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AN EXAMINATION OF THE YOUNG SCHEMA MODEL:
PERMISSIVE PARENTING, EARLY MALADAPTIVE
SCHEMAS, AND PROCRASTINATION

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychology:
General-Experimental

by
Wade Lee Kidner

June 2013

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ABSTRACT

The purpose of the present study was to test specific hypotheses based on the Young Schema Model (YSM). In this model, poor parenting and traumatic events early in life result in the formation of cognitive schemas that, in turn, result in maladaptive behaviors in adulthood. The present study tests the specific prediction that permissive parenting will have an indirect effect to increase procrastination by way of the intervening variables of entitlement/grandiosity and insufficient self-control/self-discipline cognitive schemas. Participants were 451 undergraduates (216 male, 228 female; 7 gender undisclosed; 44.3% Hispanic/Latino, 27.5% Caucasian, 7.8% African American, 4.4% Asian American, 11.5% other, 4.4% ethnicity undisclosed) who completed measures of parenting style, cognitive schemas, and procrastination. Study hypotheses were tested using structural equation modeling. Consistent with study hypotheses, permissive parenting significantly predicted both entitlement/grandiosity and insufficient self-control/self-discipline schemas, and had an indirect effect on procrastination. Likewise, insufficient self-control/self-discipline was a strong predictor of procrastination, but the predicted relationship between

entitlement/grandiosity and procrastination was not witnessed. The current study provides support for the YSM that cognitive schemas play an important role mediating the relationship between events of early childhood and later maladaptive behavior. This has important implications for the development of clinical interventions that might need to treat both the cognitive processes and the underlying developmental issues that support these cognitive vulnerabilities.

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TABLE OF CONTENTS

ABSTRACT iii

ACKNOWLEDGEMENTS v

CHAPTER ONE: YOUNG SCHEMA MODEL

 Introduction 1

 Schema Domains 4

CHAPTER TWO: LITERATURE REVIEW

 Procrastination. 10

 Early Maladaptive Schemas 19

 Early Maladaptive Schemas and
 Procrastination 28

 Parenting Styles 35

 Parenting Styles and Early Maladaptive
 Schemas 36

 Parenting Styles and Procrastination. 40

 Purpose 43

 Hypotheses 43

CHAPTER THREE: METHODOLOGY

 Participants 45

 Materials 46

 Demographic Form 46

 Parental Authority Questionnaire 46

 Young Schema Questionnaire-Short Form 48

 Tuckman Procrastination Scale 50

Procedure	51
Design and Analysis	52
CHAPTER FOUR: RESULTS	
Data Screening and Initial Analysis	53
Structural Equation Model	58
Measurement Models	58
Model Predictions	58
Model Assessment	59
Hypothesized Effects	60
CHAPTER FIVE: DISCUSSION	63
APPENDIX A: TABLES	75
APPENDIX B: FIGURES	78
APPENDIX C: INFORMED CONSENT FORM	81
APPENDIX D: IRB APPROVAL LETTER	83
REFERENCES	85

CHAPTER ONE
YOUNG SCHEMA MODEL

Introduction

Numerous models and treatment methodologies have been developed to describe and alleviate psychological disorders. Among them, cognitive behavioral therapy (CBT) has distinguished itself through a strong, empirically-supported record of treatment efficacy (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012). For example, in a review of meta-analytic studies, Hofmann et al. (2012) found that, of 11 meta-analyses comparing CBT to alternative treatments and control groups, 7 found that CBT had a better response rate than the comparison treatments. Furthermore, only 1 of the 11 meta-analyses, a study by Leichensring and Leibing (2003), found a lower response rate for CBT than the comparison treatment. Interestingly, Leichensring and Leibing (2003) specifically addressed efficacy in the treatment of personality disorders and found that psychodynamic therapy was more effective in treating personality disorders than CBT. It was in response to this perceived weakness of traditional CBT, a conclusion arrived at by Young and colleagues through clinical experience,

that the Young Schema Model (YSM; Young, 1990) was developed. The YSM was developed specifically for the purpose of conceptualizing cases of treatment-resistant individuals with personality disorders, general characterological issues, and comorbid Axis I disorders, and to generate concomitant treatment interventions (Young, Klosko, & Weishaar, 2003).

The YSM (Young, 1990) was designed to identify and explain the underlying processes at work in those cases that do not respond to CBT. It proposes that treatment resistance is the result of the action of *early maladaptive schemas* (EMS; Young et al., 2003), which are systems of memories, thoughts, feelings, and physical sensations that constitute basic beliefs about oneself, others, the world, and the relationships among them. EMS are thought to generally form during early childhood as a result of *toxic parenting*, which is poor parenting and family environments (e.g., abusive, neglectful, over-permissive, cold, and lonely families) that fail to meet core developmental needs, and from traumatic events (e.g., death, or serious injury or illness). Though formed during early childhood, at which time they are believed to represent a relatively accurate view of reality for the child, EMS persist into

adulthood when they may no longer be accurate and constitute a cognitive vulnerability through distorted interpretations of reality and result in maladaptive behaviors (Young et al., 2003).

Young (1990) originally advanced 18 EMS, 15 of which were measured with adequate reliability to be included in the Young Schema Questionnaire - Short Form (YSQ-SF; Young, 1998). The 18 EMS, with items from the YSQ-SF provided for descriptive purposes where possible, are as follows:

abandonment/instability ("I find myself clinging to people I'm close to, because I'm afraid they'll leave me.");

mistrust/abuse ("I feel that I cannot let my guard down in the presence of other people, or else they will

intentionally hurt me."); *emotional deprivation* ("Most of the time, I haven't had someone to nurture me, share

him/herself with me, or care deeply about everything that happens to me."); *defectiveness/shame* ("No man/woman could

love me once he/she saw my defects."); *social*

isolation/alienation ("I'm fundamentally different from other people."); *dependence/incompetence* ("I do not feel

capable of getting by on my own in everyday life.");

vulnerability to harm or illness ("I can't seem to escape the feeling that something bad is about to happen.");

enmeshment/undeveloped self ("It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty."); *failure* ("Almost nothing I do at work (or school) is as good as other people can do."); *entitlement/grandiosity* ("I have a lot of trouble accepting 'no' for an answer when I want something from other people."); *insufficient self-control/self-discipline* ("I can't seem to discipline myself to complete routine or boring tasks."); *subjugation* ("I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way."); *self-sacrifice* ("I'm so busy doing for the people that I care about, that I have little time for myself."); *approval-seeking/recognition-seeking, negativity/pessimism, emotional inhibition* ("I am too self-conscious to show positive feelings to others (e.g., affection, showing I care)."); *unrelenting standards/hypercriticalness* ("I try to do my best; I can't settle for 'good enough.'") and *punitiveness*.

Schema Domains

EMS are organized into five higher-order domains which are defined by the development needs which went unmet during childhood and the characteristics of a typical

family from which the EMS are theorized to have developed (Young et al., 2003).

Disconnection and Rejection. The *disconnection and rejection* domain is associated with an unmet need for "secure attachments to others (include[ing] safety, stability, nurturance, and acceptance" (Young et al., 2003, p. 10) stemming from a family that is "detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive" (p. 14). The EMS of abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, and social isolation/alienation fall within the disconnection and rejection domain.

Impaired Autonomy and Performance. The *impaired autonomy and performance* domain is associated with unmet needs to "autonomy, competence, and sense of identity" (Young et al., 2003, p. 10) stemming from a family that is "enmeshed, undermining of [the] child's confidence, overprotective, or failing to reinforce [the] child" (p. 14). The EMS of dependence/incompetence, vulnerability to harm or illness, enmeshment/underdeveloped self, and failure fall within the impaired autonomy and performance domain.

Impaired Limits. The *impaired limits* domain is associated with unmet needs for "realistic limits and self-control" (Young et al., 2003, p. 10) stemming from a family that is "characterized by permissiveness, overindulgence, lack of direction, or a sense of superiority" (p. 15). The EMS of entitlement/grandiosity and insufficient self-control/self-discipline fall within the impaired limits domain.

Other Directedness. The *other-directedness* domain is associated with unmet need for "freedom to express valid needs and emotions" (Young et al., 2003, p. 10) stemming from a family that is "based on conditional acceptance.. [where] children must suppress important aspects of themselves in order to gain love, attention, and approval" (p. 16). The EMS of subjugation, self-sacrifice, and approval-seeking/recognition-seeking fall within the other-directedness domain.

Overvigilance and Inhibition. The *overvigilance and inhibition* domain is associated with an unmet need for "spontaneity and play" (Young et al., 2003, p. 10) stemming from a family that is "grim, demanding, and sometimes punitive" (p. 17). The EMS of negativity/ pessimism, emotional inhibition, unrelenting standards/

hypercriticalness, and punitiveness fall within the overvigilance and inhibition domain.

According to the YSM, when an EMS has developed in an individual, experiences in daily life can activate the EMS, resulting in anxiety and/or fear and consequent maladaptive behavior, or *coping responses*, to deal with their anxiety or fear (Young et al., 2003). For example, an opportunity for a close relationship might produce anxiety or fear by activating a mistrust/abuse schema. While there are innumerable specific coping responses, Young et al. (2003) propose that coping responses fall into three categories, or *coping styles*: *Avoidance*, in which the individual attempts to avoid the threatening situation; *overcompensation*, in which the individual fights against the EMS by acting in a way opposite to the EMS interpretation; and *surrender*, in which the individual neither avoids nor fights back, but accepts the EMS interpretation of the situation as inevitable and acts in a way consistent with that interpretation and endures the resulting negative emotions. For example, with a mistrust/abuse EMS, the individual might avoid close relationships entirely (avoidance), become the abuser in a relationship (overcompensation), or enter into and endure

abusive relationships (surrender). The YSM predicts specific coping responses for each coping style that are typical for each EMS (Young et al., 2003).

Young et al. (2003) explained that the YSM was developed out of clinical experience and for the primary purpose of developing a therapeutic treatment to improve the outcome of those that did not evidence a significant benefit from traditional CBT. The need for empirical research to test the assumptions and relationships represented in the model was both recognized and welcomed (Young et al., 2003). While research examining treatment outcome and the reliability and validity of measures are useful, a true evaluation of the model needs to test specific predictions made by the YSM regarding the relationship between family environment, EMS, and resultant maladaptive coping response. The current study seeks to add to the body of research through a circumscribed test of the YSM model in relation to a typical family environment and associated schemas that could lead to a coping response appropriate to a university undergraduate sample, procrastination. Procrastination is predicted as a coping response particularly characteristic of five EMS in the YSM: as an avoidance coping style to unrelenting

standards/hypercriticalness, dependence/incompetence, failure, and entitlement/grandiosity; and as a surrender coping style for insufficient self-control/self-discipline (Young et al., 2003). From these EMS, the current study will examine entitlement/grandiosity and insufficient self-control/self-discipline because they have been found in previous, unpublished, studies by the researcher to demonstrate adequate variability and because both EMS are part of the same domain in the YSM, impaired limits, and so are predicted to have derived from the same family environment, one characterized by permissiveness (Young et al., 2003). Consequently, the present study will examine that portion of the YSM that predicts that a permissive parenting style will be associated with the development of entitlement/grandiosity and insufficient self-control/self-discipline schemas and a resultant increasing in procrastination as a coping response.

CHAPTER TWO
LITERATURE REVIEW

Procrastination

Procrastination, though easily understood in common speech, has been technically defined and operationalized in a variety of ways in scientific research. Steel (2007), in a meta-analysis of the etiology of procrastination, reviewed definitions of procrastination used in research and synthesized the following definition: "to voluntarily delay an intended course of action despite expecting to be worse off for the delay" (p. 66). Inherent in the definition is a level of irrationality (Steel, 2010). An alternative conceptualization separates procrastination into three subtypes: *avoidance*, *arousal*, and *decisional*. Avoidance procrastination, in which a person delays to avoid anxiety or unpleasantness, and arousal procrastination, in which a person delays in order to experience a heightened state of incentive or performance as a deadline approaches, are subtypes based on motivation (Ferrari, 1992). Decisional procrastination, in contrast, is a type based on the target of the procrastination, which

is a decision rather than some other behavior (Steel, 2010).

