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in dietetic students**

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AN INVESTIGATION OF THE PREVALENCE  
OF  
DISORDERED EATING BEHAVIORS IN DIETETIC STUDENTS

Thesis submitted to  
The Graduate School of  
Marshall University

In Partial Fulfillment of the  
Requirements for the Degree of  
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by

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AN INVESTIGATION OF THE PREVALENCE OF DISORDERED EATING BEHAVIORS  
IN DIETETIC STUDENTS

ABSTRACT

Eating disorders are a debilitating mental illness that affects young people including those in the field of dietetics. Literature suggests that dietetic students have a higher prevalence of eating disorders than other students. Seventy-seven college student in Southern West Virginia enrolled in either dietetics or another major were included in a sample to determine if dietetic students have higher prevalence of disordered eating attitudes and behaviors. The participants completed a survey that included a general information section, a 26-item questionnaire concerning eating attitudes, and a behavioral information section. Upon completion of data collection, the survey was coded, and data was analyzed using descriptive statistics and multiple logistic regression. Results of the survey indicated that on the average students enrolled in dietetics scored about 8.8 points higher on the eating attitude test as compared to students in other majors, thus indicating a higher prevalence of disordered eating attitudes and behaviors.

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## CHAPTER I

## INTRODUCTION

At least two million (five to ten percent) of females in the United States have a clinically relevant eating disorder and many more females fight a daily battle with dieting and negative body image ("10 million women suffer," 1999). Eating disorders cause considerable morbidity and mortality, and their prevalence may be increasing (Walling, 1999). In a society that often equates thinness with success, achievement, and worth, women often risk their emotional and physical health to achieve an "ideal body" ("10 million women suffer," 1999).

Research reveals that many high school and college students are psychologically dissatisfied with their weight, desiring to be thinner (Soliah, Walter, & Erickson, 2000; Stephens, Schumaker, & Sibiya, 1999; Hausenblas & Cannon, 1998; Hesse-Biber, 1999; Nielson, 2000; Nelson, Hughes, Katz, & Searight, 1999). Dieting begins to improve appearances and eventually becomes a self-destructive dieting cycle.

Those who suffer from disordered eating are preoccupied with thought of food (American Psychiatric Association, Diagnostic and statistical manual of mental disorders, 2000; Beers & Berkow, 1999; Mussell, Binford, & Fulkerson, 2000). Their interest in food may manifest itself through food-related activities such as collecting recipes, preparing food for others, and exploring a career in nutrition. Students enrolled in



dietetics may be at a greater risk for eating disorders than other students (Worobey and Schoenfeld, 1999). Fredenberg, Berglund, & Dieken (1996) examined the prevalence of eating disorders in students enrolled in dietetics verses those enrolled in home economics. Students enrolled in dietetics had notably higher scores on a test of disordered eating and a higher percentage of students scored at the symptomatic level.

### Eating Disorder Background

Diagnosable eating disorders, such as anorexia nervosa and bulimia nervosa occur in approximately 3 percent of the female population in the United States. Anorexia nervosa is characterized by refusal to maintain a minimally normal body weight, profound fear of weight gain, body image disturbance, and amenorrhea. Bulimia nervosa involves recurrent episodes of binge eating accompanied by compensatory mechanisms (self-induced vomiting, laxative abuse, excessive exercise, fasting) and self-esteem significantly influenced by one's weight and shape. Onset of these disorders usually occurs during adolescence, with the majority of cases developing before age 25, and is more frequently seen in the white, middle to upper socioeconomic status population (Mussell et al, 2000).

Although anorexia nervosa and bulimia nervosa are the most widely recognized forms of eating disorders, other types of disorders that do not meet formal diagnostic criteria, eating disorders not otherwise specified (EDNOS), warrant diagnostic

consideration and professional attention (Mussell et al, 2000). The large group of patients who present with EDNOS consists of subacute cases of anorexia nervosa or bulimia nervosa. These patients may have met all the criteria for anorexia except that they have not missed three consecutive menstrual cycles. Or, they may be of normal body weight and purge without bingeing. Although the patient may not exhibit medical complications, they do often present with medical concerns (Spear and Myers, 2001).

EDNOS includes binge eating disorder in which the patient has bingeing behavior without compensatory purging that is seen in bulimia nervosa. Binge episodes must occur at least twice a week and have occurred for at least six months. Most patients with binge eating disorder are overweight and suffer the same medical problems faced by the non-bingeing obese population such as diabetes, high blood pressure, and heart disease (Spear et al, 2001).

The actual cause of eating disorders is undetermined, however, mental illness is related to eating disorders. There is an increased frequency of depressive symptoms or mood disorders (particularly Dysthymic Disorder and Major Depressive Disorder) in both anorexia and bulimic patients. Major depression has been reported in 50-75% of anorexia and bulimia nervosa cases. Also, strongly prevalent is obsessive-compulsive features, both related and unrelated to food. Although, Obsessive-Compulsive Disorder (OCD) is seen in patients with bulimia nervosa, it is most prevalent in patients with anorexia nervosa. Other features

include personality disorders and anxiety disorders (DSM-IV-TR, 2000; APA, 2001, Section C).

### Role of the Registered Dietitian

The care of patients with eating disorders involves the expertise and dedication of an interdisciplinary team consisting of professionals from medical, nursing, nutritional, and mental health disciplines. Medical nutrition therapy (MNT) provided by a registered dietitian trained in the area of eating disorders plays a significant role in the treatment and management of eating disorders. The professional organization, the American Dietetic Association, gives the following position statement concerning nutrition intervention in the treatment of anorexia nervosa, bulimia nervosa, and EDNOS: "It is the position of the American Dietetic Association (ADA) that nutrition education and nutrition intervention, by a registered dietitian, is an essential component of the team treatment of patients with anorexia nervosa, bulimia nervosa, and EDNOS during assessment and treatment across the continuum of care" (Spear et al, 2001).

