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THE MEDIATING ROLE OF AVOIDANCE COPING UPON THE
RELATIONSHIP BETWEEN EARLY MALADAPTIVE SCHEMAS,
ANXIETY AND DEPRESSION

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
Christine Louise French

June 2007


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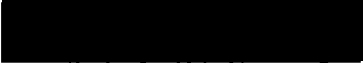
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ABSTRACT

This study examined the mediating role of Maladaptive Emotion-focused coping (MEFC) on the relationship between Early Maladaptive Schemas (EMS), anxiety, and depression. Relationships between Young's, (2003) 15 EMS, maladaptive coping strategies, and psychological distress were examined in a university population ($N = 236$; 117 women and 119 men between the ages of 18-52 $M = 22.39$, $SD = 6.77$). EMS were categorized by the Young's Schema Questionnaire (YSQ-SF). Adaptive and maladaptive forms of coping strategies were assessed with the Coping Orientation to Problem Experience (COPE). Lastly the Symptom Checklist-90-Revised (SCL-90-R) was used to assess anxiety and depression. A multiple regression indicated that EMS accounted for a greater amount of variance accounted for in anxiety and depression than MEFC. Even though a multiple regression did indicate a relationship between EMS and MEFC, MEFC did not mediate the relationship between EMS and anxiety or depression. On the contrary, a post hoc analysis revealed that EMS completely mediated the relationship between MEFC and psychological distress (i.e. anxiety and depression). Post hoc analysis also reveals that MEFC was a stronger predictor of anxiety

and depression than both problem-focused and emotion-focused adaptive coping. These results are consistent with cognitive diathesis models of psychopathology and suggest that prevention and intervention efforts should be aimed at the restructuring of dysfunctional schemas and thoughts.

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CHAPTER ONE
THE MEDIATING ROLE OF AVOIDANCE COPING
UPON THE RELATIONSHIP BETWEEN EARLY
MALADAPTIVE SCHEMAS, ANXIETY
AND DEPRESSION

If people are a product of their experiences, then how does our past experience continue to impact our current functioning? The concept of schema, borrowed from cognitive psychology, has been adapted to explain psychopathology in general and more specifically how past experience affects the manner in which people recall past events, interpret current experiences and see the future and copes with stressful situations (Beck, 1967). Schemas are important mental structures used for selecting, encoding, and interpreting stimuli in the environment in a consistent manner (Beck, 1967). Healthy development is aided when individuals have adaptive (e.g., healthy) schemas that help them interpret information realistically. However, psychopathology occurs when the individual's schemas are maladaptive due to warped attitudes, illogical premises, and impractical goals and expectations that then lead them to misinterpret information (Young, 2003).

Characteristics of Early Maladaptive Schemas

Early Maladaptive Schemas (EMS) are proposed to generate inaccurate and dysfunctional interpretations of environmental events. EMS are described as extremely constant and persistent mental structures that develop early in life and continue to evolve throughout a person's lifetime (Young, 2003). EMS are considered to be at the deepest level of cognition and have several defining characteristics. First, EMS (like schemas in general) encompass a cognitive triad where the individual has negative inflexible thoughts related to oneself, the world or others, and the future (Beck, 1967). Consequently, EMS are thought to be associated with dysfunctional behavioral and emotional patterns such as alcoholism, depression, anxiety, and insomnia. Second, EMS are so entrenched in the individual's information process that they become very difficult to alter. More specifically, EMS are believed to be self-perpetuating in that they prevent the processing of information contrary to the particular schema. Thus, the individual's biased information processing (selective processing of confirmatory evidence for EMS) will strengthen the EMS and the maladaptive way of interpreting one's experience. Finally, EMS develop as a result of the

primary caretakers failure to meet important core developmental needs (e.g. safety, "stable base," predictability, love, nurturing and attention, acceptance and praise, empathy, guidance and protection, and validation of feelings) with the greatest influence coming from the child's exposure to ongoing dysfunctional interactions with parents and peers and to a lesser degree to the influence of the child's physiological disposition (temperament). Young (2003) identified 18 EMS that lead to inaccurate interpretations of one's experience. These EMS are categorized across five domains based upon unmet core developmental needs.

Early Maladaptive Schemas

Young (2003) categorized the 18 EMS into five subcategories known as schema domains. Schema domains consist of a group of similar EMS that are believed to be formed based upon similar developmental needs that were not met during childhood. The first schema domain is called *disconnection and rejection* (DR) where a child's expectation for security, nurturance, and acceptance were not provided and thus lead to an expectation that these key needs will not be met in other relationships as well. The

connection between caregiver and child is very unstable due to the unpredictability in which these basic developmental needs are met. The EMS within this domain are called *abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, or social isolation/alienation*. The second schema domain is called *impaired autonomy and performance (IP)* where the child's expectation of independence is stifled by parental overprotection, or parental failure to reward them for skilled behavior outside the family. The child may develop EMS such as *dependence/incompetence, vulnerability to harm or illness, enmeshment/underdeveloped self, or failure* as a response to a parent's overprotection. The child grows up never really feeling a sense of independence or even having a sense of competence in making everyday decisions due to the caregivers continual undermining of that child's actions. The third schema domain is known as *impaired limits (IL)* where a child's expectation of responsibility, direction, and discipline were not met in a consistent manner. The EMS such as *entitlement/grandiosity or insufficient self-control/self-discipline* may develop due to the parents' permissiveness and failure to provide external limits. The child never learns appropriate social

behavior such as how to respect the rights of others, how to keep commitments or how to set or meet realistic goals. The fourth schema domain is labeled *other-directedness* (OD) where the child learns to get love and acceptance by strictly conforming to the desires, feelings, and responses of others even if these feelings, desires, or responses are contrary to the child's. The EMS such as *subjugation*, *self-sacrifice*, or *approval-seeking/recognition seeking* may develop as a response to a caregiver's withholding of or inability to give an adequate amount of acceptance or unconditional love for the child to feel important. The child learns to suppress his/her anger or natural inclinations in order to gain the love and approval of the caregiver. The child grows up either unable to express important feelings or tends to avoid anger or retaliation by others by suppressing these feelings. The last schema domain is called *overvigilance and inhibition* (OI) where a child's need to express unexpected feelings, impulses, and choices are suppressed. The EMS such as *negativity/pessimism*, *emotional inhibition*, *unrelenting standards/hypercriticalness*, or *punitiveness* may develop in response to the parent's hypercriticalness and suppression of spontaneous expression. The child is only shown the

negative in life and is encouraged to worry about what may happen if one is not vigilant and careful at all times.

Background on Coping Strategies

Historically, Sigmund Freud defined coping as a defense mechanism that allows one to push upsetting conscious feelings and thoughts into the unconscious (internal environment), which then alters the perception of the stressful situation (external environment). The coping literature has come a long way in that coping is now viewed as a more optimistic process where it is more forward looking, adaptable, mainly conscious, and attentive to reality (Synder, 1999).

Although many definitions exist for coping, the current study relies on the definition that coping is the response that is intended to decrease the physical, emotional, and psychological load that is associated with stressful life events and everyday happenings (Synder, 1999). Effective coping, therefore, rests on the capacity to reduce immediate stress, which is also thought to increase long-term psychological well-being and physical health. Coping is thought to be a conscious process, however, in some cases coping can be unconscious when the

stressor is habitual and the response is repetitive without attentiveness. Young (2003) attempts to operationalize these important habitual coping strategies that are thought to maintain maladaptive EMS which are specific to this thesis.

Young's Model of Coping Strategies

Young (2003) proposes that these EMS are maintained through coping strategies such as cognitive and behavioral avoidance, overcompensation and surrendering.

Schema Maintenance refers to the thoughts and behaviors that allow for the altering of information that permits the experience to be interpreted in a manner that is consistent with the existing EMS, therefore strengthening it. Schema maintenance also refers to self-defeating "coping-type" behaviors that were originally adaptive in childhood but are no longer useful in adulthood (Beck, 1967). These processes lead to a cognitive bias in accepting information that is consistent with the EMS and rejecting or minimizing possible non-confirmatory information (Young, 2003). These processes are maintained via negative reinforcement as they serve to cope (reduce emotional pain) associated with distressing thoughts,

feelings, and urges that are associated with EMS (Ball, 1998). These maintenance behaviors help to reinforce the EMS by preventing the individual from experiencing evidence that is contrary to that particular EMS. EMS are at the core of an individual's mental processes where the individual has extreme difficulty in preventing cognitive distortions or avoiding self-defeating behaviors. Three types of maladaptive coping strategies that maintain EMS are *Schema Avoidance*, *Schema Overcompensation*, and *Schema Surrender* (Young, 2003).

Schema Avoidance is a coping strategy that involves avoidance of schema activating environmental cues. Schema avoidance includes cognitive, affective, and behavioral components that lead to schema maintenance via automatic and non-conscious avoidance of thoughts, feelings, or behaviors that might activate a particular EMS. At its worst, cognitive schema avoidance may be a precursor to compulsive behavior in that individuals will engage in repetitive behaviors that distract them from their thoughts about unpleasant circumstances that activate EMS. Affective schema avoidance allows an individual to evade feelings or strong emotions even when it is appropriate to do so. This constant avoidance to appropriately experience

emotions could lead to the development of chronic psychosomatic symptoms. Lastly, behavioral schema avoidance involves active overt behavioral strategies to avoid painful activation of EMS and may progress into disorders like social anxiety disorder or agoraphobia (Young, 1998).

Schema Overcompensation is a coping strategy or construct that is harder to define and measure. Young (2003) proposes that overcompensation is an attempt to challenge the EMS by fighting against it, or doing the extreme opposite of the predicted schema outcome. This coping technique appears to be somewhat functional in that it prevents the reinforcement of the EMS, but it also prevents individual from experiencing vulnerability. The individual then is not prepared for the emotional grief associated with the eruption of the EMS if the overcompensation fails (i.e., a young woman believes that she is incompetent and a failure so to fight this belief she compulsively attempts to over achieve but she eventually burns out which then leaves her with the confirmation that she is in fact a complete failure).

Schema Surrender is a coping strategy that attempts to give in to our schemas by repeating the same strategy over and over. This coping technique allows for the optimum

reinforcement of the EMS, thus allowing the individual to experience the painful feelings associated with the EMS over and over again (i.e., a young man feels that he is incompetent so he relies on others to make important decisions for him, thus reinforcing the sense of his own incompetence by not experiencing the satisfaction of making the right decision). Due to the obvious difficulty in measuring overcompensation and surrendering and the lack of literature to support such coping this study will focus on dispositional maladaptive avoidance coping.

Dispositional Coping

Dispositional coping literature suggests that the strategies of problem-focused coping, emotional-focused coping, and maladaptive emotional-focused coping play an important role in psychological well-being (Carver and Scheier, 1994). Problem-focused coping includes efforts that serve to manage or modify the source of stress (i.e. *active coping, planning, suppression of competing activities, restraint coping, and seeking social support-instrumental*) and emotional-focused coping serves to control emotional responses to the stressor (i.e. *seeking social support-emotional, positive reinterpretation &*

growth, acceptance, and turning to religion). Both are thought to be adaptive in that problem-focused coping produces less stress by producing improved outcomes when the stressor is malleable thus leading to psychological well-being (e.g. learning a new skill, removing barriers, and generating alternative solutions. Furthermore, emotional-focused coping produces a more positive way of viewing a rigid/unchanging stressful situation thus leading to less depressive and anxious symptoms (e.g. wishful thinking, seeking emotional support, and social comparison). Thus, viewing a stressful situation in a positive way is also important when defining coping strategies. Lastly, maladaptive emotion-focused coping serves as a way to ignore or "avoid" the reality of the stressor (i.e. *mental disengagement, behavioral disengagement, denial, alcohol-drug disengagement, and focus on and venting of emotions*). Although most of these subscales can be explained as some type of avoidance coping, focus on and venting of emotions does not fit nicely into this category. Focus on and venting of emotions on the surface seems like a positive way of dealing with a stressor, however, this particular strategy presumes that nothing more is being done to change the stressful

situation except for dwelling on and verbalizing the problem at hand. Thus, maladaptive emotion-focused coping strategies are considered dysfunctional and avoidant in that it prevents a person from solving the stressful situation or viewing the stressor in a more positive manner.