The separation of procrastination into three subtypes, however, has been challenged by Steel (2010) who, in a meta-analysis of 156 studies on procrastination did not find support for this division. Steel (2010) concluded that arousal procrastination, as measured by the General Procrastination Scale (Lay, 1986), and avoidant procrastination, as measured by the Adult Inventory of Procrastination (McCown & Johnson, 1989), were too highly correlated (.86 after attenuation to correct for reliability) to be considered distinct constructs. Decisional procrastination, as measured by the Decisional Procrastination Scale (Mann, Burnett, Radford, & Ford, 1997), was considered somewhat more promising as a distinct construct in terms of its correlation with measures purported to assess avoidance (.57) and arousal (.71) procrastination.

In order to confirm the conclusions drawn from meta-analysis, Steel (2010) collected a new sample of 4169 individuals (57.4% female, 42.6% male; mean age = 37.4 years; 78.7% Caucasian, 9.3% Asian, 3.3% Indian, 3.3% Hispanic, 2.7% Black) that completed the Adult Inventory of

Procrastination (McCown & Johnson, 1989), the Decisional Procrastination Scale (Mann et al., 1997), the General Procrastination Scale (Lay, 1986), the Irrational Procrastination Scale (Steel, 2002), the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), and the Susceptibility to Temptation Scale (Steel, 2002). The data was then randomly divided into two data sets, with the first used in an exploratory factor analysis and the second used in confirmatory factor analysis to test the resultant factor solution. An oblique rotation was used since factors were expected to be correlated. Using criteria based on examination of the scree plot and interpretability of the factors, Steel (2010) suggested that a three factor solution did best represented the data, but that the factors were not associated with arousal, avoidant, and decisional procrastination. An examination of the pattern matrix found that items from all three procrastination measures loaded well on the first factor which, apparently before rotation, was found to account for 36% of the variance, which corresponded to a general procrastination factor. The second factor, increasing variance accounted for in the solution by 7%, seemed to be related specifically to running late for appointments, and the

third factor, adding an additional 6% to the variance explained, seemed to be related to doing tasks (e.g., bill paying, RSVPs, etc.) promptly. This factor analysis provided initial evidence that dividing procrastination into subtypes of avoidant, arousal, and decisional is not justified. Subsequent confirmatory factor analysis was used to test both the tripartite (arousal vs. avoidance vs. decisional) model (Ferrari, 1992) and Steel's (2010) model derived from the exploratory factor analysis. While neither model showed a strong fit, per standards indicated by Tabachnick and Fidell (2013), Ferrari's model ($\chi^2(737) = 11889$, CFI = .758, RMSEA = .085) showed a slightly poorer fit than did Steel's (2010) solution ($\chi^2(732) = 11051$, CFI = .776, RMSEA = .082). Information regarding adjustments to the model to improve fit, if any, and details relating to assumptions were not included. In consideration of these findings, the current study follows the single, general procrastination measure model for parsimony and in the absence of sufficient evidence that a more complex model is warranted.

While intending to do one thing, yet doing another, would seem to be counter-intuitive as well as counter-productive, procrastination is a common experience

(Ferrari, Díaz-Morales, O'Callaghan, Díaz, & Argumedo, 2007; Harriott & Ferrari, 1996). Harriott and Ferrari (1996), for example, examined the prevalence of procrastination in a sample of 211 individuals (122 female, 89 male; M age = 47.6 years, SD = 15.8) that attended one of four invited talks on procrastination, each recruiting from a different segment of the populace (viz., general populace through public flyers and advertisements, business people that were part of a professional organization, bank employees, or university managers). For the latter three groups, where the total number of individuals receiving the invitation was known, it was calculated that over 75% chose to take part in the study. Each participant completed a measure for each of the three aspects of procrastination: avoidance, arousal, and indecision. Overall, about 20% of those taking part identified themselves as chronic procrastinators. While participants from the general population scored the strongest for all three procrastination types, Harriot and Ferrari found strong levels of procrastination in all four groups, noting that differences between groups were unclear and could have been an artifact of the differing means of recruitment. While the representativeness of a sample that self-selected to

attend an invited talk on procrastination can well be challenged, the high rate of attendance calculated from the three professional groups where the number of persons receiving an invitation was known partially answers this criticism. This study provides evidence that procrastination is a highly prevalent behavior in diverse social and professional domains.

Ferrari et al. (2007) confirms a high prevalence for procrastination internationally, as well. A sample of 1347 individuals (582 male, 765 female; M age = 40.7, SD = 12.35, range 30 to 65 years) from Australia, Peru, Spain, the United Kingdom, and the United States completed measures of arousal and avoidant procrastination. Overall, 13.5% of men and women across countries were found to be pure arousal procrastinators and 14.6% were pure avoidant procrastinators. The methodology used by Ferrari et al. (2007) to obtain pure procrastination rates for arousal and avoidant procrastination involved regressing each type upon the other and examining the residuals. Given the high correlations found in this study between arousal and avoidant procrastination (ranging from .664 to .754 between countries), the procrastination rates reported by Ferrari et al. (2007) would, in fact, strongly underestimate the

rate of overall procrastination by discounting the covariance between these two purported subtypes. Consequently, the already significant procrastination rates reported by Ferrari et al. (2007) are particularly strong evidence for the high prevalence of procrastination due to the conservative nature of their statistical approach.

Higher rates of procrastination appear to be associated with perception of task difficulty (Ferrari, Mason, & Hammer, 2006). A sample of 120 college students (71 women, 47 men, 2 declining to state; mean age = 20.5 years), most of whom (72%) were underclassmen, were assessed as to their level of general procrastination using the General Procrastination Scale (Lay, 1986). A week later, participants took part in the second part of the study, which was camouflaged as an unrelated study utilizing a descriptive writing task. In this second part of the study, the participants were asked to write for three minutes each about a task that they had delayed and about a task they had not delayed. Each participant was asked to choose both tasks (delayed and non-delayed) from their personal experience and with deadlines from one of three randomly assigned time periods (past, present, or future). After writing about each of the two tasks,

participants filled out a measure in which they rated the task that they had described as to its difficulty, clarity, enjoyableness, the amount of effort that was required, and whether completion of the task would have had a positive result in their life. Ferrari et al. (2006) found that higher procrastination scores predicted a perception of increased task difficulty, required effort, and positive reward for completion, and of decreased clarity and enjoyableness of past-deadline tasks in which the participant had delayed. For present-deadline tasks, however, increased procrastination only predicted perception of decreased enjoyableness of delayed tasks. Unexpectedly, procrastination did not predict these task characteristics for future-deadline tasks or for non-delayed tasks. This suggests that the association between trait procrastination and task perception can be seen only in those cases where procrastination behavior has or is taking place. This suggests a link between beliefs about the task and procrastination behavior. That these beliefs about the task were not found to be associated with tasks with deadlines in the future suggests a lack of awareness, and perhaps a reflective or explanatory nature to the beliefs in order for the person to explain their own

behavior. This can be seen as consistent with the YSM in that the task would not activate an EMS until it was close enough to feel threatening, at which time the EMS could distort and change the perception of the task, resulting in procrastination behavior to cope with the perceived threat.

Procrastination has also been linked to regret in multiple life areas (Ferrari, Barnes, & Steel, 2009). A sample of 2887 adults (1,776 women, 1,111 men; age range 25 to 80 years, $M = 38.63$, $SD = 14.35$, mode = 48) were measured on avoidant procrastination, using the Adult Inventory of Procrastination (McCown & Johnson, 1989), arousal procrastination, using the General Procrastination Scale (Lay, 1986), and a measure of regret in 12 life domains, using the Life Domain Regret Inventory (Roese & Summerville, 2005). Arousal, avoidant, and non-procrastinators were identified and compared on the level of regret in the assessed domains. It was found in the domains of education, family, finance, friends, health, both avoidant and arousal procrastinators, while not differing from each other, expressed more regret than did non-procrastinators. Further, arousal procrastinators expressed more regret than non-procrastinators on community service and leisure time. On parenting interactions,

arousal procrastinators expressed more regret than avoidant procrastinators who, in turn, expressed more regret than non-procrastinators. Overall, these results demonstrate the harmfulness of procrastination, in terms of regret, and accentuate the need to better understand its underlying mechanisms.

Early Maladaptive Schemas

Early maladaptive schemas, as described in the discussion of the Young Schema Model (Young et al., 2003) in the introduction, are an important explanatory model developed to explain maladaptive behavior, including procrastination. As such, research as to the reliability, validity, and usefulness of the concept is critical.

Since the YSM and the measure to assess the EMS postulated by it derive from clinical experience, the first empirical evidence of the existence of EMS comes in the form of psychometric tests of the Young Schema Questionnaire (YSQ; Young, 1990) used to measure them. Schmidt, Joiner, Young, and Telch (1995), for example, gave the YSQ to a sample of 1,129 undergraduates (423 male, 706 female) and subjected their responses to factor analysis using a principle-components analysis (PCA) with an

orthogonal rotation to test whether the factor structure predicted by the YSM would replicate. A factor solution using a subsample of 575 of the participants was derived based on three criteria: Eigenvalues greater than one, an examination of the scree plot, and interpretability of the factors. A 17-factor solution was found that included 15 of the 16 EMS that were proposed by Young (1990) and included in the measure, as well as two unpredicted factors that were more specific than those predicted by Young (1990). These were named *money worries*, which borrowed items from the hypothesized vulnerability to harm schema, and *loss of control fears*, which was made up of items from the emotional inhibition schema (Schmidt et al., 1995). The proposed factor of social undesirability did not emerge at all. The factor solution was cross-validated with the remaining participants, again using PCA and an orthogonal rotation, replicating 13 of the factors. The choice by Schmidt et al. to use PCA and orthogonal rotation, while deliberate and in line with the recommendations of Nunnally (1978), has two drawbacks. As explained by Tabachnick and Fidell (2013), PCA attempts to use all of the variance in the data, rather than the covariance between measured variables. Using the covariance, as is done in factor

analysis, excludes the unique and error variance from consideration as is, therefore, more consistent with the purpose of using questionnaire items to measure a latent construct like an EMS. By using PCA instead, more variance than is legitimately part of the proposed measure is left in the model, generally inflating the estimates. Likewise, Schmidt et al. (1995) chose an orthogonal rotation, which assumes non-correlated factors, in an attempt to maximize the differentiation between the factors and confirm the YSM. Tabachnick and Fidell (2013) recommend an oblique rotation when factors are expected to correlate, as EMS have consistently been found to do, in order to better represent the nature of the data. The orthogonal rotation that was used could also have artificially enhanced the distinction between the factors. Nonetheless, Schmidt et al. provides some supporting evidence for the overall YSM model, though leaving room for additional analysis. Subsequent to the non-clinical PCA, Schmidt et al. conducted another PCA, using the same criteria, with a sample of 187 clinical outpatients (52% female, 91% Caucasian, M age = 36.8, SD = 10.9), with 61% having received a diagnosis of an unspecified Axis I disorder and 55% receiving a diagnosis of an Axis II personality

disorder. The PCA with this clinical sample resulted in a 15 factor solution that matched Young's (1990) proposed model, with the exception of the social undesirability schema. Together, through supporting the reliability of the YSQ, these analyses also provide some support that EMS scales are, at least, measuring some existing constructs.

