

University of Alberta

Stress, Coping, and Personality Disorder

by

David C. Watson



A thesis submitted to the Faculty of Graduate Studies and  
Research partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

Department of Psychology

Edmonton, Alberta

Fall, 1996



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ISBN 0-612-18128-6

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Title of Thesis: Stress, Coping, and Personality Disorder

Degree: Doctor of Philosophy

Year this Degree Granted: 1996

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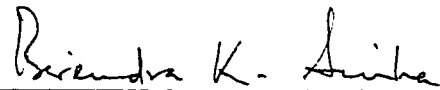
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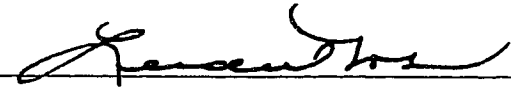
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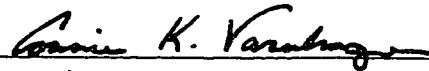
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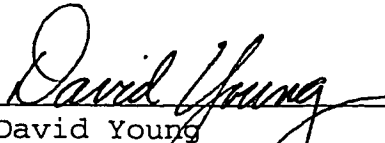
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## Abstract

The relationship between stress, coping and personality disorder was explored using 234 subjects, 80 normals and 154 high scoring individuals on the Coolidge Axis-II Inventory (Coolidge, 1984). The personality disorder subjects were grouped according to Millon's (1981, 1986) model of personality styles: independent, dependent, detached, and ambivalent. The subjects imagined themselves in 9 stressful situations, and coping responses were measured with 16 item short forms of the Ways of Coping Questionnaire (Folkman & Lazarus, 1984). On the basis of past research with personality and coping, it was predicted that people with personality disorders would use adaptive coping to a lesser degree than normal controls.

The personality disorder subjects had higher scores on the escape-avoidance, distancing, and self-blaming scales and lower scores on scales assessing seeking social support, positive reappraisal, and planful problem solving. Examination of the specific situations revealed profiles of adaptive and maladaptive coping strategies with the personality disorder groups, rather than a simple paucity of coping efforts although the latter found with the detached (schizoid,

avoidant) group. In general, the detached group was characterized by non-action, and the dependent (histrionic, dependent) group by over-reaction on both the coping and emotion measures. Based on the number of coping strategies selected and emotional responses to the stressors, an activity continuum was proposed, from the inactive, barren coping of the detached group to the overactive 'frantic' coping of the dependent group.

## Table of Contents

Chapter	Page
I Introduction	1
Coping and Stress	5
Coping and Normal Personality	9
Models for Personality and Coping	11
Personality and Coping Theory	15
Millon's Model	17
Personality Disorders and Defense Style	19
Recent Evidence	22
Purpose	26
Hypotheses	31
II Method	39
Subjects	39
Procedure	40
Instruments	44

Chapter	Page
III Results	47
Data Analysis	47
Hypothesis One: Post-hoc Comparisons	51
Hypothesis Two: Post-hoc Comparisons	53
Supplementary Hypotheses	57
Stress/emotion scales	60
Coolidge Axis-II Inventory Scores	65
Personality Disorder-Coping Correlations	65
Personality Disorder-Emotion Correlations	67
IV Discussion	69
Differential Coping Choice: Overall Patterns	72
Differential Coping Choice: Specific Situations	82
Stress and Emotional Responses	86
Gender Differences	87
Summary and Conclusions	88
Limitations and Future Directions	92
References	94



Appendixes	Page
A. Coolidge Axis-II Inventory	118
B: Instructions and Questionnaire	132
C: Vignette Stimuli	161
D: Mood Deinduction	163
E: Debriefing	164
F: Coping Scales	167
G: Pilot Study	179

## List of Tables

Table		Page
1	Total Mean Coping Scores by Group	103
2	Post-Hoc Comparisons for Situation	104
3	Number of Coping Responses Selected above 2.0	106
4	Coping Effectiveness Ratings by Group	107
5	Means and Standard Deviations of Stress/Emotion Scales	108
6	Vignette Stress Ratings by Personality Group	110
7	Emotion totals by Group	111
8	Coolidge Axis-II Inventory : Means by Group	112
9	Correlation between CATI and coping scales	114
10	Correlation between CATI and emotion totals	115

## List of Figures

Figure		Page
1	Coping Scores by Personality	116
2	Coping Effectiveness by Personality Group	117

## Chapter I: Introduction

At the core of the personality disorders is maladaptation to life, in contrast with the "adaptation to life" (Vaillant, 1977) that more normal personality styles enjoy. As Millon (1981) has suggested, normal individuals can cope with their environment in a flexible way and manifest behaviors and perceptions that engender successive increases in life satisfaction. On the other hand, when confronted with stress, individuals with personality disorders tend to use inflexible coping strategies, engage in self-defeating cycles, and exhibit fragile emotional stability (Millon, 1981; DSM-IV, 1994).

Disordered personalities face a lifetime of difficulties. One possible reason is a lack of access to the full repertoire of adaptive coping mechanisms that normals and the Axis-I disorders have developed (Millon, 1981; Padesky, 1986). This is not to say that Axis-I psychopathology is less debilitating, quite the opposite. Axis-I disorders which tend to be punctuated by periods of crisis, followed by periods of relative normality, whereas Axis-II pathology tends to be lifelong and ego-syntonic.

Thus, the lack of effective coping mechanisms is more ingrained with Axis-II disorders.

Vollrath, Alnaes and Torgersen (1994) have pointed out that the coping deficits in personality disorders appear to be more widespread than in other forms of psychopathology such as anxiety and depression. Individuals with these disorders tend to focus on cognitive avoidance as a coping strategy (Billings & Moos, 1984; Coyne, Aldwin & Lazarus 1981; Kobasa, 1982).

In addition to cognitive avoidance, people with personality disorders show a general lack of behavioral and cognitive coping skills. Not only do people with personality disorders have an impoverished repertoire, but also their maladjusted coping strategies create "vicious cycles" that leave the individual in a continually worsening position (Millon, 1981; Watchel, 1994). Cognitive distortion, behavior generalization, and protective constriction are behaviors that contribute to these self-perpetuating cycles (Millon, 1981). For example, borderline personality is characterized by cyclic extremes of overidealization and devaluation of others in interpersonal relations. Narcissistic personalities have an unrealistic sense of

entitlement and grandiosity. These individuals experience feelings of fraudulence and emptiness when they do succeed in impressing others with their grandiose self-presentation. In turn, these feelings initiate more attempts to impress others and more negative feelings (Wachtel, 1994). On the other hand, the avoidant personality is characterized by a cycle of withdrawal: this behavior is interpreted negatively by others, which increases the avoidant's fear of rejection which in turn results in further withdrawal (Kantor, 1993).

In general, there is a paucity of empirical study concerning personality disorder. While the relationship between stress, ineffective coping and negative outcome has been explored extensively, only a few studies have been conducted to explore the relationship between personality, stress and coping. Therefore, the study of coping mechanisms in personality disorder may prove a useful avenue for research.

In order to investigate personality disorder and coping, it is necessary to discuss and combine several areas of theoretical and research interest: stress and coping, normal personality and coping, and disordered personality

and coping. The combination of these areas is necessary to provide a foundation for the understanding of the relationship between personality disorder and stress/coping. One basis for the study of personality disorder and coping is a discussion of coping and stress in general, presented along the lines of the interactional approach of Folkman and Lazarus (1988). Second, the study of coping and normal personality is important to the understanding of coping and personality disorder as the five-factor model of personality has been related to stress and coping. Third, some recent attempts at establishing theoretical models to further elucidate the relationship between personality and coping will be discussed. One goal of this study is the application of the differential coping choice-coping effectiveness model (Bolger & Zuckerman, 1995) to personality disorder. Fourth, Millon's coping based theory is a useful heuristic for the understanding of personality disorder-coping relationships. A discussion of this theory and the related concept of defense style is necessary to make the theoretical bridge from coping in normal personality to personality disorder-coping relationships.

### 1. Coping and Stress

The relationship between stress and disease has been conceptualized from three distinct viewpoints: response oriented (Selye, 1976), stimulus oriented (Holmes & Madusa, 1974), and a process model which emphasizes the transaction between person and environment (Folkman & Lazarus, 1984). Researchers endorsing the response orientation have defined stress in terms of physiological (heart rate, EMG) or psychological (depression, anxiety) responses to stressors in the environment. These external events place demands on the individual's ability to cope. While this orientation measures important physiological aspects of the stress response, there are two major limitations: the provision of only a unidimensional stress score and lack of focus upon the contents or sources of the stress reaction (Lazarus, 1990).

Investigators using a stimulus oriented perspective have defined stress in terms of the external stimuli (noise, time pressures, death of a spouse) or internal stimuli (pain, negative conscience) that tax an individual's coping ability. The traditional stimulus orientation is the



theoretical underpinning of the life-events approach to stress measurement. However, as Lazarus (1990) has pointed out, 20 years of research with life events scales have only produced modest correlations between illness and life events. While life events are likely to have an influence on illness, they are relatively rare events and represent life changes rather than the chronic, recurrent wear and tear of "daily hassles" that much stress involves. Also, the stimulus orientation ignores the contribution of the individual to life events as well as the different cognitive, motivational styles demonstrated by individuals (Lazarus, 1990).

In the process model, Lazarus (1990) viewed stress in terms of the dynamic interaction, or "transaction," between the individual and the environment rather than static individual responses or environmental stimuli. Lazarus hypothesizes that the relationship between illness and stress is likely to be mutually interactive, not a unidirectional stress-to-illness process. Stress occurs when demands exceed the individual's resources.

In Lazarus' view, coping is a process or state rather than a trait. The first step in the coping process involves appraisal of the situation by the individual. The

interaction between the individual and the environment can be appraised as negative and threatening or, alternatively, as positive and as a "challenge". When the person appraises a transaction as stressful, then coping strategies are brought into the person-environment interaction. The selection of a particular coping strategy changes the person's appraisal of the situation and this selection in turn changes the stress reaction (Lazarus, 1990).

Some researchers identify two major dimensions of coping: emotion-focused and problem-focused (e.g., Lazarus, 1993; Endler & Parker, 1990). Problem focused coping has a task orientation, while emotion focused coping is person oriented, (for example fantasy and emotional responses). Through factor analysis of the Multidimensional Coping Inventory, Endler and Parker (1990) have suggested a third dimension, avoidance, which can be either person oriented (ask someone else for help) or involve engaging in another task (housework rather than studying for an exam).

A recent study by Bjorck & Cohen (1993) provides support for the interactional view of coping. Using a sample of college students, the authors investigated the relationship between stressful situations (categorized as

threats, losses, or challenges) and specific coping reactions. The study used an analogue methodology in which subjects read a set of stressful vignettes; rated these vignettes for imaginability, stress, loss, threat, and challenge; and then completed the Ways of Coping Checklist (Folkman & Lazarus, 1988). The results illustrate the differential effect of specific situations on coping responses. These normal subjects most often chose a problem solving orientation. However, the type of stressor also influenced the coping strategy chosen. For example, "problem solving" was used with challenges and "emotional social support" with loss situations. These results are consistent with those of previous studies in which a problem solving strategy was utilized where the individual viewed a situation as controllable and emotion focused strategies were used with low-control situations, (e.g., Folkman & Lazarus, 1980; Lazarus & Folkman, 1987).

The Bjork & Cohen (1993) study provided evidence for the hypothesis that coping strategies are more effective when they are perceived as a challenge rather than a threat or loss. The vignette methodology used in this study is a

useful procedure for studying the relationship between personality disorder and coping processes.

## 2. Coping and normal personality

The dimensional approach to personality disorder focuses on the idea that personality disorders occur along a continuum with and that personality disorders are different from normality in degree, not in kind. This approach has more recently been accepted by many of the major researchers, theorists, and clinicians in the area of personality disorder (Widiger, 1993; Widiger & Costa, 1994). Thus, when considering the possible relationship between personality disorder and stress and coping, a logical beginning point is the relationship between normal personality and stress/coping.

In the association between stress and coping, personality is likely to be an important individual difference variable as studies by McCrae and Costa (1986); Atkinson & Violato (1994); and Bolger & Zuckerman (1995) have illustrated. McCrae and Costa (1986) investigated the relationship between coping and three of the big-five personality factors: neuroticism, extroversion, and openness. Their results indicated that neuroticism was

associated with less adaptive coping patterns such as hostile reaction, escapist fantasy, and self-blame; extraversion was paired with more adaptive patterns such as rational action and positive thinking; and openness was associated with the more mature coping style of humor (McCrae & Costa, 1986). In a comparison of high and low neuroticism subjects, Atkinson & Violato (1994) found that high neuroticism individuals engaged in more avoidance and self-blame. In another study, Bolger & Zuckerman (1995) found that high neuroticism subjects used both adaptive (planful problem solving, seeking social support) and maladaptive (escape avoidance) coping strategies. However, they also reported that these individuals used both types of coping choices less effectively than did low neuroticism subjects.

These recent findings suggest a relationship among three of the major dimensions of personality and coping. There is also evidence of a relationship between the five-factor model and personality disorder, for example, Wiggins & Pincus (1994); Schroeder, Wormsworth & Livesley (1994). Therefore, it is also likely that there are differences in the coping patterns of the DSM-IV personality disorders.

Several of the DSM-IV personality disorders (dependent, histrionic, avoidant, passive-aggressive, borderline, and obsessive-compulsive) are associated with neuroticism (Costa & McCrae, 1990; Trull & McCrae, 1994). However, the DSM-IV PDs are more specific sets of character traits than is the single broad dimension of neuroticism. Therefore, more specific patterns of maladaptive coping may be revealed through investigation of the relationship between personality disorder and coping.

### 3. Models for personality and coping

The relationship between personality and coping has only recently been established. The development of theoretical models that link personality with coping activity is in its infancy. Therefore, an initial step in examining the possible personality disorder-stress/coping relationship is to examine a possible set of models that concern normal personality and stress/coping.

Bolger & Zuckerman (1995) suggest a set of models theoretically linking personality, coping, and outcomes by examining exposure and reactivity to stress. One set of models is derived by combining two theoretical questions: (1) Are there personality differences in stressor exposure? and

(2) Are there personality differences in stressor reactivity? Combining these two dimensions yields a 2 by 2 table of alternative models: (1) a null model, i.e. there are no differences in exposure or reactivity, (2) a differential exposure model, i.e. personality affects exposure to stress and reactivity is constant; (3) a differential reactivity model, i.e. exposure is constant, personality affects reactivity, and (4) a differential exposure-reactivity model, i.e. personality affects exposure and reactivity. According to Bolger & Zuckerman (1995), a differential exposure approach is more common in the personality literature, while differential reactivity models, e.g. hardiness, are more frequently found in the stress literature. When considering both stress and personality, it is likely that both exposure and reactivity are involved (Bolger & Zuckerman, 1995).

The second set of models is concerned with how personality may affect reactivity to stress. Reactivity is divided into coping choice and coping effectiveness. These two dimensions yield four possibilities: (1) a null model, i.e. there are no differences in coping choice or coping effectiveness with personality; (2) a differential choice

model, i.e. personality affects choices which are in their nature effective or ineffective; (3) a differential effectiveness model whereby the coping choice may be adaptive but the individual is unable to use the strategy effectively; (4) and a differential choice-effectiveness model, i.e. the possibility that both processes are related to coping outcomes. Bolger & Zuckerman (1995) suggest that a differential coping choice model for example, the concept of defense style put forth by Vaillant (1977, 1994), has been a typical approach to the understanding of personality-coping relationship. Their 1995 study provides evidence for an alternative model of differential effectiveness for personality and coping. These results suggest that an integration of choice and effectiveness may have more explanatory power for the coping and personality relationship (Bolger & Zuckerman, 1995).

With high neuroticism subjects, Bolger & Zuckerman (1995) found support for the differential exposure-reactivity model, indicating higher levels of exposure and greater reactivity to stressors. Evidence for the differential choice and differential choice-effectiveness models was also obtained for high neuroticism individuals.



It is possible that this framework of models for personality and coping may also apply to personality disorder. Millon's (1981) description of "vicious cycles" may accord with the differential exposure-reactivity model that is, personality disorder behavior puts the individual in situations in which exposure to stress is more probable, then maladaptive reactions to the stress continue the process.

Due to the previously established relationship between neuroticism and differential reactivity to stress, the current investigation is largely concerned with the reactivity component described by Bolger & Zuckerman (1995). Focusing upon one aspect of the models may provide more detailed insight into personality disorder-coping relationships than an attempt to test all aspects of the Bolger & Zuckerman (1995) approach. Therefore, all subjects will be exposed to a preselected set of stressors, and exposure to stress will be held constant: thereby allowing the effect of reactivity to be examined more thoroughly. Thus, the present focus is upon the further elucidation of possible coping choice-effectiveness differences in personality disorder.

#### 4. Personality Disorder and Coping Theory

Despite the long standing personologist-situationist debate, it is generally agreed that personality traits are characterized by consistency when measured across situations. A parallel opposition of views arises with coping. Some researchers, for example Cohen (1987), argue that coping is more situation specific. However, others, for example Carver, Schier and Wientraub (1989), have provided evidence in favor of the position that coping strategies are more stable across situations and that coping can be either dispositional or situational.

Still other researchers, (e.g., Folkman & Lazarus, 1984; Lazarus, 1993; Kohn, Hay & Legere, 1994) take a more interactional approach to coping, much like the interactional view of personality that has more recently emerged. For Kohn et al. (1994), coping is not best conceptualized as a style because situations demand that coping style be modified between circumstances for the maximum effectiveness of the coping strategy. Kohn et al. (1994) make an analogy with the assessment of athletic skill. The best athletes are not always the individuals with the best individual skills, but often the individuals that can vary their skills to suit the

situation. Therefore, effective coping may be more of an ability to adapt to the situation than a particular style or strategy. Much like the baseball player who can hit but is a poor fielder, an individual with for example, antisocial personality disorder may try to cope with being attacked through confrontation instead of using a more defensive, escape strategy.

Millon's (1981, 1986) theory is compatible with an interactional view of personality and coping. As McMahon, Schram and Davidson (1993) have pointed out, Millon's (1981; 1986) theory is a useful framework for investigating the relationship between personality, stress and psychopathology. This theory is complementary with Lazarus and Folkman's (1984) coping theory in that Millon (1981) describes personality styles in terms of maladaptive person-environment transactions that are an attempt to manage stressful interpersonal interactions and life events. The bi-directional causality between person and environment that leads to stress and pathology described by Lazarus (1990; 1993) may also apply to the development and maintenance of personality disorders (Millon, 1981). Millon's (1981; 1986) approach is likely to be an important model for the

understanding of stress and personality disorder relationships because of its incorporation of coping, possibly an important moderator variable between stress and personality.

#### Millon's Model

Millon (1981, 1987) has proposed two dimensions for personality disorder: reinforcement style and interpersonal coping style. These two dimensions combine to form a 5 x 2 matrix of 10 basic personality types. Dimension one is the source of reinforcement, how the individual obtains reward (pleasure) or avoids punishment (pain). Millon (1981) hypothesizes five basic reinforcement styles: (1) detached personalities experience few rewards or punishment; (2) ambivalent personalities are in conflict over whether to be guided by others or by their own opposing desires; (3) dependents receive rewards from others; (4) independent personalities receive reinforcements based upon their own standards and values without consideration of others, and (5) discordant personalities manipulate circumstances in order to turn reward into punishment and vice versa. These reinforcement styles are related to coping in that they represent how an individual will typically behave when

confronted with stress. For example, a dependent individual will likely seek help from others in times of stress rather than use a more effective problem solving strategy.

Dimension two is the pattern of coping behavior that is either active, in which the individual is alert and actively manipulates events, or passive in which individuals allow events to happen around them without active intervention (Millon, 1981; 1987).

These two dimensions combine to form Millon's basic personality types (1) detached, both active-detached (avoidant) and passive-detached (schizoid); (2) independent, active-independent (antisocial) and passive-independent (narcissistic); (3) dependent, active-dependent (histrionic), passive-dependent (dependent); (4) ambivalent, active ambivalent (compulsive), passive-ambivalent (passive-aggressive); and (5) discordant group, active-discordant (aggressive), passive-ambivalent (self-defeating).

The second dimension (activity-passivity) adds further predictive power to the model in that each reinforcement style divides into two possibilities. For example, the passive-dependent will expect others to help him/her by default, while the active-dependent (histrionic) will use a

more active, manipulative strategy to solicit help from others when under stress.

In sum, in order to gain an understanding of personality disorder and coping, it is necessary to combine interactional coping theory, differential-choice effectiveness theory, and Millon's dimensional model. A concept closely associated with coping is defense style. Defense style has been related to personality disorder in empirical studies and by a more recent amendment to Millon's approach (Millon, 1987). Therefore, the last critical element required for understanding personality disorder and coping is consideration of the relationship between personality disorder and defense style.

