1997

The relationship between the stress, appraisal and coping process and eating disorders.

Alexandra Sascha Griffing

University of Massachusetts Amherst

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THE RELATIONSHIP BETWEEN THE STRESS, APPRAISAL AND COPING PROCESS AND EATING DISORDERS

A Thesis Presented
by
ALEXANDRA SASCHA GRIFFING

Submitted to the Graduate School of the University of Massachusetts Amherst in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

September 1997

Department of Psychology
THE RELATIONSHIP BETWEEN THE STRESS, APPRAISAL AND COPING PROCESS AND EATING DISORDERS

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ABSTRACT

THE RELATIONSHIP BETWEEN THE STRESS, APPRAISAL AND COPING PROCESS AND EATING DISORDERS

SEPTEMBER 1997

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The role of stress as a contributing variable in the onset and maintenance of eating disorders has been examined in past research. However, research is needed that focuses on the role that the appraisal and coping process may play as well (Cattanach & Rodin, 1988). In order to address this issue, 241 undergraduate women completed the Bulimia Test, the Stress Level Severity Scale, the Personal Problem-Solving Inventory, the Coping Strategies Inventory, the Beck Depression Inventory, and the Rosenberg Self-Esteem Scale. Subjects were classified into one of three groups: bulimic (n=24), symptomatic (n=25) or asymptomatic (n=192). As hypothesized, the three groups differed from one another in a linear fashion in their experience of stress, self-appraisal of problem-solving ability, and in the use of disengaged styles of coping. Clinical implications of the findings will be discussed.
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CHAPTER I
INTRODUCTION

The incidence of eating disorders has increased dramatically in recent decades. Although reliable estimates are difficult to obtain, research indicates that approximately 5% of the population suffers from anorexia nervosa, and that the prevalence of bulimia ranges anywhere from 5 to 18% of college-age women (Pope, Hudson & Yurgelin-Todd, 1984). Clearly, eating disorders are compromising the physical and emotional well-being of large numbers of women.

Despite a proliferation of research on eating disorders, relatively little is understood regarding the specific factors which contribute to the onset and maintenance of these disorders. Variation among symptomatology, nature of illness, family background and level of pathology (Strober, 1981; Thompson, Berg & Shatford, 1987) suggest that eating disordered women comprise a very heterogeneous patient population.

Nonetheless, previous research does seem to indicate that women with eating disorders share certain cognitive patterns and styles (Etringer, Altmaier & Bowers, 1989), and that these shared attitudes often transcend those relating to food, dieting and weight (Etringer et al., 1989; Shatford & Evans, 1986). There is a pressing need for research which systematically identifies and examines these common features (Roth & Armstrong, 1990). One area which seems to merit
further investigation is that of stress, appraisal, and coping.

Researchers have begun to examine the potential role of stress in the etiology and maintenance of eating disorders. Hawkins and Clement (1980) found a significant relationship between the severity of binge eating behavior and the amount of life changes experienced by subjects. According to Strober (1984), bulimic anorexics report experiencing twice as many life stressors as do control subjects. Lacey, Coker and Britchell (1986) report that bulimic subjects identified a major life event as a precipitant of their illness. In a prospective examination of the antecedents of bulimia, Lingswiler, Crowther and Stephens (1989) documented a significant relationship between negative moods and subsequent binge episodes.

Although previous research indicates that subjects with eating disorders do perceive themselves as experiencing greater amounts of stress than control subjects, Cattanach and Rodin (1988) caution that this view might be an oversimplification. An examination of the types of stressors that subjects with eating disorders describe reveals that such events are often very common among young women. In two separate studies, Shatford and Evans (1986), and Pyle, Mitchell and Eckert (1981) reported that the most frequently cited stressful events were the breakup of a romantic relationship and leaving home to attend school.
Similarly, the events listed by bulimics as precipitants of their illness in the study conducted by Lacey et al. (1986) were either a loss of some kind (such as the ending of a relationship), a sexual conflict, and/or a major change in life circumstance (such as going away to school).