The registered dietitian assesses the nutritional status, knowledge base, motivation, and current eating and behavioral status of the patient, develops the nutrition section of the treatment plan, implements the treatment plan, and supports the patient in accomplishing the goals set out in the treatment plan. The dietitian has continuous contact with the patient throughout the course of treatment, or if this is not possible, refers the

patient to another dietitian if the patient is transitioning from an in-patient to an out-patient setting. Specifically, the role of the registered dietitian is to address food and nutrition issues, the behavior associated with those issues, and assist the medical team member with monitoring lab values, vital signs, and physical symptoms associated with malnutrition (Spear et al, 2001).

The registered dietitian's communication style, both verbal and nonverbal, can significantly affect the patient's motivation to change. An individual progresses through various stages of change. Patients with eating disorders often progress through changes with frequent backsliding along the way to recovery. The role of the nutritional therapist is to help move patients along the continuum until they reach the maintenance stage (Spear et al, 2001)

#### Research Question

Persons who develop eating disorders are often described as being meticulous, compulsive, and intelligent, with very high standards for achievement and success. These people also tend to be from middle to upper socioeconomic status, with the majority from Western-industrialized societies. Likewise, persons who enter the field of dietetics also fit these criteria, thus suggesting that this group may display a higher prevalence of disordered eating behaviors and attitudes.

Because of the registered dietitian's role in the treatment of patient's with eating disorders and the education of basic nutrition to the public, it is important to examine if there is a prevalence of disordered eating among dietetics students. If the association between disordered eating among dietetic students is positive, one must examine if this disorder would cause a problem, or conflict of interest, in the nutrition education they provide. Because of the personality characteristics displayed by dietetic students, the role of the registered dietitian in the treatment of eating disorders, and the vocation being so food-related, the research question becomes: Do dietetic students have a higher predisposition to disordered eating behaviors compared to other students in a female dominant major, based on responses to the Eating Attitudes Test?

#### Hypothesis

There will be no difference in the eating attitudes of dietetic students and the eating attitudes of students enrolled in other female dominant majors of study at one university.

#### Assumptions

For the purpose of this study it is assumed that the individuals responding to the questionnaire will answer them completely and honestly. It is assumed that the respondents will be enrolled in either dietetics or another female dominant major of study. It is also assumed that the survey results will be statistically reliable.

Limitations

Limitations of this study include population size and gender. The sample population represents a sample of students taken from one university. Also, gender was not addressed in the questionnaire, however males represented less than 10% of the sample population. A final limitation involved self-reporting.

### Definition of Terms

Adipose tissue is a fibrous connective tissue packed with masses of fat cells that serves both as an insulation layer and an energy store (Bantam Medical Dictionary, 1994).

Amenorrhea is the absence or stopping of the menstrual periods that does not include the time before puberty, during pregnancy, during milk secretion, and post menopause (Bantam Medical Dictionary, 1994).

Binging is an episode marked by three particular features: a) the amount of food eaten is larger than most individuals would eat, b) the excessive eating occurs in a discrete period of time, c) the eating is accompanied by a subjective sense of loss of control (Mahan and Escott-Stump, 2000).

Body Mass Index- weight in kilograms divided by height in meters squared.

Bradycardia is the slowing of the heart to less than 50 beats per minute (Bantam Medical Dictionary, 1994).

Cortisol or hydrocortisone is a steroid hormone that is important for normal carbohydrate metabolism the normal response to any stress (Bantam Medical Dictionary, 1994).

Diuretics are drugs that increase the volume of urine produced by promoting the excretion of salts and water from the kidney (Bantam Medical Dictionary, 1994).

Edema is swelling cause by excessive accumulation of fluid in the body tissues (Bantam Medical Dictionary, 1994).

Emaciation is defined as the wasting of the body that can be caused by malnutrition, tuberculosis, cancer, or parasitic worms (Bantam Medical Dictionary, 1994).

Esophagitis is the inflammation of the esophagus, which for the purpose of this study is caused by repeated vomiting (Bantam Medical Dictionary, 1994).

Estrogen is a steroid hormone that controls female sexual development (Bantam Medical Dictionary, 1994).

Hypokalemia is low levels of potassium in the blood (Bantam Medical Dictionary, 1994).

Hypothermia occurs when body temperature fall below the normal range without reflex actions, such as shivering (Bantam Medical Dictionary, 1994).



Lanugo is a fine, soft hair that covers the body and limbs of the human fetus that often appears on the body of a person with anorexia nervosa (Bantam Medical Dictionary, 1994).

Laxatives are used to stimulate the frequency of bowel evacuation, which are often used as a way to compensate for bingeing in patients with bulimia nervosa (Bantam Medical Dictionary, 1994).

Malnutrition occurs when the individual consumes less than what he requires for optimal health (Bantam Medical Dictionary, 1994).

Menarche is the start of the menstrual periods and other physical and mental changes associated with puberty (Bantam Medical Dictionary, 1994).

Medical nutrition therapy (MNT) is the use of specific nutritional interventions to treat an illness, injury, or condition (Mahan et al., 2000).

Menses is the blood and other materials discharged from the uterus at menstruation (Bantam Medical Dictionary, 1994).

Morbidity is the incidence of disease in a population (Bantam Medical Dictionary, 1994).