#### Personality Disorders and Defense Style

A coping strategy is not adaptive or maladaptive in isolation; it is in the interaction with the situation that the efficacy of the coping process becomes apparent. According to Carver, Scheier, & Pozo (1992), strategies such as denial and disengagement are only maladaptive in situations in which activity is the best strategy. In a different instance in which ability to control the situation is low, disengagement could be the best strategy. However,

context is not always pertinent in regards to coping efforts. Vollrath et al. (1994) argue that in general some strategies, for example disengagement and emotional discharge, are less functional than others, despite the situation. Similarly, Lazarus (1993) posits that wishful thinking, an escape-avoidance strategy, is an example of a coping mechanism that is maladaptive across situations. Therefore, these theorists acknowledge that while interaction between person and situation is important, factors particular to the individual are also salient. It may be that some personality types choose coping strategies that are ineffective in any context. Thus, the notion of defense styles is an important contribution to the understanding of personality disorder and coping.

This idea of the differential efficacy of some coping behaviors over others accords with Vaillant's (1994) notion of a hierarchy of defense mechanisms, from psychotic defenses (e.g. denial, distortion of external reality) to immature defenses (e.g. projection), neurotic defenses (e.g., repression) and mature defenses (e.g. humor, sublimation). According to this hierarchical scheme, higher defenses have a greater association with mental health.

Vaillant's (1994) notion of defense styles is that defenses are more involuntary adaptive mechanisms than are coping strategies. However, Vaillant (1994) objects to the formation of a defense-coping dichotomy--each defense has both a coping function and a defending function. As well, Lazarus (1993) conceives of coping as a generic term that includes the concept of ego defenses. The higher level defenses are thought to be more effective as coping strategies as well as more conscious. In Vaillant's (1994) view, defenses are integral to the individual's psyche; therefore, they should not be thought of as learned strategies or deficits. Millon (1986) has also integrated defense mechanisms in his coping oriented theory of personality disorder by proposing a set of defense mechanisms associated with personality disorders, including compulsive PD with reaction-formation, passive-aggressive PD with displacement, schizotypal PD with undoing, borderline PD with regression, and paranoid PD with projection. These defense mechanisms are now included in the DSM-III-R, and DSM-IV, and Vaillant (1994) has suggested that they be viewed as a possible additional axis to the diagnostic system.



In summary, the problem at hand is the DSM-IV conception that personality disorders are characterized by inflexible, maladaptive strategies when confronted with stress. In order to empirically investigate this idea, one requires a theoretical foundation that includes the following components: the interactional view of stress and coping; the differential-choice effectiveness model for personality and coping; Millon's dimensional model of personality disorder; and the more trait oriented approach of Vaillant's defense styles. As previously mentioned, research into personality disorder and coping is relatively rare. However, a few recent studies have used correlational and regression approaches to investigate the relationship between personality disorder and maladaptive coping.

#### Recent Evidence

Four recent studies provide evidence for the personality disorder-maladaptive coping/defense hypothesis. Johnson, Bornstien, and Krukonis (1992), using a sample of 106 college students and multiple regression analysis, found evidence of a relationship between a maladaptive defense style measured by the Defense Style Questionnaire (Bond, Gardner, Christian, & Sigal, 1983) and personality

symptomatology using the Personality Diagnostic Questionnaire-Revised (PDQ-R) (Hyler, Rieder, Spitzer, & Williams, (1984).

A study by Vaillant (1994) has provided evidence for the notion that personality disorders tend to use different defenses when compared to each other and a predominance of immature defenses when compared to a sample of normal controls. The "Odd" Cluster (paranoid, schizoid, and schizotypal) will tend to use defenses such as projection, and fantasy. The "Dramatic" Cluster (antisocial, narcissistic, borderline, and histrionic) tend to use acting out, splitting, devaluation, and dissociation. While the "Anxious" cluster (avoidant, dependent, compulsive, and passive-aggressive) was characterized by the use of passive-aggression and hypochondriasis as defenses.

A study by Vollrath, Alnaes & Torgersen (1994) investigated the relationship between personality disorder and coping in psychiatric outpatients using the Millon Clinical Multiaxial Inventory-II (MCMI-II) (Millon, 1987) and the COPE (Carver, Schier & Wientraub, 1989). The authors hypothesized a predominance of dysfunctional coping strategies in the personality disordered individuals. Based

upon their predominant coping strategy, the personality disorders were placed into three groups. Group one (narcissistic, antisocial, paranoid, and histrionic) tended to cope via the venting of emotions. Group two (passive-aggressive, borderline, self-defeating and dependent) tended to mentally and behaviorally disengage; however this group would seek social support (instrumental). Group 3 (schizotypal, schizoid, and to some extent compulsive) tended to restrain from coping, use emotional and behavioral disengagement, and fail to seek social support. The compulsive PD was more like the normal pattern, sharing only a small percentage of its variance with the coping scales.

With a sample of psychiatric patients, Berman and McCann (1995) investigated the relationship between personality disorders and the set of defense mechanisms proposed by Millon (1986) using the MCMI-II and the Defense Mechanism Inventory (DMI) (Ihilevich & Gleser, 1986). The results provided evidence for a few of the proposed relationships, e.g. paranoid correlated with projection and passive-aggressive with displacement. However, many of the Millon personality disorder-defense relationships were not

confirmed, and the obtained correlations were relatively modest.

These studies show support for a relationship between personality disorder and maladaptive coping/defense.

However, they have some of the same shortcomings that were identified by Lazarus (1993) and (1990) as limitations of personality-coping research. The most serious of these problems is that previous research on coping and personality examines coping/defense from a more trait-like perspective, using the methodology of correlating personality traits with defense styles or coping strategies. For example, Bolger (1990) has pointed out that, in this type of study, the time of recall for stressful events can be quite long, up to 21 months in the Costa & McCrae (1986) study. Therefore, when respondents are asked how they would cope with a previous incident, the tendency is to report typical coping style rather than situation specific coping (Bolger, 1990). Hence, these previous studies do not allow for the effective investigation of the interactional component of the coping process. That is, personality disorders may not have a uniform set of maladaptive coping styles that they apply across all situations. Their responses to some situations

may be adaptive, while others may be maladaptive. This process may depend upon how personality disorders interact with particular situations. As Bolger (1990) has suggested " Thus, it is important to simultaneously examine whether and when personality matters for coping" (Bolger, 1990, p. 526). The present study addresses this concern by examining both aggregated and situational coping measures for personality disorder. This study also allows for the examination of measures of coping with a stressor that is presently occurring, not for coping that occurred in the near or distant past.

#### Purpose of the Present Study

The general purpose of this study was to investigate the relationship between personality disorder and coping/defense using an experimental methodology as an extension of previous work based on correlation and regression procedures. This objective will be pursued by examining possible differences in coping choice and coping effectiveness in personality disorder.

#### Coping Choice 1: Total Coping Choice Differences

The first facet of coping choice concerns the general question of how different personality disorders respond to

stressful stimuli. Given the relationship between coping and personality, will the differences between personality group and coping also be observed in personality disorder?

One observation concerning the possible relationship between personality disorder and coping is that individuals with personality disorders have severe coping deficits that are present across more coping domains than found in other forms of psychopathology. An additional purpose of this study, then, is to compare the frequency of coping activity between PD groups and between PD groups and normals.

#### Coping Choice 2: Situational Differences

A second aspect of coping choice involves situational effects or possible interactions between personality disorder, coping and situation. Lazarus (1993) has suggested that a weakness in previous research concerning stress and coping is that the measurement of coping efforts tends to be based upon a single incident. Consequently, the emphasis is on interindividual differences. A process approach, emphasizing the importance of the context of the coping situation, should incorporate both "...interindividual and intrapersonal..." measurement (Lazarus, 1993, p.236).

Therefore, the second focus of the present study concerns

the issue of situational effects in personality disorder. Will there be an interaction between personality, coping and situation in personality disorder?

#### Differential Coping Effectiveness

Personality disorder may also affect coping effectiveness. One method of assessing effectiveness is to compare how normals and personality disorder groups cope with the same set of stressful stimuli. This method was also used to compare coping efficacy in neurotics and normals in a study by McCrae and Costa (1986). As previously stated, at the core of personality disorder is the use of inflexible, maladaptive coping strategies. Therefore, a third purpose of this study is to compare normals and personality disordered individuals using coping scales that are usually more effective (e.g. problem solving, social support) with scales associated with less effective coping (e.g. escape-avoidance, distancing).

Several studies have shown that normal individuals tend to use more effective, adaptive coping strategies when compared to individuals experiencing psychological distress (e.g. depressives, Vitaliano, Russo, Carr, Maiuro, & Becker, (1985); Folkman & Lazarus, (1986), and panic

disordered patients, Vitaliano, Katon, Russo, Maiuro, Anderson, & Jones, (1987). With personality disorder, a study by Vollrath, Alnaes & Torgersen (1995) has shown that upon examination of patients after a 6-7 year time interval, the use of problem focused and seeking social support improved patients personality disorder scores on the MCMI-II and that escape-avoidance strategies were associated with worsened personality disorder scores. Therefore, normal individuals in this study are expected to use healthier strategies than are the personality disorder subjects.

The DSM-IV defines personality disorder partly in terms of maladaptation. However, it is not clear if this is a global problem of personality disorder or if each personality disorder has its own pattern consisting of a unique combination of adaptive and maladaptive coping strategies. Given the results of Bolger & Zuckerman's (1995) study that found a mixture of adaptive and maladaptiveness for neuroticism, one goal of this study is to examine whether a similar pattern will also occur in personality disorders.



Millon's Model as Applicable to Personality Disorder and Coping.

One of the major theoretical formulations of personality disorder is Millon's (1981) model. Millon posits maladaptive coping as one of the foundations of personality disorder. The combination of each coping style with a source of reinforcement produces Millon's 10 basic personality styles. Millon's self-defeating and aggressive styles are not part of the DSM-IV nomenclature, so are not included in the study. Therefore, another purpose of this study is to empirically investigate the relationship between Millon's 8 personality disorder styles and coping strategies with a selected set of stressors.

## Hypotheses

Hypothesis One

## Main Effect of Personality

Millon's (1981) coping based model of personality disorders and the previously established relationship between neuroticism and coping choice, lead to the prediction that people with personality disorders will cope differently with stressful situations. Therefore, hypothesis 1(a) is that there will be a main effect of personality group on coping. However, this simple main effect is not likely to be informative, as a set of diverse personality disorders, coping strategies and specific situations are all likely to produce differences. Examination of interactions among these three factors will be necessary to further the understanding of the personality disorder-coping relationship.

Hypothesis 1(b), the group main effect is not likely to be evident in a simple comparison of normals with combined personality disorders, due to the complexity of relationship between personality disorder and coping. A specific more plausible hypothesis is that differences between normals and PDs will be shown when these two groups are contrasted using

the 8 coping scales. This result is predicted because there is likely an interaction between personality group and coping.

#### Interaction of Personality and Coping

The differences between personality groups for coping are not likely to be confined to the main effect of personality and coping. Consequently, an interaction between personality groups and coping scales is predicted. Given the complexity of the personality disorder and coping relationship, this interaction is likely to have several components: 1(c) personality group by coping strategy interaction, 1(d) effectiveness and personality disorder, and (2) an interaction between personality, coping, and situation.

The first of these aspects is 1(d) the interaction between personality disorder and coping choice will be evident when coping choices are divided into effective and ineffective strategies based upon previous association with outcome. Hence, in general, some strategies are more effective than others, it is likely that the combined PD groups will select the less adaptive strategies at a higher level than all the controls and the adaptive strategies at

a lower level compared to the controls. Therefore, hypothesis 1(d) is that when normals and combined PD groups are compared, it is predicted that there will be an interaction between personality disorder and coping effectiveness-ineffectiveness.

However, these combined personality (normal-personality disorder) and coping measures (effective-ineffective) provide only a simplified view of the personality group coping interaction. Given the six personality groups and eight coping strategies, hypothesis 1(e) it is predicted that the interaction will be evident in terms of different coping profiles for the personality groups. There is no basis for any specific predictions in this case. The profiles will be explored for the personality disorder groups across the eight coping strategies in order to further examine the nature of the personality disorder coping interaction.

### Hypothesis Two

#### Interaction with Situation

The previous predictions pertain to the effect of personality group on coping choice and effectiveness from

a trait perspective. Hypothesis two is that, given the importance of situational factors in coping and the conception of coping as a process, there will be a group by coping by situation interaction. The nine different situations will produce a different set of coping responses in general and these coping profiles will vary between personality groups. The effect of specific situations upon the coping behavior of the personality disorder groups is difficult to predict. However, some specific situations may bring into focus the potential maladaptiveness of a particular personality style. However, some situations may produce similar responses across personality groups.

#### Secondary Hypotheses

An additional component of the personality-coping relationship concerns the difference between coping as maladaptive coping choice and effectiveness differences due to coping paucity. A supplementary hypothesis is that the coping deficit approach (Millon, 1981) may not be appropriate for all personality disorders. As Vaillant (1994) has suggested, coping/defense styles are integral with the individual's overall psyche. While these styles are

modifiable according to context, some personality groups engage in more coping activity than others across situations. Therefore, the relationship between personality disorder and available repertoire of coping strategies may be more complex than a simple paucity of available coping strategies. That is, some personality types may have access to the same range of coping strategies as normals, yet use these strategies in inappropriate situations. However, the coping deficit approach may apply to other disorders who may respond to stress with withdrawal or use the same limited set of strategies across situations without adaptation to the situation.

An additional hypothesis for coping effectiveness is that the PD groups will be less satisfied with the perceived effectiveness of their coping choices when compared to normals and within personality disorders. However, this effect may be weak since, given the ego-syntonic nature of personality disorder, the personality disordered individual may have the misperception that inappropriate coping choices are appropriate and effective.

With the emotion measures (anger, depression, anxiety, and fear) differences between the personality disorders are

likely to be evident in both aggregated and specific situations. Emotional responses to the vignettes are likely to accord with the DSM-IV and Millon (1981;1987) descriptions of personality disorder emotionality. Millon's model of personality disorder is based on the dimensions of source of reinforcement, as well as interpersonal coping style, not on emotional patterns. Therefore, putting personality disorders into groups based upon these dimensions is likely to place two personality styles with different emotional constellations in the same group. The detached personality style tends to be emotionally blunted. This restriction of affect may reflect a true lack of emotion or strong inhibition of emotional expression. It is unclear which of these two possibilities is true in the schizoid PD. However, with the avoidant PD, emotions are felt, but are unlikely to be expressed due to anxiety and fear of negative evaluation by others. Therefore, a group of avoidant and schizoid personalities is less likely to express emotional responses to stressful stimuli.

The dependent group (dependent and histrionic) is likely to exhibit the greatest level of emotional expression compared to the other disorders. The histrionic personality

is characterized by dramatic, superficial emotional displays, while the dependent PD tends to be more placid (Millon, 1987). In the independent group, the antisocial PD is generally characterized by emotional neutrality and the narcissistic PD, while possessing a certain cold arrogance, tends to express anger when his/her narcissistic facade is threatened (Millon, 1987). Obsessive-compulsive and passive-aggressive personalities also have different emotional profiles. The OCPD is very emotionally controlled, while the passive-aggressive PD tends to be irritable, moody, easily annoyed, and frustrated.

Due to these different emotional patterns within the Millon based groupings, it is expected that examination of separate personality disorder scales will be more informative of the relationship between personality disorder and emotional responses to stress than analysis by PD group.

Another additional hypothesis is that the maladaptiveness conception of personality disorder may be more multifaceted when examining coping and stress. One possibility is that personality disorders exhibit unique mixtures of maladaptive and adaptive coping strategies when confronted with stress. These patterns may be evident in



general, that is when stressful situations are aggregated, and in specific situations. In particular, situations that bring the personality disorder into focus or pose a threat to the personality organization may be more salient. For example, if an individual is informed of a cancer diagnosis, problem solving, positive reappraisal or seeking social support is most likely better coping strategy than confrontation or seeking escape through alcohol/drugs. An antisocial individual may use an appropriate problem solving approach along with strategies consistent with his/her personality such as confrontation and escape. Therefore, given the Bolger & Zuckerman (1995) finding of an adaptive/maladaptive combination with neuroticism, it is likely that these patterns will be observed with personality disorder.

## Chapter II: Method

Subjects

Non-clinical populations are a suitable data source for the study of personality disorders. As Amodei and Nelson-Grey (1991) have suggested, normal subjects are not as likely to be contaminated by more severe Axis-I pathology that can possibly mask the relationships between the variables of interest. The current view of personality disorder (e.g. Widiger, 1992) emphasizes its dimensional nature. Consequently, PDs are on a continuum with normality and differ in degree rather than kind. Therefore, subjects selected because they have high scores on personality disorder scales are not merely a "sample of convenience" suffering from a "restriction of range" but potentially powerful subclinical analogues. In a normative study of the Coolidge Axis-II Inventory, a sample of 1790 students demonstrated that college student samples have adequate variance for the psychometric study of personality disorder (Watson & Sinha, in press).

## Procedure

In phase one of the study, 1302 psychology undergraduates were screened with the Coolidge Axis II Inventory (CATI) (Coolidge, 1984) in order to recruit suitable personality disorder analogues. The criteria for inclusion within the analogue sample were: (1) a subject was considered eligible if he/she scored above 2 standard deviations on one or more of the 11 CATI personality disorder scales; (2) each subject was categorized into one of five groups based upon his/her highest score on one of the 11 CATI PD scales.

The experimental groups included detached (schizoid & avoidant PD), independent (narcissistic & antisocial PD), dependent (dependent & histrionic PD), and ambivalent (passive-aggressive, & compulsive PD) personality styles. The more severe borderline, schizotypal, and paranoid PDs were not included in the study. Subjects with scale elevations on more than one scale were classified as "mixed" PD, providing the elevations were on two scales from different personality groups. For example, a schizoid-avoidant combination was included in the detached group, while the antisocial-histrionic pattern is classified as a

is "mixed" PD. The majority of the mixed group consisted of narcissistic/histrionics, which was expected given the high comorbidity between these disorders. Cutoff scores for the CATI with the 8 scales were established as follows:

Antisocial (103), Avoidant (50), Dependent (77), Narcissistic (79), Histrionic (86), Compulsive (90), Passive-aggressive (56), and Schizoid (79).

The control group consisted of Ss scoring below one standard deviation above the mean on all the 11 personality scales.

Phase two of the study consisted of a pilot with 40 introductory psychology students (26 females & 14 males). In the pilot project, the subjects rated a preliminary set of 14 stress vignettes on imaginability, stressfulness, depression, fear, anger, anxiety, and perceived control of an imagined event. Of this set of 14 vignettes, 9 were selected on the basis of imaginability, stressfulness, stress-emotion sum and perceived control (see appendix G).

Phase three consisted of an experimental design 6 (personality group) x 9 (stressful situation) with repeated measures on the last factor and 8 coping scales as

dependent measures for each situation. The personality types, a between subjects factor, consisted of independent, dependent, detached, ambivalent, mixed, and control. The stressful situations, a within subjects factor, were health (cancer), residence (fire), crime and legal matters (mugged), finances (wallet), school (midterm), family (heart), work (job), social activities (romance), crime and legal (burglary). For each stressful situation, the following coping strategies were assessed: Confrontive Coping (CC), Distancing (DD), Self-Controlling (SC), Seeking Social Support (SS), Accepting Responsibility (AR), Escape-Avoidance(EA), Planful Problem Solving(PS), and Positive Reappraisal(PR).

Eligible subjects were tested in groups of 1 to 5 with a set of 9 hypothetical vignettes presented in two different random orders. After reading each vignette, each S was asked to imagine him/herself in the stressful situation and to complete one of 9 equivalent, 16-item, short forms of the WCQ (66 items). These reduced forms were created by randomly selecting 2 items from each scale of the WCQ (see appendix b & f). Each of these tests was scored by obtaining the average of the two items for each coping scale. Total coping

scales were derived from the sum of all items for each scale from tests 1-9.

As stress/emotion measures, the subjects indicated the imaginability, stressfulness, depression, fear, anger, anxiety, and perceived control of the imagined event on a 7-point scale after each vignette. Coping effectiveness was measured on a 5-point scale after each vignette (see appendix b). Total stress/emotion scales were obtained by summing the 9 situation scores. These total coping and emotion scores were aggregated measures, and therefore, provided longer test scales with higher reliability. In order to restore their mood to pre-experimental levels, the subjects completed a mood restoration exercise (see appendix d).

After completing the mood restoration (deinduction) exercise, the subjects were debriefed as to the purpose of the study (see appendix e). They were informed that the primary purpose of the study was to investigate the role of personality in the stress and coping process. The subjects were also informed that eligibility in the study was determined by the degree to which they manifested independent, dependent, and detached personality styles.

Psychiatric labels such as "antisocial" or "dependent" were inaccurate and misleading in this context, and, therefore, were not used.

