THE RELATIONSHIPS AMONG STRESS, COPING, EATING DISORDERS, ANXIETY, AND DEPRESSION

EILENNA DENISOFF

A Thesis submitted to the Faculty of Graduate Studies in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Graduate Programme in Psychology
York University
Toronto, Ontario

May 2000
The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author’s permission.

L’auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L’auteur conserve la propriété du droit d’auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-812-56225-5
The relationships among stress, coping, eating disorders, anxiety, and depression

by Eilenna Denisoff

a dissertation submitted to the Faculty of Graduate Studies of York University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

© 2000

Permission has been granted to the LIBRARY OF YORK UNIVERSITY to lend or sell copies of this dissertation, to the NATIONAL LIBRARY OF CANADA to microfilm this dissertation and to lend or sell copies of the film, and to UNIVERSITY MICROFILMS to publish an abstract of this dissertation. The author reserves other publication rights, and neither the dissertation nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.
Abstract

The relationships among stress, general coping styles, health-specific coping styles, eating disorder symptomatology, anxiety, and depression were investigated in a clinical sample of women with eating disorders. To examine the continuity of eating disorders, results from this research were compared to results obtained in a previous study investigating relationships among stress, general coping, and weight preoccupation in a non-clinical sample of university women. The clinical sample comprised 53 women with eating disorder symptomatology participating in the Eating Disorder Program at the Toronto General Hospital. The non-clinical comparison sample used to test the continuity hypothesis comprised 206 female undergraduate university students at York University. Measures used in this research included the Life Experiences Scale, Coping Inventory for Stressful Situations, Coping with Health Injuries and Problems, Eating Disorder Inventory, Endler Multidimensional Anxiety Scales, and the Beck Depression Inventory.

Multiple regression analyses indicated that Emotion-oriented Coping from the general coping scale was a significant predictor of Total State Anxiety, Autonomic-emotional Anxiety, and Cognitive-worry State Anxiety. Social Diversion was a significant predictor of Total State Anxiety and of Cognitive-worry Anxiety. The subscales of the health-specific coping measure did not account for additional variance in any of the criterion variables in this study.

Two tests of continuity were conducted. The first test based on a categorical comparison of the pattern of relationships among stress, general coping, and weight preoccupation between clinical and non-clinical samples showed evidence of
discontinuity across these samples. An additional test of continuity was conducted in order to examine the absolute levels of variables across three groups. Women who scored in the top 1/3 on weight preoccupation were designated as a sub-clinical group for these analyses. According to this dimensional analysis of continuity there was evidence of continuity. It is likely that there are both continuities and discontinuities among different variables associated with eating disorders. The question of continuity could be investigated from a number of perspectives. Researchers should use a variety of approaches when investigating this issue.
Acknowledgements

I thank my advisor and supervisor Norman Endler. His experience, insight, and drive strongly shaped my experience in graduate school. His influence is felt throughout my work and will remain with me in the future.

My gratitude is extended to professors Debra Pepler and Gordon Flett whose thoughtful and invaluable suggestions enriched this dissertation. I appreciate Tom Martin who has been a friend and a teacher as he assisted me with the statistical analyses. Credit is also due to the staff and patients at the Toronto General Hospital, and to the students at York University for their contribution to this study.

I thank my brother Dennis for his encouragement and support. I thank my friends for their generous companionship and unwavering support throughout my years in graduate school. Special thanks to Alex Rutherford, Serine Warwar, and Rachael Rosner.
# Table of Contents

Abstract...........................................................................................................iv
Acknowledgements......................................................................................vi
Table of Contents..........................................................................................vii
List of Tables..................................................................................................x
List of Figures.................................................................................................xii

Chapter I: Introduction ..................................................................................1
Life Events Stress.........................................................................................3
Coping...........................................................................................................5
Eating Disorders............................................................................................8
Eating Disorders and Coping.........................................................................10
Methodological Issues..................................................................................13
Coping Styles, Anxiety, and Depression......................................................14
The Continuity Hypothesis and Eating Behaviour.......................................15
Purpose of the Present Study........................................................................24
Stress...........................................................................................................24
General Coping Styles..................................................................................25
Illness-specific Coping Styles.......................................................................26
Hypotheses....................................................................................................28

Chapter II: Method ......................................................................................30
Research participants ..................................................................................30
Measures .................................................................................................32

Procedure .............................................................................................38

Statistical Analyses ................................................................................40

Chapter 3: Results ..................................................................................43

Means and Reliabilities ............................................................................44

Correlations Among General Coping Styles (CISS) and
Illness-Specific Coping Styles (CHIP) ....................................................48

Correlations Among Stress, General Coping Styles,
Illness-specific Coping Styles, Eating Disorder Symptoms,
Weight Preoccupation, State Anxiety and Depression .......................50

Correlations among stress, general coping styles and
Weight preoccupation for Non-clinical sample ..................................52

Multiple Regression Analyses ...............................................................53

Model 1 Multiple Regression Analyses of Stress,
CISS, CHIP, and total EDI Scale ...........................................................57

Model 2 Multiple Regression Analyses of Stress,
CISS, CHIP, and Weight Preoccupation ..............................................58

Model 3 Multiple Regression Analyses of Stress,
CISS, CHIP, and Total Anxiety Scale ..................................................58

Model 4 Multiple Regression Analyses of Stress,
CISS, CHIP, and Autonomic-Emotional State Anxiety Scale ..........63

Model 5 Multiple Regression Analyses of Stress,
CISS, CHIP, and Cognitive-worry State Anxiety Scale ....................64

Model 6 Multiple Regression Analyses of Stress,
CISS, CHIP, and Depression .................................................................66

Testing the continuity Hypothesis .........................................................69

Chapter IV: Discussion .........................................................................89

Internal Consistency of the Measures ..................................................91
Relationships Among the Study Variables ................................................. 91
Multiple Regression Analyses ................................................................. 93
Test of the Continuity Hypothesis .............................................................. 99
Theoretical Implications ........................................................................... 105
Practical Implications ............................................................................. 112
Directions for Future Research ................................................................. 114
Limitations of the Present Research .......................................................... 116
Conclusions ............................................................................................ 117
Chapter V: Summary ............................................................. 119
References ................................................................................................ 123
Appendices ............................................................................................... 143
Appendix A: Life Experiences Survey ......................................................... 143
Appendix B: Coping Inventory for Stressful Situations ................................. 147
Appendix C: Coping With Health Injuries and Illness ................................. 149
Appendix D: Eating Disorder Inventory ...................................................... 150
Appendix E: Beck Depression Inventory .................................................... 152
Appendix F: Endler Multidimensional Anxiety Scale ................................. 155
Appendix G: Consent Form A (Clinical Sample) ........................................... 156
Appendix H: Consent Form B (Non-clinical Sample) .................................... 157
List of Tables

Table 1  Means, Standard Deviations, Minimums, Maximums and Alpha Reliabilities for all Variables for Clinical Sample........47

Table 2  Means, Standard Deviations, Minimums, Maximums and Alpha Reliabilities for all Variables for Non-clinical Sample..................49

Table 3  Correlations Among Subscales of the CISS and the CHIP coping scales...................................................51

Table 4  Correlations Among Stress, General Coping Styles, Illness-specific Coping Styles, Eating Disorder Symptomatology, Weight Preoccupation, Anxiety, and Depression..........54

Table 5  Correlations among Predictors and Dependent Variables for Non-clinical sample.............................................55

Table 6  Multiple Regression Analyses of Stress, CISS, CHIP, and EDI total scores.......................................................59

Table 7  Multiple Regression Analyses of Stress, CISS, CHIP, and Weight Preoccupation.................................................60

Table 8  Multiple Regression Analyses of Stress, CISS, CHIP, and Total State Anxiety....................................................62

Table 9  Multiple Regression Analyses of Stress, CISS, CHIP, and Autonomic-emotional State Anxiety............................65

Table 10 Multiple Regression Analyses of Stress, CISS, CHIP, and Cognitive-worry State Anxiety .........................67
Table 11  Multiple Regression Analyses of Stress, CISS, CHIP, and Depression .................................................................68

Table 12  Continuity Hypothesis Testing: Multiple Regression Analysis of Coping by Sample.....................................................72

Table 13  Group means for stress, coping and weight preoccupation for non-clinical, sub-clinical, and clinical groups....................76

Table 14  Pairwise comparison of means using Scheffe Test.................80

Table 15  Two Cluster Solution for Groups........................................81

Table 16  Three Cluster Solution for Groups.....................................81
List of Figures

Figure 1 Hypothetical Figure Showing Continuity across Samples...............73

Figure 2 Hypothetical Figure Showing Discontinuity across Samples ..........73

Figure 3 Slope of Interaction between Task-oriented coping and

Weight Preoccupation for Clinical and Non-clinical Samples.............75

Figure 4 Slope of Interaction between Emotion-oriented coping and

Weight Preoccupation for Clinical and Non-clinical Samples ..........75
THE RELATIONSHIPS AMONG STRESS, COPING, EATING DISORDERS, ANXIETY, AND DEPRESSION

Chapter I

Introduction

Overview

The multifaceted nature of eating disorders has led to the investigation and implication of biological, psychological, and social variables in both the aetiology and maintenance of these disorders. The impact of stress and coping on eating disorders is still a relatively new area of research. Several investigators have suggested that major life changes are associated with the onset of disordered eating (Lacey, Coker, & Birchnell, 1986; Pyle, Mitchell, & Eckert, 1981; Schmidt, Slone, Tiller, & Treasure, 1993). How an individual deals with the major life changes is important in terms of subsequent health outcomes. It has been suggested that coping styles might moderate relationships between stressful life events and various health outcomes (Endler, 1988; Endler & Parker, 1999a; 1999b). According to the interaction model of stress, anxiety, and coping (Endler, 1988), person variables act in combination with situational stressors to induce biochemical, physiological, and coping reactions, defence mechanisms, and/or illness. According to the interactional model (Endler, 1988) these reactions can interact with one another and can, in turn, affect the person and situation variables.

The primary goal of this research was to investigate the relationships among stress, general coping styles, illness-specific coping styles, eating disorder symptomatology, anxiety and depression in a clinical sample of women and to compare
them with a non-clinical sample. In this research, independent contributions of stress, general coping styles, health-specific coping strategies, and the interactions among stress and coping, on eating disorder symptomatology, weight preoccupation, state anxiety, and depression were investigated.

In addition to eating disorder symptoms, various researchers have reported on the comorbidity of depression and eating disorders (Kasset et al. 1989; Toner, Garfinkel, Garner, 1986). Others have noted that anxiety is also a common feature of eating disorders (Garfinkel et al. 1996). Researchers have found support for differential relationships among coping styles and various measures of psychological distress including anxiety and depression (Suls & Fletcher, 1985; Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). Suls and Fletcher (1985) conducted a meta-analysis of the coping literature and reported that avoidant coping strategies were effective in reducing pain, stress, and anxiety in the short term. Non-avoidant coping strategies such as focusing one’s attention and psychological and/or behavioural reactions on the stressor, however, seemed to be more effective over the longer term. Vitaliano et al. (1990) found that problem-focused coping was negatively related to depressed mood in situations where a stressor was appraised as changeable but was not related to depressed mood when a stressor was perceived as not changeable in nonpsychiatric samples. They also found that emotion-focused coping was positively related to depression when a stressor was appraised as changeable. In people with psychiatric conditions, these relations were not observed. In light of these observations, a secondary goal of this study was to examine the possible moderating effects of coping styles, in the relationship between
stress, and various health outcomes (e.g. eating disorder symptoms, weight preoccupation, anxiety, and depression) in a sample of women with eating disorder symptoms. In addition, patterns of results from this research were compared to previous research using a non-clinical sample (Denisoff & Endler, 1995; Denisoff & Endler, 2000) to examine similarities and differences in processes underlying weight preoccupation and eating disorders.

In order to investigate the relationships among stress, coping styles, and eating symptomatology, pertinent literature in each of these areas will be reviewed. The relationship between stress and eating disorders has been fairly well established in the literature (Lacey et al. 1986; Schmidt, Tiller, Andrews, Blanchard, & Treasure, 1997; Soukup, Beiler, & Terrell, 1990). Variables such as coping styles could potentially act as moderators of the relationship between stress and eating disorders. The research in the area of coping and eating disorders is relatively new and will be reviewed in the following sections.

**Life Events Stress**

Cannon (1932) provided some of the earliest contributions to our understanding of the stress response in his work on the fight or flight response which describes an organism's reaction to threat. Upon perceiving a stressor, the body responds with increased action of the autonomic nervous system and endocrine system. In the short term, such a response is adaptive in that it prepares the organism for action. However, over the long term, exposure to continued stress may lead to physiological damage and illness. Hans Selye (1976) pioneered stress research and theory in his description of the
general adaptation syndrome (GAS). Selye proposed that stress taxed the body in three stages: the alarm reaction, the stage of resistance, and finally, the stage of exhaustion. He proposed that, when the body is taxed by stress, both the endocrine and nervous systems respond in an attempt to maintain resistance. If the stress is prolonged, the body will begin to show signs of physical deterioration due to exhaustion (Selye, 1976). Following Selye's lead, researchers have continued to investigate the effects of particular stressors (such as losing a job, getting married, or moving) on physical and psychological functioning (Bartrop, Lazarus, Kiloh, & Penny, 1977; Folkman, Lazarus, Gruen, & DeLongis, 1986; Holmes & Rahe, 1967).

Lay definitions of stress have been somewhat confusing in that they have included both the idea of a constraining or impelling force and that of demand upon the energy of an object. This confusion between stress as both stimulus and response has carried over into medicine and psychology (Hinkle, 1977). To avoid confusion in the present study, the term stressor will be used to refer to a stressful stimulus and stress response will denote a reaction to or consequences of particular stressors.

Researchers have basically focused on trying to identify what accounts for the fact that, when faced with high levels of stress, some individuals are unable to function while others appear to continue relatively unscathed. With early models some researchers attempted to explain variability in the deleterious role of stress predominantly in terms of biological factors such as genetic predisposition to illness (Kety, Rowland, Sidman & Matthysse, 1983; Spring & Coons, 1982). Other researchers suggested a biopsychosocial
perspective that included psychological and social factors as well as biological elements in the stress process (Engel, 1977; Van Praag, 1981).

It is known that stress might lead to the use of habits and behaviours that can be detrimental to health. In certain circumstances, stress associated with an illness might cause illness behaviour that subsequently influences the course of the illness. Eating disorders such as AN and BN seem to fit this paradigm. However, studies investigating the relationships among stress and eating disorders have been inconclusive (Benenet & Cooper, 1999).

Individual differences in biological, psychological, and social functioning are still being investigated to explain differential responses to stressors (see Taylor, 1999). Factors that modify the relationship of life stress to psychological and physical distress are of particular interest to researchers. Individual coping styles are important psychological factors that have been implicated as both mediators and moderators of responses in stressful situations (Endler, 1988; Endler & Parker, 1990; 1999a). The research on coping is reviewed in order to formulate a model of coping in relation to eating disorder symptomatology.

Coping

Coping can be conceptualized as an individual’s cognitive and behavioural attempts to reconcile a perceived discrepancy between situational demands and personal capacity or competence (Endler, Parker & Summerfeldt, 1993; 1998). Lazarus and Folkman (1984) describe the dynamic nature of coping as a "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands


that are appraised as taxing or exceeding the resources of a person" (p. 141). A distinction has been made between styles and strategies of coping. Researchers have described *styles* as enduring personality traits and *strategies* as specific cognitions, behaviours, and perceptions used in a particular situation. In this research, general coping styles and illness-specific coping strategies were assessed.

During the 1980s and 1990s, researchers accrued considerable data in the area of coping and health problems (Endler & Parker, 1990). Evidence suggests that individuals develop general styles in their coping reactions to various stressful situations (Endler & Parker, 1999a; Fleischman, 1984). Three different coping styles consistently identified in the literature are task-oriented (problem-focused), emotion-oriented (person-focused), and avoidance-oriented coping (Endler & Parker, 1999a). Task-oriented coping is also called problem-focused coping and refers to behaviours directed towards solving a problem or cognitively reconceptualizing it in order to minimize its negative impact. Emotion-focused coping refers to person-oriented responses. These include emotional responding, self-preoccupation, and fantasizing. Avoidance-oriented coping can include either emotion-focused or problem-focused strategies implemented to reduce the impact of the stress. Avoidant behaviours include engaging in substitute tasks or seeking out other people for diversionary activities (Endler & Parker, 1994).

Studies have shown that although avoidance-oriented coping strategies can be effective in the short term (Miller, Brody and Summerton, 1988; Miller & Mangan, 1983; Nowack, 1989), they may actually contribute to psychological and physical health problems when used in the long term. Avoidant coping strategies are problematic over a
long term, because they delay dealing with the stressor (Cronkite & Moos, 1984; Menaghan, 1982). Non-avoidant coping strategies (including task-oriented and emotion-oriented coping) have been shown to have a negative relationship to both psychological and physical health in certain situations (Endler, Edwards & Vitelli, 1991; Parker & Endler, 1992). In general, emotion-oriented coping styles have been associated with negative health outcomes such as psychopathology and psychological distress (Endler, 1988; 1997; Endler & Parker, 1994; Nowack, 1989). In comparison, task-oriented coping has either had no link or has been negatively associated with negative health outcomes (Endler, 1988; 1993; Nowack, 1989). Research in the area of coping and eating disorders is relatively sparse. In the present study, the role of general and illness-specific coping styles in the relationship between stress, eating disorder symptoms, depression, and anxiety was examined.

Some researchers have suggested that eating disorders represent a type of coping strategy in response to stress (Caffary, 1987). Emmett, (1985) as cited in Caffary (1987) reported that anorexia and bulimia represent inadequate coping strategies in attempts to deal with a fixation on slender body image and food. As various researchers have observed an association between stress and the development and/or maintenance of eating disorders, it has been suggested that the eating disorders are an attempt to cope with stress. Although a detailed discussion of this topic is beyond the scope of this research, it has been argued that, because coping is part of the stress process, such an argument basically represents a confound between the process (i.e., stress) and the outcome (i.e., eating disorder). For a detailed examination of this topic see Troop (1998).
Eating Disorders

In the 1960s, women typically dieted or exercised to lose weight. However, today some women are resorting to more extreme measures such as fasting, vomiting, taking laxatives, diuretics, diet pills, liposuction and plastic surgery in an attempt to control their weight and shape. It has been suggested that weight preoccupation and chronic dieting lead to restricted eating and possibly eating disorders (Killen et al. 1994; King, 1991; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989).

According to the diagnostic and statistical manual, fourth edition DSM-IV (APA, 1994), there are three diagnostic categories of eating disorders (American Psychiatric Association [APA], 1994). These are anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified. AN is characterized by self-imposed starvation due to a relentless pursuit of thinness and fear of fatness, leading to varying degrees of emaciation (Goldbloom & Garfinkel, 1993, p. 1). BN is characterized by episodic patterns of binge-eating accompanied by a sense of loss of control and strong desire for a thin size. Bulimia can be an accompanying symptom in a variety of medical disorders, or a component of the anorexia syndrome. With bulimia, there may be such compensatory behaviours as vomiting or laxative abuse, accompanied by comparatively little weight loss, or even in the context of obesity (Goldbloom & Garfinkel, 1993, p. 1). The third category of disordered eating described in the DSM-IV (APA, 1994) is eating disorder not otherwise specified. This category is for eating behaviours that do not meet diagnostic criteria for the other categories on some aspect. Some examples from this category are women who meet criteria for AN except that they maintain a weight within
the normal range, or women who meet criteria for BN except for the weekly frequency of the symptom or perhaps the duration of their illness (i.e., less than 3 months).

Prevalence rates for anorexia nervosa (AN) were reported as 2% in a Canadian community sample (Garfinkel et al. 1996) with lifetime prevalence rates for bulimia nervosa (BN) reported as 1.1% (Garfinkel et al. 1995). Definitive characteristics of eating disorders such as self-imposed starvation, pursuit of thinness and fear of fatness are clearly delineated in clinical handbooks (Brownell & Fairburn, 1995; Kennedy, 1993).

In addition to the serious physical health consequences associated with disordered eating, there are often psychological concerns. Psychosocial concomitants of anorexia nervosa and bulimia nervosa include a high prevalence of anxiety disorders such as phobias (Crisp, 1970) and obsessive-compulsive disorder (Hsu, Kaye, & Weltzin, 1993; Kaye, Weltzin, & Hsu, 1993; Solyom, Freeman, Thomes & Miles, 1983) as well as affective disorders such as dysphoria (Johnson & Larson, 1982), and markedly isolated lifestyles (Halmi et al., 1991; Toner et al. 1986).

Biological, psychological and sociocultural factors have all been implicated in the development, aetiology, and maintenance of eating disorders. Biological factors include body composition (Davis, Durnin, Gurevich, LeMaire, & Dionne, 1993) as well as homeostatic imbalance within the body. Body composition includes measures of body mass index (wt kg / ht m²), body fat content, and skeletal frame size. Psychological factors such as affective and cognitive states, and sociocultural factors such as attitudes towards ideal body image and shape, are also implicated in the course of eating disorders. Several studies have demonstrated that specific personality characteristics are associated
with disordered eating. For example, emotional reactivity is positively related to concern about body image even after controlling for body composition factors (Davis & Cowles, 1989; Davis, Fox, Cowles, Hastings & Schwass, 1990; Hollin, Houston & Kent, 1985). Coping is part of the stress process and can serve to modify both psychological and physical responses to stressors. The role of coping styles with regard to eating disorders is not yet well understood in this relatively new area of research.

**Eating Disorders and Coping**

Despite extensive information on both coping and eating disorders, the research addressing the interface between these areas is sparse (Bennet & Cooper, 1999; Koff & Sangini, 1997; Soukup et al.1990; Troop, Holbrey, & Treasure, 1998; Troop, Holbrey, Trowler, & Treasure, 1994; Yager, Rorty, & Rossotto, 1995). Stress has often been associated with the onset of disordered eating (Bennet & Cooper, 1999; Denisoff & Endler, 1995; Lacey et al.1986; Schmidt et al.1997). Schmidt, Troop, and Treasure (1999) reanalyzed previously published data to examine differences between responses to stress and the development of eating disorders. They reported that 31% of women who developed AN had gone on to develop bulimic symptoms along with AN, and others had either maintained their restrictive eating patterns or developed BN while maintaining a normal weight. With regard to stressful life events, women who developed bulimic symptoms, along with AN, reported a lower rate of preceding stressful life events than women who either maintained their restriction or developed BN (Schmidt et al.1999).

In addition, women with eating disorders have reported experiencing more current stress than a comparison group of women without eating disorders (Soukup et al., 1990).
Given the observed relationships between stress and eating disorders, researchers became more interested in the stress process and in factors (such as coping styles) that might moderate the relationships between stressors and health outcomes (see Bennet & Cooper 1999 for a review).

