THE SIMILARITY OF MOTHERS’ AND DAUGHTERS’ COPING STYLE,
AND ITS RELATIONSHIP TO DISORDERED EATING

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THE SIMILARITY OF MOTHERS’ AND DAUGHTERS’ COPING STYLE,
AND ITS RELATIONSHIP TO DISORDERED EATING

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ABSTRACT

The primary purpose of this study was to empirically investigate whether mothers of daughters with a diagnosed eating disorder differed in their coping style compared to mothers of daughters who did not evidence disordered eating symptoms. A secondary research goal was to examine whether daughters with and without eating disorders differed from their mothers in terms of coping styles. Social Learning Theory guided the premises of this study. It was hypothesized that mothers who had daughters with eating disorders would cope differently than mothers of daughters without eating disorders, and that mothers and their own daughters would cope similarly regardless of eating disorder symptomatology. Participants consisted of 58 mother/daughter dyads (N = 116) sampled from an Adolescent Health Center at a public hospital in a Midwestern state. The Coping Inventory for Stressful Situations (Endler & Parker, 1999) was administered to both mothers and daughters to evaluate how they coped with stressful situations. Contrary to expectations, one-way multivariate analyses of variance (MANOVAs) revealed that mothers coped significantly differently on avoidance coping; follow-up univariate analysis of variance (ANOVA) revealed that mothers who had daughters without eating disorders used more distraction-oriented coping than mothers of daughters with eating disorders. Moreover, daughters did not uniformly cope similarly to their mothers. Although daughters used similar degrees of emotion-oriented coping as their mothers, they used statistically significantly less avoidance-oriented coping. Exploratory follow-up analyses revealed that the two groups of mothers were significantly different in terms of
family income, race, and degree of education. Implications of these results for counselor education, practice, and future research, including the possible mediating effects of demographic variables on coping styles, were discussed.
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CHAPTER 1
INTRODUCTION

Statement of the Problem and the Need for the Study

According to a meta-analysis of over 40 studies on anorexia nervosa, the mortality rate of individuals who have suffered from this eating disorder is approximately 6% (Sullivan, 1995). The annual mortality rate of anorexia nervosa has been reported as 12 times higher for females between the ages of 15 and 24 years of age as compared to all other causes of death for this demographic, and individuals who suffer from anorexia nervosa have been reported to be 200 times more likely to commit suicide than the general population (Sullivan). Researchers have reported that recovery from eating disorders is difficult, and Keel, Mitchell, Davis, Fieselman, and Crow (2000) found that recovery rates five years after diagnosis of the eating disorder bulimia nervosa ranged from only 38% to 47%. This means that between 62% and 53% of individuals diagnosed with bulimia continued to suffer from the same disorder five years later.

Because of increased mortality rates associated with eating disorders and the long-term diagnosis linked to eating disorders, more information has been needed to understand what influences the acquisition of eating disorders. Many links to the acquisition of eating disorders (e.g., the media, family, stress reactions) have already been explored at length (Botta, 1999; Hargreaves & Tiggemann, 2003; Minuchen, Rosman, & Baker, 1978; Polivy & Herman, 2002; Tiggemann & Pickering, 1996).
Research on the impact of television and film has indicated that media has a profound, oftentimes negative, impact on how girls view their bodies. Studies of families impacted by eating disorders have revealed that these families frequently use less healthy coping mechanisms than families that are not affected by eating disorders.

Another area related to eating disorders that has been explored extensively is the relationship between daughters and their mothers, and how mothers’ influence may impact daughters’ views of their bodies. Studies have indicated that mothers influence the behaviors of their daughters, and that coping styles of mothers are frequently related to the coping styles of daughters (Pike & Rodin, 1991). Researchers have asserted that eating disorders are complex, and that the influences that surround them are multifaceted.

While many suggestions have been proposed as to why girls acquire eating disorders, one specific influence that was not fully explored prior to this study was comparing mothers to mothers. Specifically, comparing coping styles of mothers whose daughters had eating disorders to coping styles of mothers whose daughters did not have an eating disorder.

With the understanding that mothers are traditionally the primary caregivers to their children (and thus often play an important role in terms of psychosocial nurturing) (Prescott & Le Poire, 2002), exploring how mothers compared to each other regarding their influence over eating disorder acquisition was a key component of this research study. Specifically, the researcher wanted to explore whether coping styles of mothers who had daughters with eating disorders differed from mothers of daughters who showed no signs of disordered eating patterns. Because no research existed on this specific topic prior to this study, the goal of this research was to add to the extant knowledge base on traits that influence eating disorder acquisition.
Researchers have found that negative parent-child relationships are a predictive factor of eating disorder acquisition (Archibald, Linver, Graber, & Brooks-Gunn, 2002; Hamid, Yue, & Leung, 2003). Studies have also determined that daughters model their behaviors after their mothers (Lee, Lester, & Rotheram-Borus, 2002). When mothers are dissatisfied with their own bodies and resort to unhealthy eating behaviors, researchers have found that daughters oftentimes follow suit and acquire eating disorder pathology of their own (Benedikt, Wertheim, & Love, 1998). Families where eating disorder symptomatology is present have been found to be more conflicted than eating disorder-free families, and mothers of eating disordered women, in particular, are more likely to have difficulty expressing emotions (Dahlman, 1996).

Researchers have found that mothers’ satisfaction and self-reported adjustment is lower in mothers whose daughters suffer from an eating disorder (Espina et al., 2003). This research finding supports the idea that mothers of daughters with an eating disorder cope in a more negative manner than mothers whose daughters do not have an eating disorder (although Espina et al.’s research did not look at coping specifically). In families where mothers were rated as overly protective, daughters felt they were unable to deal with every day life in a competent manner (Turner, Rose, & Cooper, 2004). Maternal influence was important in terms of how daughters felt they were prepared to deal with life but, before this study, no research had looked specifically at coping styles used by mothers and how coping style was related to eating disorder acquisition.

Pike and Rodin’s (1991) research supported the theory that mothers model disordered eating, and that daughters learn how to acquire an eating disorder from watching their mothers. The investigators, furthermore, explored coping and discovered
that mothers modeled coping behaviors for their daughters. However, Pike and Rodin did not use a non-eating disordered group in their study, so no comparison could be drawn between coping styles used by mothers whose daughters suffered from an eating disorder and mothers of daughters who did not have an eating disorder.

In using Inconsistent Nurturing as Control theory, Prescott and Le Poire (2002) found that daughters who suffered from an eating disorder felt their mothers actually encouraged the eating disorder due to lack of consistency and reinforcement of punishment. Prescott and Le Poire asserted that girls developed eating disorders due to a lack of harmony in the home. Coping styles used by both mothers and daughters in this sample would have been helpful in understanding how they dealt with stressors.

In conclusion, research has shown that individuals who suffer from an eating disorder employ differing coping styles than those who do not have an eating disorder. Moreover, mothers model these behaviors for their daughters. The link between mother’s behavior and daughter’s subsequent eating disorder acquisition has also been made. Prior to this study, however, how mothers across groups were different (or similar) in terms of coping styles had not yet been explored. Figure 1 summarizes the state of research regarding coping style, intergenerational transmission (i.e., modeling), and disordered eating among mothers and daughters that existed prior to this study. As figure 1 reveals, to better understand what role (if any) mothers played in the acquisition of eating disorders, it was important to gain additional knowledge about how mothers of healthy daughters were different than mothers of daughters diagnosed with an eating disorder.
Mothers -- -- -- -- -- -- -- -- -- -- Mothers

Daughters

Daughters

--------- = Relationship has been studied

-------- = Relationship has not been studied

Figure 1: Visual representation of extant research on mothers, daughters, eating disorders, and coping styles.

Coping style has been linked to severity of eating disorder symptomatology and, because mothers model coping styles for their daughters, the goal of this study was to explore how mothers’ coping styles were related to eating disorder acquisition. Research on this phenomenon would also add to information about protective factors employed by mothers who use healthy coping styles. For example, if differences in mothers’ coping styles were found, additional empirical evidence could be gathered to support the concept that certain (i.e., healthy) coping behaviors help daughters avoid disordered eating patterns. Thus, if differences in coping style were found between mothers of daughters who did and did not have eating disorders, both modeling and other psychosocial theories could be advanced. Furthermore, these research results would likely lead to the development of more specific preventative psychoeducational interventions targeted toward mothers who evidenced more extreme forms of unhealthy coping styles (i.e., those correlated with eating disorders in daughters). If mothers were found to employ less healthy coping mechanisms when their daughters suffered from an eating disorder, educating the daughters regarding healthier coping styles could also have the potential to reduce the negative behavioral patterns learned from mothers. According to research
conducted by Cohen (1978), coping skills may be part of the resolution to psychological stress and harm.

Purpose of the Study

Previous research has indicated that eating disordered behaviors are complex and influenced by many different variables. One theoretical pathway has compared eating disorder acquisition to how individuals cope with stress; another avenue has explored how coping styles are learned. While coping has not been asserted as the nexus linking all that is known about eating disorders, it has been found to be an important trait that individuals utilize to negotiate their environments. The goal of this research study, therefore, was to further examine these pathways by exploring the relationship between mothers, daughters, eating disorders, and coping styles. This research project studied the mother/daughter relationship, and examined what role (if any) coping styles played in eating disorders. The role of this study was not to determine causality of eating disorders, however.

Literature has revealed that mothers play a role in eating disorder acquisition, and that mothers of daughters with eating disorders struggle to express emotions, lack the ability to let their daughters differentiate themselves, tend to be rigid in beliefs and behaviors, and model coping styles for their daughters. Prior to this study, however, there had been no research that explored the differences in coping styles between mothers whose daughters suffered from an eating disorder to mothers whose daughters did not suffer from an eating disorder. Previous research has revealed that mothers of daughters with eating disorders prefer avoidance and emotion-focused coping techniques, but how mothers of daughters without eating disorders were different (or similar) was not known.
It could be assumed that mothers of daughters without eating disorders would cope differently (and more healthily) than mothers of daughters who had been diagnosed with an eating disorder but, until now, this was not known through empirical research. To explore the possibility that mothers cope differently based on the eating disorder status of daughters, therefore, was one of the goals of this research study.

If mothers of daughters who suffered from an eating disorder were found to cope in less healthy ways than mothers whose daughters did not suffer from an eating disorder, implications included employing psychoeducation to help train mothers in healthier coping strategies so they could model healthier coping behaviors for their daughters. Psychoeducation could be employed for daughters in order to promote healthier coping styles, which could have the potential to reduce negative behavioral patterns learned from mothers. In the future, if a daughter were diagnosed with eating disorder, results from this study could assist in understanding the family dynamics related to eating disorder transmission. Results of this study could impact treatments for eating disorders, in that treatments could be broadened (i.e., family therapy) to include mothers, rather than focusing only on the child with the eating disorder.

Social Learning Theory, which has asserted that parents model for their children and that children learn to behave according to how the important people in their lives act, would have additional empirical support if the results of this study were shown to be significant.

Results could impact Counselor Educators by revealing the importance of the mother-daughter link in eating disorders. For example, when a daughter suffers from an eating disorder, counselors could incorporate individual and/or concurrent interventions
for both the mother and daughter. Further research could be conducted that assesses what type of coping skills are most effective for mothers and/or daughters at differing stages of disordered eating, while examining the optimum quantity and quality of mother/daughter counseling interventions. Mothers could be taught healthier coping styles, which could positively impact not only their lives but also the relationships and interactions between all family members.

The purpose of this study was to empirically investigate whether mothers of daughters with a diagnosed eating disorder differed in their coping style as compared to mothers of daughters who did not evidence disordered eating symptoms. The goal was to look at relationships related to eating disorders, not causality. Diagnosticians included licensed mental health and medical professionals with specialty skills related to interviewing and diagnosing eating disorders. In order to help ensure the validity of these findings, the most recent version of the DSM-IV-TR (APA, 2000) was used for assessment purposes. Moreover, standardized and widely used instruments with good psychometric properties were utilized to evaluate participants’ coping styles and views towards eating.

Research Questions

1. Did coping styles of mothers whose daughters had eating disorders differ from the coping styles of mothers whose daughters did not have eating disorders?

2. Were coping styles of daughters with an eating disorder similar to the coping styles of their mothers?

3. Were coping styles of daughters without an eating disorder similar to the coping styles of their mothers?
Definition of Terms

The most frequently used terms are defined below, and provide a better understanding of how the words were used in this research study.

1. Anorexia Nervosa- Anorexia Nervosa occurs when an individual refuses to sustain a minimum body weight considered within the normal range (APA, 2000).

2. Avoidance-oriented coping- Coping behavior whose goal is distancing oneself from the feelings associated with the problem. Examples include talking on the phone or shopping (Endler & Parker, 1999).

3. Bulimia Nervosa- Bulimia Nervosa describes an individual who first binges on copious amounts of food, and then follows the event with unhealthy behaviors such as abusing diuretics, exercising excessively, starving oneself, vomiting, and/or the improper use of laxatives (APA, 2000).

4. Coping- The process of adapting to one’s environment

5. Daughter- A minor female who presents for treatment or evaluation at an outpatient clinic within a Midwestern hospital; she is accompanied by her mother or female guardian.

6. Disordered Eating- An intense disruption in eating behavior that may lead to psychosocial problems for an individual, but may not be a diagnosable mental disorder.

7. Eating Disorder- An intense disruption in eating behavior that leads to symptoms that qualify for a mental disorder as defined by the American Psychiatric Association (APA, 2000).
8. Emotion-oriented coping- Coping behavior that strives to change one’s emotional response to stress, and includes actions that try to restructure a problem so that it no longer causes a negative response. Examples include crying and getting angry (Endler & Parker, 1999).

9. Mother- the biological, adoptive, or foster mother of a child.

10. Social Learning Theory (Psychological Modeling)- Coined by Bandura (1971), states that humans learn from observing others in the environment. How we behave is enforced through vicarious reinforcement.

11. Task-oriented coping- Problem-focused coping behavior, whose goal is to eliminate or alter the issue causing stress. An example is writing a “to do” list (Endler & Parker, 1999).

Summary of the Introduction

Multiple studies have shown that eating disorders are common, debilitating disorders. A limitation of past research has been the failure to examine the relationship between mothers’ coping styles and daughters’ coping, specifically comparing mothers of daughters with eating disorders to mothers of daughters without eating disorders. Looking at coping styles of mothers and daughters was one pathway that could add to the extant research base of eating disorder traits and eating disorder acquisition. Researchers have indicated that eating disorders are complex disorders, and looking at coping styles of mothers and daughters was not intended to be a “silver bullet” explanation of eating disorder acquisition. The goals of this study, however, were to examine what relationship (if any) existed between coping style and eating disorder symptomatology, and to add to
eating disorder literature regarding the role mothers’ coping styles play in the eating behaviors of their daughters.
CHAPTER II
REVIEW OF THE RELATED LITERATURE

Chapter two includes a summary of theories and literature related to eating disorders, coping, and the transmission and modeling of behaviors. Topics discussed include the etiology of eating disorders, theories behind coping processes, Social Learning Theory, and views of the mother-daughter relationship. A review of research on parents, families, mothers and daughters, coping, and eating disorder etiology is explored. A critique of empirical research is offered, and the chapter concludes with a rationale for the proposed approach.

Summary of Related Literature

Various researchers have explored the etiology of eating disorders, and many hypotheses exist as to the cause of disordered eating. While theories exist as to genesis, one specific explanation has not been discovered. Rather, researchers have described eating disorders as multifaceted and the result of many influences. Examples of these influences have included familial relationships (between both parents, family dynamics as a whole, or the influence of mothers in particular), coping processes, and how learning is accomplished. In terms of family and family dynamics, researchers have revealed that families touched by eating disorder symptomatology tend to be more rigid than families without eating disorders. In terms of coping styles, research has shown that mothers of daughters with eating disorders tend to be less happy and use more avoidance and
emotion-oriented coping skills than mothers of daughters without eating disorders. Social Learning Theory has asserted that children learn how to interact with their environment from important role models, especially mothers and fathers. Researchers have found that mothers are more influential on daughters than are fathers, and so Social Learning Theory may be another avenue that helps explain eating disorder acquisition.

Introduction to Characteristics and Diagnostic Criteria of Eating Disorders

Eating disorders have been used to classify individuals who exhibit serious disruptions in their eating behavior. The two main types of eating disorders, as explained in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*; American Psychiatric Association [APA], 2000), are Anorexia Nervosa and Bulimia Nervosa. Anorexia Nervosa has occurred when an individual refuses to sustain a minimum body weight considered within normal range. Bulimia Nervosa, on the other hand, describes an individual who first binges on copious amounts of food, and then follows the event with unhealthy purging behaviors such as abusing diuretics, exercising excessively, starving oneself, vomiting, and improper use of laxatives. According to the DSM-IV-TR, misperceptions of normal body weight and body shape are clinical features of all eating disorders.

Anorexia Nervosa

An individual diagnosed with Anorexia Nervosa has made a conscious decision not to maintain a normal body weight, defined as weighing less than 85% of the weight considered normal for a particular person’s height and weight (Criterion A) (APA, 2000). In children diagnosed with Anorexia Nervosa, failure to make weight gains (while still getting taller) is more common than loss of weight. Appetite usually remains strong in
individuals who suffer from Anorexia, even though weight loss is achieved most usually by reducing the amount of food eaten.

DSM-IV-TR (APA, 2000) Criterion B for Anorexia Nervosa states that the individual is afraid of becoming fat or gaining weight. Even when the individual has lost weight, their idea of gaining weight continues to cause fear. The perception of one’s body and understanding of body weight are warped in Anorexia Nervosa (Criterion C). For example, individuals with Anorexia Nervosa tend to weigh themselves excessively, check their appearance in mirrors continuously, and may measure certain body parts repeatedly. While some individuals feel generally overweight, others tend to fixate on certain parts of their bodies as being the “fat” culprit (especially the thighs, abdomen, and buttocks) (APA, 2000). Because self-esteem is linked to how their body looks, individuals with Anorexia Nervosa take pride in self-control related to abstaining from food. Refusal to acknowledge the unhealthy consequences of their self-denying behavior is common.

For a woman who has started menstruation, Anorexia Nervosa may disrupt her period (perhaps stopping it completely). If a woman who previously menstruated has missed 3 consecutive periods due to behaviors related to food, she has met Criterion D for Anorexia Nervosa (i.e., amenorrhea). For girls who have not yet begun menstruation, menarche may be delayed (APA, 2000).

There are two subtypes of Anorexia Nervosa: Restricting Type and Binge-Eating/Purging Type. In Restricting Type, individuals lose weight through excessive exercise, fasting, and dieting; binge eating and purging has not taken place regularly. In Binge-Eating/Purging Type, on the other hand, the individual binges on copious amounts
of food, participates in self-induced purging (vomiting, laxatives, enemas, diuretics), or has engaged in both behavior patterns (APA, 2000).