Mortality is the incidence of death in a population (Bantam Medical Dictionary, 1994).

Obesity is the condition in which excess fat has accumulated in the body, mostly in the subcutaneous tissues caused by consuming more food than what is needed for performing daily functions (Bantam Medical Dictionary, 1994).

Parotid glands are one pair of salivary glands that are situated in front of each ear that often swell after repeated vomiting (Bantam Medical Dictionary, 1994).

Purging involves any method intended to reverse the effects of binge eating (Mahan et al., 2000).

## CHAPTER II

## REVIEW OF LITERATURE

Eating disorders are a culturally bound phenomena particular in young women in Western and other industrialized societies. In fact, these women may give in to eating disorders more often than other women because of society's emphasis on extreme thinness. This "perfect" body is equated with femininity, success, power, and self-control. Likewise, obesity is viewed as lazy and weak. Therefore, women often feel pressured to pursue an unrealistically thin physique, which they try to achieve through a preoccupation with dieting that is linked to eating disorders (Stephens et al, 1999).

Eating Disorders Defined

Serious eating disorders are grouped into three categories: anorexia nervosa, bulimia nervosa, and eating disorders not other specified which includes binge eating disorder (Beers et al, 1999).

Anorexia nervosa is defined as a disorder characterized by a disturbed sense of body image, marked weight loss, fear of obesity, and amenorrhea in women. Only about 5% of cases are male. Onset is usually in adolescence, occasionally prepubertal, and less commonly in adulthood. A high percentage of patients are of middle and upper socioeconomic status (Beers et al, 1999).

The incidence of anorexia nervosa appears to be increasing in Western, industrialized societies (Beers et al, 1999). In these societies, where there is an abundance of food, thinness is linked to attractiveness, especially for females. The disorder is probably most common in the United States, Canada, Europe, Australia, Japan, New Zealand, and South Africa, but little research has been done to examine the prevalence in other cultures. Immigrants from cultures in which the disorder is rare who emigrate to cultures in which the disorder is more prevalent may develop anorexia nervosa as thin-body ideals are assimilated. Cultural factors may also influence the manifestations of the disorder. For example, in some cultures, disturbed perception of the body or fear of weight gain may not be prominent and the expressed motivation for food restriction may have a different content, such as epigastric discomfort or distaste of food (DSM-IV-TR, 2000).

Furthermore, anorexia nervosa may be mild and transient or severe and long lasting. Death rates as high as 10-20% have been reported. However, because mild cases may not be reported, no one can actually give a definite number of how many people suffer from anorexia nervosa or how many die of the disorder (Beers et al, 1999).

Even before the onset of the illness, many eating disorder patients are described as being meticulous, compulsive, and intelligent, with very high standards for achievement and success. A first indicator of the disorder is the increased

concern about body weight, even if the patient is thin, and the start of restricting food. Preoccupation and anxiety about weight increases even as emaciation develops, and denial of the illness are prominent features. Patients do not complain of anorexia or weight loss, usually resist treatment, and are brought to the attention of the physician by their families, by recurrent illness, or complaints about other symptoms (Beers et al, 1999).

Anorexia actually means "lack of appetite" which is ironic since those with anorexia nervosa are actually hungry and preoccupied with food. They study diets; hoard, conceal, and deliberately waste food; collect recipes; and prepare elaborate meals for others (Beers et al, 1999).

There are two subtypes of anorexia nervosa: restricting type and binge-eating/purging type (DSM-IV-TR, 2000). Half of those who suffer from anorexia nervosa have the binge-eating/purging subtype (Beers et al, 1999). These people may or may not binge and then purge through self-induced vomiting or the misuse of laxatives, diuretics, or enemas. The other half fall into the restricting subtype. These people accomplish weight loss primarily through dieting, fasting, or excessive exercise (DSM-IV-TR, 2000).

The course and outcome of anorexia nervosa are highly variable. Some individuals with anorexia nervosa recover fully after a single episode, some exhibit a fluctuating pattern of weight gain followed by relapse, and others experience a

chronically deteriorating course of the illness over many years. With time, particularly within the first five years of onset, a significant fraction of individuals with the restrictive type of anorexia nervosa develop binge eating, indicating a change to the binge-eating/purging subtype. A sustained shift in clinical presentation (weight gain and the presence of binge eating and purging) may eventually warrant a change in diagnosis to bulimia nervosa (DSM-IV-TR, 2000).

Amenorrhea is universal in females with anorexia nervosa, and often appears before excessive weight loss. In men and women, there is usually a loss of interest in sex. Other common findings include bradycardia, low blood pressure, hypothermia, the development of lanugo hair, and edema. Depression is common, and patients tend to be very manipulative. They often lie about food intake and conceal behavior such as induced vomiting. Hormonal changes include reduced levels of estrogen and thyroid hormone and increased levels of cortisol. If a person becomes seriously malnourished every major organ system is affected. Problems with the heart and fluids and electrolytes are most dangerous. The heart gets weaker and pumps less blood through the body. The person may become dehydrated and prone to fainting and the blood may become acidic and potassium levels in the blood decrease (Beers et al, 1999).

There are four diagnostic criteria that must be present for diagnosis of anorexia nervosa: a) refusal to maintain body weight at or above a minimally normal weight for age and height; b)

intense fear of gaining weight or becoming fat, even though underweight; c) disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight; d) in postmenarcheal females, amenorrhea (DSM-IV-TR, 2000).