The fact that these events are so common raises the possibility that women with eating disorders are simply less able to negotiate the demands that these stressors place upon them. In a thorough review of the relevant literature, Cattanach and Rodin (1988) posit that the role of stress in relation to eating disorders should be conceptualized as a comprehensive process, which includes the role of mediating variables such as cognitive appraisal and coping.

Although the potential role of cognitive appraisal in eating disorders has received little attention in the literature, research indirectly supports such a relationship. According to Folkman, Lazarus, Gruen and DeLongis (1986), cognitive appraisal can best be understood as a two-step evaluative process. In the primary appraisal process, the person evaluates if and how this particular event is relative to his or her well being. In the secondary phase, the person evaluates what can be done to prevent harm and improve the prospects for benefit. Lazarus and Folkman (1984) identify two personal characteristics as key factors in the appraisal process: commitments (which refer to how important a particular situation is to the
person); and beliefs (preexisting notions about reality). Both of these factors have important implications for the role of cognitive appraisal in eating disorders.

Numerous researchers have documented extremely high levels of perfectionism in people with eating disorders (Bruch, 1973, 1978; Garner, Garfinkel & Bemis, 1982; Katzman & Wolchik, 1984). Folkman and her colleagues (1986) indicate that the more a subject has at stake in an encounter, the more likely he or she is to experience troublesome psychological symptoms as measured by the Hopkins Symptom Checklist (Derogatis, Lipman, Rickles, Uhlenhuth & Covi, 1974). It seems likely that if individuals with eating disorders experience a high need to succeed in a particular situation, then they would experience a sense of heightened commitment, which might in turn cause them to appraise a situation as stressful and taxing.

One belief described by Lazarus and Folkman (1984) which impacts upon the appraisal process is the extent to which a person feels confident in his or her ability to negotiate the demands of the environment. This idea is consistent with Rotter’s (1978) theory that the individual’s perception of his or her ability to control a situation is among the most important of the problem-solving attitudes. This type of belief would seem to be particularly relevant to people with eating disorders. Bruch (1973) identified a
paralyzing sense of ineffectiveness as a cardinal feature of anorexia nervosa. Boskind-Lodahl (1976) observed that bulimics displayed an extreme lack of confidence in their ability to control their own behavior. More recent research also supports this idea. Abramson and Fletcher (1984; as cited in Shatford & Evans, 1986) found that bulimics report feelings of ineffectiveness and have an external attribution of control. Johnson and Connors (1986) report that bulimics perceive themselves as externally controlled and helpless. Based on the existing research, it seems likely that individuals with eating disorders might appraise situations as more stressful than would control subjects.

The secondary phase of cognitive appraisal includes the evaluation of various coping mechanisms (Folkman et al., 1986). According to McCrae (1984; as cited in Heppner & Krauskopf, 1987), research supports the idea that people use different coping mechanisms and styles depending on how they appraise a particular situation. Similarly, Peterson and Seligman (1984) propose that the way in which an individual appraises a situation will strongly impact upon the choice of a coping strategy.

If women with eating disorders tend to appraise situations in a specific way, this might impact heavily on their choice of a coping strategy. Researchers have suggested that women with eating disorders may experience coping skills deficits. Lacey et al. (1986) postulated that
bulimics lack the adult coping skills needed to negotiate the demands of common stressful encounters. Etringer et al. (1989) have proposed that bulimic women possess less effective coping skills than nonbulimic women. Shatford and Evans (1986) posit that bulimia might result from a lack of adequate coping resources. Their research indicates that there is a significant relationship between the use of ineffective coping strategies in order to negotiate the demands of a stressor, and bulimic behavior. They propose a causal model of bulimia which implicates coping strategies as an important mediator of stress, and further hypothesize that women might develop eating disorders as a coping mechanism, albeit an unsuccessful one.