Associated features commonly found in individuals who suffer from Anorexia Nervosa include obsessive-compulsive behaviors, such as hoarding food or preoccupation with thoughts of food. Individuals with Anorexia Nervosa tend to be perfectionistic, overly concerned with eating in public, and lack self-esteem and emotional expressiveness. Personality disorders are co-morbid with a large percentage of people diagnosed with both Anorexia Nervosa and Bulimia Nervosa (APA). For all eating disorders, impulse control is a problem (Ackard, Croll, & Cooke, 2000; Kaye, Frank, Bailer, & Henry, 2005; Killen et al., 1996; Williamson, White, York-Crowe, & Stewart, 2004). The lifetime prevalence rate of Anorexia Nervosa is 0.5 % in females; in males, the prevalence is one-tenth of that (APA, 2000). The disorder is more prevalent in industrialized countries where lack of food is not of concern, and where thinness is associated with beauty (Haudek, Rorty, & Henker, 1999; Polivy & Herman, 2002; Prescott & Le Poire, 2002).

According to the APA (2000), the onset of Anorexia Nervosa usually occurs during adolescence and rarely occurs in women aged 40 and older. Some individuals recover from an initial occurrence of Anorexia Nervosa; others battle the disease for years. Some individuals become chronically worse because of the illness. Within five years of acquiring Anorexia Nervosa, many diagnosed with the Restricting Type will begin binge eating. Hospitalization usually occurs to re-establish healthy weight and restore loss of vital fluids. For individuals who have been hospitalized due to symptoms of Anorexia Nervosa, 10% will die because of the illness (APA, 2000).
Physical implications that manifest due to a prolonged diagnosis of Anorexia Nervosa include an obvious appearance of excessive weight loss (e.g., protruding bones, hanging skin), loss of hair, growth of a fine layer of hair over the trunk of the body, dry skin, and (in the case of purging type) erosion of tooth enamel. Medical complications include hypotension, osteoporosis, renal dysfunction, and possible death (APA, 2000). Women who are seen for counseling due to Anorexia Nervosa are usually referred by family members who are distraught by the physical manifestations of the disease; the women themselves usually do not see a need for counseling (Polivy & Herman, 2002). The mortality rate for Anorexia Nervosa hovers around 5% (Herzog et al., 2000).

**Bulimia Nervosa**

Similar to Anorexia Nervosa, the goal of Bulimia Nervosa is thinness, and over 90% of those diagnosed with the disease are female (APA, 2000). Like Anorexia Nervosa, Bulimia Nervosa most frequently occurs in industrialized countries where there is no shortage of food. In women, Bulimia Nervosa is found in 1% to 3% of the population, and occurs in men only one-tenth as often as in women (APA, 2000).

Bulimia Nervosa is characterized as a person gorging on copious amounts of food. To delineate “copious,” the APA (2000) describes binging as eating more than would normally be consumed by most people under comparable conditions (Criterion A1). Common in Bulimia Nervosa are feelings of shame and guilt after binging. Individuals with Bulimia Nervosa frequently feel as if they have no control over how much they eat (Criterion A2), and often describe the process of gorging as being an altered state of consciousness. During episodes of binging, individuals tend to ignore
external stimuli such as a telephone ringing, but may stop gorging if a person enters the room (APA, 2000).

Bulimia Nervosa is distinguished by unhealthy actions to rid the body of the large amount of food eaten during the binge, and consists of two subtypes: Purging Type and Nonpurging Type. In the Purging Type of Bulimia Nervosa, the most common behavior is self-induced vomiting; The APA (2000) states that 80% to 90% of individuals who present at eating disorder clinics force themselves to vomit. Other purging behaviors include the use of diuretics, laxatives and improper use of enemas. In the Nonpurging Type of Bulimia, individuals tend to fast or use excessive exercise to compensate for their overeating, and do not normally incorporate purging behaviors.

To be diagnosed with Bulimia Nervosa, the compensatory behaviors associated with binge eating must take place at least twice a week for 3 months (Criterion C) (APA, 2000). Finally, as with Anorexia Nervosa, the individual diagnosed with Bulimia Nervosa must be obsessed with body weight and shape (Criterion D). Individuals diagnosed with Bulimia Nervosa have a higher incidence of depressive symptoms and anxiety than individuals without Bulimia Nervosa, and a disproportionate percentage of those diagnosed with Bulimia Nervosa meet criteria for a Personality Disorder (APA, 2000).

In terms of the physical manifestations of Bulimia Nervosa, vomiting associated with the disorder deteriorates tooth enamel, while salivary glands often become enlarged. Calluses frequently develop on the hands due to induced vomiting (APA, 2000). Other physical implications include electrolyte imbalance, loss of menstruation, constipation due to reliance on laxatives, and cardiac problems. Clients who present for counseling
due to Bulimia Nervosa are usually self-referred, as binging and purging becomes disturbing even to themselves (Polivy & Herman, 2002).

Whether or not Anorexia Nervosa and Bulimia Nervosa should be characterized as distinct illnesses has been debated (Polivy & Herman, 2002). Because the basic symptoms of the disorders have been described so similarly, Van der Ham, Meulman, Van Strien, and Van Engeland (1997) asserted that eating disorders should be considered a common syndrome (called the Spectrum Hypothesis). For this study, eating disorders were viewed collectively, as one class of disorders with slightly differing but overlapping symptoms, rather than separating all eating disorder subtypes into discrete individual diagnoses based on particular manifestations (i.e., Anorexia Nervosa, Bulimia Nervosa).

Introduction to the Etiology of Eating Disorders

It has been asserted that American culture values thinness, and that the media has a strong influence on how individuals view themselves (Polivy & Herman, 2002). But if media influence were the cause of eating disorders, far more than 0.05% to 3% of women (the current incidence of eating disorders in the US population) would acquire the affliction. Williamson, White, York-Crowe, and Stewart (2004) noted that a fear of fatness is pervasive in eating disordered clients, in addition to an excessive concern regarding body size. Peer influence has been asserted as a reason why individuals acquire eating disordered habits. As in the example of the media’s influence described above, however, if peer influence alone were the cause of eating disorders, then eating disorders should afflict far more individuals than they do. Another influencing factor that has explored how one views one’s body is one’s family. Family members may help perpetuate an eating disorder by complimenting thinness, or stressing what great self-
control it takes to be thin. As Polivy and Herman (2002) indicated, however, such comments may encourage an eating disorder, but they do not cause one.

Individual risk factors may also lead to the acquisition of an eating disorder. Researchers have found that individuals who suffer from eating disorders exhibit perfectionism, low self-esteem, and experience generalized anxiety and obsessive thoughts (Williamson, White, York-Crowe, & Steward, 2004). The question, however, is whether or not these traits are innate, or learned in the family environment. According to Woodside et al. (2002), parents (both mothers and fathers) of daughters with eating disorders portrayed many of the same personality traits (perfectionism, low self-esteem, etc.) associated with eating disorder symptomatology. Biological influences (heredity) have not been found to influence the acquisition of eating disorders, although eating disorders tend to run in families. This link is considered to be a learned trait, rather than genetic (Polivy & Herman, 2002). Other risk factors that have influenced the acquisition of an eating disorder include impulsivity, a negative perspective on the world (Williamson, White, York-Crowe, & Stewart, 2004), low self-esteem, and feelings of ineffectiveness (Jacobi, Paul, de Zwaan, Nutzinger, & Dahme, 2002).

The genesis of eating disorders has not been pinpointed to one particular cause, but instead appears to be the result of a combination of biological, psychological, and social influences. Some women have been described as inherently more sensitive to the opinions of others, and so a mother or father who criticize their daughter about her weight may push their daughter into using unhealthy behaviors to reduce weight. Add to this scenario the influence of peers and the media, and it becomes evident why an individual may have turned to eating disordered behaviors. Likewise, a perfectionist who tends to
obsess may become fixated on weight and body image, leading to an eating disorder. Furthermore, when a female client feels she has no control over her life due to lack of autonomy, she may discover that choosing not to eat is the one choice over which she has control. Add a friend or relative who congratulates her on her self-control, and the traits that lead to eating disorder acquisition have been established.

Bandura (1971, 1986) asserted that the majority of human behaviors, attitudes, and values are learned by observing others. According to Bandura, modeling has a pervasive influence on how we interact with the world, others, and ourselves. For example, low self-esteem begins at home, and low self-esteem has been found to be a common personality characteristic in individuals with eating disorders (Espina, Ochoa de Alda, & Ortego, 2003; Polivy & Herman, 2002). Insecure attachment, enmeshment, and hostility were also found to be frequent family characteristics in families of women diagnosed with an eating disorder (Lattimore, Wagner, & Gowers, 2000; Minuchin, Rosman, & Baker, 1978). Individuals with eating disorders tend to be perfectionistic (Williamson, White, York-Crowe, & Stewart, 2004), and Woodside et al. (2002) found that parents of individuals with eating disorders scored highly on inventories that assess perfectionistic characteristics. Transmission of attitudes, behavioral patterns, and ultimately values are passed down through intergenerational transmission (Bandura), ultimately making some individuals more susceptible to eating disorder acquisition.

Introduction to Coping Strategies of Clients Who Have Eating Disorders

As previously mentioned, individuals who have acquired eating disorders share similar personality traits: a consuming desire to be thin, a tendency towards perfectionism, and negative affect. In trying to better understand why some women have
acquired eating disorders while others have not (even when stressors were the same),
researchers have looked to how these individuals cope with stress. A common
understanding is that women who suffer from eating disorders cope differently with
stressors than women who do not have eating disorders (Troop, 1998).

To better understand how individuals who have suffered from eating disorders
cope with stress, we first look at the field of coping in general. Coping has been defined
as a type of adaptation to one’s environment. Sigmund Freud was the first researcher to
write about the concept. Freud used the term “defense mechanism” to describe one’s
Freud expounded on the idea of defense mechanisms, and asserted that all individuals
have preferred ways of interacting with their environments (A. Freud, 1937/1966). Some
individuals use healthy defense mechanisms, which result in healthy outcomes. Others,
conversely, use unhealthy defense mechanisms, which lead to unhealthy outcomes such
as anxiety or obsessions (e.g., food, body image) (Sommerfield & McCrae, 2000).

Coping has been described as the process of interacting with the environment:
individuals act a certain way and receive feedback from their surroundings. If the
feedback were to be positively reinforcing, individuals would repeat their behaviors; if
individuals did not like the feedback (i.e., punishment), they would alter their behaviors
(Cohen, 1978). Another definition has described coping as behavioral and cognitive
actions used to deal with stress (Mullis & Chapman, 2000). According to Sommerfield
and McCrae (2000), one’s interactional style with stress is largely related to one’s
temperament and personality. Coping has been described as a “trait-like measure” of how
an individual responds to psychosocial stressors (McWilliams, Cox, & Enns, 2003, p.
While personality does not easily change (Costa, McCrae, & Zonderman, 1987; Widiger, Costa, & McCrae, 2002), how one copes could be altered through training, experience, and/or modeling.

The idea that unconscious processes (i.e., coping style) could mediate between environmental stressors and one’s response to the stressor forms the basis of coping research (Somerfield & McCrae, 2000). Endler and Parker (1999) have described coping according to style used, and they created the Coping Inventory for Stressful Situations (CISS) to assess coping styles. Endler and Parker described the three types of coping as task-oriented, emotion-oriented, and avoidance-oriented. In task-oriented coping, when individuals experience stress they preferred to take action. With emotion-oriented coping, people become emotional, which is evidenced by behaviors such as crying, yelling, or getting angry. Individuals who experience avoidance-oriented coping find things to do that will get their minds off of the stressor (such as going shopping or partying).

When Ball and Lee (2000) examined personality traits in individuals who suffered from eating disorders, they found a link between how one deals with stress and severity of one’s disordered eating. The use of avoidance-oriented coping had the highest predictive power in determining if an adolescent would acquire an eating disorder (Garcia-Grau, Fuste, Miro, Saldana, & Bados, 2002), while Grylli, Wagner, Hafferl-Gattermayer, Strober, and Karwautz (2005) found the avoidance-oriented coping style most prevalent in their sample of adolescents with eating disorders. Koff and Sangani (1997) observed that avoidance-oriented coping styles were used most frequently by individuals with eating disorders, but also discovered that their sample population frequently employed emotion-oriented coping.
In their review of literature on coping and disordered eating, Ball and Lee (2000) supported the notion that stressors lead to the acquisition of eating disordered behaviors. However, the authors noted that not all women who experienced stress developed an eating disorder. In exploring why this was so, the authors asserted that it was the coping strategy one employed that determined whether or not one acquired an eating disorder. Healthy strategies (such as confronting stressors) instead of unhealthy strategies (avoiding the stressor, or becoming overly emotional and unhappy about the stressor while doing nothing about it), served as a mediator between eating disorder acquisition and maintaining a healthy lifestyle (Ball & Lee, 2000).

Avoidance-oriented coping, which has been described as unhealthy because it focuses on the self (which increases stress), was found to be relied upon significantly more often in a sample of eating disordered women (Ball & Lee, 2002). Women suffering from eating disorders also tended to blame themselves more for the stressors in their lives than did women not diagnosed with an eating disorder (Ball & Lee, 2002). Women with eating disorders have also been found to exaggerate causes of stress, and to become preoccupied with their bodies and food (Bittinger & Smith, 2003).

Review of Theory Related to Eating Disorders and Coping

The following section explores the etiology of eating disorders and theories on coping, and examines Social Learning Theory as a link between coping styles and disordered eating behaviors.

The Etiology of Eating Disorders

Researchers have consistently broken down eating disorders into two types: Anorexia Nervosa and Bulimia Nervosa. With both types of eating disorder, no specific
cause has been revealed (Campbell, 1995). Individuals who suffer from the disorders share many similar traits, however, and these traits include biological and psychological predisposition, family pressure, perfectionism, and societal influence (Halmi, 1995; Treasure & Holland, 1995). Studies on eating disorders have indicated that lack of nutrients may cause psychological changes, which may perpetuate the illness, while depression and anxiety disorders frequently co-exist in individuals diagnosed with eating disorders (Campbell, 1995; Halmi; Treasure & Holland, 1995).

Eating disorders have developed in cultures where food is abundant and thinness is valued, while dieting and the desire to be thinner are at their core (Campbell, 1995). The desire to be thinner, and the subsequent behaviors to reach this goal, manifest themselves in actions such as dieting, purging, using laxatives, starving, and excessive dieting that lead to the restriction of calories and loss of weight. A distressing aspect of eating disorders has been the seemingly conscious choice individuals make in insisting upon continuing their eating disordered behaviors, even when these actions have a negative impact on health and the likelihood of survival (Campbell, 1995). Not all researchers have agreed with the concept of eating behaviors starting as deliberate acts of dieting, however. Orbach (1986) asserted that anorexia is less an act of will, as it is an unconscious answer to psychological problems.

Family interactions have been explored to explain the etiology of eating disorders. Colahan and Senior (1995) asserted that eating disorders are caused when individuals are not able to fully differentiate from their parent(s). As early as infancy, some children are not able to separate from their primary caregiver. Eating disorder symptomatology frequently reveals itself in adolescence, as it is during adolescence that the need for
individuality and differentiation develops (Orbach, 1986). For the person who develops an eating disorder, individuation may have been hampered due to fear of autonomy (Colahan & Senior, 1995). While the individual is not able to differentiate from their family, the individual discovers that they can control their own eating behavior. Control over food consumption has been described as a way to differentiate from the family that, according to Colahan and Senior, does not involve altering relationships within the family. Orbach (1986) defended this position, but did not include the family as a cause for eating disorder acquisition. According to research conducted by Orbach, individuals who suffer from anorexia feel emotionally needy, but cannot fulfill these needs. Controlling the body (and its intake of food) serves as a type of proxy for emotional fulfillment.

For individuals who suffer from bulimia, emotional needs have also been described as problematic. Rather than meeting the need for control by avoiding the eating of food, the person with bulimia feels overwhelmed by emotions. Rather than face emotions, however, individuals with bulimia push them aside during the day and then gorge and purge in an attempt to both feel and be cleansed of feeling (Orbach, 1986). For individuals who suffer from bulimia, it is not emotional needs that are met with eating disorders, but the desire to feel in control.

Still another view that has explained the cause of eating disorders is based on the concept of women being relegated to particular roles by society. Whereas women during the early 1900’s were diagnosed with “hysteria” when they suffered psychologically from the strict gender roles of the time, women of the late 1900’s embraced society’s value of thinness and the desire to become part of a masculine world (Orbach, 1986). According
to Orbach, women chose eating disorders to lose their femininity (curves, menstruation), which allowed them to better fit in a masculine world.

Theories on Coping

As was mentioned previously, the concept of coping within psychological literature has traced its genesis to Sigmund Freud and his exploration of defense mechanisms (e.g., projection, reaction formation, repression) (Parker & Endler, 1996; Moos & Schaefer, 1993). Anna Freud (1937/1966) expounded on her father’s work by determining that individuals prefer one specific type of defense mechanism, and that some types of coping are healthier than others.

Definitions for coping have included: efforts used to manage internal or external demands that are found to be stressful (Lazarus & Folkman, 1991); a stabilizing process that includes both cognitive and behavioral aspects, with the goal of maintaining psychosocial adaptability while under stress (Holahan, Moos, & Schaefer, 1996); and an individual’s effort to reduce stress by gaining control of demands (such as threats or challenges) that are found to exceed one’s resources (Monat & Lazarus, 1991).

Initially, researchers broke down coping styles into two types: emotion-focused and problem-focused (Parker & Endler, 1996). In emotion-focused coping, the goal was to mitigate the emotional impact caused by stress. Problem-focused coping, on the other hand, focused on changing interaction patterns with things or people, with the same goal of mitigating negative emotional impact (Monat & Lazarus, 1991). Later, researchers began to view coping as either a trait/ predisposition (inherent), or as an active strategy employed to a specific situation (a process).
To evaluate how people cope with stress, researchers have created assessment tools; the two main types of assessment tools are self-reported and observer-reported. When viewing coping as a trait or predisposition, researchers have created assessments that look at specific situations and at coping styles used under various stressors (e.g., the Ways of Coping Checklist [WCC; Folkman & Lazarus, 1980], later revised and called the Ways of Coping Questionnaire [WCQ; Folkman & Lazarus, 1988]). Coping viewed as a process has received more interest in recent years (Parker & Endler, 1996), and measurements that can evaluate this type of coping have been created. Currently, researchers are moving towards bridging coping styles to include both concepts of coping as a trait/predisposition and coping as it relates to specific situations (coping as a process).

Endler and Parker (1999) constructed a self-report assessment, the Coping Inventory for Stressful Situations (CISS), as a tool for evaluating how individuals cope (predisposition) with stressful situations. As described by Endler and Parker, there are three main types of coping: task-oriented, emotion-oriented, and avoidance-oriented. Task-oriented coping involves evaluating and considering ways to ameliorate the problem (evaluating options, writing out lists, etc). In emotion-oriented coping, individuals become emotional over the stressor. Examples of emotion-oriented coping include crying, becoming nervous, and getting angry. In avoidance-oriented coping, individuals enact avoidance techniques to keep their mind off of the stressor. Examples include going shopping, watching television, and self-medicating through alcohol or illegal substances.
In exploring the three types of coping (task, emotion, and avoidance), researchers have found that task-oriented coping tends to be the healthiest of the coping strategies (Endler & Parker, 1999; Moos & Schaefer, 1993). When situations can be improved through taking action, task-oriented individuals examine the problem, think of steps to solve the problem, and then enact the steps. However, when situations cannot be made better (terminal illness, for example), avoidance-oriented coping has been found to be the healthiest form. Researchers believe that, in circumstances that have no solution, avoiding thoughts of the problem tends to cause the least amount of stress. Using the example of a terminal illness, researchers have found that individuals who use task-oriented strategies to overcome their illnesses experience the most stress (because there is no solution to the illness), while individuals who incorporate avoidance-oriented coping fare the best (Moos & Schaefer, 1993; Folkman & Lazarus, 1991).