Schmidt et al. (1995) further supported the YSQ, and therefore indirectly the YSM itself, by testing convergent and discriminant validity. A sample of 181 undergraduates (96 male, 85 female) were given the YSQ, a measure of depression (Beck Depression Inventory; BDI; Beck, Rush, Shaw, & Emery, 1979), a measure of cognitive vulnerability to depression (Dysfunctional Attitudes Scale; DAS; Weissman, 1979), a personality disorders measure (Personality Diagnostic Questionnaire - Revised; PDQ-R; Hyler & Reider, 1987), a measure of positive and negative affect (Positive Affectivity/Negative Affectivity Scale; PANAS; Watson & Clark, 1990), a self-esteem measure (Rosenberg Self-Esteem Questionnaire; SEQ; Rosenberg, 1965), and a measure of psychological symptoms (Symptoms Checklist-90 - Revised; SCL-90-R; Derogatis, 1983). Through correlation and regression analyses, Schmidt et al. (1995) found evidence for construct validity for EMS

overall as they were associated with these related constructs in the ways predicted by the model and for discriminant validity with, for example, separate, and theory consistent, EMS related to depression (dependency and defectiveness) and to anxiety (vulnerability to harm and inferiority/incompetence). This assessment of the validity of the YSQ, in that the relationships found between EMS and psychopathology are theory consistent, also supports the theoretical model from which it was derived.

Welburn, Coristine, Dagg, Pontefract, and Jordan (2002), in establishing the reliability and validity of a shortened measure of EMS, the Young Schema Questionnaire - Short Version (YSQ-SF; Young, 1998), examined the ability of EMS to predict three measures of distress (global severity index, positive symptom total, and positive symptom distress index) and nine symptoms (somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism), as measured by the Brief Symptom Inventory (BSI; Derogatis, 1993). Participants were 196 referrals (65 male, 131 female; age range 18 to 63, M age = 36.9, SD = 9.3) to a day treatment program at a psychiatric hospital over a 2-year period that completed

all measures. Using a principle components analysis factor analysis with and varimax rotation, Welburn et al. (2002) were able to reproduce the 15-factor structure consistent with the EMS predicted by the YSM, with few, and not too severe, cross-loadings and adequate internal reliability scores for the individual factors (.76 to .93). Together, EMS predicted 52% of the variance in anxiety, 62% of the variance in paranoia, and 47% of the variance in depression. In each case, the specific EMS predicting these constructs were consistent with the YSM model. While Welburn et al.'s (2002) analyses are open to the same criticism as those of Schmidt et al. (1995) in their use of PCA and an orthogonal rotation, they still provide support, not only for the adequate psychometric properties for the YSQ, but also for the utility of the EMS construct in predicting psychopathology.

EMS have been found useful in predicting maladaptive behavior beyond establishment of measure validity, as well. Tremblay and Dozois (2009), for example, examined whether EMS predict trait aggression. Participants were 848 first-year undergraduate university students (543 female, 304 male, 1 decline-to-state; age range 16 to 46, M age = 18.5, SD = 2.25; 71.2% White, 9.2% Chinese, 2.7% South Asian,

2.3% Korean, 2.0% Arab-West Asian, 12% multiracial or other). Participants completed instruments measuring 15 EMS (YSQ-SF; Young, 1998), trait aggression with four aggression subscales - *physical aggression, verbal aggression, anger, and hostility* (Aggression Questionnaire; AQ; Buss & Perry, 1992), and depression (Center for Epidemiological Studies - Depression Scale; CES-D; Radloff, 1977). It was found that, after controlling for gender and depression, EMS overall accounted for an additional 25% of the variance in total trait aggression, 18% of the variance in physical aggression, 21% of the variance in verbal aggression, 27% of the variance in hostility, and 13% of the variance in anger. Specifically, Tremblay and Dozois (2009) found that the EMS of mistrust/abuse, entitlement/grandiosity, and insufficient self-control/self-discipline were the strongest predictors of trait aggression, which is consistent with YSM predicted coping styles for these EMS (overcompensation for mistrust/abuse and surrender for entitlement/grandiosity and insufficient self-control/self-discipline). Tremblay and Dozois (2009) provide additional support for the utility of EMS in predicting maladaptive behavior.

In addition to examining EMS as a cognitive vulnerability that predicts psychopathology, some research has tested models in which EMS serve as mediators of the effect of a distal source on psychopathology. For example, Lumley and Harkness (2007) tested a model in which physical and sexual abuse were hypothesized to have an indirect effect on the level of anxious arousal by way of schemas related to danger (viz., mistrust/abuse and vulnerability to harm) and emotional abuse was hypothesized to have an indirect effect on the level of anhedonic depression by way of schemas related to loss and worthlessness (viz., emotional deprivation, dependency/incompetence, defectiveness/shame, failure, and social isolation). To test these hypotheses, 76 adolescents (24 male, 52 female, age range 13 to 19) that qualified for diagnosis of a non-bipolar mood disorder according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) as assessed by diagnostic interview and use of the Schedule for Affective Disorders and Schizophrenia (K-SADS; Kaufman et al., 1997). Participants were rated as to: Depression, using the Beck Depression Inventory - Second Edition (BDI-II; Beck, Steer, & Brown, 1996); anxiety and anhedonia, using the Mood and

Anxiety Symptom Questionnaire (MASQ; Watson & Clark, unpublished); early maladaptive schemas, using the YSQ-SF (Young, 1994); and for childhood abuse and maltreatment, using the Childhood Experience of Care and Abuse (CECA; Bifulco, Brown, & Harris, 1994). Analysis revealed that physical abuse had an indirect effect on the level of anxious arousal by way of the vulnerability to harm EMS and an indirect effect on anhedonic depression by way of emotional deprivation. Emotion deprivation was found to have an indirect effect on anxious arousal through vulnerability to harm and an indirect effect on anhedonic depression through the EMS of self-sacrifice and social isolation. Sexual abuse did not predict anxiety or depression in the current sample. While the results of Lumley and Harkness (2007) departed somewhat from their hypothesized model in terms of the specific EMS that would be involved, where a relationship between childhood maltreatment and later psychological difficulties was observed, the relationship was found to be mediated by EMS. This research, therefore, supports the YSM and suggests that other relationships between negative childhood experiences and later psychological and behavioral

difficulties might also be indirect through EMS, as the YSM predicts.

Early Maladaptive Schemas and Procrastination

While EMS has been shown to be a valuable construct for understanding and predicting psychopathology and maladaptive behavior, the only study that has directly measured both EMS and procrastination is a case study (Flanagan, 1993) that examined the effectiveness of schema-based therapy with a patient experiencing severe, chronic procrastination. The patient in this case, Mr. G, is reported to have struggled with procrastination and indecision throughout his life of such magnitude as to severely impinge upon his life. His diagnosis included no Axis I disorders, but did include an unspecified characterological/personality disorder with obsessive-compulsive, dependent, passive aggressive, and narcissistic features. Prior to beginning therapy based on a cognitive-behavioral approach with attention to identifying and addressing early maladaptive schemas, Mr. G had undergone three years of "intense analytic therapy" (p. 824), some behavioral therapy, another two years of therapy from a psychodynamic approach, and finally a few months of supportive therapy. None of these approaches had provided

relief to Mr. G. In the schema-based approach detailed by Flanagan (1993), after first establishing rapport, explaining the process and responsibilities of patient and therapist, and identifying Mr. G's automatic thoughts, therapy went on to identify the beliefs underlying the automatic thoughts and the early maladaptive schemas underlying those beliefs.

As therapy progressed with Mr. G, EMS were identified and became the key target to facilitate change (Flanagan, 1993). The EMS in this case did not correspond directly to Young's (1990) EMS list as they were identified through dialogue and connecting past and present experience, rather than through a standardized survey, but held to the overall concept of the YSM model. In Mr. G's case, two schemas were identified. First, he believed that he was unlovable, resulting in the belief that he needed to be perfect to gain love. This schema description matches Young et al.'s (2003) description of the defectiveness/shame and unrelenting standards/hypercriticalness EMS. Second, a "helpless child" schema (p. 826) was identified, which matches Young et al.'s (2003) dependence/incompetence EMS. The primary support for a YSM explanation for procrastination from this case study is the effectiveness

of the therapeutic approach based on EMS that succeeded in helping Mr.G where other approaches, including analytic/psychodynamic approaches that delved into his past, had failed. This case study provides indirect support for the YSM model conceptualization of procrastination and highlights the need for additional research examining EMS and procrastination.

While procrastination research utilizing the schema construct is not readily available, procrastination has been linked to traits and conditions that Young et al. (2003) uses in describing EMS. Of particular interest in the present study, are characteristics of the insufficient self-control/self-discipline and entitlement/grandiosity EMS. For example, lack of self-control, the central characteristic of its namesake EMS, is clearly linked with procrastination (Digdon & Howell, 2008). In a study utilizing 308 college students (84 male, 224 female; age range = 17 to 46, $M = 21.5$, $SD = 3.88$), self-control (Self-Control Scale; Tangney, Baumeister, & Boone, 2004), procrastination (TPS; Tuckman, 1991), and whether participants functioned best in the morning or evening (Morningness/Eveningness Questionnaire; MEQ; Horne & Ostberg, 1976) were measured to determine whether

procrastination and self-control could predict morningness vs. eveningness and so provide evidence that there is an association between circadian rhythm and these behavioral deficits. Important for the current study is the strong negative correlation ($-.62$) that was found between self-control and procrastination (Digdon & Howell, 2008). Given this strong correlation, it seems possible that the insufficient self-control/self-discipline EMS would also have an important relationship with procrastination.

Dewitte and Schouwenburg (2002) provide further indirect support for a potential connection between the insufficient self-control/self-discipline EMS and procrastination. Young et al. (2003) includes in the description of this schema that it is characterized by below average tolerance for frustration and resistance to impulse. Dewitte and Schouwenburg (2002) found that procrastination was a result of a poor ability to control impulses and a general vulnerability to the draw of alternate activities, rather than to any lack of motivation. Participants in the study were 147 freshman (130 female, 17 male; age range 17 to 42, $M = 18.6$, $SD = 2.1$) who completed Dutch translations of the following scales: The Urgency, Perseverance, Premeditation, and

Sensation Seeking Scale (UPPS; Whiteside & Lynam, 2001); the General Procrastination Scale (GPS; Lay, 1986); and, the Berkeley Personality Profile (Harary & Donahue, 1994). Supporting the relationship between insufficient self-control/self-discipline and procrastination hypothesized in the current study, procrastination was significantly correlated with *perseveration* (-.72), *premeditation* (-.38), and *urgency* (.39), which are aspects of impulsivity measured by the UPPS. In contrast to the YSM (Young, 1990), however, is the finding that, in a path analysis with the personality variable, *conscientiousness*, placed as a higher order factor predicting these aspects of impulsivity, only *perseveration* remained a significant predictor of procrastination, which would suggest that the insufficient self-control/self-discipline EMS might mediate the effect of personality rather than the childhood experiences predicted by Young (1990).

The proposed relationship between the entitlement/grandiosity EMS (Young et al., 2003) and procrastination can likewise be supported indirectly. Young et al. (2003) proposed that procrastination is enacted as an avoidance coping response to safeguard the individual against challenges to their belief in their own superiority, a

belief itself sometimes taken in overcompensation for an earlier, primary defectiveness/ shame schema. This view of procrastination is consistent with Knaus (1973) who indicated that procrastinators frequently have feelings of grandiosity that they keep from being challenged by over-committing and then blaming their procrastination on their heavy workload.

While little research has been conducted directly connecting grandiosity or narcissism with procrastination, narcissists have been shown to subconsciously avoid stimuli that pose an ego threat (Horvath & Morf, 2009). Horvath and Morf measured 64 participants (33 female, 31 male; age range 17 to 39, median 22 years) as to their level of narcissism, using the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979), self-esteem, using the Rosenberg Scale (RSE; Rosenberg, 1965), and depression, using the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). In a second phase of the experiment at a later date, participants took part in a timed task in which they saw a series of 96 letter-combinations, 48 of which formed a word in English, and 48 of which did not. Of the 48 words displayed, 16 were neutral, 16 were generally negative, and the final 16 were

specifically words having to do with worthlessness. Words and non-words were displayed very briefly (35 ms) with letters displayed immediately before and after presentation to assure that the displayed stimulus was only visible for the requisite amount of time. Participants rated each letter-combination as to whether or not it formed a word. Between words a blank screen was displayed for either 90 ms or 1940 ms, depending on condition. The study hypothesis was confirmed that, those high in narcissism would rate words related to worthlessness faster than would those low in narcissism when the time between stimuli was short, consistent with an activated hypervigilance in reaction to the threatening words, but would rate words related to worthlessness slower than would low narcissism participants when the delay between words was longer, consistent with a repression/avoidance response having been activated. Overall, this study is consistent with the expectation that narcissists will respond with an avoidance strategy under circumstances which threaten their self-image, if unconsciously. Procrastination as well, therefore, might be enacted unconsciously by those high in narcissism, and narcissism like qualities, when their sense of superiority is threatened by a difficult task.