Bulimia nervosa is defined as a disorder characterized by recurrent episodes of binge eating during which the patient experiences a loss of control over eating and engages in either self-induced vomiting, use of laxative and/or diuretics, or rigorous dieting or fasting to overcome the effects of the binges. Patients show a persistent over concern with body shape and weight (Beers et al, 1999).

Bulimia nervosa, like anorexia nervosa, afflicts primarily females of upper and middle socioeconomic status (Beers et al, 1999). The illness has been reported to occur with roughly similar frequencies in most industrialized countries. Few studies have examined the prevalence of bulimia nervosa in other cultures. In clinical studies of bulimia nervosa in the United States, individuals presenting with this disorder are primarily white, but the disorder has also been reported among other ethnic groups (DSM-IV-TR, 2000).

Binge eating can cause acute gastric dilation and even rupture. Induced vomiting is associated with erosion of dental enamel, parotid gland enlargement, esophagitis, and esophageal rupture. Aspiration pneumonia occurs when induced vomiting is

associated with reduced consciousness. Hypokalemia can result from vomiting and purging, and death has been reported from abuse of ipecac taken to induce vomiting (Beers et al, 1999).

People with bulimia tend to be more aware of and guilty about their behaviors than those with anorexia nervosa and are more likely to admit their concerns when questioned by a physician. Bulimia may be suspected in patients expressing marked concern about weight gain and manifesting wide fluctuation in weight especially if there is evidence of excessive use of laxatives or unexplained hypokalemia. Suspicion is also aroused by swollen parotid glands, scars on the knuckles of the hand (from induced vomiting), and dental erosion. The final diagnosis depends on the patient's description of binge-purge behaviors (Beers et al, 1999).

Like anorexia nervosa, bulimia nervosa has two subtypes that are used to specify the presence or absence of regular purging as a means to compensate for binge eating. One type is the purging type in which the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas during the current episode. The second type is the non-purging type in which the person has used other inappropriate compensatory behaviors, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas during the current episode (DSM-IV-TR, 2000).



Bulimia nervosa usually begins in late adolescence or early adult life. The binge eating frequently begins during or after an episode of dieting. Disturbed eating behavior persists for at least several years in a high percentage of clinical samples. The course may be chronic or intermittent with periods of remission alternating with recurrences of binge eating. However, over longer-term follow-up, the symptoms of many individuals appear to diminish. Periods of remission longer than one year are associated with better long-term outcome (DSM-IV-TR, 2000).

There are five diagnostic criteria that must be met for a diagnosis of bulimia nervosa: a) recurrent episodes of binge eating; b) recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise; c) the binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months; d) self-evaluation is unduly influenced by body shape and weight; e) the disturbance does not occur exclusively during episodes of anorexia nervosa (DSM-IV-TR, 2000).

Although anorexia nervosa and bulimia nervosa are the most widely recognized forms of eating disorders, other types of disorders that do not meet formal diagnostic criteria, eating disorders not otherwise specified (EDNOS), warrant diagnostic consideration and professional attention. One of these disorders is binge eating disorder (Mussell et al., 2000).

Binge eating disorder is defined as a disorder characterized by bingeing that is not followed by purging. Although binge eating disorder involves marked distress regarding frequent binge eating, no compensatory behaviors are used to counteract the effects of the binge eating. Yet, binge eating disorder often is associated with heightened obesity (Mussel et al., 2000).

Unlike bulimia nervosa, binge eating disorder occurs most commonly in people who are obese and become more prevalent with increasing body weight. These people tend to be older than those with anorexia nervosa or bulimia nervosa, and nearly half are men. Approximately fifty percent of obese binge eaters are depressed, compared to only five percent of obese people who do not binge. Although this disorder does not result in the physical problems that can occur with bulimia nervosa, it is a problem for a person who is trying to manage their weight (Beers et al., 1999).

There are five diagnostic criteria that diagnose binge eating disorder: a) recurrent episodes of binge eating; b) the binge eating episodes are associated with at least three of the following criteria: eating much more rapidly than normal; eating until feeling uncomfortably full; eating large amounts of food when not feeling physically hungry; eating alone because of being embarrassed by how much one is eating; and/or feeling disgusted with oneself, depressed, or feeling very guilty after overeating; c) marked distress regarding binge eating; d) the binge eating

occurs, on average, at least 2 days a week for six months; e) the binge eating is not associated with the regular use of inappropriate compensatory behaviors and does not occur exclusively during the course of anorexia nervosa or bulimia nervosa (DSM-IV-TR, 2000).

Furthermore, subclinical forms of eating disorders that do not meet formal diagnostic criteria are two to five times more common than full diagnosis (Mussel et al., 2000). Examples of EDNOS include a female meeting all of the criteria for anorexia nervosa except having regular menses; meeting all of the criteria for anorexia nervosa except that despite significant weight loss, the individual's current weight is in the normal range; meeting all of the criteria for bulimia nervosa except binges occur at a frequency of less than twice a week for a duration less than three months; and an individual of normal body weight who regularly engages in inappropriate compensatory behavior after eating small amounts of food (DSM-IV-TR, 2000).

### Why Students Begin Dieting

A study by Soliah et al. (2000) explored why high school and college students began dieting. Students were surveyed about issues such as reasons for beginning dieting, methods used, weight satisfaction, and current height and weight information. Both high school and college students reported that the top two

reasons to begin a diet were a desire to improve appearance and self-image.

The study also reported that the primary reason college women begin dieting is to improve appearance and self-image. They reported that after a successful attempt at losing weight, they felt good and had a better self-image. When the same college women gain weight, they experience dissatisfaction and describe themselves as disgusting, fat, huge, terrible, lazy, depressed, lonely, failures, unhappy, and out of control (Soliah et al., 2000).