Social Learning Theory

The role of parents in the psychological and social development of their children has been explored for centuries (Perris, 1994). During the 20th century, innumerable empirical studies were conducted to further understand the role parents have in the psychological development of children (e.g., Benedikt, Wertheim, & Love, 1998; Hodges, Cochrane, & Brewerton, 1996; Humphrey, 1986; Kog & Vandereycken, 1989; Minuchin, Rosman, & Baker, 1978; Pianta & Egeland, 1990; Pike & Rodin, 1991). Theorists such as Adler (1947), Bandura (1971), and Bowlby (1970) explored the correlation of parental behaviors towards children, and the resulting influences upon children. Distinct patterns of negative parental behavior have been linked with
subsequent pathology in children that range from emotional lability to aggression (Maddi & Kobasa, 1991; Perris, 1994).

Bandura (1971) discussed the influence of role models in the acquisition of behaviors in Social Learning Theory. While humans learn through direct experience, according to Bandura, we also learn through observing others. From infancy on, the capacity to learn vicariously through observation allows us to learn quickly and avoid unpleasant (even deadly) results from unsafe actions. For example, Bandura discussed the dangers that would befall human beings if we did not learn through modeling: how could children learn to swim, or adolescents learn to drive a car? Bandura listed reasons as to why modeling plays such an important role in human development, and these reasons included: painful or costly errors are avoided by observing competent models, complex behaviors can only be learned through observing others (i.e., language), and modeling is faster than trial and error.

When models have the authority to reinforce behaviors (or prevent negative consequences), Bandura (1971; 1986) stressed that the modeling is even more influential. When humans anticipate the reinforcement of behaviors, therefore, we are more likely to remember and implement the preferred behavior. Models that have status and power are the most successful at imparting behavior to the observer. As early as infancy, children learn that certain facial expressions or sounds are pleasing to the most powerful people in their world: their parents. That parents are the preeminent role models for children, therefore, was no great stretch within Social Learning Theory.

Social Learning Theory has asserted that there are three bases for the reinforcement of human behavior: direct external reinforcement, vicarious reinforcement,
and self-monitored reinforcement (Bandura, 1971). In direct external reinforcement, changing the reinforcement of behaviors alters behaviors. In other words, whereas behaviors are responded to in a particular manner previously, in direct external reinforcement the same behavior now results in a new response. For example, if a child’s temper tantrum previously resulted in the parent giving in and the child getting his or her way, now the parent allows the tantrum to occur but does not yield to the child’s wishes. When the child begins to act in a more preferred way, the parent reinforces this new behavior with attention and praise. The child has learned that unpleasant behaviors are ignored, while pleasing behaviors are reinforced.

In vicarious reinforcement, by watching what happened to others the observer learns what behaviors are rewarded and what behaviors are punished. When behaviors are rewarded, the observer learns that such behavior is acceptable and will enact the same behavior when possible. Conversely, the observer also learns what behaviors are unacceptable by watching others, and avoids these behaviors for fear of punishment (Bandura, 1971; 1986).

The final type of learning within Social Learning Theory has been described as self-reinforcement. Because humans cannot only rely on external motivators to determine behavior, self-reinforcement describes one’s internal behavioral control (Bandura, 1971). While humans initially learn through observing others, this learning eventually becomes an internal process. Through experience, we determine what we, ourselves, value. Bandura (1971) explained that we initially learn to assess behavior based on how others respond to said behavior. The most influential of these responders were parents (Bandura, 1971). Parents initially teach the child what behaviors are preferred based on their
approving responses (smiles, hugs, laughter). Children, in time, internalized the values they learned from their parents, and these become the self-reinforcement of Social Learning Theory.

Throughout Bandura’s (1971) explanation of Social Learning Theory, the role of parents as primary modelers and reinforcers of behavior has been addressed. Although parents figure predominantly in the modeling of behavior, Bandura asserted that any important role model impacts how children learn to behave. Other important role models for children include close relatives, teachers, friends, and actors on television. Because mothers provide the majority of child rearing activities in this country, the role of mothers in modeling behaviors for their children must not be underestimated.

Perris (1994) conducted a meta-analysis of literature that explored the influence of parents on children’s behavior, and found that how parents reared their children played a large role in children’s subsequent psychological adjustment. When parents were intrusive, lacked emotional warmth, were overprotective, or had difficulty accepting their children, the likelihood of psychological problems in their children increased. Moos and Schaefer (1993), conversely, found that high levels of family support increased the likelihood that individuals would use healthier forms of coping to deal with life stressors.

Looking at families in order to explain the causes of eating disorders has been undertaken since the 1870’s (Gull, 1874 and Laseque, 1873, as cited in Eisler, 1995). Research on families and eating disorders has led to a list of traits that do not explain eating disorder causation (parental age, social class, family size/composition, and birth order), while evidence that does indicate family influence on the acquisition of eating disorders includes: death of a parent or sibling, childhood sexual abuse, physical abuse
(Eisler, 1995), maternal modeling (Benedikt, Wertheim, & Love, 1998), parental adjustment (Espina, Ochoa de Alda, & Ortego, 2003), maternal overprotection (Turner, Rose, & Cooper, 2004), and family conflict (Lattimore, Wagner, & Gowers, 2000). Mothers have figured predominantly in the raising of children, and are considered to be the most influential in the childrearing process (Gerlsma & Emmelkamp, 1994). Females first learn their role in society from their family (Bandura, 1971), and the mother-daughter relationship has been described as particularly important (Orbach, 1986). Gilligan (1996) asserted that the adjustment level of daughters was correlated to the adjustment level of their mothers, while maternal distress was correlated to daughters’ risk of experiencing comparable difficulties (Lee, Lester, & Rotheram-Borus, 2002). Bandura, Ross, and Ross (1963) found that children imitated models that had the power to reward behavior. Because mothers held such an important role in the raising of children, therefore, it was understandable that children would model many of the behaviors of their mothers. Research has been conducted to evaluate the influence of parental rearing style on the personality development of children, and McCrae and Costa (1994) found that personality was not greatly influenced by parent’s rearing style, but adaptability was. The ability to adapt to stress described the act of coping, so mothers’ modeling coping styles for daughters is a logical conclusion.

The importance of parents’ modeling on their children has been established, as well as the understanding that role models with the ability to reward specific behavior hold a preeminent role in teaching children how to behave and interact with the world around them. When mothers are the primary caregivers for children, they are incredibly important in modeling behavior for children. Because 90 percent of individuals who
suffer from eating disorders have been found to be female (APA, 1994), a better understanding of what role (if any) mothers play in the acquisition of eating disorders is of value to help us better understand the disease.

In an effort to better appreciate the role mothers play in their daughters’ acquisition of eating disorders, research has been needed that looks at the stress responses of both mothers and daughters. While information regarding the traits of mothers of daughters who have been diagnosed with an eating disorder has been plentiful, prior to this study there was a paucity of information that explored how mothers of daughters with eating disorders were different than mothers of daughters who did not have an eating disorder. The results of this study, therefore, would add this important piece of information to the existing literature base on family interactions, eating disorders, and eating disorder acquisition.

Review of Research on Eating Disorders, Parents/Families, and Coping Styles

The impact of families on coping styles and eating behaviors was explored in the previous section. In the subsequent section, more attention is focused on specific relationships in the family (e.g., mothers/daughters), and how these associations may impact eating behaviors.

Parents/Families and Coping Style

Psychological coping resources have been described as specific to every individual, and relationships within the family environment help define these individual coping resources (Hamid, Yue, & Leung, 2003). Hamid, Yu, and Leung (2003) assessed 297 adolescent boys and girls on coping style and family environment, and determined that the most favorable family style for adolescent development had low levels of
conflict, a low to medium amount of control, and a high level of expressiveness, cohesion, and organization (Hamid et al., 2003). Conversely, families with high amounts of conflict, parents who were very controlling, yet offered little expressiveness, cohesion, and organization were the least healthy for adolescent development. When students had a positive perception of their family environment, they were more likely to use problem-focused (task-oriented) coping strategies. Students who viewed their family in a negative way were less likely to use constructive (task-oriented) coping styles. Interestingly, the researchers also found that girls were more influenced by the social support received from families than were boys. This conclusion indicated that girls are more sensitive to family dynamics, and may therefore be more likely to use maladaptive coping strategies when they come from problematic family environments.

To better understand the resiliency of children whose parents experienced intense marital conflict, Nicolotti, El-Sheikh, and Whitson (2003) assessed 44 boys and 45 girls on how they reacted to conflict between their parents. Using the CCSC (Program for Prevention Research, 1991), children were assessed on how they coped with a particular situation (in this case, marital conflict). The children listened to an audio recording of a mother and father having an argument, and then answered questions on the CCSC. Results indicated that active coping (task-oriented) is positively related to children’s adjustment level. The research also revealed that girls who used high levels of active coping were protected from depression, self-esteem problems, and health problems associated with conflict (Nicolotti, El-Sheikh, & Whitson, 2003). Nicolotti et al. asserted that coping strategies could be altered with training and education, and that training
children in healthy coping styles could help them better cope with difficult situations in the future.

In a study with similar findings, Mullis and Chapman (2000) evaluated 361 adolescent students (215 male, 146 female) to assess the relationship between self-esteem and the type of coping strategy most frequently used. Mullis and Chapman found that students with high self-esteem used problem-focused (task) coping skills most frequently, while students with lower self-esteem tended to use more emotion-focused coping. Keeping in mind that task-oriented coping has been described as the healthiest type of coping, it could therefore be concluded that adolescents with high self-esteem also use the healthiest form of coping. Mullis and Chapman found no gender or age differences in coping styles used by boys or girls.

Vidovic, Juresa, Begovac, Mahnik, and Tocilj (2005) observed that mothers of daughters with eating disorders (and the daughters themselves) considered their families to be less cohesive than mothers and daughters not impacted by eating disorders. Conversely, the authors discovered that their control sample of female medical students (who did not suffer from an eating disorder) were statistically different in terms of views towards their mothers. In the control group, the women viewed relationships with their mothers as cohesive, adaptable, and openly communicative. The control group in Vidovic et al.’s study was telling in that this group of obviously successful women (they were all enrolled in medical school) described the relationship with their mothers as open and cohesive. While modeling was not addressed in the research, the females with anorexia (and their mothers) described the mother/daughter relationship as strained and
contentious. The control group of medical students, however, found their relationships with their mothers to be supportive and healthy.

In exploring the relationship between level of adjustment in daughters whose mothers were infected with HIV, Lee, Lester, and Rotheram-Borus (2002) found evidence of daughters mirroring the emotional states of their mothers. The Brief Symptom Inventory (BSI; Derogatis, 1992), Rosenberg Self-esteem Scale (Rosenberg, 1965), and various interview questions were used to gather data. With a sample of 121 mother-daughter dyads, the researchers discovered that mother’s modeled for their daughters how to cope with stressors. Lee et al. also found that the mother-daughter relationship played a pivotal role in how well daughters interacted with their environment. The authors’ work supports the understanding that mothers’ level of stress influences their daughters’ level of stress and adjustment.

Using mothers and their first-born children chosen due to their low-income status and high risk factors (little education, environmental stressors), Pianta and Egeland (1990) examined maternal stress and its relationship to behavior in children. Mothers within Pianta and Egeland’s 183 participants were interviewed using a semistructured interview protocol, and their responses were rated on a 3-pt scale. Mothers and their children were also observed working together to solve a problem when the child was approximately forty-two months old. The task was observed, and interaction between the mother and child was coded using a 7-point rating. Pianta and Egeland found that daughters were more likely to model the mothers’ reactions to stress than were boys, and that mothers interacted with their daughters in a less healthy manner than did mothers of boys. The girls in the study were more avoidant of their mothers than were boys, and
Pianta and Egeland hypothesized that this was in direct relation to the mothers’ more maladaptive behaviors towards daughters than to sons.

Eating Disorders and Coping Style

Using a non-clinical sample of 128 college females, Koff and Sangani (1997) examined the relationship between coping style, negative body image, and eating disturbance. The authors found that women with the most negative views towards their bodies used the least healthy coping strategies most frequently (emotion and avoidance-oriented). Koff and Sangani also discovered that, the higher the woman’s score on emotion-oriented coping, the more negative body image she had. The researchers used the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990) and the Eating Attitudes Test-26 (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982). The women assessed did employ task-oriented coping behaviors, but this healthy type of coping was overshadowed by emotion and avoidance-oriented coping styles. Koff and Sangani suggested, therefore, that task-oriented coping be taught to individuals who suffer from eating disorders in order to contend with unhealthy eating beliefs and negative body image.

Shatford and Evans (1986) evaluated stress reactions among healthy college women in an attempt to understand how coping related to eating disorder symptomatology. The researchers assessed 294 women on 10 variables related to processing stress. Results indicated that coping style is a mediator of stress, and that ineffective coping styles (such as avoidance and emotion-oriented coping) increase the likelihood of bulimic behaviors. Shatford and Evans contended that women who suffer
from bulimia would benefit from therapeutic interventions that include training in healthier coping strategies.

To understand the impact and perception of stress on coping behaviors of women who evidence disordered eating behaviors, Bittinger and Smith (2003) administered the Eating Attitudes Test-26 (EAT-26; Garner et al., 1982), the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1999), and the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) to 56 female college students (aged 18-35 years). Participants were broken down into two groups: one with high scores on the EAT-26 (indicating disturbed eating attitudes) and the other with low scores on the EAT-26 (indicating normal eating attitudes). The authors found that women who received high scores on the EAT-26 experienced more negative feelings in stressful situations and used emotion-oriented coping more frequently than did women in the low scoring EAT-26 group. No statistical difference was found in how frequently either group employed task-oriented or avoidance-oriented coping. The authors concluded that women in the high scoring EAT-26 group perceived stress as more disturbing than women in the low scoring EAT-26 group, exaggerated their perception of stress, and were preoccupied with issues related to food and body image (Bittinger & Smith, 2003).

Noting a paucity of research on adolescents and eating disorder acquisition, Garcia-Grau, Fuste, Miro, Saldana, and Bados (2002) examined eating attitudes and coping styles in adolescent girls to better understand what (if any) relationship existed between the two. The authors used Spanish adaptations of the Eating Disorders Inventory-2 (EDI-2; Garner, 1998) and the Adolescent Coping Scale (ACS; Frydenberg & Lewis, 1997) on 186 female high school students. The ACS broke coping down into
four types: problem-focused (similar to task-oriented), intropunitive avoidance (similar to emotion-oriented), hedonistic avoidance (similar to avoidance-oriented) and avoidance of social support (also similar to avoidance-oriented). Results indicated that intropunitive avoidance coping (most similar to emotion-oriented coping) had the highest predictive power of determining unhealthy eating disorder behaviors as assessed by the EDI-2. Analysis of results led Garcia-Grau et al. to conclude that girls who use avoidance related coping behaviors are predisposed to developing an eating disorder. High scores on the intropunitive (emotion-oriented) avoidance scale were also the only distinguishable characteristic between girls who were at a high risk for eating disorder acquisition and the rest of the sample (Garcia-Grau, Fusté, Miro, Saldana, & Bados, 2002). Individuals who used tension reduction techniques (i.e., crying, shouting) were at the greatest risk of developing an eating disorder. Participants who predominantly used problem-focused coping were not found to score highly on the measure of eating disorder pathology.

Mothers, Daughters, and Eating Disorders

The question of whether mothers model dieting behaviors for their daughters is an important one, and Ogden and Seward (2000) explored whether or not daughters learned dieting beliefs from their mothers in hopes of shedding light on this question. Thirty mother and daughter dyads were surveyed to assess their beliefs towards eating behavior and feelings about the mother-daughter relationship through interview questions, the Dutch Eating Behavior Questionnaire (DEBQ; Van Strien, Frijters, Bergers, & Defares, 1986), and the 10-item Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, and Fairburn, 1987). The researchers found that, if mothers felt they (and their daughters) had little autonomy, daughters rated themselves highly on levels of body dissatisfaction.
Ogden and Seward hypothesized that mothers project their own concerns onto their daughters, which supports the idea that daughters learn behaviors from their mothers. The researchers did not, however, find evidence that daughters learn dieting behaviors from their mothers. That mothers were models of behavior, on the other hand, was supported.

Inconsistent Nurturing as Control (INC) theory has been described as the phenomenon of nonfunctioning individuals learning to enact unhealthy behaviors by observing role models who unintentionally support the behaviors they want to stop (Prescott & Le Poire, 2002). In terms of eating disorders, Prescott and Le Poire (2002) asserted that, within INC, mothers of daughters who had an eating disorder were inconsistent in both punishing unhealthy eating behaviors and encouraging healthy eating behaviors. To test INC theory, Prescott and Le Poire recruited 40 participants from their community and a local college. Participants were chosen based on an interview that determined they had (or previously had) an eating disorder. Participants were asked to describe the behaviors of their mothers in relation to their eating disorder, assess on a scale of zero to 100 their mothers’ level of consistency in punishing (or reinforcing) the eating disorder, determine their level of eating disorder relapse, and rate their mothers’ persuasiveness in influencing the eating disorder. The researcher discovered that daughters thought their mothers had been inconsistent in reinforcing and punishing eating disorder behaviors (Prescott & Le Poire, 2002). Based on the stage of the eating disorder (as determined through self-report), participants revealed the following inconsistencies: when the eating disorder was most problematic, mothers were more likely to use punishment; when mothers were annoyed by the behaviors related to the eating disorder, they used more reinforcement. Prescott and Le Poire concluded that reinforcement of
eating disordered behaviors by mothers increases the likelihood of relapse. Conversely, mothers who were consistent in how they dealt with their daughter’s eating disorder had the greatest impact in helping daughters overcome the eating disorder.

To better understand the perspectives of mothers whose daughters suffered from an eating disorder, Pike and Rodin (1991) examined the views of 77 mothers, half of whom had a daughter with an eating disorder, and the other half who served as a control group. The researchers evaluated the mothers on their satisfaction with the family by administering the Family Adaptability and Cohesion Evaluation Scale III (FACES-III; Olson, Portner, & Lavee, 1985). Mothers evaluated their own body satisfaction by describing their dieting behaviors, compared themselves to women their own age in terms of attractiveness, and were administered the Eating Disorders Inventory (EDI; Garner, Olmstead, & Polivy, 1983). The researchers found that mothers whose daughters suffered from an eating disorder thought their daughters needed to lose more weight than the control group of mothers, and they also thought their daughters were less attractive than did mothers in the control group. Based on their analyses, Pike and Rodin concluded that disordered eating may be a learned behavior that is transmitted to daughters through modeling mothers’ unhealthy behaviors towards food and body. Pike and Rodin also asserted that mothers model coping behaviors (in this example, disordered eating) for their daughters.

