain question, they were told to choose the answer that best described them. The time allotted for the completion of the batteries was no more than one period (40 min). The battery consisted of 145 questions, and was usually completed in 25 minutes. The test batteries were collected and checked by the researchers

when the students indicated that they were finished. All batteries were collected at the end of the class period. The students were debriefed by their teachers on the following day of school. In a meeting prior to the administration of the study, the teachers were instructed to inform the students who volunteered for the study, that the study's main interest was procrastination. They were also asked to affirm the principal researcher's intention to return and fully explain the reasons and results of the study.

This study, as with any study that depends on self-report data of subjects, is prone to misreporting of information by subjects. Since the tendency to "put off or delay", procrastinate, may be considered negative by the students, it was important to try to minimize the potential for such misreporting by the students. Although accurate self-reporting could not be guaranteed, this researcher took several precautions to diminish the students' resistance to the potentially threatening effects of reporting what they may have considered negative. The object of the study was described to the students and their parents as a study of students' approach to their academic tasks. It was also explained that all students would anonymously complete the four questionnaires and would not experience any harmful academic, physical, or psychological repercussions from this study. The reactions of the students to the task seemed to indicate that the measures were accepted by them in a positive manner.

Measures

The four measures used in this study were the Children's Depression Inventory- Short Form (CDI-S) (Kovacs, 1992), the State Trait Anxiety Inventory for Children (STAIC) (Spielberger, 1970), the Eysenck Personality Questionnaire - Junior (EPQ-J) (Eysenck, 1976), and the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged children from the

Procrastination Assessment Scale - Students (PASS) (Solomon & Rothblum, 1984). The measures of the battery were arranged in different modes of presentation to control for order effects. This process consisted of placing the names of all four measures on separate pieces of paper and placing these pieces of paper in a box. For each battery, the pieces of paper, symbolizing the questionnaires, were drawn blindly from a box. The order of selection became the order of placement in each battery. This process was repeated for every battery.

The Children Depression Inventory-Short Form

The Children's depression Inventory- Short Form (CDI-S) is a 10-item self-rated symptom oriented scale appropriate for children and adolescents from 7 to 17 years of age (Kovacs, 1992). The CDI-S was chosen to assess depression in middle-school aged students because it is self-administered, short, and capable of providing quantitative information for assessing the depth of depression. The CDI-S has a forced-choice format which permits subjects to choose between three descriptive statements that describe how they may have felt over the past two weeks. For example, the subjects are asked to choose one of the following: "I feel like crying once in a while," "I feel like crying many days," "I feel like crying everyday." The three statements represent an increasing magnitude of depression and are scored accordingly:

Item Score	Meaning
0	Absence of symptom
1	Mild symptom
2	Definite symptom

(Kovacs, 1992). Saylor, Finch, Spirito, and Bennett (1984) report that the CDI can distinguish populations of emotionally disturbed children from normal school

children, and Michael G. Kavan, in his review of the Children's Depression Inventory (Kavan, 1990, p.48) writes, "Although further studies need to be completed on test-retest reliability of the CDI, internal consistency and validity appear adequate for a research instrument. As a result, the CDI shows promise as an instrument to measure childhood depression." The CDI-S correlates r =.89 with CDI, and its alpha reliability coefficient equals .80 (Kovacs, 1992). The CDI-S also demands the lowest reading level of any measure of depression for children (Berndt, Schwartz, & Kaiser, 1983; Kazdin & Petti, 1982). In this study, the Children Depression Inventory-Short Form (CDI-S), will be used to measure depression and its relationship to procrastination in a sample of middle-school aged students.

The State-Trait Anxiety Inventory for Children

The State-Trait Anxiety Inventory for Children (STAIC) is a 40 item self-report instrument which includes two separate subscales. These two twenty item subscales measure two discrete facets of anxiety, State anxiety and Trait anxiety. According to the authors, "the A-State scale is designed to measure transitory anxiety states, that is, subjective, consciously perceived feelings of apprehension, tension, and worry that vary in intensity and fluctuate over time. The A-Trait subscale measures relatively stable individual differences in anxiety proneness, that is, differences between children in the tendency to experience anxiety states" (Spielberger, Gorsuch, & Lushene, 1970, p. 3). The State subscale consists of 20 statements that ask children how they feel "right now, at this very moment," while the Trait scale has 20 items that ask them how they "usually feel." Children are asked to select one of the three alternative choices for each item which describes them best. The Trait scale asks the child to respond to each item by showing how frequent the behavior described by that

item occurs. For example, for item 11 ("I worry about school") the child responds by circling hardly ever, sometimes, or often. Each Trait-scale item has a 3-point rating scale where values of 1, 2, or 3 are assigned to each of the three alternative choices (1-hardly ever, 2-sometimes, and 3-often). Scores can range for both scales from the minimum of 20 to the maximum of 60.

The STAIC was developed to measure anxiety in 9 to 12 year old children, but can be, and has been used to study students in the ninth grade (Gaudry & Poole, 1972). In this study, the norms of the STAIC, (sixth grade) will be used to study students in 6th, 7th and 8th grades. The Trait-subscale of the STAIC was chosen to assess anxiety in middle-school aged students because it is self-administered, short, well validated, and most importantly, capable of providing quantitative information for assessing enduring anxiety. The alpha coefficients for the Trait-subscale of the STAIC is .78 for males and .81 for females (Spielberger, Edwards, Lushene, Montuori, & Platzek, 1973). C. Eugene Walker and Keith Kaufman (1984, p. 638) in their review of the State-Trait Anxiety Inventory for Children write, "in assessing some older children (e.g., sixth-graders) these reviewers found the instrument a pleasure to administer/score and had the impression that both the directions and the items were clearly understood."…. the STAIC would seem to be most appropriate for assessing children in the sixth-grade (with good reading skills) and above (though norms are lacking at older ages)." Endler (1978, pp. 1097- 1098), in his review of the State-Trait Anxiety Inventory for Children writes, "this scale is probably the best scale available for assessing anxiety in children. I would recommend it over the CMAS [Children's Manifest Anxiety Scale] and the GASC (General Anxiety Scale for Children), primarily on the basis of the care and precision with which it has been developed." The STAIC will be used to

assess anxiety and its relationship to procrastination in a sample of middle-school aged students.

The Eysenck Personality Questionnaire-Junior (EPQ-J)

The Eysenck Personality Questionnaire-Junior (EPQ-J) is an instrument created to measure the three major factors of personality in children and adolescents from the age of 7 to 15 (Eysenck & Eysenck 1975). The purpose of the questionnaire is to measure the major dimensions of personality which have emerged from large numbers of factor analytic descriptive studies of self-ratings in the United States and Europe (Eysenck & Eysenck 1975). The major dimensions of Psychoticism, Extraversion, and Neuroticism have emerged from many different sources and inventories, such as the Minnesota Multiphasic Personality Inventory, the 16PF, and the Guilford Scales (Eysenck & Eysenck, 1975). The EPQ-J consists of 81 statements which require "yes or no" responses, orthogonal scales which measure Psychoticism (P), Extraversion (E), and Neuroticism (N), and a Lie (L) scale which tests the verity of each subject's score. The EPQ-J was chosen to measure personality attributes in middle-school aged students because it is self-administered, relatively short, well validated, and is based on forty years of extensive psychometric and experimental research. Its alpha coefficents range from acceptable to high, as shown in Table 2. (Eysenck & Eysenck, 1975). The three factors of Eysenck's, Psychoticism (P), Extraversion (E), and Neuroticism (N), do not purport to explain the entire personality, but they purport to explain more variance than any other three factors in personality research. Friedman (1984, p. 280), in his review of the Eysenck Personality Questionnaire, writes, "Although the EPQ has not been as popular as the MMPI, the CPI, or the 16PF, the wealth of research, ease of

Table 2.

EPQ-J: Internal Consistency Reliability

BOYS			
AGE	**P**	**E**	**N**
7	.64	.57	.75
8	.70	.71	.73
9	.65	.64	.82
10	.73	.66	.81
11	.69	.72	.85
12	.74	.76	.86
13	.69	.81	.85
14	.73	.80	.86
15	.74	.80	.85
GIRLS			
AGE	**P**	**E**	**N**
7	.66	.54	.80
8	.64	.64	.80
9	.62	.71	.84
10	.57	.69	.82
11	.43	.75	.85
12	.55	.75	.85
13	.67	.74	.85
14	.70	.77	.86
15	.61	.75	.84

administration, and the readily available clinical intervention strategies keyed to the EPQ should contribute to its future increase in popularity."

In this study, the Eysenck Personality Questionnaire-Junior (EPQ-J) will be used to explore the relationship between the aforementioned personality factors and procrastination in middle-school aged children.

The Junior Procrastination Assessment Scale

The Junior Procrastination Assessment Scale (JPAS) (appendix B) was adapted for middle school aged children from the Procrastination Assessment Scale - Students (PASS) (Solomon & Rothblum, 1984) to measure the severity of each student's procrastination.