The authors found that a majority of the students in the study used safe and appropriate methods to lose weight that included exercise and a reduction in total calories. However, twenty-two percent of the students used unsafe methods of weight loss that included liquid diets, extreme exercise routines, diet pills, and complete omission of meals. Also interesting was the fact that 46 percent of students indicated that they were unsatisfied or very unsatisfied with their weight even when the majority of the sample were either of normal or underweight status, thus concluding that the fear of weight gain may be so powerful, and the stereotype on the overweight population so strong, that it leads to unclear thinking and weight dissatisfaction (Soliah et al., 2000).

Mussell et al. (2000) suggest that different factors may contribute to the reasons students begin dieting which can lead to eating disorders. One sociocultural factor includes

preoccupation with weight and shape, particularly, industrialized societies which place heavy emphasis on beauty as a core aspect of femininity and the primary source of achievement. These societies exhibit higher rates of eating disorders. The internalization and pursuit of an unrealistic ideal of thinness may be attributable in part to repeated exposure to media representations of excessive thinness and are closely linked to one's identity for those individuals who develop eating disorders. Portrayals of feminine beauty and success in the media are believed to have an important role in the process.

A second factor explained by Mussell et al. (2000) include developmental stages and life transitions. These changes have important significance in the onset of eating disorders. Eating disorders, which often develop during adolescence, are conceptualized as stemming from difficulty in adapting to developmental challenges. Body image dissatisfaction, increased concerns about eating, and problematic eating behaviors appear to coincide with the developmental changes associated with puberty. Normal development during this period involves a number of difficult tasks, including forming peer relationships, beginning to date, and gaining an independent sense of identity. This is also a period of time when the female body experiences increased adipose tissue and other biological changes. Furthermore, early pubertal maturation and early menarche have been found to put girls at increased risk for disordered eating.

Many women with subclinical levels of eating disturbances upon entering college subsequently develop diagnosable eating disorders. Increases in academic demands, stress, and other significant transitions in life circumstances or relationships all have been associated with the onset of eating disorders. Adolescence and the demands of early adulthood signify periods of particularly heightened risk for the development of an eating disorder (Mussell et al., 2000).

#### Eating Disorders and College Students

Many studies have been conducted comparing disordered eating and eating attitudes in college students. One such study by Hausenblas et al., (1998) focused on how a group influences eating and dieting behaviors among its members. Members of university residence halls completed open-ended questions to identify the specific areas to which other residence members were perceived to have either a positive or negative influence on their eating and dieting behaviors. The results revealed that group influences on eating and dieting behaviors are more positive than negative, are greater on eating behaviors than dieting behaviors, and have greater impact on females than males.

University students living in residence halls represent an ideal population to examine the influences that the group has on eating and dieting for three reasons. First, college age females represent a population at risk for disordered eating. Second, university counseling centers have reported an increase in the

number of eating disordered individuals at a time when counseling resources have been decreasing. Therefore, counseling centers have been challenged to develop effective as well as efficient treatment options. Finally, residence members spend a great deal of time together, live in close proximity and form strong bonds. Therefore, a residence hall floor has the potential to exert a strong influence on individual members' eating and dieting behaviors (Hausenblas et al., 1998).

The results of the study produced several findings that may have implications for the prevention of disordered eating. First, male and female members reported more positive group influences on their eating and dieting behaviors than negative group influences. Second, there are gender differences in susceptibility to group influence; female residence hall members reported more positive and negative group influences on eating and dieting behaviors than male residence members. Third, the group's influence on both male and female residence hall members was greater for eating behaviors than dieting behaviors. Finally, the negative group influences on eating and dieting behaviors were not pathological in nature, meaning that the negative influence included responses such as eating snack food and snacking more often (Hausenblas et al., 1998).

A second study conducted by Hesse-Biber (1999) looks at eating disorders among college women. The study provides insight into factors that determine whether women in the college population who exhibit eating-disordered behavior during their

college years recover during their post college years. The study assessed changes in the eating patterns of twenty-one women across a six year time period, from the sophomore year in college to two years post college. Eleven women recovered and ten continued to struggle. The women who got better were more likely to have higher self-esteem based on more positive self-concepts that lead to healthier relationships with food and body image.

Instead of viewing eating disorders as a discrete category, anorexia nervosa and bulimia nervosa may be the extreme end of a continuum of a person's relationship to food and their body. At one end, individuals express bodily satisfaction and a desire to maintain healthy eating habits and the other end is marked by excessive weight loss and/or cycles of binge eating and purging, and excessive exercise. A wide range of attitudes and behaviors related to food and body image exist in the "gray zone" (Hesse-Biber 1999).

Hesse-Biber (1999) goes on to explain that college campuses are an excellent place to learn about eating disorders since eating disturbance and body image distortions are common among college women. Many young women arrive at college with a healthy body image and normal eating habits and then enter the gray zone.

The author found that academic and career achievements in conjunction with valued relationships need to exist to promote positive self-concepts. Positive self-concepts lead to higher self-esteem and healthy lifestyle behaviors. The study revealed that by two years post graduation, the women who overcame the



disordered eating compared to the women who continue to struggle had a much stronger sense of self-confidence and self-esteem (Hesse-Biber, 1999).

A third study among college students examines eating disorders in non-Western societies. Although eating disorders are rare in non-Western societies, there is growing evidence that the prevalence of eating disorders is increasing among women from non-Western societies because they are becoming increasingly influenced by Western styles, habits, and attitudes. Stephens et al. (1999) compared the eating attitudes of university students in Australia and Swaziland. Because Australia has long been exposed to Western ideas and is associated with a high prevalence of eating disorders and the Swazi population has no documented evidence of eating disorders, the authors predicted that Australian students would show more symptoms of eating disorders.