Parenting Styles

Research as to the nature and effects of different forms of parenting is extensive, but two major, complimentary systems dominate the literature, parenting styles (Baumrind, 1971), which describe the manner in which the parents treat the child and present themselves, and attachment (Ainsworth & Bell, 1970), which describe the character of the parent-child relationship and subsequent effect on child behavior and relationships.

From an observation of 146 preschool children and their families, Baumrind (1971) was able to categorize the parenting behavior that she witnessed into three basic parenting styles (*authoritarian, authoritative, and permissive*). Authoritarian parenting is characterized by a high demand for obedience and respect coupled with a low show of warmth and responsiveness. Authoritative parenting demonstrates demandingness and limits, but in the presence of warmth, responsiveness, and mutual respect. And, permissiveness parenting is characterized by low control and few limits from the parents, often in the presence of warmth and responsiveness, but sometimes in its absence and characterized by neglect.

Attachment styles, in contrast, characterize the relationship between caregiver and child as being *securely attached, insecure - anxious/ambivalent, or insecure - avoidant*. These categories were developed after watching the behavior of 56 Caucasian infants (age range 49 to 51 weeks) as their mothers left the child in a room and returned, both with and without a stranger present and interacting with the child. In the series of situations experienced, a securely attached child was one who cried when the mother left and sought comfort from the mother upon her return. An insecure-anxious/ambivalent child cried when the mother left, and wanted contact when she returned, but also pushed her away. An insecure-avoidant child would not cry when the mother left or pay attention to her when she returned.

Parenting Styles and Early Maladaptive Schemas

Parenting styles (Baumrind, 1971) and attachment (Bowlby, 1969; Ainsworth & Bell, 1970) are important concepts for the YSM (Young, 1990) because the descriptions of the families of origin for the five domains postulated by the model use descriptors that are very close to the earlier foundational concepts. Consequently, measures of parenting style and related concepts are able to be used to

model the family environments proposed by the YSM and predict the associated EMS.

Watson, Little, and Biderman, (1992), for example, examined the ability of parenting styles (Baumrind, 1971) to predict narcissism. A sample of 324 undergraduates (125 male, 199 female; mean age 19.6 years) completed measures assessing the development of life objectives and grandiosity (Goal Instability and Grandiosity Scales; Robbins & Patton, 1985), narcissism (Narcissistic Personality Inventory; Raskin & Hall, 1981), parenting styles for each parent (Parental Authority Questionnaire; Buri, 1989), and depression and anxiety (Depression and Anxiety Scales; Costello & Comrey, 1967). Through examination of correlations and by a principle component analysis with all of the items from all of the measures together, Watson et al. concluded that permissive parenting was positively associated with grandiosity; authoritarian parenting was positively associated with goal instability, anxiety, and depression; and authoritative parenting was negatively associated with narcissism. Watson et al. (1992), therefore, supports the hypothesized relationship between permissive parenting and the entitlement/grandiosity EMS derived from the YSM.

Harris and Curtin (2002) also supports the YSM's prediction that parenting experiences will predict EMS, and, further, that EMS mediate the relationship between negative childhood experiences and later psychopathology. A sample of 194 undergraduates (59.8% female, age range = 18-38, mean age = 19.3, *SD* = 2.27) were given measures assessing their perception of parental care and overprotection (Parental Bonding Instrument; PBI; Parker, Tupling, & Brown, 1979), depression (BDI-II, Beck et al., 1995), and the 12 EMS proposed by Young (1990) that were reliably replicated with a non-clinical sample by Schmidt et al. (1995) with an appropriately shortened version of the YSQ (Young, 1990). Harris and Curtin (2002) found that, together, lower parental care and higher amounts of overprotection were associated with increased depression, accounting for 14.4% of the variance. This relationship was found to be partially mediated by the EMS of defectiveness/shame, insufficient self-control, and vulnerability to harm. This is further support for the relationship between parenting and EMS posited by the YSM and for the need to assess EMS as potential mediators between parenting and maladaptive behaviors (Young et al., 2003).

Additional partial support for the YSM proposed relationship between parenting and EMS formation can be found in Sheffield, Waller, Emanuelli, Murray, and Meyer (2005) to establish the psychometric properties of the Young Parenting Inventory - Revised (YPI-R; Young, 1999), which was devised specifically to assess the parenting and family environments proposed in the YSM (Young, 1990) to potentially result in the formation of EMS. A sample of 422 undergraduate and graduate university students (353 female, 68 male, 1 decline to state; age range 18 to 61, $M = 24.5$, $SD = 7.9$) completed the YPI-R and a subset of 160 of those also completed the YSQ-SF (Young, 1998) in order to test the construct validity of the YPI-R. The YPI-R was designed so as to have 17 subscales, each designed to match a specific EMS advanced by the YSM and assess whether the family environment suitable for that EMS to develop was perceived by the test-taker. Initial factor analysis of the YPI resulted in Sheffield et al. reducing the measure to nine factors based on the criteria of Eigenvalues greater than 1, the interpretability of the factors, and item factor loadings greater than .40. Overall, the revised measure obtained adequate reliability and construct validity, though departing from the YSM in some

particulars. Important for the present study, however, is that all EMS, with the exception of self-sacrifice, were predicted by parenting scales, lending general support to this aspect of the YSM.

Parenting Styles and Procrastination

Finally, a small number of studies have examined the relationship between parenting style and procrastination directly. Pychyl, Coplan, and Reid (2002) examined the relationships among gender, maternal and paternal parenting style (PAQ; Buri, 1991), global self-worth (Self-Perception Profile for Adolescents; Harter, 1988), and procrastination (General Procrastination Scale; Lay, 1986). A sample of 105 middle-school and high-school students (60 female, 45 male; age range 13 to 15 years, $M = 13.65$, $SD = 0.73$) participated in the study. Initial examination of gender differences in reports of parenting style found the girls were significantly more likely to report each of their parents as more authoritative than did boys. Of interest to the current study, and in conflict with the predictions of the YSM to be tested, Pychyl et al. found no significant relationship between permissive parenting and procrastination for either maternal or paternal parenting style. With respect to maternal parenting style,

authoritative parenting was found to be a negative predictor of procrastination, and to have no interaction with gender, and authoritarian maternal parenting was not related to procrastination at all. Paternal authoritative parenting also significantly predicted procrastination, but also interacted with participant gender. Breaking this finding down, Pychyl et al. found that paternal authoritative parenting has a negative relationship with procrastination for girls, but was not a significant predictor of procrastination for boys. Paternal authoritarian parenting was found to be a positive predictor of procrastination, with no gender interaction. While Pychyl et al. (2002) demonstrated a relationship between parenting and procrastination, it was not the prediction made by the YSM. In fact, this study undermines confidence in this prediction. However, additional research might reveal an indirect relationship between permissive parenting and procrastination that was not readily visible in Pychyl et al. An examination of the relationship between global self-worth and procrastination found that there was no significant relationship for males, but that there was a significant negative relationship between self-worth and procrastination for females. Pychyl

et al. suggests that both parental and participant gender could be important moderators in any of the parenting to schema relationships, a possibility that is not accounted for in the YSM.

Ferrari and Olivette (1994) also examined the relationship between parental authority and dysfunctional procrastination utilizing a sample of 84 female undergraduates (mean age = 19.1) who were enrolled in a developmental psychology course. Participants completed the Decisional Procrastination Scale (Mann, 1982), the Adult Inventory of Procrastination (McCown & Johnson, 1989), the Anger Expression Scale (Spielberger et al., 1985), and the Parental Authority Questionnaire (Buri, 1991). Paternal authoritarian parenting demonstrated a medium-sized effect in predicting both decisional and avoidant procrastination. No other parenting style by either parent was found to predict procrastination. Overall, Ferrari and Olivette (1994) further emphasize the importance of parenting style, but also suggest that the predictions of the YSM need to be tested and, if necessary, adjusted to account for additional variables of importance.

Purpose

The purpose of the present study was to test the Young Schema Model (Young, 1990) by modeling relationships from toxic parenting and family environment to EMS formation and resultant coping response using variables from the YSM that are appropriate for a university sample. Specifically, the present study sought to test the predicted relationship between permissive parenting, the EMS of insufficient self-control/self-discipline and entitlement/grandiosity, and procrastination.

Hypotheses

The following hypotheses were advanced:

- (1) Permissive parenting would be a positive predictor of the entitlement/grandiosity EMS.
- (2) Permissive parenting would be a positive predictor of the insufficient self-control/self-discipline EMS.
- (3) The entitlement/grandiosity EMS would be a positive predictor of procrastination.
- (4) The insufficient self-control/self-discipline EMS would be a positive predictor of procrastination.
- (5) Permissive parenting would have a significant, positive indirect effect on procrastination

through the insufficient self-control/self-discipline EMS and the entitlement/grandiosity EMS (see Figure 1).

Post hoc analysis was conducted in order to assess whether parent and participant gender are important variables in the proposed model.

CHAPTER THREE

METHODOLOGY

Participants

Participants were 451 undergraduates (216 male, 228 female, 7 gender undisclosed; 44.3% Hispanic/Latino, 27.5% Caucasian, 7.8% African American, 4.4% Asian American, 11.5% other, 4.4% ethnicity undisclosed). Participants were recruited from California State University, San Bernardino through the SONA Experiment Management System, a software system designed to organize participation in academic research studies, as part of a larger study on parenting style, attachment, schemas, and procrastination. Participation was voluntary and participants were free to withdraw at any time or decline to answer any question. No additional incentive was given beyond the extra credit in psychology courses that was granted for the original study. An approximate gender balance was obtained for this sample through selective recruiting by gender. Specifically, the gender balance of the sample was monitored throughout an initial period of open recruitment. Once enough participants from one gender, in this case female, had taken part in the study to constitute half of the desired

sample size, only participants of the opposite gender, in this case male, were recruited.

Materials

Demographic Form

A researcher-created survey that asked for information as to participant age, gender, ethnicity, whether the participant was currently receiving treatment for a depressive disorder (a variable not used in the present study which was collected for possible use in the larger model for which the data was originally collected), and a self-report of whether participants had provided responses which, at the time of answering the questions, were their best effort to respond accurately.

Parental Authority Questionnaire (PAQ; Buri, 1991)

The PAQ is a 30-item questionnaire that measures parenting style through participant ratings of statements on a 5-point Likert-style scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Following Baumrind's (1971) conceptualization of parental authority, the PAQ assesses the following three parenting styles with 10 statements each: *Authoritarian* (e.g., *Even if her children didn't*

agree with her, my mother felt that it was for our own good if we were forced to conform to what she thought was right), authoritative (e.g., As I was growing up, once family policy had been established, my mother discussed the reasoning behind the policy with the children of the family), and permissive (e.g., While I was growing up, my mother felt that in a well-run home the children should have their way in the family as often as the parents do). Two versions of this questionnaire will be utilized, one to assess the mother's parenting style and one to assess the father's parenting style, which vary only in terms of gendered words (e.g., mother, father, he, she, etc.).