Although coping styles can change from situation to situation, this study will focus on the notion that people are thought to utilize habitual ways of handling stress and that these coping styles can influence their responses in new situations (Carver and Scheier, 1994). Moos and Holahan (2003) suggest that an overall assessment of coping styles should include both measurement of dispositional (relatively stable and enduring traits) and contextual (average coping in specific stressful situations) However, this study will look at dispositional coping strategies that focus on unspecified instances of stress and not contextual coping strategies that require participants to be exposed to a specific stressor (i.e. final exam or earthquake).

CHAPTER TWO

EARLY MALADAPTIVE SCHEMAS LITERATURE REVIEW

Although EMS can have a direct affect upon psychological functioning, it is proposed that the combination of EMS, environmental stressors, and the way in which a person copes may contribute to the development of psychological distress (Young et al. 2003).

The dispositional coping approach presumes that relatively stable and lasting personality, attitudinal, and cognitive aspects bring about habitual coping efforts (Moos and Holahan, 2003). Likewise, it has been proposed that schemas and EMS are the relatively stable and enduring mental structures that produce coping strategies of habitual cognitive, affective, and behavioral avoidance (Beck, 1967; Young, 2003). Young, (2003) proposes that maladaptive coping efforts that attenuate the painful affect experienced via EMS activation are what eventually leads to anxiety and depression (i.e. psychological distress). Although there are no published studies to date examining the relationship between EMS and coping efforts, several studies have examined the relationship between EMS

and psychological distress, presumably stemming from poor coping efforts.

Early Maladaptive Schemas and Psychological Distress

Schmidt, Joiner, Young, and Telch, (1995) examined the relationship between self-esteem, psychological distress, personality disorder traits, dysfunctional attitudes related to depression and EMS using 181 undergraduates (85 women and 96 men) enrolled in an introductory psychology class with the mean age of 19.2 and an SD of 3.7. The ethnic composition was as follows: 77% Caucasian, 12% Hispanic, 6% Asian American, and 5% African American. The authors examined the relationship between EMS as measured by YSQ-SF (Young, 1998) and psychological distress as measured by *Symptom Checklist-90* SCL-90; General Severity Index, GSI; summed ratings of each symptom), the *Positive And Negative Affect Scale* (PANAS; assesses positive and negative affect), the *Beck Depression Inventory* (BDI; assesses depression), *Dysfunctional Attitudes Scale* (DAS; examines rigid and excessive beliefs which are also considered to be a cognitive vulnerability factor for depression), *Personality Diagnostic Questionnaire---Revised*

(PDQ-R; assesses personality disorders, and *Rosenberg Self-Esteem Questionnaire* (SEQ; assesses global self-esteem). Results revealed that the total score of EMS significantly correlated with overall psychological distress as measured by GSI. The four significant predictors were vulnerability to harm that accounted for 38%, dependency/incompetence that accounted for 10%, insufficient self-control/self-discipline that accounted for 6%, and the DAS that accounted for 1% of the variance in total psychological distress. Results also revealed that EMS significantly correlated with rigid and excessive beliefs that are thought to be a vulnerability factor for depression (DAS). More specifically, a stepwise regression revealed that the combination of EMS and DAS scales accounted for 55% of the variance in total psychological distress. For depression as measured by the BDI, stepwise regression revealed that 2 of the 15 EMS entered the equation accounting for 33% of the variance in depression. The EMS of dependence/incompetence accounted for 27.0% of the variance and defectiveness/shame accounted for an additional 6% of the explanatory variance in depression. For anxiety as measured by the SCL-90, a stepwise regression revealed that 3 of the 15 EMS accounted for 34% of the total variance in anxiety. Specifically, the

EMS of vulnerability to harm or illness accounted for 28.0%, dependence/incompetence and emotional inhibition each accounted for an additional 3% of explanatory variance in anxiety. Consistent with the Schema Model, results suggest that EMS accounted for a predominant amount of variance in predicting psychological distress. More specifically, the EMS of dependency/incompetence and defectiveness/shame were more useful in predicting depression, and vulnerability to harm or illness and dependence/incompetence were more useful in predicting anxiety. Most importantly, factor analysis revealed a similar factor structure consistent with Young's model that supports the relationship between EMS and psychological distress.

In a clinical population, Glaser, Campbell, Calhoun, Bates, and Petrocelli, (2002) examined the relationship between EMS as measured by Young Schema Questionnaire--Short-Form (YSQ-SF; Young, 1995) and psychological distress/symptoms as measured by numerous mental health questionnaires including the (SCL-90; Derogaitus, 1983; Glaser et al., 2002). The sample consisted of 141 outpatients (99 women and 42 men) where the mean age was 28.95 years ($SD= 7.80$, range = 18-52). The ethnic

composition of the sample was 94.0% Caucasian, 4.3% African American, 0.7% Hispanic, and 0.7% Indian. Unlike Schmidt et al. (1995) this study controlled for Type I errors by using the "enter method" of multiple linear regression analysis. The results revealed that the majority of the 15 EMS subscales significantly correlated with global psychological distress and specific symptoms of anxiety and depression. In general, all EMS subscale scores accounted for 54.0% of the total variance in overall psychological distress as measured by the GSI. For depression as measured by the BDI, all EMS accounted for 54.0% of the total variance in the different levels of depressive symptoms. More specifically, the EMS of abandonment/instability was the only significant predictor of depression. For anxiety as measured by the SCL-90, all EMS accounted for 50.0% of the total variance in anxiety. Specifically, the EMS of vulnerability to harm or illness and abandonment/instability were the only significant predictors of anxiety. For depression as measured by the SCL-90, all EMS subscale scores accounted for 49.0% of the total variance in depression. The only significant predictors of depression were abandonment/instability and social isolation. For negative affect as measured by the

PANAS-NA, all EMS accounted for 38.0% of the variance in negative affect. More specifically, vulnerability to harm or illness was the only significant predictor of negative affect. For anxiety as measured by the MCMI-II, all EMS accounted for 26.0% of the variance in anxiety where no significant predictors emerged. Lastly for major depression as measured by the MCMI-II, all EMS accounted for 38.0% of the total variance in major depression where abandonment/instability was the only significant predictor of major depression. In summary, the results of this study are also consistent with Young's model. Although many scales were used to assess anxiety and depression, the results were supportive that EMS were predictive of anxiety and depression.

In a similar line of research, Welburn, Coristine, Dagg, Pontefract, and Jordan, (2002) assessed the relationship between EMS (measured by YSQ-SF) and psychological distress as measured by the *Brief Symptom Inventory* (BSI; a shortened form of the SCL-90) in a clinical sample of 196 (131 women and 65 men) day treatment patients with the mean age of 36.9 ($SD = 9.3$, range = 18-63), where no ethnic breakdown was given. Consistent with Glaser et al, the study also found that the majority of the

15 EMS significantly correlated with anxiety, depression, and paranoid ideation. Results of regression analyses revealed that all EMS accounted for 47.0% of the variance in depression. The only significant unique predictors were abandonment/instability, which accounted for 12.5% and insufficient self-control/self-discipline accounted for 5.5% of the variance in depression. For anxiety, regression analyses revealed that all EMS accounted for 52.0% of the variance in anxiety. Five significant unique predictors were abandonment/instability, which accounted for 11.3%, vulnerability to harm or illness accounted for 10.5%, failure accounted for 5.2%, self-sacrifice accounted for 3.5%, and emotional inhibition accounted for 3.3% of the variance in anxiety. Lastly, all EMS accounted for 62.0% of the total variance in paranoia ideation. The four significant unique predictors were mistrust/abuse, which accounted for 22.5%, vulnerability to harm or illness accounted for 8.4%, self-sacrifice accounted for 4.7%, and insufficient self-control accounted for 3.4% of the variance in anxiety. As with the previous research, results of this study are consistent with Young's model in that it suggests EMS are predictive of depression, anxiety, and paranoid ideation.

In a broader study, Harris and Curtin (2002) examined the relationship between parenting, EMS, and depression using 194 undergraduates (59.8% women and 60.8% men). The mean age of the sample was 19.3 (SD = 2.27; range = 18-38). No ethnic composition was given. Participants were given the BDI-II to assess the level of depression (<10 minimal depressed, 47 mild to moderate depressed, 11 moderate to severe, and 7 severely depressed). In addition, participants were given the YSQ-SF and the *Parental Bonding Instrument* (PBI). A stepwise regression revealed that EMS accounted for 63.3% of the total variance in depression. The four significant unique predictors were defectiveness/shame, insufficient self-control/self-discipline, vulnerability to harm or illness and incompetence/inferiority. Although these four EMS were significantly correlated with depressive symptoms, they were also significantly correlated with perceptions of low parental caring (PBI-C) and high parental overprotection (PBI-O). Furthermore, four mediation models were performed using the four significant EMS as mediators in the relationship between perceptions of poor parenting and depression. First, results revealed that PBI-C and PBI-O accounted for 14.4% of the variance in depression. Second,

results revealed that PBI-C and PBI-O accounted for 10.4% with defectiveness/shame, 12.5% with insufficient-self control/self-discipline, 6.3% with vulnerability to harm or illness, and PBI-C alone accounted for 13.0% with incompetence/inferiority in the variance in depression. Next, regression analysis revealed that defectiveness/shame accounted for 51.2%, insufficient self-control/self-discipline accounted for 32.7%, vulnerability to harm or illness accounted for 34.3%, and incompetence/inferiority accounted for 42.3% of the variance in depression.

Four partial mediations revealed that the variance accounted for by PBI-C and PBI-O and depression dropped from 14.4% to 2.4% for defectiveness/shame, from 14.4% to 3.6% for insufficient self-control/self discipline, from 14.4% to 6.1% for vulnerability to harm or illness, and from 14.4% to 6.5% for incompetence/inferiority when controlling for these specific EMS. These findings suggest that EMS may mediate the relationship between perceptions of poor parenting and depression. Moreover, these findings are consistent with a cognitive model of depression and Young's model in that EMS were highly predictive of depression, positively associated with perceptions of poor

parenting, and were stronger predictors of depression than perceptions of poor parenting.

Schmidt and Joiner, (2004) examined the interaction between EMS and negative life events in predicting psychological distress using 93 undergraduate students enrolled in introductory psychology classes, The sample consisted of 41 women and 52 men with the mean age of 19.0; *SD* = not given, range = 17-29; 71.0% Caucasian, 18.0% Asian American, 6% Hispanic, and 5% African American) The participants were given a questionnaire packet containing (YSQ-SF), the *Schema Negative Life Survey* (SNLES; Metalsky and Joiner, 1992; includes 52 negative life events theorized to be related to schemas measured by the YSQ), the SCL-90, the *Positive and Negative Affect Scale* (PANAS; Watson, Clark, and Tellegen, 1988), and the *Beck Depression Inventory* (BDI; Beck, 1979). The results revealed no interaction effect for individuals with a greater number of EMS and negative life events, but there was a positive relationship between EMS and psychological distress, independent of these negative life events. The authors reported a positive relationship between EMS and negative life events. Participants who scored a higher number of EMS also indicated a higher level of distress. Furthermore,

these results are consistent with Young's model where a greater number of EMS predicts higher amounts of psychological distress.