The Procrastination Assessment Scale-Students (PASS) (Rothblum & Solomon, 1984) is a 52 question instrument with three sections. The initial section measures the prevalence of procrastination in six academic areas: (1)writing a term paper, (2) studying for an exam, (3) keeping up with weekly reading assignments, (4) performing administrative tasks, (5) attending meetings, and (6) performing academic tasks in general. A 5-point Likert scale is used to classify the subjects degree of procrastination on each task: 1=never procrastinate; 2=almost never; 3=sometimes; 4= nearly always; and 5=always procrastinate. A 5-point Likert scale is also used to indicate the subjects' perceptions of the degree of problems from their procrastination on each task: 1=not at all a problem; 2= almost never; 3= sometimes; 4= Nearly always; 5=always a problem. The scores for self-reported procrastination and the magnitude it presents as a problem are totaled for each academic task; this is done because the definition of procrastination for research purposes includes behavioral delay and accompanying psychological distress. For each task the

score can range from 2-10, and total over the six academic areas can range from 12-60.

The second section presents a description of a procrastination scenario: "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." Thirteen conceivable reasons underlying 26 statements (two statements per reason) are then put forward as possible causes for procrastinating on the term paper. The thirteen reasons are: (1) evaluation anxiety, (2) perfectionism, (3) difficulty making decisions, (4) dependency and help seeking, (5) aversiveness of the task and low frustration tolerance, (6) lack of self-confidence, (7) laziness, (8) lack of assertion, (9) fear of success, (10) tendency to feel overwhelmed, and poorly manage time, (11) rebellion against control, (12) risk-taking , and (13) peer influence. A 5-point Likert scale is used in each of the twenty-six statements to rate the accuracy of the statement for the students' projected reason for procrastination in the example.

The third section of the PASS consists of eight questions inquiring about the students' desire to change procrastination. Students are asked about their willingness to attend a program to eliminate or drastically reduce procrastination and the possible scheduling of these sessions. This section was eliminated due to its irrelevance to this study. Beswick, Rothblum, and Mann (1988) in their study at the Flinders University in South Australia had also deleted sections of the (PASS) because of irrelevance. The overall number of items was reduced from 52 to 34 by eliminating the aforementioned section and other portions of the questionnaire that dealt with the desire to decrease procrastination behavior. Certain items concerning academic, administrative, and attendance tasks were also eliminated due to their irrelevance to this population. A section on chores

at home was added to broaden the base of the questionnaire to non-academic pursuits, but academic procrastination was defined by using the first three sections of the Junior Procrastination Assessment Scale (JPAS) . The scenario in the second section was changed from term paper, to "paper or class project" (See changes in the PASS in Appendix A).

An initial version of the JPAS was administered to 21 middle-school aged children to assess the clarity of the wording of the measure. The students were asked to comment on the clarity of the instrument. According to their comments and the results from a computer grammar software package (RightWriter 5.0), the language of the instrument was found to be ambiguous and too high a reading level for most middle-school students, thus the wording was changed so that the reading level of the Junior Procrastination Assessment Scale (JPAS) would be commensurate with the grade level of sixth-graders and above.

Under closer examination of the results, two discrete aspects of academic procrastination began to emerge. The Junior Procrastination Assessment Scale (JPAS) was then divided into two subscales: the Junior Procrastination Assessment Scale-Behavior (JPASB); and the Junior Procrastination Assessment Scale-Feelings (JPASF). These two subscales clearly measured two distinct aspects of procrastination: the Junior Procrastination Assessment Scale-Behavior (JPASB) measured the "activity of procrastination; and the Junior Procrastination Assessment Scale-Feeling (JPASF) measured the "affect of procrastination. In this study, the Junior Procrastination Assessment Scale (JPAS), the Junior Procrastination Assessment Scale-Behavior (JPASB), and the Junior Procrastination Assessment Scale-Feelings (JPASF) will be used to measure procrastination in the sample of middle-school aged students.

Pilot Study

For the Pilot study, the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged children from the Procrastination Assessment Scale -Students (PASS) (Solomon & Rothblum, 1984), the Eysenck Personality Questionnaire - Junior (EPQ-J), the State Trait Anxiety Inventory for Children (STAIC), and the Children's Depression Inventory (CDI) were given to fifteen seventh and eight graders in a public middle-school in a moderate sized community in New York state. The 15 middle-school aged children consisted of 8 males (3 African-Americans, 1 Asian, and 4 European-Americans), and 7 females (3 African-Americans, 1 Latina, and 3 European-Americans). In this pilot study, academic procrastination was measured by the Junior Procrastination Assessment Scale (JPAS) adapted for middle school aged children from the Procrastination Assessment Scale-Students (PASS, Solomon & Rothblum, 1984). Procrastinators were operationally defined as those middle-school aged students who had cumulative scores (Sections I, II, & III) that ranged from 24 to 30. Non-procrastinators were students who had cumulative scores that ranged from 6 to 12.

The administration was uncomplicated, the instructions were easily followed, and the students reported no difficulties with the depth or length of the test. Only one student (6.6%), with a score of 24, met the criterion of a procrastinator (scores from 24 to 30), but more students admitted to procrastination on a specific academic task, as shown in Table 2: 46.7% of the students indicated that they nearly always or always procrastinated when writing a paper or doing a project; 33.3% nearly always or always procrastinated when studying for tests; 26.7% nearly always or always procrastinated doing nightly homework assignments; and 20% nearly always or always procrastinated with household chores. High scorers on the Junior Procrastination Assessment Scale

(JPAS) exhibited higher scores on the affective measures than students who scored low on the (JPAS). The results were in line with the hypotheses of the pilot study. It was thought that having a correlational design for this initial study of procrastination in middle-school aged children would result in a more accurate assessment of the scope and depth of procrastination in this young population. It was also thought that the measures were appropriate to elicit the desired information in the intended subjects. The results of the Pilot Study did not suggest any need for the division of the Junior Procrastination Assessment Scale (JPAS) into two subscales.

Table 3.

Pilot Study: Rate of Acknowledged Procrastination Responses on Specific Academic Tasks on the Junior Procrastination Assessment Scale

TASKS	Nearly Always	Always Delay	Total % of Responses
Nightly Homework Assignments	1	3	26.7
Studying for tests	2	3	33.3
Writing a paper or doing a project	5	2	46.7
Household chores	2	1	20.0

Note. N of subjects =15.

CHAPTER IV

RESULTS

Overview of Results

The subjects of this study were 286 students from the 6th, 7th, and 8th grades drawn from two middle schools in a moderate sized community in New York State. There were no significant differences on all indices between the sample of students from the two different middle-schools.

Statistical Treatment

The design of this study was a one group cross sectional correlational design. Correlations among the variables were examined to investigate the direction and magnitude of their relationships. An analysis of variance and t-tests were performed to examine possible school, gender, and age differences. Cronbach's alpha was calculated to ascertain the reliability (internal consistency) of the Junior Procrastination Assessment Scale (JPAS), the Junior Procrastination Assessment Scale-Behavior (JPASB), and the Junior Procrastination Assessment Scale-Feelings (JPASF). Due to the small number of ten year old and fourteen year old students, it was decided to collapse their small number into their respective contiguous age groups (ten and eleven year olds and thirteen and fourteen year olds) for the purpose of conducting the analysis of variance for age differences. A factor analysis of student's reasons for procrastination, 3 z-tests of proportions to ascertain significant levels of procrastination in the study's sample, and a frequency tabulation for each item consisting of the percentage of students who highly endorsed each item on section V of the Junior Procrastination Assessment Scale (JPAS) were also conducted for this study.

The Junior Procrastination Assessment Scale (JPAS)

Procrastination was defined for this study as "the self-reported tendency (a) to nearly always or always put off... tasks, and (b) to nearly always or always experience problematic levels of anxiety associated with this procrastination" (Rothblum, Solomon, & Murakami,1986, p. 387). In this study, academic procrastination was measured by the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged students from the Procrastination Assessment Scale - Students (PASS, Solomon & Rothblum, 1984). The procrastination score was expected to range from 24 to 30, which indicated procrastination at an always or nearly always level.

Only 3% of the sample scored at 24 or above on the Junior Procrastination Assessment Scale (JPAS). When the scale was divided, however, two discrete aspects of academic procrastination emerged: the worry of procrastination, "to nearly always or always experience problematic levels of anxiety associated with this procrastination"; and the actual behavior of procrastination, "to nearly always or always put off... tasks" (Rothblum, Solomon, & Murakami, 1986, p.387). These two aspects of procrastination were measured by two subscales, the Junior Procrastination Assessment Scale-Behavior (JPASB) which measured the "activity" of procrastination, and the Junior Procrastination Assessment Scale-Feeling (JPASF) which measured the "affect" of procrastination. The reliability coefficient for the full Junior Procrastination Assessment Scale (JPAS) equaled .46, but the reliability coefficient for the Junior Procrastination Scale-Behavior (JPASB) was .60, and .75 for the Junior Procrastination Assessment Scale-Feeling (JPASF), as shown in Table 4.