Test-retest reliability (.77 to .92) and internal reliability (Cronbach alpha .74 to .87) for the PAQ have been found to be adequate for the six combinations of parental authority style (permissive x authoritative x authoritarian) by parent gender (mother x father) (Buri, 1991). Discriminant validity of the measure was evaluated through correlating individual scale scores with one another for each parent (Buri, 1991). Correlations were found to support the theorized relationships, with authoritarianism negatively correlated with both permissiveness (-.38 and -.52) and authoritativeness (-.48

and $-.52$) for mother and father respectively.

Permissiveness and authoritative parenting styles were found to not be significantly correlated ($.07$ and $.12$). This is also consistent with theory and, therefore, supports discriminant validity for these three constructs. Criterion validity for the PAQ was assessed by comparing the correlation between each of the three parenting styles and a measure of parental nurturance, the Parental Nurturance Scale (Buri, Misukanis, & Mueller, 1988), to the expected theoretical relationship. Criterion validity was supported by theoretically consistent relationships for both mothers and fathers between nurturance and authoritarian ($-.36$ and $-.53$), permissiveness ($.04$ and $.13$), and authoritativeness ($.56$ and $.86$). Finally, Buri (1991) found that the PAQ is sufficiently resistant to response bias, as evidenced by non-significant correlations ($-.14$ to $.23$) between each PAQ scale and the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960).

Young Schema Questionnaire - Short Form
YSQ-SF; Young, 1998)

The 75-item YSQ-SF was developed as a shorter version of the 205-item, long version, of the Young Schema Questionnaire (YSQ-LF; Young & Brown, 1990). The YSQ-SF

measures 15 of the EMS from the YSQ-LF utilizing the five items for each EMS that loaded most strongly in factor analysis in the original instrument (Schmidt et al., 1995). One EMS that was included in the YSQ-LF, *negativity/pessimism*, was excluded from the YSQ-SF because it failed to replicate in factor analysis (Schmidt et al., 1995), as were two other EMS originally advanced in the YSM (Young, 1990) that had not been included in the YSQ-LF (*viz.*, *approval seeking* and *punitiveness*). Each EMS scale in the YSQ-SF is assessed by participant self-ratings of five statements on a 6-point Likert-style scale from 1 (*completely untrue of me*) to 6 (*describes me perfectly*). Scoring of this measure has been conducted in two different ways. While the scoring method recommended by Young et al. (2003) and Schmidt et al. (1995) consists of scoring any item rated 5 or 6 as a 1, or hit, and any item rated at 4 or below as a 0, or miss, the present study follows research literature that maintains the 6-point scale (e.g., Calvete, Estevez, de Arroyabe, & Ruiz, 2005; Thimm, 2010, 2011; Tremblay & Dozois, 2009) to take advantage of the full range of variability present in the data. This method seems particularly appropriate for the instrument's use with a non-clinical sample in which a dichotomy between

might be an issue of clinical import (5 or 6) and unlikely to be clinically significant (1-4) is not as important as assessing the construct as a continuous variable.

Consequently, scores on individual EMS items were summed to produce scales ranging from 5 to 30, with a higher score indicating that the EMS more accurately reflects the individual's worldview. Domain level scores can also be calculated from this measure by summing the scores for the EMS that constitute each, but are not of interest in the present study.

The SQ-SF demonstrates strong internal reliability with Cronbach alpha coefficients for subscales ranging from .76 to .93 (Welburn et al., 2002). Additionally, a factor structure for the SQ-SF was found that is similar to the 205-item measure and consonant with the EMS model, demonstrating congruent validity (Lee, Taylor & Dunn, 1999). Construct validity for the SQ-SF has been supported by high correlations with established measures of depression and anxiety (Calvete et al., 2005; Glaser, Campbell, Calhoun, Bates, & Petrocelli, 2002).

Tuckman Procrastination Scale (TPS; Tuckman, 1991)

The TPS is a 35-item measure assessing procrastination through participant rating of statements on a 4-point

Likert-style scale from 1 (*That's me for sure*) to 4 (*That's not me for sure*). Ratings of individual items are summed, after reverse-scoring of 10 items, to produce a procrastination score from 35 to 140, with low scores indicating a greater tendency to procrastinate. Internal reliability of the TPS has been found to be adequate with a Cronbach alpha of .90 (Tuckman, 1991). Concurrent validity was assessed through correlations between the TPS and self-efficacy (-.47) through the General Self-Efficacy Test (Scherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982) and a measure of self-regulated performance (-.54), the Voluntary Homework System (Tuckman, 1990), and found to be adequate (Tuckman, 1991).

Procedure

Consent form, questionnaires, and debriefing form were distributed online through Qualtrics survey software (Qualtrics Labs Inc., 2013). After first giving consent, questionnaires were presented in random order, with two exceptions. First, mother and father versions of the PAQ were presented consecutively, but in random order relative to one another. And, second, the demographic questionnaire was presented last in order to assure that no order effect

would occur due to priming of age, gender, ethnicity, etc. Upon completion of the study, a debriefing form was presented. A print option was made available for both the consent and debriefing forms.

Design and Analysis

The current study utilized a correlational design. Study hypotheses were examined by modeling four latent constructs (permissive parenting, entitlement/grandiosity schema (SQET), insufficient self-control/self-discipline schema (SQIS), and procrastination) in a structural equation model, with model fit assessed using Satorra-Bentler chi-square, confirmatory fit index (CFI), and root mean square error of approximation (RMSEA). Adjustments to the proposed model to increase the goodness-of-fit were assessed through the Wald test, the Lagrange Multiplier test, and assessment of the meaningfulness of the proposed associations.

CHAPTER FOUR

RESULTS

Data screening and Initial Analysis

As a first level of data cleaning, the final question in the study asked participants to confirm through an open-ended, typed response that, at the time that questions were answered, they had intended to provide an answer that accurately represented an honest response to the questions. This screening was undertaken in recognition that many participants might have completed the study for extra credit, but might not have taken the study itself seriously. This question assured the participant that their response would be handled confidentially and would be used solely for the purposes of ensuring the integrity of the data that would be analyzed. Any form of positive affirmation of the data provided resulted in retention of the data at this point, while negative responses, declining to respond, or skipping the question resulted in the data being excluded from further analysis. Overall, this criterion resulted in the exclusion of 85 participants, bringing the sample size from 536 to 451. Demographic information for the full 536 participants was not provided

as the demographic information could not be trusted to be accurate.

Data from the 451 participants that remained in the dataset was subjected to a missing value analysis using SPSS's MVA function. Individual questions from the maternal and paternal versions of the PAQ permissive parenting scale and the entitlement/grandiosity and insufficient self-control/ self-discipline schemas were entered into the MVA, with the scale score for the Tuckman Procrastination Scale entered as the DV. The only questions missing more than 5% of the data were from the paternal PAQ permissive parenting scale, and all 10 questions from that scale were missing more than 5%. The high rate of missing data for these questions was due to 35 participants that did not complete the paternal version of the PAQ at all. If these cases were not considered, all variables would have had lower than 5% missing values and further analysis would have been unnecessary (Tabachnik & Fidell, 2013). Any MVA which included these cases was conducted, nonetheless, and patterns of missing data were analyzed using Little's MCAR test. The missing data was found to be missing at random (MAR). While there were differences between those that answered and did not answer

the analyzed questions, $\chi^2(1502, N = 451) = 1654.13, p = .003$, these differences were not found to be related to the DV, procrastination. Cases with missing values could therefore be deleted list-wise, or have their missing values replaced without fear of introducing bias to into the analysis due related to the pattern of missing data (Tabachnick & Fidell, 2013).

Participants with missing values for 20% or less of the items on each scale had the missing values replaced with the individual mean for the scale in which the missing value occurred for purposes of calculating scale scores. This method takes advantage of the available knowledge concerning the participant, and has been found to be an accurate method for replacing missing values (Shrive, Stuart, Quan, & Ghali, 2006). Participants with missing values on more than 20% of the items for any scale were not included in subsequent analysis.

Data was also screened based on a completion time criteria. Participants taking less than 20 minutes to complete the study were excluded from analysis as not having taken enough time to read and respond to the questions accurately. As the median completion time for the study was 47.7 minutes, a standard at less than half of

this time was considered conservative. An additional 14 cases (3.1%) were excluded based on completion time, resulting in a sample size of 437. No data was excluded based on participants having taken too long to complete the study.

Prior to analysis as latent constructs in an SEM model, maternal and paternal permissive parenting, entitlement/grandiosity and insufficient self-control/self-discipline schemas, and procrastination were scored normally as indicated by their respective measures. Reliability of the questionnaire measures was assessed using the Cronbach's alpha criteria and found to be adequate, ranging from .748 to .918. Independent samples *t*-tests were conducted comparing scores on each measure by gender. No significant difference between male and female scores on maternal permissiveness, $t(424) = -.22, p = .830$, or paternal permissiveness, $t(398) = 1.69, p = .091$, were found. There was a significant difference in scores, however, on the EMS of entitlement/grandiosity, $t(429) = 2.27, p = .023$, and insufficient self-control/self-discipline $t(429) = 3.68, p < .001$, and on procrastination, $t(430) = -3.16, p = .002$. Males scored higher on entitlement/grandiosity and insufficient self-control/self-

discipline and females scored higher on procrastination (Cronbach alpha coefficients for study scales; as well as means, and standard deviations for each measure for the total sample, and separately by gender, can be found in Table 1.

Correlations between scale scores were also calculated and are reported in Table 2. Maternal permissive parenting was found to have a significant positive correlation of medium size with paternal permissive parenting, $r(398) = .392$, $p < .001$, and of small size with entitlement/grandiosity, $r(430) = .141$, $p = .003$. Paternal permissive parenting was found to additionally have significant small-sized correlations with both entitlement/grandiosity, $r(402) = .206$, $p < .001$, and insufficient self-control/self-discipline, $r(402) = .125$, $p = .012$. Entitlement/grandiosity was further found to have a positive, medium-sized correlation with insufficient self-control/self-disciplines, $r(436) = .330$, $p < .001$, and a small, positive correlation with procrastination, $r(436) = .132$, $p = .006$. Finally, there was a strong, positive correlation between insufficient self-control/self-discipline and procrastination, $r(436) = .616$, $p < .001$. All other correlations were not significant.

Structural Equation Model

Measurement Models

The measurement models for the latent constructs in the hypothesized SEM model were constructed as follows. The permissive parenting latent construct was established using four packets of five questions each. Two packets were constructed from the maternal permissive parenting scale, and two from the paternal permissive parenting scale. These two scales were loaded onto the same latent construct in order to approximate the YSM, which does not distinguish between paternal and maternal parenting styles. The items from the scales were randomly assigned to the packets, with different item sets selected from the maternal and paternal versions of the questionnaire. The entitlement/grandiosity and insufficient self-control/self-discipline constructs were each established by the five items that make up the corresponding scales. And, the procrastination construct was formed from four packets, each made up of four randomly selected items from the TPS scale.

Model Predictions

The hypothesized model (see Figure 1) predicted direct relationships between permissive parenting and the schema

constructs of entitlement/grandiosity and insufficient self-control/ self-discipline, and between each of these schema constructs and procrastination. Indirect effects between permissive parenting and procrastination were also predicted through both schema constructs.

Model Assessment

Prior to running the SEM, the data was examined for violations of assumptions and was found to be adequate in terms of sample size, linearity, covariances, and the absence of outliers and multicollinearity. Only cases with complete data were included in the test of the model, resulting in a sample size of 370. Consistent with the recommendation of Tabachnick and Fidell (2013), for each nonindependent latent construct, the path to one of its measured variables was set to 1 to set the scale for the latent construct. Likewise, the variance of the independent latent construct, permissive parenting, was set to 1. A normalized Mardia's coefficient of 14.50 was found, which indicated a violation of multivariate normality, so model fit was assessed using robust estimations as recommended by Tabachnick and Fidell (2013).

Modest initial support for the hypothesized model was found, Satorra-Bentler χ^2 (131, N = 370) = 320.05, $p < .001$, robust CFI = .917, RMSEA = .067.