Benedikt, Wertheim, and Love (1998) assessed the relationship between mothers’ views towards eating and dieting and their daughters’ resulting body image and dieting behaviors through a series of interview questions. The authors discovered that, amongst the 10th and 11th graders they assessed, dieting behaviors modeled by mothers did
influence the daughters’ views of their body. Mothers did not tell daughters to diet or have a negative body image, but the mothers’ dieting behaviors and comments about their own bodies did negatively impact how daughters viewed themselves. For example, daughters’ reports of unhealthy weight loss behaviors (skipping meals, dieting) were predicted by mothers’ own self-reports of negative body image and use of the same unhealthy weight loss behaviors (Benedikt, Wertheim, & Love, 1998). Benedikt et al.’s findings were another example of the tenant of social learning theory that children learn behaviors from important role models (in this case, mothers).

Families/Mothers, Daughters, Eating Disorders, and Coping Style

If the success of stress management in mothers impacted the adjustment level of daughters, then how mothers and daughters communicate with each other would be important in understanding this impact. Lattimore, Wagner, and Gowers (2000) examined the communication patterns of 34 mother-daughter dyads (20 daughters diagnosed with anorexia-nervosa, 14 daughters diagnosed with emotional and developmental disorders) using two semi-structured family tasks that were videotaped. The researchers found that the anorexia dyads used more destructive communication patterns, less effective problem solving skills, and rated lower in body satisfaction in comparison to the daughters with emotional and development disorders. Observations of mother-daughter interaction also indicated that mothers of daughters with anorexia were over-involved compared to mothers of daughters who did not have unhealthy levels of body satisfaction.

Maternal overprotection made girls feel they were unable to cope with the world around them, according to Turner, Rose, and Cooper (2004). The researchers evaluated bonding patterns between female adolescents and their parents using the Parental
Bonding instrument (PBI; Parker, Tupling, & Brown, 1979) in an attempt to understand how parental bonding impacted eating disorder symptomatology. With a sample of 367 adolescent females ranging in age from 17 to 18.75 years, the researchers determined that maternal overprotectiveness and low levels of care did negatively influence a girl’s views towards effectiveness within society. The researchers did not find, however, a link between eating disordered behaviors and mothers’ over involvement with daughters. Because they did not find a direct link, the authors encouraged future research that would further explore the role mothers (and families) played in the acquisition of eating disorders.

Wanting a better understanding of how families interacted with stressors, Espina, Ochoa de Alda, and Ortego (2003) evaluated 147 couples (seventy-four of whom had a daughter diagnosed with an eating disorder). All participants were administered the General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979) to evaluate general mental health, the Eating Attitudes Test-26 (EAT; Garner & Garfinkel, 1979) to examine beliefs regarding weight, exercise, and food, the Beck Depression Inventory (BDI; Beck et al., 1961), the Self-Rating Anxiety Scale (SAS; Zung, 1971), and the Dyadic Adjustment Scale (DAS; Spanier, 1976, 1989) to measure satisfaction and relational adjustment in intimate couples. Espina et al. found that adjustment was less healthy in couples whose daughter suffered from an eating disorder. Couples whose daughter was diagnosed with an eating disorder scored higher on anxiety and depression indexes, and the authors suggested that there might have been a “circular process” (Espina, Ochoa de Alda, & Ortego, 2003, p. 360) in which high anxiety and depression influenced the acquisition of an eating disorder. The circle continued in that depression and anxiety in
the parents was exacerbated and perpetuated by the stress experienced from having a daughter with an eating disorder. The researchers found that mothers’ low scores on the BDI predicted who would be assigned to the control group (with no eating disorder pathology). According to Espina et al., this link supported the idea that mothers’ mood and cohesion within the family are significant factors in the therapy process for daughters who suffer from an eating disorder.

Summary of the Related Research

Throughout the research on eating disorder acquisition, similarities in families were found. Daughters diagnosed with eating disorders repeatedly came from families who scored highly on controlling behaviors, but low on measures of cohesion and expressiveness. Parents whose daughter suffered from an eating disorder used less healthy communication than parents of healthy daughters, while mothers of eating disordered daughters thought their daughters were less attractive than the mothers of healthy daughters. Researchers found that girls learned behaviors from mothers, mirrored mothers’ emotional states, modeled reactions to stress like their mothers, and learned coping behaviors from their mothers. Dieting behaviors of mothers were found to influence the dieting behaviors of daughters, and mothers’ inconsistencies towards their daughter’s eating disorder increased the likelihood of eating disorder relapse. Girls were found to be more sensitive to family dynamics than were boys, but no gender difference was found in coping styles most frequently employed by boys or girls.

Task-oriented coping behaviors (the healthiest form) were related to high self-esteem, and high self-esteem was found to be a protective factor against eating disorder acquisition. Conversely, when girls had low self-esteem, they tended to use emotion-
oriented coping most frequently. Emotion and Avoidance-oriented coping styles (the least healthy coping strategies) were found to increase the likelihood of eating disordered behaviors, and women with the least healthy views towards their bodies employed the least healthy coping styles.

Critique of Empirical Research

Although a great deal of research has been conducted on eating disorders, coping styles, and the relationship between mothers and daughters, methodological limitations have been noted among prior studies. An understanding of these limitations could aid in furthering research on eating disorders, coping, and intergenerational learning. For example, Hamid, Yue, and Leung (2003) used self-reports from both boys and girls in their study, but did not include parental perspectives. Because Hamid, Yue, and Leung used results from children to directly evaluate family style, their results may be skewed because they only included the perspectives of children. If the study had included parental views on family environment, the results would have been more global and therefore more applicable.

Koff and Sangani (1997), Shatford and Evans (1986), Prescott and Le Poire (2002), Garcia-Grau et al. (2002), and Turner, Rose, and Cooper (2004) brought important knowledge to the understanding of eating disorders and the influence of coping style. In none of these studies, however, did the researchers explore the relationship of modeling or the influence of mothers on their daughters. While their research did indicate a relationship between maladaptive coping styles and eating disorder acquisition, how women learned to cope was not assessed. To include mothers and assess their style of coping, therefore, would add to the understanding of eating disorder acquisition.
Ogden and Seward (2000) played down the likelihood of mothers modeling behaviors for their daughters, but their rationale seems weak. The researchers claimed their results “may be relevant to the study of weight concern, not as a forum for modeling but as an interaction between two individuals (p. 82).” The flaw of this argument was that, within a mother-daughter relationship, the mother is in the role of the provider of rewards. As Bandura, Ross, and Ross (1963) asserted, when a role model has the power to enforce behaviors, children are more likely to enact these behaviors. So in the case of Ogden and Seward, their research did support the concept that daughters learn behaviors from their mothers. The researchers also used healthy girls to assess eating behaviors; had the girls in the study suffered from an eating disorder, the results of their research may have been more telling regarding the behaviors surrounding individuals with eating disorders.

Lattimore, Wagner, and Gowers’ (2000) research on communication patterns between mothers and their daughters with anorexia supported the idea that unhealthy or deficient communication patterns influence family functioning. While the research suggested a relationship between verbal interaction and behavior, the fact that only two scenarios were studied to gather their data is a fault of the research.

Benedikt, Wertheim, and Love (1998) used volunteers from high schools to participate in their study. While their sample of 89 mother-daughter pairs was impressive, participants came from an initial population of 284 students. Because the participants volunteered for the study after learning what the study would be about, the possibility of volunteer bias (and resulting skewing of results) must be considered. Modeling of dieting
behaviors was evaluated in the study, but the assessment of coping style modeling was not.

Pianta and Egeland’s (1990) study of economically disadvantaged mothers and their relationship with their children was important in that it assessed a segment of the population frequently missed in studies on eating disorder symptomatology. Because eating disorders had historically been diagnosed in middle to upper class populations, to better understand the relationship between observed behavior and resulting behavior in working class or poor families was useful. While Pianta and Egeland’s work supported the idea that children learn how to cope with stress in the context of the mother-child relationship, a more thorough examination of coping styles could have been assessed by administering an inventory that specifically evaluated coping style.

Prescott and Le Poire’s (2002) examination of Inconsistent Nurturing as Control theory indicated that mothers’ reactions to daughters’ eating disorders played an important role in the duration of eating disordered behaviors. Because no reports from mothers were included in their research, however, all results rested on the truthful recollections of daughters interviewed for the study. Personal bias, memory lapses, and dishonesty may have all played a role in making Prescott and Le Poire’s results skewed or incorrect. Mothers’ recollections of their daughters’ eating disorder experience would have been beneficial to better understand the role of mothers in daughters’ eating disorder diagnoses.

Mothers play a role in modeling behaviors for their daughters, according to Pike and Rodin (1991). The researchers were able to draw a link between mothers’ behaviors influencing daughters’ behaviors, and they even acknowledged that unhealthy eating
patterns were a form of coping that were passed from mothers to daughters. Vidovic et al. (2005) also found similar results in their study that explored family adaptability, cohesion and cohesion amongst women with eating disorders and their mothers. In both studies, however, actual coping styles used by mothers and daughters were not addressed. Exploring coping styles specifically would better explain the acquisition of coping behaviors in girls and women suffering from disordered eating.

Turner, Rose, and Cooper (2004) did not find a link between mothers’ overprotection and daughters’ eating disordered behaviors. The researchers did find that maternal overprotection negatively impacted daughters, but did not play a role in eating disorder acquisition. Because the study did not include the perspective of mothers, the results were one-sided. Daughters may have felt their mothers were over-involved, but such feelings amongst adolescents could be viewed as common (even expected). A more thorough understanding of mothers’ influence on daughters would have been garnered if mothers had been included in the study.

Mothers and fathers were assessed in the work of Espina, Ochoa de Alda, and Ortego (2003), but the perspective of daughters was not included. If the authors had included daughters and their perspective of stress in the family relationship, a more thorough understanding of how stress impacts everyone in the family would have been gathered.

Bittinger and Smith (2003) evaluated college women in their study on coping responses and disordered eating. The sample was drawn from a population of healthy college women, and the participants were chosen based on their Eating Attitudes Test-26 (EAT-26; Garner et al., 1982) scores. While the study provided insight into how adult
women perceive stress and its relationship to disordered eating, the study did not evaluate
the perspective of adolescents who suffer from eating disorders. The study, furthermore,
did not examine the influence of modeling on the behavior and beliefs of the participants.

Lee, Lester, and Rotheram-Borus (2002) and Nicolotti, El-Sheikh, and Whitson
(2003) found powerful evidence that the emotional stress level of mothers was highly
correlated to the stress level of children. In both studies, the sample populations consisted
of individuals suffering from issues other than eating disorders (Lee et al. studied families
and HIV, while Nicolotti et al. studied marital conflict). A study that uses the same type
of structure, but explores the relationship of stress and eating disorder symptomatology
on children’s coping style, would be beneficial. For example, mothers of daughters who
have been diagnosed with an eating disorder, mothers of daughters who have not been
diagnosed with an eating disorder, and the daughters of both groups could be assessed on
how they cope with stress on a regular basis. Results could be examined to determine if
the emotional stress levels of mothers were correlated to the stress levels of their
children.

Rationale for the Approach

As researchers have indicated (e.g., Vidovic et al., 2005; Ogden & Seward, 2000;
Lee, Lester, & Rotheram-Borus, 2002), mothers model behaviors for their daughters, and
daughters have been receptive students to their mothers’ teachings. Bandura’s Social
Learning Theory has supported the concept of daughters learning behavior from their
mothers, while other researchers (Bandura, Ross, & Ross, 1963) have discerned that
models with the ability to reward preferred actions are even more powerful than models
who are merely observed in passing. Because mothers (who provided the majority of care
Giving) are in the position to reward behaviors, they play a pivotal role in teaching children how to behave.

Coping has been explored for decades and viewed many ways, and an enduring perspective of coping is that coping style is both inherent and learned from the environment. As described by Endler and Parker (1999), coping is both a process and predisposition, and every individual has a tendency to cope with stressful situations in a particular manner. Coping is not a stagnant trait, however, but can be altered through experience, maturation, or training (Endler & Parker, 1999). Because girls learn behaviors and beliefs from their mothers, and unhealthier forms of coping (emotion-oriented and avoidance-oriented) have been found to be associated with eating disorder symptoms, a better understanding of the relationship of mothers’ coping style to disordered eating in daughters is of importance.

If mothers could be trained to use healthier coping mechanisms, the likelihood of eating disorder acquisition by their daughters may be diminished. Because girls model behaviors after their mothers, mothers who use unhealthy forms of coping could be coached to use healthier forms of coping. Eating disorder research has indicated that mothers of daughters who suffer from eating disorders frequently have negative views on their families, their daughters’ bodies, and incorporate unhealthy communication styles into their typical interactions. By teaching these mothers healthier ways to cope with stress, the negative attitudes and behaviors they model could be altered to be healthier (i.e., task-oriented).

Prior to this study, there was no research that compared coping styles of mothers of healthy daughters to mothers of daughters who suffered from eating disorders. By
examining the coping styles of mothers of both eating disordered and symptom-free daughters, a clearer understanding of the role mothers play in the acquisition of (or protection from) eating disordered symptoms was attempted. The goal of this study, therefore, was to evaluate coping styles of both mothers and daughters. In one group of mother-daughter dyads, all the daughters had been diagnosed with an eating disorder and were presenting in an outpatient setting due to their eating disorder symptoms. The non-eating disordered group also consisted of mother-daughter dyads, and the daughters were evaluated to ensure that none of them elicited eating disordered characteristics. This non-eating disordered group of girls came from the same outpatient clinic as the eating disordered mother-daughter dyads, and were contacted through an Adolescent Health Center where they presented for sports physicals, birth control evaluations, etc. All daughters were administered the Eating Attitudes Test-26 (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982) to evaluate severity (or existence) of an eating disorder. All mothers and daughters were administered the Coping Inventory for Stressful Situation (CISS; Endler & Parker, 1999) to determine which type of coping the participants employed most frequently.

Results of the study would either support or refute the understanding that mothers play an important role in modeling how daughters cope with stressful situations. If mothers in the two groups were found to be significantly different in terms of coping styles, this information could be used to shape counseling interventions employed when girls present for treatment due to unhealthy eating behaviors. If mothers in the eating disorder group were found to use less healthy coping strategies than mothers in the non-
eating disordered group, future interventions with eating disorder clients could include assessment of coping styles used within the family.
CHAPTER III

METHODOLOGY

The purpose of this study was to explore the relationship between how mothers cope with stress, and how mothers’ coping styles were related to daughters’ eating disorder symptomatology. Research has suggested that daughters learn coping styles from family members (Hamid, Yue, & Leung, 2003; Patterson & McCubbin, 1987; Espina, Ochoa de Alda, & Ortego, 2003), and that daughters are highly influenced by the coping styles used by their mothers (Pike & Rodin, 1991; Pianta & Egeland, 1990). Because no previous research had been conducted that compared coping styles of mothers of daughters with eating disorders to coping styles of mothers of daughters without eating disorders, this study’s goal was to add to the extant knowledge regarding disordered eating and disordered eating acquisition.

General Research Questions

1. Do coping styles of mothers whose daughters have eating disorders differ from the coping styles of mothers whose daughters do not have eating disorders?

2. Are coping styles of daughters with an eating disorder similar to the coping styles of their mothers?

3. Are coping styles of daughters without an eating disorder similar to the coping styles of their mothers?
Statistical Hypotheses

Null hypothesis 1: There is no statistically significant difference in scores on the Coping Inventory for Stressful Situations (CISS) between mothers of daughters with an eating disorder and mothers of daughters without an eating disorder.

Directional hypothesis 1: On the CISS, mothers of daughters without an eating disorder will show significantly higher scores on the task-oriented coping scale, and significantly lower scores on the emotion and avoidance-oriented coping scale than mothers of daughters with an eating disorder.

Null hypothesis 2: There is no statistically significant difference in scores on the CISS between daughters with an eating disorder and their mothers.

Null hypothesis 3: There is no statistically significant difference in scores on the CISS between daughters without an eating disorder and their mothers.

Although hypothesis one had not been researched prior to this study, based on theory and previous research studies it was expected that directional hypothesis one would be supported. For example, Lee, Lester, and Rotheram-Borus (2002) examined the relationship in adjustment styles of mothers with HIV and their daughters. These researchers found that self-esteem and emotional distress in mothers were highly correlated to the self-esteem and emotional distress of their daughters. The idea that daughters would be influenced by the coping styles of their mothers, therefore, followed
the conclusion of Lee et al. Moreover, Pike and Rodin (1991) found that mothers modeled coping behaviors for their daughters; to compare coping styles of mothers of healthy daughters to coping styles of mothers of daughters with eating disorders would put this assertion to the test. Because hypotheses two and three were secondary hypotheses, and because these variables had been investigated previously, directional hypotheses were not posed. However, null hypotheses two and three were examined with this population in order to support or disconfirm prior research on the relationship between mothers’ and daughters’ coping styles.

Description of Independent and Dependent Variables

In order to test null hypothesis one, three quantitative dependent variables and one categorical independent variable were utilized. Dependent variables included participant scores on task-oriented coping, emotion-oriented coping, and avoidance-oriented coping (as measured by scores on the Coping Inventory for Stressful Situations [CISS]). The independent variable included group membership, which were the mutually exclusive categories of mothers of daughters with eating disorders, and mothers of daughters without eating disorders.

In order to test null hypothesis two, three quantitative dependent variables and one categorical independent variable were utilized. Dependent variables once again included participant scores on task-oriented coping, emotion-oriented coping, and avoidance-oriented coping (as measured by scores on the CISS). The independent variable included membership in one of two mutually exclusive categories: mothers of daughters with eating disorders and daughters with eating disorders themselves.
In order to test null hypothesis three, the same three quantitative dependent variables were utilized (i.e., participant scores on task-oriented coping, emotion-oriented coping, and avoidance-oriented coping, as measured by scores on the CISS). The one categorical independent variable included membership in one of two mutually exclusive categories: mothers of daughters without eating disorders and daughters without eating disorders themselves.

Research Design and Data Analysis

First, descriptive statistics were examined for all variables, and included means and standard deviations of information gathered from mothers (e.g., age, height, weight, household income) and daughters (e.g., age, height, weight). Additionally, mothers were asked their marital status, race, and if they have had any health issues lasting longer than three months. Mothers were also asked to describe their relationship to their daughters (biological mother, adoptive mother, or foster mother). Under the foster and adoptive categories, participants were asked to describe how old the daughter was at time the foster or adoptive relationship began, and for how long the daughter had lived with the foster or adoptive family. Additional information gathered from daughters included grade in school, race, and if they had any health issues lasting longer than three months.

After descriptive statistics were reported for all demographic variables, inferential statistics were used to test the three null hypotheses described above. According to Mertler and Vannatta (2002), one-way multivariate analyses of variance (MANOVAs) were the most appropriate means of statistically testing null hypotheses one, two and three. Specifically, three separate one-way MANOVAs were used in this study. One-way MANOVAs were appropriate for this research study because this analysis identifies
whether statistically significant group differences exist between two independent groups of participants on more than one dependent variable. As Mertler and Vannatta explain, “…in MANOVA, the researcher takes two or more groups [in this case, mothers and daughters] and compares their scores on a combination of DVs [task, emotion, and avoidance coping] in an attempt to discover whether or not there exists significant group differences” (p. 282, italics added).