The following studies support this idea. When Teusch (1988) asked bulimics about the reasons for their behavior, they reported that their bulimic behavior helped them to manage anger, rage, shame and anxiety. Thompson, Berg and Shatford (1987) administered several measures including a "Use of Food Survey" (UFS) to three groups of women: bulimic, symptomatic, and control subjects. They concluded that the three groups differed from one another in a linear fashion in the amount and type of cognitive distortions related to eating and weight (such as perfectionism, dichotomous thinking and defeatism). The three groups also displayed differences in their tendency to "use food as a
coping mechanism," as measured by the UFS, with bulimic subjects at the high end of the scale.

Although it has been suggested that women with eating disorders use food as an ultimately maladaptive coping strategy (Shatford & Evans, 1986; Thompson et al., 1987), researchers have not yet examined the specific coping styles that are associated with eating disorders. Shatford and Evans (1986) report that the majority of the bulimic subjects in their study utilized styles of avoidance and emotion-focused coping. Although this is an interesting finding, there is a need for research that examines the specific patterns of coping that are used by bulimic women. It seems likely that a better understanding of the ways in which bulimic women cope with stress would help to illuminate possible reasons why these women turn to binge eating and purging.

Tobin, Holroyd, Reynolds and Wigal (1988) provide a hierarchical conceptualization of coping styles, and have developed a method to measure this hierarchical structure. Their scale includes two tertiary factors, engaged (in which the person actively engages the problem) and disengaged (in which the person attempts to avoid the problem). Each of these two factors can subsequently be broken down into two secondary factors (problem-focused or emotion-focused). These secondary factors can be further divided into eight primary subscales (the specific coping strategies that
people make use of to respond to stress): problem solving, cognitive restructuring, social support, express emotions, problem avoidance, wishful thinking, social withdrawal, and self-criticism. Through an examination of the specific coping patterns of bulimic, symptomatic and symptom-free subjects, it will be possible to come to a more comprehensive understanding of the relationship between the coping process and eating disorders.

The existing literature on the stress, appraisal, and coping processes in relation to eating disorders seems to indicate that there are at least three possibilities as to why individuals with eating disorders report that they experience more stress than control subjects do. The first possibility is that they do in fact experience greater levels of stress. The second is that they are more likely to perceive experiences as stressful as a result of the appraisal process. The third is that they are less able to negotiate the demands of specific stressors as a consequence of their specific coping styles. Any one of these possibilities may be operating independently, or more likely, they may be operating in conjunction with one another. All three of these possibilities deserve to be addressed by research, which is the focus of the present paper. Three groups of subjects (bulimics, symptomatic subjects, and symptom-free subjects) will be compared on a
variety of dimensions related to the stress, appraisal and coping process.

In order to examine the possibility that bulimic women perceive themselves as experiencing greater amounts of stress, the degree of stress reported by the three groups will be examined. It is hypothesized that the three groups will differ from one another in a linear fashion in their perceptions of the severity of stress, with bulimics reporting the highest levels of stress and symptom-free subjects reporting the lowest.

The cognitive appraisal process will be examined in terms of subjects' perceptions of their problem-solving ability. It is expected that bulimic subjects will endorse attitudes and behaviors that are indicative of lower problem-solving confidence than will symptomatic or control subjects. It is also anticipated that symptomatic subjects will report greater confidence in their problem-solving skills than bulimic subjects, but less confidence than control (symptom-free) subjects.

Finally, the specific types of coping strategies that are employed by the three groups will be examined. It is hypothesized that bulimic women will report that they are more likely to use disengaged types of coping styles (problem avoidance, social withdrawal, self criticism and wishful thinking) than either symptomatic or control subjects. Once again, it is anticipated that symptomatic
subjects will report an intermediate level between bulimic and control subjects.
CHAPTER II
METHOD

Subjects

Subjects were undergraduate women between the ages of eighteen and twenty-two recruited from a large Northeastern university. Three hundred seventy-five questionnaires were distributed to volunteers from six psychology courses. Potential subjects were informed that they could return the testing materials to the experimenter at the next class meeting, in exchange for extra course credit. Two hundred sixty-seven (71%) questionnaires were returned. Of these, twenty-six subjects failed to complete all of the measures and were eliminated from the data analysis.