Denisoff and Endler (1995; 2000) examined the relationships among stress, coping styles, and weight preoccupation in a non-clinical sample of women. They found that task-oriented coping was associated with less weight preoccupation while emotion-oriented coping was related to more weight preoccupation. They also found that women with a large body size, (as measured by Body Mass Index [BMI]) reported greater weight preoccupation if they relied primarily on emotion-oriented coping than if they seldom used emotion-oriented coping. These findings point to the possibility that reliance on task-oriented coping might be a protective factor with regard to the development of weight preoccupation. Conversely, the predominant use of emotion-oriented coping might be a risk factor for the development of weight preoccupation. In other non-clinical samples, several researchers have reported positive relationships between emotion-oriented coping and eating problems (Janzen, Kelly, & Saklofske, 1992; Koff & Sangani, 1997; Mayhew & Edelman, 1989; Shatford & Evans, 1986). Conversely, they have found negative relationships between task-oriented coping style and eating pathology (Janzen et al.1992).

Koff and Sangani (1997) examined the relationships among coping strategies, negative body image, and eating disturbance in a group of college women. Body dissatisfaction and weight dissatisfaction were the criterion variables in this study.
Results indicated that high scores on the Eating Attitudes Test were positively associated with Emotion-oriented coping and with Distraction but were unrelated to Task-oriented coping or Social Diversion. General body dissatisfaction and body size distortion were positively correlated with Emotion-oriented coping. Weight dissatisfaction, while unrelated to Emotion-oriented coping or Distraction, was negatively correlated with Task-oriented coping and Social Diversion. These findings suggested that lower weight dissatisfaction was associated with more positive body image and with lower psychological distress. Regression analyses indicated that higher use of Emotion-oriented coping was associated with higher scores on the Eating Attitudes Test regardless of level of body dissatisfaction and that the use of Emotion-oriented coping produced a larger effect on level of eating attitudes scores when body dissatisfaction was low than when it was high. It was suggested that the use of Emotion-oriented coping might be a risk factor for eating disturbance (Koff & Sangani, 1997).

Similar associations have been found in clinical samples. For example, Troop et al. (1998) reported a positive relationship between the use of cognitive avoidance, and cognitive rumination, with eating disorders. These researchers concluded that women with eating disorders were less effective in their coping than women without eating disorders. In previous research comparing coping in response to actual problems, Troop et al. (1994) reported that women with AN and women with BN endorsed more use of avoidance coping than women in the comparison group who did not experience eating problems. In addition, Troop et al. (1994) reported that women with BN also used more
wishful thinking and sought less support in response to a stressor than a comparison group.

Soukup et al. (1990) found that BN patients reported higher levels of stress than AN women, and that both AN and BN patients endorsed more items than controls indicating that they had more difficulty coping with stress prior to the onset of their illness. Yager et al. (1995) found that women with active BN manifested fewer coping behaviours and more maladaptive ones than controls.

Smith, Feldman, Nasserbakt, and Steiner (1993) examined psychological characteristics, coping styles and DSM-III-R diagnoses in an adolescent-onset, anorexic sample six years following initial assessment. Overall, psychological characteristics of anorexic subjects with good outcomes resembled those of controls except that the former anorexics expressed greater body dissatisfaction and less use of cognitive avoidance as a coping mechanism than controls (Smith et al. 1993).

Methodological Issues

There are several reasons why it is difficult to draw conclusions or to make generalizations based on the research findings in the area of coping and eating disorders. First, numerous and different coping scales have been used to measure coping styles rendering comparisons between them difficult or meaningless. In most studies, researchers have used measures of general or ‘trait-like’ coping styles. There is debate in the literature as to how well these measures of general coping styles predict coping with specific health concerns (Lazarus & Folkman, 1984). In this research, measures of general and specific coping were used. To date, there are no studies looking at illness-
specific coping with eating disorders. This would allow for examination of how well the
trait measures predict the state process that the women actually use to cope with their
eating disorder. Although there has been a proliferation of coping scales for specific
health problems, there are no scales specifically designed to measure coping with eating
disorders. Furthermore, many of the newly developed scales are replete with
methodological weaknesses that limit their utility (as reported by Endler, Parker, &

Eating disorders encompass a diversity of attitudes and behaviours associated with
eating and body image that vary in severity. Results from studies on a specific type or
aspect of disordered eating cannot be generalized to other types of disordered eating or to
other degrees of severity of the same disorder. When coping with a particular eating
disorder such as BN is considered, the research is still extremely limited.

Coping Styles, Anxiety and Depression

Anxiety (Crisp, 1970) and affective disorders, such as dysphoria (Johnson &
Larson, 1982), often co-occur clinically. It has been reported, however, that these
constructs can be meaningfully separated into distinct constructs (Endler, Denisoff, &
Rutherford, 1998). Higher levels of anxiety and depression have also been reported in
women with eating disorders (Casper, Eckert, Halmi, Goldberg, & Davis, 1980). Some
researchers have concluded that women with BN experience more anxiety and depression
than women with AN (Laessle, Wittchen, Fichter, & Pirke, 1989b; Norman & Herzog,
1983). Others found no difference in levels of anxiety and depression between these two
clinical groups although both groups reported more anxiety and depression than a control
group (Breaux & Moreno, 1994; Williamson, Kelley, Davis, Ruggerio, & Blouin, 1985). Emmett (1985) reported that women with BN tended to have poorer long-term outcomes as a result of persistent mood disorders. In the present research, the relationships among anxiety and depression as they relate to stress, coping, and eating disorders were investigated. More specifically, we examined whether particular coping styles were associated with less anxiety and depression than other coping styles in women with eating disorders.

The Continuity Hypothesis and Eating Behaviour

Researchers have long debated whether various clinical disorders occur on a continuum (see Compas, Ey, & Grant, 1993; Coyne, 1994; Depue & Monroe, 1978; Endler & Kocovski, [in press]; Flett, Vredenburg, & Krames, 1997; Nolen-Hoeksema & Girgus, 1994; Vredenburg, Flett, & Krames, 1993). There are several aspects to the continuity debate. On the one hand, a focus on typology based on diagnostic criteria suggests discontinuity of various disorders. On the other hand, focusing on the full spectrum or dimension of a disorder often suggests continuity across attitudes, behaviours and psychological variables associated with the disorder.

With regard to depression, proponents of the discontinuity viewpoint argue that clinical depression is distinct from milder levels of distress and that non-clinical samples should not be used as analogs for diagnosable depression (see Coyne, 1994 for a review). Coyne (1994) argued that self-report measures do not provide accurate measures of depression or depressive symptomatology and that diagnosable depression is conceptually and empirically distinct from what is measured in self-reports. Difference in prevalence
rates between depressive symptoms and diagnosed depression, instability of self-reported distress, and similarities between non-depressed clinical patients and distressed college students are all cited in support of discontinuity of depression (Coyne, 1994). Based on his review (Coyne, 1994) concluded that the use of distressed college students as analogs for depression has led to a neglect of a wide range of phenomena associated with depression and serves to negate the enormous personal and social costs of depression.

Proponents of the continuity viewpoint argue that studying distress in college student samples is not only important in its own right but that comparing results across non-clinical and clinical samples, in fact, indicates that results are very similar across the samples (Vredenburg et al. 1993; Flett et al. 1997). More recently, it has been suggested that it is important to recognize that the issue of continuity is, in fact, complex and multifaceted. Recognizing that both continuities and discontinuities exist might be the most productive way to advance theory and research in the area (see Flett, Vredenburg, & Krames for a review).

The original suggestion that symptoms of AN occur on a continuum was made by Nylander (1971) who found that symptoms typically associated with AN such as fatigue, increased interest in food, depression, and anxiety were, in fact, prevalent among adolescent females. He argued that dieting might produce starvation symptoms that could eventually lead to the development of more severe forms of eating disorders. According to the continuity hypothesis, therefore, full syndrome eating disorders fall at the extreme end of a continuum of eating concerns and behaviours (Pike & Rodin, 1991; Striegel-Moore, Silberstein, & Rodin, 1986). Accordingly, the same variables that distinguish
various levels of severity of eating pathology should be arrayed along the same continuum.

The question of whether disorders occur on a continuum focuses on whether there are qualitative differences between sub-clinical variants of clinical disorders or if the differences are essentially quantitative. Proponents of the discontinuity viewpoint have argued that individuals with eating pathology are categorically different from individuals with sub-clinical levels of eating problems or no eating problems (Bruch, 1973; Crisp, 1965; Selvini-Palazzoli, 1978). Crisp (1965) argued that the reasons why anorexic women pursued dieting were distinctly different from the reasons that normal dieters cited. While normal dieters reported wanting to improve their appearance, self-esteem, or sense of control, anorexic patients cited wanting to escape psychosocial demands of puberty and maturation as their reasons for dieting. Similarly, Selvini-Palazzoli (1978) postulated that full syndrome disorders are distinguished from less severe disorders by differences in fundamental interpersonal distrust. Both the unique reasons for dieting and the presence of interpersonal distrust have been cited as evidence in support of the view that there is discontinuity across clinical and non-clinical samples (Crisp, 1965; Selvini-Palazzoli, 1978).

Eating disorder symptoms occur on a continuum ranging from mild to severe (Garfinkel & Garner, 1982; Garner, Olmsted, & Garfinkel, 1983). It is unclear, however, whether eating behaviour itself occurs as a developmental progression, with normal eating behaviours and weight concerns at one end possibly developing into severe eating disorders at the extreme (Button & Whitehouse, 1981; Garner, Olmsted, Polivy, &
Garfinkel, 1984; Killen et al., 1994). Button and Whitehouse (1981) described women who are "abnormally preoccupied" with weight and who indicate many of the behavioural symptoms of AN as "sub-clinical anorexia nervosa" suggesting continuity across these groups. Such observations of similarities in thoughts and behaviours among clinical and non-clinical samples led researchers to investigate variables that are similar and those that distinguish non-clinical, sub-clinical, and clinical samples.

Garner, Olmsted, & Garfinkel (1983) compared psychological characteristics of women with AN to weight preoccupied college and ballet students. They sought to differentiate weight preoccupied women --for whom pursuit of thinness was associated with poor psychological outcomes-- from women for whom the pursuit of thinness was not related to severe personality disturbance. Women from the college and ballet samples were divided into weight preoccupied and not weight preoccupied subgroups based on their degree of dieting and weight concern as reflected by scores on the Eating Disorder Inventory. Results indicated that some traits frequently reported by women with AN were also common in women with weight preoccupation, such as drive for thinness, body dissatisfaction, and perfectionism. Meanwhile, other traits such as ineffectiveness, lack of interoceptive awareness, and interpersonal distrust were specific to the AN group. These researchers suggested that women who did not report high scores on these latter traits could be classified as "normal" dieters. Conversely, those who did report elevated scores on these psychological traits displayed psychopathology similar to women with AN and might represent sub-clinical variants of the disorder (Garner et al., 1983).
Polivy and Herman (1987) compared normal and abnormal eating patterns in clinical and non-clinical samples of women. They argued that societal preference for a thin physique led to a corresponding increase in weight preoccupation and dieting to the extent that the majority of female college students diet. Non-dieters who are responsive to physiological and biological regulatory pressures such as eating more when deprived than when preloaded with food, and eating more when calm than when agitated, are the minority in today’s society (Polivy & Herman, 1987).

The boundary model of eating behaviour suggests that normal eating behaviour is regulated by physiological hunger and satiety cues (Polivy & Herman, 1987). Normal dieters restrict caloric intake although not to the same degree as anorexic patients. When the diet boundary is exceeded, dieters tend to overeat, albeit not to the same degree that bulimics do (Polivy & Herman, 1987). It is argued that pathological eating, therefore, does not distinguish normal dieters from eating disorder patients except in quantitative terms. While eating disorder patients might restrict or binge to a greater extreme than normal dieters, the dividing line is not clear and it is difficult to distinguish non-clinical groups from clinical groups. When an individual displays pathological eating patterns in conjunction with extreme concerns about weight and appearance and certain personality defects (such as low self-esteem, interpersonal distrust, maturity fears, and decreased interoceptive awareness) they are considered to be abnormal or disordered (Polivy & Herman, 1987). The authors conclude that although the boundary model of eating behaviour explains some common aspects of dieting and eating disordered behaviour, it requires experimental support. The question of continuity across normal eating, dieting,
and eating disorders is a complex one and further research is needed (Polivy & Herman, 1987).

A societal shift in preference to a slender physique occurred at about the same time that dieting and the incidence of AN also increased. The timing of these changes incited speculation about the relationships between dieting and AN. Researchers noted that eating disorders often originate with dieting (Hawkins & Clement, 1980; Wardle & Beinhart, 1981). Others identified similarities among dieting behaviours and eating disorders (Hesse-Biber, 1989; Kirkley, Burge, & Ammerman, 1988; Ruderman & Besbeas, 1992). BN has also been linked to dieting behaviour in several studies (Pyle et al. 1981; Streigel-Moore, Silberstein, & Rodin, 1986; Wardle & Beinart, 1981). The observed links between dieting behaviours and eating disorders have been put forth as support for the notion of continuity between levels of eating disorders.

In addition to assessing similarities and differences across non-clinical, sub-clinical, and clinical samples, researchers began to investigate behavioural and psychological variables that might be arrayed along an eating disorder continuum. According to the continuity hypothesis, non-clinical controls, sub-clinical samples, and clinical patients would fall on a continuum on the various measures, with controls exhibiting the least disturbance and clinical patients exhibiting the most. In contrast, discontinuity would be evidenced by control subjects being more similar to dieters than to the clinical patients and by finding that variables separating dieters from clinical patients were different than variables separating controls from dieters (Ruderman & Besbeas, 1992). Studying female undergraduates, Ruderman and Besbeas (1992) compared
bulimics, dieters, and a control group on anxiety, depression, assertiveness, self-esteem, body image, social desirability, anger, suspiciousness, and obsessive-compulsive characteristics. Results indicated evidence of discontinuity in that the number, kind, and degree of differences between dieters and non-dieters were distinctly different than the number, kind, and degree of differences observed between the dieters and bulimics. It was found that dieters were more willing to describe themselves in socially undesirable terms than non-dieters and that dieters differed from bulimics on a broad array of variables. However, there was also some evidence of continuity between the groups. Overall, dieters were found to show more disturbance than control subjects and to show similar, albeit milder, disturbances than those seen in the bulimic sample. The bulimia nervosa sample showed more pervasive and severe disturbance than dieters and members of the BN group were characterized by greater psychopathology and deficits in self-esteem beyond what could be attributed to dieting (Ruderman & Besbes, 1992).

Lowe et al. (1996) evaluated the continuity hypothesis in women with bulimia, current dieters, restrained non-dieters, and unrestrained non-dieters. The women were compared on measures of general psychopathology, eating-disorder-specific psychopathology, and overeating. A factor analysis of various measures (self-report, interview, and food records) to assess psychopathology and bulimic symptomatology coalesced into three factors: general psychopathology, restraint/weight concerns, and binge eating. Results indicated that general psychopathology and restraint/weight concerns increased in a graduated linear fashion across the four groups, suggesting continuity across the samples. Notably, this graduated increase in general
psychopathology was inconsistent with previous research showing differences in psychopathology across groups (Garner et al., 1983; Ruderman & Besbeas, 1992). Results of the regression analyses indicated that the linear trend in psychopathology observed in the trend analysis was not found when restraint/weight concerns were controlled. This finding provided additional support for the view that continuity exists across these samples.

The dual pathway model of bulimia posits that restraint and negative affect are the final proximal predictors of bulimia (Stice, 1994). Elevated body mass is associated with body dissatisfaction and an increased pressure to be thin. The pressure to be thin increases body dissatisfaction not only directly, but also through internalization of an ideal body stereotype. Increased body dissatisfaction, moreover, leads to bulimic symptoms through restrained eating and negative affect.

Stice, Ziemba, Margolis, & Flick (1996) compared groups of control, sub-clinical bulimic, and bulimic women on body mass, ideal-body internalization, body dissatisfaction, dietary restraint, perceived pressure to be thin, and negative affect. The aim of their research was to test whether bulimics differed from control subjects on variables proposed by the dual pathway model and to test whether these variables could differentiate sub-clinical bulimics from control subjects and bulimics. Results indicated that all variables except body mass successfully differentiated control subjects from both sub-clinical bulimics and bulimics. It was found that the three groups did lie along a single continuum, supporting the continuity perspective of eating pathology.
Stice and colleagues (1998) investigated continuity in a large sample of high school students. Participants were classified into three comparison groups: bulimic, subthreshold bulimic, and control subjects. Participants were compared on body mass, thin-ideal internalization, body dissatisfaction, dietary restraint, depression, anxiety, and temperamental emotionality. Results indicated that a single factor (comprised of weight concerns and psychopathology) differentiated among all three groups and provided additional evidence for the continuity hypothesis.

Franko and Omori (1999) examined psychological correlates of disturbed eating in a sample of first year college women. They found that depression, dysfunctional thinking, and disturbed eating correlated with severity of eating pathology. These results support the continuity hypothesis of eating disorders.

Shisslak, Crago, and Estes (1994) reviewed the literature on eating disturbance in an attempt to provide a better understanding of the entire spectrum of eating disturbances. To date, most studies examining the spectrum of eating disorders have been cross-sectional, often designed to compare two or more groups on variables such as eating behaviours, personality characteristics, and psychopathology. Cross-sectional studies indicate that, in general, more severe eating disturbances are associated with greater psychopathology. Longitudinal studies that look at eating attitudes and behaviours over time are needed in order to determine whether eating disturbances increase in severity in the same individual. Longitudinal studies have indicated that, in the long term, normal dieting did progress to pathological dieting in some women, pathological dieting did
progress to partial or full syndrome eating disorders, and partial syndrome eating disorders did progress to full syndrome disorders (see Shisslak et al. 1994).

The present research replicates, in part, a previous study (Denisoff, 1995; Denisoff & Endler, 2000) conducted with a non-clinical sample. Results of the present study might offer some clarification of whether processes underlying sub-clinical eating disorder symptoms in non-clinical samples are similar to the processes underlying such symptoms in a clinical sample. More specifically, the relationships among stress, coping, and weight preoccupation observed in a non-clinical sample were compared to the pattern of results obtained in an eating disordered sample to shed some light on whether there is continuity among these variables across the samples.

**Purpose of the Present Study**

The present research was conducted to: 1) investigate the relationships among stress, coping styles, eating disorder symptomatology, anxiety, and depression in a clinical sample of women, 2) to investigate whether illness-specific coping styles predicted variance in eating disorder symptoms, anxiety, and depression over and above that explained by general coping styles, and 3) to test the continuity of eating disorders across non-clinical and clinical samples by comparing a clinical and a non-clinical sample of women.

**Stress**

Several researchers have identified stress as a major factor in the development of eating disorders (Cattanach & Rodin, 1988; Heilburn & Putter, 1986; Striegel-Moore et al. 1989). Based on these previous findings, it was hypothesized that stress would be
positively associated with negative health outcomes including eating disorder symptomatology, anxiety, and depression. More specifically, it was hypothesized that 1) women who reported higher levels of stress (as assessed by the Life Experiences Scale) would also report higher levels of eating disorder symptomatology (as assessed by the Eating Disorder Inventory), higher levels of anxiety (as assessed by the Endler Multidimensional Anxiety Scales), and higher levels of depression (as assessed by the Beck Depression Inventory).

General Coping Styles

Consistent with various researchers who reported that task-oriented coping styles are positively associated with good health outcomes (Endler & Parker, 1999a; Janzen et al.1992), it was hypothesized that task-oriented coping styles (as assessed by the Coping Inventory for Stressful Situations [(CISS: Endler & Parker, 1999a)]) would be negatively associated with eating disorder symptoms (as assessed by the Eating Disorder Inventory). Conversely, emotion-oriented coping styles were predicted to be positively associated with eating disorder symptomatology. Avoidance-oriented coping is comprised of two subscales: Distraction and Social Diversion. Research investigating the role of avoidance-oriented coping remains equivocal. Some researchers have reported avoidance-oriented coping strategies (including Distraction and Social Diversion) to be negatively associated with physical symptoms (Mayhew & Edelman, 1989; Miller et al.1988; Shatford & Evans, 1986). Others have reported higher levels of distress (Menaghan, 1982) and depression (Cronkite & Moos, 1984) to be related to the use of avoidance coping strategies. Other researchers found no significant relationship between
the use of avoidance-oriented coping and abnormal eating (Janzen et al. 1992) or differential relationships between subscales of avoidance-coping and weight preoccupation (Denisoff & Endler, 2000). It is possible that the subscales of avoidance-oriented coping, namely Distraction and Social Diversion, could be differentially related to health outcomes. For example, Distraction avoidance could potentiate stress by leading to greater feelings of guilt and anxiety. It is also possible that individuals who use Distraction-oriented coping might tend to hold back feelings and emotions or fail to recognize them.

Social diversion as a way of avoiding stress might provide increased social support and might thereby lead to less distress. It was hypothesized that Distraction would be positively associated with eating disorder symptomatology and that Social Diversion would be negatively associated with eating disorder symptomatology.

**Illness-Specific Coping Styles**

Various coping measures have been developed to investigate health problems (Butler, Damarin, Beaulieu, Schwebel, & Thorn, 1989; Feifel, Strack, & Nagy, 1987; McCubbin, et. al., 1983). The fact that these scales have been developed to assess people’s coping with only one specific type of health problem but not another limits researchers ability to make comparisons, draw conclusions, or generalize findings across studies and samples. The Coping with Health, Injuries, and Problems (CHIP) (Endler & Parker, 1999b) was developed to circumvent some of these problems as is was specifically designed to be used with a variety of health problems.
To date, there have been no studies investigating illness-specific coping strategies with relation to eating disorders. Assessing both general and illness-specific coping strategies would allow for the examination of how well the trait measures (general coping styles as assessed by the CISS) predict the state process (illness-specific coping strategies as assessed by the CHIP), that the women actually use to cope with their eating disorder. Despite a proliferation of coping scales for particular health problems, there are no scales specifically designed to measure coping with eating disorders. A goal of the present research was to (1) examine whether illness specific-coping styles predict variance in eating disorder symptomatology beyond that predicted by general coping styles and, (2) to investigate whether coping styles are predictors of mental health, (e.g. depression and anxiety).

There is an ongoing debate in the literature as to whether or not various clinical disorders occur on a continuum (see Compas, Ey, & Grant, 1993; Depue & Monroe, 1978; Flett et al. 1997; Nolen-Hoeksema & Girgis, 1994). Accordingly, it has been argued that eating disorders occur on a continuum with normal eating behaviours at one end and progressively more severe levels of disordered eating at the other. It is not clear whether eating behaviour occurs on a continuum, that is, whether the differences between sub-clinical and clinical variants of disordered eating are qualitative or quantitative differences. Part of this research replicates a previous study conducted with a non-clinical sample (Denisoff, 1995; Denisoff & Endler, 2000). It was hypothesized that the results observed in the non-clinical sample of women with weight preoccupation would be replicated in this clinical sample of women with eating disorders demonstrating
continuity of eating disorder symptomatology and related phenomena between non-clinical and clinical samples.

**Hypotheses**

The primary aims of this study were to investigate relationships among stress, coping styles, eating disorders, anxiety, and depression. A secondary goal of this research was to examine the continuity of eating disorders across clinical and non-clinical samples:

1) to examine whether general coping styles are associated with illness-specific coping styles. It was hypothesized that Task-oriented coping on the CISS would be positively associated with Instrumental coping on the CHIP; that Emotion-oriented coping and the CISS would be positively associated with Emotional-preoccupation on the CHIP; and that the Distraction component of the Avoidance subscale of the CISS would be positively correlated with the Distraction subscale of the CHIP.