Participants, Setting, and Delimitations

Participants for this study were gathered from a children’s hospital in the Midwest. A power analysis using a hypothesized medium effect size and alpha level of p < .05 revealed that a total of approximately 80 participants were necessary to adequately test all three statistical hypotheses described above (Cohen, 1992). Specifically, this study intended to include at least 20 mothers of daughters without an eating disorder, 20 mothers of daughters with an eating disorder, 20 daughters without an eating disorder, and 20 daughters with an eating disorder (Mertler & Vannatta, 2002). The final count of participants included 29 pairs of mothers and their daughters who had been diagnosed with an eating disorder, and 29 pairs of mothers and their daughters who did not evidence eating disordered behaviors or symptoms. Therefore, a total of 116 individual participants were included in the study.

The children’s hospital used in this study offered an Adolescent Health Center where medical evaluation, analysis, and follow-up care were provided on an outpatient basis. The clinic also offered general health physicals, contraceptive counseling, and prescription checkups. The majority of research conducted on women and eating disorders has been done at the college level (e.g., Vidovic et al., 2005; Bittinger & Smith,
2003; Hodges et al., 1998; Koff & Sangani, 2997; Haudek et al., 1999; Humphrey, 1986). However, Nicolotti et al. (2003), McWilliams et al., (2003) and Somerfield and McCrae (2000) have indicated that adolescence is the opportune time to teach more effective coping styles. Therefore, the population studied for this project was adolescent females, as they currently experienced active modeling by their mothers.

The daughters in the study were limited to ages 13 to 18, as the adolescent version of the CISS was normed to this age range and was written at the 6th grade reading level. Prevalence rates of eating disorders have indicated that approximately 90 percent of all eating disorder diagnoses are attributed to females, with the remaining 10 percent assigned to males (APA, 2000). Subjective observations by staff at the Adolescent Health Center where data were gathered also supported these claims in that over 90% of the patients who present at that particular clinic for eating disorder-related reasons are female (E. Lantzouni, personal communication, December 9, 2006). Because Mullis and Chapman (2000) found no gender or age differences in coping styles used by adolescent males or females, and because the primary purpose of this study was to generalize results to mothers and their daughters, it was reasonable to delimit the sample population to females. In addition, Pike and Rodin (1991) and Pianta and Egeland (1990) discovered that adolescent females primarily used their mothers as coping role models (rather than fathers). Another delimitation of this study, therefore, was the use of mothers (not fathers) as research participants.

Procedures

There were two distinct groups in this research study: (1) mothers and their daughters who had been diagnosed with an eating disorder, and (2) mothers and their
daughters who had not been diagnosed with an eating disorder. In the first group, the patients’ primary care physician or a licensed mental health practitioner had made the eating disorder diagnosis prior to referral to the Adolescent Health Center (or at the Adolescent Health Center itself, if their primary care physician was employed there). Mothers and daughters in the second (i.e., non-eating disordered) group were recruited from the same Adolescent Health Center. However, these participants presented for sports physicals, contraceptive counseling, or other non-eating disorder-related reasons. The non-eating disordered sample was non-clinical, meaning that they had no known mental disorders. The Eating Attitudes Test-26, furthermore, was administered to the non-eating disordered group to ensure that no individuals with eating disordered behaviors or beliefs towards food were included in this group.

Those patients agreeing to participate in the study met with either the researcher or the previously determined physician, who explained the study protocol to both the mother and the daughter. The fact that no identifying information would be gathered during participation in the study was explained to mothers and daughters. The prospective participants were told that, by completing and turning in the questionnaires, consent would be assumed. Informed consent and Informed assent documents used in this study are shown in Appendices B and C.

When mothers and daughters agreed to participate, the mother completed a demographic questionnaire. The demographic information collected contained no identifying information. Within the demographics questionnaire, mothers listed height and weight for both themselves and their daughters. This information was self-reported data (and therefore subjected to bias), because access to clients’ records was not
requested through the research protocol. While the mother filled out the demographics questionnaire, the daughter was administered the Eating Attitudes Test-26 (EAT-26: Garner et al., 1982) to understand daughters’ feelings towards eating behavior and to allow the researcher to examine how thoughts towards eating related to coping strategies. Data from daughters in the non-eating disordered group was utilized only if their scores on the EAT-26 fell below the cutoff of 20, as suggested by Garner et al. (1982). One prospective pair of participants for the non-eating disordered group was precluded from participation in the study due to the daughter scoring higher than the cutoff for eating disorder screening purposes.

A coding system was created to organize and describe all participants (e.g., ME1=mother number one in the eating disordered group; DE1=daughter number one in the eating disordered group; MN1=mother number one in the non-eating disordered group; DN1=daughter number one in the non-eating disordered group). The coding system allowed for delineation between groups (eating disorders group or non-eating disorder group), to separate scores of mothers and daughters, and allowed for the matching of mothers with their daughters. A complete listing of questions on the demographics questionnaire is found in Appendix D. Finally, both mothers and daughters filled out the adult and adolescent versions, respectively, of the CISS.

After data collection was completed, an attending physician or nurse practitioner was available if either the mothers or daughters had questions or concerns about the inventories. There was no social or financial incentive associated with participation in this research project, and there are no known risks associated with completing the instruments.
When inventories and questionnaires were completed, the researcher collected the data and stored it in a locked office at the hospital. The researcher scored the anonymously coded inventories at the hospital, and later inputted the data into an Excel matrix for easy transferal to the Statistical Package for the Social Sciences (SPSS).

Instruments

Inventories were administered to assess coping styles and eating behaviors (located in Appendices E, G, and H), while a questionnaire gathered more general information about the participants (located in Appendix D). The following section describes these tools in detail.

Demographics Questionnaire

The Demographics Questionnaire was developed by the researcher to be filled out by mothers, and requested information on the mother’s age, race, marital status, height and weight, relationship to daughter (biological mother, foster mother, or adoptive mother), family income, history of chronic health problems, and medications currently taken. Information gathered on the daughter included the daughters’ age, grade in school, race, height and weight, history of chronic health problems, and medications currently taken. Data collected by the Demographics Questionnaire was open to reporter bias because it was a self-report instrument.

Coping Inventory for Stressful Situations

The Coping Inventory for Stressful Situations (CISS) is a 48-question self-report assessment that is available in both adult and adolescent (ages 13 to 18) versions. The adolescent version of the CISS is written at the 6th grade reading level. Multi-Health Systems (MHS) published the current version of the CISS in 1999. Endler and Parker
began working on the formation of a coping scale with the publication of the precursor to the CISS, the Multidimensional Coping Inventory (MCI), in 1990. The adult version of the CISS is in its fifth revision (version six) of the original inventory (Endler & Parker, 1999). The test booklet for the CISS is in its second edition.

The CISS measures multidimensional coping styles used when individuals are faced with stressful situations. The inventory has been used to assist researchers or clinicians in understanding an individual’s preferred coping style, which furthermore aids in comprehending the relationship between an individual’s coping style and personality. Administration time of the CISS is approximately 10 minutes, and it is hand-scored by the test administrator. The CISS uses a Likert scale that ranges from “Not at All” (1) to “Very Much” (5), and divides coping into three basic scales: Task-oriented coping, emotion-oriented coping, and avoidance-oriented coping. Avoidance-oriented coping is further broken down into the subscales distraction and social diversion. Sixteen questions from the CISS measure task-oriented coping, 16 questions assess emotion-oriented coping, and 16 questions measure avoidance-oriented coping. Task coping is measured by questions 1, 2, 6, 10, 15, 21, 24, 26, 27, 36, 39, 41, 42, 43, 46, and 47. Emotion coping is measured by questions 5, 7, 8, 13, 14, 16, 17, 19, 22, 25, 28, 30, 33, 34, 38, and 45. Avoidance coping is measured by questions 3, 4, 9, 11, 12, 18, 20, 23, 29, 31, 32, 35, 37, 40, 44, and 48. Figure two shows the subscales of the CISS.
As has been described by Endler and Parker (1999), task-oriented coping is purposeful behavior focused on solving, restructuring, or altering a situation. An example of task-oriented coping is writing a “to do” list in order to better understand how to tackle a problem. The authors describe emotion-oriented coping as self-oriented, with the goal of reducing stress. Examples of emotion-oriented coping include crying and becoming angry. Avoidance-oriented coping is aimed at avoiding stressors through actions (distraction-oriented) or social diversion (social-diversion oriented). Examples of avoidance-oriented coping are watching television and talking on the telephone.

Multiple researchers (e.g., Dafna & Tali, 2005; McWilliams et al., 2003; Endler & Parker, 1999) have asserted that task-oriented coping is the healthiest of the three coping styles because task-oriented coping is the most adaptive form of coping. Task-oriented coping has also been found to be negatively associated with psychological distress and depression. Emotion-oriented and avoidance-oriented coping, on the other hand, have
been found to correlate highly with measures of depression and psychopathology (McWilliams et al.).

The CISS demonstrates good psychometric properties. Coefficient alphas have been reported to range from .87 to .92 on the task scale, from .82 to .90 on the emotion scale, and from .76 to .85 on the avoidance scale (Cosway, Endler, Sadler, & Deary, 2000), indicating good internal consistency reliability. Furthermore, coefficient alphas for the distraction and social diversion subscales of the avoidance-oriented coping scale have been reported to range from .75 to .81. Stability reliability for the CISS ranged from .51 (on the distraction subscale) to .73 (on the task-oriented scale) after a six-week interval (Cosway et al., 2000).

The adolescent version of the CISS was administered to two groups of adolescents (13-15 years old and 16-18 years old) and factor analyzed. The three factors (task, emotion, and avoidance-oriented coping) yielded similar results for both age groups. When the 3 factor solutions for the two samples were compared, congruence coefficients were above .97, indicating factor structures for both age groups were nearly identical (Endler & Parker, 1999). When scores of the adolescent samples were compared to scores of an adult sample, the congruence coefficient was above .94 (indicating multidimensionality of the inventory) (Endler & Parker).

Concurrent validity of the CISS was explored by comparing the CISS to other inventories that measure coping. The CISS task scale correlated moderately with the Ways of Coping Questionnaire’s (WCQ; Folkman & Lazarus, 1985; 1988) Problem-Focused Scale for females (r = .49, p < .01). In relation to the MMPI-2 (Hathaway & McKinley, 1989), the task-oriented coping scale of the CISS was found to correlate
highly with the ability rating \((r = .20, p<.01)\) of the MMPI-2. Cook and Heppner (1997) compared the CISS to the COPE (Carver, Scheier, & Weintraub, 1989) and the Coping Strategies Inventory (CSI; Tobin, Holroyd, Reynolds, & Wigal, 1989) to examine stability of the factor structure and to understand the common constructs underlying the three scales. Of these three coping inventories, Cook and Heppner determined that the CISS was the best inventory for measuring coping behaviors. A Complete listing of questions for both the Adolescent and Adult versions of the CISS are shown in Appendices F and G.

Eating Attitudes Test-26

The Eating Attitudes Test-26 (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982) is a self-report inventory that measures eating attitudes and behaviors related to anorexia nervosa. The 26 items of the EAT-26 are scored on a 6-point Likert-type scale that ranges from ‘always’ to ‘never’. The answers most indicative of eating disorder symptomatology fall under the ‘Always’ category, and these answers are given a score of 3. ‘Usually’ responses receive 2 points, ‘Often’ answers are given 1 point, and ‘Sometimes,’ ‘Rarely,’ and ‘Never’ receive no points. On question 26, scores are ranked conversely (e.g., ‘Never’ receives 3 points, ‘Rarely’ receives 2 points, and so on). The total score range for the EAT-26 is 0 to 78, with higher scores indicating greater pathology. As mentioned previously, a score of 20 is the recommended cut-off for screening for eating disorders. Cronbach alpha’s show that the internal consistency reliability of the EAT-26 ranges from .83 to .90 (Garner et al., 1982). A discriminant analysis was able to correctly classify 83.6% of anorexic and control group participants, indicating that the EAT-26 correctly discriminates between persons with and without
eating disorders in the vast majority of cases. Daughters in the non-eating disordered group were administered the EAT-26 to ensure than no participants in this group evidence eating disordered behaviors. Daughters in the eating disordered group were also administered the EAT-26 for descriptive and comparison purposes. A Complete listing of questions for the EAT-26 is shown in Appendix D.

Summary of Methodology

The purpose of this research study was to examine coping styles used by mothers, specifically when the daughters of mothers in one group suffered from an eating disorder while daughters of mothers in another group did not have an eating disorder. An additional question included whether or not daughters modeled the coping behaviors evidenced by their mothers. Participants came from a children’s hospital in the Midwest, and both mothers and daughters answered questions on the Coping Inventory for Stressful Situations. Daughters in both groups took the Eating Attitudes Test-26 to discern their level of eating disorder symptomatology. Demographic information gathered included ages of mothers and daughters, race, height, weight, family income, and whether or not any of the participants had health complaints lasting longer than three months. Because there was one independent variable in 4 categories (mothers, mothers, daughters, daughters) and 3 dependent variables (task-oriented, emotion-oriented, and avoidance-oriented), data was analyzed using a one-way MANOVA.
CHAPTER IV
RESULTS

The purpose of this research study was to explore whether or not a relationship could be found between mothers’ coping styles, specifically when mothers in one group had daughters who had been diagnosed with eating disorders, while mothers in the second group had daughters with no eating disorder symptomatology. Chapter four presents the statistical results of these research findings. Results of the study are presented in two parts: demographic descriptive statistics and results of statistical hypotheses.

Descriptive Statistics

A total of 59 mother/daughter dyads were recruited for participation in this study (N=118). Two participants (i.e., one mother/daughter dyad) had to be excluded from the research study because the daughter in this dyad, a participant in the non-eating disordered group, scored above the suggested cut off of 20 on the Eating Attitudes Test-26. Because this score indicated the possibility of eating disordered behavior, and this participant was in the non-eating disordered group, these data may not have accurately represented this subsample of participants. The final number of participants for this study, therefore, consisted of 58 mother/daughter dyads (N=116). Of this sample, 79.3% of the participants identified as Euro-American (i.e., White), 19% indicated that they were African-American, and 1.7% identified as Hispanic-American. Regarding the entire
sample, daughters ranged in age from 13 to 18 years, and mothers ranged in age from 29 to 60 years. The mean age of daughters in the non-eating disorder group was 15.34 ($SD = 1.37$), while the mean age of the daughters in the eating disorder group was 15.55 ($SD = 1.57$). The mean age of mothers in the non-eating disorder group was 41.66 ($SD = 5.88$), while the mean age of the mothers in the eating disorder group was 44.45 ($SD = 5.79$).

Eating Attitudes Test-26 (EAT-26) scores for daughters in the non-eating disorder subsample had a mean of 8.21 ($SD = 6.25$), while scores for daughters in the eating disorder subsample had a mean of 19.48 ($SD = 17.67$). Body Mass Index (BMI) mean of girls in the non-eating disorder group was 23.76 ($SD = 4.73$), while the mean BMI for girls in the eating disorder group was 18.97 ($SD = 2.34$). BMI of mothers in the non-eating disorder group had a mean of 28.25 ($SD = 7.60$), while the mean BMI of mothers in the eating disorder group was 25.43 ($SD = 5.14$).

All participants were asked to indicate whether or not mothers and daughters had a biological relationship, or if the daughter was a foster or adopted child. Only two mother/daughter dyads (both within the eating disorder group) had an adoptive or foster relationship. Because of this small number, no statistical significance was found regarding whether or not biological or non-biological parenting had an influence on eating disorder acquisition. Thus, both non-biological mother/daughter dyads were retained in the sample.

For families of daughters with an eating disorder, 12 (43%) reported an income over $100,001, 1 (4%) reported an income between $75,001 and $100,000, 6 (21%) reported an income between $50,001 and $75,000, 7 (25%) reported an income between $25,001 and $50,000, and 2 (7%) reported an income of less than $25,000. Of families
where no eating disorder symptomatology was present, no families (0%) had income above $100,000, 5 (17%) reported incomes between $75,001 and $100,000, 4 (14%) reported income between $50,001 and $75,000, 7 (24%) reported incomes between $25,001 and $50,000, and 13 (45%) reported incomes of less than $25,000. Therefore, on average, families in the eating disorder group had higher incomes than families in the non-eating disorder group. One family within the eating disorder sample did not report family income.

Regarding incidence of health problems lasting longer than 3 months, the eating disorder sample was more likely to report a psychological problem (36% of this population reported suffering from a psychological problem), while the non-eating disorder sample was more likely to suffer from a physical problem (41% of this population reported a physical problem lasting longer than 3 months). Seventy-nine percent of mothers with a daughter having an eating disorder were married, while only 58% of mothers who having a daughter without an eating disorder were married. Table 1 shows demographic characteristics of daughters with and without eating disorders included in this study.

Table 1

*Descriptive Statistics for Daughters*

| Variable                  | No Eating Disorder | | | | Eating Disorder | | | |
|---------------------------|-------------------|--|--|---|--|---|--|---|--|---|
|                           | N    | Mean | Std. Deviation | N    | Mean | Std. Deviation |
| Age                       | 29   | 15.34| 1.37           | 29   | 15.55| 1.57           |
| Daughter's Eating Score   | 29   | 8.21 | 6.25           | 29   | 19.48| 17.67          |
| BMI                       | 29   | 23.76| 4.73           | 29   | 18.97| 2.34           |
| Years of Mothers Education| 24   | 12.63| 1.91           | 25   | 15.16| 2.1            |
| Task Total Raw Score      | 29   | 49.83| 12.21          | 29   | 52.14| 10.08          |
| Emotional Total Raw       | 29   | 43.86| 11.58          | 29   | 46.62| 12.89          |
| Avoidance Total Raw       | 29   | 54.83| 11.35          | 29   | 48.03| 11.41          |
Table 1

*Descriptive Statistics for Daughters (continued)*

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</tr>
</thead>
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<td>N</td>
<td>Mean</td>
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<tr>
<td>Distract Total Raw</td>
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<td>25.45</td>
</tr>
<tr>
<td>Social Diversion Total</td>
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<td>19.41</td>
</tr>
</tbody>
</table>

Table 2 shows demographic characteristics of mothers who do and do not have daughters with eating disorders included in this study.

Table 2

*Descriptive Statistics for Mothers*

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<th>Eating Disorder</th>
</tr>
</thead>
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<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Age</td>
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</tr>
<tr>
<td>BMI</td>
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<td>28.25</td>
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<tr>
<td>Years of Mothers Education</td>
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<td>12.63</td>
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<td>Age Differences</td>
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<td>Task Total Raw Score</td>
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<tr>
<td>Emotional Total Raw</td>
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<td>45.41</td>
</tr>
<tr>
<td>Avoidance Total Raw</td>
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<td>47.24</td>
</tr>
<tr>
<td>Distract Total Raw</td>
<td>29</td>
<td>22.03</td>
</tr>
<tr>
<td>Social Diversion Total</td>
<td>29</td>
<td>17.03</td>
</tr>
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</table>

Table 3 lists frequency distributions for racial and marital status among participants.