The remaining 241 subjects were categorized on the basis of their scores on the BULIT into one of three groups in the manner recommended by the authors of the scale: bulimic (n=24), symptomatic (n=25), or symptom-free (n=192).

Measures

Bulimia Test (BULIT). (Smith & Thelan, 1984). The BULIT uses the DSM-III criteria for bulimia as a framework, and also allows for an evaluation of the severity of bulimic behavior. The BULIT is a 32-item multiple choice instrument that examines five sub-areas associated with bulimia: binging, vomiting, feelings about eating and weight, concern with weight, and concern with food. The developers of the
instrument provide cutoff scores for categorizing subjects as bulimic (scores greater than or equal to 102) or symptomatic (scores between 88 and 101).

The original researchers report that the BULIT correlates highly with the EAT except that it focuses on bulimia instead of anorexia. They report that the scale has excellent predictive validity ($p<.0001$) in that it successfully discriminates samples of clinical bulimics from normal controls, and conclude that it is appropriate for use with nonclinical populations as well. Test-retest reliability is computed at $.87$.

Stress Level Severity Scale (SLSS). The SLSS is an eight-item self-report measure that was developed for the purpose of this study. Subjects are asked to indicate on a five point Likert-type scale, the degree of general stress that they feel they are experiencing in four separate domains: academic, social, family, and financial. Subjects are also asked to report the level of stress that they believe their peers are experiencing for each of the four domains.

Coping Strategies Inventory (CSI). (Tobin, Holroyd, Reynolds & Wigal, 1989). The CSI is a 72-item, self-report questionnaire that examines a range of thoughts and actions that people use to negotiate the internal and external demands of a stressful encounter. The format is based on
the Ways of Coping Scale (Folkman & Lazarus, 1988), in that subjects are asked to describe the "most stressful event that they have experienced in the past two months," and then respond to a five point Likert-type scale (1 = none, 5 = very much) that measures the extent to which they have made use of each potential coping strategy.

The CSI was constructed through a hierarchical factor analytic procedure, which facilitates the measurement of the hierarchical structure of coping. The CSI consists of a total of fourteen subscales: eight primary subscales (which represent the specific types of coping strategies that people utilize to respond to stress), four secondary scales, and two tertiary scales. The eight primary subscales are: 1) problem solving (active cognitive and behavioral strategies designed to directly affect the source of the stressor); 2) cognitive restructuring (strategies that alter the meaning of the stressful transaction so that it may be reframed and viewed as less threatening or from a different perspective); 3) express emotions (releasing one's emotions); 4) social support (strategies that include seeking and accepting assistance from family members and friends); 5) problem avoidance (the avoidance of thoughts or actions related to the event); 6) wishful thinking (hoping or wishing that things could be better, rather than actually reframing the situation); 7) self criticism
(blaming or criticizing oneself); and 8) social withdrawal (isolating from or avoiding one’s social network).

These primary subscales are grouped into the four secondary factors: problem-focused engagement (problem solving and cognitive restructuring), problem-focused disengagement (problem avoidance and wishful thinking); emotion-focused engagement (express emotions and social support) and emotion-focused disengagement (self criticism and social withdrawal). The secondary factors are further grouped into the two tertiary factors of engagement (problem-focused engagement and emotion-focused engagement) and disengagement (problem-focused disengagement and emotion-focused disengagement). Each of the primary subscales consists of nine individual items. Raw scores for each of the primary subscales are computed by summing the item responses for that particular scale. Secondary and tertiary subscale scores are computed by adding together the primary scales that comprise that secondary or tertiary scale. Tobin and his colleagues (1989) report that the CSI has been demonstrated to have high internal consistency and good test-retest reliability.

Personal Problem-Solving Inventory (PSI). (Heppner & Peterson, 1982). The PSI is a 32-item checklist based on a six point Likert-type scale (one = never, six = always) that
is designed to measure the individual's perception of his or her problem-solving ability.

The PSI was developed from a principal-components factor analysis of data collected from college students who completed the PSI as well as the Level of Problem-Solving Skills Estimate Form (LPSSEF), a self-report measure in which subjects compare their problem-solving skills to those of other college students and evaluate their perceived satisfaction or dissatisfaction with these skills.