2) to examine whether illness-specific coping strategies predict variance in eating disorder symptomatology over and above that predicted by general coping styles. It was hypothesized that subscales of the CHIP would add to the variance in eating disorder symptomatology over and above that predicted by the CISS subscales.

3) to examine whether stress and coping styles are predictors of mental health (e.g. eating disorder symptomatology, anxiety and depression) in this sample. It was predicted that stress would be positively associated with mental health outcomes. It was also predicted that Task-oriented coping and Instrumental coping would be negatively related to eating disorder symptomatology, anxiety, and depression.
Conversely, it was hypothesized that Emotion-oriented coping and Emotional-preoccupation would be positively associated with eating disorder symptomatology, anxiety, and depression. It was predicted that Distraction-oriented coping would be positively related to eating disorder symptomatology, anxiety, and depression. No specific predictions were made for Palliative coping or for the Social Diversion component of the Avoidance-oriented coping subscale.

4) to test the continuity of weight preoccupation across samples by comparing results obtained in the clinical sample to results obtained with a non-clinical sample. It was predicted that the pattern of relationships between the clinical and non-clinical samples would be equivalent. More specifically, that the slope of a sample by other predictor interaction would be the same for both the clinical and non-clinical samples.
Chapter II

Method

Research Participants

Two groups of women participated in this study. A clinical sample of women seeking treatment for eating concerns (n=53) and a non-clinical sample of university women (n=206). In order to control for the discrepancy in sample sizes, the hypothesis in which the two samples were compared was tested using sample (clinical and non-clinical) as a dummy variable.

Clinical Group

Fifty-three women between the ages of 17 and 50 years participated in this study. The women were recruited from the eating disorder programme of the General Division at the Toronto General Hospital. The recruitment period ran from October 1998 to December 1999. The women in this study were primarily Caucasian with a mean age of 27.46 ± 7.73 years. Fifty-two percent of the women were single, 18.5% were married, 5.6% were divorced, 1.9% were living in a common-law relationship and 22.2% did not report their marital status. Twenty-six percent of the women were unemployed at the time they completed the questionnaires. Thirty-three percent of the women were working full-time, 18.5% were working part-time, and 22.2% did not indicate their current employment status. With regard to education level, 5.6% had completed a graduate degree, 1.9% had completed some graduate level education, 33.3% completed college or university, 20.4% had some college or university training, 22.2% completed high school, 3.7% had some high school education, and 13% did not report their level of education.
All participants in the psychoeducation group were to complete the questionnaires and return them to the researcher the following week. Of the 163 women who attended the psychoeducation group during the recruitment period, 43 participated in this research. Additional participants were from the in-patient program and the day treatment programme.

Diagnostic categories based on the DSM-IV (APA, 1994) criteria were derived from information obtained during a semi-structured clinical interview supplemented by information from medical charts and self-report questionnaires. In this sample, 3 women met diagnostic criteria for AN, 12 BN, and 38 were classified as EDNOS. EDNOS is a DSM-IV (APA, 1994) diagnostic category for disorders of eating that do not meet the criteria for any specific eating disorder. Inclusion criteria for the research were extended to women 17 years of age or older who presented with eating concerns. Women were not included in the research if they were less than 17 years of age, not able to speak English well enough to complete the questionnaires, not competent to sign consent, or too ill to participate in the programme.

Non-clinical Group

Participants in the non-clinical group were 206 female undergraduate students at York University. The mean age of the participants was 23.3 years, with a standard deviation of 5.45 years. Most subjects were recruited for the study from undergraduate classes where they were asked to participate in a research project designed to investigate the effects of stress on their lives. Volunteers listed their names and phone numbers on sign-up sheets and were subsequently contacted by phone. Arrangements were made for
participants to come to the lab where they completed the test measures. Notices posted on the York University campus requesting female participants for a study examining the effects of stress were also used to recruit participants. Again, women interested in participating in the study called the researcher and arrangements were made for participants to come to the lab to complete the research measures. This research was conducted as a Master’s thesis research project (Denisoff, 1995). This sample was used for control purposes only to test the continuity hypothesis and was not included in the main clinical group being studied in this research.

One hundred and seventy-five (85%) of the participants were single, 24 (11.7%) were married, 6 (2.9%) were separated or divorced and 1 participant (.5%) did not indicate their marital status. The participants were primarily Caucasian. All were currently enrolled in undergraduate courses at the university.

Measures

Stress

Life Experiences Survey. (LES: Sarason, Johnson & Siegel, 1978) The LES will be used to assess the number of stressful life events affecting individual subjects for the 12-month period prior to the date of data collection (see Appendix A). This scale is a 57-item self-report measure that asks respondents to indicate, using a 7-point Likert scale anchored with the end points “extremely negative” and “extremely positive”, the number and severity of life experiences that have happened to them. Examples include “Death of a close family member” or “Major change in number of arguments with spouse” (see Appendix A). Positive and negative change scores will be obtained by summing impact
ratings. The LES has two sections, a general section for all respondents to complete and a section specific to a student sample. Both will be administered in this study.

Coping

Numerous measures have been developed to study coping responses to specific stressors (e.g. Amirkhan, 1990; Billings & Moos, 1981; Folkman & Lazarus, 1980, 1985, 1988; McCrae, 1984). Unfortunately, psychometric inadequacies within various measures and the diversity of measures used in the research have limited progress in the area of coping and health by making it difficult to generalize results or to extrapolate findings from various studies, samples or health problems (Parker & Endler, 1992).

To overcome some of the psychometric problems in previous instruments, the Coping Inventory for Stressful Situations scale (CISS; Endler & Parker, 1999a) was developed. The CISS was designed to assess relatively stable cross-situational coping styles consisting of the following three dimensions: Task-oriented, Emotion-oriented and Avoidance-oriented coping. The Avoidance-oriented subscale contains two additional and somewhat different styles of Avoidance coping, namely Distraction and Social Diversion.

In addition, the CHIP (Endler, & Parker, 1999b) was developed to assess Distraction, Palliative, Instrumental, and Emotional-preoccupation coping with regard to a particular health problem. While the CISS was designed to assess reactions to difficult, stressful, or upsetting situations in general, the CHIP was developed to assess coping responses and reactions to specific types of health problems. Although several researchers have attempted to assess general coping styles of women with eating
disorders, few have assessed coping reactions to specific health problems such as eating disorders. Troop and Treasure (1997) used semi-structured interviews to ascertain how women with eating disorders coped with stressful life events occurring in the year prior to the onset of their eating disorder. They reported that, in response to a crisis, the use of cognitive avoidance was associated with anorexic symptoms and that use of cognitive rumination was associated with the onset of bulimic symptoms (Troop & Treasure, 1997).

It has been suggested that it may be inappropriate to use general coping measures to assess coping reactions to different types of health problems (see Endler & Parker, 1999b). In this research, the CHIP was used to assess coping reactions to eating disorders in a clinical sample. More specifically, the roles of instrumental coping (a task-oriented approach), Emotional-preoccupation coping (an emotion-oriented approach), and Distraction-oriented coping as they relate to eating disorders were investigated.

**Coping Inventory for Stressful Situations.** (CISS: Endler & Parker, 1999a). The CISS will be used to assess participants’ general coping styles (see Appendix B). This measure consists of 48 items that represent reactions to stressful situations. Participants will be asked to rate the extent to which they engage in various activities on a 5-point Likert scale ranging from “not at all” to “very much”. This measure encompasses three independent main coping styles: Emotion, Task, and Avoidance. There are 16 items per scale.

Task-oriented coping describes attempts to solve the problem through cognitive restructuring or altering the situation. Items from the Task-oriented coping scale include “Outline my priorities” and “Think about how I have solved similar problems.” Emotion-
oriented coping involves the use of self-oriented emotional reactions in attempt to reduce stress. These reactions can be emotional responses such as “Get angry”; self-preoccupation responses including “Blame myself for having gotten into this situation”; or fantasizing responses such as “Wish that I could change what had happened or how I felt.”

Avoidance responses are aimed primarily at avoiding the stressful situation. Subcomponents of Avoidance are measured as Distraction (8 items) and Social Diversion (5 items). Distraction includes behaviours such as “Window shop” while Social Diversion actions include “Try to be with other people” or “Talk to someone whose advice I value.”

Coping with Health Injuries and Problems Scale, (CHIP: Endler & Parker, 1999b). The CHIP is a self-report instrument that was developed to assess how individuals cope with health problems (see Appendix C). This measure consists of 32 items that represent four distinct state-like coping strategies that people tend to use when faced with physical health problems (Distraction, Palliative, Instrumental and Emotional-preoccupation scales). Each scale is composed of eight items. Participants were asked to rate the extent to which they engage in various activities to cope with their eating disorder symptoms on a 5-point Likert scale ranging from “not at all” to “very much”. Sample questions from the CHIP are “Concentrate on the goal of getting better.” and “Wonder why it happened to me.”

Instrumental coping is closely related to “problem-focused” coping in the general coping literature. This scale evaluates individuals’ solution-focused coping efforts such
as seeking information about their illness or pursuing medical treatment in a timely fashion. The second scale of the CHIP measures Distraction. Distraction refers to attempts to avoid a health problem by thinking about other more pleasant experiences, engaging in unrelated activities or seeking out the company of others. The third scale (Palliative coping) assesses cognitive and behavioural coping strategies aimed at reducing the pain from the health problems and alleviating the unpleasantness of a situation. Emotional-preoccupation coping, the fourth scale of the CHIP, is conceptually related to general emotion-oriented coping responses and involves affective reactions to health problems.

The CHIP was developed using participants with a variety of acute and chronic health problems. Acute health problems included respiratory and other infections, fractures, and other health problems and injuries. Chronic health problems included diabetes, cancer, arthritis, and psoriasis, among other illnesses. The psychometric properties of the CHIP have been demonstrated in various studies (Endler & Parker, 1999b). The construct validity of the CHIP scales has been demonstrated with a latent variables path analysis using both the CHIP and the CISS (Endler & Parker, 1999b). Criterion validity was confirmed by comparing the coping behaviours of adults with chronic and acute health problems (Endler & Parker, 1999b).

Health Outcome Measures

Eating Disorders

Eating Disorder Inventory. (EDI; Garner & Olmsted, 1984) The EDI is a 64-item questionnaire that has been used to assess psychological and behavioural traits common
in anorexia nervosa and bulimia nervosa (see Appendix D). Responses are provided using a six-point forced choice format ranging in degree from “always” to “never”. Specifically, respondents rate the degree to which each item applies to them. The EDI consists of eight subscales that measure: 1) drive for thinness, 2) bulimia, 3) body dissatisfaction, 4) ineffectiveness, 5) perfectionism, 6) interpersonal distrust, 7) interoceptive awareness and 8) maturity fears. Sample items from the EDI are “I feel satisfied with the shape of my body.” and “I exaggerate or magnify the importance of weight.” The EDI has been used both in clinical and non-clinical samples and is considered a useful screening tool and typological research aid as well as a useful outcome measure and adjunct to clinical judgements (Garner & Olmsted, 1984).

Anxiety

Endler Multidimensional Anxiety Scales (EMAS: Endler, Edwards & Vitelli, 1991). The EMAS is a self-report measure of multidimensional trait anxiety, state anxiety, and perception of situations (see Appendix E). Respondents rate the extent to which they experience subjective anxiety in various situations using a 5-point frequency scale. Sample items are “feel tense” and “feel nervous”. The state anxiety scale measures two components of state anxiety: Cognitive-worry (10 items) and Autonomic-emotional (10 items). The trait anxiety scales, each of which are 15 items, measure four different dimensions of trait anxiety: social evaluation, physical danger, ambiguous situations, and daily routines. Reliabilities for the state and trait scales have been reported as: EMAS-state: .89 to .94, EMAS-trait: .87 to .96 (Endler, Edwards, Vitelli, & Parker, 1989).
Depression

Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) The BDI is a 21 item self-report scale designed to measure various affective, cognitive, physical, and behavioural indices of depression (see Appendix F). Respondents are asked to evaluate their experiences in these domains over the past week, and rate the intensity of their experiences on a scale from 0-3. Higher scores are indicative of more depression.

Procedure

Clinical Group

The clinical sample was recruited from programmes at the Toronto Hospital, General Division. Most participants in this study were recruited from the psychoeducation group offered as part of the Eating Disorder Programme. Women who attended the psychoeducation group were asked if they would volunteer for a study looking at stress and eating disorders. Women who expressed interest in participating in the study were given a copy of the informed consent (see appendix G), and were asked to complete a package of self-report questionnaires at home and to return the questionnaires at the next Psychoeducational Group session. The questionnaire package consisted of the EMAS-S, CHIP, CISS, and LES. The BDI and EDI were completed as part of a standard package of questionnaires administered to all women who attend the day hospital programme at the hospital.

The Psychoeducation group is a six-session information group for women with eating disorders and is often a very early step in the treatment of eating disorders at the
Toronto General Hospital. However, severity of symptoms varies dramatically among participants. The group is held approximately six times per year with attendance varying from 10-20 participants per session. Three women from the in-patient unit and seven from the Day Hospital Programme also participated in this study. Participation in the study was voluntary and all participants were assured that their treatment would not be jeopardized by refusal to take part. Ethics guidelines were adhered to at all times. Confidentiality was respected. Information such as demographic data, diagnoses, EDI and BDI measures was obtained from participant’s pre-treatment assessment packages. Diagnoses were made using a semi-structured clinical interview based on the DSM-IV (APA, 1994). Information that was missing from the semi-structured clinical interview report, and deemed necessary to make a diagnosis, was extracted from self-report measures in order to maximize the number of women who did receive a DSM-IV (APA, 1994) diagnosis.

Non-Clinical Group

Three questionnaires (LES, CISS, and the Drive for Thinness, Bulimia, and Body Dissatisfaction subscales of the EDI) were used to collect data for the non-clinical sample used as a comparison group in this research. In addition, demographic data were obtained on all participants. The non-clinical sample comprised female undergraduate students. The women were not screened for possible eating or other psychological disorders.

After agreeing to volunteer for the study, participants were contacted by phone and arrangements were made for each participant to come to the lab to complete the package of questionnaires. All participants were met by the researcher at which time the
voluntary nature and confidentiality of the study were explained. Consent forms were signed (see Appendix H) and surveys were completed anonymously. Participants were encouraged to complete the LES, CISS, and EDI subscales and to answer as honestly as possible. Although frequently more than one participant occupied the lab at a given time, participants were provided with individual cubicle space to maximize privacy. Upon completion of the measures, all participants were debriefed about the specific hypotheses of the study.

Participants were offered the chance to win one of three lottery cash prizes of $100 each for their participation in the research. One female researcher did all of the recruiting, testing, and measuring in this study. During completion of questionnaires, she was available to answer any questions that participants had. Multiple regression analyses were used to examine the amount of variance accounted for by main effects of stress and coping styles as well as any interactions between these variables.

Statistical Analyses

Hypothesis 1

The first hypothesis was to be tested by examining the correlations among the subscales of the CHIP and the CISS.

Hypothesis 2

Hypothesis 2 was tested using a separate stepwise regression analysis for each set of predictor variables (Stress, Task, Emotion, Distraction, Social Diversion, general coping styles plus Instrumental, Emotional-preoccupation, Distraction, and Palliative health-specific coping styles) with each criterion variable (e.g. total eating disorder
symptomatology, weight preoccupation, anxiety, and depression). Each model consisted of two blocks. Block one included stress and the CISS subscales. On the second block, significant predictors from the CISS were retained and the CHIP subscales were added.

The nature of the data is correlational. Since the intent of the current study was to go beyond simple correlations, multiple regression analyses were selected to be the method of choice for the analyses. This type of analysis allows for the comparison of several predictors at once for a single dependent variable. The effect of each predictor can then be tested while controlling for other predictors in the model.

**Hypothesis 3**

Hypothesis three was tested using the hierarchical regression analysis described for hypothesis two.

**Hypothesis 4**

In order to test for continuity across the clinical and non-clinical samples, a multiple regression analysis was performed using weight preoccupation as the dependent variable. The main effect variables were entered first. These included stress, Task-oriented coping, Emotion-oriented coping, Distraction, and Social Diversion coping along with the dummy variable representing sample. The main effect of sample is equivalent to a test of the mean difference between weight preoccupation in the clinical and non-clinical samples and does not represent a test of continuity on its own. The test of continuity was based on type I significance tests of the interaction terms between sample and each of the other main effect variables (Task, Emotion, Distraction, and Social
Diversion coping). A type I test represents a test of significance of each interaction if it and only it were added to the main effects model.

An additional test of the continuity hypothesis was conducted using a dimensional approach. A series of K-means cluster analyses was performed whereby predictors (CISS coping dimensions and stress) were used to assign each respondent to one of K-groups. Two different cluster analyses were performed. The first analysis examined the classification of participants into one of two groups based on the original non-clinical and clinical group designation. The second analysis clustered the participants into one of three different classifications corresponding to each of the revised “non-clinical”, “sub-clinical”, and “clinical” groups. Percentage of correct classifications was examined using a Crosstabulations procedure in SPSS.
Results

Overview

All analyses were conducted using SPSS for Windows version 8.0. Demographic characteristics of the clinical and non-clinical samples are presented first. Then, results from the reliability analyses, as well as means and standard deviations of the dependent and independent measures for the clinical sample, are presented. Correlations among the general (CISS) and health-specific (CHIP) coping measures, as well as for the predictors and the dependent measures, are reported. The relationships among stress, general, and health-specific coping styles, eating disorder symptomatology, depression, and anxiety are then examined. Multiple regression analyses are used to show the amount of variance in the dependent measures (eating disorder symptoms, depression, and anxiety) accounted for by stress, and the general and health-specific coping styles. The clinical sample was a heterogenous group with three AN, 12 BN, and 38 EDNOS patients. Comparisons between samples were not made because of the small number of women in each diagnostic category (e.g. AN and BN) and the unequal sample sizes.

Separate regression analyses were used to test the hypotheses for each dependent variable (e.g. eating disorder symptomatology, weight preoccupation, anxiety, and depression). The model tested for each dependent variable consisted of two blocks. The first block contained stress as measured by the LES, and the CISS subscales (Task, Emotion, Distraction, and Social Diversion Coping) and the second block included the
CHIP subscales (Instrumental, Emotional-preoccupation, Distraction, and Palliative Coping).

The continuity hypothesis was tested in two separate ways. First by comparing the pattern of relationships among stress, general coping styles, and weight preoccupation between the non-clinical and clinical samples. Differences in sample sizes were controlled by using the sample as a dummy variable in the analyses. The second test of continuity involved separating the non-clinical sample into a non-clinical group and a sub-clinical group based on their level of weight preoccupation. A cluster analysis was conducted to determine whether a two-cluster or a three-cluster solution predicted group membership most accurately.

Means and Reliability Analyses

Reliabilities

Cronbach alpha (Cronbach, 1951) reliabilities for the scales used in this study were all acceptable, ranging from .76 on the Palliative Coping subscale of the CHIP to .93 for weight preoccupation, which was comprised of the subscales Drive for Thinness, Bulimia, and Body Dissatisfaction of the Eating Disorder Inventory. These moderate to high internal consistencies suggested that the measuring instruments were adequate for the present study. All reliabilities for the clinical sample are presented in Table 1. Reliabilities for the non-clinical sample are reported in (Denisoff, 1995). Reliabilities for the subscales of the CISS ranged from .73 on the Distraction component of the Avoidance subscale to .91 on the Task-oriented coping subscale. Reliabilities for the three subscales of the EDI were .89 for Drive for Thinness, .81 for the Bulimia subscale, and .93 for
Body Dissatisfaction and .93 for the composite score of the three subscales. Reliabilities were not calculated for the LES as this scale merely requires endorsement of events that have occurred over the past year and is not intended to have internal consistency among items.

Means and Standard Deviations For Clinical Sample

Means and Standard Deviations for Predictors

Means, standard deviations, and minimum and maximum scores for all scales are reported in Table 1. The CISS subscales of Task, Emotion, and Avoidance coping each have 16 items. The Avoidance subscale includes the Distraction subscale comprised of 8 items and the Social Diversion subscale comprised of 5 items. Observed means for the CISS subscales were as follows: Task $M = 45.19; SD = 10.97$, Emotion $M = 58.11; SD = 10.18$, Avoidance $M = 41.42; SD = 5.07$, Distraction $M = 22.04; SD = 7.12$, and Social Diversion $M = 12.54; SD = 5.07$. The means on the Task-oriented coping subscale were lower than those obtained during scale construction using a normative sample. The means for the Emotion-oriented coping subscale were higher than those obtained during scale construction using a normative sample. The means for the total Avoidance-oriented coping scale and for the Distraction and Social Diversion subscales of Avoidance-oriented coping were comparable to the normative sample means obtained during scale construction ($Task M = 58.6, Emotion M = 42.6, Avoidance M = 44.7, Distraction M = 20.5, and Social Diversion M = 16.6$).

The CHIP subscales have 8 items each: Instrumental $M = 24.78; SD = 6.21$; Emotional-preoccupation $M = 29.43$ $SD = 6.63$; Distraction $M = 20.56$ $SD = 5.72$; and
Palliative $M = 23.16 \ SD = 5.94$. The means for Distraction and Palliative coping were similar to the normal sample means obtained during scale construction (Distraction $M = 22.97 \ SD = 7.19$ and Palliative $M = 24.79 \ SD = 7.00$). The normative sample reported a slightly higher mean for Instrumental coping ($M = 28.30 \ SD = 6.74$) and a lower mean for Emotional-preoccupation ($M = 20.42 \ SD = 6.59$).

The Life Experiences Survey was used to calculate negative change scores. Negative change scores were obtained by summing the absolute value of the score for each individual. This negative change score is a measure of life stress over the past year. The mean negative change score obtained in this sample was 9.5 with a standard deviation of 6.59.

Means and Standard Deviations for Outcome Measures for the Clinical Sample

The EDI is comprised of eight subscales. The total scale was used as a measure of eating disorder symptomatology and the three subscales of Drive for Thinness, Bulimia, and Body Dissatisfaction were used as a measure of weight preoccupation in this research. The mean for the total EDI scale was $M = 87.24, SD = 35.45$. The means for the subscales of EDI were as follows: Drive for Thinness $M = 14.28, SD = 5.66$; Bulimia $M = 7.7, SD = 6.41$; and Body Dissatisfaction $M = 18.74, SD = 8.36$. The sum of the above three subscales is used as a measure of weight preoccupation and had a $M$ of 40.72, $SD = 17.7$. These means are similar to those obtained with a clinical sample during scale construction.