Table 3

*Frequency Distributions for Demographic Variables*

<table>
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<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percent</th>
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</thead>
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<td>Eating Disorders N = 116</td>
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<td></td>
</tr>
<tr>
<td>Eating Disorders</td>
<td>58</td>
<td>50.0%</td>
</tr>
<tr>
<td>No Eating Disorders</td>
<td>58</td>
<td>50.0%</td>
</tr>
<tr>
<td>Mother/ Daughter N = 116</td>
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<td></td>
</tr>
<tr>
<td>Mothers</td>
<td>58</td>
<td>50.0%</td>
</tr>
<tr>
<td>Daughters</td>
<td>58</td>
<td>50.0%</td>
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</table>
Table 3

Frequency Distributions for Demographic Variables (continued)

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<th>Frequency</th>
<th>Percent</th>
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</tr>
<tr>
<td>Caucasian</td>
<td>92</td>
<td>79.3%</td>
</tr>
<tr>
<td>African-American</td>
<td>22</td>
<td>19.0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>1.7%</td>
</tr>
<tr>
<td>Marital Status</td>
<td>N=80</td>
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</tr>
<tr>
<td>Married, Daughter no Eating Disorder</td>
<td>46</td>
<td>57.5%</td>
</tr>
<tr>
<td>Married, Daughter with Eating Disorder</td>
<td>34</td>
<td>42.5%</td>
</tr>
</tbody>
</table>

Results of Statistical Hypotheses

The following section describes the hypotheses that were examined, and concludes with an explanation of information that was revealed through additional exploratory analyses.

Results for Research Hypothesis One

Hypothesis one stated that there would be no statistically significant difference in scores on the Coping Inventory for Stressful Situations (CISS) between mothers of daughters with an eating disorder and mothers of daughters without an eating disorder (mothers compared to mothers). To test this hypothesis, a MANOVA was utilized to compare a linear combination of mothers’ scores on the three scales of the CISS (i.e., task, emotion, and avoidance). A significant Wilk’s Lambda was found (Wilk’s $\lambda = .048$, $F [6, 22721.208] = 2.819$, $p = .048$, multivariate $\eta^2 = .135$). Examination of the coefficients for the linear combinations of the eating disorder groups indicated that avoidance-oriented coping was the only subscale of the CISS that significantly contributed to distinguishing between the two groups ($p = .013$).
A follow-up univariate ANOVA was used to determine what type of avoidance coping (i.e., distraction or social diversion) each group used predominantly. To adjust for multiple comparisons, a Bonferroni correction indicated that the critical alpha value was .017. Results of the ANOVA revealed that mothers whose daughters did not suffer from an eating disorder scored significantly higher on distraction-oriented avoidance coping than did mothers of daughters who had an eating disorder, $F(1,56) = 8.880, p = .004$. On the social diversion subscale of avoidance coping, no statistical significance was found.

Table 4 shows results of the MANOVA for hypothesis one ($p = .39$).

Table 4  

| MANOVA Results for Differences in Mothers’ Coping Styles |
|-----------------|---------|-----------------|-----------------|-----------------|-----------------|
| Effect          | Value   | F    | Hypothesis df | Error df | Sig.  |
| Intercept       | Pillai's Trace | 0.99 | 1396.759       | 3        | 0.000 | 0.987 |
|                 | Wilks' Lambda   | 0.01 | 1396.759       | 3        | 0.000 | 0.987 |
|                 | Hotelling's Trace | 77.60 | 1396.759       | 3        | 0.000 | 0.987 |
|                 | Roy's Largest Root | 77.60 | 1396.759       | 3        | 0.000 | 0.987 |
| ED              | Pillai's Trace | 0.14 | 2.819          | 3        | 0.048 | 0.135 |
|                 | Wilks' Lambda   | 0.86 | 2.819          | 3        | 0.048 | 0.135 |
|                 | Hotelling's Trace | 0.16 | 2.819          | 3        | 0.048 | 0.135 |
|                 | Roy's Largest Root | 0.16 | 2.819          | 3        | 0.048 | 0.135 |

Note: F statistics are exact

Results of Research Hypothesis Two

Hypothesis two stated that there would be no statistically significant difference in scores on the CISS between daughters with an eating disorder and their mothers. To test this hypothesis, a MANOVA was utilized that compared a linear combination of scores on the three scales (i.e., task, emotion, and avoidance coping) of the CISS for both mothers and daughters in the eating disorder group. A significant Wilk’s Lambda was found ($\lambda = .005, F[6, 22721.208] = 4.796, p = .005$, multivariate $\eta^2 = .210$). Examination
of the coefficients for the linear combinations indicated that avoidance-oriented coping was the only subscale of the CISS that significantly differentiated daughters with eating disorders from their mothers ($p = .011$).

A follow-up univariate ANOVA was used to determine what type of coping strategy (i.e., task, emotion, or avoidance) each group used predominantly. To adjust for multiple comparisons, a Bonferroni correction indicated that the critical alpha value was .017. Results of the ANOVA revealed that mothers of daughters who had an eating disorder scored significantly higher on avoidance-oriented coping than did their daughters, $F(1, 56) = 6.964$, $p = .011$. Table 5 shows results of the MANOVA for hypothesis two.

### Table 5

**MANOVA Results for Differences in Mothers’ and Daughters’ Coping Styles (with Eating Disorders)**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
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</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>947.392</td>
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<td>Wilks’ Lambda</td>
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<td>0.000</td>
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<td>Hotelling’s Trace</td>
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<tr>
<td>Roy's Largest Root</td>
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<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
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<th>Hypothesis df</th>
<th>Error df</th>
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<tr>
<td>ED</td>
<td>0.210</td>
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<tr>
<td>Hotelling’s Trace</td>
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<td>4.796</td>
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<td>0.210</td>
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<td>Roy's Largest Root</td>
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<td>0.005</td>
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</table>

**Note:** $F$ statistics are exact

Results of Research Hypothesis Three

Hypothesis three stated that there would be no statistically significant difference in scores on the CISS between daughters without an eating disorder and their mothers. To test this hypothesis, a MANOVA was run that compared a linear combination of scores
on the three scales of the CISS (i.e., task, emotion, and avoidance coping) of mothers and daughters with no eating disorder symptomatology. A significant Wilk’s Lambda was found ($\lambda < .001, F[6, 22721.208] = 7.108, p < .001$, multivariate $\eta^2 = .283$). Examination of the coefficients for the linear combinations revealed that mothers were distinguished from their daughters on both avoidance and task-oriented coping scales of the CISS ($p = .008$ and $p = .03$, respectively).

A follow-up univariate ANOVA was run to determine what type of coping (task, emotion, or avoidance) each group used predominantly. To adjust for multiple comparisons, a Bonferroni correction indicated that the critical alpha value was .017. Results of the ANOVA revealed that mothers whose daughters had no eating disorders scored significantly higher than their daughters only on the avoidance-oriented scale, $F(1, 56) = 7.442, p = .008$).

Table 6 shows results of the MANOVA for hypothesis three.

**Table 6**

*MANOVA Results for Differences in Mothers’ and Daughters’ Coping Styles (without Eating Disorders)*

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
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<td>Pillai’s Trace</td>
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<td>Wilks’ Lambda</td>
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<td>Hotelling’s Trace</td>
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Note  F statistics are exact
Given the statistical results reported above, null hypotheses one, two, and three were rejected. However, all statistical analyses showed unanticipated results that were contrary to the directional hypotheses posed. Therefore, additional exploratory analyses were conducted to examine possible reasons for the sample in this study not following trends suggested by previous literature. First, age was compared among mothers who had daughters with eating disorders versus mothers who had daughters without eating disorders. Results of a t-test comparing mean differences in age for the two groups revealed that no statistically significant difference was evident ($t (55) = -1.941, p = .057$). Although mothers of daughters with eating disorders were, on average, 2.79 years older than mothers of daughters without eating disorders, the mean group differences in age did not reach statistical significance. Therefore, no additional statistical analyses were performed regarding age.

Next, both groups of mothers were compared regarding their Body Mass Index (BMI). There was no significant difference found between mothers in the eating disorder and non-eating disorder groups on BMI, $t (54) = 1.63, p = .110$. Although mothers of daughters with eating disorders had, on average, BMI scores approximately 3 points lower than mothers of daughters without eating disorders, the mean group differences in BMI did not reach statistical significance (BMI of mothers in the eating disorder group was 25.43, while BMI of mothers in the non-eating disorder group was 28.25).

In order to test whether eating disorders were proportionately more likely among African American versus Euro-American persons, a 2X2 chi-square analysis was utilized (eating disorder group versus non-eating disorder group X African American versus Euro-American). Results indicated that Euro-American mothers were significantly more
likely to be in the eating disorder group than African-American mothers, $X^2 (1, N = 57) = 10.319, p = .001$. Due to this finding, a follow-up one-way ANOVA was conducted to determine whether race significantly differed across task coping, emotion coping, or avoidance coping styles. Results of the ANOVA revealed that African Americans scored significantly higher on avoidance coping, $F (1, 55) = 12.137, p = .001$. More specifically, African Americans scored significantly higher on the CISS distraction subscale than Euro-Americans, $F (1, 55) = 17.357, p < .001$.

Then, income was compared among mothers who had daughters with eating disorders versus mothers who had daughters without eating disorders. Results of a t-test comparing mean differences in income for the two groups indicated that families with higher incomes were significantly more likely to have daughters with eating disorders than families with lower incomes, $t (55) = -4.232, p < .001$. Due to this finding, a follow-up one-way ANOVA was conducted to further determine whether family income differentiated task coping, emotion coping, or avoidance coping. Results of the ANOVA revealed that there were no statistically significant differences between reported family income and any specific coping style: task coping ($F (4, 51) = .703, p = .594$); avoidance coping ($F (4, 51) = .672, p = .615$), emotion coping ($F (4, 51) = 1.582, p = .193$).

To determine if amount of mothers’ education was significantly different between the two groups (i.e., mothers of daughters with eating disorders and mothers of daughters without eating disorders), an independent samples t-test was run. Results of the t test indicated that the two groups of mothers were significantly different, $t (47) = -4.424, p < .001$, in terms of education attained. A Pearson correlation was run to determine if amount of mothers’ education correlated to task, emotion, or avoidance coping. Results
revealed that there were no statistically significant relationships between mothers’ education and any of the three CISS coping subscales: task coping ($r = -.03, p = .83$); avoidance coping ($r = -.22, p = .13$), emotion coping ($r = -.13, p = .37$).

Summary of Results

Chapter four included demographic statistics of the population sampled, and descriptive statistics related to the Coping Inventory for Stressful Situations and the Eating Attitudes Test-26. Scores from the CISS were examined using MANOVAs and, when significance was found, ANOVAs were used to determine what aspect of the CISS subscale led to statistical significance. Null Hypothesis one was not supported, in that mothers of daughters who did not have an eating disorder used more avoidance coping than did mothers of daughters who had an eating disorder. Null hypotheses two and three were also not supported, in that mothers and daughters did not score significantly differently on the task and emotion scales of the CISS. Because all three hypotheses were not supported, subsequent statistics were used to evaluate how race, family income, and mothers’ education interplayed with daughters’ eating disorder symptomatology. Results of the follow-up statistics revealed that daughters were more likely to experience eating disorder behaviors when their families had higher incomes, the mothers had more education, and the families were European-American.
CHAPTER V
DISCUSSION

This chapter discusses the results of the study, and is broken down into discussion and interpretation of statistical results, comparison of the results of this study to previous research, implications for theory, clinical practice, and Counselor Education and Supervision, limitations and implications for future research, and a summary of the discussion and implications.

Discussion and Interpretation of Statistical Results

Participants in this study consisted of two groups: mothers and their daughters who had been diagnosed with eating disorders, and mothers and their daughters who did not evidence eating disorder symptomatology. Participants came from an outpatient adolescent health center located within a children’s hospital.

Hypothesis one stated that there would be no statistically significant difference in scores on the Coping Inventory for Stressful Situations (CISS) between mothers of daughters with an eating disorder and mothers of daughters without an eating disorder. On the task and emotion scales of the CISS, there were no statistically significant differences between the two groups of mothers. Results did show that avoidance coping significantly distinguished the two groups of mothers ($p = .013$), however. A follow-up ANOVA of subscales of avoidance coping (as measured by the CISS) further revealed that mothers whose daughters did not suffer from an eating disorder scored significantly
higher ($p = .004$) on distraction-oriented avoidance coping than did mothers whose daughters had an eating disorder. On the social diversion subscale of avoidance coping, no statistically significant differences were found ($p = .39$).

The results of the MANOVA for hypothesis one ran contrary to current literature, which has indicated that mothers of daughters with eating disorders interact with their environments in a less healthy manner (i.e., avoidance-oriented) than do mothers of daughters who do not have an eating disorder (Espina, Ochoa de Alda, & Ortego, 2003). In this sample, however, mothers whose daughters were not impacted by eating disorders were actually more avoidant in their coping styles than mothers of daughters diagnosed with an eating disorder. The follow up ANOVA revealed that distraction coping was the biggest difference in types of coping used, and that the mothers of daughters without eating disorders used this type of coping more frequently than the other group of mothers.

Hypothesis two stated that there would be no statistically significant difference in scores on the CISS between daughters with an eating disorder and their mothers. This hypothesis was tested by comparing scores on the three scales of the CISS (i.e., task, emotion, and avoidance coping) of mothers and daughters using MANOVA as the statistical analysis. Once again, the avoidance scale of the CISS was the only scale that significantly differentiated daughters with eating disorders from their mothers ($p = .011$). On the task and emotion scales, mothers’ and daughters’ scores were not statistically different. This research finding (similar to results related to Hypothesis one) runs contrary to Social Learning Theory, which has asserted that children learn behaviors from important role models, especially during child-rearing (i.e., mothers) (Hamid, Yue, & Leung, 2003; Lee, Lester, & Rotheram-Borus, 2002). Possible reasons for daughters
coping differently than their mothers on the avoidance scale include that daughters may use outside sources (peers, the media) as role models for coping, rather than predominantly learning from mothers (as purported by Social Learning Theory).

Hypothesis three stated that there would be no statistically significant difference in scores on the CISS between daughters without an eating disorder and their mothers. As was done with hypothesis two, hypothesis three was evaluated by comparing non-eating disordered mothers’ and daughters’ scores on the three scales of the CISS (i.e., task, emotion, and avoidance coping) using a MANOVA as the statistical analysis. The avoidance scale of the CISS significantly differentiated daughters with eating disorders from their mothers ($p = .008$), as did the task-oriented coping scale ($p = .03$), but in taking a Bonferroni correction into account ($p < .017$), only the avoidance scale of the CISS differentiated mothers from daughters. Hypothesis three revealed that mothers in this sample were significantly more likely to use avoidance-oriented coping than their daughters. As in hypothesis two, reasons for the disparity between these results and previous literature may be that adolescent females of today model behaviors more after peers or media figures, rather than directly after their mothers.

Follow-up analyses were conducted, on an exploratory basis, in order to test whether or not demographic variables played a part in the results reported above. These findings revealed that the two groups of mothers and daughters assessed in this study were significantly different in terms of family income, mothers’ race, and mothers’ level of education attainment. Whether or not these factors explain the disparity between previous literature (that daughters would cope similarly to their mothers) and the results of this study is up for speculation, yet these differences in populations must be
considered. Had the two groups of mothers and daughters (i.e., one with eating disorders, the other without eating disorders) been more similar in terms of race, income, and education level attained, perhaps they would have scored more similarly on the CISS to what literature suggested regarding hypothesis one.

For hypotheses two and three (where mothers used avoidance coping more frequently than their daughters, regardless of daughters’ eating disorder status), ideas that may explain the commonality between the two groups of daughters include: generational changes being experienced by these girls, the influence of fathers in modeling for daughters how to cope with stress, or simply that these girls have not had enough exposure to the world to make them more avoidant when faced with stressors. The idea that the girls have not had enough exposure to the world to make them more avoidant in their coping style may explain why the mothers in both groups were so similar in terms of coping styles. That is, perhaps over time they found that the best way to deal successfully with stressors in their lives was to be avoidance-oriented. As Endler and Parker (1999) explained in their research on the healthiness of different coping styles, when individuals cannot change, alter and improve upon situations out of their control, the healthiest coping strategy is actually avoidance-oriented. In avoidance-oriented coping, one does not try to fix things that cannot be fixed, but rather avoids the unpleasant stimulus and thinks or acts on other information.

Because the mothers and daughters used in this study came from one particular region, it could be that the dissimilarity of scores between mothers and daughters on the CISS were a result of experiences that occurred in the area where sampling took place. The region where data was gathered suffered an intense economic hardship during the
1970’s and 1980’s when the majority of manufacturing jobs that employed the greater part of the population either disappeared or were sent overseas (High, 2003; U.S. Department of Commerce, 1998). For most mothers in the present study, this economic hardship struck when they were children learning how to interact with their environment by modeling after important role models. Assuming their parents struggled economically due to the loss of employment, this may have impacted these future mothers’ responses to stressful situations. Mothers may have learned to use avoidance-oriented coping to deal with the stress associated with watching their parents or other important role models lose jobs, since there was nothing they could do to bring manufacturing jobs back to the region.

In comparison, the economic health of the area has been much stronger during the 1990’s and 2000’s (High, 2003; U.S. Department of Commerce, 1998), and this may have influenced daughters’ perspectives on the world at large. If jobs were plentiful and they grew up watching gainfully employed parents (even with a disparity in family income between the two groups), this may indicate why these girls viewed the world from a task-oriented perspective. While their mothers may continue to evidence avoidance-oriented coping behaviors, the daughters in this study may have learned to use more task-oriented behaviors because they were raised in homes relatively free of the emotional strife caused by loss of employment.

Comparison of Results of this Study to Previous Research

Through their research, Mullis and Chapman (2000) discerned a link between self-esteem and the type of coping strategy individuals used most frequently. Accordingly, the authors found that students with low self-esteem used less healthy
coping strategies. The daughters with eating disorders in this study did not evidence a similar correlation, however, which runs contrary to the expectations laid by Mullis and Chapman. In fact, daughters in both groups (i.e., eating disorder and non-eating disorder) used healthier coping strategies (i.e., task-oriented) than either group of mothers. Mullis and Chapman’s research indicated that individuals with low self-esteem rely on less healthy coping strategies. Because girls in both groups in this study used healthy coping strategies, it could be hypothesized from Mullis and Chapman’s work that all the girls had high self-esteem. However, this possibility was not directly tested here. The concept of girls with eating disorders having high self-esteem runs contrary to current literature, but may indicate that in this sample the girls with eating disorders did not find their disorder to be a problem; in fact, these girls with eating disorders might have experienced improved self-esteem due to compliments garnered from others based on their slender physiques or dedication to thinness.