The Wald test did not suggest that the deletion of any path, but the Lagrange Multiplier test suggested four error covariances to improve model fit. Since each suggested error covariance was between measured variables that loaded onto the same latent construct and were not theoretically inconsistent with the model, they were added and the model reassessed. Addition of these error covariances resulted in a model demonstrating good fit with the data, χ^2 (127, N = 370) = 206.6, robust CFI = .97, RMSEA = .04, and explaining 51.7% of the variance in procrastination.

Hypothesized Effects

All tested paths within the measurement models were significant. Standardized path coefficients are available in Figure 2. Consistent with the hypothesized model, permissive parenting was a significant, positive predictor, of low to medium strength, for both entitlement/grandiosity ($\beta = .378$, $p < .05$) and insufficient self-control/self-discipline ($\beta = .236$, $p < .05$). Insufficient self-control/self-discipline ($\beta = .722$, $p < .05$) was also found to be a significant, and very strong, positive

predictor of procrastination, consistent with the hypothesized model. The predicted direct relationship between entitlement/ grandiosity and procrastination, however, was not significant ($\beta = -.058, p > .05$). Finally, permissive parenting was found to have a significant, though weak, indirect effect on procrastination ($\beta = .148, p < .05$). The final model, with standardized coefficients inserted, can be found in Figure 2.

Post hoc analyses were conducted to assess the importance of participant gender to the hypothesized relationships. Separate SEM models, identical to the hypothesized model were run with only male and only female participants. These gender segregated models produced the same results as did the model run with the full sample, with the exception that the two weakest paths in the hypothesized model no longer reached significance with the smaller sample size, although standardized coefficients were similar. Since analyzing the data separately by gender did not appear to shed additional light on the model, the results of these analyses are not reported in depth.

A post hoc analysis was also conducted to assess whether entering separate latent constructs into the model for paternal and maternal permissive parenting would shed greater light on the nature of the relationships between the constructs. The single permissive parenting construct was divided into two separate constructs, each associated with five 2-item packets taken randomly from the appropriate version of the permissive parenting scale of the PAQ (Buri, 1991). As with the hypothesized model, each of these two permissive parenting constructs was set to predict each of the EMS constructs (entitlement/grandiosity and insufficient self-control/self-discipline). This five construct model was found to have very poor fit with the data, Robust CFI = .697, RMSEA = .136. Consequently, no further analysis was done with this model.

CHAPTER FIVE

DISCUSSION

The purpose of the present study was to assess the predictions of the Young Schema Model (Young, 1990) with respect to specific cognitive and early childhood predictors of a common maladaptive coping behavior, procrastination. Specifically, the study hypothesized that permissive parenting would positively predict the early maladaptive schemas of entitlement/grandiosity and insufficient self-control/self-discipline, which would positively predict procrastination. Furthermore, an indirect effect of permissive parenting on procrastination was predicted. Overall, good support was found for the hypothesized model. With the exception of the hypothesized relationship between entitlement/grandiosity and procrastination, all hypothesized relationships were found to be significant.

These findings are consistent with the YSM (Young, 1990) which proposed that a permissive parenting environment in early childhood leads to the formation of the entitlement/grandiosity and insufficient self-control/self-discipline EMS. While permissive parenting

was only a modest predictor of these cognitive constructs in the present sample, this simply suggests that other variables are also important in affecting these maladaptive and distorted ways of interpreting reality. The YSM concept that the experiences of early childhood result in cognitive vulnerabilities, in the form of early maladaptive schemas (EMS), in predictable ways is an important insight.

The modest relationship between permissive parenting and the entitlement/grandiosity EMS is consistent with Watson, Little, and Biderman (1992) who found that grandiosity, but not narcissism, was associated with permissive parenting. Since the YSM conceptualizes entitlement and grandiosity as aspects of a single EMS, understood to be closely associated with narcissism (Young et al., 2003), the modest association between permissive parenting and entitlement/grandiosity EMS might be due to the association only involving one aspect of the EMS.

Similarly, the finding of Harris and Curtin (2002) that insufficient self-control/self-discipline mediated the relationship from parental care and overprotection to depression could also explain the modest relationship between permissive parenting and insufficient self-control/self-discipline found in the present study.

Succinctly, the relationship appears to be there, but perhaps more complicated than the YSM posits, with multiple types of family environments (e.g., parental indifference or overcontrol) leading to the same cognitive vulnerability.

The finding that insufficient self-control/self-discipline was a very strong predictor of procrastination is consistent with the YSM that predicts procrastination as a surrender coping response to that EMS (Young et al., 2003). That is, this schema, characterized by the belief that one does not have the ability to endure frustration, boredom, negative emotion, and the like in order to do what one believes should be done, predicts behavior consonant with that belief (viz., procrastination). Likewise, these findings are consistent with Digdon and Howell (2008) who also found that lack of self-control was strongly linked with procrastination behavior. This is, of course, also consistent with the simple logic that delaying action that one believes will be in one's own best interest (e.g., studying) while simultaneously having an expectation of a negative consequence for doing so (e.g., poor grades) would at some point involve a failure to overcome the impulse and

do what one believes is in their best interest (i.e., study anyway).

Alternatively, one could argue that the insufficient self-control/self-discipline EMS, as measured by the YSQ in particular, is merely an accurate description of the procrastination behavior itself. Establishing causality between EMS and behavior, which is most likely reciprocal in any case, is beyond the scope of the current research. The present study's contribution to understanding the role of the insufficient self-control/self-discipline EMS in procrastination, therefore, is limited, but one critical conclusion is suggested. That permissive parenting, which clearly is temporally antecedent to both EMS and behavior, was found to have an indirect effect on procrastination through insufficient self-control/self-discipline, suggest that, at least in part, the EMS represents an induced cognitive vulnerability that increases the likelihood of procrastination, and is not a mere self-reflection. This, then, constitutes a potentially important insight into the roots of procrastination that can subsequently influence selection of treatment approach, as will be discussed.

The finding that entitlement/grandiosity did not predict procrastination in the present study is

inconsistent with both the YSM (Young et al., 2003) and previous research that has shown a link between avoidant behavior and narcissism (Horvath & Morf, 2009) and between procrastination and grandiosity (Knaus, 1973). The difference in results from previous research might be due to the inclusion of insufficient self-control/self-discipline in the current model. This latter construct was such a strong predictor on its own that it might have accounted for that aspect of entitlement/grandiosity that would enact procrastination to avoid difficult and threatening situations. In other words, any increased propensity to avoid threatening situations through procrastination for those high in entitlement/grandiosity might have been captured instead by the more direct questions in the insufficient self-control/self-discipline scale.

Of particular interest in the current study is the indirect relationship between permissive parenting and procrastination that is hypothesized by the YSM (Young et al., 2003). While weak in and of itself, it plays an important part in understanding procrastination. The EMS mediation of the relationship of parenting on subsequent behavior supports the importance of including cognitive

schemas in any conceptual framework. In this way, the current study supports previous studies that have also found EMS playing a mediational role in parenting and in interpreting and responding to perceived threat (e.g., Harris & Curtin, 2002; Lumley & Harkness, 2007).

The model supported by the present study is also in conflict with Pychyl et al. (2002) whose findings, while supporting the importance of parenting style in subsequent procrastination, did not find a relationship between permissive parenting, specifically, and this behavior. Furthermore, the importance of the gender of the parent and of the participant in the role of specific parenting styles on procrastination behavior was not replicated. The present study, in post hoc analysis, found no significant difference in the model based on participant gender. When post hoc analysis examined maternal and paternal permissive parenting as separate constructs in the same SEM model, the model failed to resolve at all. This disparity in findings between the present study and Pychyl et al. (2002) might be explained, however, by differences in the way permissive parenting was conceptualized. By looking at the covariance of maternal and paternal permissive parenting in a structural equation model, permissive parenting in the

present study represented a family environment instead of the parenting style of specific parents. It might, therefore, be that a permissive family environment has an indirect effect on procrastination, consistent with the YSM, whereas permissive parenting by individual parents, as in Pychyl et al., is not sufficient to observe this relationship. Further study to examine this possibility is needed.

Several limitations were inherent in the design of the present study. First, the choice to use a single procrastination measure, rather than measures different types of procrastination, might have made some relationships more difficult to distinguish. It is perhaps logical that an avoidance style of procrastination would be more directly related to the self-defensive purpose given as an explanation for procrastination in the entitlement/grandiosity EMS, while an arousal procrastination style would be more closely related to insufficient self-control/self-discipline (Young et al., 2003). A different approach might shed more light on this potential relationship.

Additionally, combining maternal and paternal permissive parenting into the same construct, while it most

directly modeled a permissive parenting environment by capturing the covariance of both parents' parenting styles, does not allow for a deeper look at the differential effects of permissive parenting when only practiced by one parent or how it might interact with alternate parenting styles in the same home. Also, by including only the covariance of the permissive parenting between two parents, single parent households were not examined. Future research should examine this in its full complexity, comparing single and dual parent household and the interaction of parenting styles in their impact on later behavior.

The present study examined only a small portion of the YSM predictions about the source of procrastination, limiting itself to just those schemas related to a single family of origin. This could have resulted in a distortion of the true relationship between parenting, cognitive schemas, and procrastination. Future research should undertake a full model from each type of parenting, through their associated schemas, and to the common maladaptive behavior of procrastination to fully test the model and to fully elucidate the multiple paths to this common behavior.

Finally, the current study used a correlational design and, so, inherited all of the limitations inherent in this type of research. Future research using an experimental, or quasi-experimental, design should be undertaken to examine schema interaction and resultant maladaptive behavior. The YSM posits that these maladaptive behaviors are responses to perceived threat that is created or magnified by the distorted interpretations of an EMS. Future research, therefore, could further test this model by utilizing a manipulation designed to differentially activate specific schemas and examine the resulting maladaptive behaviors. This might be particularly useful in examining the proposed relationship between entitlement/grandiosity and procrastination, for example, because the maladaptive behavior is only expected to be present under certain threatening circumstances and, likewise, can be a subconscious phenomenon (Horvath & Morf, 2009) that does not yield easily to survey research.

The YSM was developed to explain the source of treatment resistance for chronic, characterological, maladaptive behaviors, like procrastination and many others, in terms of cognitive vulnerabilities (i.e., EMS) and their early childhood precursors (i.e., toxic

parenting) in order to generate effective treatment interventions. The indirect relationship between permissive parenting and procrastination through the insufficient self-control/self-discipline EMS found in the current study suggests that the condition might be most effectively dealt with by addressing not only cognitive and behavioral aspects of the behavior, as CBT does, but also developmental aspects of the individual, as psychodynamic approaches emphasize.

Schema-focused psychotherapy, as proposed by Young et al. (2003), is a balance between these two approaches. It includes identification of target behaviors, development of specific goals, identifying and challenging automatic thoughts, assigning homework, and so forth, as is characteristic of CBT. It adds to this, however, additional techniques to address the unmet developmental needs that led to the formation of the schemas underlying the maladaptive behaviors. Visualization and roleplaying, for example, are recommended to activate relevant EMS during therapy, at which time they are examined so that the client can understand how the schemas developed and begin to disassociate with them. Limited reparenting can be used in order to address unmet core needs and strengthen new,

healthy schema through which the client can better interpret and deal with life circumstances, emotional distress, and the like.

In a non-clinical sample, however, as are the participants in the present study, schema-focused therapy to deal with procrastination or some other maladaptive behavior might not be an option, even if it is characterized by the persistence that the YSM was developed to address. Clinical professionals available through campus resources may well not have the specialized training recommended by Young et al. (2003), and financial resources might not be available to pay for treatment elsewhere. In such case, educators and advisors that are called on to help the individual may still be able to employ general strategies that help the person address their needs. By exploring when in early life the current maladaptive behavior might have been a reasonable option and highlighting the difference between the client in their early life as compared to the present, the requisite distance between the actions and thoughts of the young self and the older self can be fostered. In this way, the thought patterns (i.e., schemas) that maintain the behavior

in the present can be undermined and alternative thought patterns strengthened.