The EMAS has two subscales, namely Autonomic-emotional State Anxiety $M = 21.56, SD = 8.36$; and Cognitive-worry State Anxiety $M = 30.88, SD = 11.19$. The
<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Min</th>
<th>Max</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CISS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>45.19</td>
<td>10.97</td>
<td>24</td>
<td>74</td>
<td>.91</td>
</tr>
<tr>
<td>Emotion</td>
<td>58.11</td>
<td>10.18</td>
<td>24</td>
<td>77</td>
<td>.85</td>
</tr>
<tr>
<td>Avoidance</td>
<td>41.42</td>
<td>11.01</td>
<td>18</td>
<td>67</td>
<td>.83</td>
</tr>
<tr>
<td>Distraction</td>
<td>22.04</td>
<td>7.12</td>
<td>8</td>
<td>39</td>
<td>.80</td>
</tr>
<tr>
<td>Social Diversion</td>
<td>12.54</td>
<td>5.07</td>
<td>5</td>
<td>25</td>
<td>.87</td>
</tr>
<tr>
<td><strong>CHIP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental Emotion</td>
<td>24.78</td>
<td>6.21</td>
<td>12</td>
<td>38</td>
<td>.82</td>
</tr>
<tr>
<td>Emotion</td>
<td>29.43</td>
<td>6.63</td>
<td>11</td>
<td>40</td>
<td>.79</td>
</tr>
<tr>
<td>Distraction</td>
<td>20.56</td>
<td>5.72</td>
<td>8</td>
<td>33</td>
<td>.77</td>
</tr>
<tr>
<td>Palliative</td>
<td>23.16</td>
<td>5.94</td>
<td>12</td>
<td>37</td>
<td>.76</td>
</tr>
<tr>
<td><strong>STRESS (LES)</strong></td>
<td>9.5</td>
<td>6.59</td>
<td>0</td>
<td>30</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>EDI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive for Thinness</td>
<td>14.28</td>
<td>5.66</td>
<td>0</td>
<td>21</td>
<td>.83</td>
</tr>
<tr>
<td>Bulimia</td>
<td>7.7</td>
<td>6.41</td>
<td>0</td>
<td>19</td>
<td>.90</td>
</tr>
<tr>
<td>Body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfaction</td>
<td>18.74</td>
<td>8.36</td>
<td>2</td>
<td>27</td>
<td>.91</td>
</tr>
<tr>
<td>Weight</td>
<td>40.72</td>
<td>17.7</td>
<td>2</td>
<td>65</td>
<td>.93</td>
</tr>
<tr>
<td><strong>ANXIETY (EMAS-state)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomic-emotional State Anxiety</td>
<td>21.56</td>
<td>8.36</td>
<td>10</td>
<td>43</td>
<td>.83</td>
</tr>
<tr>
<td>Cognitive-worry State Anxiety</td>
<td>30.88</td>
<td>11.19</td>
<td>10</td>
<td>50</td>
<td>.81</td>
</tr>
<tr>
<td>Total State Anxiety</td>
<td>52.44</td>
<td>18.02</td>
<td>21</td>
<td>93</td>
<td>.89</td>
</tr>
<tr>
<td><strong>BDI</strong></td>
<td>26.62</td>
<td>11.94</td>
<td>1</td>
<td>46</td>
<td>.88</td>
</tr>
</tbody>
</table>

CISS - Coping Inventory for Stressful Situations
CHIP - Coping with Health, Illness, and Problems
LES - Life Experiences Survey
Note: The LES is a checklist of events and is not intended to have internal consistency
EMAS-S - Endler Multidimensional Anxiety Scales - state
EDI - Eating Disorder Inventory
BDI - Beck Depression Inventory
means for these subscales are similar to those obtained with female psychiatric outpatients during scale construction (Autonomic-emotional State Anxiety $M = 22.81$, Cognitive- Worry State Anxiety $M = 27.76$). The BDI scale is comprised of 21 items. 

The BDI had a $M = 26.62$, $SD = 11.94$. (See Table 1).

**Means and Standard Deviations for Non-clinical Sample**

Means and standard deviations were calculated on all variables for the non-clinical sample. The CISS subscales of Task, Emotion and Avoidance (Distraction 5 items and Social Diversion 8 items) were as follows: Task $M = 57.1$, $SD = 10.1$; Emotion $M = 48.8$, $SD = 10.9$, Avoidance $M = 46.7$, $SD = 10.4$, Distraction $M = 21.5$, $SD = 5.8$, Social Diversion $M = 17.2$, $SD = 4.4$. The EDI subscales Drive for Thinness $M = 4.9$, $SD = 5.9$; Bulimia $M = 1.5$, $SD = 2.8$; Body Dissatisfaction $M = 10.1$, $SD = 8.3$; Weight Preoccupation (total for three EDI subscales) $M = 16.5$, $SD = 14.6$. The LES had a $M = 8.3$, $SD = 6.3$. (See Table 2).

**Correlations among CISS and CHIP Coping Scales for the Clinical Sample**

It was hypothesized that general coping styles as assessed by the CISS would be predictive of health-specific coping styles as assessed by the CHIP. More precisely, it was predicted that Task-oriented coping, Emotion-oriented coping, and Distraction coping on the CISS would be positively associated with health-specific Instrumental coping, Emotional-preoccupation, and Distraction as assessed by the CHIP. Pearson Product Moment correlations were computed to assess the degree of association among these variables.
Table 2

Means, Standard Deviations, Minimums, and Maximums and Alphas

For All Variables for Non-Clinical Sample (N = 206)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Min</th>
<th>Max</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>57.1</td>
<td>10.1</td>
<td>28</td>
<td>78</td>
<td>.91</td>
</tr>
<tr>
<td>Emotion</td>
<td>48.8</td>
<td>10.9</td>
<td>20</td>
<td>78</td>
<td>.88</td>
</tr>
<tr>
<td>Avoidance</td>
<td>46.7</td>
<td>10.4</td>
<td>20</td>
<td>70</td>
<td>.84</td>
</tr>
<tr>
<td>Distraction</td>
<td>21.5</td>
<td>5.8</td>
<td>8</td>
<td>36</td>
<td>.73</td>
</tr>
<tr>
<td>Social Diversion</td>
<td>17.2</td>
<td>4.4</td>
<td>5</td>
<td>25</td>
<td>.81</td>
</tr>
<tr>
<td>STRESS (LES)</td>
<td>8.3</td>
<td>6.3</td>
<td>0</td>
<td>29</td>
<td>N/A</td>
</tr>
</tbody>
</table>

| EDI                  |      |                    |     |     |       |
| Drive for Thinness   | 4.9  | 5.9                | 0   | 21  | .90   |
| Bulimia              | 1.5  | 2.8                | 0   | 18  | .81   |
| Body                 |      |                    |     |     |       |
| Dissatisfaction      | 10.1 | 8.3                | 0   | 15  | .93   |
| Weight               |      |                    |     |     |       |
| Preoccupation        | 16.5 | 14.6               | 2   | 56  | .93   |

CISS - Coping Inventory for Stressful Situations
Stress LES - Life Experiences Survey
Note: The LES is a checklist of events and is not intended to have internal consistency
EDI - Eating Disorder Inventory
Correlations among the general (CISS) and health-specific coping measures are found in Table 3. As predicted, Task-oriented coping on the CISS was significantly and positively associated with Instrumental coping \( r = .44, p < .000 \) on the CHIP. Task-oriented coping on the CISS was also significantly and positively associated with Distraction coping \( r = .31, p < .03 \) on the CHIP. Emotion-oriented coping on the CISS was significantly and positively associated with Emotional-preoccupation coping \( r = .53, p < .000 \) on the CHIP. Emotion-oriented coping on the CISS was also significantly and positively associated with Palliative coping on the CHIP \( r = .45, p < .001 \). Distraction-oriented coping on the CISS was significantly and positively associated with Distraction coping \( r = .32, p < .02 \) and with Palliative coping \( r = .31, p < .03 \) on the CHIP. Social Diversion coping on the CISS was significantly and positively associated with Distraction coping on the CHIP \( r = .60, p < .000 \).

The total Avoidance-oriented coping subscale of the CISS was significantly and positively associated with Distraction coping on the CHIP \( r = .61, p < .000 \). It was hypothesized that subscales of the health-specific coping measure (CHIP) would predict variance in the criterion variables (eating disorder symptomatology, weight preoccupation, total state anxiety, Autonomic-emotional State Anxiety, Cognitive-worry State Anxiety, and depression) over and above that predicted by the subscales of the general coping measure (CISS). Therefore it was important to establish whether these respective subscales were significantly correlated. The observed correlations among the respective subscales were as predicted.
Table 3
Correlations among CISS and CHIP Subscales for the Clinical Sample (N = 53)

Coping with Health, Injuries, and Problems

<table>
<thead>
<tr>
<th></th>
<th>Instrum</th>
<th>Emotion</th>
<th>Distraction</th>
<th>Palliative</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK</td>
<td>.44**</td>
<td>-.19</td>
<td>.31*</td>
<td>-.13</td>
</tr>
<tr>
<td>EMOTION</td>
<td>.07</td>
<td>.53**</td>
<td>-.21</td>
<td>.45*</td>
</tr>
<tr>
<td>AVOID</td>
<td>.06</td>
<td>-.01</td>
<td>.61**</td>
<td>.10</td>
</tr>
<tr>
<td>DIST</td>
<td>-.03</td>
<td>.08</td>
<td>.32*</td>
<td>.31*</td>
</tr>
<tr>
<td>DIVERS</td>
<td>.14</td>
<td>-.13</td>
<td>.60**</td>
<td>-.17</td>
</tr>
</tbody>
</table>

CISS – Coping Inventory for Stressful Situations
Task – Task-Oriented Coping
Emotion – Emotion-Oriented Coping
Avoid – Avoidance-Oriented Coping
Dist – Distraction Subscale of Avoidance Coping
Divers – Social Diversion Subscale of Avoidance Coping
CHIP – Coping with Health, Injuries, and Problems
Instrum – Instrumental Coping
Emotion – Emotion-Oriented Coping
Dist – Distraction Coping
Pall – Palliative Coping

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
Correlations among stress, general coping styles, illness-specific coping styles, eating disorder symptoms, weight preoccupation, depression and anxiety.

Prior to conducting the regression analyses to test the study hypotheses predicting that illness-specific coping styles predict variance in eating disorder symptomatology, anxiety, and depression, it was important to assess the degree of association among the predictor variables and criterion variables. Pearson Product Moment correlations were computed to assess the degree of association among these predictor and criterion variables. See Table 4 for these results.

Emotion-oriented coping on the general coping measure (CISS) was significantly and positively associated with Autonomic-emotional State Anxiety \( r = .33, p < .05 \), Cognitive-worry State Anxiety \( r = .55, p < .000 \) and Total State Anxiety, \( r = .50, p < .000 \). Social Diversion of the Avoidance-oriented coping subscale was significantly and negatively associated with Cognitive-worry State Anxiety \( r = -.35, p < .01 \) and Total State Anxiety \( r = -.30, p < .03 \). Emotional-preoccupation on the health-specific coping measure (CHIP) was also significantly and positively associated with Cognitive-worry State Anxiety \( r = .34, p < .01 \) and with Total State Anxiety \( r = .30, p < .04 \). Stress was significantly and positively associated with Autonomic-emotional State Anxiety \( r = .28, p < .05 \).

**Correlations among Stress, General Coping Styles and Weight Preoccupation for the Non-clinical Sample (N=206)**

The subscales of Avoidance-oriented coping (Distraction and Social Diversion) were found to be differentially related to concerns about weight in the non-clinical sample
and were, therefore, analyzed separately for the subsequent analyses. More specifically, Distraction was positively correlated with weight preoccupation $r = .19$, $p < .001$ while Social Diversion had a negative, albeit nonsignificant, correlation $r = -.12$, $p < .10$ with weight preoccupation. Table 5 displays the correlations among stress, general coping styles, and weight preoccupation for the non-clinical sample.

Stress and weight preoccupation were significantly and positively correlated, $r = .23$, $p < .01$. Task-oriented coping was significantly and negatively correlated with weight preoccupation, $r = -.21$, $p < .01$. These correlations, although significant, accounted for a small amount of variance in weight preoccupation 5.29% and 4.41% respectively. Emotion-oriented coping was significantly and positively correlated with weight preoccupation $r = .38$, $p < .01$, accounting for 14.49% of the variance. The Distraction component of the Avoidance subscale was significantly positively correlated with weight preoccupation $r = .19$, $p < .01$. Accounting for only 3.6% of the variance, this result, although statistically significant, was, in fact, trivial. The Social Diversion component of the Avoidance subscale was negatively correlated with weight preoccupation, however, the relationship was not statistically significant. (See Table 5).

### Multiple Regression Analyses

#### Overview

A series of multiple regression analyses was performed to determine the amount of variance in each of the dependent measures (eating disorder symptomatology, anxiety, and depression) accounted for by the predictors (stress, general, and health-specific coping styles) and to examine whether health-specific coping styles (CHIP) accounted for
Table 4
Correlations among Predictors and Dependent Variables for Clinical Sample (N=53)

<table>
<thead>
<tr>
<th></th>
<th>EMAS-S-AE</th>
<th>EMAS-S-CW</th>
<th>EMAS-S-Tot</th>
<th>DforT</th>
<th>BUL</th>
<th>BODDIS</th>
<th>WTP</th>
<th>EDI</th>
<th>BDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK</td>
<td>-.14</td>
<td>-.19</td>
<td>-.19</td>
<td>.12</td>
<td>.10</td>
<td>.05</td>
<td>.10</td>
<td>-.06</td>
<td>-.06</td>
</tr>
<tr>
<td>EMOTION</td>
<td>.33*</td>
<td>.55**</td>
<td>.50**</td>
<td>-.02</td>
<td>.01</td>
<td>.14</td>
<td>.07</td>
<td>.18</td>
<td>.22</td>
</tr>
<tr>
<td>DIST</td>
<td>-.21</td>
<td>-.17</td>
<td>-.20</td>
<td>-.13</td>
<td>.27</td>
<td>-.05</td>
<td>.03</td>
<td>-.03</td>
<td>-.12</td>
</tr>
<tr>
<td>DIVERS</td>
<td>-.18</td>
<td>-.35*</td>
<td>-.30*</td>
<td>.37</td>
<td>.17</td>
<td>.04</td>
<td>.09</td>
<td>-.15</td>
<td>-.11</td>
</tr>
<tr>
<td>AVOID</td>
<td>-.21</td>
<td>-.26</td>
<td>-.26</td>
<td>-.14</td>
<td>.04</td>
<td>-.09</td>
<td>-.07</td>
<td>-.14</td>
<td>-.15</td>
</tr>
<tr>
<td>CHIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSTRUM</td>
<td>-.09</td>
<td>-.01</td>
<td>.05</td>
<td>.11</td>
<td>.15</td>
<td>.09</td>
<td>.13</td>
<td>.12</td>
<td>.20</td>
</tr>
<tr>
<td>EMOTION</td>
<td>.19</td>
<td>.34*</td>
<td>.30*</td>
<td>-.01</td>
<td>.10</td>
<td>-.02</td>
<td>.02</td>
<td>.12</td>
<td>.20</td>
</tr>
<tr>
<td>DIST</td>
<td>-.07</td>
<td>-.26</td>
<td>-.19</td>
<td>-.24</td>
<td>-.17</td>
<td>-.14</td>
<td>-.21</td>
<td>-.27</td>
<td>-.08</td>
</tr>
<tr>
<td>PALL</td>
<td>.11</td>
<td>.17</td>
<td>.16</td>
<td>-.02</td>
<td>.15</td>
<td>-.01</td>
<td>.04</td>
<td>.11</td>
<td>.10</td>
</tr>
<tr>
<td>STRESS</td>
<td>.28*</td>
<td>.10</td>
<td>.20</td>
<td>-.06</td>
<td>-.00</td>
<td>-.12</td>
<td>-.08</td>
<td>-.04</td>
<td>-.04</td>
</tr>
</tbody>
</table>

CISS - Coping Inventory for Stressful Situations
Task - Task-Oriented Coping
Emotion - Emotion-Oriented Coping
Dist - Distraction Subscale of Avoidance Coping
Divers - Social Diversion Subscale of Avoidance Coping
Avoid - Avoidance-Oriented Coping
CHIP - Coping with Health, Injuries, and Problems
Instrum - Instrumental Coping
Emotion - Emotion-Oriented Coping
Dist - Distraction Coping
Pall - Palliative Coping
STRESS - Life Experiences Survey Negative Change Score
EMAS-S-AE - Autonomic-emotional State Anxiety EMAS-state
EMAS-S-CW - Cognitive-worry State Anxiety EMAS-state
EMAS-S-Tot - EMAS-state Total State Anxiety
DforT - Drive for Thinness Subscale of the EDI
BUL - Bulimia Subscale of the EDI
BODDIS - Body Dissatisfaction Subscale of the EDI
WTP - Weight Preoccupation (composite score of DforT, Bul, and Boddis subscales)
EDI - Eating Disorder Inventory
BDI - Beck Depression Inventory

* Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).
Table 5
Correlations among Predictors and Dependent Variables for Non-Clinical Sample
(N=206)

<table>
<thead>
<tr>
<th></th>
<th>STRESS</th>
<th>TASK</th>
<th>EMOTION</th>
<th>DIST</th>
<th>DIVERS</th>
<th>WTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRESS</td>
<td>-.14</td>
<td>.32</td>
<td>.20*</td>
<td>.03</td>
<td>.23*</td>
<td></td>
</tr>
<tr>
<td>TASK</td>
<td>-.40*</td>
<td>.116</td>
<td>.13</td>
<td>-.21*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMOTION</td>
<td>.26*</td>
<td>.08</td>
<td>.38*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIST</td>
<td>.40*</td>
<td>.19*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIVERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.12</td>
<td></td>
</tr>
<tr>
<td>WTP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stress - Life Experiences Survey Negative Change Score
Task - Task-oriented Coping
Emotion - Emotion-oriented Coping
Dist - Distraction Subscale of Avoidance Coping
Divers - Social Diversion Subscale of Avoidance Coping
WTP - Weight Preoccupation (composite score of Drive for Thinness, Bulimia, and Body Dissatisfaction subscales)

*Correlation is significant at the 0.01 level (2-tailed).
variance in the dependent measures over and above that accounted for by the general coping styles (CISS). The Avoidance subscale of the CISS consists of two subscales, namely, Distraction and Social Diversion. As seen in the correlations in Table 4, these subscales can at times be differentially related to other variables. For example, Distraction was negatively associated with the Drive for Thinness and Body Dissatisfaction subscales of the EDI, whereas Social Diversion was positively associated with each of these subscales. In order to examine the potential contribution of Distraction and Social Diversion to variance in eating disorder symptomatology, anxiety and depression, the Distraction and Social Diversion subscales were analyzed separately in these models.

A two-phase modeling procedure was used where the first phase included stress and the CISS subscales (Task, Emotion, Distraction, and Social Diversion) as predictor variables. These effects were tested using the step-wise model selection feature of linear regression analyses in SPSS for windows version 8.0. The significant predictors ($p < .05$) from phase one were retained and entered into the second phase of the model at which point the CHIP subscales (Instrumental, Emotional-preoccupation, Distraction, and Palliative) were also entered into the analyses using the step-wise procedure as described above. Individual analyses based on stress and each of the different general (CISS) and health-specific (CHIP) coping styles were tested in this same way with the following criterion variables: eating disorder symptoms, weight preoccupation, Autonomic-emotional State Anxiety, Cognitive-worry State Anxiety, Total State Anxiety, and depression (BDI). A separate regression model was used for each dependent variable.
(eating disorder symptomatology, weight preoccupation, Total State anxiety, Autonomic-emotional State Anxiety, Cognitive-worry State Anxiety, and depression) for a total of six regression models. These will be described in turn.

Regression Analysis 1

In the first analysis the total score of the eating disorder inventory served as the criterion variable. This analysis tested the hypothesis that coping styles are predictive of eating disorder symptomatology. It was predicted that Task-oriented coping (CISS) would be negatively associated with eating disorder symptomatology, and that stress, and Emotion-oriented coping (CISS) would be positively associated with eating disorder symptomatology. Based on previous findings with a non-clinical sample (Denisoff, 1995), it was hypothesized that Distraction coping (CISS) would be positively associated with eating disorder symptomatology and that Social Diversion (CISS) would be negatively associated with eating disorder symptomatology.

It was also predicted that Instrumental coping (CHIP) would be negatively associated with eating disorder symptomatology and that Emotional-preoccupation and Distraction (CHIP) would be positively associated with eating disorder symptomatology. The phase one independent variables of stress and CISS coping were not significant predictors of eating disorder symptomatology and were not retained in phase two of this analysis. In phase two, the health-specific coping styles (Instrumental, Emotion, Distraction, and Palliative) were not significantly related to eating disorder symptomatology in this sample. Results for this analysis are presented in Table 6.
Regression Analysis 2

In the second regression analysis, weight preoccupation served as the criterion variable. The total score of the three subscales (Drive for Thinness, Bulimia, and Body Dissatisfaction) of the Eating Disorder Inventory was used as a measure of weight preoccupation. This analysis tested the hypothesis that coping styles are predictive of weight preoccupation. It was predicted that Task-oriented coping would be negatively associated with weight preoccupation, and that stress, Emotion-oriented coping, and Distraction would be positively associated with weight preoccupation.

It was also predicted that Instrumental coping (CHIP) would be negatively associated with weight preoccupation and that Emotional-preoccupation and Distraction (CHIP) would be positively associated with eating weight preoccupation.

In the first phase, stress and the general coping styles were not significant predictors of weight preoccupation and were not retained in phase two of this model. In phase two, the health-specific coping styles did not significantly predict variance in weight preoccupation. Results for this model are presented in Table 7.

Regression Analysis 3

In the third analysis the total score of the EMAS State Anxiety scale served as the criterion variable. This model tested the hypothesis that coping styles predict variance in state anxiety. It was predicted that Task-oriented coping and Social Diversion (CISS) would be negatively associated with Total State anxiety. It was predicted that stress, Emotion-oriented and Distraction (CISS) would be positively associated with Total State anxiety. It was also predicted that Instrumental coping (CHIP) would be negatively
Table 6

Clinical Sample (N=53)

<table>
<thead>
<tr>
<th>Variable</th>
<th>URC</th>
<th>STD. ER</th>
<th>$R^2$</th>
<th>F</th>
<th>p</th>
<th>LCI</th>
<th>UCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS Task</td>
<td>0.16</td>
<td>.69</td>
<td></td>
<td>-1.00</td>
<td>1.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Distraction</td>
<td>1.16</td>
<td>.29</td>
<td></td>
<td>-0.57</td>
<td>1.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>0.78</td>
<td>.38</td>
<td></td>
<td>-3.47</td>
<td>1.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRESS</td>
<td>0.26</td>
<td>.61</td>
<td></td>
<td>-2.05</td>
<td>1.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHIP Instrumental</td>
<td>1.05</td>
<td>.31</td>
<td></td>
<td>-1.24</td>
<td>2.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Distraction</td>
<td>0.29</td>
<td>.60</td>
<td></td>
<td>-1.58</td>
<td>1.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palliative</td>
<td>0.34</td>
<td>.57</td>
<td></td>
<td>-1.94</td>
<td>2.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CISS – Coping Inventory for Stressful Situations
CHIP – Coping with Health, Injuries, and Problems
STRESS – Total negative change score of the Life Experiences Survey
URC – Unstandardized regression coefficient
STD. ER – Standard Error
$R^2$ – $R$ Squared Change Score
LCI – Lower Confidence Interval
UCI – Upper Confidence Interval
Table 7
Clinical Sample (N=53)

<table>
<thead>
<tr>
<th>Dependent Variable Weight Preoccupation</th>
<th>Variable</th>
<th>URC</th>
<th>STD.ER</th>
<th>R²</th>
<th>F</th>
<th>p</th>
<th>LCI</th>
<th>UCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>0.84</td>
<td>.37</td>
<td>-0.29</td>
<td>0.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.30</td>
<td>.59</td>
<td>-0.49</td>
<td>0.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction</td>
<td>0.22</td>
<td>.64</td>
<td>-0.66</td>
<td>1.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>0.50</td>
<td>.49</td>
<td>-1.75</td>
<td>0.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRESS</td>
<td>0.00</td>
<td>.95</td>
<td>-0.94</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td>.04</td>
<td>1.84</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td>1.12</td>
<td>.30</td>
<td>-0.44</td>
<td>1.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.00</td>
<td>.95</td>
<td>-1.04</td>
<td>0.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction</td>
<td>1.84</td>
<td>.18</td>
<td>-0.86</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palliative</td>
<td>0.02</td>
<td>.89</td>
<td>-1.18</td>
<td>0.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CISS – Coping Inventory for Stressful Situations
CHIP – Coping with Health, Injuries, and Problems
STRESS – Total negative change score of the Life Experiences Survey
URC – Unstandardized regression coefficient
STD. ER – Standard Error
R² - R Squared Change Score
LCI – Lower Confidence Interval
UCI – Upper Confidence Interval
associated with Total State anxiety and that Emotional-preoccupation and Distraction (CHIP) would be positively associated with Total State anxiety.