Three major factors were extracted from the data: problem solving confidence (which assesses the subjects confidence in participating in a variety of general problem-solving activities); approach-avoidance style (which examines the individuals tendency to approach or avoid a problem); and personal control (which evaluates the subjects perceived ability to successfully cope with a problem). In addition to yielding a global score, the PSI yields a separate subscore for each of the three domains.

The test-retest reliabilities were computed for the total score (r = .89), as well as separately for each factor: problem-solving confidence, r = .85, approach-avoidance style, r = .88, and personal control, r = .83. Estimates of concurrent and construct validity were obtained by correlating subjects scores on the three factors and their total PSI scores, with scores on the LPSSEF. All of these correlations were statistically significant (p<.0001).
Construct validity was determined through a comparison of the scores of subjects who completed a problem-solving skills workshop to those of control subjects (p<.05). Furthermore, the PSI has been found to correlate significantly with behavioral ratings of problem-solving confidence (Heppner, Hibel, Neale, Weinstein & Rabinowitz, 1982; as cited in Heppner & Petersen, 1982).

Beck Depression Inventory (BDI). (Beck, Rush, Shaw & Emery, 1979). The BDI is a 21-item self-report measure of depression in adolescents and adults. Subjects respond to a series of self-evaluative statements that assess the cognitive, affective, and behavioral components of depression. Each item is scored on a four-point scale that ranges from 0 to 3 in terms of severity. A score of 0 indicates that the symptom is absent, a score of 1 indicates that the symptom is of mild severity, a score of 2 indicates that the symptom is of moderate severity, and a score of 3 indicates that the symptom is severe. The total BDI score is calculated by summing the individual item scores.

There is some controversy over the use of this scale as a screening device in college students, because it has been suggested that high scores are indicative of general adjustment difficulties rather than clinical depression. Nonetheless, it is one of the most widely accepted
instruments for detecting depression in normal populations (Steer, Beck & Garrison, 1985).

Test-retest reliability in a large sample of college students has been reported at .90 over a two-week interval (Lightfoot & Oliver, 1985).

Rosenberg Self-Esteem Scale (RSE). (Rosenberg, 1979). The RSE was originally developed to assess the level of self-esteem of high school students. However the scale is often used with both children and adults. Subjects complete a 10-item measure based on a five point Likert-type scale that addresses perceptions about the self.

Because this scale has been used extensively with subjects of diverse ages and ethnic backgrounds, there is a great deal of data concerning validity and reliability. Measures of test-retest reliability range from .85 to .88. Construct validity has been demonstrated by the fact that the RSE correlates negatively with measures of anxiety and depression, and positively with measures of peer group reputation. The RSE has also been shown to correlate significantly with other measures of self-esteem such as the Coopersmith Self-Esteem Inventory.
CHAPTER III

RESULTS

Subjects were categorized on the basis of their scores on the BULIT into one of three groups: bulimic (n=24), symptomatic (n=25), or symptom-free (n=192). As previously stated, the established cutoffs for the BULIT are 102 for the eating disordered range and 88 for the symptomatic range.

In order to examine the three hypotheses of the study, univariate analyses of variance were computed to compare the group differences on the following measures: SLSS score, problem-solving confidence, and disengaged style of coping (both, primary and tertiary). In addition, pairwise comparisons were computed for all measures using the Duncan’s multiple range test. The results of these analyses are presented in Table 1.

As hypothesized, the three groups reported different levels of perceived stress, $F(2,241) = 16.919, \ p < .001$. Bulimic subjects reported the highest levels of stress, the symptomatic subjects reported an intermediate level of stress, and the symptom-free subjects reported the lowest levels of stress. Pairwise comparisons indicated that both the bulimic group and the symptomatic group differed significantly from the asymptomatic group in their perceptions of stress, $F(2,241) = 2.065, \ p < .01$. 

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Table 1: Differences in Perceptions of Stress, Cognitive Appraisal, and Coping Styles of Bulimic, Symptomatic and Symptom-Free Women.