Perris (1994) determined that how parents rear their children plays a large role in children’s subsequent psychological adjustment. For example, if parents were intrusive, lacked emotional warmth, were overprotective, or had difficulty accepting their children, the likelihood of psychological problems in their children increased. Perris’ findings influenced the present study, in that mothers of daughters with eating disorders were expected to use the least healthy coping styles, while mothers of daughters without eating disorders were expected to use the healthiest of coping styles. Because mothers in both groups of this study used less healthy coping strategies than their daughters, however, Perris’ assertion that children’s psychological adjustment is directly related to how parents rear their children is questioned by the results of this study.
Campbell (1995) noted that eating disorders develop in cultures where food is abundant and thinness is valued. With the participants in this study, follow-up analyses revealed that the wealthier, better educated families were also the families most likely to be impacted by eating disorders. This finding may reflect the broader expectations of females from different (e.g., middle and upper) social classes in Western society. While the fact that mothers did not cope similarly to their daughters runs contrary to some previous literature, the fact that wealthier individuals in this sample were the ones most likely to be influenced by an eating disorder does follow previous findings that eating disorders are predominantly found among Euro-Americans who are financially secure (Atlas, Smith, Hohlstein, McCarthy, & Kroll, 2002; Molloy & Herzberger, 1998).

In terms of specific coping strategies, Endler and Parker (1999) and Moos and Shaefer (1993) described task-oriented coping as the healthiest form of coping, and explained that individuals who use task-oriented coping examine their problems, think of steps to solve problems, and then enact the steps. Based on prior research in this area, it was hypothesized that the non-eating disorder group in this study would use more task-oriented coping styles than the eating disorder group. On the contrary, both groups of daughters used task-oriented coping more frequently than their mothers. The daughters’ task-oriented stress reactions indicated that they were more likely than their mothers to consider the challenges facing them, determine courses of action, and then enact the steps to alleviate their problems. While the cause of this disparity is unknown, in the case of the girls with eating disorders it could be hypothesized that these daughters did not know how to deal with stressors in their lives, so they determined that eating disordered behavior would help them reach their goals. It could be that the girls in the eating
disorder group used task-oriented coping, but somehow chose the desire to be thinner as the solution to their problems. That is, eating disordered behaviors and coping styles were mutually exclusive in this sample population. Because these girls were task-oriented, they therefore enacted the steps necessary to achieve thinness, but by doing so acquired an eating disorder. In a society that values thinness, furthermore, the girls in the eating disorder group may have received enough positive reinforcement from society for their skinniness that their eating disordered behaviors became endemic to their task-oriented disposition.

Gilligan (1996) has asserted that the adjustment level of daughters is correlated to the adjustment levels of their mothers, while maternal distress has been correlated to daughters’ risk of experiencing comparable difficulties (Lee, Lester, & Rotheram-Borus, 2002). The results of this research study contradict the assertions of Gilligan and Lee et al. (2002), in that daughters appeared to cope with stress in a much healthier manner than their mothers (who used the least healthy of the coping styles significantly more frequently than their daughters). As mentioned previously, the reasons for daughters coping in a healthier manner may be a result of modeling coping after fathers, peers, learning to be more task-oriented by watching television or other media outlets, or by mothers themselves, who encouraged daughters to use healthier coping strategies than they, themselves, used. Ogden and Seward (2000) hypothesized that mothers project their own concerns onto their daughters. This hypothesis further supports the idea that mothers in the current research study may have encouraged their daughters to use healthier (i.e., task-oriented) coping styles versus the unhealthy (i.e., avoidance-oriented) coping strategies they personally used on a regular basis.
Mothers in the eating disorder group in this study weighed less (according to self-reported Body Mass Index), on average, than the non-eating disorder mothers. In research conducted by Pike and Rodin (1991), the authors discovered that mothers of eating disordered daughters felt their daughters needed to lose more weight in comparison to mothers’ opinions of daughters in their control group (who did not have eating disorders). Pike and Rodin concluded that disordered eating might have been a learned behavior that was transmitted to daughters through modeling of mothers’ unhealthy behaviors towards food and body. If the same scenario were correlated to the sample of mothers and daughters in this study, it could be that mothers of daughters with eating disorders were not only thinner than the other set of mothers, but also modeled the importance of being thin for their daughters. In support of this concept, work conducted by Prescott and Le Poire (2002) revealed that mothers of daughters who had eating disorders were inconsistent in punishing unhealthy eating behaviors in their daughters. While results of the present study did not reveal a relationship between mothers’ coping style and daughters’ coping style (in either group of daughters), it could be that mothers in the eating disorder group did encourage eating disordered behaviors in their daughters.

According to research conducted by Hamid, Yu, and Leung (2003), students who viewed their families in a negative way were less likely to use constructive (i.e., task-oriented) coping styles. While students’ perceptions of their families in Hamid et al.’s (2003) work was correlated with their coping styles, it could be that daughters in the current study viewed their families in a positive way- thus resulting in healthy coping styles. Daughters in this study may have seen family interactions and relationships as positive (even though mothers in both groups were more avoidance-oriented), which may
explain why the daughters in both groups in this study used the healthy coping style (i.e., task-oriented) more than their mothers.

After finding that no relationship existed between eating disordered behaviors and mothers’ over (or under) involvement with daughters, Turner, Rose, and Cooper (2004) encouraged further research to explore what role families play in eating disorder acquisition. Because results of the present study found that there was no commonality between mothers’ coping styles and coping styles in daughters, it could be hypothesized that mothers play very little role (if any) in their daughters’ eating disorder acquisition (at least in terms of viewing eating disorders as an inability to cope with one’s environment).

According to previous research, daughters are strongly influenced by mothers’ modeling and how mothers interact with the world around them (Lee, Lester, & Rotherman-Borus, 2002; Pianta & Egeland, 1990). In families where daughters have been diagnosed with eating disorders, furthermore, daughters continue to be powerfully influenced by the modeling of mothers (Benedikt, Wertheim, & Love, 1998; Ogden & Seward, 2000). This information influenced the assumptions put forward in this study, that there would be an observable correlation between mothers’ coping styles and daughters’ coping styles, and that using a non-eating disorder sample of mothers and daughters for comparison would highlight how similarly mothers and daughters cope with stress (regardless of symptomatology). Contrary to expectations, however, the mothers in both groups (i.e., eating disorder and non-eating disorder) in this study used less healthy coping styles than their daughters (whether the daughter had been diagnosed with an eating disorder or not).
To determine if unique demographic factors in this sample population (and associated socio-cultural variables) explained why the results of this study did not meet expectations supported by previous research, extraneous variables were explored. Statistical analyses revealed that the two groups (i.e., eating disorder and non-eating disorder) were significantly different in terms of race, family income, and amount of mothers’ education. When mothers’ scores on the CISS were compared based on race, it was found that African-American mothers were significantly more avoidant than Euro-American mothers. None of the research that was examined prior to this study indicated there would be significant differences between races in terms of coping, so the fact that mothers of separate races scored so differently on the avoidance scale of the CISS adds to the extant literature on coping styles.

The main intent of this research study was to examine whether similarities (or differences) of mothers’ coping styles existed, specifically when one group of mothers had daughters with eating disorders. Previous literature indicated that the two groups of mothers would use different coping styles, in that mothers of daughters with eating disorders would use the least healthy (i.e., avoidance-oriented) coping strategies, while mothers of daughters without eating disorders would use the healthiest (i.e., task-oriented) coping strategies most frequently. Contrary to expectations, however, mothers in both groups used the least healthy coping strategy (i.e., avoidance-oriented) most frequently, while daughters in both groups were found to use the healthier coping strategies most frequently.

Results of analyses conducted on extraneous variables revealed that the two groups (i.e., eating disorder and non-eating disorder) were significantly different in terms
of mothers’ education, family income, and race. Furthermore, mothers in the non-eating disorder group were different in terms of avoidance, in that African-American mothers were significantly more avoidant than Euro-American mothers. While follow-up analyses indicated that the demographic dissimilarities between the two groups of mothers and daughters might have had a role in the unexpected results of this study, these differences do not explain why the daughters in both groups used healthier coping styles than their mothers. Reasons hypothesized include that daughters of the current generation studied here may be more influenced by fathers than mothers, or that these girls model behaviors more after media figures or peers. Finally, it was hypothesized that daughters in the eating disorder group may not view their eating disorder as a negative characteristic at all, which is why they were found to cope using more healthy strategies.

Implications for Theory, Clinical Practice, and Counselor Education and Supervision

Results of this study revealed that mothers and daughters did not cope in a similar manner, regardless of group affiliation. While these results were unexpected, the data provided pertinent information for counselors, Counselor Educators, and furthered the understanding of Social Learning Theory.

Implications for Theory

Social Learning Theory holds at its core the tenet that children learn behaviors and attitudes by observing important role models (Bandura, 1971, 1986). Contrary to expectations laid by Social Learning Theory, daughters in the two groups of the present study did not cope similarly to their mothers on any of the scales of the Coping Inventory for Stressful Situations. In fact, daughters scored significantly differently than their mothers on the avoidance scale, regardless of whether or not the girls had been diagnosed
with an eating disorder. Because hypothesis one showed that mothers in both groups were significantly more likely to use avoidance-oriented coping than their daughters, this discrepancy lays the foundation for questioning Social Learning Theory’s assertion that children learn behaviors (i.e., coping styles) from parents.

Two aspects of Social Learning Theory may help explain why daughters’ scores in the present study did not mirror mothers’ scores; these concepts are called Vicarious Reinforcement and Self-reinforcement. In Vicarious Reinforcement, observers (i.e., children) learn what behaviors are rewarded, and what behaviors are punished, by watching the experiences of others. Vicarious Reinforcement may explain the discrepancy found between mothers’ coping styles and daughters’ coping styles, in that daughters in the present sample may have grown up watching their avoidant mothers, observed that mothers were not rewarded for this avoidant behavior, and so chose to use more task or emotion-oriented coping strategies than their mothers.

That daughters learned not to use avoidance-oriented coping by watching their mothers could also be supported through the concept of Self-reinforcement. In Self-reinforcement, individuals learn to motivate themselves based on successful use of behaviors. In the case of daughters whose mothers were avoidance-oriented, for example, daughters may have found that either task or emotion coping was more successful than avoidance-oriented coping and continued to use these strategies to more and more success. While the main tenant of Social Learning Theory (that children model their behaviors after important role models) was not necessarily supported by the present research study, lesser aspects of Social Learning Theory (i.e., Vicarious Reinforcement
and Self-reinforcement) did help explain what may have happened to make daughters act differently than their mothers in terms of coping.

Regarding the learning of behavior, Bandura (1971) conceded that any important role model impacts how children learn to behave. Because this study only looked at mothers as role models for daughters, the impact of fathers, the media, and peers were not assessed. The influence these omnipresent, powerful entities have on the learning of coping styles may explain why some tenets of Social Learning Theory were not supported in the sample population examined in this study.

In conducting the literature review for this study, no research was found that discussed differences in coping styles based on race. Because results of follow-up analyses revealed that the African-American mothers in this sample used more distraction-oriented coping that Euro-American mothers, this finding has added a new dimension to research and theories on coping styles. However, because of the small sample size and the limited geographic variability of the sample population, these results should be viewed with caution. Follow-up analyses also revealed that income and amount of education attained were different amongst the two groups of mothers, but these demographic variables did not significantly influence the type of coping the mothers used.

Implications for Practice

Because follow-up exploratory analyses showed that income, race, and education differed between mothers with and without eating disorders, implications for clinical practice may be evident. For example, these findings indicate that eating disorders cannot be investigated from a uni-dimensional perspective, and that they must be evaluated from
a multidimensional standpoint. When counselors work with individuals diagnosed with eating disorders, therefore, results of this study indicated that practitioners need to examine many dimensions to fully understand what underlies clients’ eating disordered behaviors. Examples of these many dimensions include a client’s cultural values, norms, and attitudes (Sue & Sue, 2003), in addition to clients’ personal beliefs regarding eating behaviors and body image.

When counseling Euro-American, financially stable women, follow-up analyses indicated that counselors should be aware of the increased likelihood that these women could be raising daughters who may eventually acquire eating disorders. Results of this study indicated that how mothers respond to stressful situations does not necessarily correlate to how daughters will relate to stress. That the demographic traits of individuals with eating disorders were different among participants in this study, nonetheless, reinforces the understanding that Euro-American females who grow up in economically stable environments may be at a greater risk of acquiring an eating disorder than non-Euro-American females.

Daughters diagnosed with eating disorders in this study were not assessed regarding how they felt about their eating disorders. Because girls in the eating disorder group used task-oriented coping most frequently, and because it was not known if these girls wanted to eliminate their eating disorder, it could be that girls in the eating disorder group had made a mindful decision to acquire and/or maintain their eating disorders for personal or socio-cultural reasons. That these girls were found to be task-oriented, furthermore, indicates that these girls were in all probability good at maintaining eating disordered behaviors. A first step in working with a client with an eating disorder,
therefore, is to assess whether or not they want to eliminate their eating disordered behaviors.

Because daughters in this sample tended to be less avoidance-oriented and more task-oriented than their mothers (regardless of eating disorder status), practitioners who work with adolescent females should consider that this generation of girls might use healthier coping strategies than did previous generations. These results also highlight the importance of clinicians assessing clients’ coping styles, and tailoring interventions to the types of coping that most effectively connect with clients’ needs. Furthermore, girls diagnosed with eating disorders used task-oriented coping most frequently, which reveals that these girls interacted with their environment in a straightforward, solution-focused way. When counselors work with girls of this generation who have been diagnosed with eating disorders, teaching their clients about the destructive nature of eating disorders may be a good starting point for therapy. If girls have received nothing but positive reinforcement from society for their unhealthy eating behaviors, furthermore, educating them on the unhealthiness of eating disorder behaviors is an important first step. Practitioners should also keep in mind that girls who are task-oriented will more than likely want to take action on the thing that is bothering them. This tendency could result in disparate reactions when the client has an eating disorder: the adolescent client may abruptly stop coming to counseling because she does not want to change her eating disordered behavior or, conversely, take an active and effective role in stopping her disordered eating behaviors.
Implications for Counselor Education and Supervision

When teaching about eating disorders, Counselor Educators can benefit from the findings of this study that reveal that having an eating disorder is not necessarily indicative of an individual who interacts ineffectively with her environment. As was shown with the sample of girls in the present study, daughters used the healthier types of coping more than mothers. Results of the present study emphasize that eating disorders are complex, and that their etiology is multifaceted. Counselor Educators need to keep the complexity of eating disorders in mind when working with counseling students, so that counselors in training understand that many aspects interplay to cause and perpetuate eating disorders.

Counselor Educators should be aware that the current generation of adolescent females might be more influenced by popular media and peers than previous generations, based on the fact that daughters in this study did not implement coping strategies similar to those used by their mothers. The present study did not evaluate how girls learned to interact with their environments, but one of the goals was determine if mothers and daughters (based on eating disorder pathology) coped similarly. Since both groups (i.e., eating disorder and non-eating disorder) of daughters coped dissimilarly than their mothers, this result points toward the idea that girls today are less influenced by their mothers than were daughters in previous generations.

Historically, eating disorders have been diagnosed predominantly among Caucasian females from financially comfortable backgrounds. The results of this study revealed that this tendency remains the same, in that the eating disorder daughters came from families that were significantly more Caucasian and earned higher incomes than
daughters in the non-eating disorder sample. The incidence of eating disorders can be found among all races and socio-economic statuses, but Counselor Educators should teach counseling students not to be surprised if the majority of clients they will diagnose (or who have been diagnosed previously) with eating disorders are female and come from Euro-American, economically stable families. The American Counseling Association’s Code of Ethics (American Counseling Association [ACA], 2005) states that Counselor Educators must recognize historical and social prejudice when working with clients (Section E. 5. c), and that counselors should ensure that counseling is sensitive to different economic and cultural experiences before and during treatment (Section E. 5. b.). Hence, while the majority of individuals diagnosed with eating disorders may be Euro-American, female, and come from higher socio-economic backgrounds, this does not mean that individuals who do not fit these stereotypes cannot be diagnosed with an eating disorder.

The ages of the eating disorder participants in this study (13 to 18 years old) indicate that these adolescents interact with a wide variety of adults in both clinical and non-clinical settings (e.g., school counselors). Currently, only mental health counseling programs require coursework on diagnosing and treating psychological disorders (Council for the Accreditation of Counseling and Related Educational Programs [CACREP], 2001). According to CACREP, school counseling students are required to have knowledge and skills regarding issues that may affect the development and functioning of students (e.g., eating disorders); however, they are not required to take coursework on diagnosing, treating, referring, or preventing mental and emotional disorders (2001). Because school counselors are likely to interact with students who have
eating disorders, they would consequently benefit from obligatory coursework on characteristics, diagnoses, and treatments of psychological disorders (i.e., eating disorders).

Limitations and Implications for Future Research

Although an attempt was made to gather a representative sample of participants for this study, several limitations were apparent in terms of research design. Methodological limitations of this study include the fact that the eating disorder sample was more Euro-American than the non-eating disorder sample, that the families whose daughters had eating disorders made more money than families of daughters who did not have eating disorders, and that mothers of daughters with eating disorders had achieved more education than the mothers whose daughters did not have an eating disorder. All of these differences were unanticipated and were discovered post hoc after follow-up statistical analyses revealed demographic group-related differences. Historically, eating disorders have been considered a disorder that impacts Euro-American, financially comfortable families. While this was true for the daughters with eating disorders and their mothers, if the non-eating disorder mothers and daughters had been more racially homogenous (i.e., predominantly Euro-American) and financially stable, the differences related to coping styles revealed between daughters and mothers on the CISS may have been much different. The demographic differences found in this study, therefore, led to potential spurious factors impacting eating disorder symptomatology and/or coping styles among participants. Clearly, additional research regarding these understudied factors is warranted.
Body Mass Index (BMI) scores for mothers and daughters were gathered for this study by asking mothers to list both their height and weight and the height and weight of their daughters. Future studies would benefit from gathering the actual heights and weights of participants, rather than expecting mothers to factually list measurements for themselves and their daughters. If future studies were conducted in a medical setting (as this study was), scales and measurement tools would be readily available to assist in gathering precise data. Mothers in the eating disorder group weighed less than mothers in the non-eating disorder group in this study, but statistical analyses did not show a significant difference in mothers’ measurements. Had this study gathered actual heights and weights for mothers, statistical significance may have been found.

To ensure that no girls with eating disordered behaviors were included in the non-eating disorder group, the Eating Attitudes Test-26 (EAT-26) was administered to all daughters in this study. Rather than face the possibility that mothers in the study would become defensive at being asked to also take the EAT-26, it was determined during the conception of this study not to administer the EAT-26 to mothers. While this choice may have made the gathering of data less problematic, including mothers in the administration of the EAT-26 might have provided some crucial information to better understand the relationships between mothers, daughters, coping styles, and disordered eating. Future studies that aim to explore these relationships, therefore, would benefit from including mothers in the administration of the EAT-26.

The EAT-26 provided a cut-off score that ensured a differentiation between the two groups (i.e., eating disorder and no eating disorder) of daughters in this study. Beyond the cut-off score of 26, however, the test did not provide more insightful
information behind the thoughts of girls with eating disordered behaviors and girls without eating disordered behaviors. Thus, future studies that examine eating disorder pathology would benefit from using an inventory that provides more information about eating disordered thoughts and behaviors.