There were no significant differences in gender for the overall scale, the Junior Procrastination Assessment Scale (JPAS), or for the two subscales, the Junior Procrastination Assessment Scale- Behavior and the Junior Procrastination Assessment Scale-Feelings, as shown in Table 5.

There were also no significant age differences for the overall scale, the Junior Procrastination Assessment Scale (JPAS) and its subscale, the Junior Procrastination Assessment Scale-Feelings (JPASF), but there was a significant age effect as shown in Table 6. Post-hoc Scheffe tests indicated that the ten and eleven year olds (mean = 6.96) scored significantly lower than the thirteen and fourteen year olds (mean = 7.88) on the Junior Procrastination Assessment Scale- Behavior (JPASB).

Table 4.

The Reliability Coefficients for Measures of Procrastination

Measures	Reliability
JPAS	.46
JPASB	.60
JPASF	.75

Note. JPAS = Junior Procrastination Assessment Scale; JPASB = Junior Procrastination Assessment Scale-Behavior; JPASF = Junior Procrastination Assessment Scale-Feelings

Table 5.
Gender Differences in Procrastination Measures

Variables	Mean		Standard Deviation		Degrees of Freedom	t-value
	Male	Female	Male	Female		
Junior Procrastination Assessment Scale (JPAS)	16.53	16.64	3.85	3.79	277	-.20
Junior Procrastination Assessment Scale - Behavior (JPAS-B)	7.79	7.37	2.51	2.41	279	1.43
Junior Procrastination Assessment Scale - Feelings (JPAS-F)	8.73	9.22	3.24	3.24	279	-1.27
Children's Depression Inventory - Short Form (CDI-S)	2.55	3.01	3.16	3.10	281	-1.25
State Trait Inventory for Children (STAIC)	34.39	37.23	7.04	7.18	283	* -3.37
Task Aversiveness Factor (TAF)	14.48	14.27	4.81	5.14	279	.35
Self Consciousness Factor (SCF)	11.17	11.43	3.62	4.04	278	-.58
Fear of Failure Factor (FOFF)	9.75	10.01	3.06	3.56	282	-.65
Neuroticism (NEURO)	9.79	12.06	4.91	4.69	252	* -3.77
Psychoticism (PSYCHO)	5.08	2.44	3.37	2.22	265	* 7.59
Extraversion (EXTRA)	18.54	18.93	3.76	3.38	250	-.87

Note: * = Significance at $p < .001$.

Table 6.

Summary Table of the Analysis of Variance of Age Differences on the Junior Procrastination Assessment Scale - Behavior (JPASB)

Source	df	SS	MS	F	p
Between Groups	2	47.932	23.966	4.036	.019
Within Groups	278	1650.673	5.938		
Total	280	1698.605			

Age	N	Mean	SD
10-11	88	6.97	2.64
12	91	7.82	2.16
13-14	102	7.88	2.48

Hypothesis I.

There will be a significant percentage of middle-school aged children who will evidence procrastination, i.e. the percentage will be significantly different from zero.

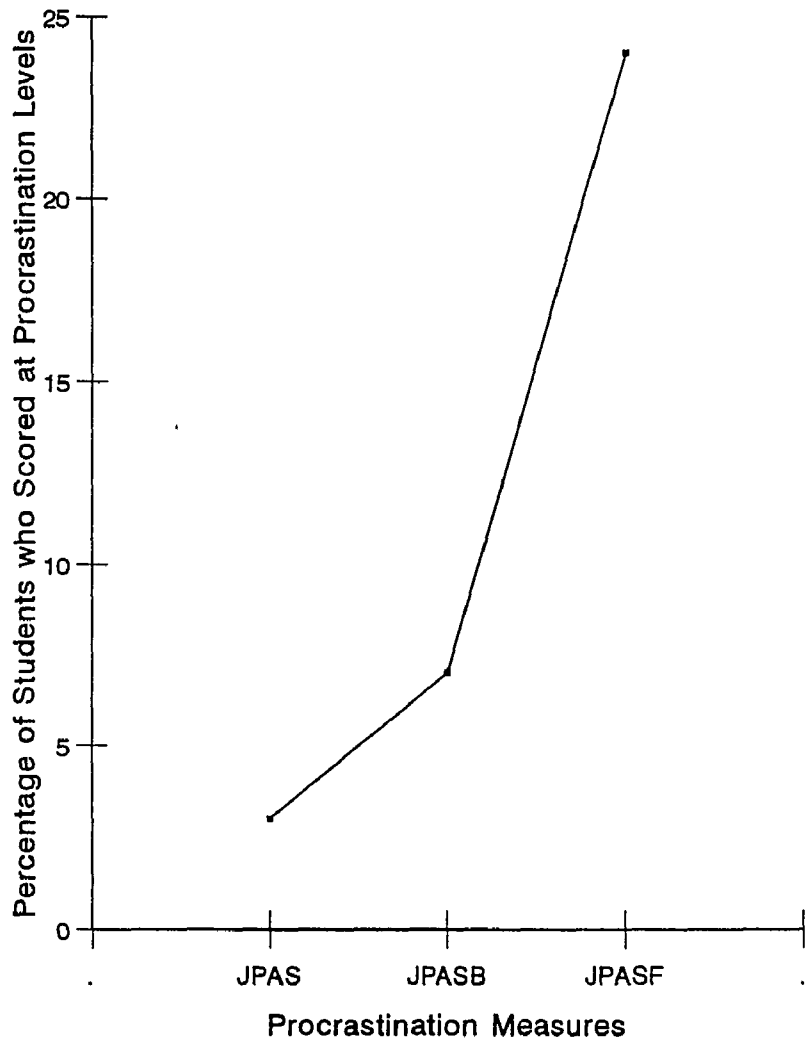
Although 3% of the entire sample, 9 students, evidenced procrastination (scores of 24-30) when the overall Junior Procrastination Assessment Scale (JPAS) was utilized, this percentage was still significantly different from zero ($z = 3.05$, $p < .005$). The frequency of procrastination was different when procrastination was defined as an emotional manifestation, i.e., worrying about procrastination, or when it was defined as a behavioral manifestation, i.e., the actual behavior of procrastination as shown in Figure 1. Seven percent of the sample scored within the procrastination range of "nearly always or always procrastinating" on the Procrastination Assessment Scale-Behavior (JPASB), while 24% of the sample as measured by the Junior Procrastination Assessment Scale-Feelings (JPASF) scored within the procrastination range. Scores of 12 to 15 indicated students who nearly always or always procrastinated on the Junior Procrastination Assessment Scale-Feelings and the Junior Procrastination Assessment Scale-Behavior.

For the specific tasks, as shown in Table 6: 10.5% of students nearly always or always checked that they put off or delayed completing their homework assignments, while 28.3% marked that they nearly always or always worried about their delay or potential for delay in doing their homework; 23% of the students indicated that they nearly always or always put off or delayed studying for tests, while 36% nearly always or always worried about their delay or putting off; and 15% of middle-school students nearly always or always delayed or put off writing a paper or doing a project, while 35.6% nearly always or always worried about delaying or putting off writing a paper or doing a

project. The "doing household chores" question was the only question where the above pattern was reversed: 33.9% of students reported nearly always or always delaying or putting off doing their chores, while only 10.2% of students admitted that they worried about the delaying or putting off of their chores. There were no significant gender or age differences for this hypothesis. This hypothesis was supported.

Figure 1.

Percentage of Students Who Scored at Positive Levels of Procrastination



JPAS: Junior Procrastination Assessment Scale
JPASB: Junior Procrastination Assessment Scale - Behavior
JPASF: Junior Procrastination Assessment Scale - Feelings

Table 7.

Percentage of Students who Procrastinated on Specific Tasks

Specific Tasks	Worry	Actual Delay
Studying for tests	36%	23%
Doing Homework Assignments	28.3%	10.5%
Writing Papers/Doing Projects	35.6%	15%
Doing Household Chores	10.2%	33.9%

Note: N = 286.

Hypothesis II.

> Procrastination in middle-school aged children will vary positively with levels of (i) anxiety (ii) depression (iii) task aversiveness and (iv) fear of failure.

(i) Anxiety as measured by the State Trait Anxiety Inventory for Children (STAIC) positively correlated with procrastination as measured by the overall scale, the Junior Procrastination Assessment Procrastination Scale (JPAS) (r = .31, p < .000); the Junior Procrastination Assessment Scale-Behavior (JPASB) (r = .19, p < .001); and the Junior Procrastination Assessment Scale- Feelings (JPASF) (r = .22, p < .0005). Girls (mean = 37.23) had significantly higher anxiety scores on the State Trait Anxiety Inventory for Children (STAIC) than boys (mean = 34.39) (see Table 4). This gender difference mirrors the gender difference found for the norms of the State Trait Anxiety Inventory for Children (STAIC) (Spielberger, Edwards, Lushene, Montuori, & Platzek 1973).