<table>
<thead>
<tr>
<th></th>
<th>Bulimic Mean</th>
<th>Bulimic SD</th>
<th>Symptomatic Mean</th>
<th>Symptomatic SD</th>
<th>Asymptomatic Mean</th>
<th>Asymptomatic SD</th>
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<tbody>
<tr>
<td>Stress</td>
<td>15.33</td>
<td>2.67</td>
<td>13.82</td>
<td>3.40</td>
<td>11.99</td>
<td>2.88</td>
<td>16.919***</td>
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<tr>
<td>Confidence</td>
<td>34.04</td>
<td>6.31</td>
<td>37.74</td>
<td>7.83</td>
<td>39.86</td>
<td>5.70</td>
<td>10.631***</td>
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<tr>
<td>Engaged Coping</td>
<td>105.08</td>
<td>27.18</td>
<td>105.38</td>
<td>25.03</td>
<td>111.36</td>
<td>21.23</td>
<td>1.440</td>
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<tr>
<td>Problem-Solving</td>
<td>23.46</td>
<td>8.15</td>
<td>25.30</td>
<td>8.40</td>
<td>26.22</td>
<td>7.12</td>
<td>1.572</td>
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<tr>
<td>Cognitive-Restructuring</td>
<td>23.83</td>
<td>8.21</td>
<td>22.85</td>
<td>7.76</td>
<td>26.72</td>
<td>6.90</td>
<td>4.634**</td>
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<tr>
<td>Express-Emotions</td>
<td>27.13</td>
<td>9.77</td>
<td>26.27</td>
<td>9.76</td>
<td>25.66</td>
<td>7.55</td>
<td>.388</td>
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<td>Social-Support</td>
<td>27.75</td>
<td>8.96</td>
<td>27.28</td>
<td>9.19</td>
<td>30.75</td>
<td>8.18</td>
<td>2.945</td>
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<td>Disengaged Coping</td>
<td>104.00</td>
<td>21.13</td>
<td>96.00</td>
<td>20.93</td>
<td>85.39</td>
<td>21.10</td>
<td>9.649***</td>
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<td>Problem-Avoidance</td>
<td>20.52</td>
<td>6.59</td>
<td>18.48</td>
<td>6.54</td>
<td>18.25</td>
<td>5.67</td>
<td>1.537</td>
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<td>Wishful-Thinking</td>
<td>32.30</td>
<td>5.86</td>
<td>28.26</td>
<td>7.32</td>
<td>26.27</td>
<td>7.14</td>
<td>7.959***</td>
</tr>
<tr>
<td>Social-Withdrawal</td>
<td>25.00</td>
<td>8.33</td>
<td>22.30</td>
<td>8.27</td>
<td>17.97</td>
<td>6.61</td>
<td>13.879***</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001.
Means in the same row that do not share superscripts differ at p < .05 in the Duncan’s multiple range test.
The three groups also differed in their level of confidence in their problem-solving ability $F(2,239) = 10.631, p < .001$. Pairwise comparisons indicated that bulimic subjects perceived themselves to be less effective problem-solvers than did both symptomatic and asymptomatic subjects, $F(2,239) = 4.264, p < .05$.

As expected there were differences among the groups with respect to the particular coping strategies employed by subjects. At the tertiary level of coping, there were significant differences in the use of disengaged coping, $F(2,230) = 9.649, p < .001$. Both, bulimic and symptomatic subjects reported significantly higher levels of disengaged coping than did asymptomatic subjects $F(2,230) = 14.909, p < .01$.