### Instruments

Coolidge Axis Two Inventory (Coolidge, 1984) is a 200 item self-report inventory designed to measure the DSM-III-R personality disorders (see appendix a). The items for the 11 personality disorder scales are derived directly from the 117 personality disorder criteria of the DSM III-R and there is a minimum amount of item overlap (Coolidge, & Merwin, 1992). Merwin & Coolidge (1987) report a mean test-retest reliability of .90 for the personality disorder scales. Cronbach's alpha ranged from: .68 obsessive-compulsive to: .86 Avoidant (Coolidge & Merwin, 1992).

The Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1988) is a 66 item self-report measure of coping processes. With this instrument, respondents are asked how they would cope with a particular stressful situation in the last week. For the current experiment, the instructions were modified so that the S indicated how he/she would cope with the situation he/she was currently imagining. The WCQ contains 8 different scales (50 items) based on several

factor analytic studies (Folkman & Lazarus, 1988), which have been assigned the following descriptive labels: Confrontive Coping (CC), Distancing (DD), Self-Controlling (SC), Seeking Social Support (SS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PS), and Positive Reappraisal (PR).

Stressor Vignettes. In a pilot study (see appendix g) ( $n=40$  university students) tested 14 written depictions of stressful life-events/ daily hassles. Based upon these data, 9 vignettes (see appendix c) were selected using stressfulness, imaginability and emotional response as criteria. These one paragraph statements were constructed by elaborating upon selected one-sentence statements found in the Psychiatric Epidemiology Research Interview (PERI) Life Events scale (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978). This instrument is a list of 102 events that are designed to sample a cross-section of human life events.

Research using simulation (Sinclair, Mark & Shotland, 1987) and roleplay (Sinclair, Mark, Enzle, Borkovec, & Cumbleton, 1994) has demonstrated the close correspondence between imagined analogue situations and actual behavior.



Also, as these vignettes are essentially self-report in paragraph form, these stimuli are expected to be as valid as the typical one-sentence statements employed in questionnaire research.

## Chapter III: Results

## Overview

The results are consistent with an interactional view of personality disorder and coping. In the primary data analysis, there were three major findings: a main effect of group, group by coping interaction, and personality by situation by coping interaction. Therefore, these results provide evidence of trait, situational and interaction effects.

Data Analysis:

A total of 234 eligible subjects (160 females, 74 males) participated in the experimental portion of the study. The age of the Ss ranged from 18 to 45:  $M=21.23$ ,  $\sigma=4.55$ . The Ss consisted of 80 controls (60 female, 20 male); 33 independent (11 female, 22 male); 33 detached (19 female, 14 male); 30 dependent (28 female, 2 male); 26 ambivalent (21 female, 5 male); and 32 mixed (21 female, 11 male) PDs. Due to these gender imbalances, the primary data analysis was conducted with the combined dataset.

In order to test hypothesis one and two across situations, a 6(Personality group) ANOVA with repeated

measures across the (9 Situations X 8 Coping scales) was performed. The ANOVA yielded a significant main effect for group,  $F(5, 228)=4.43$ ,  $p < .01$ , in support of hypothesis 1(a).

There was a significant interaction for coping X group,  $F(35, 1596)=4.97$ ,  $p < .001$ , showing support for hypothesis 1(c). In support of hypothesis 2, there was a significant situation X coping X group interaction,  $F(280, 12768)= 2.69$ ,  $p < .001$

Hypothesis 1(b): a planned comparison between all personality disorder groups combined and normals was performed with aggregated coping as a dependent measure. The difference between ( $X=19.16$ ), PD groups versus ( $X=19.21$ ), normals was not significant.

A planned comparison between the control group and all personality groups for the eight coping scales revealed significant effect for personality group. Wilk's  $\lambda=0.818$   $F(8, 220)=6.13$ ,  $p < .001$ . Univariate (Bonferroni adjusted) F tests showed differences for EA (escape-avoidance scale), ( $X=16.65$ ) for controls versus ( $X=18.10$ ) for PD groups,  $F(1, 227)=18.51$ ,  $p < .001$ , SS (social support) scale, ( $X=23.21$ ) for controls versus ( $X=20.93$ ) for PD groups

$F(1,227)=14.94$ ,  $p < .001$ , and PR (positive-reappraisal) scale, ( $X=20.71$ ) for controls versus ( $X=19.40$ ) for PD groups,  $F(1,227)=11.13$ ,  $p < .001$ .

Hypothesis 1(c) of a significant interaction between personality group and coping scale was found for 6(personality group) X 8(coping scales),  $F(35, 1596)=4.97$ ,  $p < .001$ . Univariate (Bonferonni adjusted) F tests revealed that CC (confrontive coping),  $F(5, 227)=8.37$ ,  $p < .001$ , EA (escape-avoidance)  $F(5, 227)=10.47$ ,  $p < .001$ , (seeking social support)  $F(5, 227)=9.34$ ,  $p < .001$ , and AR (accepting responsibility)  $F(5, 227)=4.99$ ,  $p < .001$  were significantly different for the six personality groups. Mean differences for the DD, SC, and PS scales were nonsignificant (see table 1).

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Insert table 1 about here

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Using an arbitrary cutoff of 20 with total coping scores (the possible range for coping totals is 9-36), the predominant coping strategies for the 6 personality groups are presented in figure 1. The control group tended to use SS, PS, PR, and SC. Independent personalities used PS and

CC. Detached personalities used PS and SC. The dependent group used SS, PS, and CC. Ambivalent personalities used SS, SC, and PS. Mixed personality used SS, PS, CC, EA and PR.

Examination of figure 1 provides further evidence for hypothesis 1(c) of different patterns of coping strategies for each personality group. These patterns appear to indicate that normals tend to use strategies associated with healthier outcomes: problem solving, seeking social support, positive reappraisal, and self-control. These results indicate a possible interaction between personality disorder and coping effectiveness.

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Insert figure 1 about here

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Hypothesis 1(d) of an interaction between personality disorder and coping effectiveness was examined by an 2 (personality group) X 2 (effective-non-effective) ANOVA with repeated measures on the last factor. The effective scale was the combined PS, PR, SS and SC scales, the ineffective scale was the combined EA, CC, AR, and EA scales. A significant group by effectiveness interaction was obtained,  $F(1,232)=28.75$ ,  $p < .001$  (see figure 2). The effect of group

was significant, Wilk's  $\lambda = .889$   $F(2,231) = 14.39$ ,  $p < .001$ . Univariate F tests show significant mean differences for the effective scale ( $X = 21.72$ ) controls, ( $X = 20.47$ ) PD groups,  $F(1,232) = 9.02$ ,  $p < .01$  and the ineffective scale ( $X = 16.69$ ) controls, ( $X = 17.85$ ) PD groups,  $F(1,232) = 9.21$ ,  $p < .01$ .

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Insert figure 2 about here

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#### Hypothesis 1(e) Post-Hoc Comparisons

The above analyses indicate support for the hypothesis of an interaction between personality and coping choice. A series of post-hoc analyses were performed with the coping scale totals in order to further examine the different coping profiles between the personality groups.

##### Accepting Responsibility

In the AR scale, post-hoc Tukey HSD comparisons revealed several mean differences. The control group ( $X = 16.49$ ) differed from the dependent ( $X = 19.03$ ),  $p < .05$  and mixed ( $X = 18.65$ ),  $p < .05$  PD groups. The detached ( $X = 15.69$ ) group differed from the dependent ( $X = 19.03$ ),  $p < .01$  and mixed ( $X = 18.65$ ),  $p < .05$  groups.

### Confrontive Coping

For the CC scale, the control group ( $X=19.00$ ) differed from the detached group ( $X=16.95$ ),  $p < .05$  and mixed groups ( $X=22.00$ ),  $p < .01$ . The independent group ( $X=20.50$ ) differed from the detached group ( $X=16.95$ ),  $p < .001$ , and the detached group differed from the dependent ( $X=20.46$ ),  $p < .001$  and mixed groups ( $X=22.0$ ),  $p < .001$ .

### Escape-Avoidance

There were several significant Tukey HSD tests for EA. The control group ( $X=16.65$ ) differed from the dependent ( $18.36$ ),  $p < .05$ , ambivalent ( $X=18.67$ ),  $p < .05$  and mixed groups ( $X=20.57$ ),  $p < .001$ . The detached group ( $X=15.03$ ) differed from the independent ( $X=18.08$ ),  $p < .05$ , dependent ( $X=18.36$ ),  $p < .01$ , ambivalent ( $X=18.67$ ),  $p < .01$ , and mixed ( $X=20.57$ ),  $p < .001$ , groups.

### Positive Reappraisal

In the PR scale, a post-hoc Tukey HSD showed a difference between the control ( $X=20.71$ ) and independent ( $X=18.69$ ) groups  $p < .01$ .

### Seeking Social Support

With the SS scale, post-hoc Tukey-HSD tests revealed that the control group ( $X=23.21$ ) differed from the

independent ( $X=19.24$ ),  $p < .001$  and detached groups ( $X=18.71$ ),  $p < .001$ . Also, both the dependent ( $X=23.36$ ) and mixed ( $X=22.87$ ) groups differed from the independent and detached groups,  $p < .01$ .

#### Hypothesis Two: Post-Hoc Comparisons

For hypothesis two (situational effects), there was a significant 6(personality) X 9(situation) X 8(coping) interaction  $F(56, 12768)=2.69$ ,  $p < .001$ . In order to further explore hypothesis two of an interaction of personality group, coping and situation, analysis by situation was performed for the nine situations for each of the eight coping scales. The six groups were first compared by performing a separate MANOVA (6 groups) X (8 coping scale) for each situation. The multivariate  $F$ 's ranged from  $F(40, 966)=2.04$ ,  $p < .001$  for "job" to  $F(40, 966)=3.70$ ,  $p < .001$  for "fire". Post-hoc Tukey HSD comparisons have been recommended by Stevens (1992) as a useful means of post-hoc analysis with repeated measures designs. Comparisons between the personality groups were performed on those coping scales with univariate  $F$ 's below  $p < .005$ , reducing the possible number of scale comparisons from 72 to 27. The total set of these comparisons was Bonferroni corrected at



( $p.05/27=0.0018$ ), therefore all comparisons were  $p < .002$   
(see table 2).

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Insert table 2 about here

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### "Mugged"

Situation 1 involved being robbed and physically attacked by two large men (see appendix c). The independent group endorsed CC ( $X=2.60$ ) and the mixed group ( $X=2.45$ ) compared to the dependent group at ( $X=2.01$ ). The controls endorsed SS ( $X=2.89$ ), compared to the independents ( $X=2.01$ ). In the AR scale, the control group endorsed ( $X=1.81$ ), compared to the dependent group at ( $X=2.63$ ).

### "Cancer"

Situation 2 involved being informed of having cancer. The detached group endorsed CC ( $X=2.0$ ) compared to the independent ( $X=2.39$ ) and mixed ( $X=2.64$ ) groups.

### "Romance"

Situation 3 involves breaking off with a dating partner. The control group endorsed CC ( $X=1.91$ ) compared to the dependent ( $X=2.61$ ) and mixed ( $X=2.57$ ) groups. With social

support, the control group score was ( $X=2.08$ ) in contrast to the lower detached group score ( $X=1.60$ ) and higher mixed group score ( $X=2.18$ ). In escape-avoidance, the independent ( $X=2.42$ ) and mixed ( $X=2.56$ ) groups were higher than the control group ( $X=1.81$ ).

#### "Fire"

Situation 4 was a scenario in which the individual was faced with his/her home burning down. With the EA scale, the control ( $X=1.50$ ) and detached ( $X=1.37$ ) groups compared to the mixed ( $X=2.39$ ) and independent ( $X=2.30$ ) groups. Problem solving was endorsed to a greater degree by the controls ( $X=2.63$ ) compared to the detached group ( $X=2.03$ )

#### "Heart"

In situation 5, the individual had to cope with the impending death of a parent due to a heart attack. Social support was used to a greater degree by the controls ( $X=3.21$ ) compared to the ambivalent ( $X=2.34$ ), independent ( $X=2.27$ ), and detached groups ( $X=2.22$ ). Escape-avoidance was used by the detached group ( $X=1.39$ ) compared to the control ( $X=1.75$ ), dependent ( $X=2.31$ ) and mixed groups ( $X=2.38$ ).

"Burglary"

Situation 6 was a scenario in which the individual discovers that he/she had been burglarized at home. In escape-avoidance, the ambivalent group endorsed the scale (X=1.94) compared to the control group at (X=1.36).

"Job"

Vignette 7 involved the experience of being fired at work. In the EA scale, the control group (X=1.48) were different from the mixed group at (X=2.15), which was also significantly different from the detached group (X=1.42).

"Wallet"

For situation 8, the individual imagined a scenario in which she/he lost a wallet with a moderate amount of cash in it. With CC, the mixed group (X=2.67) compared to the control (X=1.75), independent (X=1.77) and detached groups (X=1.56). The independent group endorsed SS (X=1.57) compared to the control group (X=2.30).

"Midterms"

A student having to write three midterms on the same day was situation 9. This scenario was the most likely to have actually occurred to the Ss as 48.92% of the respondents indicated that this had happened to them in the

last year. With distancing, a strategy more commonly used after an exam (Lazarus, 1993), the independent group endorsed DD ( $X=1.95$ ) compared to the control group ( $X=1.36$ ). The controls ( $X=1.53$ ) differed from the dependent ( $X=2.60$ ), ambivalent ( $X=2.38$ ), and mixed ( $X=2.39$ ) groups on the EA scale.

These situation analyses provide additional support for the notion that (a) normals cope differently than personality disordered individuals not only in general but also when specific situations are examined and (b) these differences are also evident when personality disorder groups are compared in specific stressful situations. The coping patterns appear to indicate the choice of less effective strategies for the PD groups and also provide evidence for the notion of a pattern of choosing both effective and ineffective strategies in the personality groups.

#### Supplementary Hypotheses

(1) Number of coping strategies. In order to test the supplementary hypothesis of coping paucity, analysis was completed on the number of coping mechanisms selected.

The coping strategy scores (1 to 4 average of two WCQ items) were recoded using an arbitrary cutoff of 2.0 (meaning 'used somewhat' on the scale). Scores below 2.0 were coded 0, 'not selected', or above 2.0 =1, 'selected'. These scores were then summed to obtain a 'number of strategies selected' score for each situation and for the total number of strategies. An ANOVA for the total number of strategies selected was significant  $F(5, 228)=4.26, p < .01$  (see table 3).

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Insert Table 3 about here

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A post-hoc contrast between the control group and combined PDs was not significant. A contrast between the low scoring detached group ( $X=24.72$ ) and all other groups was significant  $F(1, 228)=11.93, p < .01$ . Post-hoc Tukey HSD analysis showed differences for the independent ( $X=28.3$ ) and mixed groups ( $X=35.15$ ); the detached and mixed groups; and the detached and dependent groups ( $X=32.03$ ). Significant correlations between CATI PD scales and the total number of strategies were found for the histrionic  $r=0.253, p < .01$ , and narcissistic,  $r=0.228, p < .05$  scales.

These results support the idea of coping deficit for the detached group schizoid/avoidant. However, for the mixed (largely histrionic/narcissistic) group, the strategy could be described as "overcoping" rather than "undercoping". In addition, Figure 1 illustrates that paucity is not a characteristic of all of the PD groups.

(2) Coping effectiveness. The additional hypothesis is that personality affects coping effectiveness as measured by self-ratings. One component of effectiveness is measured by comparing normals with PD groups, assuming normals will on average make the better choice and be able to implement that choice effectively. The previous analysis 1(d) provides evidence for this hypothesis. Another aspect of effectiveness is the perception of effectiveness measured by self-ratings. This effectiveness perception may vary between normals and personality disorder groups as well as between the PDs.

An ANOVA with total coping effectiveness scores revealed a main effect of group  $F(5, 227)=5.67, p < .001$ . A contrast between the control group and all personality groups was significant  $F(1, 224)=9.65, p < .01$ . Tukey HSD post hoc comparisons coping efficacy scores showed

differences between the ambivalent group ( $X=26.96$ ) and the control ( $X=32.46$ ),  $p < .001$ , independent ( $X=32.51$ ),  $p < .001$ , and detached groups ( $X=31.63$ ),  $p < .05$  (see table 4).

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Insert table 4 about here

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The results indicated that overall the control group was significantly different from the personality groups in perception of coping effectiveness. However, this was largely a difference between the lower effectiveness ratings of the ambivalent group and all other personality groups.

#### Stress/emotion scales

The means and SDs for imaginability, stressfulness, depression, fear, anger, anxiety, situational control, and coping efficacy are presented in table 5.

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Insert Table 5 about here

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(3) Stress/emotion differences. This additional hypothesis was tested by examining personality group

differences for stress and emotional responses to the vignette stimuli. In general, the results indicate a pattern of low reactivity for the detached group and higher reactivity with the dependent group.

#### Stress

The results indicated that the vignettes provided a range of stressful stimuli, from wallet ( $X=4.2$ ) to heart ( $X=6.22$ ), see table 6.

An ANOVA on total stress scores showed a significant effect for group  $F(5, 227)=3.67$ ,  $p < .01$ . Post hoc Tukey-HSD tests revealed significant differences between means for the control ( $X=47.62$ ) and detached groups ( $X=43.12$ ),  $p < .05$  and detached and dependent groups ( $X=50.40$ )  $p < .01$ . Univariate F tests (Bonferonni adjusted) showed group differences for situation 1 (mugged)  $F(1,227)=9.16$ ,  $p < .01$ , between the dependent group ( $X=6.21$ ), and the detached group ( $X=5.18$ ); for situation 4 (fire)  $F(1, 227)=9.28$ ,  $p < .01$ , with the dependent group ( $X=6.0$ ) and the detached group, ( $X=5.13$ ); and in situation 9 (midterms)  $F(1, 227)=8.33$ ,  $p < .01$ , between the dependent group ( $X=5.97$ ) and detached group ( $X=5.10$ ).



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Insert table 6 about here

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#### Emotion scales

Table 7 presents ANOVA performed on the total scores for the anxiety, depression, anger, fear, imaginability, and perception of control. An ANOVA on the total anxiety scores revealed a significant effect of personality group  $F(5, 227)=2.69$ ,  $p < .05$ . A post-hoc Tukey HSD for the total anxiety scores revealed a difference between the detached ( $X=36.36$ ) and dependent groups ( $X=44.0$ ),  $p < .05$ .

With an ANOVA for the total depression scores, there was a significant main effect for group  $F(5, 227)=4.38$ ,  $p < .001$ . Post-hoc Tukey HSD comparisons revealed significant differences between the independent ( $X=36.72$ ) and dependent groups ( $X=43.73$ )  $p < .05$ , and the detached ( $X=34.42$ ) and dependent groups,  $p < .01$ , and the detached and ambivalent groups ( $X=42.11$ ),  $p < .05$ .

An ANOVA for the total anger ratings revealed a significant main effect for group  $F(5, 227)=6.76$ ,  $p < .001$ . Post-hoc Tukey HSD comparisons revealed a difference between the low scoring detached group ( $X=33.36$ ) and the control

group ( $X=40.33$ ),  $p < .05$ , the independent group ( $X=44.93$ ),  $p < .001$ , dependent group ( $X=45.80$ ),  $p < .001$ , ambivalent group ( $X=41.88$ ),  $p < 0.05$  and mixed group ( $X=44.06$ ),  $p < .001$ .

For the total fear ratings, an ANOVA for personality group was significant  $F(5, 228)=7.27$ ,  $p < .001$ . Post-hoc Tukey HSD comparisons for the total fear means revealed differences for the control ( $X=36.38$ ) and detached groups ( $X=30.21$ ),  $p < .01$ , the control ( $X=36.38$ ) and dependent groups ( $X=42.73$ ), the independent ( $X=33.87$ ) and dependent groups ( $X=42.73$ ),  $p < .01$ , the detached ( $X=30.21$ ) and dependent groups ( $X=42.73$ ),  $p < .001$ , and the detached ( $X=30.21$ ) and ambivalent groups ( $X=40.03$ ),  $p < .001$ .

For imaginability and perception of control, the effect of personality group was not significant.

In sum, the stress/emotion scales indicate that the stressful vignettes were effective in producing a range of stress and emotional responses and adequately imaginable to the respondents.

#### Gender

An exploration of possible gender differences was also conducted with a series of exploratory F tests. For the females  $n=160$ , univariate F tests show similar group

differences as found in the complete sample, CC scale:  $F(5,154)=3.69$ ,  $p<.01$ , EA scale:  $F(5, 154)=3.86$ ,  $p <.01$ , SS scale:  $F(5 ,154)=5.00$ ,  $p <.001$ , and the AR scale:  $F(5, 154)=4.28$ ,  $p <.01$ .

In the males  $n=74$ , the univariate F tests, also revealed similar group mean differences for the CC scale:  $F(5, 68)=5.85$ ,  $p <.001$ , SS scale:  $F(5, 68)=3.74$ ,  $p <.01$ , EA scale:  $F(5, 68)=9.66$ ,  $p <.001$ .