The first phase of the model (stress and CISS) accounted for 34% of variance in Total State Anxiety ($F(2, 47) = 12.04; p < .000$). As predicted, Emotion-oriented coping and Social Diversion accounted for significant variance in Total State Anxiety. Emotion-oriented coping was a significant predictor of variance in Total State Anxiety ($F(1, 45) = 16.96; p < .000$) accounting for 25% of the variance. Social Diversion was also a significant predictor of variance in Total State Anxiety ($F(1, 45) = 6.62; p < .01$) accounting for 8% of the variance in Total State Anxiety. Emotion-oriented coping and Social Diversion were retained and entered in phase two of the analysis.

In addition to Emotion-oriented coping and Social Diversion coping retained from phase one, the health-specific coping styles (Instrumental, Emotion, Distraction, and Palliative) were entered at phase two. The overall model at phase two was significant ($F(2, 47) = 12.04; p < .000$). However, the variance in Total State anxiety accounted for was only due to the significant predictors retained from phase one. The health-specific coping styles did not account for any additional variance in Total State anxiety. Results for this analysis are presented in Table 8.

The results suggest that the use of Emotion-oriented coping is associated with more Total State Anxiety, accounting for 25% of the variance in Total State Anxiety. Emotion-oriented coping involves person-oriented responses such as emotional responding and self-preoccupation. It is possible that such tendencies may lead to increased state anxiety about the situation. The use of Social Diversion coping was also a
Table 8

Clinical Sample (N=53)

<table>
<thead>
<tr>
<th>Variable</th>
<th>URC</th>
<th>STD.ER</th>
<th>R²</th>
<th>F</th>
<th>p</th>
<th>LCI</th>
<th>UCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>0.12</td>
<td>.73</td>
<td>-0.32</td>
<td>0.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.88</td>
<td>0.21</td>
<td>.25</td>
<td>16.97</td>
<td>.000</td>
<td>0.45</td>
<td>1.30</td>
</tr>
<tr>
<td>Distraction</td>
<td>2.99</td>
<td>.09</td>
<td>-1.29</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>-1.11</td>
<td>0.43</td>
<td>.08</td>
<td>6.62</td>
<td>.01</td>
<td>-1.98</td>
<td>-0.02</td>
</tr>
<tr>
<td>STRESS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.72</td>
<td>.20</td>
<td>-0.13</td>
<td>1.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS/STRESS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.88</td>
<td>0.21</td>
<td>.25</td>
<td>16.97</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>-1.11</td>
<td>0.43</td>
<td>.08</td>
<td>6.62</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td>0.13</td>
<td>.72</td>
<td>-0.89</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.00</td>
<td>.95</td>
<td>-0.96</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction</td>
<td>0.70</td>
<td>.41</td>
<td>-0.60</td>
<td>1.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palliative</td>
<td>1.13</td>
<td>.30</td>
<td>-1.34</td>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CISS – Coping Inventory for Stressful Situations
CHIP – Coping with Health, Injuries, and Problems
STRESS – Total negative change score of the Life Experiences Survey
URC – Unstandardized regression coefficient
STD. ER – Standard Error
R² – R Squared Change Score
LCI – Lower Confidence Interval
UCI – Upper Confidence Interval
significant predictor of Total State Anxiety accounting for an additional 8% of the variance in Total State Anxiety. In previous research it was found that Social Diversion was significantly and negatively associated with weight preoccupation (Denisoff, 1995). The negative relationship between Social Diversion and Total State Anxiety suggests that Social Diversion has some beneficial effects in terms of reducing overall state anxiety. Social support has been identified as one factor that mediates between stressors and the experience of stress (Coyne & Downey, 1991; Lazarus & Folkman, 1984). It is possible that in some situations, Social Diversion may serve as social support for an individual.

Regression Analysis 4

In the fourth analysis, the subscale of Autonomic-emotional State Anxiety from the EMAS-S-AE served as the criterion variable. It was predicted that Task-oriented coping and Social Diversion (CISS) would be negatively associated with Autonomic-Emotional State Anxiety (EMAS-S-AE). It was also predicted that stress, Emotion-oriented coping, and Distraction (CISS) would be positively associated with Autonomic-Emotional State Anxiety. It was predicted that Instrumental coping (CHIP) would be negatively associated with Autonomic-emotional State Anxiety and that Emotional-preoccupation and Distraction (CHIP) would be positively associated with Autonomic-emotional State Anxiety.

The overall analysis at phase one (stress and CISS) was significant ($F(1,48) = 7.26; p < .01$) and accounted for 13% of the variance in Autonomic-emotional State Anxiety. Emotion-oriented coping was a significant predictor of Autonomic-emotional
State Anxiety ($F (1,48) = 7.26; p < .01$) accounting for 13% of the variance. Emotion-oriented coping was retained as a predictor in phase two of this model. In phase two, the health-specific coping styles did not account for any additional variance in Autonomic-Emotional State Anxiety over and above that accounted for by Emotion-oriented coping from phase one. Results of this analysis are presented in Table 9.

These results suggest that the use of Emotion-oriented coping is also associated with greater Autonomic-emotional-State Anxiety, accounting for 13% of the variance. The Autonomic-emotional State Anxiety subscale measures physiologic arousal such as feeling tense, perspiring, and dryness in the mouth. It is possible that thinking about the eating disorder may be similar to cognitive rumination and may lead to greater physiologic arousal in women with eating disorders.

**Regression Analysis 5**

In the fifth analysis, the Cognitive-worry State Anxiety subscale (EMAS-S-CW) of the EMAS served as the criterion variable. It was predicted that Task-oriented coping and Social Diversion (CISS) would be negatively associated with Cognitive-worry State Anxiety. It was also predicted that stress, Emotion-oriented coping, and Distraction (CISS) would be positively associated with Cognitive-worry State Anxiety. With regard to health-specific coping, it was predicted that Instrumental coping (CHIP) would be negatively associated with Cognitive-worry State Anxiety and that Emotional-preoccupation and Distraction (CHIP) would be positively associated with Cognitive-worry State Anxiety.
Table 9
Clinical Sample (N=53)

Dependent Variable Autonomic-emotional Anxiety (EMAS-S-AE)

<table>
<thead>
<tr>
<th>Variable</th>
<th>URC</th>
<th>STD. ER</th>
<th>R^2</th>
<th>F</th>
<th>p</th>
<th>LCI</th>
<th>UCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>0.02</td>
<td>0.88</td>
<td>-0.18</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.34</td>
<td>0.11</td>
<td>0.16</td>
<td>9.64</td>
<td>0.003</td>
<td>0.07</td>
<td>0.52</td>
</tr>
<tr>
<td>Distraction</td>
<td>3.81</td>
<td>0.06</td>
<td>-0.66</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>1.81</td>
<td>0.19</td>
<td>-0.74</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRESS</td>
<td>2.18</td>
<td>0.15</td>
<td>-0.10</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS/STRESS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.34</td>
<td>0.11</td>
<td>0.16</td>
<td>9.64</td>
<td>0.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td>0.75</td>
<td>0.39</td>
<td>-0.60</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.00</td>
<td>0.95</td>
<td>-0.41</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction</td>
<td>0.00</td>
<td>0.96</td>
<td>-0.40</td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palliative</td>
<td>0.16</td>
<td>0.69</td>
<td>-0.51</td>
<td>0.43</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CISS – Coping Inventory for Stressful Situations
CHIP – Coping with Health, Injuries, and Problems
STRESS – Total negative change score of the Life Experiences Survey
URC – Unstandardized regression coefficient
STD. ER – Standard Error
R^2 – R Squared Change Score
LCI – Lower Confidence Interval
UCI – Upper Confidence Interval
The first phase of the analysis was significant \((F(2,47) = 17.20; p < .000)\) and accounted for 42% of variance in Cognitive-worry State Anxiety. Emotion-oriented coping was a significant predictor of variance in Cognitive-worry State Anxiety \((F(1,47) = 24.02; p < .000)\), accounting for 30% of the variance in this criterion variable. Social Diversion was also a significant predictor \((F(1,47) = 9.04; p < .004)\), accounting for 11% of the variance in Cognitive-worry State Anxiety. Emotion-oriented coping and Social Diversion were retained and entered in phase two of the model.

In addition to Emotion-oriented coping and Social Diversion coping retained from phase one, the health-specific coping styles (Instrumental, Emotion, Distraction, and Palliative) were entered at phase two. The overall analysis at phase two was significant \((F(2,47) = 17.20; p < .000)\). However, the variance in Cognitive-worry State Anxiety accounted for was only due to the significant predictors retained from phase one. The health-specific coping styles from the CHIP did not account for any additional variance in Cognitive-worry State Anxiety. Results for this model are presented in Table 10.

Both Emotion-oriented coping and Social Diversion were significant predictors of variance in Cognitive-worry State Anxiety, accounting for 30% and 11% of the variance respectively. Again, it is possible that, in this sample, Emotion-oriented attempts to deal with the eating disorder lead to greater anxiety. Social Diversion might actually provide a source of social support and might, therefore, lead to less anxiety.

**Regression Analysis 6**

In the sixth analysis, the total score of the Beck Depression Inventory served as the criterion variable. It was predicted that Task-oriented coping and Social Diversion
Table 10
Clinical Sample (N=53)

Dependent Variable Cognitive-worry Anxiety (EMAS-S-CW)

<table>
<thead>
<tr>
<th>Variable</th>
<th>URC</th>
<th>STD.ER</th>
<th>$R^2$</th>
<th>F</th>
<th>p</th>
<th>LCI</th>
<th>UCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS Task</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.59</td>
<td>0.12</td>
<td>0.30</td>
<td>23.07</td>
<td>.000</td>
<td>0.34</td>
<td>0.84</td>
</tr>
<tr>
<td>Distraction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>-0.81</td>
<td>0.25</td>
<td>0.11</td>
<td>10.48</td>
<td>.002</td>
<td>-1.31</td>
<td>-0.31</td>
</tr>
<tr>
<td>STRESS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS/STRESS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>0.59</td>
<td>0.12</td>
<td>0.30</td>
<td>23.07</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>-0.81</td>
<td>0.25</td>
<td>0.11</td>
<td>10.48</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palliative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CISS – Coping Inventory for Stressful Situations
CHIP – Coping with Health, Injuries, and Problems
STRESS – Total negative change score of the Life Experiences Survey
URC – Unstandardized regression coefficient
STD. ER – Standard Error
$R^2$ – R Squared Change Score
LCI – Lower Confidence Interval
UCI – Upper Confidence Interval
Table 11
Clinical Sample (N=53)

<table>
<thead>
<tr>
<th>Variable</th>
<th>URC</th>
<th>STD.ER</th>
<th>R²</th>
<th>F</th>
<th>p</th>
<th>LCI</th>
<th>UCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CISS</td>
<td>0.06</td>
<td>2.34</td>
<td>0.13</td>
<td>0.6</td>
<td>0.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>0.12</td>
<td>0.73</td>
<td>-0.38</td>
<td>0.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>2.34</td>
<td>0.13</td>
<td>-0.07</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction</td>
<td>1.01</td>
<td>0.32</td>
<td>-0.80</td>
<td>0.38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion</td>
<td>0.34</td>
<td>0.57</td>
<td>-0.93</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRESS</td>
<td>0.55</td>
<td>0.47</td>
<td>-0.77</td>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHIP</td>
<td>0.04</td>
<td>1.73</td>
<td>0.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td>0.88</td>
<td>0.35</td>
<td>-0.34</td>
<td>0.98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>1.73</td>
<td>0.20</td>
<td>-0.38</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction</td>
<td>0.08</td>
<td>0.77</td>
<td>-0.95</td>
<td>0.56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palliative</td>
<td>0.13</td>
<td>0.72</td>
<td>-0.70</td>
<td>0.77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CISS – Coping Inventory for Stressful Situations
CHIP – Coping with Health, Injuries, and Problems
STRESS – Total negative change score of the Life Experiences Survey
URC – Unstandardized regression coefficient
STD. ER – Standard Error
R² – R Squared Change Score
LCI – Lower Confidence Interval
UCI – Upper Confidence Interval
(CISS) would be negatively associated with depression. It was also predicted that stress, Emotion-oriented coping and Distraction (CISS) would be positively associated with depression. With regard to health-specific coping, it was predicted that Instrumental coping (CHIP) would be negatively associated with depression and that Emotional-preoccupation and Distraction (CHIP) would be positively associated with depression.

The overall analysis in phase one was not significant and therefore no variables from phase one were retained for phase two. In phase two, the health-specific coping styles (Instrumental, Emotion, Distraction, and Palliative) were entered. These were not found to be significant predictors of depression in this sample. Results for this model are presented in Table 11.

Testing the Continuity Hypothesis

By partially replicating previous research involving a non-clinical sample, this research with a clinical sample provides an opportunity to explore the question of continuity across these two samples by comparing the pattern of results obtained in each. Previous research examined the relationships among stress, general coping styles (Task, Emotion, Distraction, and Social Diversion), and weight preoccupation in a non-clinical sample of university women (Denisoff, 1995). The non-clinical sample provided a comparison group for the clinical sample in the first test of continuity. In the subsequent continuity analysis the non-clinical sample was divided into a non-clinical and a sub-clinical group with the women who scored in the top 1/3 of the distribution on weight preoccupation representing the sub-clinical group.
The current research includes the investigation of stress, general coping styles (Task, Emotion, Distraction, and Social Diversion), and weight preoccupation among other variables in a clinical sample. Investigating the same variables in two separate samples (clinical and non-clinical) allows for the statistical investigation of whether the pattern of results from the two samples is the same. A similar pattern of results across samples would represent continuity while a different pattern of results would represent discontinuity across the samples (Tabachnick & Fidell, 1996, p.329).

Continuity is tested using sample (clinical or non-clinical) by other predictor (coping) interactions. Continuity is represented by having the same slope for the clinical and non-clinical sample for a given coping style. An interaction between sample and predictor (coping) tests the hypothesis that the slope is equal across both samples. A significant interaction, therefore, suggests that the slopes are not equal across clinical and non-clinical samples and provides evidence of discontinuity (Tabachnick & Fidell, 1996, p.329).

In order to test for continuity across the clinical and non-clinical samples, a multiple regression analysis was performed using weight preoccupation as the dependent variable. Anxiety and depression outcome measures had not been collected for the non-clinical group and therefore could not be tested for comparison purposes. The main effect variables were entered first. These included stress, Task-oriented coping, Emotion-oriented coping, Distraction, and Social Diversion coping along with the dummy variable representing sample. The main effect of sample is equivalent to a test of the mean difference between weight preoccupation in the clinical and non-clinical samples (i.e., a t-
test of the means) and does not represent a test of continuity on its own. The test of continuity of each predictor is represented by the interaction term between sample and that main effect variable (i.e., sample by Task, sample by Emotion, sample by Distraction, and sample by Social Diversion) on the dependent variable (i.e. weight preoccupation). Each of these tests is performed individually following the main effect tests.

As a demonstration of continuity and discontinuity, two hypothetical figures follow, Figure 1 and Figure 2. Note that the parallel lines in figure 1 show that this hypothetical predictor has the same effect in both samples one representing a clinical sample and the other representing a non-clinical sample (i.e., continuity). Note also that the vertical difference between the lines themselves represents a hypothetical difference in the means of the dependent variable between the two samples (i.e. like a t-test).

Figure 2 represents a hypothetical example of discontinuity. Note that the lack of parallelism between the lines representing the clinical and non-clinical samples indicates the discontinuity. In this hypothetical example, the relationship between our predictor and our dependent variables is significantly higher in the line representing the clinical sample than in the line representing the non-clinical sample.

Examination of the residuals for weight preoccupation indicated evidence of non-normality and heterogeneity. Square root transformations of weight preoccupation corrected these problems. As a result, the transformed variable was used in these analyses. The main effect model represented a significant explanation of the transformed dependent variable weight preoccupation (F (6, 241) = 20.74, p < .0005). Results of these main effects are reported in table 12.
Table 12
Clinical Sample (N= 53)

Dependent Variable Weight Preoccupation

<table>
<thead>
<tr>
<th>Variable</th>
<th>URC</th>
<th>STD.ER</th>
<th>( \text{F} )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>-0.06</td>
<td>0.01</td>
<td>0.00</td>
<td>0.96</td>
</tr>
<tr>
<td>Emotion</td>
<td>0.05</td>
<td>0.01</td>
<td>18.32</td>
<td>0.00</td>
</tr>
<tr>
<td>Distraction</td>
<td>0.04</td>
<td>0.02</td>
<td>5.08</td>
<td>0.02</td>
</tr>
<tr>
<td>Diversion</td>
<td>-0.07</td>
<td>0.02</td>
<td>8.59</td>
<td>0.00</td>
</tr>
<tr>
<td>STRESS Sample</td>
<td>0.02</td>
<td>0.02</td>
<td>1.87</td>
<td>0.17</td>
</tr>
<tr>
<td>Sample</td>
<td>1.57</td>
<td>0.32</td>
<td>23.65</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Interactions

| Task by Sample          | 0.57 | 0.23 | 6.22 | 0.01 |
| Emotion by Sample       | -0.73 | 0.28 | 6.62 | 0.01 |
| Distraction by Sample   | -0.25 | 0.18 | 1.77 | 0.18 |
| Social Diversion by Sample | 0.10 | 0.15 | 0.45 | 0.50 |

CISS – Coping Inventory for Stressful Situations

STRESS – Total negative change score of the Life Experiences Survey

URC – Unstandardized regression coefficient
STD. ER – Standard Error
Figure 1

Hypothetical Figure Showing CONTINUITY Across Samples

Figure 2

Hypothetical Figure Showing DISCONTINUITY Across Samples
The slopes of two of the predictors (Task and Emotion-oriented coping) showed evidence of being different across the clinical and non-clinical samples. If entered next, the Task by sample interaction was significant (F (1, 241) = 6.20, p = .01). Emotion by sample was also significant (F (1, 241) = 6.62, p = .01) providing further evidence for discontinuity across samples. See Table 10 for these results. No other sample by predictor interactions (i.e., Distraction by sample, Social Diversion by sample) were significant. Overall these results support discontinuity rather than continuity across the samples. Figures 3 and 4 show the discontinuity for Task and Emotion-oriented coping respectively.

An additional test of continuity involves examining variables that differentiate groups across levels of disorder. For example, the continuity perspective would be supported by research finding that the same variables that differentiate a control group from a sub-clinical group differentiate the sub-clinical group from the clinical group. Conversely, the discontinuity perspective would be supported by research finding that the variables that separate controls from sub-clinical groups fail to distinguish between sub-clinical and clinical groups or vice versa. In addition, research finding that the variables that distinguish a control group from a sub-clinical group are different than variables that separate the sub-clinical group from the clinical group would also provide evidence in support of discontinuity (Stice et al. 1996).

In the absence of any published cutoff scores to demarcate “non-clinical” from “sub-clinical” from “clinical” scores on weight preoccupation, it was decided that an examination of the distribution of student scores might suggest a logical cutoff point.
Figure 3

![Graph showing predicted weight preoccupation (transformed) vs. task oriented coping subscale total for clinical and non-clinical samples.](image)

Figure 4

![Graph showing predicted weight preoccupation (transformed) vs. ciss emotion subscale total for clinical and non-clinical samples.](image)
Table 13

Group means for stress, coping, and weight preoccupation for non-clinical, sub-clinical and clinical groups

<table>
<thead>
<tr>
<th></th>
<th>Non-clinical</th>
<th>Sub-clinical</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Task Oriented</td>
<td>58.40</td>
<td>0.88</td>
<td>54.31</td>
</tr>
<tr>
<td>Emotion Oriented</td>
<td>46.04</td>
<td>0.90</td>
<td>54.07</td>
</tr>
<tr>
<td>Distraction</td>
<td>20.71</td>
<td>0.51</td>
<td>23.06</td>
</tr>
<tr>
<td>Social Diversion</td>
<td>17.65</td>
<td>0.39</td>
<td>16.56</td>
</tr>
<tr>
<td>STRESS</td>
<td>7.49</td>
<td>0.55</td>
<td>9.46</td>
</tr>
<tr>
<td>Wt. Preocc.</td>
<td>7.23</td>
<td>0.86</td>
<td>34.43</td>
</tr>
<tr>
<td>Transformed Wt. Preocc.</td>
<td>1.79</td>
<td>0.06</td>
<td>3.53</td>
</tr>
</tbody>
</table>
Although the decision of where to partition the non-clinical sample is somewhat arbitrary several considerations guided the choice. A median split was not used because it could lead to a high number of false positives. An examination of the histogram and frequency tables illustrated the fact that a score of 21 and higher represented the upper one-third of the student sample scores. Respondents with weight preoccupation scores of 21 and above were, therefore, designated as “sub-clinical” participants. Olmsted and Garner (1986) used a similar method to identify different clusters among women who self-induced vomiting. Similar group classification procedures have also been used in anxiety research (see Endler, 1983; 1997).

The secondary analyses of the continuity hypothesis, following Stice et al. (1996) was based on the following three groups: group one, consisted of the 67th and lower percentile scores of the student sample and was designated as non-clinical. The upper 33% of the student sample was designated sub-clinical. The entire hospital sample was designated clinical. It was predicted that the variables that differentiate the non-clinical group from the sub-clinical group would also differentiate the sub-clinical group from the clinical group. Such as pattern of results would support the continuity position. Having distinguished the original two groups (e.g. non-clinical and clinical) into three groups (non-clinical, sub-clinical, and clinical), a MANOVA was conducted with CISS coping and stress as the dependent measures and the three group factor as a predictor.
The multivariate results were significant ($F(14.47) = 25.59, p < .0005$) thus justifying univariate testing. The univariate F values along with the group means are found in Table 13.