A total of 192 Australian students and 129 Swazi students participated in the study. They were asked to complete the Eating Attitudes Test (EAT-26), a twenty-six item, self-report questionnaire, and indicated if they considered themselves overweight and if they were on a diet (Stephen et al., 1999).

The authors concluded that Australian women did not differ from Swazi women in terms of eating disorder symptoms. Results indicated that more Australians saw themselves as overweight and were on a weight loss diet. However, it was noted that some of the answers from the Swazi population could be a direct result of their culture, and the EAT-26 may not be the best tool for

screening for eating disordered behavior among this group. The EAT-26 was designed for Western societies, therefore a response of "I avoid eating when I am hungry" may indicate that they avoid eating because they are unable to afford food every time they are hungry. In conclusion, the EAT-26 may reflect normal Swazi eating habits and not eating disorder symptoms (Stephens et al., 1999).

In a similar study Heesacker, Samson, and Shir (2000) assessed disordered eating in typical Israeli and American college women, using two validated measures of disordered eating, including the Eating Attitudes Test. Analysis of variance comparing scores from 113 Americans and 124 Israelis on the two measures indicated that Americans scored significantly higher than Israelis. The greatest differences were in body dissatisfaction and introspective awareness.

A final study examines the difference between black and white females in regard to eating disorders, dieting, and physical self-confidence. When it comes to eating disorders and attitudes about their weight, black females in the United States suffer less frequently than their white counterparts partly due to the fact that black males and females have less restrictive, less narrow definitions of what makes a woman attractive. Unlike most whites, most African Americans do not consider extremely skinny, underweight women to be more beautiful and desirable than women who are of average or slightly above average weight. However, a growing number of black females seem to be adopting

many unhealthy attitudes about thinness that are typical of Caucasian women, are becoming more dissatisfied with their bodies, and are developing more eating disorders (Nielson, 2000).

A sample of 56 black females (one-third of the black female undergraduates) and 353 white females (twenty-one percent of white female undergraduates) were randomly selected from the undergraduate population in a small, southern, coeducational, predominantly white, private university. It was concluded that both black and white female college students need help combating eating disorders. Although white females are still at the most risk, it cannot be assumed that eating disorders only affect the white population (Nielson, 2000).

#### Eating Disorders and Males

Although eating disorders most commonly occur in female adolescents and adults, males comprise 10-15 percent of the eating disorder population. In children with eating disorders, the percentage of males rises to 30 percent. Despite the gender difference, there is little difference in clinical features between males and females with eating disorders (Geist, Heinmaa, Katzman, and Stephens, 1999).

A study conducted by Geist et al. (1999) found that males endorsed a statistically significant lower drive for thinness and body dissatisfaction. However, there are no representative norms for adolescent males on these variables. The authors concluded

that male and female adolescents with eating disorders are clinically similar to each other.

Similarly, a study by Nelson et al. (1999) examines the gender differences in eating attitudes and behaviors in undergraduate college students. They found that anorexic symptoms were found for twenty percent of the females and ten percent of the males surveyed. The study suggested that eating problems might be more prevalent among males than previously estimated.

The study consisted of 333 females and 138 males taken from undergraduate psychology classes at two different colleges, ranging in age of seventeen to twenty-four years. The authors concluded, from the results of the study, that as previous research has suggested, anorexic-like attitudes and behaviors are common among college females. However, a relatively large portion of the surveyed males also indicated anorexic-like attitudes and behaviors. Limitations of the study was that only a small population of males were surveyed and the EAT-26, used in the study, was developed primarily using female anorexia nervosa patients and normal controls (Nelson et al., 1999).

#### Eating Disorders and Dietetic Students

Because eating-related issues represent an important health problem in college campuses, the eating concerns of female related activities and female dominant majors, such as dance and home economics, are often explored. The eating habits of

dietetic students continue to demand the most interest due to the profession being food-related (Worobey et al., 1999)

Worobey et al. (1999) compared dietetics students and students in other female dominant majors on a measure of eating-related concerns. The dietetic students reported greater distress with respect to their attitudes toward food and weight loss particularly cognitive concerns, bingeing/purging behaviors, excessive exercise, and interference with living. They concluded by suggesting that students who elect to major in dietetics may be at a heightened risk for an eating disorder, and didactic programs in dietetics should continue to develop support systems for students.

## Chapter III

### METHODOLOGY

This study seeks to determine if there is a prevalence of disordered eating behaviors and attitudes in dietetic students at a single university based on the responses from the Eating Attitudes Test. It investigates the prevalence by comparing two groups of college students: Dietetic and students enrolled in another female dominant major such as family and consumer sciences, child development, and education.

A survey, the Eating Attitudes Test, written by David M. Garner, was used to investigate the prevalence of disordered eating behaviors and attitudes. A sample of students from both groups responded to the survey. Results of the survey instrument were analyzed using multiple logistic regression analysis and multiple regression analysis to determine if statistical relationships occurred between and among certain specific variables. This chapter provides a description of the instrument used in obtaining information from the subjects and the procedure for data collection.

#### Population and Sample

The population of this study includes college students enrolled in dietetics and another female dominant major. The classroom teachers issued surveys to the students. All students

present were provided with a cover letter, survey, and envelope. One hundred and twenty (120) questionnaires were distributed and 77 surveys were completed and returned.