There were also differences in three of the four primary disengaged subscales: 1) self-criticism, $F(2,237) = 3.299, p < .05$; 2) wishful-thinking, $F(2,237) = 7.959, p < .001$; and 3) social-withdrawal, $F(2,240) = 13.879, p < .001$. Pairwise comparisons indicate that bulimic subjects were significantly more likely to use wishful-thinking than were symptomatic ($p < .05$) and symptom-free subjects ($p < .01$), $F(2,237) = 4.983$. Bulimic subjects were also more likely than symptom-free subjects to use social-withdrawal, $F(2,240) = 4.939, p < .01$, and self-criticism $F(2,237) = 7.276, p < .05$. 
In order to provide a comprehensive understanding of the coping process, between-group differences were also examined with respect to the engaged coping strategies. Although there were not significant difference at the tertiary level of engaged coping, there were between-group differences in one of the primary engaged coping strategies: cognitive-restructuring $F(2,240) = 4.634, p < .01$. 
CHAPTER IV

DISCUSSION

The results of the present study document a clear relationship between the stress, appraisal and coping process and bulimic behavior. These findings are consistent with previous research that indicates that bulimic women report more stress (Cattanach & Rodin, 1988; Lingswiler et al., 1989), less confidence in their ability to solve problems (Estringer et al., 1989; Soukup, Beiler & Terrel, 1990) and different coping styles (Shatford & Evans, 1986; Thompson et al., 1987) than do nonbulimic women. The present study also links theoretical conceptualizations of the stress and appraisal process (Lazarus & Folkman, 1984) with the existing research about eating disorders.

Significant differences existed among the three groups (bulimic, symptomatic and symptom-free) in the expected direction on all measures.

The three groups differed from one another in a linear fashion on measures of the severity of stress. Bulimic subjects reported the highest level of stress, and both bulimic and symptomatic subjects reported significantly higher levels of stress than did symptom-free subjects. This finding is consistent with previous research that documents a relationship between stress and the development of psychological distress and physical illness (MacFarlane, Norman, Stein & Roy, 1980). Rabkin and Streuning (1976)
maintain that the experience of stress can result in the onset and exacerbation of physical illness. According to Elliot and Eisendorfer (1982) people who experience significant stressors are more likely to develop adverse health consequences.

Cattanach and Rodin (1988) discuss four explanations that might account for the specific relationship between stress and bulimic behavior. One possibility is that the experience of stress may activate physiological changes that subsequently influence food intake. This idea is consistent with Strober’s (1984) proposition that stress-induced neurochemical changes may impact upon the organization and regulation of eating behavior.

A second possibility is that stress-induced overeating may become a learned response. This idea is supported by Robins and Fray’s (1980; as cited in Cattanach & Rodin, 1988) research which suggests that "hunger" is a response which can be learned when food is paired with an arousing experience.

Another explanation that could account for the relationship between stress and disordered eating is that the experience of stress can result in a disinhibition of cognitive restraint. Similarly, Strober (1984) suggests that when women with eating disorders are exposed to stress, they experience a decrease in confidence in their ability to
control their behavior, which might generalize to deficits in the ability to control and regulate eating behavior.

Finally, it is possible that binge eating might result in the temporary alleviation of tension and serve to distract the bulimic individual from feelings of depression or low self-esteem. In two separate studies (Casper, Eckert, Halmi, Goldberg & Davis, 1980; Johnson, Stuckey, Lewis & Schwartz, 1983), researchers found that eating disordered subjects reported an association between binge eating and the experience of specific emotions.

Although the present study does not measure objective numbers and types of stressors, the aforementioned explanations seem more closely related to perceptions and to the subjective experience of stress. Any or all of these explanations could plausibly account for the relationship between stress and disordered eating. However, none of these alternatives explain why the experience of stress would cause some people and not others to develop bulimic behavior. Although the finding that bulimics and symptomatic subjects experience more stress than control subjects is interesting, it is necessary to consider certain cognitive variables that might contribute to the onset and maintenance of bulimia.

The need to examine the relationship between individual variation in response to stress and disordered eating behavior is supported by Cattanach, Mallay and Rodin's
research that involves the experimental manipulation of stress in bulimic and control subjects. They found that bulimic women reported a higher level of global stress, a lower sense of mastery, and a greater desire to binge in response to stress. This suggests that bulimic women are having a more extreme response to stress and also that their responses to stress are more closely associated with binge eating.