(ii) Depression as measured by the Children's Depression Inventory-Short Form (CDI-S) was positively correlated with procrastination as measured by the overall scale, the Junior Procrastination Assessment Procrastination Scale (JPAS) (r = .13, p < .04); and the Junior Procrastination Assessment Scale-Behavior (JPASB) (r = .20, p < .001). Procrastination as measured by the Junior Procrastination Assessment Scale- Feelings (JPASF) did not significantly correlate with depression. There were no significant gender or age differences for depression as measured by the Children's Depression Inventory- Short Form (CDI-S).

(iii) The task aversiveness factor was positively correlated with procrastination as measured by the overall scale, the Junior Procrastination

Assessment Procrastination Scale (JPAS) ($r = .31$, $p < .000$); and the Junior Procrastination Assessment Scale- Behavior (JPASB) ($r = .40$, $p < .0005$). Procrastination as measured by the Junior Procrastination Assessment Scale-Feelings (JPASF) did not significantly correlate with the task aversiveness factor. There was no significant gender difference for this factor. However, there were significant age effects between the ten and eleven year olds and the twelve year olds, and significant age effects between the ten and eleven year olds and the thirteen and fourteen year olds as shown in Table 8. Post-hoc Scheffe tests indicated that the ten and eleven year olds (mean = 12.55) scored significantly lower than the twelve year olds (mean = 15.10) and also scored significantly lower than the thirteen and fourteen year olds (mean = 15.29) on this factor.

(iv) The fear of failure factor was positively correlated with procrastination as measured by the overall scale, the Junior Procrastination Assessment Procrastination Scale (JPAS) ($r = .37$, $p < .000$); the Junior Procrastination Assessment Scale- Behavior (JPASB) ($r = .24$, $p < .000$); and the Junior Procrastination Assessment Scale- Feelings (JPASF) ($r = .24$, $p < .000$). There were no significant age or gender differences for this factor.

There was a significant, but expected difference between boys and girls on the State Trait Anxiety Inventory for Children (STAIC), and there were significant age differences for the task aversiveness factor, but there were no age or gender differences for depression as measured by the Children's Depression Inventory- Short Form (CDI-S) or the fear of failure factor. This hypothesis was supported.

Table 8.

Summary Table of the Analysis of Variance of Age Differences on the Task Aversiveness Factor

Source	df	SS	MS	F	p
Between Groups	2	421.769	210.884	9.033	.0002
Within Groups	278	6490.246	23.346		
Total	280	6912.014			

Age	N	Mean	SD
10-11	87	12.55	4.70
12	94	15.10	5.13
13-14	100	15.29	4.65

Hypothesis III.

There will be significant relationships between procrastination in middle-school aged children and the following personality factors: psychoticism, extraversion, and neuroticism.

(i) Psychoticism as measured by the Eysenck Personality Questionnaire - Junior (EPQ-J) evidenced a small but significant negative relationship with Procrastination as measured by the Junior Procrastination Assessment Scale-Feelings ($r = -.15$, $p < .01$); and a significant positive relationship with procrastination as measured by the Junior Procrastination Assessment Scale-Behavior (JPASB) ($r = .26$, $p < .001$). Psychoticism as measured by the (EPQ-J) did not significantly correlate with procrastination as measured by the Junior Procrastination Assessment Scale (JPAS). Boys (mean = 5.07) scored significantly higher on psychoticism as measured by the Eysenck Personality Questionnaire -Junior (EPQ-J) than girls (mean = 2.43). The thirteen and fourteen year old students (mean = 4.44) scored significantly higher on the psychoticism scale than the ten and eleven year old students (mean = 3.09). Both the gender and age differences (see Table 5 and 9) found for Psychoticism in this study mirror the gender and age differences found for the norms for Psychoticism as measured by (EPQ-J) (Eysenck & Eysenck 1975).

(ii) Extraversion as measured by the Eysenck Personality Questionnaire - Junior (EPQ-J) did not significantly correlate with procrastination as measured by the overall scale, the Junior Procrastination Assessment Scale (JPAS); the Junior Procrastination Assessment Scale-Feelings (JPASF); or the Junior Procrastination Assessment Scale-Behavior (JPASB). There were no significant age or gender differences for extraversion.

(iii) Neuroticism as measured by the Eysenck Personality Questionnaire -

Junior (EPQ-J) was positively correlated with procrastination as measured by the overall scale, the Junior Procrastination Assessment Scale (JPAS) ($r = .20$, $p < .001$); and the Junior Procrastination Assessment Scale-Behavior (JPASB) ($r = .19$, $p < .003$). Neuroticism as measured by the (EPQ-J) did not significantly correlate with procrastination as measured by the Junior Procrastination Assessment Scale-Feelings (JPASF). Girls (mean = 12.06) had significantly higher scores than boys (mean = 9.79) on neuroticism as measured by the Eysenck Personality Questionnaire - Junior (EPQ-J). This gender difference mirrors the gender difference found for the norms for Neuroticism as measured by the (EPQ-J) (Eysenck & Eysenck 1975).

Other than the expected significant age difference found for psychoticism, there were no significant age differences for extraversion or neuroticism. However, there were the expected significant gender differences found for psychoticism and neuroticism. Boys scored higher than girls on psychoticism, while girls scored higher than boys on neuroticism (Eysenck & Eysenck 1975). This hypothesis received mixed support.

Table 9.

Summary Table of the Analysis of Variance of Age Differences on Psychoticism

Source	df	SS	MS	F	p
Between Groups	2	87.129	43.565	4.5741	.011
Within Groups	264	2514.362	9.524		
Total	266	2601.491			

Age	N	Mean	SD
10-11	85	3.09	2.69
12	85	3.53	3.08
13-14	97	4.44	3.60

Additional Findings

Analysis of the Reasons for Procrastination

A factor analysis of the reasons for procrastination given by all the students was performed. This analysis consisted of a principal axis solution with squared correlations on the diagonals, followed by a varimax rotation of these factors with eigenvalues, prior to rotation greater than or equal to one. An item was included as loading significantly on a factor if its factor loading was greater than or equal to plus or minus .50 as shown in Table 10. The first factor which accounted for 30.8% of the variance reflected task aversiveness. Items like laziness, task aversiveness, and poor management of time loaded on the task aversiveness factor. The task aversiveness factor negatively correlated with extraversion ($r = -.21$, $p < .001$), positively correlated with psychoticism ($r = .24$, $p < .001$), neuroticism ($r = .26$, $p < .001$), depression as measured by the CDI-S ($r = .27$, $p < .001$), and anxiety as measured by the STAIC ($r = .30$, $p < .001$).

A second factor which accounted for 7.8% of the variance was labelled the Self-Conscious factor. This factor included lack of assertion, fear of success, and perfectionism. The self-conscious factor negatively correlated with extraversion ($r = -.20$, $p < .001$), positively correlated with neuroticism ($r = .35$, $p < .001$), depression as measured by the CDI-S ($r = .29$, $p < .001$), and anxiety as measured by the STAIC ($r = .40$, $p < .001$), but did not significantly correlate with psychoticism.

A third factor which accounted for 5.8% of the variance was the fear of failure factor. This factor had lack of self-confidence, difficulty making decisions, and evaluation anxiety as items. The fear of failure factor negatively

correlated with extraversion (r = -.26, p < .001), positively correlated with neuroticism (r = .29, p < .001), depression as measured by the CDI-S (r = .28, p < .001), and anxiety as measured by the STAIC (r = .39, p < .001), but did not correlate with psychoticism.

Factors four through six drew upon fear of success, rebellion against control, and dependency, but these factors had eigenvalues after the varimax rotation that were less than 1.50, so they were not investigated any further.

Tables 11, 12, and 13 present the intercorrelation matrix which reports the significant relationships among the affective variables, personality factors, factor analytic reasons and procrastination as measured by the Junior Procrastination Assessment Procrastination Scale (JPAS), and its subscales: the Junior Procrastination Assessment Scale-Behavior; and the Junior Procrastination Assessment Scale-Feelings.

Table 10.

Full Rotated Factor Matrix for the Factor Analysis of the Junior Procrastination Assessment Scale

JPAS Question	F1	F2	F3	F4	F5	F6
9. You were worried the teacher wouldn't like your work.	--	--	.737	--	--	--
10. You had a hard time knowing what to put in and what to leave out in your project.	--	--	.693	--	--	--
11. You waited until a classmate did his or hers, so that he/she could give you some advice.	--	--	--	--	--	--
12. You had too many other things to do.	.678	--	--	--	--	--
13. There was some information you needed to ask the teacher, but you felt uncomfortable approaching him/her.	--	.707	--	--	--	--
14. You were worried you would get a bad grade.	--	--	.523	--	--	--
15. You disliked having to do things assigned by others.	--	--	--	--	.692	--
16. You didn't think you knew enough to do the project or write the paper.	--	--	.564	--	--	--
*17. You really disliked doing projects/writing papers.	.535	--	--	--	.563	--

* Question loads on more than one factor.