Post hoc analyses using the Scheffe test were conducted to determine which groups differed significantly from which other groups. Results indicated that all groups (non-clinical, sub-clinical, and clinical) were significantly different on Task-oriented coping. For Emotion-oriented coping the non-clinical group was significantly different from the sub-clinical and clinical groups. The sub-clinical and clinical groups were not significantly different from one another. The non-clinical group differed significantly from the sub-clinical group on Distraction coping. No other significant group differences were observed on Distraction coping. The non-clinical group was not significantly different from the sub-clinical group on Social Diversion. Both the non-clinical and sub-clinical groups were significantly different from the clinical group on Social Diversion. Stress was not significantly different among the three groups. Weight preoccupation showed significant differences between the non-clinical group and the sub-clinical group. The non-clinical group also differed significantly from the clinical group on weight preoccupation. The sub-clinical and clinical groups were not significantly different on weight preoccupation. See Table 14 for these results.

As a further test of the continuity hypothesis, a series of k-means cluster analyses was performed to classify participants into group membership. K-means cluster analysis is a technique whereby predictors (CISS coping dimensions, and stress) are used to assign each respondent to one of k-groups. Two different cluster analyses were performed.
Analysis one examined the classification of participants into one of two groups, intended to correspond with the initial samples (non-clinical student and clinical). A second analysis clustered the participants into one of three different classifications corresponding to each of the revised non-clinical, sub-clinical and clinical groups. Using the Crosstabulations procedure in SPSS, the number and percentage of correct classifications could be examined. Tables 15 and 16 show the classification outcomes for the two and three cluster solutions respectively.

As can be seen from examining Tables 14 and 15, the three cluster solution leads to more correct group classification (59.36% overall compared to 31.08 % for the two cluster solution). This suggests that the subdivision of the student sample into control and sub-clinical participants is not an arbitrary one. It argues in favour of the existence of a third group of respondents between the clinical and non-clinical distinction more traditionally used. This finding is consistent with previous research in support of the continuity hypothesis (Laessle et al. 1989a; Lowe et al. 1996; Stice et al. 1996; Stice et al. 1998).

All pairwise comparisons that were significant, were significant at p<.05. According to the continuity hypothesis it was predicted that there would be gradations with respect to the mean across the groups (non-clinical, sub-clinical, and clinical) along with the criterion variable increasing from group to group. As predicted the means for Task-oriented coping decreased across the three groups with the non-clinical group
<table>
<thead>
<tr>
<th>Task</th>
<th>Non-clinical</th>
<th>Sub-clinical</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-clinical</td>
<td></td>
<td>.03</td>
<td>.0005</td>
</tr>
<tr>
<td>Subclinical</td>
<td></td>
<td>.0005</td>
<td>.0005</td>
</tr>
<tr>
<td>Clinical</td>
<td></td>
<td></td>
<td>.17</td>
</tr>
<tr>
<td>Emotion</td>
<td></td>
<td>.0005</td>
<td>.0005</td>
</tr>
<tr>
<td>Non-clinical</td>
<td></td>
<td></td>
<td>.17</td>
</tr>
<tr>
<td>Subclinical</td>
<td></td>
<td></td>
<td>.17</td>
</tr>
<tr>
<td>Clinical</td>
<td></td>
<td></td>
<td>.17</td>
</tr>
<tr>
<td>Distraction</td>
<td></td>
<td>.03</td>
<td>.44</td>
</tr>
<tr>
<td>Non-clinical</td>
<td></td>
<td></td>
<td>.44</td>
</tr>
<tr>
<td>Subclinical</td>
<td></td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>Clinical</td>
<td></td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>Social Diversion</td>
<td></td>
<td>.28</td>
<td>.0005</td>
</tr>
<tr>
<td>Non-clinical</td>
<td></td>
<td></td>
<td>.0005</td>
</tr>
<tr>
<td>Subclinical</td>
<td></td>
<td></td>
<td>.0005</td>
</tr>
<tr>
<td>Clinical</td>
<td></td>
<td></td>
<td>.0005</td>
</tr>
<tr>
<td>Stress</td>
<td></td>
<td>.12</td>
<td>.13</td>
</tr>
<tr>
<td>Non-clinical</td>
<td></td>
<td></td>
<td>.13</td>
</tr>
<tr>
<td>Subclinical</td>
<td></td>
<td></td>
<td>.97</td>
</tr>
<tr>
<td>Clinical</td>
<td></td>
<td></td>
<td>.97</td>
</tr>
<tr>
<td>Transformed Wt.</td>
<td></td>
<td>.00</td>
<td>.0005</td>
</tr>
<tr>
<td>Non-clinical</td>
<td></td>
<td></td>
<td>.0005</td>
</tr>
<tr>
<td>Subclinical</td>
<td></td>
<td></td>
<td>.0005</td>
</tr>
<tr>
<td>Clinical</td>
<td></td>
<td></td>
<td>.0005</td>
</tr>
</tbody>
</table>
### Table 15: Two Cluster Solution

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>Predicted Group</th>
<th>Student</th>
<th>Clinical</th>
<th>Total</th>
<th>Percent Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td></td>
<td>72</td>
<td>129</td>
<td>201</td>
<td>35.82%</td>
</tr>
<tr>
<td>Clinical</td>
<td></td>
<td>44</td>
<td>6</td>
<td>50</td>
<td>12.00%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>116</td>
<td>135</td>
<td>251</td>
<td>31.08%</td>
</tr>
</tbody>
</table>

### Table 16: Three Cluster Solution

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>Predicted Group</th>
<th>Non-clinical</th>
<th>SubClinical</th>
<th>Clinical</th>
<th>Total</th>
<th>Percent Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>79</td>
<td>34</td>
<td>20</td>
<td>133</td>
<td>59.40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td>35</td>
<td>17</td>
<td>68</td>
<td>51.47%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>11</td>
<td>35</td>
<td>50</td>
<td>70.00%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99</td>
<td>80</td>
<td>72</td>
<td>251</td>
<td>59.36%</td>
</tr>
</tbody>
</table>
reporting the highest use of Task-oriented coping and the clinical group reporting the lowest use of Task-oriented coping. As expected, Emotion-oriented coping showed a gradual increase across the groups with the clinical group reporting the highest use of Emotion-oriented coping. Distraction coping was the only variable that did not follow the expected pattern of results. Although the non-clinical group had the lowest use of Distraction-oriented coping, and differed significantly from the sub-clinical group, the non-clinical group was not significantly different than the clinical group on this variable. Social Diversion showed a gradual decrease from the non-clinical group to the clinical group as expected according to the continuity hypothesis.

Weight preoccupation increased across the three groups with the non-clinical group reporting the least weight preoccupation, followed by the sub-clinical group and clinical group. Stress showed a gradual increase from the non-clinical group to the sub-clinical group and the clinical group although the post hoc analysis indicated that stress scores were not significantly different across the groups. Overall, the results of these analyses support the continuity hypothesis. The results of this study show evidence of both continuity and discontinuity. When analyses are conducted based on categorizing samples according to diagnostic criteria (e.g. a non-clinical group versus a clinical group) evidence of discontinuity was seen. When groups were arrayed on a broader spectrum of weight preoccupation with groups representing non-clinical, sub-clinical, and clinical samples there was evidence for discontinuity.
Summary of Results

Reliability analyses reflect the high internal consistency of the measures used in this study. Obtained means and standard deviations were all in accordance with expectations set out in previous research with these measures.

Results of the correlation analyses supported the hypotheses that the subscales of the general coping styles (CISS), namely Task, Emotion, and Distraction were positively correlated with respective subscales (Instrumental, Emotional-preoccupation, and Distraction) on the health specific coping measure (CHIP). Correlational analyses among the predictor variables (stress, general coping styles, and health-specific coping styles) and the dependent variables (eating disorder symptoms, weight preoccupation, anxiety, and depression) showed that Emotion-oriented coping on the CISS was significantly and positively related to Autonomic-emotional State Anxiety, Cognitive-worry State Anxiety, and Total State Anxiety. Emotional-preoccupation on the CHIP was also positively associated with Cognitive-worry State Anxiety and Total State Anxiety measures. Stress was significantly and positively associated with Autonomic-emotional State Anxiety. Social Division was significantly and negatively associated with Cognitive-worry State Anxiety and with Total State Anxiety.

A series of multiple regression analyses were conducted to determine the amount of variance in each of the dependent measures accounted for by each predictor variable. A separate regression analysis was performed for eating disorder symptomatology, weight preoccupation, Total State Anxiety, Autonomic-emotional State Anxiety, Cognitive-worry State Anxiety, and depression. A two-phase modeling procedure was used with the
first phase of the model including stress and the subscales of the general coping styles (Task, Emotion, Distraction, and Social Diversion) as predictor variables. A step-wise model selection procedure was used. Significant predictors from phase one were retained and entered into the second phase of the model at which point the CHIP subscales (Instrumental, Emotional-preoccupation, Distraction, and Palliative) were also entered into the analyses using the step-wise procedure. It was predicted that Task-oriented coping, Social Diversion, Emotion-oriented coping and Distraction would predict variance in each of the dependent measures. Instrumental, Emotional-preoccupation and Distraction coping were also hypothesized to predict variance in each of the dependent measures.

The individual regression analyses (analyses 1, 2, and 6) in which eating disorder symptomatology, weight preoccupation, and depression were the dependent measures respectively were not significant. This finding suggests that stress, general coping styles, and health-specific coping styles did not predict variance in eating disorder symptomatology, weight preoccupation, or depression in this sample.

In the third regression analysis Total Anxiety served as the criterion variable. It was predicted that Task-oriented coping and Social Diversion (CISS) would be negatively associated with Total State Anxiety and would predict variance in this criterion variable. Emotion-oriented coping and Distraction (CISS) were predicted to be positively associated with Total State Anxiety and were also expected to predict variance in Total State Anxiety. It was also predicted that Instrumental coping (CHIP) would be negatively associated with Total State Anxiety and that Emotional-preoccupation (CHIP) would be
positively associated with Total State Anxiety. In this analysis Emotion-oriented coping accounted for 25% and Social Diversion accounted for an additional 8% of variance in Total State Anxiety. Emotion-oriented coping is associated with higher levels of anxiety suggesting that the use of Emotion-oriented coping strategies may lead to greater distress. The negative relationship between Social Diversion and Total State Anxiety suggests that Social Diversion has beneficial effects in terms of reducing overall anxiety.

In the fourth regression analysis, Autonomic-emotional State Anxiety served as the criterion variable. It was predicted that Task-oriented coping and Social Diversion (CISS) would be negatively associated with Autonomic-emotional State Anxiety and that stress, Emotion-oriented coping, and Distraction would be positively associated with Autonomic-emotional State Anxiety. It was also predicted that subscales of the health-specific coping measure would explain additional variance in Autonomic-emotional State Anxiety. More specifically, it was predicted that Instrumental coping, Emotional-preoccupation, and Distraction would explain variance in Autonomic-emotional State Anxiety.

In the fourth regression analysis, Emotion-oriented coping did explain 13% of the variance in Autonomic-emotional State Anxiety. The subscales of the health-specific coping measure did not account for any additional variance in Autonomic-emotional State Anxiety over and above that explained by Emotion-oriented coping. This finding suggests that the use of Emotion-oriented coping lead to increased autonomic arousal in women with eating disorders.
The fifth regression analysis was conducted with Cognitive-worry State Anxiety serving as the outcome measure. Predictions with regard to independent measures were the same as those described in the fourth analysis. In this analysis Emotion-oriented coping and Social Diversions accounted for 30% and 11% of the variance in Cognitive-worry State Anxiety respectively. Other variables did not account for additional variance in Cognitive-worry State Anxiety.

The research conducted with the clinical sample partially replicated previous research with a non-clinical sample. More specifically, previous research (Denisoff, 1995) examined the relationships among stress, general coping styles (Task, Emotion, Distraction, and Social Diversions) as assessed by the CISS and weight preoccupation in a non-clinical sample of female university students. The research with the clinical sample includes the same variables in addition to other variables. Investigating the same variables in two separate samples allows for the investigation of whether the pattern of results obtained in each sample is the same or different. A similar pattern of results across samples would represent continuity while a different pattern of results would represent discontinuity. It was predicted that a similar pattern of results would be observed in both the non-clinical and clinical samples thereby representing continuity of weight preoccupation across these samples. This hypothesis was tested by comparing the slope between the sample and each main effect variable for the non-clinical sample with the slope for the sample and each main effect variable for the clinical sample. Results indicated that the slopes of Task-oriented coping and weight preoccupation and Emotion-oriented coping and weight preoccupation were different across the two samples. These
results focusing on a comparison of results between a non-clinical sample and a clinical sample support discontinuity.

Another way to test continuity is to create groups in order to examine the absolute levels of variables across the groups. A further test of the continuity hypothesis was conducted in order to test for continuity across levels of severity of weight preoccupation. The non-clinical sample was divided into two groups based on the degree of weight preoccupation. The tertiary classification has been used by other researchers to differentiate groups (Omsted & Garner, 1986; Endler, 1983; 1997). Three groups varying on degree of weight preoccupation were then used to examine levels of coping, stress, and weight preoccupation across the groups. Two cluster analyses were conducted to determine whether a three group classification system was appropriate for this sample. Results showed that a three-group solution (non-clinical, sub-clinical, and clinical) was appropriate for this sample.

Subsequent analyses investigated the patterns of results of stress, coping styles (Task, Emotion, Distraction, and Social Diversion), and weight preoccupation across the newly established groups (non-clinical, sub-clinical, and clinical). Task, Emotion, and Social Diversion coping were arrayed across the continuum of non-clinical, sub-clinical, and clinical groups. Stress was also arrayed across the groups with the non-clinical group reporting the least stress, followed by the sub-clinical group and the clinical group. A post hoc comparison of means indicated that stress did not differ significantly across the groups. Distraction coping did not follow the expected pattern of results. With regard to Distraction coping, the non-clinical group was not significantly different than the clinical
group. Overall, the observed patterns of results suggest continuity across the groups and lend support for the continuity hypothesis. Although no previous studies have examined coping and weight preoccupation with regard to continuity, these results are consistent with previous research investigating the continuity of various behavioural and psychological variables (Franko & Omori, 1999; Garner et al. 1983; Hesse-Biber, 1989; Polivy & Herman, 1987; Ruderman & Besbeas, 1992; Stice et al. 1996;1998).
Chapter IV
Discussion

General Overview

This study was designed to investigate the way in which stress, general coping styles, and health-specific coping styles relate to eating disorder symptomatology, weight preoccupation, Total State Anxiety, Autonomic-emotional Anxiety, Cognitive-worry anxiety, and depression. Stress is an inherent part of life, and prolonged stress has been associated with deleterious health outcomes (Selye, 1976). The way an individual responds to stress might account for the fact that some individuals are unable to function under high levels of stress while others appear to continue relatively unhindered. One response to stress is coping -- coping has been conceptualized as an individual’s cognitive and behavioural attempts to reconcile perceived discrepancies between situational demands and personal capacity or competence (Endler, Parker, & Summerfeldt, 1993; 1998). Coping responses includes *styles* of responding, which are enduring personality traits, and *strategies* which are specific cognitions, behaviours, and perceptions used in particular situations.

Researchers investigating coping styles have identified the three distinct coping styles, of task-, emotion-, and avoidance-oriented coping (Endler & Parker, 1999a). In previous research, task-oriented coping has either had no link to health outcomes or was negatively associated with negative health outcomes (Endler, 1988; Nowack, 1989). Emotion-oriented coping styles, meanwhile, have been positively associated with negative health outcomes such as psychopathology and distress (Endler, 1988; 1997;
Endler & Parker, 1994; Nowack, 1989). Although avoidance-oriented coping styles can be effective in the short term (Miller et al., 1988; Miller & Mangan, 1983; Nowack, 1989) they are problematic in the long term because they delay dealing with the stressor (Cronkite & Moos, 1984; Menaghan, 1982).

Most of the previous research on coping has used measures of general coping styles to assess how an individual responds to specific health concerns, but the question of how well these styles predict coping with specific health concerns is an ongoing debate (Lazarus & Folkman, 1984). In the present study, both general and health-specific coping measures were used to assess how women with eating disorders actually respond to their disorder.

It was predicted that Task-oriented coping and Social Diversion would be negatively associated with poor health outcomes and that Emotion-oriented coping and Distraction would be positively associated with poor health outcomes. It was also predicted that health-specific coping strategies would explain variance in eating disorder symptomatology, weight preoccupation, anxiety, and depression over and above that accounted for by the general coping styles. More specifically, it was hypothesized that Instrumental coping would be negatively associated with poor health outcomes, but that Emotional-preoccupation and Distraction would be positively associated with poor health outcomes.

The following discussion describes some of the main findings, such as the reliability of the measuring instruments, the relationships among the general and health-specific coping measures, and the relationships among the coping measures and the
criterion variables. It then provides an interpretation of the results related to the hypotheses of this study.

Internal Consistency of the Measures

The alpha reliability analyses suggested that the coefficients were high for all scales and subscales used in this study. Alpha reliabilities from the clinical sample ranged from .76 on the Palliative Coping subscale of the CHIP to .93 for weight preoccupation comprised of the subscales Drive for Thinness, Bulimia, and Body Dissatisfaction of the Eating Disorder Inventory. Reliabilities for the non-clinical sample ranged from .73 for the Distraction subscale of the CISS to .93 for the Bulimia subscale of the Eating Disorder Inventory. Alpha reliabilities were not computed for the Life Experiences Survey because this measure merely requires endorsement of events that have occurred over the past year and the items are not intended to have internal consistency.

Relationships among the Study Variables

Prior to conducting the analyses, Pearson Product moment correlations were calculated to determine the degree of linear relationship between the general coping measure (CISS) and the health-specific coping measure (CHIP). As predicted, Task-oriented coping on the CISS was significantly and positively associated with Instrumental coping on the CHIP. Emotion-oriented coping on the CISS was also significantly and positively associated with Emotional-preoccupation on the CHIP. The Distraction subscales of the CISS and the CHIP were also significantly and positively correlated.
It was also found that Emotion-oriented coping and the Distraction subscale of the CISS were significantly and positively associated with Palliative coping on the CHIP, and that Task-oriented coping on the CISS was significantly and positively associated with Distraction coping on the CHIP.

Pearson product moment correlations were also computed to assess the degree of linear relationships among the predictor and criterion variables. Emotion-oriented coping on the general coping measure (CISS) was significantly and positively associated with Autonomic-emotional State Anxiety, Cognitive-worry State Anxiety, and Total State Anxiety. Emotion-oriented coping includes “feeling anxious about not being able to cope” and “becoming tense.” The use of emotion-oriented coping has been found to be positively related to psychological distress, such as state anxiety, while the use of instrumental coping has been related to lower levels of state anxiety (see Endler, Parker, & Summerfeldt 1993 for a review). It is not surprising that an individual who copes with stressors in an emotion-oriented style would also report high levels of anxiety. An emotion-oriented coping style is similar to rumination and may itself lead to increased state anxiety.

Social Diversion of the Avoidance-oriented coping subscale of the CISS was significantly and negatively associated with Cognitive-worry State Anxiety and Total State Anxiety. Social Diversion includes strategies such as “spending time with a special person,” “visiting a friend,” and trying to be with other people.” It is possible that this coping strategy, although it involves avoiding the stressor, has the benefit of providing social support for the individual. Social support has been shown to decrease the effects of
stress, to help an individual cope with stressors, and to reduce the likelihood that stress will lead to poor health (Sarason, Sarason, & Gurung, 1997). Stress was significantly and positively associated with Autonomic-emotional State Anxiety.

Multiple Regression Analyses

Multiple regression analyses were conducted in order to determine the amount of variance in each of the dependent measures (eating disorder symptomatology, weight preoccupation, Total State Anxiety, Autonomic-emotional Anxiety, Cognitive-worry Anxiety, and depression) accounted for by each of the predictors and to determine whether health-specific coping strategies predicted variance in the outcome measures over and above that accounted for by general coping strategies. Predictor variables included stress, general coping styles, and health-specific coping strategies. Outcome variables were eating disorder symptomatology, weight preoccupation, state anxiety, and depression.

A two-step modeling procedure was used with the first phase of the regression analysis including stress and the CISS subscales of Task, Emotion, Distraction and Social Diversion as predictor variables. These effects were tested using the step-wise entry procedure for linear regression analyses. Significant predictors from the first phase were entered into the second phase of the model, at which point the CHIP subscales (Instrumental, Emotional-preoccupation, Distraction, and Palliative) were added to the model. Separate analyses were run for each of the dependent measures listed above. Various coping scales have been used to assess coping with health problems and illnesses making much of the work in this area difficult to interpret (see Endler et al. 1998; Endler
There is also concern about how well measures of general coping styles predict coping with specific health concerns (Lazarus & Folkman, 1984). The CHIP is a psychometrically sound, health-specific coping measure that can be meaningfully compared across samples with various health concerns.

The analyses that tested whether stress, general coping styles, and health-specific coping styles predicted variance in eating disorder symptomatology, weight preoccupation, and depression did not produce any significant results. Other researchers investigating coping styles, negative body image and eating disturbances found that the use of Emotion-oriented coping and Distraction was associated with greater eating disturbance and negative body image in a non-clinical sample (Koff & Sangani, 1997). Similarly, Denisoff and Endler (1995) found that the use of Emotion-oriented coping was associated with greater weight preoccupation. Although many of the hypotheses were not confirmed in this study, an inspection of the confidence intervals indicates that the results are, in fact, in the direction of the predictions. This suggests that the results are consistent with previous research and with a larger sample, or a more heterogeneous sample, the effects could have been detected.

There are several possible explanations for this finding. It is possible that task-oriented coping, which has been found to be predictive of positive health outcomes in other samples (Denisoff, 1995; Endler et al. 1991; Parker & Endler, 1992), does not have the same effect in this sample. Task-oriented coping strategies include “taking corrective action immediately,” “focusing on the problem to see how it can be solved,” and “thinking about the event and learning from mistakes.” Possibly, task-oriented coping
strategies such as those mentioned above are not as effective in eating disorders because the disorder symptoms may persist for a long time, therefore, taking immediate action or learning from one’s mistakes no longer apply.

Adolescence is the developmental stage during which most eating disorders arise (Smith et al. 1993), but the mean age of women in the clinical sample in this study was 27.46 years. It is likely, therefore, that many of the women in this sample had been dealing with eating disorder symptoms for several years prior to this study. Indeed, researchers have noted that women often struggle with eating disorder symptoms for years before seeking help (Fairburn & Cooper, 1984; Pyle et al. 1981; Welch, Doll, & Fairburn, 1997).

Furthermore, coping styles might not only influence the development of eating disorders but they interact with other variables and perhaps change over the course of the disorder (Welch et al. 1997). Troop and Treasure (1997) reported that helplessness in response to a provoking situation increased the risk of developing an eating disorder while mastery decreased the risk. Depending on how many times one has sought treatment and how successful previous attempts had been, one might change the way one copes with the illness and might be more or less confident of one’s ability to cope at this time. It has been suggested that people who are repeatedly in uncontrollable situations experience helplessness and become increasingly passive in their coping efforts (Folkman et al. 1986).