### Survey Instrument

The survey instrument for collecting the necessary data consisted of three parts. The first section requested general information about the subject including height, weight, socioeconomic status, college level, major, and age.

The second section of the survey was the Eating Attitudes Test (EAT-26), a pre-existing survey that has an internal consistency rating of .90 for individuals with eating disorders. The EAT-26 is a 26-item self-report questionnaire designed to evaluate a broad range of behaviors and attitudes characteristic of anorexia nervosa and related eating disorders. Typical items include, "I am terrified of being overweight," and "I like my stomach to be empty." Items are rated on a 6-point Likert scale with answers ranging from 1(always) to 6(never) (Stephens et al., 1999).

The EAT-26 is probably the most widely used standardized measure of symptoms and concerns characteristic of eating disorders. Many studies have been conducted using the EAT-26 as a screening tool and are based on the assumption that early identification of an eating disorder can lead to earlier treatment thereby reducing serious physical and psychological complications or even death (Garner, 1982).

Most surveys of adolescents and young adult women using the EAT-26 indicate that about 15% score at or above 20. Of those who score at 20 or above, interviewers have shown that a high proportion has clinical significant eating disorders or "partial syndromes" characterized by some but not all of the symptoms required to meet the full diagnostic criteria. Interviews of those who score below 20 on the EAT-26 show that the test produces very few false negatives (Garner, 1982a).

The EAT-26 alone does not yield a specific diagnosis of an eating disorder. Neither the EAT-26, nor any other screening instrument, has been established as the sole means for identifying eating disorders. However, studies have shown that the EAT-26, when combined with a diagnostic interview for those who score above 20, can be an efficient screening instrument. All self-report measures require truthful answers to provide accurate information. Therefore, envelopes were provided to insure complete privacy and promote more honest responses. When the EAT-26 is answered honestly it usually provides very useful information about the eating symptoms and concerns that are common in eating disorders (Garner, 1982a).

The EAT-26 is supplemented by several behavioral symptom questions that are meant to improve the ability to screen for individuals who have significant symptoms of eating disorders. These questions appear at the end of the EAT-26, and thus make up the third section of the survey. These items include questions such as, "Have you ever made yourself sick to control your weight



or shape," and "Have you ever been treated for an eating disorder" (Garner, 1982).

#### Procedure for Data Collection

Department chairpersons of Family and Consumer Sciences and Dietetics were contacted. Each chair was asked to distribute a research instrument to students in their classrooms. The department chairs distributed the surveys to the students, along with an empty envelope. The students completed the surveys, and were directed to place the survey into the envelope and seal it to insure confidentiality. Completed surveys, sealed in the envelopes provided, were returned to the department chairs, and then collected at a designated time by the researcher.

#### Statistical Analysis

The total score of each student's response from the EAT-26 portion of the survey (SCALSCOR) was used as the dependent variable using multiple regression analysis. SCALSCOR was regressed on the fact that one was in the dietetics major (MAJOR) with race, status (undergraduate or graduate student), socioeconomic stats, age, and body mass index (BMI) serving as controls in the multiple regression equation.

Multiple logistic regression was used to determine if one can use the same set of independent variables and SCALSCOR to identify differences among students with regard to MAJOR, and other factors such as a student developing a particular way of

manifesting a particular disorder. These factors are based on the behavioral questions found at the end of the EAT-26 that make up the third section of the survey.

## CHAPTER IV

## RESULTS AND DISCUSSION

A statistical analysis of the data collected from surveys returned by the subjects who participated in the study is the basis for the findings. The study investigated if dietetic students have a higher prevalence of disordered eating behaviors and attitudes when compared to other students. Because age, socioeconomic status, level of education, race, and major have the potential to influence the attitudes of students, information about these factors was gathered to control for these variables in the investigation. This chapter discusses the hypothesis and analyzes the study results.

Definition of Variables and Descriptive Statistics

When the surveys were collected, each question was assigned a code for the purpose of data input. Table 1 illustrates the definitions of the variables.

TABLE 1: Definition of Variables

<b>SES</b>	Socioeconomic level. Coded 1 for lower class, 2 for low-middle class, 3 for middle class, 4 for upper-middle class, and 5 for upper class.
<b>AGE</b>	Age of the subject.
<b>STATUS1</b>	College student status. Coded 1 for undergraduate, 2 for graduate.
<b>MAJOR1</b>	College major of study. Coded 1 for dietetics, 2 for other.

<b>BMI</b>	Body Mass Index (wt in kg divided by Height in meters squared)
<b>RACE1</b>	Ethnicity of participant. Coded 1 for white, Non-Hispanic, 0 for other
<b>SCALSCOR</b>	Total score for the EAT-26 survey questions. The higher the score, the higher prevalence; the lower the score, the lower the prevalence.

The EAT-26 items were coded Q1-Q26 for each response, and then coded 5-always, 4-usually, 3-often, 2-sometimes, 1-rarely, 0-never. The total score possible on the survey was 109.00 using this formula. The participant's scores were calculated and assigned the code SCALSCOR to represent their total score.

The research sample descriptive statistics indicated an average population (TABLE 2). The socioeconomic status of the participants indicated that the middle class was the median. The average age of the participants ranged from age 20-24, and most of the participants were undergraduates. Participants were nearly evenly distributed between dietetic students and students from another major, and the majority of the population were White-Caucasian ethnicity.