Early Maladaptive Schemas and Psychopathology

Waller, Shah, Ohanian, and Elliot (2001) also examined the difference in core beliefs among women who fell into one of the four groups (major depressive disorder; N= 18, severely depressed bulimic; N=31, non-depressed bulimic; N= 26, and comparison women; N= 45). The sample consisted of 96 European Americans, 5 Asian-Americans and 1 Afro-Caribbean participant; however no mean age was given. All study participants were given the BDI and YSQ. Results of a one-way ANOVA revealed significant differences between the groups on 13 of the 15 EMS. Specifically, the comparison women scored lower on abandonment/instability, dependence/incompetence, defectiveness/shame, and insufficient self-control/self-discipline scales than the bulimic groups. Interestingly, bulimics with either moderate to severe depression or major depressive disorder tended to share the EMS of abandonment/instability, emotional deprivation, emotional inhibition,

entitlement/grandiosity, mistrust/abuse, social isolation, and unrelenting standards/hypercriticalness. Furthermore, bulimics with major depressive disorder tended to out score any other group on the EMS of dependence/incompetence, subjugation, and vulnerability to harm or illness. A stepwise discriminant function analysis was performed to find differences among the groups. The five groups were different by two functions (social isolation and defectiveness/shame scores) and the second function (failure to achieve). Overall, findings suggest that bulimics with moderate to severe depression tended to score higher on both functions. Whereas, bulimics with major depressive disorder tended to score higher on the social isolation and defectiveness/shame function but did not tend to score higher on the failure to achieve function. These findings suggest that individuals with depression tended to have a greater amount of unhealthy core beliefs than non-depressed individuals regardless of the diagnosis of bulimia. These results are consistent with Young's model in that EMS were prevalent in bulimic groups and especially those that had comorbid depression.

In a similar line of research, Waller, Meyer, and Ohanian, (2001) examined the relationship between EMS and

bulimic pathology (binging and purging) using 120 participants (60 bulimic women with mean age 25.3 and 60 non-bulimic women with mean age 26.8). No sample demographic information was *provided*. Participants were then given the YSQ. Results showed that insufficient self-control/self-discipline was positively correlated with binging behaviors. Results also showed that abandonment/instability was positively correlated with purging behaviors. Overall findings showed that both binging and purging behaviors were positively correlated with emotional inhibition and social isolation/alienation. This suggests EMS in general and these particular EMS specifically may play an important role in the continuance of each type of bulimic pathology. This is also consistent with Young's model where it is possible that eating disorder behaviors are maladaptive coping attempts to deal with the painful affect elicited by EMS activation.

A study done by Waller, Ohanian, Meyer, and Osman, (1999) examined the relationship of cognitive core beliefs and bulimic disorders using 100 participants (50 bulimics with mean age 24.4 and 50 non-bulimic women with mean age 22.1). No ethnic composition was given. The patients were diagnosed and divided into four groups (bulimic nervosa; N=

28, anorexia nervosa; N= 12, binge eating disorder; N= 10, and comparison group; N= 50). All participants were then given the YSQ questionnaire. A MANOVA was performed and results showed differences between groups on 15 of the 16 EMS where bulimic groups had greater pathological scores than the comparison women. There were no significant differences among the bulimic groups on any of the individual EMS. Multiple regression analyses revealed that all EMS accounted for 32.4% of the variance in the frequency of bingeing where emotional inhibition was the only unique significant predictor. In the frequency of vomiting, all EMS accounted for 30.0% of the variance where the only unique significant predictor was defectiveness/shame. These results are also consistent with Young's model in that EMS represent a cognitive diathesis for psychopathology (e.g., bulimic pathology).

In a treatment outcome study, Nordalh, Holthe, and Haugum (2005) examined the relationship between EMS, psychological distress, and personality disorder traits in a sample of 82 Norwegian psychiatric outpatients (46 women and 36 men; mean age = 37.7, SD = 10.7, range 19-68). Patients were first diagnosed as Axis I or Axis II using a *Structured Clinical Interview* (44 Axis I patients and 38

Axis II patients). The patients were then given the SCL-90 and the YSQ-SF. A bivariate correlation revealed that all EMS (except for emotional deprivation, entitlement/grandiosity, and enmeshment/undeveloped self) were significantly correlated with psychological distress. In personality traits, results showed that the EMS of mistrust/abuse, defectiveness/shame, and emotional deprivation significantly correlated with *paranoid*, *dependent*, and *borderline* personality traits. Furthermore, the EMS of entitlement/grandiosity and insufficient self-control/self-discipline significantly correlated with *obsessive* and *passive aggressive* personality traits. Lastly, vulnerability to harm or illness, emotional inhibition, and insufficient self-control/self-discipline significantly correlated with *narcissistic* personality traits. Additionally, an ANCOVA with pre-treatment psychological distress as the covariate revealed significant main effects for the presence of personality disorder. Results indicated that those with personality disorder scored higher than those without a personality disorder on 12 of the 15 EMS. These results are consistent with the Young's model in that with a patient sample, EMS are associated with specific forms of psychopathology and

that EMS were higher in the more pathological group (Axis II vs. Axis I).

In a similar study, Gude, Hoffart, Hedley, and Ro (2004) examined the relationship between EMS and Dependent Personality Disorder using 182 Norwegian psychiatric patients with agoraphobia (N=117) mostly with panic (91%), without panic (9%), and patients with eating disorders (N=65; all patients were diagnosed with having Cluster C (anxious-fearful) personality disorders/traits). The patients were then given the YSQ and BDI. The sample consisted of 81% women and 19% males with a mean age of 41.3 (± 8.7). A *Structured Clinical Interview* was used to diagnosis personality disorders in patients prior to having them complete the YSQ-SF and BDI. Results showed that abandonment/instability significantly correlated with two components dependency/incompetence and attachment/abandonment of the Dependent Personality Disorder traits while controlling for the level of depression as measured by BDI and the Global personality Index. Although associations were weak here, the associations between EMS and the two categories for Dependent Personality Disorder support Young's model where

EMS may be a better predictor of depression rather than a specific personality disorder.

These previous studies have demonstrated a positive relationship between EMS and Axis I and Axis II psychological symptoms in both patient and undergraduate samples. However, the Schema Model also proposes that EMS are associated with schema maintaining maladaptive avoidance coping and that the relationship between EMS and psychological distress should be mediated by maladaptive avoidance coping. That is the relationship between EMS and psychological distress results from EMS activating avoidance coping, which exacerbates psychological distress. On the other hand, adaptive coping should attenuate this relationship. For example, a male college student whose abandonment/instability EMS is activated by his girlfriend breaking up with him will have less psychological distress if he employs an adaptive versus maladaptive coping strategy.

CHAPTER THREE
COPING LITERATURE REVIEW

Although no studies to date have examined the relationship between EMS and maladaptive emotion-focused coping (e.g. avoidance coping), the following studies examined the relationships between maladaptive emotion-focused coping styles, psychological distress, and personality dimensions.

Avoidance Coping and
Psychological Distress

Myers and Derakshan, (2000) examined the relationship between coping styles as measured by the *Coping Orientation to Problem Experience* (COPE; Carver, Scheier, and Weintraub, 1989) and mood states as a part of a larger study on repressive and defensive personality types. The sample consisted of 167 freshman and sophomore psychology undergraduates with mean age 24.35 ($SD = 8.61$). No other sample characteristics were given. Results showed that trait anxiety was negatively correlated with the adaptive active coping, planning subscales of problem-focused coping. Results also revealed that trait anxiety was

negatively correlated with emotion-focused coping (growth/re-interpretation) an adaptive coping strategy. Furthermore, trait anxiety was positively correlated with maladaptive emotion-focused coping, specifically the focus on and venting of emotions, denial, and behavioral disengagement. That is trait anxiety was associated with the under-utilization of adaptive coping techniques and over-utilization of maladaptive emotion-focused coping techniques. These results demonstrate that maladaptive emotion-focused coping is related to anxiety, which supports Young's model in that maladaptive coping is associated with psychological distress. As the study did not measure EMS, no conclusions about the relationship of EMS and coping can be drawn.

Carver, Scheier, and Weintraub, (1989) examined the relationship between adaptive and maladaptive coping tactics and various personality dimensions (optimism-pessimism; self-esteem; hardiness; social desirability; trait anxiety) in a sample of 978 undergraduates. The authors did not report any sample demographics. The study employed the COPE and five other personality measures *Life Orientation Test* (LOT; Scheier and Carver, 1985), *Self-Esteem Scale* (SES; Rosenberg, 1965), *Personal Views Survey*

(PVS; Hardiness Institute, 1985), *State-Trait Anxiety Inventory* (STAI-TA; Spielberger et al., 1970), and *Marlowe-Crowne Social Desirability Scale* (MC; Crowne and Marlowe, 1964). Results revealed that adaptive problem-focused coping positively correlated with optimism (presumably a positive schema). More specifically, problem-focused coping subscales of active coping, planning, and restraint coping positively correlated with optimism. Results also indicated that adaptive emotion-focused coping also positively correlated with optimism. Particularly, seeking instrumental social support, positive reinterpretation and growth, acceptance, and turning to religion positively correlated with optimism. Moreover, maladaptive emotion-focused coping (avoidance coping) negatively correlated with optimism (a healthy schema). Results also indicated that active coping and restraint coping subscales of problem-focused coping negatively correlated with trait anxiety. Furthermore, positive reinterpretation and growth subscale of emotion-focused coping negatively correlated with trait anxiety. More importantly, all maladaptive emotion-focused coping subscales (except for alcohol-drug disengagement) positively correlated with trait anxiety, which makes sense in that alcohol and drug use tends to

alleviate anxiety on the surface. Overall, these findings suggest that maladaptive emotion-focused coping or avoidant coping strategies are associated with trait anxiety and with lower levels of optimism. These findings are consistent with Young's model where maladaptive avoidance coping is positively associated with anxiety and negatively associated with optimism (a concept antithetical to EMS).

Litman, (2006) examined the relationship between coping strategies (approach versus avoidant motives) and personality traits (positive and negative traits). In the first study, the sample consisted of 230 (149 women and 81 men) students with mean age 20.84 ($SD = 4.84$, ranging from 18-51). No ethnic composition was given. Participants were given the COPE, *The Behavioral Activation/Inhibition Scales* (BAS/BIS; Carver and White, 1994; designed to assess approach/avoidant behavior), *The International Personality Item Pool Extraversion Scale* (assesses the "Big Five" positive traits), and STPI (measures anxiety, depression, anger, and curiosity). Factor analysis was performed where four factors emerged. Factor I included the subscales of planning, active coping, and suppression of competing activities of the problem-focused coping scale. Factor II included the subscales of denial, substance abuse, mental

disengagement, and behavioral disengagement of the maladaptive or avoidant emotion-focused coping scale. Factor III included the subscales emotional social support, instrumental social support, and venting of and focusing on emotions. Factor IV included the subscales restraint coping, positive reinterpretation and growth, acceptance, and humor of the self-sufficient emotion-focused coping scale. Results revealed that avoidant coping (Factor II) positively correlated with depression and anxiety. In addition, positive reinterpretation and growth (emotion-focused coping scale; Factor III) negatively correlated with depression and anxiety. Study two examined the COPE scales and if students would approach/avoid academic success using 357 (279 women, 78 men) students with mean age 20.41 ($SD = 4.10$, ranging from 18-53). No ethnic composition was given. A factor analysis was performed where three factors emerged. Factor I included the subscales planning, active coping, positive reinterpretation and growth, suppression of competing activities, acceptance, restraint coping, humor, turning to religion of the self-sufficient problem focused coping scale. Factor II included the subscales denial, mental disengagement, behavioral disengagement, and substance

abuse of the maladaptive or avoidant coping scale. Factor III included emotional social support, instrumental social support, and focusing on and venting of emotions of the socially supported emotion-focused coping scale. For self-sufficient problem-focused coping (Factor I), results revealed all subscales (except for suppression of competing activities and humor) negatively correlated with anxiety. For the avoidant coping (Factor II), all subscales except for mental disengagement positively correlated with anxiety. For socially supported emotion-focused coping (Factor III), emotional social support and instrumental social support negatively correlated with anxiety. Interestingly, focusing on and venting of emotions positively correlated with anxiety. This result gives support that focusing on and venting of emotions may help to prolong anxiety rather than relieve anxiety. In summary, these results support Young's theory in that avoidance coping was associated with anxiety and depression.