Researchers have also reported that women with eating disorders report less confidence in their problem solving abilities than control subjects (Neckowitz &
Morrison, 1991; Soukup et al. 1990). The natural history of eating disorders and attempts to cope with them early in their development might be obscured by secondary physical and psychological changes that accompany full syndrome eating disorders (Fairburn & Beglin, 1990; Patton, 1988).

In this research, the analysis including stress and CISS coping styles accounted for significant variance in Total State Anxiety. In this analysis, Emotion-oriented coping accounted for 25% of the variance in Total State Anxiety. This finding is consistent with previous research linking the use of Emotion-oriented coping with negative health outcomes such as psychopathology and distress (Endler, 1988; 1997; Endler & Parker, 1994, Nowack, 1989). Conversely, researchers have reported that active coping strategies such as problem solving have been associated with lower levels of anxiety in community samples (Holohan & Moos, 1985; Kendler, Kessler, Heath, Neale, & Eaves (1991) and in clinical samples (Brodbeck & Michelson, 1987; Fairbank Hansen, & Fitterling, 1991; Vollrath & Angst, 1993).

Social Diversion—an avoidant coping style—accounted for an additional 8% of the variance in Total State Anxiety. In student samples, eating pathology has previously been associated with avoidant coping (Denisoff & Endler, 2000; Mayhew & Edlemann, 1989), however, it is possible that Social Diversion functions as a source of social support, thereby accounting for the negative relationship between the use of Social Diversion and Total State Anxiety. Researchers have demonstrated that social support reduces psychological distress such as anxiety and depression during times of stress (Flemming, Baum, Gisriel, & Gatchel, 1982; Sarason et al. 1997). Several studies suggest
that, although eating disorder subjects may have access to a similar amount of social support as control subjects they might still feel dissatisfied with their support network and might feel more anxious and alienated from others (see Bennet & Cooper 1999 for a review). It has been reported that bulimic women perceived less support from family and friends and reported more negative interactions and conflict than a non-eating disordered sample (Grissett & Norvell, 1992).

In assessing the amount of variance in Autonomic-emotional State Anxiety predicted by stress and coping styles, it was found that Emotion-oriented coping accounted for 13% of the variance in the Autonomic-emotional State Anxiety. No other predictors accounted for additional variance in Autonomic-emotional State Anxiety in this analysis. The analyses that assessed the amount of variance in Cognitive-worry State Anxiety indicated that both Emotion-oriented coping and Social Diversion predicted variance in this outcome measure. Emotion-oriented coping accounted for 32% of the variance in Cognitive-worry State Anxiety and Social Diversion accounted for an additional 11% of variance. Previous studies have noted that avoidance-oriented coping strategies (such as Social Diversion) may be effective in the short-term for reducing pain, stress, or anxiety (Suls & Fletcher, 1985). In fact, Social Diversion might provide social support, a factor that has been associated with the reduced likelihood of poor health outcomes (Flemming et al.1982; Sarason et al.1997). Health-specific coping strategies did not account for additional variance in Cognitive-worry State anxiety.

The CISS (Endler & Parker, 1999a) is a trait-like measure of coping in that it assesses how an individual usually copes with stress. The CHIP (Endler & Parker,
1999b) is more of a state-like measure of coping in that it assesses how one copes with a health-specific concern. To date, only two previous studies have attempted to investigate state-like coping in eating disorder samples. Neckowitz and Morrison (1991) investigated coping strategies of normal-weight bulimic women in intimate and non-intimate stressful situations and Troop et al. (1994) asked women how they coped with a self-identified stressor. The latter did not report the specific stressors identified by the women in their sample. In the present study, women were asked how they cope with their eating disorder. It is possible that, in responding to the questionnaire, women had distinctly different stressors in mind. Some might have responded based on how they cope with physical symptoms such as vomiting or bingeing while others may have responded based on how they cope with their psychological symptoms such as depression. Specifying particular symptoms (i.e. physical versus psychological) might produce more informative results about coping with eating disorders.

In previous research examining relationships among stress, coping styles, and weight preoccupation it was found that the use of Emotion-oriented coping and distraction was associated with higher weight preoccupation scores. The use of Task-oriented and Social Diversion coping was associated with less weight preoccupation. Similarly, Koff and Sangani (1997) investigated coping, negative body image and eating disturbance in a non-clinical sample of college women. They reported that the higher use of Emotion-oriented coping and Distraction was associated with higher scores on the Eating Attitudes Test. It was suggested that Task-oriented coping might act as a buffer against negative health outcomes (Denisoff & Endler, 2000) and that Emotion-oriented
coping might be a risk factor for the development of more severe eating disorders (Denisoff & Endler, 2000; Koff & Sangani, 1997).

**Test of the Continuity Hypothesis**

A controversy has existed for several decades as to whether various clinical disorders such as eating disorders, anxiety, and depression occur on a continuum ranging from normal behaviour to clinical disorders (Coyne, 1994; Endler & Kocovski, [in press]; Flett et al. 1997; Polivy & Herman, 1987; Ruderman & Besbeas, 1992; Shisslak et al. 1995; Stice et al. 1996; Vredenburg et al. 1993). The issue of continuity involves determining whether symptoms differ in degree (i.e., a quantitative difference) or in kind (i.e., a qualitative difference). The categorical approach based on the DSM-IV (APA, 1994) diagnostic system fits the medical model better and might be easier to handle statistically (Szmukler, 1985).

Researchers find that clinical disorders such as anxiety (Endler & Kocovski, [in press]), depression (Flett et al. 1997; Vredenburg et al. 1993), and eating disorders (Garner et al. 1983; Hesse-Biber, 1989; Lowe et al. 1996; Polivy & Herman, 1987; Ruderman & Besbeas, 1992; Stice et al. 1996; 1998) seem to be continuous in the population and are well suited to investigation from a dimensional approach. Flett et al. (1997) reviewed evidence for continuity in depression in four domains: phenomenological, typological, etiological, and psychometric. Overall, evidence supported the continuum model of depression (Flett et al. 1997). Several studies have also supported the continuity perspective with regard to eating disorders (Lowe et al. 1996; Pike & Rodin, 1991; Stice et al. 1996; Striegel-Moore et al. 1986).
The question of continuity involves two distinct but related questions. One of these questions asks whether levels of eating disorder symptoms vary in severity within a sample. The other question has to do with whether or not findings obtained in a particular sample (i.e., a non-clinical sample) are representative and generalizable to other samples (i.e., clinical samples)? Vredenburg et al. (1993) make a cogent argument for continuity between depressed college students and depressed patients concluding that empirical findings do not support abandoning the use of college students in depression research. Coyne (1994) argues that clinical depression is very different from distress in college students. He asserts that not only are college student samples not appropriate analogs for depression but that focusing research on non-clinical samples ignores and negates more severe depression. Flett et al. (1997) suggest that the issue of continuity is complex. They propose that a differentiated framework in which phenomenological, typological, etiological, and psychometric continuity are all considered and argue that theory and research in the area would benefit if researchers recognized both continuities and discontinuities across samples.

To date, there has been research support for both the continuity and the discontinuity perspective with regard to eating disorders. Support for the continuity hypothesis of eating disorders was reported in several studies (Laessle, Tuschl, Waadt, & Pirke, 1989a; Lowe et al. 1996; Stice et al. 1996; Stice et al. 1998). Other researchers reported findings supporting the discontinuity perspective of eating disorders (Dykens & Gerrard, 1986; Garfinkel et al. 1995; Katzman & Wolchik, 1984; Laessle et al. 1989a; Ruderman and Besbeas, 1992).
Nylander (1971) suggested that symptoms of AN occur on a continuum with full syndrome AN at the extreme point. Observing that fatigue, increased interest in food, depression and anxiety, symptoms typically associated with AN, were prevalent among adolescent females, Nylander (1971) argued that dieting might produce starvation symptoms that could eventually lead to the development of severe forms of eating disorders. According to the continuity hypothesis, therefore, full syndrome eating disorders fall at the extreme end of a continuum of eating concerns and behaviours (Pike & Rodin, 1991; Striegel-Moore et al. 1986) and variables that distinguish levels of severity of eating pathology should be arrayed along the continuum. In the present study, the small number of women in the various diagnostic categories (AN and BN) did not allow for comparisons across these diagnostic categories.

Proponents of the discontinuity viewpoint argue that individuals with eating pathology are categorically different from individuals with sub-clinical levels of eating problems or no eating problems (Bruch, 1973; Crisp, 1965; Selvini-Palazzoli, 1978). It is unclear whether eating disorder behaviour occurs as a developmental progression with full syndrome eating disorders at the extreme (Button & Whitehouse, 1981; Garner, Olmsted, Polivy, & Garfinkel, 1984; Killen et al. 1994).

Although previous research has examined the question of continuity with regard to various eating attitudes, behaviours, personality variables, and psychopathology believed to be associated with eating disorders, there have not been any studies examining the relationships among stress, coping styles, and weight preoccupation across non-clinical and clinical samples.
This study provided an opportunity to test for continuity by comparing the pattern of results obtained with a non-clinical sample to results obtained with the clinical sample. Previous research examined the relationships among stress, general coping styles (Task, Emotion, Distraction, and Social Diversion) and weight preoccupation in a non-clinical sample of university women (Denisoff, 1995; Denisoff & Endler, 2000). The current research examined relationships among these same variables in a clinical sample.

Cross-sectional research can be used to determine whether patterns of results obtained from non-clinical and clinical samples are continuous and might shed some light on the questions of comparability. The first analyses in this study support the notion of discontinuity and suggest that the relationships between coping styles and weight preoccupation are qualitatively different in the non-clinical and clinical groups.

One way to test for continuity is to observe the pattern of relationships across groups. An additional test of the continuity hypothesis was conducted after categorizing the two (non-clinical and clinical) samples into three groups. The non-clinical sample was divided into a non-clinical group and a sub-clinical group based on degree of weight preoccupation. The top 1/3 of women from the non-clinical group were selected based on high scores on weight preoccupation. Similar procedures for dividing groups have been reported by Endler (1983; 1997) and by Olmsted and Garner (1986). A cluster analysis indicated that this classification was, in fact, appropriate as evidenced by the degree of correct classifications corresponding to each revised group. According to the continuity hypothesis, certain variables are arrayed in a continuous fashion across levels of severity of disorder represented by the different groups. Indeed, results from this
analysis indicated that the means of Task-oriented, Emotion-oriented, Social Diversion coping and stress followed the predicted pattern. Overall, the observed pattern of results provided evidence in support of the continuity hypothesis in this analysis. This finding is consistent with previous research supporting the continuity hypothesis in eating disorders (Franko & Omori, 1999; Garner et al. 1983; Hesse-Biber, 1989; Kirkley et al. 1988; Lowe et al. 1996; Polivy & Herman, 1987; Ruderman & Besbeas, 1992; Russell, 1979; Stice et al. 1996; Stice et al. 1998). Stice and colleagues (1998) suggested that there has been general support for continuity when examining variables such as weight concern, whereas discontinuity was reported when general psychological symptoms were assessed.

To date, there have not been any studies investigating coping styles across normal, sub-clinical, and clinical samples. It is possible that coping styles moderate the relationships between weight concerns and affective psychopathology. Researchers have found that the use of Emotion-oriented coping has been positively associated with eating problems in non-clinical samples (Denisoff & Endler, 2000; Janzen et al 1992; Koff & Sangani, 1997; Mayhew & Edelman, 1989; Shatford & Evans, 1986). Conversely, the use of Task-oriented coping has been negatively associated with eating problems in non-clinical samples (Denisoff & Endler, 1995; 2000; Janzen et al 1992). Similar associations have been observed in clinical samples (Soukup et al. 1990; Troop et al 1994; 1998). Overall, the findings from this study support the continuity hypothesis when investigated dimensionally across three groups of women with varying degrees of weight preoccupation. Coping styles were arrayed across the three different groups in the predicted pattern. For the most part, coping styles were able to differentiate the non-
clinical group from sub-clinical group and to differentiate the sub-clinical group from the clinical group. Women who reported greater weight preoccupation tended to use more Emotion-oriented coping while those who reported less weight preoccupation reported using more Task-oriented coping. There was a graduated change in these relationships across the three groups. Overall, the issue of continuity is complex. The continuity-discontinuity issue can be placed with the context of the DSM-IV (APA, 1994), which is basically a typology, as opposed to most personality research which is dimensional. If eating disorders are viewed as an illness only if diagnostic criteria are met then comparisons across samples will show evidence of discontinuity. If, however, the full spectrum of disordered eating is considered dimensionally, then continuities will be seen. Polivy and Herman (1987) explored similarities between normal dieters and individuals with eating disorders to investigate the question of continuity between normal and abnormal eating behaviour. They pointed out that the question of whether normal eating, normal dieting, and eating disorders offers much room for investigation. Although it appears that some aspects of eating behaviours are continuous, the factors that determine whether an individual will progress along the continuum have not been determined. Results should be interpreted in light of the number and type of samples studied and the method of analyses used.

One limitation of this study was the lack of diagnostic information available for the non-clinical sample. It should be noted that the sub-clinical group was derived from a tertiary classification of the non-clinical group based on their scores on weight preoccupation and was not comprised of a formally identified partial syndrome group of
women. This approach is quite different from studies that identify a sub-clinical group on the basis of clinical symptomatology that falls short of meeting full diagnostic criteria. Clinical interviews were not conducted with the student group and it was not possible to determine the number of students who may have actually met the criteria for an eating disorder as opposed to those who had some symptoms.

**Theoretical Implications**

Results from this study suggest that Emotion-oriented coping and Social Diversion were related to greater state anxiety in the clinical sample. Previous research studies have found Task-oriented coping to be associated with good psychological and physical health outcomes (Denisoff & Endler, 2000; Endler, Edwards, & Vitelli, 1991; Parker & Endler, 1992). It is possible that Task-oriented coping might be beneficial during highly stressful times but during times of low stress there may be few physical or mental health benefits evident.

For example, in explaining the role of social support in moderating the effects of stress, both the direct effects hypothesis (see Cohen & Hoberman, 1983; Cohen & McKay, 1984; Pilisuk, Boylan, & Acredolo, 1987) and the buffering hypothesis (see House, Umberson, & Landis, 1988) have received research support. The direct effects hypothesis maintains that moderating variables are generally beneficial regardless of level of stress. Alternatively, the buffering hypothesis suggests that the beneficial effects of moderating variables are evident during periods of high stress (Taylor, 1999 p.225). It is possible that under higher levels of stress, Task-oriented coping might have functioned as a moderator between stress and health outcomes.
Although this research investigated state anxiety as an outcome measure, it is also possible that trait anxiety might function as either a mediator or moderator of the stress and/or coping responses. According to the interaction model of anxiety, stress, and coping (Endler, 1988; 1997), person variables (e.g. trait anxiety and coping styles) interact with one another and with situation variables (e.g. life events and illness) which themselves interact with one another. Person and situation interactions could lead to the perception of danger or threat, thereby leading to changes in state anxiety and subsequently to changes in coping responses, physiological reactions, and mental and physical health (Endler, 1988).

Trait anxiety was not assessed in this research because the high volume of research conducted at the clinical site made it necessary to limit the number of measures added (i.e. because of time constraints). It is possible, however, that high levels of trait anxiety might be associated with an individual's appraisal of her ability to cope with stress and might lead to the use of less effective coping strategies. A sense of mastery or of seeing oneself as in control of forces that affect one's life, might render one more able to assert one's self and use more effective coping reaction in response to stress (Lazarus, 1966).

To date, most studies investigating coping with eating disorders have used trait measures of coping, assessing how an individual usually copes with stressors. There is some debate as to how well trait measures of coping actually predict state processes of coping that individuals actually use when faced with real-life stressors. With regard to situation specific coping Neckowitz & Morrison, (1991) reported that the women with
bulimia perceived intimate relationship difficulties as more threatening than non-intimate relationship difficulties and used more escape-avoidance than a comparison group. Troop et al. (1994) found that anorexic and bulimic women used more avoidance than controls when responding to self-selected stressors. Bulimic women also used more wishful thinking and sought less social support than controls. They report that although the numbers in their sample did not allow for a detailed analysis of coping in response to different problems, there did appear to be differences when subjects nominated psychological problems.

It has been noted that the nature and type of stressor plays an important role in relating coping strategies and positive physical and mental health. For example, task-oriented coping was found to be most efficacious in controllable stressful situations while emotion-oriented coping was most efficacious in uncontrollable stressful situations during childhood and adolescence (Compas, Malcarne, & Fondacaro, 1988). Situational control and perceived control have also been shown to affect coping (Endler, Speer, Johnson, & Flett, 2000). Individuals who had perceived control in a situation used task-oriented coping more whereas, individuals who perceived that they did not have control tended to use more emotion-oriented coping. Vitaliano et al. (1990) found that when situations were perceived as changeable, task-oriented coping was negatively associated with depression. When the stressor was perceived as not changeable, however, there was no relationship between coping and depression. Although perception of control was not assessed in this study, it is possible that the extent to which one felt control over their
illness might have affected their coping responses. Future research should assess perceived control as it relates to coping with eating disorders.

In this study, the CHIP was used as a state-like, situation-specific measure to assess coping with illness. The lack of significant findings might be explained by the diversity of symptoms in eating disorders including restricting, purging, physical discomfort, weight and body image concerns, anxiety, and depression. Eating disorders are recognized as multidimensional (Garner et al. 1983) and various scales to assess these disorders have focused on different aspects of the disorder such as attitudes and behaviours related to anorexia nervosa (Goldberg, Halmi, Eckert, Casper, Davis & Roper, 1980), and bulimia nervosa (Hawkins & Clement, 1980).

Parker and Endler (1992) noted an increase in research examining the role of coping styles and strategies in reaction to stressful situations especially in regard to health specific stressors in general. This research has provided some evidence that different coping styles and or strategies might be more effective for certain types of stressors. For example, avoidance-oriented coping might be efficacious in the short term for reducing anxiety, pain or stress (Brown, Nicassio, & Wallston, 1989; Delamanter, Kurtz, Bubb, White & Santiago, 1987; Peterson, 1989; Suls & Fletcher, 1985), while task-oriented coping might be more beneficial over the long term (Endler & Parker, 1999b).

For example, women might cope with their physical symptoms with more instrumental coping strategies but might rely on emotional-preoccupation when dealing with psychological concerns. Indeed, Troop et al. (1994) reported that there did appear to be differences in coping among the women in their sample when subjects nominated
psychological problems as the stressor to which they responded. Therefore, specifying particular symptoms when assessing coping may produce different results.

Asking women how they deal with their eating disorder probably evokes different concerns for different individuals. Some might respond to how they deal with physical concerns associated with eating disorders, while others might respond based on how they deal with psychological problems related to eating disorders. In addition, eating disorders encompass a complex set of physical, psychological, and social concerns (Casper et al. 1980; Garfinkel, 1995 Garfinkel et al. 1980; Garner et al. 1983), and how one copes with one can be markedly different from how one copes with another. Quite possibly, different types of coping might be more efficacious in dealing with different aspects of the disorder.

For example, some aspects of an eating disorder might be seen as controllable and might be best approached with a task-oriented coping while others might be perceived as uncontrollable and would be best handled by an emotion-oriented coping style (Compas et al. 1988; Endler et al. 1997; Vitaliano, 1990)

Theoretical Implications Regarding the Continuity Hypothesis

The issue of whether various clinical disorders occur on a continuum, varying in severity from one another, or are discrete categories has been debated for years (Compas, Ey, & Grant, 1993; Coyne, 1994; Depue & Monroe, 1978; Endler & Kocovski, [in press]; Flett, Vredenburg, & Krames, 1997; Nolen-Hoeksema & Girgus, 1994). The debate has practical and theoretical implications (see Flett, Vredenburg, & Krames for a discussion of continuity in depression). It has been suggested that the categorical approach is easier
to handle statistically and fits a medical model better (Szmukler, 1985). The questions of whether eating disorders occur on a continuum was initially suggested by Nylander (1971). In an attempt to address the question of whether eating disorders occur on a continuum researchers have investigated linear relationships between numerous behavioural and psychological variables in non-clinical and clinical samples (see Shisslak et al. 1994 for a review). More recently researchers have moved towards testing theoretical models of continuity across more than two groups believed to represent varying degrees of severity of the disorder. According to the continuity hypothesis, the same variables that differentiate controls from subthreshold groups, should also differentiate subthreshold groups from clinical groups. The three groups are expected to be arrayed across the same continuum.

The present research included the examination of stress, general coping styles and weight preoccupation in a clinical sample of women with eating disorders. Previous research examined the relationships among these same variables in a non-clinical sample of university women. Investigation of the same variables in two separate samples allowed for the statistical investigation of the pattern of results across these samples. A similar pattern of results across the samples would represent continuity while a different pattern of results would represent discontinuity (Tabachnik & Fidell, 1996, p. 329). The hypothesis of continuity across samples was tested with two different approaches. In the first test sample (clinical and non-clinical) by other predictor (coping) interactions were examined to see whether they were similar or different. The same slope in both samples for a given coping style would represent continuity while a different slope or significant
interaction between sample and predictor provides evidence of discontinuity. Findings indicated that the slope of the predictors of Task and Emotion-oriented coping showed evidence of being different across the clinical and non-clinical samples, providing evidence of discontinuity. These results suggest that these samples are not derived from the same population but are discrete samples. This finding is consistent with previous research that examined categorical differences between non-clinical and clinical samples (Crisp, 1973; Selvini-Palazzolli, 1978).

These findings suggest that results obtained on the association between coping and weight preoccupation with non-clinical samples should not be indiscriminately generalized to clinical samples. Weight preoccupation in a non-clinical sample is qualitatively different from that in the clinical sample and not merely a difference in quantity or severity of weight preoccupation. This finding might be explained by the possibility that women who are able to cope effectively with weight preoccupation do not go on to develop full-blown eating disorders. Conversely, women who lack effective coping mechanisms might develop eating disorder symptoms in response to stress. For example, Heatherton and Baumeister (1991) suggested that binge eating might be a form of avoidance. It was suggested that binge eating might draw attention away from other areas of concern such as poor self-esteem. Meanwhile, Rodin, Striegel-Moore, and Silberstein (1990) suggested that eating disorder symptoms might function to displace feelings of incompetence.

While initial analyses testing for continuity using two discrete groups (non-clinical and clinical) did not provide evidence of continuity, subsequent analyses using a
more dimensional approach did provide support for the continuity hypothesis in terms of the levels of key variables. When the non-clinical group was divided into two groups based on the degree of weight preoccupation (see Endler, 1983; 1997; Olmsted & Garner, 1986 for similar procedure) they reported, and coping was assessed across the three groups (non-clinical, sub-clinical, and clinical), support for the continuity hypothesis was seen. These results are consistent with previous research supporting the continuity hypothesis of eating disorders (Franko & Omori, 1999; Lowe et al. 1996; Ruderman & Besbeas, 1992; Stice et al. 1996; 1998).

The evidence with regard to the issue of continuity is mixed. Empirical evidence has been provided for both continuity and discontinuity. In this study, the evidence for continuity was more compelling. The study of continuity with regard to eating disorders offers wide latitude for investigation and should be approached from various perspectives including phenomenological, typological, etiological, and psychometric.