Significant,  $p <.05$ , mean differences for the EA ( $X=15.69$  male,  $X=18.48$  female), and SS ( $X=22.73$  female,  $X=19.52$  male) scales were found using 95% confidence intervals, Hotelling's,  $T^2(8, 206)=48.21$ ,  $p <.001$ .

As similar patterns of differences between personality disorder groups are noted in the male and female portions of the sample, and given the problem of confounding between personality disorder and gender, the major analyses were conducted with the total sample.

In general, using a 2(sex) X 9(situation) repeated measures MANOVA, the females rated the situations as more stressful, Wilk's  $\lambda=0.847$ ,  $F(9,227)=4.56$ ,  $p<.001$ ), and higher for depression (Wilk's  $\lambda=.0731$   $F(9,227)=9.30$ ,  $p<.001$ ), for anxiety (Wilk's  $\lambda=0.848$   $F(9,227)=4.52$ ,  $p<.001$ ),

with fear, (Wilk's  $\lambda=.703$   $F(9,228)=12.04$   $p<.001.$ ), and for anger (Wilk's  $\lambda=0.888$ ,  $F(9,227)=3.17$ ,  $p<.01$ ). With the 'mugged' situation, control ( $X=3.28$  versus  $X=2.13$ ),  $T^2(9,223)=65.32$ ,  $p<.001.$ , and coping effectiveness ( $X=3.75$  versus  $X=3.13$ ),  $T^2(9,223)=28.03$   $p<.001$ , were found to be lower for the females using 95% confidence intervals. There was no significant gender difference for imaginability.

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Insert table 7 about here

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Means and standard deviations for the Coolidge Axis-II Inventory scores for the 11 DSM-III-R scales are presented in table 8.

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Insert table 8 about here

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#### Personality Disorder-Coping Correlations

In order to provide additional validation of the previously discussed correlational findings of a

relationship between personality disorder and maladaptive coping strategies, Pearson correlations were calculated for the personality disorders and total coping scores. An additional purpose of this analysis was to examine similarities and differences within the Millon personality disorder groups.

The antisocial PD (independent) was related to CC and EA. However, the narcissistic PD was associated with CC, AR and EA. With avoidant Pd (detached), the association was positive with AR, EA, and negative with PS. The schizoid PD was negatively associated with SS and EA. In the dependent group, the dependent PD was associated with AR, EA and negatively correlated with PS. However, the histrionic PD was associated with CC, SS, AR, and EA. With obsessive-compulsive PD (ambivalent) there were no significant correlations, the passive-aggressive Pd was strongly associated with EA and correlated with AR.

These results provide further evidence for differential coping choice in personality disorder, for coping paucity in some disorders and over-coping in others and for, and the notion of maladaptive-adaptive coping mixtures for personality disorders.

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Insert table 9 about here

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#### Personality Disorder-Emotion Correlations

As a further test of possible emotion differences, correlations between personality disorder scales and emotion totals were calculated (see table 10). As predicted, with the independent group, the antisocial Pd had no significant correlations with any of the scales, whereas the narcissistic PD was significantly related to stress, anger, fear, anxiety and depression. In the detached group, the avoidant PD was significantly related to fear, anxiety, depression, low control and low coping efficacy. However, the schizoid PD was negatively related to stress, anger, fear, anxiety and depression. With the dependent group, both dependent and histrionic PD were associated with all of the emotion scales. Although, the low control perception and coping efficacy were not noted with the histrionic PD. In the ambivalent group, the lack of emotion was evident for the obsessive-compulsive PD, with the exception of depression. Both of these personalities

were associated with low coping efficacy. Anger, fear, anxiety, and depression were associated with passive-aggressive PD.

As predicted, examination of separate personality disorder scales revealed more aspects of the relationship between personality disorder and emotional responses to stress than analysis by PD group. These correlations demonstrate that the association between the emotional responses to the vignettes and personality disorder are close to the DSM-IV and Millon (1981;1987) descriptions of personality disorder emotionality.

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Insert table 10 about here

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## Chapter IV: Discussion

The results of this study show that people with personality disorders are different in how they cope with stressful situations. These differences are noted when personality disordered individuals are compared with normals and when PDs are compared with each other. There is evidence of both trait and situational differences for personality disorder and coping.

Inflexibility and maladaptiveness are the two main characteristics of the DSM-IV conception of the relationship between personality disorder and stress/coping. How are PDs inflexible and maladaptive? Millon (1981; 1987) has made the first step in answering this question by suggesting that personality disorders are limited in their ability to cope by two factors: interpersonal coping style and the use of a single source of reinforcement that is not adaptive in all situations. Literature exploring the relationship between personality and coping is relatively scarce and studies relating personality disorder to coping are even more rare. The present study takes several steps towards addressing this issue by providing evidence for differential coping choice, differential coping effectiveness, the importance of



personality-situation interaction, the differential choice-differential effectiveness model, and the heuristic value of Millon's (1981; 1987) model in the analysis of coping choice-effectiveness differences in personality disorders. Two additional findings include the possibility of a coping activity continuum and maladaptive/adaptive coping patterns in personality disorder.

This study reinforces previous findings of a differential coping choice, or trait effect, for personality and coping. The examination of aggregated measures supports the hypothesis that these results will also apply to personality disorder and coping.

According to the pure situationist approach, personality should not matter at all in relation to stress and coping. When a person is confronted with stress, it should be the situation alone that determines coping choice. Therefore, it should be merely differential coping effectiveness that determines the outcome. As discussed previously, trait and situational views of the relationship between coping and personality are analogous with the ancient situationist-personologist debate. The more modern resolution of this diatribe is the notion of interaction

between persons and situations. Upon examination of the relationship between personality disorder and situation, the results of situational measures provide evidence for the application of an interactionist position for the personality disorder stress/coping relationship. Thus, differential coping choice can be observed in the person, in the situation, and in the interaction between these two factors.

Comparisons between personality disorder groups and normals, and analysis of coping effectiveness ratings, also provide support for the differential coping-effectiveness hypothesis. Therefore, the present investigation supports both differential coping choice and differential effectiveness in personality disorder. Consequently, there is evidence for the Bolger & Zuckerman (1995) combination model of differential choice-differential effectiveness.

The nine situations used in the present study produced different coping responses, as well as a range of emotional responses. The stress/emotion scales show that the different situations were stressful in varying degrees, from a simple lost wallet, more of a daily hassle, to the death of a parent, a major life event. Examination of the coping

responses to these stressful situations, either aggregated or by specific situation, yields a pattern of differences between the personality types. Examination of these patterns within the context of modern personality disorder theory, i.e., Millon (1981, 1987), is a useful aid in the interpretation of these personality choice-effectiveness differences.

#### Differential Coping Choice: Overall Coping Patterns

The examination of trait differences in overall coping patterns reveals that normal controls and the combined personality disorder groups are different in their use of escape-avoidance strategies, seeking social support, and positive reappraisal. In general, the normals tended to implement more adaptive, effective strategies when compared to PD individuals. The normals in the study tended to use less escape-avoidant coping, distancing, and accepting responsibility (self-blaming). The normal personalities also utilized more seeking social support, positive reappraisal, and planful problem solving when compared to all the PD groups. Nevertheless, each PD group has a distinctly different coping pattern that is in some cases similar to

the normal standard yet idiosyncratic with the other PD groups.

#### Confrontive Coping

Both normals and several of the PDs tended to use confrontive coping (e.g. "stand my ground and fight for what I want;" "try to get the person responsible to change his or her mind;" "I expressed anger to the person(s) who caused the problem;" "I let my feelings out"). Confrontive coping was associated with the independent, dependent, and mixed PD groups. Millon (1986) predicted the use of an acting-out or confrontive strategy for the antisocial personality. The correlation between ASPD and CC, and the difference between the action of the independent group and the relative inaction of the detached group lends support to the notion that antisocial PD is characterized by action when under stress. Millon's differentiation between the "active" ASPD and "passive" narcissistic PD is also highlighted. The passive-independent (narcissistic) style, has a passive, "I get the world handed to me on a silver platter" sense of entitlement. These narcissistic personalities have a lesser tendency to cope through the use of escape-avoidance and confrontation.

The dependent group also tended to use CC, although this was more characteristic of the active pole of the activity-passivity dimension than the dependent source of reinforcement. The active-dependent (histrionic) group tended to use a combination of confrontive coping, escape-avoidance and seeking social support while the passive-dependent (dependent PD) group employed a combination of accepting responsibility (self-blaming) and escape-avoidance. Both of these disorders are dependent in their orientation, the difference being that the histrionic will make demands on others to meet his/her needs.

#### Distancing

The distancing scale (e.g. "make light of the situation;" "refuse to get too serious about it;" "go on as if nothing had happened") was the least endorsed scale by all the groups. Distancing failed to discriminate between the personality groups, although it was used to a lesser extent by the control group. When additional regression analysis was performed with emotion checks as criteria and coping scales as predictors, this analysis suggested that distancing was negatively associated with anger, fear,

depression, stress, and anxiety rather than personality groups.

#### Escape-Avoidance

Escape-avoidance (e.g. "wish that the situation will go away or somehow be over with;" "refused to believe that it had happened;" "tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.") was associated with all the personality disorder scales, with the exception of the obsessive-compulsive scale. This coping mechanism discriminated normals from the PD groups in general. Superficially, one would expect that the detached group, active-detached (avoidant) and passive-detached (schizoid), would use escape to a greater extent than the other personality groups. Nevertheless, the tendency of the detached group is to do nothing when confronted with stress. The escape-avoidance scale consists of items measuring denial, drug/alcohol use, and physical avoidance strategies. As Millon (1986) has suggested, schizoid and avoidant personalities are more likely to cope via the detachment oriented escape strategies of intellectualization (schizoid) or fantasy (avoidant).

The difference between the active and passive-detached personality is illustrated by the positive correlation between avoidant PD and the escape-avoidance and accepting responsibility scales and the negative relationship of avoidant PD to problem solving. However, the schizoid personality correlates negatively with escape-avoidance and has a negative relationship to seeking social support. These results concur with Millon's description of the two disorders in which the avoidant desires contact with others but is too anxious and afraid of negative evaluation and therefore shuns contact. The avoidant PD is an "unsuccessful dependent," whereas the schizoid's avoidant character emerges from an aloof lack of interest or concern with human interaction (Millon, 1981).

#### Self-Controlling

The self-controlling scale (e.g. "I will try to keep my feelings to myself;" "keep others from knowing how bad things are;" "I tried not to act too hastily or follow my first hunch") was endorsed more or less equally by all the groups with the exception of the independent group, which appeared to have less control when compared to the control group. This result is likely a reflection of the acting out

orientation of antisocial and narcissistic PDs as, for example, Berman & McCann (1995) and Vollrath et al. (1994) have noted. Coping by self-control failed to correlate with any of the personality disorder scales. This coping mechanism was endorsed to the greatest degree in the "heart" vignette involving the death of a parent. However, the responses were similar across personality groups.

#### Accepting Responsibility

Accepting responsibility or self-blaming (e.g. "realized I brought the problem on myself;" "criticized or lectured myself") discriminated normals from the dependent and mixed PD groups. Self-blame is apparently not a characteristic of the total detached group given the low endorsement of this coping mechanism relative to the other groups. However, the active-detached (avoidant) pattern correlated positively with AR, and the passive-detached (schizoid) pattern had a negative relationship with AR. This within group difference is understandable given that the schizoid personality is characterized by an odd, aloof viewpoint of reality with strong intellectualizing tendencies. Consequently, it is not likely that these individuals would blame themselves for stressful situations.



Retreat into fantasy is a far more likely coping style for the schizoid PD.

Differences within the dependent group are also noted for the active-dependent (histrionic) and passive-dependent (dependent) patterns. The passive pattern is more likely to use a combination of self-blame (AR) and escape-avoidance. Dependent PD also correlates negatively with PS (problem solving). The active pattern uses AR to some extent, but is mainly characterized by escape-avoidance, seeking social support, and confrontive coping. Although both of these PDs seek reinforcement from others, as Millon (1987) suggests, the dependent PD is characterized by introjection. Consequently, rather than risk a dependent relationship with another, the dependent will accept the blame for any difficulties. On the other hand, histrionics are more likely to use dissociation than to accept responsibility. These dramatic personalities are shielded from blame by a veneer of false self-presentation (Millon, 1987).

Differences between the narcissistic and antisocial PDs are brought into focus in the AR scale. While the independent group is very similar to the control group on this measure, the active and passive independent patterns

are very different with respect to AR. As one would expect, the antisocial PD has no correlation with AR. Antisocial PD is more associated with confrontation or escape. The narcissistic (passive) pattern is similar in its use of confrontation and escape, but also has an association with accepting responsibility. Millon (1987) has suggested that the narcissistic PD uses rationalization as a defense. Perhaps any self-blame takes the form of believable self-deception that serves to protect the self-centered image of the narcissistic individual.

#### Social Support

Social support is an important variable in the relationship between stress and disease. The total scores on the SS scale (e.g. "accepted sympathy and understanding from someone;" "talked to someone about how I was feeling") were no different for normals and the dependent, ambivalent and mixed groups. The independent and detached groups used social support to a lesser extent, as expected from their respective styles. Antisocial PD is too independent and callous to want social support, while narcissistic PD is too self-centered and arrogant. As well, the detached group, given their anxiety about others (avoidant) or lack of

interest (schizoid), are not likely to seek out others in times of stress. When examining the correlations between the PD scales and social support, only the positive relationship with the histrionic PD and the negative relationship with the schizoid PD are noted. The remainder of the PDs are not strongly associated with social support, which suggests that perhaps it is a strategy used by both normals and some but not all personality disorders. These results are similar to Vollrath et al, (1994) whereby social support was negatively associated with schizoid, schizotypal, and avoidant PDs, and positively associated with the histrionic PD. Dependents, given their passive orientation, are more likely to receive social support almost by default, that is, providing they maintain their submissive connection to their caregiver. Consequently, they are not as likely to seek social support, in contrast to the demanding interpersonal style of the histrionic. However, both histrionics and dependents will receive an equivalent amount of attention from others, albeit via different means of interpersonal manipulation (Millon, 1987).

The nature of the social support that disordered personalities receive may not be of the same quality or

nature as that of normals. As Millon (1981) would suggest, the etiology and maintenance of PD is related to a past and present history of poor interpersonal relationships with significant others.

#### Problem Solving

Problem solving (e.g. "I know what has to be done, so I will double my efforts to make things work;" "I will make a plan of action and follow it") involves the use of adaptive coping efforts to change the circumstances surrounding a stressful situation. As expected, the normal controls used this strategy to a greater extent than the PD groups. This coping mechanism was associated with feelings of control and coping effectiveness. Problem solving was used to a similar extent by all the PD groups. Dependent and avoidant PDs correlated negatively with problem solving, coping effectiveness, and perceived control. This pattern is consistent with the passivity of the dependent PD (who expects the caregiver to be the problem solver) and with the non-action of the avoidant PD. Problem solving brings into focus the activity-passivity difference between the active hemispheric who is more neutral on this scale and the passive

dependent PD who has a negative relationship with the active coping that problem solving entails.

#### Positive Reappraisal

For the positive reappraisal scale (e.g. "found new faith;" "rediscovered what is important in life"), the major difference was between the control and independent group. This coping style was associated with coping effectiveness. The independence of the antisocial PD and self-centered characteristics of the narcissistic PD make it unlikely that these individuals would use the "learn from my own mistakes" strategy that positive reinterpretation involves.

#### Differential Coping Choice: Specific Situations.

Examination of the specific situations used in this study highlights some of the differences between normals and PD groups and intergroup differences in how personality disordered individuals cope with stress. The "mugged" situation illustrates a difference between the independent and dependent strategies as the independent PD indicated a greater willingness to fight back when attacked. The controls tended to choose social support, problem solving, escape-avoidance, and positive reappraisal in this

situation. However, the independent's emphasis was on confrontation (maladaptive) and problem solving (adaptive). The dependents tended to engage both the adaptive response of seeking social support and the maladaptive response of self-blaming.

In the "cancer" situation, social support, positive reappraisal, problem solving, and confrontive coping were all endorsed by the control group. The detachment of the schizoid and avoidant PDs was illustrated by the combination of lower seeking social support and lower confrontive coping, unlike the independent orientation, which demonstrated equally lower seeking social support yet with a tendency to use confrontive coping.

In the "romance" situation, the controls used a combination of all the coping scales except for escape-avoidance and confrontive coping. The independent group used the more adaptive problem solving and accepting responsibility strategies, although this occurred in combination with confrontation and escape-avoidance. Unlike the normals, the dependent PD did not choose PR and DD in the "romance" situation. The dependent and independent groups were similar in this scenario as they both utilized

confrontive coping. However, the underlying motivation for the use of this coping strategy was likely different for these groups. Maintenance of the dependent relationship was the likely reason for the dependent group. In the independent group, the compelling factor is likely the need to control the loved one.

The detached group, while endorsing many of the healthy coping strategies, showed the lowest level of seeking social support in the "romance" situation.

A further example of the healthy/unhealthy combination of coping strategies in personality disorder was the "fire" situation. The normal standard coping responses were problem solving, positive reappraisal, and social support. The independents also tended to choose problem solving and positive reappraisal, but they selected escape-avoidance at an equal level to problem solving. The detached group had a non-action strategy, endorsing neither healthy problem solving nor maladaptive escape-avoidance.

The most stressful situation in the study was the "heart" vignette. Here, the pattern for the personality groups was lower endorsement of the healthy strategy of seeking social support, along with selection of escape-

avoidance. The dependent PD was similar to the normal pattern in endorsing social support, but also chose escape-avoidance. When faced with the death of a parent, the detached group refrained from either social support or escape-avoidance coping.

The "burglary" situation produced similar responses (confrontive coping, social support, and problem solving) across the personality groups, with the exception of a higher endorsement of escape-avoidance by the ambivalent group compared to controls and a suggestive trend of lower seeking social support for the independent and detached groups.

The "job" scenario also produced similar responses across groups with the exception of the suggestive trends of lower social support for the independent group compared to the dependent group and more self-blaming by dependents compared to the other groups.

With the "wallet" situation, the independent group showed a predominantly adaptive pattern but failed to seek social support. The mixed, largely histrionic/narcissistic group also endorsed a normal coping pattern, with the exception of an inappropriate confrontive strategy.



In the "midterm" vignette, the most adaptive response was likely to be problem solving. All the personality groups endorsed this strategy. However, the adaptive/maladaptive pattern in PD was further illustrated by the choice of escape-avoidance along with problem solving by the personality disorder groups.

#### Stress and Emotional Responses

The nine situations used in the study appeared to be equally stressful for most of the personality groups with the exception of the detached group. Therefore, it is unlikely that the coping differences between the groups are merely an artifact of differential stress perception. Under conditions of similarly rated stress, the personality groups selected the less adaptive strategies to a greater degree than the normals. The largest difference was between the lower stress/emotion ratings of the detached group and the higher ratings of the dependent group. This is consistent with the distancing and blunting of emotion commonly employed by the schizoid personality disorder. The avoidant PD is grouped with the schizoid in Millon's model due to their common detachment. However, the avoidant PD is more similar to the DSM-IV "anxious cluster" when it comes to

emotion. Avoidant personality disorder has a "detached" character partially because of emotion, rather than due to a lack of emotion as in schizoid PD. This detachment contrasts with the exaggerated emotionality of the histrionic and the clinging dependence of the dependent personality.

#### Gender Differences

While gender differences are an important issue in psychology and psychopathology, the focus of the study was upon personality disorder group differences and differences between personality disordered individuals and normal controls. The degree of confounding between gender and personality disorder makes the effects of personality disorder and gender difficult to separate. Therefore, personality disorder is the variable of interest rather than gender. However, exploratory investigations of gender differences revealed that the overall relationship between personality disorder and coping choice was similar for males and females in the study. The females tended to endorse the use of the healthy strategy of seeking social support and the less adaptive strategy of escape-avoidance to a greater degree than the males. In general, the females rated the

nine situations as more stressful and higher for depression, anxiety, fear, anger. As well, control and coping effectiveness were lower for females in relation to the specific situation of being physically attacked and robbed. One possible explanation for these results is that males are more reticent to provide self-report data regarding emotional reactions to stressful situations. Another possibility is that females are more emotionally reactive to similarly rated stressors.

#### Summary and conclusions

The results of this study provide support for the interactional, process approach to stress and coping as both trait and situational factors appeared to be important influences in the stress process. It is clear that personality has an effect upon coping. These results indicate that this effect applies to personality disorder as well. The study provides evidence that the proposed differential coping-choice, differential-effectiveness model for personality and coping may also apply to personality disorder. Given the dimensional approach to personality disorder, these are important, but not surprising findings. These results also lend additional support for to the

dimensional position in personality disorder theory as, in this case, findings which apply to normal personality also apply to abnormal personality.

What appears to distinguish personality disorders from normals is the composition of their coping strategies. Personality disordered individuals seem to use less adaptive strategies in general, mixtures of adaptive and maladaptive strategies which may be inappropriate in specific situations, and, depending upon the disorder, to engage in "undercoping" or "overcoping."