Essentially, YSM's contribution to treatment efficacy is in bringing a balance to the conceptualization and treatment of treatment resistant, and even ego syntonic, psychopathology such that the source of distorted cognitions is not overlooked while dealing with such things as automatic thoughts, and the cognitive vulnerabilities are not overlooked while treatment focuses on unresolved developmental stages. Overall, the present study supports the YSM model in its predictions regarding parenting and cognition in relation to procrastination and underscores the need for more research examining a full model of psychopathology from parenting to adult behavior.

APPENDIX A

TABLES

Table 1

Reliability, means, and standard deviations for each scale by gender

Scale	α	Male		Female		Total	
		M	SD	M	SD	M	SD
PP-M	.748	24.5	6.33	24.6	6.89	24.5	6.63
PP-F	.770	24.9	6.83	23.7	7.09	24.3	6.96
SQET	.773	15.1	5.54	13.9	5.26	14.5*	5.42
SQIS	.850	13.4	5.50	11.5	5.23	12.4*	5.42
Proc	.918	2.6	0.58	2.8	0.66	2.7*	0.63

Note. PP-M = maternal permissive parenting scale; PP-F = paternal permissive parenting scale; SQET = entitlement/grandiosity schema; SQIS = insufficient self-control/ self-discipline schema; Proc = procrastination. * indicates significant differences in scale scores by gender at the $p < .05$ level.

Table 2

Correlation Coefficients Between Study Variables

Scale	1	2	3	4	5
1. Maternal Permissiveness	1.00				
2. Paternal Permissiveness	.39*	1.00			
3. Entitlement/Grandiosity	.15*	.22*	1.00		
4. Insufficient Self-Control	.07	.15*	.34*	1.00	
5. Procrastination	.00	.08	.13*	.61*	1.00

Note. * $p < .05$.

APPENDIX B

FIGURES

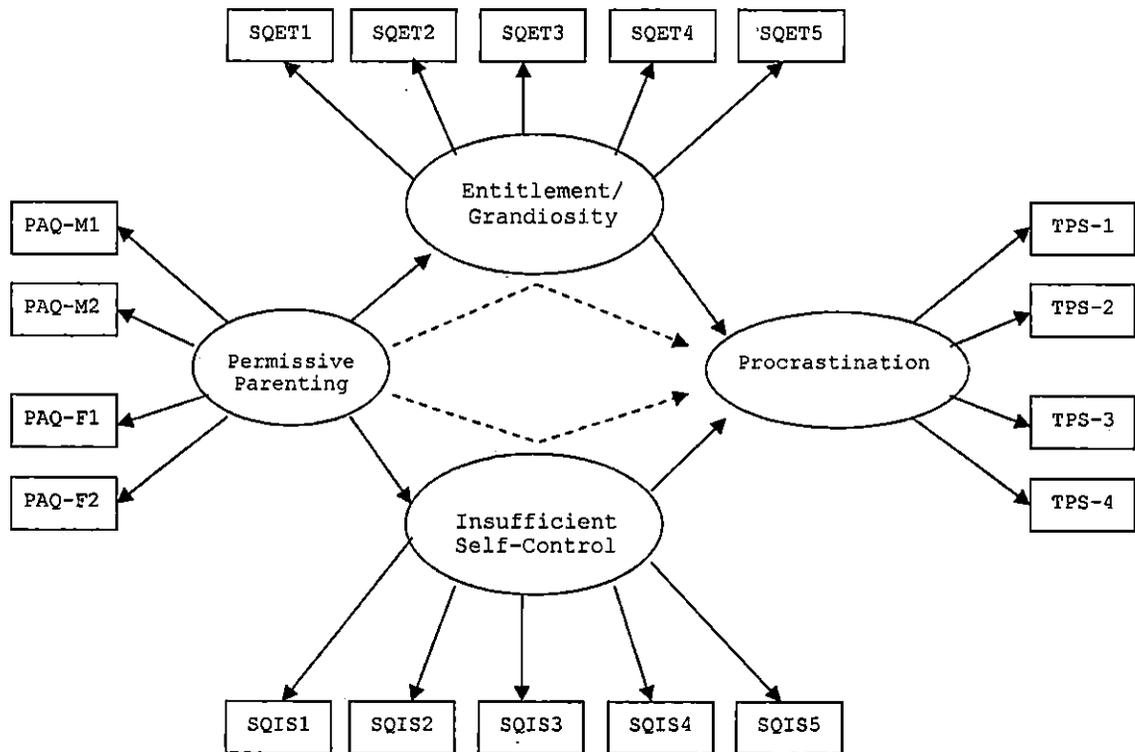


Figure 1. Hypothesized structural equation model. Solid arrows indicate direct effects and dashed arrows indicate indirect effects.

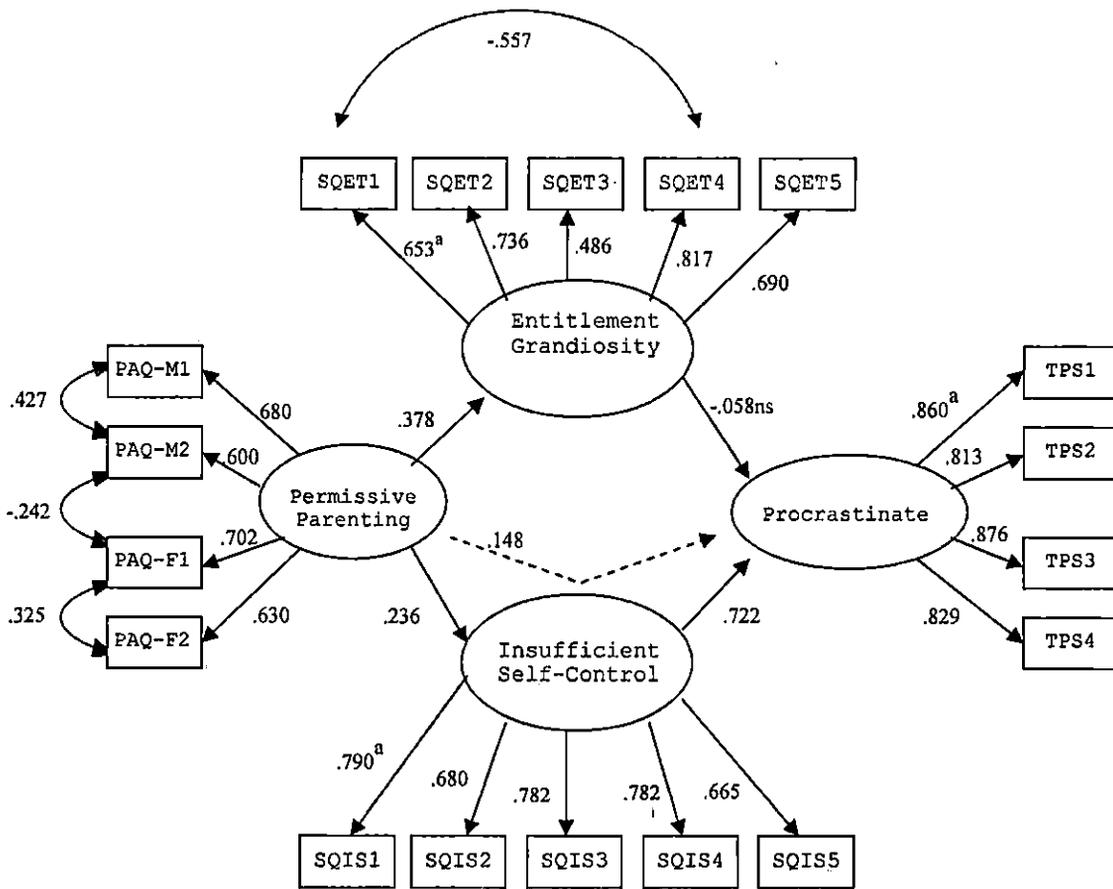


Figure 2. Adjusted model with standardized path coefficients. Solid arrows indicate direct effects and dashed arrows indicate indirect effects. All paths are significant unless otherwise specified. ^{ns} denotes non significance. ^a denotes path that was not tested for significance in the model.

APPENDIX C
INFORMED CONSENT FORM



College of Social and Behavioral Sciences
Department of Psychology

Consent Form for Relationships, Beliefs, and Procrastination Study

You are invited to participate in a study designed to assess the effect of early relationships and beliefs about oneself and others on procrastination. This study is being conducted by Wade Kidner under the supervision of Dr. Michael Lewin, Associate Professor of Psychology. This study has been approved by the Department of Psychology Institutional Review Board Sub-Committee of the California State University, San Bernardino, and a copy of the official Psychology IRB stamp of approval should appear on this consent form. The university requires that you give your consent before participating in this study.

You will fill out a series of questionnaires that will ask about your experiences, relationships, and any procrastinating behavior. When you complete the questions, an information statement will describe the study in more detail. Altogether your participation in this study should only take about 30 minutes to complete.

This study involves no risks beyond those routinely encountered in daily life, nor any direct benefits to you as a participant. If you are a CSUSB student, you may receive 2 points of extra credit in a selected Psychology class at your instructor's discretion.

Your participation in this study is entirely voluntary. You are free to withdraw your participation or refuse to answer any specific question at any time during the study, without penalty or loss of extra credit points to which you are otherwise entitled.

SONA will generate a random identification number that will be appended to your survey responses so that extra credit points can be awarded. Once data collection is complete and credits are awarded, the id codes will be stripped from the data to maintain the anonymity of your responses. The information collected in this study will be stored in a password protected computer in a locked lab at CSUSB and only the researchers will be able to access this information. Data will only be reported in group format. The results from this study will be included in Wade Kidner's MA thesis and submitted for publication to a scientific journal. All data will be destroyed 5 years after publication.

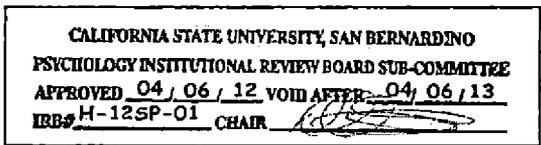
It is very unlikely that any intense emotional discomfort will result from participation in this study. However, if you would like to discuss any distress you may have experienced, do not hesitate to contact the CSUSB Psychological Counseling Center (537-5040). Additionally, if you have any questions regarding this study, please feel free to contact Dr. Michael Lewin, Associate Professor of Psychology (mlewin@csusb.edu or (909) 537-7303). You may also contact the Human Subjects Office at California State University, San Bernardino ((909) 537-7588) if you have any questions or concerns about this study. Results from this study will be available from Dr. Michael Lewin after June 2012.

I acknowledge that I have been informed of, and understand the true nature and purpose of this study, and I freely consent to participate. I acknowledge that I am at least 18 years of age.

Please indicate your desire to participate by placing and "X" on the line below.

Participant's X _____

Date: _____



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APPENDIX D
IRB APPROVAL LETTER

**Human Subjects Review Board
Department of Psychology
California State University,
San Bernardino**

PI: Lewin, Michael, & Kidner, Wade
From: Donna Garcia
Project Title: The Role of Attachment and Early Maladaptive Schemas on Procrastination (Relationships, Beliefs, and Procrastination)
Project ID: H-12SP-01
Date: Friday, April 06, 2012

Disposition: Administrative Review

Your IRB proposal is approved. This approval is valid until 4/6/2013.

Good luck with your research!