Liverant, Hofmann, and Litz, (2004) examined the relationship between PTSD anxiety responses and coping responses of the 911 terrorist attacks at two different time periods (the first administration was given about one and three months after September 11 and the second

administration two months after the initial data collection. The sample consisted of 178 undergraduate psychology students (112 women and 66 men with mean age $M = 18.65$, $SD = 1.72$, ranging from 17-23) living in Boston, Massachusetts. No ethnic composition was given. Participants were given *Beck's Anxiety Inventory* (BAI; measures physical and psychological symptoms of anxiety), COPE, and a demographics questionnaire (assessing the indirect impact and changes in thoughts and behaviors as result of the 911 attacks). Results indicated that maladaptive emotion-focused coping strategies (focusing on and venting of emotions, mental disengagement, behavioral disengagement and denial were significantly correlated with anxiety at the first test time. Moreover, results showed that maladaptive emotion-focused coping strategies (mental disengagement and focusing on and venting of emotions) were significantly associated with anxiety at both test times. However at time 2, individuals showed less anxiety than at test time 1. Surprisingly, results did not reveal an association between the adaptive forms of coping strategies (problem-focused and emotion-focused coping) and anxiety. A linear regression was performed using maladaptive emotion-focused coping subscales (focusing on and venting of

emotions, mental disengagement, behavioral disengagement, and denial) and the total subjective indirect impact scale as predictors of anxiety severity at test time 1. Results revealed that the model accounted for 27.0% of the variance in anxiety at test time one. More importantly, a hierarchical regression that controlled for the first test time anxiety found that the model accounted for 51.6% of the variance in anxiety at time 2. Results also indicated that the only significant predictor was focusing on and venting of emotions, which accounted for 20.9% of the variance in anxiety at test time two. These findings suggest that individuals who use maladaptive emotion-focused coping strategies, more specifically focusing and venting of emotions, may be increasing and even prolonging their levels of anxiety following a major stressor. These results are also consistent with Young's model in that avoidance coping was associated with both level and persistence of psychological distress, more specifically anxiety.

Arnett, Higginson, Voss, Randolph, and Grandey, (2002) examined the relationship between maladaptive emotion-focused coping, cognitive dysfunction, and depression using 55 participants with multiple sclerosis. No ethnic

composition or mean age was given. The participants were given the COPE and the *Cognitive Task Index*, (CTI; assessing cognitive dysfunction and depression in individuals with MS). In addition estimates of intellectual functioning and medication measures were used to control for these variables. Results revealed that the avoidance coping lower order scales (mental disengagement, denial, and behavioral disengagement) positively correlated with depression, whereas, active coping lower order scales (active coping, planning, and suppression of competing activities) were negatively correlated with depression. Hierarchical regression revealed that both CTI and maladaptive emotion-focused coping were predictive of depression. More specifically, results showed that when combined they accounted for 67.0% of the variance in depression. More importantly after controlling for cognitive task and avoidance coping factors, maladaptive avoidance coping still accounted for 8.0% of the variance in depression. Additionally after controlling for cognitive task and active coping factors, adaptive active coping still accounted for 18.0% of the variance in depression. Furthermore, patients tended to show greatest depressive symptoms when they had low cognitive abilities and used

high levels of maladaptive emotion-focused coping (i.e. avoidance coping). Moreover, when individuals used low amounts of maladaptive emotion-focused coping strategies, depression levels did not change regardless of cognitive ability. This result suggests that the greater use of maladaptive emotion-focused coping strategies is a better predictor of depression than cognitive ability alone. These findings are also consistent with Young's model where avoidance coping is associated with depression.

Avoidance Coping and Psychopathology

Vollrath, Alnaes, and Torgersen, (1995) performed a six-year follow up clinical study using 240 (168 women and 72 men; mean age not given, range = 24-65) outpatients from the Department of Psychiatry, University of Oslo. The authors examined the relationship between adaptive and maladaptive coping and personality disorders. All outpatients were diagnosed with either an Axis I or Axis II disorder and were given a *Structured Interview for DSM-III-R Personality Disorders* (SIDP-R; Spitzer and Williams, 1983) and the COPE. The patients were appropriately placed into one of the eleven categories found within the SIDP-R (i.e., *paranoid, schizoid, schizotypal, borderline,*

histrionic, narcissistic, avoidant, dependent, obsessive, passive-aggressive, and self-defeating). It was found that adaptive coping, such as *active coping, seeking support,* and *positive reinterpretations* were negatively correlated with personality disorder subscales. Moreover, maladaptive emotion-focused coping styles such as disengagement and use of alcohol and drugs positively correlated with all the personality scales. Specifically, the denial scale significantly correlated with histrionic and avoidant personality disorders; distraction significantly correlated with borderline and avoidant personality disorders; and focus on and venting of emotions significantly correlated with histrionic and narcissistic personality disorders. Thus, this study provided additional evidence of the relationship between maladaptive emotion-focused coping and psychopathology. Furthermore, the research showed that individuals, who suffer from personality disorders and presumably EMS, tend to under-utilize adaptive problem-focused and emotion-focused coping strategies and overuse maladaptive emotion-focused coping or avoidant coping strategies. These results can be extrapolated to be consistent with Young's assertion that poor coping efforts are associated with both EMS and psychological distress.

Spranger, Waller, and Byrant-Waugh (2000) examined avoidance coping in an eating disordered group and comparison control group. The study used the *Young-Rygh Avoidance Inventory* (YRAI; 2003). The sample consisted of 93 women (19 women with mean age 30.8; $SD = 9.99$, range = 20-53) previously diagnosed with an eating disorder such as bulimia nervosa, anorexia nervosa, or binge eating disorder) and 74 volunteer comparison women (mean age 19.7; $SD = 2.37$, range = 16-33). No ethnic composition was given. The study found that the women with an eating disorder scored significantly higher on the total avoidance score and each derived subscale (*cognitive/affective, behavioral/somatic avoidance*) than the comparison group. Hence, this research suggests that women suffering from eating disorders engage in more avoidance coping strategies than do the women in the control group. Although this study used a different inventory to measure avoidance coping, results were consistent with Young's model that suggests that avoidance coping is related to psychopathology.

In summary, although to date there are no published studies that have examined the relationship between EMS and maladaptive avoidance coping directly, researchers have found relationships between EMS, anxiety, and depression

(Schmidt et al., 1995; Glaser et al., 2002; Welburn et al., 2002; and Harris and Curtin, 2002), and maladaptive emotion-focused coping strategies, anxiety and depression (Meyers and Derakshan, 2000; Carver, Scheier, and Weintraub, 1989; Litman, 2006).

More Importantly, previous studies done by Waller, Ohanian, Meyer, and Osman, (1999) and Waller, Shah, Ohanian, and Elliot (2001) examined the relationship between EMS and psychopathology in the bulimic population where EMS were predictive of psychological distress (i.e., depression). These findings suggest that EMS were in fact related to specific eating disordered pathology but previous research has also linked eating disordered pathology to avoidance coping, which suggests that there may be an indirect relationship between avoidant coping, EMS, and psychological distress. Taken as a whole, these results are consistent with Young's model and suggest that eating disordered individuals may use avoidance coping to suppress the activation of a particular EMS that then leads to greater amounts of psychological distress. Ultimately, these studies support the purpose of our study where EMS and avoidance coping may play an important role in the exacerbation or prolonging of anxiety and depression.

Purpose of Study

The purpose of this thesis is to examine the direct relationship between EMS, maladaptive emotion-focused coping strategies and anxiety and depression. Specifically, it is predicted that maladaptive emotion-focused coping will mediate the relationship between EMS and psychological distress (i.e. anxiety and depression).

Hypotheses

Based upon prior research and Baron and Kenny's (1986) model for testing mediation the hypotheses tested are as follows:

1. EMS will be predictive of anxiety.
2. EMS will be predictive of depression
3. EMS will be predictive of maladaptive emotion-focused coping.
4. Maladaptive emotion-focused coping will be predictive of anxiety.
5. Maladaptive emotion-focused coping will be predictive of depression.
6. The relationship between EMS and anxiety will be mediated by maladaptive emotion-focused coping.
7. The relationship between EMS and depression will be

mediated by maladaptive emotion-focused coping.

Additionally, post-hoc exploratory regression analyses will be conducted to determine the unique contribution of the individual coping variables (i.e. problem-focused, emotion-focused, and maladaptive emotion-focused coping) in relationship to EMS, anxiety, and depression and to determine the strongest model in accounting for psychological distress (i.e. anxiety and depression).

CHAPTER FOUR

METHODOLOGY

Participants

Participants were 236 undergraduate students (117 women and 119 men) from Social Science classes at California State University, San Bernardino. Participants received 3 extra credit points for their participation. Study participants ranged in age from 18-52 ($M = 22.4$, $SD = 6.77$). The ethnic composition of the sample was 36.0% Caucasian, 34.3% Latino, 9.7% African-American, 9.8% Asian, and 0.4% Native-American, and 8.9% other. All participants were treated in accordance with "Ethical Principles of Psychologists and code of conduct" (APA, 2002).

Measures

Demographic Questionnaire. This measure was designed to collect demographic information including age, gender, income and ethnicity.

Young Schema Questionnaire-Short Form (YSQ-SF; Young, 1998). This 75-item self-report questionnaire is designed to measure presence and severity of Early Maladaptive Schemas. Each item is rated on a 6-point Likert-type scale

indicating the degree to which participant agree with the statement (1 = *completely untrue of me*; 2 = *mostly untrue of me*; 3 = *slightly more true than untrue*; 4 = *moderately true of me*; 5 = *mostly true of me*; 6 = *describes me perfectly*). Higher scores indicate greater presence and/or severity of EMS. The YSQ-SF yields five domains and 15 schemas (see introduction for further elaboration regarding schemas and domains). Three of the 18 schemas that failed to emerge in factor analysis (see Schmidt, Joiner, Young, and Telch, 1995) have been omitted. These include *approval /recognition seeking, negativism/pessimism, and punitiveness*. Adequate internal consistency of the schema subscales has been reported with Cronbach's alpha coefficients ranging from .76 to .93 (Welburn et al, 2002) and .71 to .93 (Glaser et al., 2002). Construct validity of this measure is supported where 70 of the 75 items loaded as designed (Wellburn et al. 2002) and where all 15 EMS subscales were comparable to and accounted for significant variance in several other measures of symptomology (Glaser et al. 2002).

Coping Orientation to Problem Experience, (COPE; Carver et al., 1989). This 60-item self-report

questionnaire is designed to measure how people respond when they confront difficult or stressful events in their lives. Each item is rated on a 4 point Likert-type scale, indicating degree to which participant agrees to the statement (1 = *I usually don't do this at all*; 2 = *I usually do this a little bit*; 3 = *I usually do this a medium amount*; 4 = *I usually do this a lot*). Higher scores indicate greater frequency of the specified coping behavior. The COPE yields 16 lower order subscales that cluster into three higher order subscales: problem-focused coping (PFC; active coping, planning, suppression of competing activities, and seeking social support-instrumental), adaptive emotion-focused coping (EFC; seeking social support-emotional, positive reinterpretation & growth, acceptance, and turning to religion) and maladaptive emotion-focused coping (MEFC; mental disengagement, denial, behavioral disengagement, alcohol-drug disengagement, and focusing and venting of emotions). This study will only utilize maladaptive emotion-focused coping scale as a measurement of avoidance coping. Internal consistency has been reported with Cronbach's alpha coefficients ranging from .62 to .90 (Zuckerman & Gagne, 2003). The reliability of the COPE is based on the internal

consistency, which is measured by Cronbach's alpha reliability coefficients. These coefficients were very high, with only one falling below .60. For the purpose of this thesis, the higher order subscale of problem-focused coping, emotion-focused coping, and maladaptive emotion-focused coping will be used to measure the unique contribution of these coping variables in the relationship to EMS, anxiety, and depression.

Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983). This measure is a 90-item self-report questionnaire designed to measure psychological symptoms over the past week. Each item is rated on a five-point Likert scale ranging from 0 to 4 where 0 = *not at all*, 1 = *a little bit*, 2 = *moderately*, 3 = *quite a bit*, and 4 = *extremely*. Higher scores indicate greater presence of psychological symptoms. The SCL-90-R results in nine primary symptom dimensions (*Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism*). It also includes three indices that assess overall levels of distress. These are the Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total. For the purpose of this thesis, the lower order scales of anxiety

CHAPTER FIVE

RESULTS

Statistical Approach

Bivariate correlation, multiple regression and hierarchical regression was utilized to test all study hypotheses and for exploratory post hoc analyses. In order to test mediation of the EMS-anxiety and EMS-depression relationship by MEFC, a mediation model utilized Early Maladaptive Schemas (EMS) as the independent variable (IV), depression or anxiety as the dependent variable (DV), and maladaptive emotion-focused coping (MEFC) as a mediator. Barron and Kenny (1986) suggested that three conditions would need to be met to test for mediation. First, the IV (EMS) must be predictive of the DV (anxiety or depression). Second, the mediator (MEFC) must be predictive of the DV (anxiety or depression). Third, the IV (EMS) must be predictive of the mediator (MEFC). If all conditions (Hypotheses 1-5) are met, then a hierarchical regression analysis with the mediator (MEFC) entered in the first step and the IV (EMS) entered in the second step with anxiety or depression as the criterion variable will be performed. If a previously significant relationship between the IV (EMS)

and the DV (anxiety or depression) is either greatly reduced or eliminated then partial or complete mediation respectively has occurred (Baron & Kenny, 1986).

Additionally, post-hoc exploratory regression analyses were conducted to determine the unique contribution of the individual coping subscales in relationship to both EMS and psychological distress (e.g. anxiety and depression), as well as to determine the strongest regression model in predicting anxiety and depression.

Statistical Analysis of Early Maladaptive Schemas and Psychological Distress

Two separate multiple regression analyses were conducted to test whether EMS was predictive of both anxiety and depression. Consistent with Hypothesis 1, results showed that EMS collectively accounted for 41.5% of the variance in anxiety as measured by the SCL-90, $F(15, 220) = 10.39, p < .05$. Specifically, the EMS of vulnerability to harm or illness (VH), enmeshment/undeveloped self (EM), subjugation (SB) and self-sacrifice (SS) were the only significant unique predictors of anxiety. A separate regression analysis with only the significant EMS predictors was conducted and

accounted for 39.2% of the variance in anxiety, $F(4, 231) = 37.21, p < .05$, (see Table 1).

Table 1.

Multiple Regression Model of Early Maladaptive Schemas as Predictors of Anxiety (N = 235)

Variable Entered	β	R^2	R^2 change	Prob R^2 Change
<u>Step 1</u>		.392	.392	.000
VH	.358			.000
EM	.147			.023
SB	.272			.000
SS	-.152			.050

Note. β : standardized coefficients. VH; vulnerability to harm and illness, EM; enmeshment/hypercriticalness, SB; subjugation and SS; self-sacrifice.

Additionally, the correlation coefficients of the significant predictors and anxiety are presented in Table 2.

Table 2

Correlations of Significant Early Maladaptive Schemas as Predictors of Anxiety

	SCL-90 Anxiety	VH	EM	SB	SS
SCL-90 Anxiety	---	.568***	.452***	.519***	.166**
VH		---	.530***	.616***	.310***
EM			---	.548***	.289***
SB				---	.468***
SS					---

Note. ** $p < .05$, *** $p < .001$. VH; vulnerability to harm and illness, EM; enmeshment/undeveloped self, SB; subjugation, and SS; self-sacrifice

Consistent with Hypothesis 2, EMS accounted for 45.3% of the variance in depression, $F(15, 220) = 12.15, p < .05$. The EMS of abandonment/instability (AB), enmeshment/undeveloped self (EM), subjugation (SB), and insufficient self-control/self discipline (IS) were the

only significant predictors. A separate regression analysis with only the significant EMS predictors was conducted and accounted for 40.9% of the variance in depression, $F(4, 231) = 39.96, p < .05$, (see Table 3).

Table 3.

Multiple Regression Model of Early Maladaptive Schemas as Predictors of Depression (N = 235)

Variable Entered	β	R^2	R^2 change	Prob R^2 Change
<u>Step 1</u>		.409	.409	.000
AB	.230			.000
EM	.159			.010
SB	.253			.000
IS	.182			.003

Note. β : standardized coefficients. AB; abandonment/instability, EM; enmeshment/undeveloped self, SB; subjugation, and IS; insufficient self-control/self-discipline

Additionally, the correlation coefficients of the significant predictors and depression are presented in Table 4.

Table 4

Correlations of Significant Early Maladaptive Schemas as Predictors of Depression

	SCL-90 Depression	AB	EM	SB	IS
SCL-90 Depression	---	.492***	.443***	.552***	.468***
AB		---	.313***	.530***	.426***
EM			---	.548***	.400***
SB				---	.490***
IS					---

Note. *** p < .001. AB; abandonment/instability, EM; enmeshment/undeveloped self, SB; subjugation, and IS; insufficient self-control/self-discipline

Statistical Analysis of Early Maladaptive Schemas and Maladaptive Coping

A multiple regression analysis was used to test whether EMS was predictive of maladaptive emotion-focused coping. Although there were no published studies that

examined the direct relationship between EMS and maladaptive emotion-focused coping, results were consistent with Hypothesis 3. Results revealed that EMS accounted for 34.8% of the variance in maladaptive emotion-focused coping, $F(15, 220) = 7.83, p < .05$, unrelenting standards/hypercriticalness (US), entitlement/grandiosity (ET), and insufficient self-control (IS) were the only significant predictors. A separate regression analysis using only the significant EMS predictors was conducted and accounted for 24.6% of the variance in maladaptive emotion-focused coping, $F(3, 232) = 25.24, p < .05$ (see Table 5).

Table 5.

Multiple Regression Model of Early Maladaptive Schemas as Predictors of Maladaptive Emotion-Focused Coping (N = 235)

Variable Entered	β	R^2	R^2 change	Prob R^2 Change
<u>Step 1</u>		.246	.246	.000
US	-.251			.000
ET	.192			.005
IS	.413			.000

Note: β : standardized coefficients. US; unrelenting standards/hypercriticalness, ET; entitlement/grandiosity IS; insufficient self-control/self-discipline.

Additionally, the correlation coefficients of the significant predictors and depression are presented in Table 6.

Table 6.

Correlations of Significant Early Maladaptive Schemas as Predictors of Maladaptive Emotion-Focused Coping

	MEFC	US	ET	IS
MEFC	---	-.092	.233**	.436**
US		---	.446**	.176**
ET			---	.347**
IS				---

Note. ** p < .05, *** p < .001. MEFC; maladaptive emotion-focused coping, US; unrelenting standards/hypercriticalness, ET; entitlement/grandiosity, and IS; insufficient self-control/self-discipline.

Statistical Analysis of Maladaptive Coping and Psychological Distress

A multiple regression analysis was used to test whether maladaptive emotion-focused coping was predictive of anxiety. Results were consistent with previous findings and supported Hypothesis 4. The analysis indicated that

maladaptive emotion-focused coping accounted for 7.4% of the variance in anxiety, $F(1, 234) = 18.61, p < .05$.

Additionally, a multiple regression analysis was used to examine whether maladaptive emotion-focused coping was predictive of depression (Hypothesis 5). Consistent with Hypothesis 5, maladaptive emotion-focused coping accounted for 10.6% of the variance in depression, $F(1, 234) = 27.74, p < .05$. Because all conditions to test mediation were met (Baron & Kenny, 1986), two hierarchical regression analyses with MEFC as the mediator entered in the first step and EMS as the IV entered in the second step with anxiety or depression as the criterion variable were performed. With anxiety, the four unique EMS (vulnerability to harm or illness, enmeshment/undeveloped self, subjugation, and self-sacrifice) were used as the IV. With depression, the four unique EMS (abandonment/instability, enmeshment/undeveloped self, subjugation, and insufficient self-control/self-discipline) were used as the IV.

Statistical Analysis of Original Mediation Model

A hierarchical regression analysis with anxiety as the criterion was conducted. Results were not consistent with

Hypothesis 6, and revealed that when controlling for maladaptive emotion-focused coping, the variance in anxiety accounted for by vulnerability to harm or illness (VH), enmeshment/undeveloped self (EM), self-sacrifice (SS), and subjugation (SB) still accounted for 32.0%, $F(4, 230) = 30.33, p < .05$ (see Table 7). This represents only a 7.2% drop in variance (i.e., from 39.2% to 32.0%) with EMS remaining a significant predictor of anxiety and thus no evidence for mediation was found.

Table 7.

Hierarchical Regression of Maladaptive Emotion-Focused Coping as a Mediator of Early Maladaptive Schemas and Anxiety (N = 234)

Variable Entered	β	R^2	R^2 change	Prob R^2 Change
<u>Step 1</u>				
MEFC	.271	.074	.074	.000
<u>Step 2</u>			.320	.000
VH	.354			.000
EM	.146			.024
SB	.255			.001
SS	-.108			.067

Note. β : standardized coefficients. MEFC; maladaptive emotion-focused coping, VH; vulnerability to harm and illness, EM; enmeshment/hypercriticalness, SB; subjugation, and SS; self-sacrifice

These results do not support Hypothesis 6 that the relationship between EMS and anxiety is mediated by maladaptive emotion-focused coping. At best, the results are suggestive of partial, but weak mediation by maladaptive emotion-focused coping in the relationship between EMS and anxiety.

Likewise, the results of hierarchical regression controlling for maladaptive emotion-focused coping, revealed that the variance in depression accounted for by abandonment/instability (AB), enmeshment/undeveloped self (EM), subjugation (SB), and insufficient self-control (IS) still accounted for 30.4%, $F(4, 230) = 29.69, p < .05$ (see Table 8). This represents only a 10.5% drop in variance (i.e., from 40.9% to 30.4%) with EMS remaining a significant predictor of depression and thus no evidence for mediation was found.

Table 8.

Hierarchical Regression of Maladaptive Emotion-Focused Coping as a Mediator of Early Maladaptive Schemas and Depression (N = 234)

Variable Entered	β	R ²	R ² change	Prob R ² Change
<u>Step 1</u>				
MEFC	.326	.106	.106	.000
<u>Step 2</u>			.304	.000
AB	.225			.000
EM	.161			.010
SB	.245			.001
IS	.169			.008

Note. β : standardized coefficients. MEFC; maladaptive emotion-focused coping, AB; abandonment/instability, EM; enmeshment/hypercriticalness, SB; subjugation, and IS; insufficient self-control/self-discipline.

As with anxiety, results for Hypothesis 7 showed a partial but weak mediation by maladaptive emotion-focused coping in the relationship between EMS and depression.