In order to establish adequate power when assessing for statistical significance, the sample size for this study was a priori estimated at approximately 80 participants (20 daughters with eating disorders and their 20 mothers; 20 daughters without eating disorder and their 20 mothers). The final sample size for this study was 118 (56 mother/daughter dyads in each group). While the sample size exceeded minimum statistical power-related expectations, had the samples in each group been larger the results may have shown that the daughters differed from their mothers on more than one CISS subscale (i.e., avoidance-oriented coping). For example, as described above, with the size of the current sample statistical significance was almost reached regarding similarity of task-oriented coping styles among mothers and daughters with eating disorders. So if the sample size had been larger, it is likely that these mothers and daughters would have differed on not just the avoidance scale, but the task scale of the CISS as well. A larger sample size would have also bolstered the generalizeability of results, leading to greater external validity.

Results of this study should be generalized to populations outside the Midwestern United States with caution. It is possible that socio-cultural factors may have influenced the lifestyles or mothers and daughters in this study, and therefore their preferred coping styles. As was mentioned previously, the region where sampling took place was hit hard by economic struggles when the majority of manufacturing jobs in the area were lost
during the 1970’s and 1980’s. The mothers evaluated in this sample were in their formative years during this time, which may have influenced how they learned to deal with stress (and may also explain why the mothers used avoidance-oriented coping most frequently). Because daughters evaluated in the study grew up in the region when the economic situation had improved, this may also explain why daughters’ stress reactions were much more task-oriented than their mothers. Gathering data from mothers and daughters from a region that did not experience such wide scale economic hardships may show that, indeed, mothers’ and daughters’ are more similar than they were found to be with the present sample. Future studies should also incorporate data from various locations to increase population diversity. Because data regarding where clients grew up and how long they lived in this region were not obtained for this study, the idea that the region and era played a role in how participants cope with stress is speculative. In addition, stability reliability of the CISS is considered adequate but not excellent. Therefore, it cannot be determined in this sample whether or not participants’ experiences from years ago affected their current coping styles.

Coping style may be situational and change based on psychosocial factors; therefore, coping styles may be more related to one’s state (rather than a long-term trait). The data obtained in this study, consequently, should be viewed as point specific, in that the research assessed coping styles during one specific moment in time. Without knowing a person’s psycho-social situation, furthermore, assertions cannot be made that one coping style is better than another. For example, judgments should not be made based solely on how one copes on an assessment tool- the situation in which the coping occurs is integral in understand how healthy the response was to the stressful situation.
Incorporating qualitative data gathering techniques in future studies that look at eating disorders and coping styles would be beneficial. In the present study, mothers indicated if they (or their daughters) had experienced any health conditions that had lasted longer than 3 months. Health conditions that had lasted longer than three months were categorized as either physical or psychological. While this information was interesting, it was difficult to evaluate in a quantitative way. Had this study incorporated qualitative data gathering techniques, the information on long-term health conditions may have helped explain the discrepancy between expected outcomes and actual results.

Other suggestions for qualitative data gathering techniques that would have added depth to this study include assessing individuals on how they felt about being diagnosed with an eating disorder, and whether or not they wanted to eliminate their eating disordered behavior. As was previously discussed, daughters with eating disorders in this study were found to use healthier forms of coping in comparison to their mothers. Although this finding was unexpected, qualitative data gathering techniques may have revealed that girls with eating disorders wanted the disorder because it helped them maintain the body image they desired.

This study asserted that daughters learn behaviors from observing important role models. A logical extension of this study would be to ask daughters to share their own perspective on how fathers, peers, and the media influenced their thoughts and feelings regarding eating behaviors and body image. Using qualitative data gathering techniques to gather this information would provide insightful perspectives on what influences girls’ stress responses.
Summary of Discussion and Implications

The present study attempted to evaluate the similarity of mothers’ coping styles, specifically when one group of mothers had daughters diagnosed with eating disorders and the other group of mothers had daughters who were free from eating disorder symptomatology. Anticipated results (that mothers and daughters would cope in a similar manner, regardless of eating disorder pathology) were not found. In fact, daughters coped in a healthier manner than mothers, regardless of eating disorder status.

This last chapter began with a discussion and interpretation of statistical results. Ideas were offered in an attempt to explain why the mothers and daughters differed so greatly in terms of coping styles most frequently used. This section was followed by a comparison of results of the present study to previous research. Suggestions proposed as to why previous research differed from this study included that daughters of the current generation are more influenced by peers, the media, or fathers, mothers may have taught their daughters to be more task-oriented even though they themselves use more avoidance-oriented coping strategies, eating disorders do not necessarily mean that those afflicted with them use unhealthy coping styles, and that economic pressures experienced by the different generations may have influenced coping style acquisition. The third section of this chapter explored implications for Counselor Education and clinical practice, and ideas were suggested to improve counselor preparation. Finally, limitations and implications for future research were offered that included using a non-eating disorder sample that is more racially and economically similar to the eating disorder group, increasing sample size, taking actual measurements to determine body mass index (rather than asking mothers to self-report), using an eating inventory that provides more
insight into thoughts and feelings behind eating behaviors, using qualitative data gathering techniques to evaluate daughters on their feelings towards eliminating their eating disorder, and to examine the influences of people other than mothers (i.e., peers, fathers, the media) on the coping behaviors of daughters
REFERENCES


APPENDIX A

EVIDENCE OF APPROVAL OF THE HUMAN PROTECTION COMMITTEE

Office of Research Services and Sponsored Programs

April 18, 2007

Molly Cox
733 North Avenue
Akron, Ohio 44320

Ms. Cox:

The University of Akron’s Institutional Review Board for the Protection of Human Subjects (IRB) completed a review of the protocol entitled “The Similarity of Mothers’ and Daughters’ Coping Style and Its Relationship to Disordered Eating”. The IRB application number assigned to this project is 20070413.

The protocol qualified for Expedited Review and was approved on April 18, 2007. The protocol represents minimal risk to subjects and matches the following federal category for expedited review:

(7) Research on individual or group characteristics or behavior or research utilizing survey, interview, oral history, focus group, program evaluation, human factors evaluation or quality assurance methodologies

This approval is valid until April 18, 2008 or until modifications are proposed to the project protocol, whichever may occur first. In either instance, an Application for Continuing Review must be completed and submitted to the IRB.

Enclosed are copies of the informed consent documents, which the IRB has approved for your use in this research. Copies of these forms are to be submitted with any application for continuation of this project.

In addition, your request for a waiver of documentation of informed consent, as permitted under 45 CFR 46.111(c), is also approved.

Please note that within one month of the expiration date of this approval, the IRB will forward an annual review reminder notice to you by email, as a courtesy. Nevertheless, it is your responsibility as principal investigator to remember the renewal date of your protocol’s review. Please submit your continuation application at least two weeks prior to the renewal date, to ensure the IRB has sufficient time to complete the review.

Please retain this letter for your files. If the research is being conducted for a master’s thesis or doctoral dissertation, you must file a copy of this letter with the thesis or dissertation.

Sincerely,

Sharon McWhorter
Interim Director

Cc: Eleni Lantziou, Co PI
    Robert Schwartz, Advisor
    Rosalie Hall, IRB Chair
APPENDIX B

AKRON CHILDREN’S HOSPITAL’S INFORMED CONSENT

**Title of Study:** The Similarity of Mothers’ and Daughters’ Coping Style, and its Relationship to Disordered Eating

**Introduction:** You and your daughter are being asked to participate in a research project conducted by Molly Cox, a doctoral student in the Department of Counselor Education and Supervision at The University of Akron, and Eleni Lantzouni, M.D., a pediatrician in the Adolescent Health Center of Akron Children’s Hospital.

**Purpose:** The goal of this study is to explore coping styles of mothers, and how mothers’ coping styles may impact daughters’ coping styles.

**Procedures:** After agreeing to participate in this study, mothers/female guardians will be given a demographics questionnaire and an inventory. Daughters will be given two inventories. The inventories use Likert-style scales where the participants circle their rating to each item. The time needed to participate in this study is approximately 15 minutes. A total of 80 participants are needed for this research.

**Exclusions:** Both the mother/female guardian and daughter must be willing to participate.

**Risks and Discomforts:** There are no known risks or consequences related to completing the inventories or demographics questionnaire.

**Disclosure of Alternatives:** The researchers have no alternate way to gather the information requested for this study.

**Cost and Compensation:** There is no cost to you or your daughter for participating in this study. Likewise, there is no compensation for participation.

**Benefits:** There are no personal benefits to you or your daughter for participating in this study.

**Right to refuse or withdraw:** Your (and your daughter’s) participation in this research is voluntary. You and your daughter may refuse to participate or discontinue participation at any time, and there will be no penalty or loss of benefits to you or your daughter.
**Anonymous Data Collection:** No identifying information is being collected, and no information will be gathered from your medical records. Anonymity of you and your daughter is further protected by not asking either of you to sign or return an informed consent document.

**Confidentiality of Records:** The data collected in this study will be entered into a password-protected computer, and written information (e.g., demographics questionnaires, inventories) will be locked in a filing cabinet. No data from this study will be put into your medical records.

**Health Insurance Portability and Accountability Act (HIPAA):** A separate HIPAA disclosure and consent will be reviewed with you prior to your participation in this study.

**Who to contact with questions:** If you have questions about this study, you may email Molly Cox at mhc7@uakron.edu or Robert Schwartz, PhD, at rcs@uakron.edu, or call 330-972-8155. This project has been reviewed and approved by Akron Children’s Hospital’s Institutional Review Board and The University of Akron’s Institutional Review Board. If you have any questions about your rights as a research participant, you may call Akron Children’s Hospital’s IRB at (330)543-8725 or The University of Akron’s Institutional Review Board at (330)972-7666 or 1-888-232-8790.

**Acceptance:** I have read the above information and all of my questions have been answered. I voluntarily agree to participate in this study. By completing and returning the inventories and questionnaire, I am agreeing that my daughter and I will participate in this study. I understand that I will be given a copy of this consent document for my records.
APPENDIX C

AKRON CHILDREN’S HOSPITAL’S INFORMED ASSENT

Introduction: You are being asked to take part in a research study. Participating in this research is voluntary. Information gathered from you will be anonymous, meaning that no one will be able to trace your answers back to you. If you decide not to participate, there is no penalty.

How the Research is Conducted: You will fill out two inventories. The first inventory takes 10 minutes to complete; the second inventory takes 5 minutes to complete. While you fill out these inventories, your mom/female guardian will also fill out an inventory and a questionnaire. Your answers will not be viewed by your mom/guardian, and you will not see your mom’s/guardian’s answers. Once you and your mom/guardian finish the inventories, you are both done with the study.

Time Required by You: Approximately 15 minutes.

Location: The study takes place in the Adolescent Health Center of Akron Children’s Hospital (where you currently are). Forty girls and 40 moms/female guardians are needed to participate in this study. After you fill out the inventories, no more information will be needed from you.

Benefits: There are no benefits to you for participating in this study.

Risks: There are no known risks for filling out the inventories.

If You Have Questions: Dr. Lantzouni or Molly Cox (the researchers conducting this study) can answer your questions. Dr. Lantzouni is a pediatrician in the Adolescent
Health Center and can be reached at (330)342-5437 or at elantzouni@chmca.org. Molly Cox can be reached at mhc7@uakron.edu.

Acceptance: I have read and understand the information above. I understand that I will fill out two inventories for this research. All of my questions have been answered. By completing and returning the inventories, I am voluntarily agreeing to participate in this study.

Signature: The person who explained this research to me will sign below. I will be given a copy of this document for my records.

________________________________________
Signature of individual who explained assent to minor participant
APPENDIX D

Demographics Questionnaire (to be filled out by mothers/ female guardians)

1. What is your age? __________

2. What is your race (please check the one category that best describes you):
   ___African American/Black
   ___Euro-American/White
   ___Asian American/Asian
   ___Native American
   ___Hispanic/Latin American
   ___Other (please list: _________________________)

3. What is your height:___________ 
   weight:__________

4. What is your household income (please check one):
   ___Less than $25,000
   ___$25,001-50,000
   ___$50,001-75,000
   ___$75,000-100,000
   ___$100,000+

5. What is your marital status (please check the category that best describes you):
   ___Married
   ___Divorced/ Separated
   ___Widowed
   ___Single
   ___Living with significant other

6. What is your relationship to your daughter (please check one):
   ___Biological mother
___Adoptive mother
    How old was your daughter when you adopted her?__________

    How long has your daughter been living with you?__________

___Foster mother/ female guardian
    How old was your daughter when you became her foster mother/
    guardian?__________

    How long has your daughter been living with you?__________

7. Have you had any health issues that have lasted longer than three months
    (examples include asthma, diabetes, arthritis, depression)?

    ___Yes
        Please describe:______________________________________________

        ____________________________________________________________

    ___No

8. Please list medications you are currently taking:

        ____________________________________________________________

        ____________________________________________________________

9. What is your daughter’s age? __________years and __________months

10. What is your daughter’s grade in school (i.e., 6th grade)?__________

11. What is your daughter’s race (please check the one category that best
    describes her):

    ___African American/Black
    ___Euro-American/White
    ___Asian American/Asian
    ___Native American
    ___Hispanic/Latin American
    ___Other (please list: _________________________)

12. What is your daughter’s height:______________

    weight:______________
13. Has your daughter had any health issues that have lasted longer than three months (examples include asthma, diabetes, ADHD, eating disorders)?

___ Yes

Please describe: ________________________________________________
________________________________________________________________
________________________________________________________________

___ No

14. Please list medications your daughter is currently taking:

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
APPENDIX E

EATING ATTITUDES TEST-26

Please Circle a Response for Each of the Following Statements:

<table>
<thead>
<tr>
<th>Question</th>
<th>Always</th>
<th>Usually</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Am terrified about being overweight.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Avoid eating when I am hungry.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Find myself preoccupied with food.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. Have gone on eating binges where I feel I may not be able to stop.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Cut my food into small pieces.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. Aware of the calorie content of foods that I eat.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Particularly avoid food with a high carbohydrate content (bread, rice, potatoes, etc).</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. Feel that others would prefer if I ate more.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9. Vomit after I have eaten.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10. Feel extremely guilty after eating.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11. Am preoccupied with a desire to be thinner.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12. Think about burning up calories when I exercise.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13. Other people think that I'm too thin.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>14. Am preoccupied with the thought of having fat on my body.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
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<td>---</td>
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</tr>
<tr>
<td>15. Take longer than others to eat my meals.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16. Avoid foods with sugar in them.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>17. Eat diet foods.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>18. Feel that food controls my life.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>19. Display self-control around food.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20. Feel that others pressure me to eat.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21. Give too much time and thought to food.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>22. Feel uncomfortable after eating sweets.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>23. Engage in dieting behavior.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>24. Like my stomach to be empty.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25. Have the impulse to vomit after meals.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>26. Enjoy trying new rich foods.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

APPENDIX F

COPYRIGHT INFORMATION FOR EAT-26

From http://www.river-centre.org/abouteat26.html: Copyright ownership of the EAT and EAT-26 has been retained; however, because the aim has been for others to have free access to the test, all fees and royalties have been waived. Permission is granted to reproduce the work as long as the original publication source is identified.

I would be very interested in the results from your study.

Best wishes,

David M. Garner, Ph.D.
President and CEO
River Centre Clinic
5465 Main Street
Sylvania, Ohio USA

Phone: 419-885-8800
Fax: 419-885-8600
e-mail: garner@river-centre.org
website: www.river-centre.org
APPENDIX G

COPING INVENTORY FOR STRESSFUL SITUATIONS, ADULT

<table>
<thead>
<tr>
<th>Not At All</th>
<th>Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3 4 5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

1. Schedule my time better.
2. Focus on the problem and see how I can solve it.
3. Think about the good times I’ve had.
4. Try to be with other people.
5. Blame myself for procrastinating.
6. Do what I think is best.
7. Become preoccupied with errors and guilt.
8. Blame myself for having gotten into this situation.
9. Worry about things.
10. Outline my priorities.
11. Try to go to sleep.
12. Treat myself to a favorite food or snack.
13. Feel anxious about not being able to cope.
15. Think about how I solved similar problems.
16. Tell myself that it is really not happening to me.
17. Blame myself for being too emotional about the situation.
18. Go out for a snack or meal.
20. Buy myself something.
21. Develop a course of action and follow it.
22. Blame myself for not knowing what to do.
23. Go to a party.
24. Work to understand the situation.
25. "Freeze" and not know what to do.
26. Take corrective action immediately.
27. Think about the event and learn from my mistakes.
28. Wish that I could change what had happened or how I felt.
29. Visit a friend.
30. Worry about what I am going to do.
31. Spend time with a special person.
32. Go for a walk.
33. Tell myself that it will never happen again.
34. Focus on my general inadequacies.
35. Talk to someone whose advice I value.
36. Analyze the problem before reacting.
37. Phone a friend.
38. Get angry.
39. Adjust my priorities.
40. See a movie.
41. Get control of the situation.
42. Make an extra effort to get things done.
43. Come up with several different solutions to the problem.
44. Take some time off and get away from the situation.
45. Take it out on other people.
46. Use the situation to prove that I can do it.
47. Try to be organized so I can be on top of the situation.
48. Watch TV.
APPENDIX H

COPING INVENTORY FOR STRESSFUL SITUATIONS, ADOLESCENT

<table>
<thead>
<tr>
<th>Name:</th>
<th>Age:</th>
<th>Sex:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation: Student Y N Other:</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Instructions: The following are ways people react to various difficult, stressful, or upsetting situations. Please circle a 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>Not at All</th>
<th>Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Schedule my time better.
2. Focus on the problem and see how I can solve it.
3. Think about the good times I've had.
4. Try to be with other people.
5. Blame myself for putting things off.
6. Do what I think is best.
7. Become preoccupied with aches and pains.
8. Blame myself for having gotten into this situation.
9. Window shop.
10. Outline my priorities.
11. Try to go to sleep.
12. Treat myself to a favorite food or snack.
13. Feel anxious about not being able to cope.
15. Think about how I solved similar problems.
16. Tell myself that it is really not happening to me.
17. Blame myself for being too emotional about the situation.
18. Go out for a snack or meal.
20. Buy myself something.
21. Determine a course of action and follow it.
22. Blame myself for not knowing what to do.
23. Go to a party.
24. Work to understand the situation.
25. "Freeze" and not know what to do.
26. Take corrective action immediately.
27. Think about the event and learn from my mistakes.
28. Wish that I could change what had happened or how I felt.
29. Visit a friend.
30. Worry about what I am going to do.
31. Spend time with a special person.
32. Go for a walk.
33. Tell myself that it will never happen again.
34. Focus on my general inadequacies.
35. Talk to someone whose advice I value.
36. Analyze my problem before reacting.
37. Phone a friend.
38. Get angry.
39. Adjust my priorities.
40. See a movie.
41. Get control of the situation.
42. Make an extra effort to get things done.
43. Come up with several different solutions to the problem.
44. Take some time off and get away from the situation.
45. Take it out on other people.
46. Use the situation to prove that I can do it.
47. Try to be organized so I can be on top of the situation.
48. Watch TV.