The results of the present study also support the idea that cognitive variables may predispose certain women to experience disordered eating as a consequence of the subjective experience of stress. As hypothesized, bulimic subjects had less confidence in their ability to successfully cope with general problems than did either of the other groups. Lazarus and Folkman (1984) report that the extent to which people feel confident of their ability to control and negotiate the demands of a specific situation will have tremendous impact on the appraisal process. Those who feel unable to cope with a situation will experience a greater degree of stress (Schier & Carver, 1985). The fact that the bulimic and symptomatic women in this study feel less capable of coping with stress, may explain why they report higher levels of stress.

The impact of the cognitive appraisal process on the selection of coping strategies is well-documented (McCrae, 1984; as cited in Cattanach & Rodin, 1988; Peterson &
Seligman, 1984). There were significant differences in the specific coping patterns among the groups in this study. Bulimic subjects were more likely than symptomatic and control subjects to rely on wishful thinking, and they were more likely to rely on self-criticism than control subjects. Bulimic subjects and symptomatic subjects were both more likely to use social withdrawal than control subjects.

These results are consistent with the findings of several researchers. Shatford and Evans (1986) reported that bulimics are more likely to rely on emotion-focused or avoidant forms of coping. Thompson et al. (1987) suggested that women rely on bulimic behavior as a maladaptive coping strategy, in order to anesthetize themselves against negative emotions or to avoid confronting actively confronting a problem. Soukup et al. (1990) reported that anorexics and bulimics tend to avoid actively coping with their problems.

However, the present study also found that despite significant differences in the use of disengaged coping strategies, there were few differences between groups in the tendency to employ engaged coping strategies. This suggests that bulimics may not actually be utilizing different engaged coping strategies than control subjects, but that they are instead using disengaged coping patterns in conjunction with the engaged ones.
This pattern could also be explained by either of two competing hypotheses. The first possibility is that bulimic women are simply less effective at employing positive coping skills. This idea is consistent with research that focuses on problem-solving skills and depression. Nezu, Nezu, Saraydarian, Kalmar and Ronan (1986) suggested that poor problem-solving ability may increase an individual's vulnerability to stressors. Furthermore, Lakey (1988) concluded from a prospective investigation, that low problem-solving ability is a significant predictor of depression regardless of the actual level of stress. Perhaps bulimic women are unable to solve problems effectively which subsequently leads to depression and possibly to disordered eating behavior as well.

An alternative explanation for these findings states that bulimic subjects may simply perceive themselves as ineffective problem solvers. Heppner and Krauskopf (1987) report that several researchers have documented the importance of distinguishing between people's perceptions of their problem-solving capacity and actual problem-solving capacity. The bulimics in the present study reported low levels of confidence in their problem-solving ability, supporting this idea.

Larsen, Piersel, Imao and Allen (1990) examined the relationship between several cognitive variables and perceptions of problem-solving ability. They concluded that
the use of engaged coping strategies is associated with higher levels of perceived competence in problem-solving. It is interesting to note that this is not the case with the bulimic subjects in this sample. Despite similar levels of the use of engaged coping styles, there are differences in perceived competence. This also seems to suggest that the discrepancy between coping patterns may be related to differing perceptions in ability.

The data from the present study can not differentiate between these two competing explanations and further research is needed that examines both of these possibilities. A comparison of the objective coping strategies that are used by bulimic subjects with their own perceptions of the success or failure of these strategies, would help to determine the relative contribution of these variables. This could have great relevance for the development of treatment and prevention programs. If bulimics are actually less effective copers, then efforts could be focused on the development of more effective coping skills. However, if bulimics simply perceive themselves to be less effective copers, then efforts should be aimed at helping them to develop a more realistic sense of their own skills and capabilities.

Further research should also examine whether there are actual differences in the amount of stress experienced by eating disordered, symptomatic and symptom-free subjects.
The present study only addresses perceptions of stress, which may be biased as a consequence of bulimics' low self-evaluation of their problem-solving abilities.

In sum, the present study has documented differences in perceptions of stress, perceptions of problem-solving skills and the use of specific coping strategies among bulimic, symptomatic and symptom-free undergraduate women. The highly significant findings of this study indicate that this is an area that is worthy of continued and more comprehensive investigation.