Post Hoc Analysis of Mediation Model

Interestingly, when a post hoc hierarchical regression analysis was conducted with EMS as the mediator in the relationship between maladaptive emotion-focused coping and anxiety, complete mediation occurred. Results indicated

that the variance in anxiety accounted for by MEFC, controlling for vulnerability to harm or illness, enmeshment/undeveloped self, self-sacrifice, and subjugation was only 0.2%, $F(1, 230) = .63, p > .05$. This represents a substantial 7.2% drop in variance (i.e., from 7.4% to 0.2%) with MEFC as no longer a significant predictor of anxiety. Thus once controlling for EMS, MEFC was no longer a significant predictor indicating that EMS completely mediated the relationship between MEFC and anxiety. Likewise, when a post hoc hierarchical regression analysis was conducted with EMS as the mediator in the relationship between maladaptive emotion-focused coping and depression, complete mediation occurred. Results indicated that the variance accounted for in depression by MEFC, when controlling for abandonment/instability, enmeshment/undeveloped self, subjugation, and insufficient self-control was only 0.4%, $F(1, 230) = 1.48, p > .05$ ns. This represents a substantial 10.2% drop in variance (i.e., from 10.6% to 0.4%) with MEFC as no longer a significant predictor of depression. Taken as a whole, the results that revealed that EMS accounted for a larger amount of variance in both anxiety and depression than MEFC, and the complete mediation by EMS in the relationship between maladaptive

coping and these mood states is suggestive that the relationship between maladaptive emotion-focused coping and depression or anxiety is completely accounted for by EMS.

Post Hoc Analysis of Coping Model

Additionally, post-hoc exploratory regression analyses were conducted to determine the unique contribution of the individual coping variables (i.e. problem-focused coping, emotion-focused coping, and maladaptive emotion-focused coping) in the relationship to EMS, anxiety, and depression. In the prediction of EMS, results indicated that problem-focused (PFC), emotion focused (EFC), and maladaptive emotion-focused coping (MEFC) accounted for 16.9% of the variance in total EMS score, $F(3, 232) = 15.76, p < .05$, with maladaptive emotion-focused coping as the only significant predictor of EMS (see Table 9).

Table 9.

Multiple Regression Model of Coping as Predictors of all Early Maladaptive Schemas (N = 235)

Variable Entered	β	R^2	R^2 change	Prob R^2 Change
<u>Step 1</u>		.169	.169	.000
PFC	-.081			.265
EFC	-.028			.702
MEFC	.393			.000

Note. β : standardized coefficients. PFC; problem-focused coping, EFC; emotion-focused coping, and MEFC; maladaptive emotion-focused coping.

Likewise in the prediction of anxiety, results indicated that problem-focused (PFC), emotion focused (EFC), and maladaptive emotion-focused coping accounted (MEFC) for 9.2% of the variance in anxiety, $F(3, 232) = 7.86$, $p < .05$, with maladaptive emotion-focused coping as the only significant predictor of anxiety (see Table 10).

Table 10.

Multiple Regression Model of Coping Variables as Predictors of Anxiety (N = 235)

Variable Entered	β	R ²	R ² change	Prob R ² Change
<u>Step 1</u>		.092	.092	.000
PFC	-.021			.780
EFC	-.123			.104
MEFC	.269			.000

Note. β : standardized coefficients. PFC; problem-focused coping, EFC; emotion-focused coping, and MEFC; maladaptive emotion-focused coping.

Finally in the prediction of depression, results indicated that problem-focused (PFC), emotion-focused (EFC), maladaptive emotion-focused coping (MEFC) accounted for 12.7% of the variance in depression, $F(3, 232) = 11.24, p < .05$, with maladaptive emotion-focused coping as the only significant predictor of depression (see Table 11).

Table 11.

Multiple Regression Model of Coping Variables as Predictors of Depression (N = 235)

Variable Entered	β	R ²	R ² change	Prob R ² Change
<u>Step 1</u>		.127	.127	.000
PFC	-.054			.471
EFC	-.108			.146
MEFC	.321			.000

Note. β : standardized coefficients. PFC; problem-focused coping, EFC; emotion-focused coping, and MEFC; maladaptive emotion-focused coping.

These results suggest that maladaptive emotion focused coping strategies were the only form of coping that were predictive of EMS and psychological distress.

CHAPTER SIX

DISCUSSION

The current study examined the direct relationship between early maladaptive schemas (EMS), maladaptive emotion-focused coping strategies (maladaptive avoidance coping) with anxiety and depression. Specifically, this study predicted that maladaptive avoidance coping would mediate the relationship between early maladaptive schemas and psychological distress (i.e. anxiety and depression). The pre-conditions for testing mediation as outlined by Baron and Kenny, (1986), were tested and met, before a mediation model was assessed. Even though these pre-conditions were not the focus of this study the results do support previous findings throughout the literature.

As expected, all maladaptive schemas collectively were predictive of anxiety. Throughout the literature, maladaptive schemas collectively accounted for a large percentage of variance in anxiety (Schmidt et al., 1995, 55.0%; Glaser et al., 2002, 50.0%; and Welburn et al., 2002, 52.0%). Consistent with the literature, we found that all maladaptive schemas combined accounted for 41.5% of the variance in anxiety. In our college sample, the early

maladaptive schemas of vulnerability to harm or illness (VH), enmeshment/undeveloped self (EM), subjugation (SB) and self-sacrifice (SS) were the strongest predictors of anxiety. One common theme throughout the literature suggests that vulnerability to harm or illness seems to be the strongest and most reliable predictor of anxiety (Glaser et al., 1995; Welburn et al., 2002). These results support cognitive models of anxiety (Beck, 1976) in that catastrophic beliefs and worry about potential threats to self are at the core of anxiety. This makes sense in that the vulnerability to harm or illness yields a world-view in which one overestimates the likelihood of impending doom or catastrophes and underestimates their abilities to cope with these unlikely "dangerous" events. These results are consistent with models of anxiety in which primary (e.g., overestimation of threat) and secondary (e.g., underestimation of coping resources) appraisal processes are based upon unrealistic expectations that are associated with the beliefs of vulnerability.

As hypothesized, all early maladaptive schemas collectively also predicted depression. In this study, maladaptive schemas collectively accounted for 45.3% of the variance in depression. Again, our results were consistent

with previous research where all maladaptive schemas combined accounted for a large percentage of variance in depression (Schmidt et al., 1995, 55.0%; Glaser et al., 2002, 54.0%; Welburn et al., 2002, 47.0%). In this college sample, abandonment/instability (AB), enmeshment/undeveloped self (EM), subjugation (SB), and insufficient self-control/self-discipline (IS) were unique significant predictors of depression. The results are consistent with the literature in that abandonment/instability was one of the strongest predictors of depression (Glaser et al.; 1995, and Welburn et al.; 2002). Moreover Glaser et al., (2002), found that abandonment/instability was the strongest predictor of depression using several measures of depression. These results are consistent with cognitive models of depression that emphasize loss, particularly loss of interpersonal connectedness as a major vulnerability for depressed mood. This sense of lack of support from significant others is at the core of the EMS of abandonment/instability.

The other common thread throughout the literature suggests that insufficient self-control/self-discipline was another strong predictor of depression in both clinical and college populations (Welburn et al., 2002; Harris and

Curtin, 2002). This maladaptive schema involves the perception of difficulty in dealing with frustration and poor capabilities in meeting commitments and long-term individual goals. It is likely that consistent failure to meet ones desired goals can lead to a sense of helplessness and hopelessness and ultimately depression. For example, the effects of a students' poor time management, delay of gratification and low frustration tolerance can lead to falling behind in their academics and ultimately yielding depression.

Taken together, these results are consistent with the cognitive models of psychopathology of Beck (1979) and Young, (2003) in that schemas, believed to represent a cognitive vulnerability to various forms of psychopathology, do indeed predict levels of mood both in clinical and non-clinical populations.

In regards to the relationship between maladaptive coping and psychological distress, as predicted the results of this study supported prior research where maladaptive avoidance coping was predictive of anxiety and depression. This is consistent with the cognitive model as well as the use of avoidance strategies to cope with stress is believed to provide only temporary relief, but ultimately will be

related to problematic mood reactions. This is also consistent with prior research in which avoidance coping was associated with anxiety and depression (Meyer and Derakshan, 2000; Carver et al., 1989; Arnett et al., 2002; and Litman J. A., 2006). Although a relationship between coping and psychological distress is strongly established throughout the literature as well as in the current study, future research may want to focus on measuring contextual and dispositional coping techniques in the relationship between anxiety and depression. That is, in addition to trait-like coping responses, measure coping responses employed to a specific situational stressor. Moos and Holahan (2003) suggest that measuring both types of coping will bring about a better understanding of the relationship between coping and psychological well-being.

Of significance, the direct relationship between early maladaptive schemas and maladaptive avoidance coping was established for the first time in the literature. The current data supported a direct relationship between maladaptive schemas and maladaptive avoidance coping. Specifically, the study found that all 15 early maladaptive schemas collectively accounted for 34.8% in the variance in avoidance coping. More specifically,

unrelenting standards/hypercriticalness, entitlement/grandiosity and insufficient self-control/self-discipline were unique significant predictors of the use of maladaptive avoidance coping strategies. With these particular maladaptive schemas, a possible common theme is avoidance (e.g., avoidance of criticism, avoidance of being average, or an avoidance of discomfort/frustration). For example, a person who sets very high internalized standards that greatly interferes with their pleasure would tend to avoid projects that require constructive criticism to prevent the activation of unrelenting standards/hypercriticalness schema. Additionally, a person who feels superior to other people would tend to avoid situations that would place that person as being labeled as average or typical in order to prevent the activation of the schema of entitlement/grandiosity. Lastly, a person who has difficulty tolerating discomfort or frustration to any degree will tend to avoid working or avoid responsibility so that the schema of insufficient self-control/self-discipline will not be activated. In summary, this thesis supported the proposed connection between early maladaptive schemas and maladaptive avoidance coping outlined in the cognitive vulnerability models of Beck (1976) and Young

(2003). Specifically, the activation of maladaptive schemas was associated with maladaptive compensatory coping behavior designed to mitigate the emotional impact of the maladaptive schema. However, the avoidance strategy is a short-term fix (temporarily reduces emotional impact of the early maladaptive schema) as in the long-run the opportunity to disconfirm the early maladaptive schema is lost through avoidance. Thus the early maladaptive schema is perpetuated.

However, Young, (2003) suggests that there are three forms of maladaptive coping as a reaction to early maladaptive schemas (avoidance, surrender and overcompensation). The current study focuses primarily on avoidance as a coping strategy that activates the maladaptive schema. It is possible that if surrender and overcompensation coping were measured that this might further the understanding of the relationship between maladaptive schemas and maladaptive coping. Future research should examine early maladaptive schemas as potential predictors of these alternative forms of maladaptive coping.

Unexpectedly, the study results did not provide support that maladaptive avoidance coping mediated the

relationship between early maladaptive schemas and psychological distress (i.e. anxiety and depression). On the contrary, post hoc results indicated that it was early maladaptive schemas that completely mediated the relationship between maladaptive avoidance coping and psychological distress (e.g., anxiety and depression). Our findings suggest that early maladaptive schemas were a stronger predictor of anxiety and depression as compared to maladaptive avoidance coping (i.e. cognitive and behavioral avoidance). Results indicated that maladaptive avoidance coping only accounted for 7.4% in the variance of anxiety and 10.6% of the variance in depression, as compared to maladaptive schemas which accounted for 41.5% of the variance in anxiety and 45.3% of the variance in depression. This may explain why maladaptive avoidance coping did not mediate the relationship between maladaptive schemas and depression/anxiety. These findings also suggest that maladaptive forms of coping may not represent the diathesis for anxiety and depression, but early maladaptive schemas may. This is consistent with Beck's cognitive model of psychopathology in which deeply entrenched, persistent core beliefs (dysfunctional views of self and others) are presumed to be the vulnerability factor for problematic

mood states. According to the cognitive model of psychopathology, problematic coping is presumed to develop subsequent to maladaptive schemas, and perpetuate or reinforce maladaptive schemas by leading to missed opportunities to experience disconfirmatory evidence that approach behavior might yield. Young, 2003, also suggests that it is the early maladaptive schemas that contribute to the maintenance and continuance of anxiety and depression where maladaptive avoidance coping is just a one way to which a person may respond to a stressful situation (e.g. surrendering and overcompensation).