The data obtained provide support for the general DSM-IV conceptualization of the relationship between personality disorder and coping, which emphasizes the use of maladaptive and inflexible coping strategies. Examination of the coping strategies chosen by the PD groups in the study when the situations were aggregated also supports this hypothesis. However, the atheoretical stance of the DSM does little to elucidate the underlying mechanisms of the relationship between personality disorder and coping. Millon's approach of outlining a descriptive structural model of coping with stressors in an active or passive way is a useful heuristic. Millon (1987) has also made more specific reference to the

relationship between personality disorder and defense style. Nevertheless, the coping-personality disorder relationship has numerous facets that require further exploration.

One such issue is the quantity versus quality of coping responses. Millon (1981) and others have suggested that personality disordered individuals have an impoverished repertoire of coping strategies. This implies that they have a low quantity of coping responses, and that the few strategies that they select are less effective. However, Vaillant's approach emphasizes the quality of responses arranged along a hierarchy. The data suggests that both views may be appropriate. Personality disordered individuals do appear to select less appropriate strategies. However, the number of these strategies is variable. The avoidant and schizoid PD, detached pattern seems to demonstrate the idea of an impoverished coping repertoire. Other personality disorder groups appear to make coping efforts at a similar or greater level to that of normals.

This suggests the possibility that personality disordered individuals fall along a continuum of coping activity with the detached group on one extreme having very few strategies and the mixed (antisocial, narcissistic,

borderline, histrionic) group on the other extreme having more strategies. If this is the case, it is possible that coping in personality disorder has at least two dimensions, one being the number of coping choices selected and the other being the quality of those choices. An interaction between these two dimensions may occur whereby low quantity and low quality are associated with the detached group and high quantity, low quality are associated with more active personality styles such as histrionic and borderline PD.

The data in this study supports this first proposed dimension: the detached group elected to "do nothing" on one end of the scale, along with a group of dramatic cluster PDs "spinning their wheels". This may be a reflection of the emotionality (impassive versus expressive) dimension of Millon's (1987) circumplex model of emotionality and affiliation. The second proposed dimension, quality of choices is also evident in the data. Vaillant's hierarchical view appears to be supported by the aggregated coping measures which indicated lower quality overall coping choices. As well, Lazarus's interactional view appears to be supported by this study through the subjects' tendency to respond to the nine specific situations with a lower quality

copied response. Also, the idea that coping as a process is supported by the fact the PD groups appeared to endorse a combination of lower and higher quality coping responses. This is a more complex pattern of coping that may reflect the middle position that personality disorders occupy along the continuum between normality and more severe psychopathology of Axis-I. Perhaps PD groups are aware, at some level, of what the appropriate response to a stressful situation is, but other variables intrinsic to the personality disorder pattern interfere with selecting the appropriate coping choice.

#### Limitations and Future Directions

A limitation of the current research is that, while both trait and contextual effects were examined, the analogue methodology employed did not allow for independent assessment of coping effectiveness. The coping used was "projected coping" (Bjorck & Cohen, 1993), and effectiveness was obtained through self-rating. However, if one assumes that the control group was the adaptive standard for coping choice, some measure of effectiveness was obtained by comparing the controls with PD groups.

Most of the personality groups had the perception that their coping efforts were at least on average mildly effective. However, individuals in the ambivalent group were less satisfied with their coping choices. Millon (1987) suggests that the personality patterns which comprise PD are very deeply embedded and automatic and that individuals are unaware of these processes and their relationship to life difficulties. Therefore, it is possible that the PD groups in this study believed that they were making effective coping choices and would be able to implement these choices effectively. Given the evidence for differential coping choice in personality disorder provided by this study and others, (for example, Vaillant, 1994; Vollrath et al. 1994) it may be useful for future investigations to focus upon coping effectiveness in personality disorder. Idiographic-normative analysis using the type of experience sampling methodology employed by Atkinson & Violato (1994) and Bolger & Zuckerman (1995) may allow for examination of both coping choice and its later effects. Given the DSM-IV emphasis on the maladaptive nature of personality disorder, investigations along this path may help answer the question, "How are personality disorders maladaptive?"



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Table 1 Total mean coping scores by group

	n=80	n=33	n=33	n=30	n=26	n=32		
	Group							
	Control	Ind.	Det.	Depend.	Ambiv.	Mixed	Coping	
	1	2	3	4	5	6	Total	$\alpha$ †
Mean (SD)								
AR	16.49 (3.76)	16.16 (2.86)	15.69 (3.48)	19.03 (4.31)	18.17 (4.11)	18.65 (4.22)	17.14 (3.9)	.79
CC	19.00 (3.33)	20.50 (3.03)	16.95 (3.30)	20.46 (3.57)	19.36 (3.84)	22.00 (3.95)	19.57 (3.7)	.69
DD	14.64 (3.23)	15.54 (4.47)	16.22 (4.85)	15.51 (3.55)	16.61 (3.44)	16.01 (4.24)	15.51 (3.9)	.81
EA	16.65 (3.76)	18.08 (4.17)	15.03 (3.97)	18.36 (4.47)	18.67 (4.12)	20.57 (5.09)	17.60 (4.5)	.85
PR	20.71 (3.91)	18.69 (4.01)	19.39 (4.24)	19.90 (4.70)	19.07 (5.00)	19.98 (4.76)	19.89 (4.5)	.80
PS	22.98 (3.95)	21.98 (3.93)	20.86 (4.21)	22.20 (4.12)	20.46 (4.54)	22.39 (4.86)	22.09 (4.2)	.81
SS	23.21 (3.63)	19.24 (4.45)	18.71 (4.57)	23.36 (4.31)	20.73 (4.44)	22.87 (4.63)	21.71 (4.5)	.80
SC	19.99 (3.15)	18.97 (3.82)	20.57 (4.10)	19.78 (3.57)	20.53 (4.00)	19.87 (3.52)	19.94 (3.6)	.70
Group								
Mean	19.21	18.64	17.93	19.82	19.20	20.29		
(SD)	(2.04)	(2.42)	(2.22)	(2.20)	(2.59)	(2.76)		

† Cronbach's  $\alpha$  for 18 items.

Note: Ind.=independent, Det.=detached, Ambiv.=ambivalent.

Table 2 Post-Hoc Comparisons for Situation

Coping Scale		F	P
"Mugged"			
CC	2-3, 3-6*	5.42	.000
SS	1-2	5.31	.000
AR	1-4,	5.51	.000
Wilk's $\lambda=0.615$ $F(40,966)=2.84$ , $p<.001$			
"Cancer"			
CC	3-2, 3-6	6.58	.000
Wilk's $\lambda=0.672$ $F(40,966)=2.30$ , $p<.001$			
"Romance"			
CC	1-4, 1-6,	6.33	.000
SS	1-3, 3-6,	6.24	.000
EA	1-6, 1-2	6.86	.000
Wilk's $\lambda=0.586$ $F(40,966)=3.15$ , $p<.001$			
"Fire"			
EA	1-2, 1-6, 2-3, 3-6	14.78	.001
PS	1-3	3.74	.003
Wilk's $\lambda=0.537$ $F(40,966)=3.70$ , $p<.001$			
"Heart"			
SS	1-2, 1-3, 1-5	14.44	.000
EA	1-4, 1-6, 3-4, 3-6	8.64	.000
Wilk's $\lambda=0.562$ $F(40,966)=3.41$ , $p<.001$			

\* Significant group comparison between group 3 (detached) and group 1 (mixed)

Stress 105

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Coping Scale	F	P
"Burglary"		
EA 1-5	4.60	.001

Wilk's  $\lambda=0.664$   $F(40,966)=2.37$ ,  $p<.001$

"Job"

EA 1-6,3-6	5.69	.000
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Wilk's  $\lambda=0.701$   $F(40,966)=2.04$ ,  $p<.001$

"Wallet"

CC 1-6,2-6,3-6,	9.21	.000
SS 1-2	4.79	.000

Wilk's  $\lambda=0.608$   $F(40,966)=2.92$ ,  $p<.001$

"Midterms"

DD 1-2,	4.81	.000
EA 1-4,1-5,1-6,2-4,3-4,	12.97	.000

Wilk's  $\lambda=0.589$   $F(40,966)=3.11$ ,  $p<.001$

Table 3

Number of Coping Responses Selected above 2.0  
Control Ind. Det. Depend. Ambiv. Mixed

	1	2	3	4	5	6	F	P
Mean (SD)								
1	3.35 (1.36)	3.18 (1.46)	2.66 (1.45)	3.63 (1.60)	3.34 (1.44)	3.84 (1.48)	2.52	.030
2	3.96 (1.41)	3.87 (1.45)	3.09 (1.62)	3.76 (1.87)	3.73 (1.68)	4.12 (1.26)	1.92	.092
3	3.55 (1.71)	3.69 (1.66)	3.24 (1.71)	3.66 (1.47)	3.50 (2.12)	4.78 (1.97)	3.02	.012
4	2.72 (1.46)	2.75 (1.60)	1.72 (1.32)	3.00 (1.53)	2.57 (1.85)	3.18 (2.00)	3.24	.007
5	3.46 (1.43)	2.63 (1.29)	2.42 (1.27)	3.76 (1.65)	3.19 (1.76)	3.59 (1.86)	4.30	.001
6	2.81 (1.37)	2.81 (1.40)	2.84 (2.84)	3.03 (1.49)	3.69 (1.69)	3.84 (1.50)	3.57	.004
7	3.62 (1.60)	3.54 (1.88)	3.30 (1.64)	4.13 (1.54)	3.92 (1.64)	4.34 (1.97)	1.76	.121
8	3.13 (1.56)	2.36 (1.72)	2.45 (1.83)	2.96 (1.47)	2.38 (1.38)	3.53 (2.07)	2.85	.016
9	3.22 (1.55)	3.42 (1.78)	2.97 (1.66)	4.06 (1.36)	3.69 (1.51)	3.90 (1.80)	2.39	.039
Total	29.85 (9.11)	28.30 (9.44)	24.72 (8.73)	32.03 (8.46)	30.03 (10.71)	35.15 (11.98)	4.26	.001

Note: Ind.=independent, Det.=detached, Ambiv.=ambivalent.

Table 4 Coping Effectiveness Ratings by Group

	Control	Ind.	Det.	Depend.	Ambiv.	Mixed	F	P
	1	2	3	4	5	6		
1	3.48 (.96)	3.66 (.77)	3.42 (1.09)	3.03 (1.09)	2.76 (.99)	3.50 (1.36)	3.19	.008
2	3.42 (1.01)	3.51 (1.17)	3.45 (1.09)	2.96 (1.21)	2.92 (1.01)	2.90 (1.08)	2.34	.042
3	3.50 (1.0)	3.36 (1.22)	3.15 (1.06)	3.33 (1.56)	3.11 (.95)	3.41 (1.58)	0.63	.673
4	3.60 (.93)	3.72 (1.23)	3.15 (1.12)	3.06 (1.01)	2.50 (1.24)	3.00 (1.03)	6.10	.000
5	3.21 (.91)	3.15 (1.12)	3.27 (1.06)	2.86 (1.16)	2.73 (.91)	3.18 (1.57)	1.25	.286
6	3.85 (.95)	3.90 (.91)	3.90 (.80)	3.40 (1.0)	3.07 (.79)	3.40 (1.21)	4.76	.000
7	3.70 (.81)	3.57 (.79)	3.63 (.78)	3.53 (.90)	3.11 (.99)	3.84 (1.29)	1.95	.080
8	3.84 (.86)	3.87 (1.11)	4.06 (.93)	3.63 (.92)	3.65 (.97)	3.56 (1.26)	1.10	.360
9	3.73 (.82)	3.72 (1.18)	3.75 (1.0)	3.43 (1.30)	3.11 (.81)	3.67 (1.19)	1.92	.092
Tot.	32.46 (4.24)	32.51 (5.08)	31.63 (5.79)	29.26 (5.87)	27.0 (3.78)	30.51 (7.15)	5.67	.000

Note: Ind.=independent, Det.=detached, Ambiv.=ambivalent.

Table 5 Means and (SDs) of Stress/emotion scales

	Mugged (383)	Cancer(668)
Imaginability	4.67(1.47)	4.53(1.47)
Stress	5.50(1.45)	6.0(1.15)
Depression	3.79(1.80)	5.68(1.42)
Fear	5.75(1.50)	5.60(1.54)
Anger	5.74(1.35)	4.54(1.82)
Anxiety	5.27(1.53)	4.99(1.74)
Control	2.50(1.34)	2.35(1.31)
Coping Efficacy	3.35(1.07)	3.26(1.11)
% Actual Occurrence	4.29%	2.57%
	Romance (328)	Fire(407)
Imaginability	5.20(1.67)	4.23(1.38)
Stress	4.72(1.36)	5.67(1.22)
Depression	4.94(1.55)	4.86(1.45)
Fear	2.42(1.58)	4.20(1.87)
Anger	4.02(1.69)	4.48(1.77)
Anxiety	3.38(1.74)	4.64(1.65)
Control	3.33(1.43)	1.97(1.32)
Coping Efficacy	3.37(1.2)	3.3(1.1)
% Actual Occurrence	27.0%	0.85%
	Heart (1036)	Burglary(314)
Imaginability	4.70(1.57)	4.80(1.45)
Stress	6.22(1.2)	4.67(1.24)
Depression	5.85(1.45)	3.45(1.54)
Fear	5.39(1.71)	4.40(1.76)
Anger	4.34(1.98)	5.49(1.46)
Anxiety	5.23(1.73)	4.26(1.65)
Control	1.82(1.23)	2.59(1.45)
Coping Efficacy	3.12(1.11)	3.67(0.99)
% Actual Occurrence	4.29%	7.72%

	<u>Job (407)</u>	<u>Wallet(460)</u>
Imaginability	4.40(1.53)	5.67(1.30)
Stress	4.47(1.37)	4.20(1.56)
Depression	3.79(1.53)	3.03(1.53)
Fear	2.56(1.51)	2.27(1.48)
Anger	4.68(1.54)	4.51(1.64)
Anxiety	3.67(1.62)	3.58(1.77)
Control	3.50(1.44)	3.92(1.65)
Coping Efficacy	3.59(0.95)	3.61(1.03)
% Actual Occurrence	9.4%	35.6%

	Midterms (323)
Imaginability	5.96(0.99)
Stress	5.54(1.29)
Depression	3.58(1.70)
Fear	3.66(1.80)
Anger	3.60(1.77)
Anxiety	5.02(1.56)
Control	3.38(1.47)
Coping Efficacy	3.61(1.03)
% Actual Occurrence	48.9%

	<u>Total mean (SD) Cronbach's <math>\alpha</math> (9items)</u>	
Imaginability	44.23(7.84)	.77
Stress	47.05(7.36)	.79
Depression	39.04(9.43)	.84
Fear	36.29(9.30)	.80
Anger	41.50(10.27)	.85
Anxiety	40.08(9.72)	.82
Control	25.41(7.10)	.72
Coping Efficacy	31.10(5.48)	.75



Table 6 Vignette Stress Ratings by Personality Group

	n=80 Control	n=33 Ind.	n=33 Det.	n=30 Depend.	n=26 Ambiv.	n=31 Mixed	F	P
	1	2	3	4	5	6		
1	5.62 (1.22)	5.21 (1.43)	5.15 (1.85)	6.23 (.97)	5.15 (1.69)	5.43 (1.50)	2.69	.022
2	6.06 (1.09)	5.78 (1.31)	5.51 (1.50)	6.33 (.92)	6.11 (.95)	6.10 (.91)	3.08	.010
3	4.78 (1.33)	4.84 (1.32)	4.48 (1.64)	4.96 (1.02)	4.46 (1.55)	4.68 (1.25)	0.69	.630
4	5.71 (.95)	5.63 (1.43)	5.12 (1.59)	6.00 (1.23)	5.65 (1.26)	5.96 (.91)	2.23	.053
5	6.30 (.97)	5.81 (1.55)	5.90 (1.64)	6.53 (.86)	6.15 (1.31)	6.50 (.88)	1.97	.083
6	4.58 (1.13)	4.93 (1.39)	4.27 (1.39)	4.90 (1.18)	5.00 (1.16)	4.68 (1.35)	1.58	.166
7	4.61 (1.14)	4.27 (1.60)	4.12 (1.49)	4.83 (1.17)	4.46 (1.44)	4.19 (1.61)	1.41	.220
8	4.28 (1.47)	4.33 (1.74)	3.51 (1.54)	4.60 (1.22)	4.00 (1.69)	4.43 (1.68)	1.98	.082
9	5.65 (1.22)	5.39 (1.24)	5.03 (1.48)	6.00 (.94)	5.30 (1.56)	5.75 (1.04)	2.42	.036
Tot.	47.62 (6.38)	46.24 (7.90)	43.12 (9.69)	50.40 (4.86)	46.30 (8.44)	48.03 (5.45)	3.67	.003

Note: Ind.=independent, Det.=detached, Ambiv.=ambivalent.

Table 7 Emotion totals by Group

	n=80	n=33	n=33	n=30	n=26	n=31		
	Control	Ind.	Det.	Depend.	Ambiv.	Mixed		
	1	2	3	4	5	6		
Anxiety	39.62 (8.56)	38.45 (10.50)	36.36 (11.29)	44.00 (10.10)	42.80 (9.77)	41.18 (8.18)	2.69	.022
Fear	36.38 (7.94)	33.87 (7.47)	30.21 (10.95)	42.73 (7.30)	40.03 (9.40)	36.00 (9.93)	7.33	.000
Anger	40.33 (9.10)	44.93 (9.15)	33.84 (10.73)	45.80 (9.09)	41.88 (9.71)	44.06 (11.05)	6.76	.000
Depress.	38.75 (8.63)	36.72 (9.37)	34.42 (10.69)	43.73 (7.75)	42.11 (8.25)	39.87 (10.01)	4.38	.001
Control	25.17 (6.97)	26.48 (6.54)	26.24 (6.70)	23.93 (5.91)	23.84 (7.79)	26.35 (7.99)	0.90	.481
Imagin.	44.11 (7.03)	45.42 (7.11)	41.18 (10.15)	46.10 (6.04)	42.69 (9.86)	44.87 (6.64)	1.77	.119

Note: Ind.=independent, Det.=detached, Ambiv.=ambivalent.

Table 8

Coolidge Axis-II Inventory : Means(SDs) by Group

PD Scale	Control 1	Ind. 2	Det. 3	Depend. 4	Ambiv. 5	Mixed 6	Norm.
Antisocial (2)	74.80 (10.0)	103.87 (12.42)	70.21 (8.99)	76.75 (8.40)	82.11 (10.2)	102.21 (14.9)	79.5
Avoidant (3)	34.05 (5.83)	35.69 (7.52)	42.27 (10.9)	39.36 (8.40)	43.80 (5.49)	38.15 (9.71)	36.0
Borderline	45.19 (5.49)	55.15 (7.52)	43.15 (7.43)	56.43 (9.19)	54.03 (8.72)	57.40 (8.03)	48.2
Dependent (4)	53.46 (7.50)	54.60 (9.46)	54.72 (11.8)	68.96 (11.2)	65.03 (8.35)	62.50 (11.9)	57.3
Histrionic (4)	68.84 (5.90)	73.33 (4.85)	57.81 (7.73)	81.36 (7.56)	68.34 (10.1)	78.64 (9.63)	70.4
Narcissistic (2)	62.24 (6.23)	71.30 (8.56)	60.21 (8.26)	74.16 (6.44)	66.84 (6.79)	75.90 (9.27)	65.3
Obsessive -Compulsive (5)	70.84 (6.50)	71.93 (8.60)	78.21 (7.10)	75.33 (10.3)	84.19 (8.51)	76.28 (11.1)	73.9
Paranoid	38.63 (5.41)	48.36 (9.42)	41.97 (8.60)	45.96 (7.49)	47.73 (7.50)	48.40 (8.78)	42.7
Passive- Aggressive (5)	42.25 (5.18)	50.33 (7.38)	42.03 (8.33)	50.80 (6.29)	54.00 (6.92)	50.15 (7.08)	45.2
Schizoid (3)	63.54 (6.32)	60.81 (7.59)	75.72 (7.85)	53.56 (6.87)	62.76 (10.4)	59.00 (12.1)	63.0
Schizotypal	39.51 (5.64)	46.45 (7.20)	46.36 (8.05)	45.13 (7.08)	49.23 (7.10)	49.71 (8.65)	43.4

Wilk,s  $\lambda$ =.106  $F(55, 989)=11.247, p < .001$

LDF  $\chi^2=493.36, p < .001$ , Canonical  $r=0.824$

Correct Classification percent: Control 65% ,Independent 72.72%, Detached 81.81%, Dependent 83.33%, Ambivalent 69.23 %, Mixed 65.62 %.

: N=1790 Watson & Sinha (in press)

Note: Ind.=independent, Det.=detached, Ambiv.=ambivalent.