Table 10. (continued)

Full Rotated Factor Matrix for the Factor Analysis of the Junior Procrastination Assessment Scale

JPAS Question	F1	F2	F3	F4	F5	F6
18. You felt the project was too much or too big for you to do.	--	--	--	--	--	--
19. You had difficulty asking information from other people.	--	.600	--	--	--	--
20. You really liked the excitement of doing this assignment at the last minute.	--	--	--	--	.733	--
21. You couldn't choose among all the topics.	--	--	--	--	--	--
22. You were worried that if you did well, your classmates would not like you.	--	--	--	--	.560	--
23. You didn't think you could do a good job.	--	--	--	--	--	--
24. You didn't have enough energy to begin the assignment.	.557	--	--	--	--	--
25. You felt that it just takes too long to do a project or write a paper.	.613	--	--	--	--	--
26. You liked the dare of waiting until the deadline.	--	--	--	.790	--	--
27. You knew that your classmates hadn't started the project/paper either.	--	--	--	--	--	.733
28. You disliked people setting deadlines for you.	--	--	--	--	.634	--

* Question loads on more than one factor.

Table 10. (continued)

Full Rotated Factor Matrix for the Factor Analysis of the Junior Procrastination Assessment Scale

JPAS Question	F1	F2	F3	F4	F5	F6
29. You were worried you wouldn't be able to do it as good as you knew you could.	--	.584	--	--	--	--
30. You were worried that if you got a good grade, people would expect you to get the same grade in the future.	--	.604	--	--	--	--
31. You waited to see if the teacher would give you some more information about the project/paper.	--	--	--	--	--	.584
32. You set very high standards for yourself and you worried that you wouldn't be able to meet those standards.	--	.535	--	--	--	--
33. You just felt too lazy to write a paper or do a project.	.712	--	--	--	--	--
34. Your friends were pressuring you to do other things.	.504	--	--	--	--	--

* Question loads on more than one factor.

Table 11.

Intercorrelation Matrix of Affective Variables, Personality Factors, Factor Analytic Reasons and the Junior Procrastination Assessment Scale

	JPAS	CDI-S	STAIC	NEURO	PSYCHO	EXTRA	TAF	SCF	FOFF
Junior Procrastination Assessment Scale (JPAS)	-	.13*	.31**	.20**	.04	-.10	.31**	.26**	.37**
Children's Depression Inventory - Short Form (CDI-S)		-	.56**	.55**	.17*	-.35**	.27**	.29**	.28**
State-Trait Inventory for Children (STAIC)			-	.69**	.04	-.18*	.30**	.40**	.39**
Neuroticism (NEURO)				-	.16*	-.14*	.26**	.35**	.29**
Psychoticism (PSYCHO)					-	.03	.24**	.09	.09
Extraversion (EXTRA)						-	-.21**	-.20**	-.26**
Task Aversiveness Factor (TAF)							-	.45**	.40**
Self-Consciousness Factor (SCF)								-	.59**
Fear of Failure Factor (FOFF)									-

Note. * = Significance $p < .05$; **= Significance $p < .001$

Table 12.

Intercorrelation Matrix of Affective Variables, Personality Factors, Factor Analytic Reasons and the Junior Procrastination Assessment Scale - Behavior

	JPASB	CDI-S	STAIC	NEURO	PSYCHO	EXTRA	TAF	SCF	FOFF
Junior Procrastination Assessment Scale-Behavior (JPASB)	-	.20**	.19**	.19**	.26**	-.05	.40**	.10	.24**
Children's Depression Inventory - Short Form (CDI-S)		-	.56**	.55**	.17*	-.35**	.27**	.29**	.28**
State-Trait Inventory for Children (STAIC)			-	.69**	.04	-.18*	.30**	.40**	.39**
Neuroticism (NEURO)				-	.16*	-.14*	.26**	.35**	.29**
Psychoticism (PSYCHO)					-	.03	.24**	.09	.09
Extraversion (EXTRA)						-	-.21**	-.20**	-.26**
Task Aversiveness Factor (TAF)							-	.45**	.40**
Self-Consciousness Factor (SCF)								-	.59**
Fear of Failure Factor (FOFF)									-

Note. * = Significance $p < .05$; ** = Significance $p < .001$

Table 13.

Intercorrelation Matrix of Affective Variables, Personality Factors, Factor Analytic Reasons and the Junior Procrastination Assessment Scale - Feelings

	JPASF	CDI-S	STAI C	NEURO	PSYCHO	EXTRA	TAF	SCF	FOFF
Junior Procrastination Assessment Scale-Feelings (JPASF)	-	.01	.22**	.09	.-15*	-.06	.03	.21**	.24**
Children's Depression Inventory - Short Form (CDI-S)		-	.56**	.55**	.17*	-.35**	.27**	.29**	.28**
State-Trait Inventory for Children (STAIC)			-	.69**	.04	-.18*	.30**	.40**	.39**
Neuroticism (NEURO)				-	.16*	-.14*	.26**	.35**	.29**
Psychoticism (PSYCHO)					-	.03	.24**	.09	.09
Extraversion (EXTRA)						-	-.21**	-.20**	-.26**
Task aversiveness Factor (TAF)							-	.45**	.40**
Self-Consciousness Factor (SCF)								-	.59**
Fear of Failure Factor (FOFF)									-

Note. * = Significance $p < .05$; **= Significance $p < .001$

Analysis of the Frequency of Reasons for Procrastination

In order to examine the frequency with which questions comprising each independent factor were highly endorsed by students, frequency tabulations, as shown in Table 14, consisting of the percentage of students who chose 4 or 5 on the 5-point scale in which 1 = "not at all shows why I delayed" and 5 = "definitely shows why I delayed", were constructed for each question.

For the task aversiveness Factor, the frequency of the questions highly endorsed ranged from 11.1% to 30.8% of the sample, the frequency of the questions highly endorsed for the Self- Conscious factor ranged from 10.8% to 17.4% of the students, and for the fear of failure factor, the frequency of questions highly endorsed ranged from 10.8% to 31.5% of the sample. Other questions highly endorsed by at least 20% of the students were "You disliked having to do things assigned by others" (20.9%) and "You disliked people setting deadlines for you" (25.9%), and " You really disliked doing projects/writing papers" (30.8%) these three items reflected the rebellion against control factor. The four questions that were most often highly endorsed were: "You were worried you would get a bad grade."(31.5%, Fear of Failure factor), "You had too many other things to do"(31.1%, Task Aversiveness factor), "You really disliked doing projects/writing papers" (30.8%, Task Aversiveness and Rebellion against Control Factors), and "You disliked people setting deadlines for you" (25.9%, Rebellion against Control factor).

<u>Summary</u>

Hypothesis I, which predicted that a significant percentage of middle-school aged children would evidence procrastination, was supported. Three percent of the entire sample, 9 students, admitted to procrastination with the overall Junior Procrastination Assessment Scale (JPAS), 7% of the sample with the Junior

Procrastination Assessment Scale-Behavior (JPASB), and 24% admitted to procrastination as measured by Procrastination Assessment Scale-Feelings (JPASF). Hypothesis II, which predicted that procrastination in middle-school aged children would vary positively with levels of anxiety, depression, task aversiveness and fear of failure, was supported. Hypothesis III, which predicted that there would be significant relationships between procrastination in middle-school aged children and Eysenck's personality factors of psychoticism, extraversion, and neuroticism, received mixed support. There were significant positive correlations between the Junior Procrastination Assessment-Behavior and neuroticism and psychoticism, significant positive correlation between the overall scale, the Junior Procrastination Assessment Scale, and neuroticism, but there was only a small significant negative relationship between the Junior Procrastination Assessment Scale-Feelings and psychoticism.

Three major reasons for procrastination were discerned by the analysis of the results of this middle school population. The major reason, which accounted for 30.8% of the variance, was labelled the task aversiveness factor; the second reason, which accounted for 7.8% of the variance, was labelled the self conscious factor; and the third reason, which accounted for 5.8% of the variance, was labelled the fear of failure factor. In the previous studies done on college students, fear of failure was the most frequent reason discerned for procrastination, with task aversiveness the second most frequent reason. In these studies, college students also indicated a higher frequency of procrastination on academic tasks. (Solomon & Rothblum, 1984; Rothblum, Solomon, & Murakami, 1986; Beswick, Solomon, & Mann 1988; Solomon & Rothblum, 1988).

There were no significant gender differences found for any index of, or reasons for, academic procrastination, or for any of the hypotheses. However,

Table 14.