Donna M. Garcia, Chair
Psychology IRB Sub-Committee

REFERENCES

- Ainsworth, M. D., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development, 41*, 49-67.
- American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monograph, 4*(1, Pt. 2), 1-103. doi:10.1037/h0030372
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck depression inventory*, 2nd ed. Psychological Corporation.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*, 561-571.
- Bifulco, A., Brown, G. W., & Harris, T. O. (1994). Childhood experience of care and abuse (CECA): A

- retrospective measure. *Journal of Child Psychology and Psychiatry*, 35, 1419-1435.
- Bowlby, J. (1969). *Attachment and loss, Vol. 1 Attachment*. New York: Basic Books.
- Buri, J. R. (1989). Self-esteem and appraisals of parental behavior. *Journal of Adolescent Research*, 4, 33-49.
- Buri, J. R. (1991). Parental authority questionnaire. *Journal of Personality Assessment*, 57, 110-119.
- Buri, J. R., Misukanis, T. M., & Mueller, R. A. (1988). "Nothing I ever do seems to please my parents": Female and male self-esteem as a function of mother's and father's nurturance. St. Paul, MN: University of St. Thomas, Psychology Department. (ERIC Document Reproduction Service No. ED 285114).
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63, 452-459.
- Calvete, E., Estévez, A., de Arroyabe, E. L., & Ruiz, P. (2005). The Schema Questionnaire - Short Form: Structure and relationship with automatic thoughts and symptoms of affective disorder. *European Journal of Psychological Assessment*, 21(2), 90-95.
- doi:10.1027/1015-5759.21.2.90

- Costello, C. G., & Comrey, A. L. (1967). Scales for measuring depression and anxiety. *Journal of Psychology, 66*, 303-313.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*, 349-354.
- Derogatis, L. R. (1983). *SCL-90-R administration, scoring and procedures manual-II for the (R)evised version and other instruments of the psychopathology rating scale series*. Towson, MD: Clinical Psychometric Research.
- Derogatis, L. R. (1993). *Brief Symptom Inventory (BSI): Administration, scoring and procedures manual (3rd ed.)*. Minneapolis: National Computer Systems.
- Dewitte, S., & Schouwenburg, H. C. (2002). Procrastination, temptations, and incentives: The struggle between the present and the future in procrastinators and the punctual. *European Journal of Personality, 16*, 469-489. doi:10.1002/Per.461
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71-75.
- Digdon, N. L., & Howell, A. J. (2008). College students who have an eveningness preference report lower self-

control and greater procrastination. *Chronobiology International*, 25, 1029-1046.

doi:10.1080/07420520802553671

Ferrari, J. R. (1992). Psychometric validation of two procrastination inventories for adults: Arousal and avoidance measures. *Journal of Psychopathology and Behavioral Assessment*, 14, 97-110.

Ferrari, J. R., Barnes, K. L., & Steel, P. (2009). Life regrets by avoidant and arousal procrastinators: Why put off today what you will regret tomorrow? *Journal of Individual Differences*, 30, 163-168.

doi:10.1027/1614-0001.30.3.163

Ferrari, J. R., Díaz-Morales, J. F., O'Callaghan, J., Díaz, K., & Argumedo, D. (2007). Frequent behavioral delay tendencies by adults: International prevalence rates of chronic procrastination. *Journal of Cross-Cultural Psychology*, 38, 458-464. doi:10.1177/0022022107302314

Ferrari, J. R., Mason, C. P., & Hammer, C. (2006).

Procrastination as a predictor of task perceptions: Examining delayed and non-delayed tasks across varied deadlines. *Individual Differences Research*, 4, 28-36.

Ferrari, J. R., & Olivette, M. J. (1994). Parental authority and the development of female dysfunctional

- procrastination. *Journal of Research in Personality*, 28, 87-100.
- Flanagan, C. M. (1993). Treating neurotic problems that do not respond to psychodynamic therapies. *Hospital and Community Psychiatry*, 44, 824-826.
- Glaser, B. A., Campbell, L. F., Calhoun, G. B., Bates, J. M., & Petrocelli, J. V. (2002). The early maladaptive schema questionnaire - short form: A constructive validity study. *Measurement and Evaluation in Counseling and Development*, 35, 2-13.
- Harary, K., & Donahue, E. (1994). *Who do you think you are? Explore your many-sided self with the Berkeley Personality Profile*. San Francisco: Harper.
- Harriott, J., & Ferrari, J. R. (1996). Prevalence of procrastination among samples of adults. *Psychological Reports*, 78, 611-616.
- Harris, A. E., & Curtin, L. (2002). Parental perceptions, early maladaptive schemas, and depressive symptoms in young adults. *Cognitive Therapy and Research*, 26, 405-416.
- Harter, S. (1988). *Manual for the self-perception profile for adolescents*. Denver, CO: University of Denver.
- Hofmann, S. G., Asnaani, A., Vonk, I. J. J., Sawyer, A. T.,

- & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research*, 36, 427-440.
doi:10.1007/s10608-012-9476-1
- Horne, J. A., & Ostberg, O. (1976). A self-assessment questionnaire to determine morningness-eveningness in human circadian rhythms. *International Journal of Chronobiology*, 4, 97-110.
- Horvath, S., & Morf, C. C. (2009). Narcissistic defensiveness: Hypervigilance and avoidance of worthlessness. *Journal of Experimental Social Psychology*, 45, 1252-1258. doi:10.1016/j.jesp.2009.07.011
- Hyer, S. E., & Reider, R. O. (1987). *PDQ-R: Personality Diagnostic Questionnaire - Revised*. New York: New York State Psychiatric Institute.
- Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., ... & Ryan, N. (1997). Schedule for affective disorders and schizophrenia for school-aged children-present and lifetime version (K-SADS-PL): Initial reliability and validity data. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 80-988.

- Knaus, W. J. (1973). Overcoming procrastination. *Rational Living*, 8, 2-7.
- Lay, C. H. (1986). At last, my research article on procrastination. *Journal of Research in Personality*, 20, 474-495.
- Lee, C. W., Taylor, G., & Dunn, J. (1999). Factor structure of the schema questionnaire in a large sample. *Cognitive Therapy and Research*, 23, 441-451.
doi:10.1023/A:1018712202933
- Leichensring, F., & Leibing, E. (2003). The effectiveness of psychodynamic therapy and cognitive behavior therapy in the treatment of personality disorders: A meta-analysis. *The American Journal of Psychiatry*, 160, 1223-1232. doi:10.1176/appi.ajp.160.7.1223
- Lumley, M. N., & Harkness, K. L. (2007). Specificity in the relations among childhood adversity, early maladaptive schemas, and symptom profiles in adolescent depression. *Cognitive Therapy and Research*, 31, 639-657. doi:10.1007/S10608-006-9100-3
- Mann, L. (1982). *Decision-Making Questionnaire*. Unpublished scale, Flinders University of South Australia, Australia.
- Mann, L., Burnett, P., Radford, M., & Ford, S. (1997). The

Melbourne Decision Making Questionnaire: An instrument for measuring patterns for coping with decisional conflict. *Journal of Behavioral Decision Making*, 10, 1-19.

McCown, W., & Johnson, J. (1989). *Differential arousal gradients in chronic procrastination*. Paper presented at the American Psychological Association, Alexandria, VA.

Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology*, 51, 1-10.

Pychyl, T. A., Coplan, R. J., & Reid, P. A. M. (2002). Parenting and procrastination: Gender differences in the relations between procrastination, parenting style, and self-worth in early adolescence. *Personality and Individual Differences*, 33, 271-285.

Qualtrics Labs Inc. (2013). Qualtrics Labs Inc. software, Version 40170. Provo, UT. <http://www.qualtrics.com>

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-

401.

- Raskin, R., & Hall, C. S. (1981). The narcissistic personality inventory: Alternate form reliability and further evidence of its construct validity. *Journal of Personality Assessment, 45*, 159-162.
- Robbins, S. B., & Patton, M. J. (1985). Self-psychology and career development: Construction of the superiority and goal instability scales. *Journal of Counseling Psychology, 32*, 221-231.
- Roese, N. J., & Summerville, A. (2005). What we regret most ... and why? *Personality and Social Psychology Bulletin, 31*, 1273-1285.
- Rosenberg, S. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Scherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51*, 663-671.
- Schmidt, N. B., Joiner, T. E., Young, J. E., & Telch, M. J. (1995). The schema questionnaire: Investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemas. *Cognitive Therapy and Research, 19*, 295-321. doi:10.1007/BF02230402

- Sheffield, A., Waller, G., Emanuelli, F., Murray, J., & Meyer, C. (2005). Links between parenting and core beliefs: Preliminary psychometric validation of the Young Parenting Inventory. *Cognitive Therapy and Research, 29*, 787-802. doi:10.1007/s10608-005-4291-6
- Shrive, F. M., Stuart, H., Quan, H., & Ghali, W. A. (2006). Dealing with missing data in a multi-question depression scale: a comparison of imputation techniques. *BMC Medical Research Methodology, 6*:57. doi:10.1186/1471-2288-6-57
- Speilberger, C. D., Johnson, E. H., Russell, S. F., Crain, R. J., Jacobs, G. A., & Worden, T. J. (1985). The experience and expression of anger: Construction and validation of the Anger Expression Scale. In M. A. Chesney and R. H. Rosenman (Eds.) *Anger and hostility in cardiovascular and behavioral disorders*. New York: Hemisphere Publishing.
- Steel, P. (2002). *The measurement and nature of procrastination*. Unpublished PhD, University of Minnesota, Minneapolis.
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*,

65-94. doi:10.1037/0033-2909.133.1.65

Steel, P. (2010). Arousal, avoidant and decisional procrastinators: Do they exist? *Personality and Individual Differences, 48*, 926-934.

doi:10.1016/j.paid.2010.02.025

Tabachnik, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. Boston: Pearson/Allyn & Bacon.

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72*, 271-324.

Thimm, J. C. (2010). Personality and early maladaptive schemas. *Journal of Behavior Therapy and Experimental Psychiatry, 41*, 373-380.

doi:10.1016/j.jbtep.2010.03.009

Thimm, J. C. (2011). Incremental validity of maladaptive schemas over five-factor model facets in the prediction of personality disorder symptoms.

Personality and Individual Differences, 50, 777-782.

doi:10.1016/j.paid.2010.12.030

Tremblay, P. F., & Dozois, D. J. (2009). Another perspective on trait aggressiveness: Overlap with

early maladaptive schemas. *Personality and Individual Differences*, 46, 569-574.

doi:10.1016/j.paid.2008.12.009

Tuckman, B. W. (1990). Groups versus goal-setting effects on the self-regulated performance of students differing in self-efficacy. *Journal of Experimental Education*, 58, 291-298.

Tuckman, B. W. (1991). The development and concurrent validity of the procrastination scale. *Education and Psychological Measurement*, 51, 473-480.

doi:10.1177/0013164491512022

Watson, D., & Clark, L. A. (1990). *The Positive and Negative Affect Schedule - Expanded Form*. Unpublished manuscript, Southern Methodist University.

Watson, P. J., Little, B., & Biderman, M. D. (1992). Narcissism and parenting styles. *Psychoanalytic psychology*, 9, 231-244.

Weissman, A. N. (1979). The Dysfunctional Attitude Scale: a validation study. *Dissertation Abstracts International*, 40, 1389-1390.

Welburn, K., Coristine, M., Dagg, P., Pontefract, A., & Jordan, S. (2002). The schema questionnaire - short form: Factor analysis and relationship between schemas

and symptoms. *Cognitive Therapy and Research*, 26, 519-530. doi:10.1023/A:1016231902020

Whiteside, S. P., & Lynam, D. R. (2001). The five factor model and impulsivity: Using a structural model of personality to understand impulsivity. *Personality and Individual Differences*, 30, 669-689.

Young, J. E. (1990). *Cognitive therapy for personality disorders*. Sarasota, FL: Professional Resources Press.

Young, J. E. (1994). *Cognitive therapy for personality disorders*. (rev. ed.) Sarasota, FL: Professional Resources Press.

Young, J. E. (1998). Young schema questionnaire short form. New York, NY: Cognitive Therapy Center.

Young, J. E. (1999). *Cognitive therapy for personality disorders*. (3rd ed.) Sarasota, FL: Professional Resources Press.

Young, J. E., & Brown, G. (1990). *Young schema questionnaire*. New York: Cognitive Therapy Center of New York.

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. New York, NY: Guilford Press.