Table 9

Correlation between CATI and coping scales N=228

CATI Scale	CC	DD	SC	SS	AR	EA	PS	PR
Antisocial	.322†	.105	-.040	-.078	.083	.264‡	.031	-.132
Avoidant	-.113	.039	-.057	-.166	.272†	.344†	-.296‡	-.133
Borderline	.272†	.107	-.001	-.044	.355†	.599†	-.166	-.145
Dependent	.013	.098	-.019	-.034	.346†	.471†	-.242†	-.112
Histrionic	.374†	-.013	-.091	.292†	.234	.417†	.042	.026
Narciss.	.271†	.022	-.059	.137	.282†	.452†	-.014-	.054
Obsessive- Compulsive	.128	.010	.057	-.189	.208	.173	-.162	-.094
Paranoid	.131	.037	.003	-.126	.229	.403†	-.204	-.231
Passive -aggressive	.228	.138	-.071	-.054	.287†	.544†	-.223	-.228
Schizoid	.258	.030	.139	-.271†	-.204	-.375†	.036	.019
Schizotypal	.163	.198	.076	-.172	.289†	.382†	-.136	.111

Bonferroni corrected

‡ p &lt;.05., † p &lt;.001

Table 10

Correlation between CATI and emotion totals N=228

<u>CATI</u>	<u>Stress</u>	<u>Anger</u>	<u>Fear</u>	<u>Anx.</u>	<u>Dep.</u>	<u>Contr.</u>	<u>Eff.</u>	<u>Imagi.</u>
Anti.	-.022	.121	-.134	-.120	-.103	.076	.048	.140
Avoid.	.192	.121	.301†	.317†	.391	-.331†	-.443†	-.055
Bord.	.231	.334†	.258†	.273†	.352†	-.153	-.359†	.128
Dep.	.258†	.285†	.435†	.359†	.474†	-.306†	-.471†	.004
Hist.	.391†	.381†	.352†	.283†	.341†	-.115	-.104	.198
Narc.	.316†	.416†	.297†	.297†	.329†	-.180	-.157	.109
Obcom.	-.016	.036	.177	.211	.241†	-.129	-.314†	-.209
Para.	.187	.348†	.179	.223	.258†	-.205	-.266†	.166
Pass.	.224	.342†	.280†	.246†	.388†	-.167	-.399†	.079
Schiz.	-.371†	-.352†	-.343†	-.290†	-.356†	.170	.152	-.170
Stypal.	.116	.193	.139	.156	.238	-.134	-.247†	.118

Bonferroni corrected,

†p &lt;.05., † p &lt;.001

Note: Anti.=antisocial, Avoid= avoidant, Bord.=borderline,

Dep.=dependent, Hist.=histrionic, Narc.=narcissistic,

Obcom.=obsessive-compulsive, Para=paranoid, Pass.=passive-

aggressive, Schiz.=schizoid, Stypal.=schizotypal,

Anx=anxious, Dep.=depression, Contr.=control, Eff.=efficacy,

Imagi.=imaginability.

Figure 1: Coping Scores by Personality Group

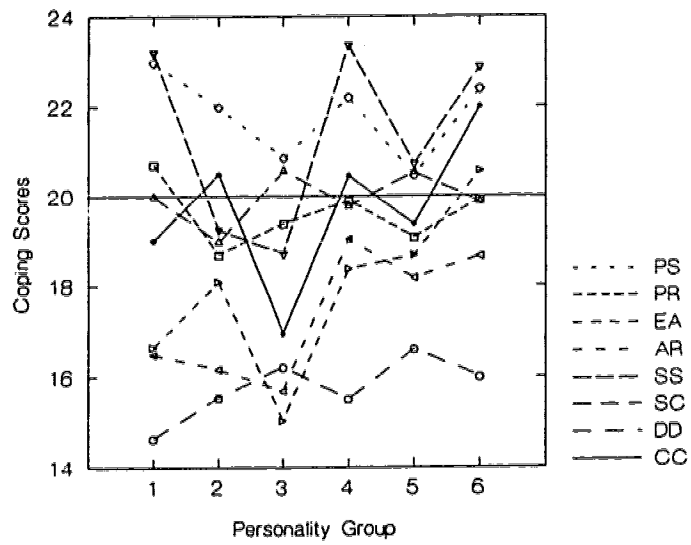
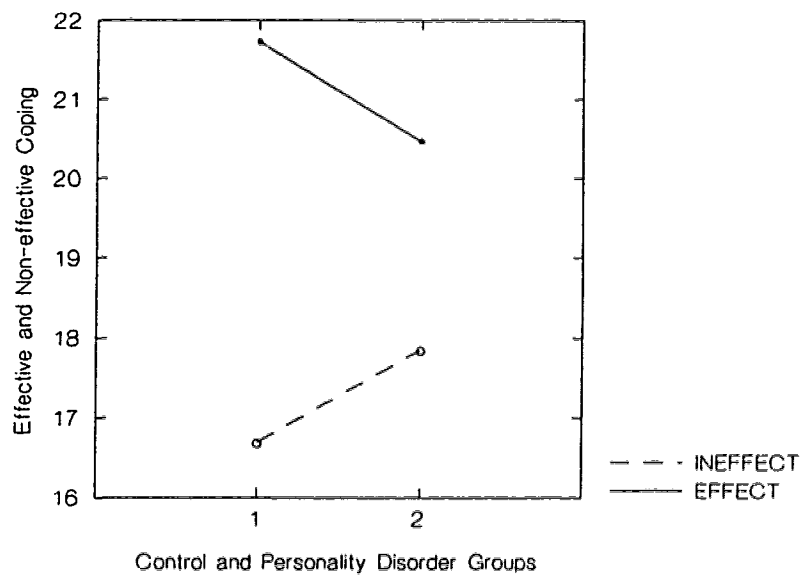


Figure 2: Coping Effectiveness by Personality





## Appendix A: Coolidge Axis II Inventory

Directions: The statements in this booklet are to help you describe yourself as you see yourself. Some statements will seem strongly false and some statements will seem strongly true. Other statements will seem somewhere in between the extremes and you are to choose whether they are more false than true or more true than false. It is important that you try not to omit any answers. If the statement does not exactly apply to you, try to do your best to find which of the answers still most appropriately describes you. Also, if you are retired or currently unemployed, answer the questions as if your were still working. We have provided an answer sheet with each test booklet, please record your answers on Answer Sheet #1.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

1. I enjoy social gatherings where I can talk to a lot of people.
2. I have had a number of jobs in the last few years.
3. People consider me to be a warm person.
4. I like to look or act sexy.
5. Before the age of 15, I was a constant liar.
6. My emotions are fairly stable.
7. I am quiet in social situations because I may not be able to answer a question.
8. I am afraid to do things that might get me arrested.
9. I feel relaxed most of the time.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

10. I have gotten into at least one physical fight in the past few years.
11. I am unwilling to get involved with people unless I am certain they will like me.
12. I am easily hurt by criticism or disapproval.
13. I tend to have intense but unstable relationships.
14. I think my memory has gotten worse in the past few years.
15. I tend to hold back my emotions and tender feelings.
16. I get advise or reassurance from others before I make everyday decisions.
17. Someone I know thinks I have an alcohol or drug problem.
18. Before, the age of 15, I used a weapon in more than one fight.
19. I manage my life without help from others.
20. Some people say that I am reckless.
21. I have trouble making everyday decisions.
22. When people criticize me I almost never get angry.
23. I neither desire nor enjoy close relationships (including my family).
24. My perfectionism interferes with my completing a task on time.
25. I rarely expect to be exploited or harmed by others.
26. I find life exciting.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

27. People find me angry.
28. I am not a procrastinator, that is, I do not put off things that need to be done.
29. When I get into a relationship, I'm usually the one who ends up hurt.
30. I have never been physically cruel in any of my relationships.
31. I feel like people are talking directly to me or about me on the TV or radio.
32. Other people make most of my important decisions.
33. I have chosen people or situations which have led to disappointment, failure, or mistreatment.
34. People think I am too devoted to my job or work.
35. I pay back all my loans and debts.
36. I consider myself dependent on others.
37. I like activities that involve a lot of interaction with others.
38. I fail to accomplish tasks even when I have the ability.
39. I played quarterback for the Denver Bronco's football team.
40. Before the age of 15, I ran away from home overnight more than once.
41. I like to make complete plans for my vacation or leisure time.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

42. Before the age of 15, I often started physical fights.
43. People are not as loyal to me as I would like them to be.
44. I wonder " who I am" much of the time.
45. People see me as an assertive person.
46. Before the age of 15, I stole from others more than once (shoplifting, forgery, etc.).
47. I have trouble understanding what I read.
48. I get enough appreciation when I work (home or job).
49. I seldom let others make important decisions in my life, like where to live or what job to take, etc.
50. I think that there are people who are out to get me or harm me or ruin me in some way.
51. I have quit more than one job without having plans for my next job.
52. People talk to me behind my back.
53. I am very concerned about details, lists, or schedules before I begin a task.
54. I think I was born with more abilities and talents than the average person.
55. I can get depressed pretty quickly.
56. I make extreme efforts to avoid being alone.
57. I seldom question the loyalty of friends or associates.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

58. I become sulky or irritable if I am asked to do things that I do not want to do.
59. I never deliberately destroyed other people's property (like vandalism or setting fires).
60. Often I cannot complete a task because I set my standards too high.
61. I am a jealous person.
62. I am impulsive.
63. I would never humiliate a person in public even if they deserved it.
64. I experience strong emotional feelings.
65. I am very comfortable in social situations even if I do not know the people there.
66. I like to be silly and laugh.
67. I am uncomfortable when people find me sexually attractive.
68. I feel useless and helpless a lot of the time.
69. I am very sensitive to rejection from others.
70. Before the age of 15, I was physically cruel to people or animals.
71. I have travelled about without a job, a clear goal or a travel plan.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

72. I am quiet in social situations because I might say something inappropriate or foolish.
73. I have been very impulsive in either my spending money, sex, drug use, shoplifting, reckless driving or binge eating.
74. I enjoy making my own decisions without help from others.
75. I think people underestimate the importance of looking good.
76. I guess you could say I was a juvenile delinquent.
77. I am less emotional than other people.
78. When I'm alone I feel helpless and uncomfortable.
79. When people talk to me it sounds like they are mumbling.
80. It really bothers me when I'm not the center of attention.
81. I agree with other people even if I know that they are wrong because I fear being rejected.
82. It takes a lot to really frustrate me.
83. Physical attractiveness is unimportant to me.
84. I was a member of the French Foreign Legion.
85. It is a fact of life that sometimes you have to step on people or hurt people to get what you really want.
86. I am not very self-assured.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

87. I usually insist that others do things the way I want them done.
88. I suspect that people go out of their way just to annoy me.
89. People consider me rebellious.
90. I will sometimes work slowly or do a bad job on a task if it something that I did not want to do.
91. I give compliments freely to my family and co-workers.
92. I have used harsh treatment or discipline to control someone in my care.
93. I have little or no desire to have sex with anyone.
94. I have a lot of friends.
95. Before the age of 15, I often skipped school.
96. When I go out I like to look exotic, flamboyant, or dramatic.
97. I never forced someone into sexual activity with me.
98. I usually feel bad or guilty after something really good happens to me.
99. I have felt the presence of a force or person who was not actually there.
100. I consider myself a loner.
101. I have lived without a mailing address for a month or more.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

102. Most of the time I trust people more than I distrust them.
103. I have never stolen from someone face-to-face (like mugging or robbing someone).
104. I fear being embarrassed in front of other people by blushing, crying, or being anxious in front of them.
105. My moods change fairly quickly.
106. I slur my words or I find common words difficult to pronounce.
107. I have no difficulty starting projects on my own.
108. People tell me that I am an unemotional person.
109. I feel like I am a special person and I deserve to be noticed for it.
110. I am very afraid of being abandoned by someone.
111. I do not like to let others do things because I am sure they will not do them correctly.
112. I forgive insults or slights pretty quickly.
113. I hardly ever feel like people make unreasonable demands of me.
114. Sometimes the suffering of animals or people amuses me.
115. Neither praise nor criticism bother me.
116. People may consider my behavior or my appearance odd, unusual, or eccentric.



Strongly False=1

More False than True=2

More True than False=3

Strongly True=4

117. I have a tendency to get people really angry or upset at me and then I feel terrible or humiliated about it.
118. I tell lies a lot.
119. I like new and adventurous activities.
120. It takes a lot to irritate me.
121. I have trouble trying to remember the names of common objects.
122. I have done unpleasant or degrading things in order to get people to like me.
123. When I greet people, I like to give them a hug.
124. I feel like my problems are unique and they could only be understood by someone really " special ".
125. I am reluctant to confide in others, because I fear the information may be used against me.
126. I tend to forget to do things I am supposed to do.
127. I would lie to hurt someone if I felt that they deserved it.
128. I have no close friends other than in my family.
129. People do not understand what I am trying to say.
130. I have repeatedly turned down chances to have a good time (like vacations).
131. I have made more than one suicidal threat or gesture in my life.
132. I find it difficult to memorize anything.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

133. I've had more than my fair share of temper tantrums.
134. I fantasize a lot about being really successful, powerful, or brilliant.
135. People have told me that I am too conscientious.
136. When I am slighted or insulted by someone, I am quick to counterattack or show my anger.
137. Other people tell me that I have done a bad job when I think I did something well.
138. I would never frighten others to get them to do things I want them to do.
139. I find myself feeling aloof or distant from other people.
140. When I am having a good time, I like to show it.
141. I have been sexually faithful to one person for more than one year.
142. I consider myself bold.
143. I feel like my anger gets out of control easily.
144. I have never been accused of hurting, neglecting, or mistreating a child.
145. I have never been a bad parent.
146. I fantasize a lot about being beautiful, having a great body, or finding perfect love.
147. When I try to go somewhere, I get lost easily.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

148. When a close relationship ends, I feel devastated or helpless.
149. I deserve or have earned special or favorable treatment from others.
150. I see myself as emotionally well-controlled.
151. I question the faithfulness of my spouse or sexual partner.
152. I resent suggestions from others on how I could be more productive.
153. In a close relationship (spouse, older son or daughter) I like that person to have a lot of freedom from me.
154. I suspect that some people think that I act inappropriately. For example, they may think I am weird or strange, or too silly.
155. In the past, I have only been attracted to people who treated me well or cared about me.
156. I often forget what I am about to say.
157. I seem to be able to change my emotions quickly.
158. I like to get a lot of reassurance, approval or praise from others.
159. I really enjoy giving money or gifts to others even if I won't gain anything from it.
160. People rarely tell me that I have failed to do my share of the work.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

161. I like stories or movies of violence, weapons, martial arts, injury, or torture.
162. I have sacrificed for people who didn't ask me to.
163. I have trouble concentrating.
164. People have accused me of being self-centered.
165. I get really annoyed or surprised when a person cancels an appointment with me for any reason.
166. I keep worn-out or worthless things even when they do not have sentimental value.
167. I tend to be critical of people in positions of authority.
168. I help others succeed at the cost of my own success.
169. I have noticed a change in my sense of taste or smell.
170. I have been told that my style of speech is strange or vague.
171. I am envious of successful people.
172. I am very proud of my achievements.
173. I have problems with my balance.
174. I get very frustrated if I do not get what I want immediately.
175. I rarely feel empty or bored.
176. I enjoy getting a lot of admiration and attention from other people.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

177. I have gotten into trouble because of a drinking or drug problem.
178. I hear voices or see things that are not really there.
179. I avoid getting into physical fights.
180. I think there is something wrong with my mind.
181. I tend to refuse help or suggestions from others even if I need it.
182. I feel justified if I hurt or mistreat someone.
183. I am superstitious (beliefs in black cats, the number 13, etc.).
184. I believe in special powers like clairvoyance, mental telepathy, or ESP.
185. I wish I had the success that other people have.
186. I have used "scams" or "conned" people for profit or pleasure.
187. I worry a lot about the problems or difficulties doing something I haven't done before.
188. More than once I have hurt myself badly on purpose, like cutting my wrists, or smashing my fist against a wall, etc.
189. I like to be really organized and have everything in order before I get ready to do something.
190. I avoid or postpone making decisions.
191. I have trouble finishing things on time because I spend too much time getting organized.

Strongly False=1  
More False than True=2  
More True than False=3  
Strongly True=4

- 192. I set very high moral and ethical standards for myself and others.
- 193. When I go out, I like people to notice me.
- 194. I tend to be suspicious of people.
- 195. I often talk out loud to myself.
- 196. I swam the English Channel.
- 197. People often disappoint me.
- 198. Recently I have felt like killing myself.
- 199. I have headaches.
- 200. I am troubled by my dreams (sleep or daydreams).

Appendix B: Instructions and Questionnaire

Instructions: you will be presented a set of stories.

Read each story very carefully and then-- pause, --close your eyes ---, and take a moment to imagine yourself in the situation described. Then take a few moments to answer a short coping questionnaire after each story on the printed cards. Now go ahead and turn over card number one.

Questionnaire:

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on green sheet #1 how you would cope with the first situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

1. Stand my ground and fight for what I want.
2. Try to get the person responsible to change his or her mind.
3. Make light of the situation; refuse to get too serious about it.
4. Go on as if nothing had happened.
5. I will try to keep my feelings to myself.
6. Keep others from knowing how bad things are.
7. Talk to someone to find out more about the situation.
8. Talk to someone who could do something concrete about the problem.
9. Criticize or lecture myself.

10. Realize I brought the problem on myself.
11. Wish that the situation will go away or somehow be over with.
12. Hope that a miracle will happen.
13. I know what has to be done, so I will double my efforts to make things work.
14. I will make a plan of action and follow it.
15. Change or grow as a person in a good way.
16. I come out of the experience better than when I went in.
17. Please rate the effectiveness of your coping with the situation you have just imagined. **Please Use THIS SCALE:**

1=not all effective  
2=slightly effective  
3=mildly effective  
4=moderately effective  
5=highly effective

18. How easy was it for you to imagine this situation?

1=not imaginable at all  
2=slightly imaginable  
3=mildly imaginable  
4=moderately imaginable  
5=quite imaginable  
6=very imaginable  
7=Extremely imaginable

19. How stressful would you rate this imagined event?

1=not stressful at all  
2=slightly stressful  
3=mildly stressful  
4=moderately stressful  
5=quite stressful  
6=very Stressful



7=Extremely Stressful

20. How depressed would the imagined situation make you feel ? if it actually happened to you.

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

21. How afraid would the imagined situation make you feel ?

- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

22. How angry would the imagined situation make you feel ?

- 1=not at all angry
- 2=slightly angry
- 3=mildly angry
- 4=moderately angry
- 5=quite angry
- 6=very angry
- 7=Extremely angry

23. How Anxious would the situation make you feel ?

- 1=not at all anxious
- 2=slightly anxious
- 3=mildly anxious
- 4=moderately anxious
- 5=quite anxious
- 6=very anxious
- 7=Extremely anxious

24. How much control did you feel you had in the imagined situation if it actually happened to you?

- 1=not controllable
- 2=slightly controllable
- 3=mildly controllable
- 4=moderately controllable
- 5=quite controllable
- 6=very controllable
- 7=Extremely controllable

25. Has this situation happened to you in the past year?

True or False      T=1 F=2

STOP--Take one minute to imagine card #2

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on green sheet #1 how you would cope with the second situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

- 26. I expressed anger to the person(s) who caused the problem.
- 27. I let my feelings out somehow.
- 28. Didn't let it get to me; refused to think about it too much.
- 29. Tried to forget the whole thing.
- 30. Tried not to burn my bridges, but leave things open somewhat.