Percent Endorsement of Procrastination Reasons and Their Factor Loadings

JPAS Question	Percent of Subjects Highly Endorsing Questions	Factor on Which Question Loads
9. You were worried the teacher wouldn't like your work.	14.0	(F-3) Fear of Failure (.74)
10. You had a hard time knowing what to put in and what to leave out in your project.	20.2	(F-3 Fear of Failure (.69)
11. You waited until a classmate did his or hers, so that he/she could give you some advice.	10.8	****
12. You had too many other things to do.	31.1	(F-1) Task Aversiveness Factor (.68)
13. There was some information you needed to ask the teacher, but you felt uncomfortable approaching him/her.	16.1	(F-2) Self Conscious Factor (.71)
14. You were worried you would get a bad grade.	31.5	(F-3) Fear of Failure (.52)
15. You disliked having to do things assigned by others.	20.9	(F-5) Rebellion against Control Factor (.69)
16. You didn't think you knew enough to do the project or write the paper.	10.8	(F-3) Fear of Failure Factor (.56)

Table 14. (continued)

Percent Endorsement of Procrastination Reasons and Their Factor Loadings

JPAS Question	Percent of Subjects Highly Endorsing Questions	Factor on Which Question Loads
*17. You really disliked doing projects/writing papers.	30.8	*(F-1) Task Aversiveness Factor (.54). * (F-5) Rebellion against Control Factor (.56)
18. You felt the project was too much or too big for you to do.	16.4	****
19. You had difficulty asking information from other people.	12.6	(F-2) Self Consciousness Factor (.60)
20. You really liked the excitement of doing this assignment at the last minute.	14.3	(F-4) Risk Taking Factor (.73)
21. You couldn't choose among all the topics.	11.8	****
22. You were worried that if you did well, your classmates would not like you.	6.2	(F-4) Risk Taking Factor (.56)
23. You didn't think you could do a good job.	11.2	****
24. You didn't have enough energy to begin the assignment.	11.1	(F-1) Task Aversiveness Factor (.56)
25. You felt that it just takes too long to do a project or write a paper.	16.8	(F-1) Task Aversiveness Factor (.61)

Table 14. (continued)

Percent Endorsement of Procrastination Reasons and Their Factor Loadings

JPAS Question	Percent of Subjects Highly Endorsing Questions	Factor on Which Question Loads
26. You liked the dare of waiting until the deadline.	12.5	(F-4) Risk Taking Factor (.79)
27. You knew that your classmates hadn't started the project/paper either.	11.9	(F-6) Dependency Factor (.73)
28. You disliked people setting deadlines for you.	25.9	(F-5) Rebellion against Control Factor (.63)
29. You were worried you wouldn't be able to do it as good as you knew you could.	10.8	(F-2) Self Conscious Factor (.58)
30. You were worried that if you got a good grade, people would expect you to get the same grade in the future.	15.3	(F-2) Self Conscious Factor (.60)
31. You waited to see if the teacher would give you some more information about the project/paper.	15.4	(F-6) Dependency Factor (.58)
32. You set very high standards for yourself and you worried that you wouldn't be able to meet those standards.	17.4	(F-2) Self Conscious Factor (.53)
33. You just felt too lazy to write a paper or do a project.	19.5	(F-1) Task Aversiveness Factor (.71)
34. Your friends were pressuring you to do other things.	14.0	(F-1) Task Aversiveness Factor (.50)

there were significant expected gender differences evidenced on the two personality factors, psychoticism and neuroticism, and anxiety; and a significant expected age difference for psychoticism. There were also significant age differences for the Junior Procrastination Assessment Scale-Behavior, and the task aversiveness factor. This age difference was manifested in higher scores for the older students, particularly the oldest group of students. The thirteen and fourteen year old students scored higher than the youngest group, the ten and eleven year old students, on both indices.

The fundamental hypothesis upon which this study was founded, that procrastination in middle-school students is similarly experienced and manifested as procrastination in college students, was not supported.

CHAPTER V

DISCUSSION OF RESULTS

Overview

This study was conceived and conducted to better understand the depth and scope of academic procrastination in the middle-school aged population. Since other researchers (Hill, Hill, Chabot, & Barrall, 1978 ; Solomon & Rothblum, 1984; Rothblum, Solomon, & Murakami, 1986; McCown, Petzel, & Rupert, 1987 and Ellis & Knaus, 1977) had found a high incidence of procrastination among the college aged student population, it was felt that the same would be found in the middle-school aged population. The results of this study could then begin to give a developmental foundation to the study of procrastination.

The underlying premise of this study was that middle school aged children procrastinated in patterns similar to that found in college age students, and that they manifested similar prevalence, personality characteristics, and affective vulnerability. Thus, it was hypothesized that procrastination in the middle school aged population would be significantly related to fear of failure, task aversiveness, anxiety, depression, and Eysenck's factor analytic personality factors: extraversion, neuroticism, and psychoticism. It was also assumed that this study would produce results similar to those from both McCown et al's (1987 & 1989) work with the " P.E.N. paradigm" and procrastination in college students, and Rothblum et al's (1984; 1986; and 1988) work with the Procrastination Assessment Scale- Students (PASS) and procrastination in college students. It was hoped that a synthesis of both McCown's and Rothblum's approach with a younger age group would be useful.

The Junior Procrastination Assessment Scale (JPAS)

Academic procrastination was defined as "the self-reported tendency (a) to nearly always or always put off... tasks, and (b) to nearly always or always experience problematic levels of anxiety associated with this procrastination" (Rothblum, Solomon, & Murakami, 1986, p. 387). But in this middle-school aged population, two discrete manifestations of academic procrastination emerged, the worry of procrastination, "to nearly always or always experience problematic levels of anxiety associated with this procrastination", and the actual behavior of procrastination, "to nearly always or always put off... tasks" (Rothblum, Solomon, & Murakami, 1986, p. 387). In this study, it was also intended that academic procrastination would be measured by the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged children from the Procrastination Assessment Scale - Students (PASS, Solomon & Rothblum, 1984). After an examination of the results, the overall scale was separated into two subscales, the Junior Procrastination Assessment Scale-Behavior (JPASB), and the Junior Procrastination Assessment Scale-Feelings (JPASF). Under this examination, there appeared the aforementioned two discrete aspects of procrastination. It was then decided that the overall scale would be divided into two distinct subscales. This division had not previously been effected by Solomon and Rothblum (1984), or Rothblum, Solomon, and Murakami (1986). The Junior Procrastination Assessment Scale-Behavior (JPASB) measured the activity of procrastination, and the Junior Procrastination Assessment Scale-Feeling (JPASF) measured the affect of procrastination. These two subscales, with significantly increased internal consistency, proved to be more efficacious in discerning the procrastination patterns of this sample of middle-school aged students.

Affect and Procrastination

The results showed that the students (7%) who acknowledged that they engaged in the actual activity of delay were the ones whose test results indicated that they experienced the concomitant anxiety and depression that resulted from or preceded their procrastination behavior. Consequently, students who reported both anxiety and depression were more likely to admit to actively procrastinating than were students who admitted to only worrying about it. Those students (24%) who acknowledged their worry about procrastination, did admit to some anxiety, but they also indicated that they did not engage in delay, they simply fretted about the prospect of procrastination. Because this study was correlational, it is not possible to conclude whether anxiety and depression led to procrastination or whether procrastination resulted from anxiety and depression. This relationship may be cyclical as Ellis and Knaus (1977) have postulated.

The reasons for Procrastination

Task aversiveness, self consciousness, and fear of failure, in this order, emerged as the three main determinants found for procrastination by this middle-school aged population. In this study, task aversiveness (30.8%) was the primary factor, and accounted for most of the variance, while self consciousness (7.8%) and fear of failure (5.8%) were the two secondary factors.

There were also significant age differences among this sample of middle-school students with respect to task aversiveness. More thirteen and fourteen year old students selected task aversiveness as a reason for their procrastination than did ten and eleven year old students; and more twelve year old students selected task aversiveness as a reason for their procrastination than did ten and eleven year old students. There was no significant age difference between the twelve year old students and the thirteen and fourteen year old students. The

other two factors evidenced no significant age differences. The age differences in the task aversiveness factor may reflect the early adolescents'(the thirteen and fourteen year old students) greater ease in exercising their increasing independence and autonomy. The preadolescents(ten and eleven year old students) may still be responding compliantly to the authority of their parents and parents' surrogates. In this middle school aged group, fear of failure was not as salient as it was in college aged students (Solomon and Rothblum, 1984). Middle-school aged students may not experience the connection between "if I fail I may not get a job or succeed." For this age group, task aversiveness encompassed and explained more of their developmental stage: opposition---"If I don't like to do it, I won't," low frustration tolerance, inchoate impulse control, and a burgeoning sense of autonomy. These findings are reversed when compared to the findings of Rothblum and Solomon's 1984 study. They found that the primary reasons for procrastination among older students was fear of failure which accounted for 49.4% of the variance, and task aversiveness which accounted for 18% of the variance in their study. Developmentally then, younger students are more likely to procrastinate because of negative reactions to the task itself and only secondarily because they fear not succeeding with it. When these students are older and in college they may be more willing to engage in tasks which are challenging, but they may be simultaneously less willing to risk failure.