Although it appears that early maladaptive schemas account for more variance in mood states than maladaptive coping in this college sample, it is possible that this pattern would not be observed in a clinical sample. A clinical sample includes patients who have self-selected to obtain psychotherapeutic assistance due to social/occupational dysfunction. In a clinical sample, higher levels of depression, anxiety, maladaptive schemas and maladaptive coping may be observed compared to non-clinical samples. This could lead to different relationships among the variables and specifically, maladaptive coping may be a stronger predictor of

problematic mood and play a mediating role in the relationship between early maladaptive schemas and anxiety/depression. Future research with clinical samples can shed light on this question.

Lastly, the post hoc results indicated that maladaptive emotion-focused coping (maladaptive avoidance coping) and not adaptive forms of coping (problem-focused and emotion-focused coping) predicted maladaptive schemas, anxiety, and depression. In the literature, Liverant et al. (2004) also found that only maladaptive avoidance coping predicted anxiety not adaptive forms of coping when using multiple regression analysis. Surprisingly, this study did not address the reasons why the study had alternate findings. However, prevalent throughout the literature (Meyer and Derakshan, 2000; Carver et al., 1989; and Litman, J. A., 2006), studies revealed that adaptive forms of coping did, in fact, correlate negatively with anxiety and depression. Although there is not an obvious reason for these differences, a number of things may explain the contradictory findings. One possible explanation is that previous studies established a negative relationship between adaptive coping and psychological distress via bivariate correlational analyses, and we utilized a

multiple regression in which the coping variables (adaptive and maladaptive) had to compete for explanatory variance. The only obvious difference between this study and contradictory findings is that the previous studies did not report data on the ethnicity of their sample and their samples were gender imbalanced with 2-3 times more women than men. This sample consisted of equal numbers of men and women and was an ethnically diverse sample. Future research may examine gender and ethnicity as it relates to coping and psychological distress.

Clinical Implications

The results of the current study have significant implications for the prevention and treatment of problematic mood states, particularly anxiety and depression. As stated earlier, consistent with cognitive models of psychopathology that emphasize belief systems as the key vulnerability factor for problematic mood, maladaptive schemas were the strongest predictors of anxiety and depression. These results suggest that it would be prudent for prevention and intervention efforts to target the formation or alteration of these maladaptive schemas. Prevention efforts could address parenting, as the

literature has suggested that maladaptive schemas mediate the relationship between parenting and depression (Shah & Waller, 2000; Harris & Curtain, 2002). According to Young's model, a parents' failure to meet basic core developmental needs for consistent, reliable, safe and nurturing parenting leads to the development of maladaptive schemas. Helping parents meet their children's needs should ward off the formation of maladaptive schemas (such as vulnerability to harm, abandonment/instability, etc.). Additionally, these results have implications for treatment in that they suggest that efforts aimed at reducing the emotional impact of maladaptive schemas should be successful. This is consistent with the treatment outcome literature in which many varieties of cognitive behavioral therapy that include cognitive restructuring of schemas have been empirically supported (Nathan & Gorman, 1998). Finally, although maladaptive avoidance coping was a weaker predictor of problematic mood, it did account for some explanatory variance. Thus, treatment efforts aimed at reducing these forms of coping would also likely be helpful and is a part of many of the cognitive behavioral therapies.

APPENDIX A
INFORMED CONSENT FORM

**Early Maladaptive Schema Study
Informed Consent Statement**

STUDY ID# _____

You are invited to participate in a study designed to assess different factors that may be related to the way in which you have learned to view relationships, yourself, and the world around you. We are also examining how these views relate to emotional health and coping strategies. PSYC 432 Advanced Lab is conducting this study: Clinical students, under the supervision of Dr. Michael R. Lewin, Associate Professor of Psychology.

The Department of Psychology Human Participants Review Board (HPRB) of CSUSB has approved the study. This consent form bears an official stamp indicating Psychology IRB sub committee. The university requires that you give your consent before participating in this study.

In this study you will be asked to complete a packet of questionnaires designed to measure your views of self and the world around you, your relationship with your parents, your coping style, and questions related to your emotional well being. The packet will take approximately 1-½ hours to complete. At your instructor's discretion, you will earn three extra credit units for your participation. Your participation is anonymous, so please do not give any identifying information on the questionnaire packet. Presentation of the results of the study will be reported in group format only. At the conclusion of the study (after April 2005), you may receive a report of the results by contacting Dr. Michael R. Lewin. Your participation in the research is completely voluntary and you are free to withdraw at any time during this study without penalty, not to answer any question that makes you uncomfortable, and to remove any data at any time. This study involves no risks beyond those routinely encountered in daily life, nor is there any direct benefits to you as an individual.

Any questions about this study or your participation in this research should be directed to Dr. Michael R. Lewin at (909) 880-7303.

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 an "X" on the line below

Participant's **X**

Date

Researcher's Signature

Date

APPENDIX B

SURVEYS

DEMOGRAPHICS

Study ID _____

Please answer each question to the best of your knowledge.

1. Age: _____

2. Gender: M ___ F ___

3. Ethnicity:

Asian or Asian American _____ African American (or black) _____

Caucasian (or white) _____ Native American (or American Indian) _____

Latino (or Hispanic) _____ (please indicate specific Hispanic origin below)

_____ (e.g., Mexican, Puerto Rican, Columbian etc)

Other ___ (please specify) _____

4. Primary Language(s) spoken by parents or primary caretakers

5. Monthly Income _____

6. Number living on the income _____

YSQ**INSTRUCTIONS**

Listed below are some statements that a person might use to describe himself/herself. Please read each statement and decide how well it describes you. When there you are not sure, base your answer on what you emotionally feel, not on what you think to be true. Choose the highest rating from 1 to 6 that describes you and write the number in the space before the statement.

RATING SCALE:

- 1 = Completely untrue of me
- 2 = Mostly untrue of me
- 3 = Slightly more true than untrue

- 4 = Moderately true of me
- 5 = Mostly true of me
- 6 = Describes me perfectly

1. _____ 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.

2. _____ In general, people have not been there to give me warmth, holding, and affection.

3. _____ For much of my life, I haven't felt that I am special to someone.

4. _____ For the most part, I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.

5. _____ I have rarely had a strong person to give me sound advice or direction when I'm not sure what to do.

6. _____ I find myself clinging to people I'm close to, because I'm afraid they'll leave me.
7. _____ I need other people so much that I worry about losing them.
8. _____ I worry that people I feel close to will leave me or abandon me.
9. _____ When I feel someone I care for pulling away from me, I get desperate.
10. _____ Sometimes I am so worried about people leaving me that I drive them away.
11. _____ I feel that people will take advantage of me.
12. _____ I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.
13. _____ It is only a matter of time before someone betrays me.
14. _____ I am quite suspicious of other people's motives.
15. _____ I'm usually on the lookout for people's ulterior motives.
16. _____ I don't fit in.
17. _____ I'm fundamentally different from other people.
18. _____ I don't belong; I'm a loner.
19. _____ I feel alienated from other people.
20. _____ I always feel on the outside of groups.
21. _____ No man/woman I desire could love me one he/she saw my defects.
22. _____ No one I desire would want to stay close to me if he/she knew the real me.

23. _____ I'm unworthy of the love, attention, and respect of others.
24. _____ I feel that I'm not lovable.
25. _____ I am too unacceptable in very basic ways to reveal myself to other people.

RATING SCALE:

- | | |
|------------------------------------|----------------------------|
| 1 = Completely untrue of me | 4 = Moderately true of me |
| 2 = Mostly untrue of me | 5 = Mostly true of me |
| 3 = Slightly more true than untrue | 6 = Describes me perfectly |

26. _____ Almost nothing I do at work (or school) is as good as other people can do.
27. _____ I'm incompetent when it comes to achievement.
28. _____ Most other people are more capable than I am in areas of work and achievement.
29. _____ I'm not as talented as most people are at their work.
30. _____ I'm not as intelligent as most people when it comes to work (or school).
31. _____ I do not feel capable of getting by on my own in everyday life.
32. _____ I think of myself as a dependent person, when it comes to everyday functioning.
33. _____ I lack common sense.
34. _____ My judgment cannot be relied upon in everyday situations.
35. _____ I don't feel confident about my ability to solve everyday problems that come up.

36. _____ I can't seem to escape the feeling that something bad is about to happen.
37. _____ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.
38. _____ I worry about being attacked.
39. _____ I worry that I'll lose all my money and become destitute.
40. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.
41. _____ I have not been able to separate myself from my parent(s), the way other people my age seem to.
42. _____ My parent(s) and I tend to be overinvolved in each other's lives and problems.
43. _____ It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.
44. _____ I often feel as if my parent(s) are living through me--I don't have a life of my own.
45. _____ I often feel that I do not have a separate identity from my parent(s) or partner.
46. _____ I think that if I do what I want, I'm only asking for trouble.
47. _____ 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.
48. _____ In relationships, I let the other person have the upper hand.

49. _____ I've always let others make choices for me, so I really don't know what I want for myself.
50. _____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.
51. _____ I'm the one who usually ends up taking care of the people I'm close to.
52. _____ I am a good person because I think of others more than of myself.
53. _____ I'm so busy doing for the people that I care about, that I have little time for myself.

RATING SCALE:

- | | |
|------------------------------------|----------------------------|
| 1 = Completely untrue of me | 4 = Moderately true of me |
| 2 = Mostly untrue of me | 5 = Mostly true of me |
| 3 = Slightly more true than untrue | 6 = Describes me perfectly |

54. _____ I've always been the one who listens to everyone else's problems.
55. _____ Other people see me as doing too much for others and not enough for myself.
56. _____ I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).
57. _____ I find it embarrassing to express my feelings to others.
58. _____ I find it hard to be warm and spontaneous.
59. _____ I control myself so much that people think I am unemotional.
60. _____ People see me as uptight emotionally.

61. _____ I must be the best at most of what I do; I can't accept second best.
62. _____ I try to do my best; I can't settle for "good enough."
63. _____ I must meet all my responsibilities.
64. _____ I feel there is constant pressure for me to achieve and get things done.
65. _____ I can't let myself off the hook easily or make excuses for my mistakes.
66. _____ I have a lot of trouble accepting "no" for an answer when I want something from other people.
67. _____ I'm special and shouldn't have to accept many of the restrictions placed on other people.
68. _____ I hate to be constrained or kept from doing what I want.
69. _____ I feel that I shouldn't have to follow the normal rules and conventions other people do.
70. _____ I feel that what I have to offer is of greater value than the contributions of others.
71. _____ I can't seem to discipline myself to complete routine or boring tasks.
72. _____ If I can't reach a goal, I become easily frustrated and give up.
73. _____ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.
74. _____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.
75. _____ I have rarely been able to stick to my resolutions.

COPE

INSTRUCTION

We are interested in how people respond when they confront difficult or stressful events in their lives. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. Please respond to each of the following items by using the response choices listed below and answer each question in the space provided. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item.

- 1 = I usually don't do this at all**
- 2 = I usually do this a little bit**
- 3 = I usually do this a moderate amount**
- 4 = I usually do this a lot**

1. ____ I try to grow as a person as a result of the experience.
2. ____ I turn to work or other substitute activities to take my mind off things.
3. ____ I get upset and let my emotions out.
4. ____ I try to get advice from someone about what to do.
5. ____ I concentrate my efforts on doing something about it.
6. ____ I say to myself "this isn't real."
7. ____ I put my trust in God.
8. ____ I laugh about the situation.
9. ____ I admit to myself that I can't deal with it, and quit trying.
10. ____ I restrain myself from doing anything too quickly.