31. I tried not to act too hastily or follow my first hunch.
32. I asked a relative or friend I respected for advice.
33. Talked to someone about how I was feeling.
34. I made a promise to myself that things that things would be different next time.
35. I apologized or did something to make up.
36. Refused to believe that it had happened.
37. Took it out on other on other people.
38. Just concentrated on what I had to do next-- the next step.
39. Changed something so things would turn out all right.
40. Found new faith.
41. Rediscovered what is important in life.
42. Please rate the effectiveness of your coping with the situation you have just imagined. **Please Use THIS SCALE:**

- 1=not all effective
- 2=slightly effective
- 3=mildly effective
- 4=moderately effective
- 5=highly effective

43. How easy was it for you to imagine this situation?

- 1=not imaginable at all
- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

44. How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

45. How depressed would the imagined situation make you feel ? if it actually happened to you.

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

46. How afraid would the imagined situation make you feel ?

- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

47. How angry would the imagined situation make you feel ?

- 1=not at all angry
- 2=slightly angry
- 3=mildly angry
- 4=moderately angry
- 5=quite angry
- 6=very angry
- 7=Extremely angry

48. How Anxious would the situation make you feel ?

- 1=not at all Anxious
- 2=slightly Anxious

- 3=mildly Anxious
- 4=moderately Anxious
- 5=quite Anxious
- 6=very Anxious
- 7=Extremely Anxious

49. How much control did you feel you had in the imagined situation if it actually happened to you?

- 1=not controllable
- 2=slightly controllable
- 3=mildly controllable
- 4=moderately controllable
- 5=quite controllable
- 6=very controllable
- 7=Extremely controllable

50. Has this situation happened to you in the past year?

True or False T=1 F=2

STOP--Take one minute to imagine card #3

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on green sheet #1 how you would cope with the third situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

51. Took a big chance or did something very risky.

52. I did something which I didn't think would work, but at least I was doing something.

53. Looked for the silver lining, so to speak; tried to look on the bright side of things.

54. Went along with fate; sometimes I just have bad luck.
55. I went over in my mind what I would say or do.
56. I thought about how a person I would admire would handle the situation and used that as a model.
57. Accepted sympathy and understanding from someone.
58. I got professional help.
59. Realized I brought the problem on myself.
60. I made a promise to myself that things that things would be different next time.
61. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
62. Slept more than usual.
63. Drew on my past experiences; I was in a similar position before.
64. Came up with a couple different solutions to the problem.
65. I changed something about myself.
66. I was inspired to do something creative.
67. Please rate the effectiveness of your coping with the situation you have just imagined. **Please Use THIS SCALE:**

1=not all effective  
2=slightly effective  
3=mildly effective  
4=moderately effective  
5=highly effective

68. How easy was it for you to imagine this situation?

1=not imaginable at all

- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

69. How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

70. How depressed would the imagined situation make you feel if it actually happened to you?

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

71. How afraid would the imagined situation make you feel ?

- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

72. How angry would the imagined situation make you feel ?

- 1=not at all angry
- 2=slightly angry
- 3=mildly angry
- 4=moderately angry
- 5=quite angry

6=very angry  
7=Extremely angry

73.How Anxious would the situation make you feel ?

1=not at all Anxious  
2=slightly Anxious  
3=mildly Anxious  
4=moderately Anxious  
5=quite Anxious  
6=very Anxious  
7=Extremely Anxious

74.How much control did you feel you had in the imagined situation if it actually happened to you?

1=not controllable  
2=slightly controllable  
3=mildly controllable  
4=moderately controllable  
5=quite controllable  
6=very controllable  
7=Extremely controllable

75.Has this situation happened to you in the past year?

True or False T=1 F=2

STOP--Take one minute to imagine card #4

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on **green sheet #1** how you would cope with the fourth situation you have just imagined using the following scale:

1=does not apply and/or not used  
2=used somewhat  
3=used quite a bit  
4=used a great deal

76 Tried to get the person responsible to change his or her mind.

77. I did something which I didn't think would work, but at least I was doing something.



78. Made light of the situation; refused to get too serious about it.
79. Tried to forget the whole thing.
80. Tried not to burn my bridges, but leave things open somewhat.
81. I tried to keep my feelings from interfering with other things too much.
82. I got professional help.
83. Accepted sympathy and understanding from someone.
84. Realized I brought the problem on myself.
85. Criticized or lectured myself.
86. Took it out on other on other people.
87. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
88. Came up with a couple different solutions to the problem.
89. Just concentrated on what I had to do next-- the next step.
90. I prayed.
91. Changed or grew as a person in a good way.
92. Please rate the effectiveness of your coping with the situation you have just imagined. **Please Use THIS SCALE:**

- 1=not all effective
- 2=slightly effective
- 3=mildly effective
- 4=moderately effective
- 5=highly effective

93. How easy was it for you to imagine this situation?

- 1=not imaginable at all
- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

94. How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

95. How depressed would the imagined situation make you feel if it actually happened to you?

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

96.How afraid would the imagined situation make you feel ?

- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

97. How angry would the imagined situation make you feel ?

- 1=not at all angry
- 2=slightly angry
- 3=mildly angry
- 4=moderately angry
- 5=quite angry
- 6=very angry
- 7=Extremely angry

98.How Anxious would the situation make you feel ?

- 1=not at all Anxious
- 2=slightly Anxious
- 3=mildly Anxious
- 4=moderately Anxious
- 5=quite Anxious
- 6=very Anxious
- 7=Extremely Anxious

99. How much control did you feel you had in the imagined situation if it actually happened to you?

- 1=not controllable
- 2=slightly controllable
- 3=mildly controllable
- 4=moderately controllable
- 5=quite controllable
- 6=very controllable
- 7=Extremely controllable

100.Has this situation happened to you in the past year?

True or False T=1 F=2

STOP--Take one minute to imagine card #5

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on green sheet #1 how you would cope with the fifth situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

101. I did something which I didn't think would work, but at least I was doing something.
102. Stood my ground and fought for what I wanted.
103. Made light of the situation; refused to get too serious about it.
104. Went along with fate; sometimes I just have bad luck.
105. Kept others from knowing how bad things were.
106. I went over in my mind what I would say or do.
107. Accepted sympathy and understanding from someone.
108. Talked to someone about how I was feeling.
109. Realized I brought the problem on myself.
110. Criticized or lectured myself.
111. Slept more than usual.
112. Refused to believe that it had happened.
113. Came up with a couple different solutions to the problem.
114. I knew what had to be done, so I doubled my efforts to make things work.
115. Rediscovered what is important in life.
116. Changed or grew as a person in a good way.
117. Please rate the effectiveness of your coping with the situation you have just imagined. Please Use THIS SCALE:
  - 1=not all effective
  - 2=slightly effective
  - 3=mildly effective
  - 4=moderately effective

5=highly effective

118. How easy was it for you to imagine this situation?

- 1=not imaginable at all
- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

119. How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

120. How depressed would the imagined situation make you feel ?

if it actually happened to you.

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

## **SWITCH TO GREEN SHEET #2**

1. How afraid would the imagined situation make you feel ?

- 1=not at all afraid (#5)
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid

7=Extremely afraid

2. How angry would the imagined situation make you feel ?

1=not at all angry

2=slightly angry

3=mildly angry

4=moderately angry

5=quite angry

6=very angry

7=Extremely angry

3. How Anxious would the situation make you feel ?

1=not at all Anxious

2=slightly Anxious

3=mildly Anxious

4=moderately Anxious

5=quite Anxious

6=very Anxious

7=Extremely Anxious

4. How much control did you feel you had in the imagined situation if it actually happened to you?

1=not controllable

2=slightly controllable

3=mildly controllable

4=moderately controllable

5=quite controllable

6=very controllable

7=Extremely controllable

5. Has this situation happened to you in the past year?

True or False      True=1 False=2

## STOP--Take one minute to imagine card #6

Directions: Below is a list of ways people cope with a wide

variety of stressful events. Please indicate on green sheet #2 how you would cope with the sixth situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

6. I let my feelings out somehow.
7. Took a big chance or did something very risky.
8. Went along with fate; sometimes I just have bad luck.
9. Went on as if nothing had happened.
10. I tried not to act too hastily or follow my first hunch.
11. I tried to keep my feelings to myself.
12. Talked to someone to find out more about the situation
13. I got professional help.
14. I apologized or did something to make up.
15. I made a promise to myself that things that things would be different next time.
16. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
17. Avoided being with people in general.
18. Came up with a couple different solutions to the problem.
19. Drew on my past experiences; I was in a similar position before.
20. I prayed.

21. I was inspired to do something creative.

22. Please rate the effectiveness of your coping with the situation you have just imagined. Please Use THIS SCALE:

- 1=not all effective
- 2=slightly effective
- 3=mildly effective
- 4=moderately effective
- 5=highly effective

23. How easy was it for you to imagine this situation?

- 1=not imaginable at all
- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

24. How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

25. How depressed would the imagined situation make you feel if it actually happened to you?

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

26. How afraid would the imagined situation make you feel ?



- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

27. How angry would the imagined situation make you feel ?

- 1=not at all angry
- 2=slightly angry
- 3=mildly angry
- 4=moderately angry
- 5=quite angry
- 6=very angry
- 7=Extremely angry

28.How Anxious would the situation make you feel ?

- 1=not at all Anxious
- 2=slightly Anxious
- 3=mildly Anxious
- 4=moderately Anxious
- 5=quite Anxious
- 6=very Anxious
- 7=Extremely Anxious

29.How much control did you feel you had in the imagined situation if it actually happened to you?

- 1=not controllable
- 2=slightly controllable
- 3=mildly controllable
- 4=moderately controllable
- 5=quite controllable
- 6=very controllable
- 7=Extremely controllable

30..Has this situation happened to you in the past year?  
True or False T=1 F=2

STOP--Take one minute to imagine card #7

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on green sheet #2 how you would cope with the seventh situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

31. I expressed anger to the person(s) who caused the problem.
32. I let my feelings out somehow.
33. Looked for the silver lining, so to speak; tried to look on the bright side of things.
34. Went along with fate; sometimes I just have bad luck.
35. I tried to keep my feelings from interfering with other things too much.
36. Kept others from knowing how bad things were.
37. Talked to someone to find out more about the situation.
38. I got professional help.
39. Realized I brought the problem on myself.
40. I apologized or did something to make up.
41. Refused to believe that it had happened.
42. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
43. Came up with a couple different solutions to the problem.
44. Changed or grew as a person in a good way.
45. I knew what had to be done, so I doubled my efforts to

make things work.

46. Rediscovered what is important in life.

47. Please rate the effectiveness of your coping with the situation you have just imagined.

Please Use THIS SCALE:

- 1=not all effective
- 2=slightly effective
- 3=mildly effective
- 4=moderately effective
- 5=highly effective

48.How easy was it for you to imagine yourself in this situation?

- 1=not imaginable at all
- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

49.How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

50.How depressed would the imagined situation make you feel if it actually happened to you?

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed

6=very depressed  
7=Extremely depressed

51.How afraid would the imagined situation make you feel ?

1=not at all afraid  
2=slightly afraid  
3=mildly afraid  
4=moderately afraid  
5=quite afraid  
6=very afraid  
7=Extremely afraid

52. How angry would the imagined situation make you feel ?

1=not at all angry  
2=slightly angry  
3=mildly angry  
4=moderately angry  
5=quite angry  
6=very angry  
7=Extremely angry

53.How Anxious would the situation make you feel ?

1=not at all Anxious  
2=slightly Anxious  
3=mildly Anxious  
4=moderately Anxious  
5=quite Anxious  
6=very Anxious  
7=Extremely Anxious

54.How much control did you feel you had in the imagined situation if it actually happened to you?

1=not controllable  
2=slightly controllable  
3=mildly controllable  
4=moderately controllable  
5=quite controllable  
6=very controllable  
7=Extremely controllable

55..Has this situation happened to you in the past year?  
True or False T=1 F=2

STOP--Take one minute to imagine card #8

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on green sheet #2 how you would cope with the sixth situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

- 56. I expressed anger to the person(s) who caused the problem.
- 57. Took a big chance or did something very risky.
- 58. Tried to forget the whole thing.
- 59. Made light of the situation; refused to get too serious about it.
- 60. Tried not to burn my bridges, but leave things open somewhat.
- 61. I tried to keep my feelings to myself.
- 62. I asked a relative or friend I respected for advice.
- 63. Talked to someone about how I was feeling.
- 64. I made a promise to myself that things that things would be different next time.
- 65. Criticized or lectured myself.
- 66. Avoided being with people in general.
- 67. Refused to believe that it had happened.
- 68. I made a plan of action and followed.
- 69. Changed something so things would turn out all right.

70. Changed or grew as a person in a good way.

71. Rediscovered what is important in life.

72. Please rate the effectiveness of your coping with the situation you have just imagined. Please Use THIS SCALE:

- 1=not all effective
- 2=slightly effective
- 3=mildly effective
- 4=moderately effective
- 5=highly effective

73. How easy was it for you to imagine this situation?

- 1=not imaginable at all
- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

74. How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

75. How depressed would the imagined situation make you feel? if it actually happened to you.

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

76. How afraid would the imagined situation make you feel ?

- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

77. How angry would the imagined situation make you feel ?

- 1=not at all angry
- 2=slightly angry
- 3=mildly angry
- 4=moderately angry
- 5=quite angry
- 6=very angry
- 7=Extremely angry

78. How Anxious would the situation make you feel ?

- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

79. How much control did you feel you had in the imagined situation if it actually happened to you?

- 1=not controllable
- 2=slightly controllable
- 3=mildly controllable
- 4=moderately controllable
- 5=quite controllable
- 6=very controllable
- 7=Extremely controllable

80. Was this situation happened to you in the past year?

True or False T=1 F=2

STOP--Take one minute to imagine card #9

Directions: Below is a list of ways people cope with a wide variety of stressful events. Please indicate on green sheet #2 how you would cope with the sixth situation you have just imagined using the following scale:

- 1=does not apply and/or not used
- 2=used somewhat
- 3=used quite a bit
- 4=used a great deal

- 81. I let my feelings out somehow.
- 82. Took a big chance or did something very risky.
- 83. Tried to forget the whole thing.
- 84. Went on as if nothing had happened.
- 85. I went over in my mind what I would say or do.
- 86. Tried not to burn my bridges, but leave things open somewhat.
- 87. I got professional help.
- 88. Talked to someone to find out more about the situation.
- 89. Realized I brought the problem on myself.
- 90. I apologized or did something to make up.
- 91. Slept more than usual.
- 92. Avoided being with people in general.
- 93. Changed something so things would turn out all right.
- 94. Drew on my past experiences; I was in a similar position before.



95. Changed or grew as a person in a good way.

96. I was inspired to do something creative.

97. Please rate the effectiveness of your coping with the situation you have just imagined. Please Use THIS SCALE:

- 1=not all effective
- 2=slightly effective
- 3=mildly effective
- 4=moderately effective
- 5=highly effective

98. How easy was it for you to imagine this situation?

- 1=not imaginable at all
- 2=slightly imaginable
- 3=mildly imaginable
- 4=moderately imaginable
- 5=quite imaginable
- 6=very imaginable
- 7=Extremely imaginable

99. How stressful would you rate this imagined event?

- 1=not stressful at all
- 2=slightly stressful
- 3=mildly stressful
- 4=moderately stressful
- 5=quite stressful
- 6=very Stressful
- 7=Extremely Stressful

100. How depressed would the imagined situation make you feel ? if it actually happened to you.

- 1=not at all depressed
- 2=slightly depressed
- 3=mildly depressed
- 4=moderately depressed
- 5=quite depressed
- 6=very depressed
- 7=Extremely depressed

101. How afraid would the imagined situation make you feel ?

- 1=not at all afraid
- 2=slightly afraid
- 3=mildly afraid
- 4=moderately afraid
- 5=quite afraid
- 6=very afraid
- 7=Extremely afraid

102. How angry would the imagined situation make you feel ?

- 1=not at all angry
- 2=slightly angry
- 3=mildly angry
- 4=moderately angry
- 5=quite angry
- 6=very angry
- 7=Extremely angry

103. How Anxious would the situation make you feel ?

- 1=not at all Anxious
- 2=slightly Anxious
- 3=mildly Anxious
- 4=moderately Anxious
- 5=quite Anxious
- 6=very Anxious
- 7=Extremely Anxious

104. How much control did you feel you had in the imagined situation if it actually happened to you?

- 1=not controllable
- 2=slightly controllable
- 3=mildly controllable
- 4=moderately controllable
- 5=quite controllable
- 6=very controllable

Stress 160

7=Extremely controllable

105. Has this situation happened to you in the past year?  
True or False T=1 F=2

Appendix C: Vignette Stimuli

order 1 (mugged, cancer, romance, fire, heart, burglary, job, wallet, midterms); order 2 (midterms, burglary, fire, heart, job, romance, wallet, mugged, cancer).

Mugged #1 Order 1 #8 order 2

You are walking home one dark night and two large men approach you. One of them hits you on the side of the head and the other begins to demand money from you.

Cancer #2 Order 1 #9 order 2

You have been physically tired and run down for months, After a series of strenuous and sometimes painful tests, the doctor invites you to his office and tells you have cancer.

Romance #3 Order 1 #6 Order 2

(Males)

You have been romantically involved with someone for the past several months. You have been thinking about becoming more serious about the relationship. Tonight she tells you she has decided to break up with you.

(Females)

You have been romantically involved with someone for the past several months. You have been thinking about becoming more serious about the relationship. Tonight he tells you he has decided to break up with you.

Fire #4 Order 1 #3 Order 2

You come home one night and there are several fire trucks around your home. You can see flames coming out of your window of your place. You want to go in and rescue some of your belongings, but the fire marshal tells you to stay back.

Heart #5 Order 1 #4 Order 2

Your father had to undergo open heart surgery. Today you learn that things didn't go well, and that he is near death.

Burglary #6 Order 1 #2 Order 2

You come home one night and you notice some strange marks around the lock on the door to your home. It looks like someone has forced the door. You open the door and cautiously peer in. There doesn't seem to be anyone in there. You walk around the living room and you find that your TV and stereo are gone.

Job #7 Order 1 #5 Order 2

You thought things were going well at a job you have had for the past two months. The job is very demanding, but you thought you were getting the hang of it. Your boss calls you aside at the end of the day and tells you that you are going to be fired.

Wallet #8 Order 1 #7 Order 2

You can't find your wallet anywhere. You have been trying to locate it but to no avail. Then you realize that it must have fallen out of your back pack on the way home from school. There must have been thirty or forty dollars in there, but you aren't quite sure

Midterms #9 Order 1 #1 Order 2

You are already extremely busy and then you realize that you are about to have three midterms on the same day, two of them back to back. You are unable to change the time for any of them.

Appendix D: Mood Deinduction

In order to restore the S's mood to preexperimental levels, the subject will be asked to do the following:

**Development of a LIFE EVENTS INVENTORY**

The final part of the study involves developing a life events inventory that is applicable to university students. Different people are going to focus on different kinds of life events. We have found that it is best to have individual's focus on one type of life event because this seems to result in more vivid descriptions. We would like you to spend a few minutes (up to 10) recalling life events that made you feel very happy. Please take the time to describe, in vivid detail, one or more life events that made you feel very happy. Try to relive the events as you write about them. Describe, in detail how you were feeling and what was occurring that made you feel very happy. Please write your response on this page and on the back of this page. If you need more paper raise your hand and the experimenter will bring you more paper. Please begin now.

The subject will then be orally debriefed as to the purpose of this manipulation.

"The purpose of this exercise is not to construct a Life Events Inventory but to put you in a positive mood and counteract any negative impact that the stressful vignettes may have had."

Appendix E: Debriefing

## Debriefing

The vignettes you have just imagined may seem negative and stressful. These were constructed in this way because many events in life are negative or a hassle for a person. It was necessary to make these realistic because of the importance of stress in personality processes. If you found any of these situations overly distressing please let the experimenter know. He or she can get you in touch with someone that may be able to provide assistance for you.

The purpose of this study is to examine differences between coping strategies between five different personality styles (independent, dependent, ambivalent, detached, and control) with a set of hypothetical stressful vignettes covering a broad range of life event domains, eg. health, love and marriage, financial. This study will examine two sets of independent variables (1) stressor domain (health, domestic, and vocational) and (2) personality style (independent, dependent, ambivalent, detached, and control). The dependent variables are eight different coping strategies, e.g. confrontive coping, distancing. Researchers typically manipulate independent variables in order to assess how these variables cause changes in other variables called dependent variables. Independent variables are the theoretical causes and dependent variables, the variables that we measure, are the effects or outcomes of our independent variables. For example, we could look at gender (Male versus Female) as a predictor of verbal ability scores. This type of study is correlational in nature and because we did not manipulate any variables, we could not make any cause and effect inferences. That is, we couldn't say that gender causes differences in verbal differences in verbal ability because we cannot manipulate gender. As you're likely aware, there are a lot of differences between men and women, like how men versus women are socialized, that could provide an alternative explanation for any relationship between relationship between gender and verbal ability.

When random assignment is used, this means that each of you have an equal probability of receiving any of the levels of each of our independent variables. Because of this, we know that the different groups of people who receive the various levels of our independent variables are about the same before our manipulations; that is all groups contain tall people and short people, smart and not so smart people, people who have

had a lot of coffee and people who haven't had much coffee, etc.--so height intelligence, and amount of coffee cannot be what caused any differences on our dependent variable, so our independent variable has to be the cause of any change that we find in our dependent variable. So if the groups are the same before our manipulations, then any differences that we find on our dependent variables must be due to our independent variables causing some effect.

In the present study, the focus is on whether different personality types (independent variables) will cope (dependent variables) differently with a variety of different stressors (independent variables).

Previous research by Dr. Sinha and David Watson has used correlational designs with psychosocial variables, e.g. stress locus of control, as predictor variables and dysfunctional personality traits as criterion variables. This research has revealed the importance of stress in personality dysfunction. The present research is aimed at examining relationships between stress, personality style, and coping. Part of the scientific process involves building on previous research in order to attempt to clarify issues and lead to new discoveries.

In the present study, we are attempting to build upon knowledge regarding the assessment of personality. The findings in the present work will lead to modifications of theory and other testable hypotheses which, in turn should lead to other hypotheses, and so on. This how science builds on previous work and is known as the functional approach to theory development. We often identify issues raised in journals, point out problems, extend the issues, or modify theories in order to advance our understanding.