Personality Correlates of Procrastination

In this middle-school population, there were no distinctive personality types which were associated with procrastination as measured by the Junior Procrastination Assessment Scale, the Junior Procrastination Assessment Scale-Feelings, the Junior Procrastination Assessment Scale-Behavior, and the Eysenck

Personality Questionnaire-Junior. Eysenck's three personality factors evidenced some small statistical significance, but were of no practical importance. The correlations were small, accounted for little of the variance, and had very little predictive or explanatory power. Thus, there was no definitive personality relationship between procrastination and middle-school aged students as found in college students (McCown, Petzel, & Rupert (1987) and McCown, Johnson & Petzel 1989). This finding may reflect the nature of preadolescence and early adolescence with its still developing and malleable personality.

Frequency of Procrastination

To determine the frequency of academic procrastination in the middle-school population, responses to the Junior Procrastination Assessment Scale (JPAS), the Junior Procrastination Assessment Scale-Behavior (JPASB), and the Junior Procrastination Assessment Scale-Feelings (JPASF) were examined.

Hill, Hill, Chabot, and Barrall (1978) found that 27% of their college age student sample reported that they frequently or usually procrastinated, McCown, Petzel, and Rupert (1987) also found that chronic procrastination on academic tasks affected about 25% of all college students, while results from a study by Solomon and Rothblum (1984) indicated that 46% of their college student sample reported nearly always or always procrastinating on an assigned paper. Rothblum, Solomon, and Murakami (1986) found that more than 40% of their student sample reported a high levels of procrastination, and Ellis and Knaus (1977), from their clinical experiences, estimated that 95% of all college students procrastinated.

This study found a much smaller (3%), but yet significant level of reported procrastination on the overall Junior Procrastination Assessment Scale. The subscales, the Junior Procrastination Assessment-Feelings and the Junior

Procrastination Assessment Scale-Behavior, however, revealed that these middle school aged children indicated that they worried three times more about procrastination (24%) than actually engaged in it (7%). Middle-school aged students acknowledged that they delayed studying for tests (23%) writing a paper and doing a project (15%), with the least amount of students admitting to delay on homework assignments (10.5%). The largest amount of students acknowledged that they delayed (34%) doing their chores.

Middle-school aged students also indicated that they worried about delaying their studying for their tests (36%), writing a paper or doing a project (35.6%), and over a quarter of the middle school aged children worried about putting off their homework (28.3%). They seldom admitted worrying about putting off doing their chores, but they were three times as likely to indicate that they procrastinated (actively engaged in delay) with chores than they worried about them. This may be due to the lack of parental demand and expectation on these students for their chores as compared to academic work, or at least to the social acceptability of resistance to chores as opposed to academic work.

Middle school aged students' academic performance may also be influenced by lower levels of procrastination (McKean, 1990). When the item "sometimes delay or put off" was added to the definition of overall academic procrastination (score of 9 to 15 on the JPASB and JPASF, or 18 to 30 on the JPAS), 95 (33%) students as measured by the Junior Procrastination Assessment Scale-Behavior (JPASB), 150 (52%) students as measured by the Junior Procrastination Assessment Scale-Feelings (JPASF), and 123 (43%) students as measured by the total Junior Procrastination Assessment Scale (JPAS) scored at positive levels of procrastination. This is in contrast to 19 (7%) students as measured by the Junior Procrastination Assessment Scale-Behavior (JPASB), 68 (24%) students as measured by the Junior Procrastination Assessment Scale-

Feelings (JPAS), and 9 (3%) students as measured by the total Junior Procrastination Assessment Scale (JPAS) when the "nearly always" or "always" criteria for scoring at positive levels of procrastination is employed. Therefore, at the "sometimes delay or put off" level, a more frequent rate of procrastination, a rate that more closely resembles the rate found in college aged students (Hill, Hill, Chabot, & Barrall, 1978; McCown, Petzel, & Rupert, 1987; Solomon & Rothblum, 1984; and Rothblum, Solomon, & Murakami, 1986), is acknowledged by this sample of middle-school aged students.

Analysis of the Frequency of Reasons for Procrastination

A significant percentage of students indicated that the task aversiveness and the self conscious factors were the primary reasons for their procrastination, while a small group of students indicated that the fear of failure factor was the major reason for their procrastination. A significant share of students also indicated that the rebellion against control factor was their primary reason for procrastination. Eleven percent to 31% of the sample chose task aversiveness statements, and 11% to 32% of the sample chose fear of failure statements, while only 11% to 17% of the sample chose statements from the self conscious factor. A large number of students also selected statements that indicated the rebellion against control factor, for example, "You disliked having to do things assigned by others" (20.9%), "You disliked people setting deadlines for you" (25.9%), and "You really disliked doing projects/writing papers" (30.8%). Task aversiveness, self-consciousness and fear of failure all correlated significantly with anxiety and depression, but only the fear of failure factor correlated with both the Junior Procrastination Assessment Scale-Behavior and the Junior Procrastination Assessment Scale-Feelings. The self-conscious factor correlated with the Junior Procrastination Assessment Scale-Feelings, and the task

aversiveness factor correlated with the Junior Procrastination Assessment Scale-Behavior. The fear of failure was the only factor which played a major part in procrastination as measured by both scales.

Consequently, middle-school aged children did not attribute procrastination to one source. Students indicated that they procrastinated for different reasons, and they were able to differentiate those reasons. Middle school students who procrastinated because of task aversiveness were most likely the students who indicated that they engaged in actual delay, and were most likely early adolescents (thirteen and fourteen years old). The students who scored high on the self-consciousness factor were most likely the students who admitted to worrying about delay, but reported that they did not engage in it. The students who attributed procrastination to fear of failure were most likely the students who admitted engaging in both the affect-- "the worry," and the activity--"the delay" of procrastination. Students from all three groups paid a toll as evidenced by their significant scores on the anxiety and depression scales.

The above results are similar to the findings of the study, "Academic Procrastination: Frequency and Cognitive--Behavioral Correlates," conducted by Solomon and Rothblum in 1984. Solomon and Rothblum also found that task aversiveness and fear of failure correlated significantly with depression and anxiety. In their 1984 study, task aversiveness correlated significantly with depression ($\underline{r} = .36$, $\underline{p} < .0015$), but did not correlate significantly with anxiety, while the fear of failure factor correlated significantly with both anxiety ($\underline{r} = .23$, $\underline{p} < .0015$) and depression ($\underline{r} = .41$, $\underline{p} < .0015$). The words of their 1984 study also apply to the results of this study, ".... procrastination is not solely a deficit in study habits or time management, but involves a complex interaction of behavioral, cognitive, and affective components." (Solomon & Rothblum in 1984, p. 509).

Implications of Results

These results indicate that the experience and manifestation of procrastination in middle-school aged children is different from the experience and manifestation of procrastination found in college aged students (Solomon & Rothblum, 1984; Rothblum, Solomon, & Murakami, 1986; and McCown, Petzel, & Rupert, 1987). Although the results of this study establish procrastination as a nettlesome phenomenon for younger students, the results of this study could not establish corresponding personality and prevalence patterns similar to college age students.

With this population, the affect of procrastination appeared more salient than the actual lack of activity. More students in this younger age group, admitted to worrying more about their procrastination behavior than actually engaging in it, and older students in this sample were more likely to engage in the actual delay than the worrying. Students may also have denied their actual procrastination and substituted worrying about it, because of social desirability. "I know I am supposed to be worrying about these things so I better put it down that I do worry about it." As evidenced in the reversal of the trend for the exploratory question "doing your household chores", there was less perceived social consequences for chores so the worry was not as great, and the activity of delay was substantial.

Whether students were under-reporting the behavior they engaged in, or whether they were over-reporting how worried they felt about any tendency to procrastinate, or whether it was a little bit of both, cannot be answered by this study. What has emerged from the results of this study, is the realization that procrastination does occur as a recognizable issue during the middle school years; that preadolescents and early adolescents in the 6th 7th, and 8th grades

will acknowledge procrastination behavior and concerns;and that some of these students manifest patterns of worry and anxiety that is reflected in their responses to questions about managing academic tasks and home chores. It was also found among those who admitted procrastination, that task aversiveness was the most significant attributed cause. What also has emerged from the results of this study, is the realization that procrastination may be a developmental trait that changes as children grow older due to the increasing demands of academic responsibility, and the concomitant maturing awareness of the consequences from those academic responsibilities, and the increasing emancipation from the control of persons of authority. The previous statement is further supported by the significant age differences found for the oldest students on the task aversiveness factor and the Junior Procrastination Assessment Scale-Behavior.