1 = I usually don't do this at all

2 = I usually do this a little bit

3 = I usually do this a moderate amount

4 = I usually do this a lot

11. ____ I discuss my feelings with someone.
12. ____ I use alcohol or drugs to make myself feel better.
13. ____ I get used to the idea that it happened.
14. ____ I talk to someone to find out more about the situation.
15. ____ I keep myself from getting distracted by other thoughts or activities.
16. ____ I daydream about things other than this.
17. ____ I get upset, and am really aware of it.
18. ____ I seek God's help.
19. ____ I make a plan of action.
20. ____ I make jokes about it.

21. ____ I accept that this has happened and that it can't be changed.
22. ____ I hold off doing anything about it until the situation permits.
23. ____ I try to get emotional support from friends or relatives.
24. ____ I just give up trying to reach my goal.
25. ____ I take additional action to try to get rid of the problem.
26. ____ I try to lose myself for a while by drinking alcohol or taking drugs.

- 1 = I usually don't do this at all
2 = I usually do this a little bit
3 = I usually do this a moderate amount
4 = I usually do this a lot

27. ____ I refuse to believe that it has happened.
28. ____ I let my feelings out.
29. ____ I try to see it in a different light, to make it seem more positive.
30. ____ I talk to someone who could do something concrete about the problem.
31. ____ I sleep more than usual.
32. ____ I try to come up with a strategy about what to do.
33. ____ I focus on dealing with this problem, and if necessary let other things slide a little.
34. ____ I get sympathy and understanding from someone.
35. ____ I drink alcohol or take drugs, in order to think about it less.
36. ____ I kid around about it.
37. ____ I give up the attempt to get what I want.
38. ____ I look for something good in what is happening.
39. ____ I think about how I might best handle the problem.
40. ____ I pretend that it hasn't really happened.
41. ____ I make sure not to make matters worse by acting too soon.
42. ____ I try hard to prevent other things from interfering with my efforts at dealing with this.

- 1 = I usually don't do this at all
- 2 = I usually do this a little bit
- 3 = I usually do this a moderate amount
- 4 = I usually do this a lot

- 43. ____ I go to movies or watch TV, to think about it less.
- 44. ____ I accept the reality of the fact that it happened.
- 45. ____ I ask people who have had similar experiences what they did.
- 46. ____ I feel a lot of emotional distress and I find myself expressing those feelings a lot.
- 47. ____ I take direct action to get around the problem.
- 48. ____ I try to find comfort in my religion.
- 49. ____ I force myself to wait for the right time to do something.
- 50. ____ I make fun of the situation.
- 51. ____ I reduce the amount of effort I'm putting into solving the problem.
- 52. ____ I talk to someone about how I feel.
- 53. ____ I use alcohol or drugs to help me get through it.
- 54. ____ I learn to live with it.
- 55. ____ I put aside other activities in order to concentrate on this.
- 56. ____ I think hard about what steps to take.
- 57. ____ I act as though it hasn't even happened.
- 58. ____ I do what has to be done, one step at a time.
- 59. ____ I learn something from the experience.
- 60. ____ I pray more than usual.

SCL-90

Instructions: Below is a list of problems people sometimes have. Please read each one carefully, and circle the number that best describes HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY. Circle only one number for each problem and do not skip any items. If you change your mind, erase your first mark carefully. Read the example before beginning, and if you have any questions please ask them now.

0 = Not at all 1 = A little bit 2 = Moderately
3 = Quite a bit 4 = Extremely

- | | | | | | | |
|-----|---|---|---|---|---|--|
| 1. | 0 | 1 | 2 | 3 | 4 | Headaches |
| 2. | 0 | 1 | 2 | 3 | 4 | Nervousness or shakiness inside |
| 3. | 0 | 1 | 2 | 3 | 4 | Repeated or unpleasant thoughts that won't leave your mind |
| 4. | 0 | 1 | 2 | 3 | 4 | Faintness or dizziness |
| 5. | 0 | 1 | 2 | 3 | 4 | Loss of sexual interest or pleasure |
| 6. | 0 | 1 | 2 | 3 | 4 | Feeling critical of others |
| 7. | 0 | 1 | 2 | 3 | 4 | The idea that someone else can control your thoughts |
| 8. | 0 | 1 | 2 | 3 | 4 | Feeling others are to blame for most of your troubles |
| 9. | 0 | 1 | 2 | 3 | 4 | Trouble remembering things |
| 10. | 0 | 1 | 2 | 3 | 4 | Worried about sloppiness or carelessness |
| 11. | 0 | 1 | 2 | 3 | 4 | Feeling easily annoyed or irritated |
| 12. | 0 | 1 | 2 | 3 | 4 | Pains in heart or chest |

0 = Not at all 1 = A little bit 2 = Moderately
 3 = Quite a bit 4 = Extremely

- 13. 0 1 2 3 4 Feeling afraid in open spaces or on the streets
- 14. 0 1 2 3 4 Feeling low in energy or slowed down
- 15. 0 1 2 3 4 Thoughts of ending your life
- 16. 0 1 2 3 4 Hearing voices that other people do not hear
- 17. 0 1 2 3 4 Trembling
- 18. 0 1 2 3 4 Feeling that most people cannot be trusted
- 19. 0 1 2 3 4 Poor appetite
- 20. 0 1 2 3 4 Crying easily
- 21. 0 1 2 3 4 Feeling shy or uneasy with the opposite sex
- 22. 0 1 2 3 4 Feelings of being trapped or caught
- 23. 0 1 2 3 4 Suddenly scared for no reason
- 24. 0 1 2 3 4 Temper outbursts that you could not control
- 25. 0 1 2 3 4 Feeling afraid to go out of your house alone
- 26. 0 1 2 3 4 Blaming yourself for things
- 27. 0 1 2 3 4 Pains in lower back

0 = Not at all 1 = A little bit 2 = Moderately
 3 = Quite a bit 4 = Extremely

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|-----|---|---|---|---|---|--|
| 28. | 0 | 1 | 2 | 3 | 4 | Feeling blocked in getting things done |
| 29. | 0 | 1 | 2 | 3 | 4 | Feeling lonely |
| 30. | 0 | 1 | 2 | 3 | 4 | Feeling blue |
| 31. | 0 | 1 | 2 | 3 | 4 | Worrying too much about things |
| 32. | 0 | 1 | 2 | 3 | 4 | Feeling no interest in things |
| 33. | 0 | 1 | 2 | 3 | 4 | Feeling fearful |
| 34. | 0 | 1 | 2 | 3 | 4 | Your feelings being easily hurt |
| 35. | 0 | 1 | 2 | 3 | 4 | Other people being aware of your private thoughts |
| 36. | 0 | 1 | 2 | 3 | 4 | Feeling others do not understand you or unsympathetic |
| 37. | 0 | 1 | 2 | 3 | 4 | Feeling that people are unfriendly or dislike you |
| 38. | 0 | 1 | 2 | 3 | 4 | Having to do things very slowly to insure correctness |
| 39. | 0 | 1 | 2 | 3 | 4 | Heart pounding or racing |
| 40. | 0 | 1 | 2 | 3 | 4 | Nausea or upset stomach |
| 41. | 0 | 1 | 2 | 3 | 4 | Feeling inferior to others |
| 42. | 0 | 1 | 2 | 3 | 4 | Soreness of your muscles |
| 43. | 0 | 1 | 2 | 3 | 4 | Feeling that you are watched or talked about by others |

0 = Not at all 1 = A little bit 2 = Moderately
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|-----|---|---|---|---|---|---|
| 44. | 0 | 1 | 2 | 3 | 4 | Trouble falling asleep |
| 45. | 0 | 1 | 2 | 3 | 4 | Having to check or double-check what you do |
| 46. | 0 | 1 | 2 | 3 | 4 | Difficulty making decisions |
| 47. | 0 | 1 | 2 | 3 | 4 | Feeling afraid to travel on buses, subways, or trains |
| 48. | 0 | 1 | 2 | 3 | 4 | Trouble getting your breath |
| 49. | 0 | 1 | 2 | 3 | 4 | Hot or cold spells |
| 50. | 0 | 1 | 2 | 3 | 4 | Having to avoid certain things, places, or activities because they frighten you |
| 51. | 0 | 1 | 2 | 3 | 4 | Your mind going blank |
| 52. | 0 | 1 | 2 | 3 | 4 | Numbness or tingling in parts of your body |
| 53. | 0 | 1 | 2 | 3 | 4 | A lump in your throat |
| 54. | 0 | 1 | 2 | 3 | 4 | Feeling hopeless about the future |
| 55. | 0 | 1 | 2 | 3 | 4 | Trouble concentrating |
| 56. | 0 | 1 | 2 | 3 | 4 | Feeling weak in parts of your body |
| 57. | 0 | 1 | 2 | 3 | 4 | Feeling tense or keyed up |
| 58. | 0 | 1 | 2 | 3 | 4 | Heavy feelings in your arms or legs |
| 59. | 0 | 1 | 2 | 3 | 4 | Thoughts of death or dying |

0 = Not at all 1 = A little bit 2 = Moderately
 3 = Quite a bit 4 = Extremely

- 60. 0 1 2 3 4 Overeating
- 61. 0 1 2 3 4 Feeling uneasy when people are watching or talking about you
- 62. 0 1 2 3 4 Having thoughts that are not your own
- 63. 0 1 2 3 4 Having urges to beat, injure, or harm someone
- 64. 0 1 2 3 4 Awakening in the early morning
- 65. 0 1 2 3 4 Having to repeat the same actions such as touching, counting, or washing
- 66. 0 1 2 3 4 Sleep that is restless or disturbed
- 67. 0 1 2 3 4 Having urges to break or smash things
- 68. 0 1 2 3 4 Having ideas or beliefs that others do not share
- 69. 0 1 2 3 4 Feeling very self-conscious with others
- 70. 0 1 2 3 4 Feeling uneasy in crowds, such as shopping or at a movie
- 71. 0 1 2 3 4 Feeling everything is an effort
- 72. 0 1 2 3 4 Spells of terror or panic

0 = Not at all 1 = A little bit 2 = Moderately
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|-----|---|---|---|---|---|--|
| 73. | 0 | 1 | 2 | 3 | 4 | Feeling uncomfortable about eating or drinking in public |
| 74. | 0 | 1 | 2 | 3 | 4 | Getting into frequent arguments |
| 75. | 0 | 1 | 2 | 3 | 4 | Feeling nervous when you are left alone |
| 76. | 0 | 1 | 2 | 3 | 4 | Others not giving you proper credit for your achievements |
| 77. | 0 | 1 | 2 | 3 | 4 | Feeling lonely even when you are with other people |
| 78. | 0 | 1 | 2 | 3 | 4 | Feeling so restless you couldn't sit still |
| 79. | 0 | 1 | 2 | 3 | 4 | Feeling of worthlessness |
| 80. | 0 | 1 | 2 | 3 | 4 | The feeling that something bad is going to happen to you |
| 81. | 0 | 1 | 2 | 3 | 4 | Shouting or throwing things |
| 82. | 0 | 1 | 2 | 3 | 4 | Feeling afraid you will faint in public |
| 83. | 0 | 1 | 2 | 3 | 4 | Feeling that people will take advantage of you if you let them |
| 84. | 0 | 1 | 2 | 3 | 4 | Having thoughts about sex that bother you a lot |
| 85. | 0 | 1 | 2 | 3 | 4 | The idea that you should be punished for your sins |

0 = Not at all 1 = A little bit 2 = Moderately

3 = Quite a bit 4 = Extremely

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|-----|---|---|---|---|---|--|
| 86. | 0 | 1 | 2 | 3 | 4 | Thoughts and images of a frightening nature |
| 87. | 0 | 1 | 2 | 3 | 4 | That idea that something serious is wrong with your body |
| 88. | 0 | 1 | 2 | 3 | 4 | Never feeling close to another person |
| 89. | 0 | 1 | 2 | 3 | 4 | Feelings of guilt |
| 90. | 0 | 1 | 2 | 3 | 4 | The idea that something is wrong with your mind |

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