As you can see, it is very important to have people participate in our research so that the scientific endeavour can progress. Hopefully, your participation not only helps to advance science, but leads you to understand how we go about conducting research so that we can address important psychological issues.

One of the last things that I want to discuss with you is why, in the beginning, I didn't explain exactly what our hypotheses were. I guess you can see if I told you that we were studying personality and how you might cope with stressful events in your life then you might have felt a lot of pressure or demand to react one way or the other. You might have felt pressured to react in the way you thought we expected you to on the basis of our theory rather than reacting the way you normally would. The possibility that some participants might react to independent variable manipulations based on what they believe the experimenters expect is called the demand awareness effect. This can be a problem in research because our results could reflect



nothing having to do with the psychological processes that we're interested in studying, but could simply reflect demand awareness. If this was the case, scientific progress would be slowed and inappropriate avenues of research could be followed. So, I hope you can see how having people know our hypotheses in advance of responding would lead to problems in the interpretation of the data.

Thank you very much for participating. Without the help of people like you, we couldn't answer most important scientific questions in psychology. You've been a great help. If you have any further questions contact Dr. B.K. Sinha 492-5292.

Appendix F: Coping scales

These were presented in two different random orders:  
 order 1 (mugged, cancer, romance, fire, heart, burglary,  
 job, wallet, midterms); order 2 (midterms, burglary, fire,  
 heart, job, romance, wallet, mugged, cancer).

1 CC scale: Order1: Mugged, Order 2: Midterms

1. Stand my ground and fight for what I want.
2. Try to get the person responsible to change his or her mind.

2 CC scale: Order1 cancer, Order 2 burglary

26. I expressed anger to the person(s) who caused the problem.
27. I let my feelings out somehow.

3 CC scale order 1: romance order 2: fire

51. Took a big chance or did something very risky.
52. I did something which I didn't think would work, but at least I was doing something.

4 CC scale order 1 fire, order 2 heart

- 76 Tried to get the person responsible to change his or her mind.
77. I did something which I didn't think would work, but at least I was doing something.

5 CC scale order1 heart, order2 job

101. I did something which I didn't think would work, but at least I was doing something.

102. Stood my ground and fought for what I wanted.

6 CC scale order1 burglary, order 2 romance

6. I let my feelings out somehow.

7. Took a big chance or did something very risky.

7 CC scale order1 job, order 2 wallet

31. I expressed anger to the person(s) who caused the problem.

32. I let my feelings out somehow.

8 CC scale order1 wallet, order 2 mugged

56. I expressed anger to the person(s) who caused the problem.

57. Took a big chance or did something very risky.

9 CC scale order1 midterms, order2 cancer

81. I let my feelings out somehow.

82. Took a big chance or did something very risky.

1 DD scale 1- mugged, 2-midterms

3. Make light of the situation; refuse to get too serious about it.

4. Go on as if nothing had happened.

2 DD scale Order1 cancer, Order 2 burglary

28. Didn't let it get to me; refused to think about it too much.

29. Tried to forget the whole thing.

3 DD scale order 1: romance order 2: fire

53. Looked for the silver lining, so to speak; tried to look on the bright side of things.

54. Went along with fate; sometimes I just have bad luck.

4 DD scale order 1 fire, order 2 heart

78. Made light of the situation; refused to get too serious about it.

79. Tried to forget the whole thing.

5 DD scale order1 heart, order2 job

103. Made light of the situation; refused to get too serious about it.

104. Went along with fate; sometimes I just have bad luck.

6 DD scale order1 burglary, order 2 romance

8. Went along with fate; sometimes I just have bad luck.

9. Went on as if nothing had happened.

7 DD scale order1 job, order 2 wallet

33. Looked for the silver lining, sb to speak; tried to look on the bright side of things.

34. Went along with fate; sometimes I just have bad luck.

8 DD scale order1 wallet, order 2 mugged

58. Tried to forget the whole thing.

59. Made light of the situation; refused to get too serious about it.

9 DD scale order1 midterms, order2 cancer

83 Tried to forget the whole thing.

84. Went on as if nothing had happened.

1 SC scale Order1: Mugged, Order 2: Midterms

5. I will try to keep my feelings to myself.

6. Keep others from knowing how bad things are.

2 Sc scale Order1 cancer, Order 2 burglary

30. Tried not to burn my bridges, but leave things open somewhat.

31. I tried not to act too hastily or follow my first hunch.

3 Sc scale order1: romance order2: fire

55. I went over in my mind what I would say or do.

56. I thought about how a person I would admire would handle the situation and used that as a model.

4 Sc Scale order1 fire, order2 heart

80. Tried not to burn my bridges, but leave things open somewhat.

81. I tried to keep my feelings from interfering with other things too much.

5 SC scale order1 heart, order2 job

105. Kept others from knowing how bad things were.

106. I went over in my mind what I would say or do.

6 SC scale order1 burglary, order 2 romance

10. I tried not to act too hastily or follow my first hunch.

11. I tried to keep my feelings to myself.

7 SC scale order1 job, order 2 wallet

35. I tried to keep my feelings from interfering with other

things too much.

36. Kept others from knowing how bad things were.

8 SC scale order1 wallet, order 2 mugged

60. Tried not to burn my bridges, but leave things open somewhat.

61. I tried to keep my feelings to myself.

9 SC scale order1 midterms, order2 cancer

85. I went over in my mind what I would say or do.

86. Tried not to burn my bridges, but leave things open somewhat.

1 Social Support Scale 1-Mugged, Order 2: Midterms

7. Talk to someone to find out more about the situation.

8. Talk to someone who could do something concrete about the problem.

2 SS scale Order1 cancer, Order 2 burglary

32. I asked a relative or friend I respected for advice.

33. Talked to someone about how I was feeling.

3 SS scale order1: romance order2: fire

57. Accepted sympathy and understanding from someone.

58. I got professional help.

4 SS scale order1 fire, order2 heart

82. I got professional help.

83. Accepted sympathy and understanding from someone.

5 SS scale order1 heart, order2 job

107. Accepted sympathy and understanding from someone.

108. Talked to someone about how I was feeling.

6 SS scale order1 burglary, order 2 romance

12. Talked to someone to find out more about the situation

13. I got professional help.

7 SS scale order1 job, order 2 wallet

37. Talked to someone to find out more about the situation.

38. I got professional help.

8 SS scale order1 wallet, order 2 mugged

62. I asked a relative or friend I respected for advice.

63. Talked to someone about how I was feeling.

9 SS scale order1 midterms, order2 cancer

87. I got professional help.

88. Talked to someone to find out more about the situation.

1 AR scale 1 Mugged, Order 2: Midterms

9. Criticize or lecture myself.

10. Realize I brought the problem on myself.

2 AR scale Order1 cancer, Order 2 burglary

34. I made a promise to myself that things that things would be

different next time.

35. I apologized or did something to make up.

3 AR scale order1: romance order2: fire

59. Realized I brought the problem on myself.
60. I made a promise to myself that things that things would be different next time.
- 4 AR scale order1 fire, order2 heart
84. Realized I brought the problem on myself.
85. Criticized or lectured myself.
5. AR scale order1 heart, order2 job
109. Realized I brought the problem on myself.
110. Criticized or lectured myself.
- 6 AR scale order1 burglary, order 2 romance
14. I apologized or did something to make up.
15. I made a promise to myself that things that things would be different next time.
- 7 AR scale order1 job, order 2 wallet
39. Realized I brought the problem on myself.
40. I apologized or did something to make up.
- 8 AR scale order1 wallet, order 2 mugged
64. I made a promise to myself that things that things would be different next time.
65. Criticized or lectured myself.
- 9 AR scale order1 midterms, order2 cancer
89. Realized I brought the problem on myself.
90. I apologized or did something to make up.
- 1 EA scale Mugged, Order 2: Midterms
11. Wish that the situation will go away or somehow be over with.



12. Hope that a miracle will happen.
- 2 EA Scale Order1 cancer, Order 2 burglary
36. Refused to believe that it had happened.
37. Took it out on other on other people.
- 3 EA Scale 1-romance order2: fire
61. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
62. Slept more than usual.
- 4 EA Scale 1-fire, order2 heart
86. Took it out on other on other people.
87. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
- 5 EA Scale 1-heart, order2 job
111. Slept more than usual.
112. Refused to believe that it had happened.
- 6 EA Scale 1-burglary, order 2 romance
16. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
17. Avoided being with people in general.
- 7 EA Scale 1- job, order 2 wallet
111. Slept more than usual.
112. Refused to believe that it had happened.
- 8 EA Scale 1- wallet, order 2 mugged
66. Avoided being with people in general.

67. Refused to believe that it had happened.

9 EA Scale 1-midterms, order2 cancer

91. Slept more than usual.

92. Avoided being with people in general.

PS-Planful problem solving Order 1: Mugged, Order 2:  
Midterms

13. I know what has to be done, so I will double my efforts  
to make things work.

14. I will make a plan of action and follow it.

2 PS Scale: Order 1 cancer, Order 2 burglary

38. Just concentrated on what I had to do next-- the next  
step.

39. Changed something so things would turn out all right.

3 PS Scale: order 1 romance, order 2: fire

63. Drew on my past experiences; I was in a similar position  
before.

64. Came up with a couple different solutions to the  
problem.

4 PS Scale: order 1 fire, order2 heart

68. Came up with a couple different solutions to the  
problem.

69. Just concentrated on what I had to do next-- the next  
step.

5 PS Scale: order 1 heart, order 2 job

113. Came up with a couple different solutions to the problem.
114. I knew what had to be done, so I doubled my efforts to make things work.
- 6 PS Scale: order 1 burglary, order 2 romance
18. Came up with a couple different solutions to the problem.
19. Drew on my past experiences; I was in a similar position before.
- 7 PS Scale: order 1 job, order 2 wallet
44. Changed or grew as a person in a good way.
45. I knew what had to be done, so I doubled my efforts to make things work.
- 8 PS Scale: order 1 wallet, order 2 mugged
69. Changed something so things would turn out all right.
70. Changed or grew as a person in a good way.
- 9 PS Scale: order 1 midterms, order2 cancer
93. Changed something so things would turn out all right.
94. Drew on my past experiences; I was in a similar position before.
- PR- Positive reappraisal
- 1 PR Scale 1-Mugged, Order 2: Midterms
15. Change or grow as a person in a good way.

16. I come out of the experience better than when I went in.
- 2 PR Scale Order 1 cancer, Order 2 burglary
40. Found new faith.
41. Rediscovered what is important in life.
- 3 PR Scale Order 1 romance, order2: fire
65. I changed something about myself.
66. I was inspired to do something creative.
- 4 PR Scale Order 1 fire, order 2 heart
90. I prayed.
91. Changed or grew as a person in a good way.
- 5 PR Scale order 1 heart, order 2 job
115. Rediscovered what is important in life.
116. Changed or grew as a person in a good way.
- 6 PR Scale order 1 burglary, order 2 romance
20. I prayed.
21. I was inspired to do something creative
- 7 PR Scale order 1 job, order 2 wallet
45. I knew what had to be done, so I doubled my efforts to make things work.
45. Rediscovered what is important in life.
- 8 PR Scale order 1 wallet, order 2 mugged

- 70. Changed or grew as a person in a good way.
- 71. Rediscovered what is important in life.
- 9 PR\_Scale order 1 midterms, order 2 cancer
- 95. Changed or grew as a person in a good way.
- 96. I was inspired to do something creative.

Appendix J: Pilot Study

Running head: Stress Vignettes

Stressful Life Event Vignettes: A Pilot study.  
David C. Watson

University of Alberta

## Abstract

In order to develop a set of stressful vignettes for further research on stress and coping, a set of one paragraph statements was constructed. These statements were based upon a selected set of life event domains found within the Psychiatric Epidemiology Research Interview (PERI) Life Events scale (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978). This initial set of vignettes was administered to a sample  $N=40$  university students in order to determine the best 9 of the set of 14 using stress, imaginability, and emotional response as criteria. The results indicated a range of responses on stress, imaginability, depression, fear, anger, anxiety and control perception. Based on these criteria, 5 vignettes were eliminated from the set.

## Introduction

The Psychiatric Epidemiology Research Interview (PERI) Life Events scale (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978) is a list of 102 events that are designed to sample a cross-section of human life events. These one sentence statements are weighted on a scale of stressfulness from 0 to 1000. From this larger set of stressful events, a selected sample of 14 one paragraph vignettes was made to cover a range of life event domains. The purpose of this study is to select a set of 9 stressful vignettes from the initial set of 14 that for further research with personality disorders. Vignettes with higher stress, imaginability, and stress-emotion summed ratings will be selected for use in the second study.



## Method

### Subjects

40 introductory psychology students (26 females & 14 males) participated in exchange for course credit. The sample ranged in age from 17 to 25 years.

### Procedure

The participants completed a questionnaire consisting of 14 vignettes and were asked to rate on a seven point Likert scale the imaginability, stressfulness, depression, fear, anger, anxiety, perceived control of the event. Also the S's were asked if the event had happened to the individual in the past year. The vignettes were from several domains: love and marriage (Dohrenwend, et al,1978) PERI rating 309, Health (cancer,668), residence (fire,580), crime and legal matters (mugged,383), finances (wallet, 460), school (midterms,323), family (heart, 1036), work (fired, 407), social activities (romance, 328), residence

(roommate, 262), health (backproblem, 611), crime and legal (burglary, 314), financial (debt, 446), and school (professor, 268).

### Results

Means and standard deviations for imaginability, stress, depression, fear, anger, anxiety, control for the 14 vignettes are presented in Table 1. For imaginability, the average rating (on a 1 to 7 scale) ranged from 3.7 (#2 cancer) to 6.15 (#14 professor). With stress, the range was from 3.25 (#10 roommate) to 6.52 (#7, heartattack). For depression, 2.02 (#10 roommate) to 6.42 (#7 heartattack). With fear, 1.52 (#10, roommate) to 6.47 (#4, mugged). The anger ratings ranged from 3.95 (#5, debt) to 6.25 (#12, robbed). Anxiety ranged from 3.0 (#10, roommate) to 6.05 (#7 heartattack). Perception of control ranged from 4.1 (#9, friend) to 1.92 (#7, heartattack).

## Discussion

Based upon these results, nine vignettes were selected as stressful stimuli for the personality disorder study: #s 1,2,3,4,6,7,8,12,13. Vignette #5 was eliminated due to low imaginability 3.47, compared to #13 wallet, 6.07 also in the finances domain of life events. Vignette #9, friend was omitted due to the high control rating, 4.1. Roommate, #10 was eliminated due overall low stress-emotion (SE) ratings, sum=14.59. Backache was omitted due to lower stress-emotion ratings, sum=26.18 compared to cancer SE sum=29.16 in the health domain. In the school domain, midterm #6 SE sum=26.43 was selected over professor #14 SE sum=24.99.

Table 1 Vignette ratings N=40

	<u>Vignette 1(Romance)</u>	<u>Vignette 2(Cancer)</u>
	Mean (sd)	Mean(sd)
Imaginability	4.47(1.4)	3.7(1.57)
Stress	5.37(1.1)	6.45(0.8)
Depression	5.10(1.15)	6.12(1.1)
Fear	3.15(1.5)	6.05(1.5)
Anger	4.40(1.8)	4.92(1.73)
Anxiety	3.85(1.54)	5.62(1.53)
Control	2.57(1.41)	2.30(1.55)
Stress-Emotion sum	21.87	29.16
	<u>Vignette 3(Fire)</u>	<u>Vignette 4(Mugged)</u>
Imaginability	4.55(1.4)	4.85(1.74)
Stress	5.72(1.3)	6.12(0.8)
Depression	5.22(1.15)	4.15(1.86)
Fear	5.02(1.76)	6.47(0.8)
Anger	4.90(1.59)	5.97(1.4)
Anxiety	5.37(1.33)	6.02(1.12)
Control	2.2(1.5)	2.52(1.50)
Stress-emotion sum	26.23	28.73

	Vignette 5 (Debt)	Vignette 6 (Midterm)
Imaginability	3.47(1.85)	6.07(1.04)
Stress	5.72(1.3)	6.32(0.99)
Depression	4.9(1.3)	4.67(1.68)
Fear	4.55(1.23)	5.27(1.67)
Anger	3.95(1.70)	4.45(1.7)
Anxiety	5.22(1.27)	5.72(1.43)
Control	3.52(1.55)	3.17(1.63)
Stress-emotion sum	24.34	26.43

	Vignette 7(Heartattack)	Vignette 8 (Fired)
Imaginability	4.77(1.52)	4.25(1.67)
Stress	6.52(1.1)	5.6(0.95)
Depression	6.42(1.01)	5.62(1.14)
Fear	6.42(1.21)	4.07(1.6)
Anger	5.25(1.66)	5.7(1.43)
Anxiety	6.05(1.28)	4.87(1.24)
Control	1.92(1.07)	2.57(1.27)
Stress-emotion sum	30.66	25.86

	Vignette 9 (Friend)	Vignette 10 (Roommate)
Imaginability	4.97(1.84)	5.30(1.45)
Stress	5.40(1.08)	3.25(1.46)
Depression	5.22(1.34)	2.02(1.25)
Fear	3.47(1.86)	1.52(1.08)
Anger	5.5(1.41)	4.8(1.53)
Anxiety	4.4(2.01)	3.0(1.58)
Control	4.10(1.54)	4.05(1.33)
Stress-emotion sum	23.99	14.59

	Vignette 11(Backache)	Vignette 12 (Robbed)
Imaginability	4.17(1.46)	5.22(1.52)
Stress	5.67(1.07)	5.57(1.37)
Depression	5.17(1.13)	4.1(1.69)
Fear	5.62(1.49)	5.35(1.87)
Anger	4.27(1.33)	6.25(1.23)
Anxiety	5.45(1.15)	5.25(1.48)
Control	3.00(1.53)	2.30(1.41)
Stress-emotion sum	26.18	26.52

	Vignette 13 (Wallet)	Vignette 14 (Professor)
Imaginability	6.07(1.04)	6.15(1.05)
Stress	5.65(0.95)	5.7(1.3)
Depression	4.25(1.54)	4.12(1.72)
Fear	3.37(1.86)	4.05(1.83)
Anger	5.47(1.37)	5.87(1.53)
Anxiety	5.15(1.21)	5.25(1.42)
Control	3.3(1.78)	2.37(1.48)
Stress-emotion Sum	23.89	24.99

Appendix 1 Stress Vignettes

Romance

( MALES IMAGINE THIS VIGNETTE)

1. You have been romantically involved with someone for the past several months. You have been thinking about becoming more serious about the relationship. Tonight she tells you she has decided to break up with you.

(FEMALES IMAGINE THIS VIGNETTE)

1. You have been romantically involved with someone for the past several months. You have been thinking about becoming more serious about the relationship. Tonight he tells you he has decided to break up with you.

Cancer

2. You have been physically tired and run down for months, After a series of strenuous and sometimes painful tests, the doctor invites you to his office and tells you have cancer.

Fire

3. You come home one night and there are several fire trucks around your home. You can see flames coming out of your window of your place. You want to go in and rescue some of your belongings, but the fire marshal tells you to stay back.

Mugged

4. You are walking home one dark night and two large men approach you. One of them hits you on the side of the head and the other begins to demand money from you.

Debt

5. You are in deeply in debt and you cannot keep up with the monthly payments. Now, at seven in the morning a caller from the collection agency asks you when you are going to come up with more money.



Midterm

6. You already extremely busy and then you realize that you are about to have three midterms on the same day, two of them back to back. You are unable to change the time for any of them.

Heart

7. Your father had to undergo open heart surgery. Today you learn that things didn't go well, and that he is near death.

Fired

8. You thought things were going well at a job you have had for the past two months. The job is very demanding, but you thought you were getting the hang of it. Your boss calls you aside at the end of the day and tells you that you are going to be fired.

Friend

9. Your very best friend has been giving you the cold shoulder for the past few days. Today, you have a huge argument , indicating clearly that you aren't friends any more.

Roommate

10. You have agreed to share in the household chores with your new roommate. One evening you notice that he/she has finally gotten around to washing the ever growing pile of dishes, but you notice that there is dried on food on about half of the plates.

Back

11. Your back hurts. It has been hurting you for the past several months, especially in the morning, when you first get out of bed. You have been spending a lot of time in your easy chair with the hot pad on your back. The doctor says you need surgery but there is no guarantee.

Robbed

12. You come home one night and you notice some strange marks around the lock on the door to your home. It looks like someone has forced the door. You open the door and cautiously peer in. There doesn't seem to be anyone in

there. You walk around the living room and you find that your TV and stereo are gone.

Wallet

13. You can't find your wallet anywhere. You have been trying to locate it but to no avail. Then you realize that it must have fallen out of your back pack on the way home from school. There must have been thirty or forty dollars in there, but you aren't quite sure.

Professor

14. You are writing a difficult midterm and the whole class is waiting for the professor's assistant to bring in the exams. When he finally arrives, you end up starting the test about five minutes late. Then, when the time period is up, you are not quite finished. The professor demands that you turn your exam in immediately.

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