Limitations of the Study

This study is limited in its generalizability by both the sample and the measures. There was no use of stratified random sampling methods in producing the sample for this study. Subjects were drawn from two middle-schools in a moderate sized community in upstate New York. Consequently, results may not generalize to dissimilar samples of middle school aged children. Though an ample effort was made to use measures that have been demonstrated to be valid, reliable and standard, results obtained from these measures may still not generalize to other credible measures. The use of the Junior Procrastination Assessment Scale (JPAS), adapted for middle school aged children from the Procrastination Assessment Scale - Students (PASS, Solomon & Rothblum, 1984), further limits generalizability to analogous self-reports of procrastination.

The present study's sample was large, but it may have the usual self-selection bias inherent in research using paper and pencil measures. There was

no objective measure of procrastination to corroborate the questionnaire findings of the Junior Assessment Procrastination Scale and its two subscales. No interview or observation of the students to lend credence to the self-reported "affect and activity" of procrastination was possible, nor was it possible to require ratings from their teachers. There was no practical method of comparing the students reports of procrastination with their actual behavior.

The Junior Procrastination Assessment Scale (JPAS) was not as discriminating for this age group as it was intended, nor were its two subscales. One major reason may be the procrastination construct at this stage of life may not be as stable or as developed as it is in later life. Consequently, the questions of the Junior Procrastination Assessment Scale (JPAS) may not have been as salient for this younger population.

Suggestions for Further Research

This study should be replicated with a better designed and much more sensitive version of the Junior Procrastination Assessment Scale, since the significant but small correlations were possibly due to the scale's lack of precision. It would also be interesting to have cross-sectional sample of students ranging from the elementary through high school years. This type of sample could shed more light on the development and age changes in the recognition and experience of procrastination. Interviews of the sample as well as analysis of their actual management of school and home tasks would undoubtedly add further texture and depth to the understanding of the issues under study.

Conclusions

This was a study of middle-school aged students' preadolescent and early adolescent experience of procrastination from a developmental perspective. Two

of the hypotheses were supported, with the third sustained partial support. The findings indicate that procrastination is a known concern of preadolescents and early adolescents, but that its manifestation at these ages differ from that found among college populations.

In middle-school, the affect--" the worry" of procrastination overshadows the activity-- "the delay" of procrastination. And in specific academic tasks, the levels of admitted procrastination are not as substantial as that found among college aged students. The middle school students' worry about procrastination speak to McCown's (1987) notion that a little anxiety or worry about procrastination can serve as an inoculation against procrastination, while too much worry can facilitate procrastination, although no curvilinear relationship was detected in the analyses of middle school aged children. Procrastination in this age group was exhibited in concern and worry, but actual delay was minimized and denied. McCown's (1987) idea of anxiety being either inoculative or facilitative may further presage that the middle school aged students who exhibited greater levels of worry in this study, may be the procrastinators of high school, college, and beyond. There were no gender differences in this sample of 286 predominantly European-American middle-school students, but there were two significant age differences discovered.

Based on the above, and limited by the dimensions of the present study and sample, this researcher offers as tenable the following conclusions:

1. Procrastination does exist in the preadolescent and early adolescent middle-school aged population.
2. There are two distinct aspects of procrastination within this population, "the affect and the activity."
3. Task aversiveness is the primary reason for procrastination in this age group.

4. The "activity" of procrastination increases with age.
5. There is no distinctive personality factor associated with procrastination for this age group.
6. Procrastination is experienced and manifested differently for middle school aged students than for college aged students.

The findings of this study continue to support the notion of procrastination's complexity (Rothblum & Solomon, 1984) and its multidimensionality (Lay, 1986, & 1987; Solomon & Rothblum, 1984; Rothblum, Solomon, & Murakami, 1986; Beswick, Solomon, & Mann, 1988; Solomon & Rothblum, 1988; McCown, Petzel, & Rupert, 1987; and McCown, Johnson, & Petzel, 1989).

APPENDIX A

Changes Made to The Procrastination Assessment Scale-Students

APPENDIX B. The Junior Procrastination Assessment Scale

APPENDIX C. Consent Form

Dissertation Study Consent Form

Dear Parent,

Your informed consent is being requested to allow your child to participate in a study on student's attitudes when approaching a task. Your child will be asked to complete four questionnaires during one of their classroom periods. Your child's name will not appear on any of the questionnaires. They will only be asked to give the answers that best describe them. Upon completion of the questionnaires, they will be told the reasons for the study. Your child's participation in this study will lead to a better understanding of the development of student's attitudes as they approach their school work.

I understand the following procedure will be followed:

The study will be conducted in a classroom in my child's school and will concern student's attitudes towards task accomplishment.

The study will consist of my child anonymously filling out four questionnaires.

The study will take no longer than 40 minutes (1 class period).

I understand that a copy of the results of this study will be made available to me upon request.

I understand that my child's participation in this dissertation study is entirely voluntary.

I understand that this study will not intentionally expose my child to harm, undue stress, or physical or psychological discomfort, and will not affect my child's standing in his/her class.

I understand that if I choose to allow my child to be part of this study, questionnaires on personality and emotions will be part of this study.

My signature to this statement of Consent confirms my permission for my child's participation in this Dissertation study.

_____ _____

Signature of Parent Date

Thanking you in anticipation.

Dave R. Rawlins
Doctoral Candidate

APPENDIX D. Directions and Face Sheet

DIRECTIONS TO ASSISTANTS:

HERE IS A PACKAGE OF FOUR QUESTIONNAIRES. THESE QUESTIONNAIRES HAVE SELF-EXPLANATORY INSTRUCTIONS, AND WILL REQUIRE ONLY 40 MINUTES TO COMPLETE. EACH PACKAGE HAS A FACE SHEET. PLEASE READ THE FOLLOWING PARAGRAPH THAT APPEARS ON THE STUDENTS' FACE SHEET ALOUD TO THE STUDENTS TO FURTHER CLARIFY WHAT IS EXPECTED AFTER PASSING OUT THE QUESTIONNAIRES.

"YOU ARE BEING ASKED TO HELP IN A RESEARCH STUDY BY A GRADUATE STUDENT IN PSYCHOLOGY WHO IS INTERESTED IN YOUR HONEST ANSWERS TO THE FOLLOWING QUESTIONS. COMPLETE THESE FOUR QUESTIONNAIRES AS BEST AS YOU CAN AND LEAVE NO ANSWERS BLANK. THERE ARE NO "TRICK" QUESTIONS, OR "RIGHT" OR "WRONG" ANSWERS. CHOOSE THE ANSWERS THAT BEST DESCRIBE YOU. YOUR ANSWERS TO THESE QUESTIONS WILL IN NO WAY AFFECT YOUR GRADE IN CLASS. DO NOT PUT YOUR NAME ON ANY QUESTIONNAIRE BECAUSE ALL QUESTIONNAIRES ARE NUMBERED SO YOUR NAME WILL NOT BE KNOWN. THESE QUESTIONNAIRES WILL BE SEEN ONLY BY THE RESEARCHER. REMEMBER TO ANSWER ALL THE QUESTIONS."

AFTER YOU HAVE COLLECTED ALL THE QUESTIONNAIRES AND CHECKED FOR COMPLETENESS, LET THE STUDENTS KNOW THAT THEY WILL BE TOLD MORE ABOUT THE STUDY AT TOMORROW'S STUDY HALL BY THEIR TEACHER.

FACE SHEET

DIRECTIONS FOR STUDENTS:

YOU ARE BEING ASKED TO HELP IN A RESEARCH STUDY BY A GRADUATE STUDENT IN PSYCHOLOGY WHO IS INTERESTED IN YOUR HONEST ANSWERS TO THE FOLLOWING QUESTIONS. COMPLETE THESE FOUR QUESTIONNAIRES AS BEST AS YOU CAN AND LEAVE NO ANSWERS BLANK. THERE ARE NO "TRICK" QUESTIONS, OR "RIGHT" OR "WRONG" ANSWERS. CHOOSE THE ANSWERS THAT BEST DESCRIBE YOU. YOUR ANSWERS TO THESE QUESTIONS WILL IN NO WAY AFFECT YOUR GRADE IN CLASS. DO NOT PUT YOUR NAME ON ANY QUESTIONNAIRES. ALL QUESTIONNAIRES ARE NUMBERED SO YOUR NAME WILL NOT BE KNOWN. THESE QUESTIONNAIRES WILL BE SEEN ONLY BY THE RESEARCHER. REMEMBER TO ANSWER ALL THE QUESTIONS.

1. GENDER: BOY____. GIRL____

2. AGE:___

3. GRADE:___

4. RACE: BLACK____ WHITE____ ASIAN____, LATINO___ ,

NATIVE AMERICAN____, OTHER___

APPENDIX E.

The Children's Depression Inventory - Short Form

APPENDIX F.

The State-Trait Anxiety Inventory for Children

APPENDIX G.

The Eysenck Personality Questionnaire - Junior

EPQ

(Junior)

INSTRUCTIONS

Please answer each question by marking an ☒ beside the "YES" or the "NO" following the question. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the questions

PLEASE REMEMBER TO ANSWER EACH QUESTION

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