**Practical Implications**

The finding of discontinuity between clinical and non-clinical samples has practical implications for future research, as is suggested by the controversy that already exists regarding, the use of non-clinical samples such as students to draw inferences about clinical disorders. Establishing discontinuity for clinical disorders would limit the relevance of psychological literature when it came to full-blown clinical disorders. If research findings using non-clinical samples cannot be generalized to clinical disorders, researchers might have to restrict their focus to clinical samples exclusively (see Flett et al.1997). This study’s finding of discontinuity encourages further comparative research
of this sort and with attention to the types of groups studied and the methods of analyses used.

Researchers have noted that there seem to be both continuities and discontinuities of variables across clinical and non-clinical samples (Endler & Kocovski, [in press]; Flett et al. 1997; Garner et al. 1983; Polivy & Herman, 1987; Ruderman & Besbeas 1992). Procedures for determining continuity and discontinuity are still evolving. One way to assess continuity is to compare the slopes of key variables across samples to see whether they are the same or different. The focus in this approach is to examine how variables are related to each other. Using this method, discontinuity was supported.

Another way of examining the issue of continuity involves creating three groups to examine the absolute levels of the variables as was presented in the second analysis. An examination of the absolute levels of the variables across the non-clinical, sub-clinical, and clinical groups showed evidence of continuity. This is consistent with much of the recent research using discriminant function analyses to test for continuity across samples. Many of these studies do, in fact, report evidence of continuity (Lowe et al. 1996; Ruderman & Besbeas, 1992; Stice et al. 1996; 1998). Overall, it is clear that the issue of continuity of eating disorders is quite complex and cannot be easily reduced to seemingly pristine predictions outlined in models such as the two factor theory (see Polivy & Herman, 1987). Researchers need to continue to investigate the continuity issue from a variety of perspectives such as phenomenological, typological, etiological, and psychometric.
The issue of continuity also has practical implications in terms of treatment intervention. Clinical decisions regarding treatment are generally made based on whether or not a patient has a diagnosed disorder. According to this approach, individuals who have sub-clinical symptoms might be overlooked for treatment. In fact, individuals with sub-clinical symptoms might be best served by providing prevention strategies while individuals who experience severe levels of disturbance should be the focus of treatment interventions.

Directions for Future Research

Coping is a process involving the appraisal of stressors as well as one’s ability to deal with the stressors. The dynamic nature of the stress process has been recognized (Endler, 1988; 1997; Folkman, 1991; Terry, 1994), yet most research continues to focus on coping styles and strategies rather than on the more intricate external and intrapsychic aspects involved. Future research should be extended to include variables such as appraisal of one’s ability to deal with the stress.

Although people might have particular coping styles that they prefer to use, it is also possible that an appraisal style or particular way of interpreting the environment can account for some of the inconsistency in the eating disorder literature (Troop et al.1994). If an individual consistently expects the worst or perceives oneself as helpless, her choice of coping response might be reflective of this appraisal. Ideally coping should be studied longitudinally. Although, to date, there have been no longitudinal studies of coping with eating disorders.
Researchers have suggested that there might be a deficit in coping skills among eating disordered individuals (Caffary, 1987; Lazarus & Folkman, 1984). Others have suggested that bulimic women might have more difficulty in dealing with stress and might perceive more stress than others even when they don’t experience a greater number of stressors (Cattachan & Rodin, 1988). Empirical evidence suggests that both bulimic and anorexic women use less active coping styles (Mayhew & Edelman, 1989; Yager et al. 1995). The field of coping and eating disorders might be further advanced if researchers assess the availability of coping resources, and beliefs about one’s ability to cope with stress.

The EDNOS category is for disorders of eating that do not meet full diagnostic criteria for any specific eating disorder. It is likely that the EDNOS group in this sample included women who were sub-clinical AN and sub-clinical BN classifications. Separating the EDNOS group into the respective AN-like and BN-like categories might have revealed different coping styles among these samples and may account for the negative findings in this study. It is likely that the EDNOS group had more BN-like women than AN-like women. The BN-like group could be combined with the group that met full criteria for BN in future analyses. Future research should investigate these categories separately to determine the relationships among stress, coping and symptomatology in these sub-clinical samples.

A further suggestion for future research warrants acknowledgment. Men have constituted an increasing percentage of hospital admissions for eating disorders in the past several years (Braum, Sunday, Huang, & Halmi, 1999). While this issue has yet to
be addressed, continuity analysis across gender (as well as culture, race, and other self-defining criteria) could help clarify differences between clients who seem to be of one sample type such as female university students. Future research should therefore, be extended to also include men, as well as other distinct groups with eating disorders.

Future research should continue to investigate the issue of continuity in eating behaviour. Continuity should be tested across multiple domains including phenomenological, typological, etiological, and psychometric (see Flett et al. 1997). Results should be interpreted in light of the samples investigated and the method of analysis used.

Limitations of the Present Research

The present study had a number of limitations that should be acknowledged in the interpretation and generalization of the findings. The clinical sample was a heterogeneous group of women with a wide range of eating disorder symptomatology including three with AN, 12 with BN, and 38 with eating disorders not otherwise specified. The small number of women in each diagnostic category and the unequal distribution of women across the categories, did not allow for comparisons between diagnostic groups. It is possible that relationships between stress, coping styles, and health outcomes could be different across diagnostic categories. For example, women with anorexia, bulimia, and binge eating disorder might use distinctly different coping styles and strategies to deal with stress. A better understanding of the relationships between stress and coping in each disorder category might provide more meaningful findings.
It should also be noted that the overall level of stress reported in the clinical sample was quite low $M=9.5$, $SD = 6.59$. In comparison, the non-clinical sample reported negative life stress of $M=8.3$, $SD = 6.3$. These differences were not significantly different ($p<.05$). Other researchers have reported higher levels of stress among clinical samples (e.g. Lacey et al. 1986; Soukup et al. 1990; Strober, 1984). It is possible that the life experiences survey did not capture the types of stress experienced by this sample or that this particular sample simply did not experience high levels of stress in the year prior to completing the stress measure. The retrospective nature of the study makes it possible that some women were unable to recall stressors that they had experienced in the past year. Under higher stress, a different pattern of relationships might emerge.

Given that participants in this research were volunteers, it remains indeterminate whether their particular personality characteristics, ways of coping with stress, and mental health are similar to people who opted not to participate in the study. Consequently, the present results apply only to these particular samples and cannot be generalized to other samples. Moreover, both the clinical and non-clinical samples were comprised of women who live in the Toronto area. Results from these samples cannot be generalized to other samples (such as children, adolescents, or people who live in other geographical regions).

The measuring instruments were self-report and they themselves might further limit the results. Although it is presumed that people responded accurately as to how they react to certain stressors and accurately reported how they felt, it is possible, as is the case with all self-report studies, that they had not been entirely honest in their responses. The correlational nature of the study does not allow us to draw causal inferences for any of the
observed relationships. Behavioural and physiological measures of coping with specific stressors would provide objective information in this regard.

Conclusions

The present study examined the relationships among stress, general coping styles, illness-specific coping styles and eating disorder symptoms, weight preoccupation, state anxiety, and depression in a sample of women with eating disorders. In general, in this sample, Emotion-oriented coping and Social Diversion were predictive of state anxiety. Stress, general coping styles, and illness-specific coping strategies were not predictive of mental health outcomes in this sample.

Results for stress, general coping styles, and weight preoccupation for the clinical sample were compared to results obtained from a non-clinical sample in which these variables were examined in order to test for continuity across these samples. The pattern of results across the two samples was different, suggesting discontinuity across these samples. Subsequently the non-clinical group was divided into two groups based on the amount of weight preoccupation they reported. The pattern of relationships of stress and coping styles were compared across the three groups (non-clinical, sub-clinical, and clinical). Overall, these results support the continuity hypothesis. Continuity is a complex issue. Procedures for determining continuity-discontinuity are still evolving. Researchers need to be aware of the need to approach this issue from a variety of perspectives including phenomenological, typological, etiological, and psychometric.
Chapter V

Summary

The present study investigated the relationships among stress, general coping styles, health-specific coping styles, eating disorder symptomatology, weight preoccupation, state anxiety, and depression. The study also examined whether health-specific coping styles predicted variance in the outcome measures (eating disorder symptomatology, weight preoccupation, state anxiety, and depression) over and above that predicted by general coping styles. Results obtained with the clinical sample were compared to results from a non-clinical sample to test for continuity across these samples. An additional test of the continuity hypothesis was conducted following a tertiary classification of the non-clinical group based on levels of weight preoccupation. The main hypotheses of the study were that the general coping styles (Task and Social Diversion) would be negatively associated with health outcomes and that Emotion-oriented coping and Distraction would be positively associated with health outcomes. It was also predicted that health-specific coping styles (Instrumental, Emotional-preoccupation, and Distraction) would predict variance in health outcomes over and above that accounted for by general coping styles. It was anticipated that there would be evidence for continuity across the samples.

To determine whether stress and coping styles were predictive of health outcomes a heterogeneous clinical sample of women with eating disorders (three AN, 12 BN, 38 EDNOS) was used. The clinical sample included 53 women with eating disorders. To
test for continuity, results obtained with the clinical sample were compared to results obtained with a non-clinical sample of 206 university women. Continuity was also tested across three groups (non-clinical, sub-clinical, and clinical).

Stress was assessed by the Life Experiences Survey (LES: Sarason, Johnson, & Siegel, 1978). Two well established measures were used to assess coping, the Coping Inventory for Stressful Situations (CISS: Endler & Parker, 1999a), and the Coping with Health, Injuries and Problems Scale (CHIP: Endler & Parker, 1999b). The Eating Disorder Inventory (EDI: Garner & Olmsted, 1984) was used to assess eating disorder symptomatology and three subscales of the EDI (Drive for Thinness, Bulimia, and Body Dissatisfaction) were summed as a measure of weight preoccupation. State anxiety was measured using the Endler Multidimensional Anxiety Scales (EMAS: Endler, Edwards, & Vitelli, 1991). Depression was assessed with the Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Although a revised version of the measure was available it was not part of the assessment package used at the hospital and was not added for this study.

The data were analyzed using a series of correlational analyses and multiple regression analyses. The results suggest that all measuring instruments had high internal consistency. The use of Emotion-oriented coping was positively associated with greater Total State Anxiety, Autonomic-emotional State Anxiety, and Cognitive-worry State Anxiety. Social Diversion was negatively associated with Total State Anxiety and with Cognitive-worry State Anxiety. It was suggested that Emotion-oriented coping might be
similar to cognitive rumination thereby increasing state anxiety. Social Diversion could be a source of social support and serve to decrease state anxiety.

Comparing patterns of results between the clinical and non-clinical discrete or categorical samples suggested evidence of discontinuity across these samples. This suggests that the relationships among coping styles and weight preoccupation are qualitatively different in non-clinical and clinical samples. Subsequent analyses were conducted after dividing the non-clinical group into two groups (non-clinical and sub-clinical) based on their degree of weight preoccupation. These groups were then compared to the clinical group on stress and coping styles. This dimensional approach for testing continuity provided evidence for continuity across these samples. No previous studies have examined whether differences in coping are continuous across groups of women with varying degrees of weight preoccupation. Continuity research in the area of eating disorders has produced mixed results with research evidence supporting continuity for some variables and discontinuity for others (see Shisslak, 1995). Stice et al. (1998) suggested that continuity is supported for measures of weight concern (e.g. eating behaviour and dieting), whereas discontinuity is supported for measures of psychopathology (e.g. low self-esteem and interpersonal distrust). To date, factors that might moderate the relationships between weight concern and psychological distress have received little research attention. Coping styles might be important moderators of the relationships between weight concerns and psychopathology. The findings from this study suggest that the multifaceted nature of disordered eating and the complex issue of continuity should be approached from both categorical and dimensional perspectives.
Factors potentially responsible for the unanticipated outcomes with respect to continuity are discussed. Relatively low levels of stress, and the diagnostic heterogeneity of the sample might account for the lack of predicted results regarding the relationships among stress, general and health-specific coping, and eating disorder symptoms, weight preoccupation, state anxiety and depression. It is also possible that the chronicity of the sample might have affected outcomes. Contrary to the hypotheses, illness-specific coping strategies did not predict additional variance over and above that accounted for by the general coping measure in health outcomes. It is possible that the question of “How do you cope with your eating disorder?” may simply be too ambiguous and too general in this sample. Asking how one copes with physical versus psychological aspects of their eating disorder might produce more meaningful findings.

General implications of these findings are discussed. Suggestions for future research are made. Suggestions include studying appraisal of stress and one’s ability to cope, using longitudinal research designs, and extending research to also include men with eating disorders. The limitations of the present were addressed and include aspects of the sample, measures, and design used.
References


Appendices

Appendix A: Life Experiences Survey

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. Please check those events which you have experienced in the recent past and indicate the time period within which you have experienced each event. Be sure that all check marks are directly across from the items they correspond to. Also, for each item checked below, please indicate the extent to which you viewed the event as having either a positive or negative impact on your life at the time the event occurred. That is, indicate the type and extent of impact that the event had. A rating of 1 would indicate an extremely negative impact. A rating of 4 suggests no impact either positive or negative. A rating of 7 would indicate an extremely positive impact.

<table>
<thead>
<tr>
<th>Event</th>
<th>0 to 7 mo</th>
<th>6 mo to 1 yr</th>
<th>extremely negative</th>
<th>no impact</th>
<th>extremely positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Marriage</td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Detention in jail or comparable institution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Death of a spouse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Major change in sleeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habits (much more or much less sleep)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Death of close family member</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. father</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. brother</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. sister</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. grandmother</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. grandfather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. other, (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Major change in eating habits (much more or much less food intake)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Foreclosure on mortgage or loan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Death of close friend</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A, continued

9. Outstanding personal achievement

10. Minor law violations (traffic tickets, disturbing the peace etc.)

11. Male: Wife/girlfriend’s pregnancy

12. Female: pregnancy

13. Changed work situation (different work responsibility, major changes in working conditions, working hours etc.)

14. New Job

15. Serious illness or injury
   of close family members:
   a. father
   b. mother
   c. sister
   d. brother
   e. grandfather
   f. grandmother
   g. spouse
   h. other (specify)

16. Sexual difficulties

17. Trouble with employer (in danger of losing job, being suspended, demoted etc.)

18. Trouble with in-laws

19. Major change in financial status (a lot better off or a lot worse off)

20. Major change in closeness of family members (increased or decreased closeness)

21. Gaining a new family member (through birth, adoption, family moving in etc.)

22. Change of residence

23. Marital separation from mate (due to conflict)

24. Major change in church activities (increased or decreased attendance)
Appendix A, continued

25. Marital reconciliation with mate

26. Major change in number of arguments with spouse (lot more or lot less arguments)

27. Married male: Change in wife’s work outside the home (beginning work, ceasing work, changing to a new job, etc.)

28. Married female: Change in husband’s work (loss of job, beginning new job, retirement etc.)

29. Major change in usual type and/or amount of recreation

30. Borrowing more than $10,000 (buying home, business, etc.)

31. Borrowing less than $10,000 (buying car, T.V., getting school loan etc.)

32. Being fired from job

33. Male: Wife/girlfriend having abortion

34. Female: Having abortion

35. Major personal illness or injury

36. Major change in social activities, (e.g. parties, movies, visiting (increased or decreased participation)

37. Major change in living conditions of family (building new home, remodeling, deterioration of home, neighborhood etc.)

38. Divorce

39. Serious injury or illness of close friend

40. Retirement from work

41. Son or daughter leaving home (due to marriage, college, etc.)

42. Ending of formal schooling
Appendix A, continued

43. Separation from spouse (due to work travel, etc.)

44. Engagement

45. Breaking up with boyfriend/girlfriend

46. Leaving home for the first time

47. Reconciliation with boyfriend/girlfriend

48. Beginning a new school experience at a higher academic level (college, graduate school, professional school, etc.)

49. Academic probation

50. Being dismissed from dormitory or other residence

51. Failing an important exam

52. Changing a major

53. Failing a course

54. Dropping a course

55. Joining a fraternity/sorority

56. Financial problems concerning school (in danger of not having sufficient money to continue)
Appendix B: Coping Inventory for Stressful Situations (CISS-Adult)

Instructions: The following are ways people react to various difficult, stressful, or upsetting situations. Please circle the number from 1 to 5 for each item. Indicate how much you engage in these types of activities when you encounter a difficult, stressful, or upsetting situation.

<table>
<thead>
<tr>
<th></th>
<th>Very Much</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Schedule my time better.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Focus on the problem and see how I can solve it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Think about the good times I've had.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Try to be with other people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Blame myself for procrastinating.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Do what I think is best.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Preoccupied with aches and pains.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Blame myself for having gotten into this situation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Window shop.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Outline my priorities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Try to go to sleep.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Treat myself to a favorite food or snack.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Feel anxious about not being able to cope.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Think about how I have solved similar problems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Tell myself that it is really not happening to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Blame myself for being too emotional about the situation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Go out for a snack or meal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Buy myself something.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Determine a course of action and follow it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Blame myself for not knowing what to do.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Go to a party.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Work to understand the situation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>“Freeze” and don’t know what to do.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Take corrective action immediately.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>Think about the event and learn from my mistakes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>Wish that I could change what had happened or how I felt.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Visit a friend.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Worry about what I am going to do.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>Spend time with a special person.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>Go for a walk.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>Tell myself that it will never happen again.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B, continued

Not at all | Very Much
---|---
1 2 3 4 5 | 34. Focus on my general inadequacies.
1 2 3 4 5 | 35. Talk to someone whose advice I value.
1 2 3 4 5 | 36. Analyze the problem before reacting.
1 2 3 4 5 | 37. Phone a friend.
1 2 3 4 5 | 38. Get angry.
1 2 3 4 5 | 39. Adjust my priorities.
1 2 3 4 5 | 40. See a movie.
1 2 3 4 5 | 41. Get control of the situation.
1 2 3 4 5 | 42. Make an extra effort to get things done.
1 2 3 4 5 | 43. Come up with several different solutions to the problem.
1 2 3 4 5 | 44. Take time off and get away from the situation.
1 2 3 4 5 | 45. Take it out on other people.
1 2 3 4 5 | 46. Use the situation to prove that I can do it.
1 2 3 4 5 | 47. Try to be organized so I can be on top of the situation.
1 2 3 4 5 | 48. Watch T.V.

Appendix C: Coping With Health Injuries and Illness (CHIP)

The following are ways of reacting to HEALTH PROBLEMS, such as ILLNESSES, SICKNESSES, and INJURIES. These are typically difficult, stressful, or upsetting situations. We are interested in your eating disorder symptoms. Please circle a number from 1 to 5 for each of the following items. Indicate how much you engage in these types of activities when you encountered this health problem. Please be sure to respond to each item.

1-Not at all  3=Moderately  5=Very Much

1. Think about the good times I’ve had.
2. Stay in bed.
3. Find out more information about the illness.
4. Wonder why it happened to me.
5. Be with other people.
6. Lie down when I feel tired.
7. Seek medical treatment as soon as possible.
8. Become angry because it happened to me.
10. Get plenty of sleep.
11. Concentrate on the goal of getting better.
13. Enjoy the attention of friends and family.
14. Try to use as little energy as possible.
15. Learn more about how my body works.
16. Feel anxious about the things I can’t do.
17. Make plans for the future.
18. Make sure I am warmly dressed or covered.
19. Do what my doctor tells me.
20. Fantasize about all the things I could do if I was better.
21. Listen to music.
22. Make my surroundings as quiet as possible.
23. Try my best to follow my doctor’s advice.
24. Wish that the problem had never happened.
25. Invite people to visit me.
26. Be as quiet and still as I can.
27. Be prompt about taking medications.
28. Feel anxious about being weak and vulnerable.
29. Surround myself with nice things (e.g. flowers).
30. Make sure I am comfortable.
31. Learn more about the most effective treatment available.
32. Worry that my health might get worse.
Appendix D: Eating Disorder Inventory Sample Items

This is a scale which measures a variety of attitudes, feelings and behaviours. Some of the items relate to food and eating. Others ask you about your feelings about yourself. THERE ARE NO RIGHT OR WRONG ANSWERS SO TRY VERY HARD TO BE COMEpletely HONEST IN YOUR ANSWERS. RESULTS ARE COMPLETELY CONFIDENTIAL. Read each question and fill in the circle under the column which applies best to you. Please answer each question very carefully. Thank you.

1=always  2=usually  3=often  4=sometimes  5=rarely  6=never

1. I eat sweets and carbohydrates without feeling nervous.  
2. 3. 4. 5. 6.

8. I get frightened when my feelings are too strong.  
1. 2. 3. 4. 5. 6.

17. I trust others.  
1. 2. 3. 4. 5. 6.

29. As a child, I tried very hard to avoid disappointing my parents and teachers.  
1. 2. 3. 4. 5. 6.

41. I have a low opinion of myself.  
1. 2. 3. 4. 5. 6.

64. When I am upset, I don’t know if I am sad, frightened, or angry.  
1. 2. 3. 4. 5. 6.
Appendix E: Beck Depression Inventory Sample Items

This questionnaire consists of 21 groups of statements. After reading each group of statements carefully, circle the number (0, 1, 2 or 3) next to the one statement in each group which best describes the way you have been feeling in the past week, including today. If several statements within a group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1.  0 I do not feel sad.
   1 I feel sad.
   2 I am sad all the time and I can’t snap out of it.
   3 I am so sad or unhappy that I can’t stand it.

4.  0 I get as much satisfaction out of things as I used to.
   1 I don’t enjoy things the way I used to.
   2 I don’t get real satisfaction out of anything anymore.
   3 I am dissatisfied or bored with everything.

10. 0 I don’t cry any more than usual.
     1 I cry more now than I used to.
     2 I cry all the time now.
     3 I used to be able to cry, but now I can’t cry even though I want to.

13. 0 I make decisions about as well as I ever could.
     1 I put off making decisions more than I used to.
     2 I have greater difficulty in making decisions than before.
     3 I can’t make decisions at all anymore.
Appendix F:  Endler Multidimensional Anxiety Scale (EMAS-S) Sample Items

For each of the following 20 items, please circle a number on the 5-point scale to indicate how you feel at this particular moment.

<table>
<thead>
<tr>
<th>Item</th>
<th>LOW</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hands feel moist.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Feel helpless.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Feel tense.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. Feel incompetent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Eilenna Denisoff and Dr. N. S. Endler are conducting a research project on how women with eating problems deal with stress. Participating in this research involves completing the attached questionnaires and will require approximately 20 minutes of your time. Your participation in the research is voluntary and a decision to decline from participating in the study will in no way jeopardize your access to treatment. If, after signing the consent, you change your mind about participating, you are free to withdraw at anytime. All responses will be confidential, no one will be identified in any way. Your participation will be appreciated.

__________________________

signature of the participant

__________________________  Date

Thank you very much,

Eilenna Denisoff, M.A.
Appendix H

Consent Form (Non-clinical Sample)

I, __________________________ agree to participate in this research on effects of stressful events on daily activities as described to me by the researcher. I am aware that my responses will be anonymous and that all information will be kept strictly confidential. I understand that my participation is voluntary and that I am free to withdraw from the study at any time without explanation or penalty.

Signed: ________________________ Date: __________________________