TABLE 2:  
DESCRIPTIVE STATISTICS  
Means and (Standard Deviations)

<b>SES</b>	3.1481 (.7265)
<b>AGE</b>	2.1687 (.5592)
<b>SCALSCOR</b>	43.0909 (20.9763)
<b>STATUS1</b>	.8795 (.3275)

MAJOR1	.4096 (.4948)
BMI	24.1322 (4.9172)
RACE1	.9146 (.2811)

### Hypothesis Analysis Results

To address the research question: Do dietetic students have a higher predisposition to disordered eating behaviors compared to other students in a female dominant major, based on responses of the Eating Attitudes Test, the Eating Attitudes Test (EAT-26) scores (SCALSCOR) were utilized.

In regard to SCALSCOR, the 26 item self-report questionnaire had 77 respondents. Cronbach's alpha was used to determine the reliability of the SCALSCOR. On a reliability scale of 0 to 1, the reliability coefficient has a value of .92. This indicates that the scale is measuring one's predisposition of disordered eating behaviors and attitudes, with much reliability and has face validity. The combination of face validity and the reliability coefficient of .92 indicates that it is a good variable and one has good reason for using the EAT-26 questionnaire. One finds that just as it has worked well for others, it will work well for the purposes of this study.

The SCALSCOR is used as the dependent variable in a multiple regression analysis. The study is set-up to decide whether dietetic students are the same as other students in regard to disordered eating attitudes and behaviors. One way to

determine this is to regress SCALSCOR on MAJOR (coded as 1 for dietetics and 0 for other). Various independent variables that include race, status (undergraduate or graduate student), socioeconomic status (self-report item), age, and BMI (computed from respondent's stated height and weight) were used as controls in the multiple regression equation. When SCALSCOR is regressed on MAJOR, controlling for the other five independent variables, and using a one-tailed test, the equation indicates that dietetics majors have a higher prevalence of disordered eating behaviors and attitudes.

The one-tailed test is necessary because it was surmised that dietetic students, given socioeconomic status, high achievement levels, and other factors as presented in literature, would have a higher prevalence of disordered eating behaviors and attitudes than other students. In effect, one is predicting direction by asking, "are dietetic students more likely to have disordered eating behaviors and attitudes than any other student" rather than, "are dietetic students different or the same as other students." The one-tailed test is required in this instance.

The one-tailed test, and acknowledging that this is what should be used in this case, finds that there is a statistically significant regression coefficient corresponding to major. The numerical value of 8.772 (TABLE 3) means that on average a person in dietetics will score about 8.8 points higher, than other students with whom they are being compared, on the EAT-26. This

is quite consistent with the claim, with control in place, that on the average, dietetic students will have a higher score. The regression coefficient with the one-tailed test is statistically significant.

TABLE 3:  
SCALSCOR  
Unstandardized Regression Coefficients

RACE1 *	15.511 (.048)
STATUS1	6.994 (.357)
MAJOR1 *	8.772 (.068)
SES **	9.402 (.004)
AGE	4.088 (.351)
BMI *	.886 (.054)
* p < .05	
** p < .01	
*** p < .001	

The other variables with statistically significant coefficients were race, socioeconomic status, and BMI. Socioeconomic status (SES) was found to be the strongest of these three predictors, indicating that the higher the SES, the more likely one is to have disordered eating behaviors and attitudes. Race, coded 1 for white and 0 for other, indicated that white, non-Hispanics were more likely to have the disordered eating behaviors and attitudes. Also interesting, the test indicated that the higher the BMI the prevalence of disordered eating increased. However,

the categorical variable, MAJOR, still indicates that those students in dietetics have a higher prevalence of disordered eating behaviors and attitudes.

Logistic regression was used to determine if one can use the same set of independent variables and SCALSCOR to identify differences among students with regard to MAJOR, and in this instance other factors with respect to whether a student develops a particular way of manifesting a particular disorder. These factors are based on the behavioral questions found at the end of the EAT-26.

The first instance was the item asking the question, "have you ever gone on eating binges where you feel that you may or may not be able to stop?" This was coded as BINGE and 1 if the respondent answered yes, and 0 if the question was answered no. With the independent variables plus SCLASCOR, the only factor, in regard to binging, which was a statistically significant regression coefficient in the logistic regression equation is SCALSCOR (TABLE 3). Again, this is consistent with the claim that the scale, EAT-26, works because it does predict binging.

TABLE 4  
Logistic Regression Results  
BINGE

	Coefficients	
RACE1	.166	
STATUS1	.556	* p < .05
MAJOR1	.567	** p < .01
SES	.642	*** p < .001
AGE	.612	
BMI	.751	
SCALSCOR **	.005	



The second instance was the item asking the question, "Have you ever made yourself sick (vomited) to control your weight or shape?" This was coded as PURGE and 1 if answered yes, and 0 if answered no. Again, with the independent variables plus SCALSCOR, the only factor with a statistically significant regression coefficient was SCALSCOR (TABLE 5). This refers to the reliability of the EAT-26 as a predictor of these behaviors. It should be noted that BMI and race are negatively related to purging, and MAJOR has no effect on the prediction of this particular behavior. SCALSCOR increases the confidence that the EAT-26 is reliable.

TABLE 5  
Logistic Regression Results  
PURGE

	Coefficient		
RACE1 *	.051		
STATUS1	.848	*	p < .05
MAJOR1	.805	**	p < .01
SES	.567	***	p < .001
AGE	.428		
BMI*	.043		
SCALSCOR **	.006		

Finally, the item asking the question, "have you ever used laxatives, diet pills, or diuretics (water pills) to control your weight or shape" was coded as PILLS and 1 if answered yes, and 0 if answered no. Once again, the only statistically significant regression coefficient was SCALSCOR (TABLE 6).

TABLE 6  
Logistic Regression Results  
PILLS

	Coefficient	
RACE1	.777	
STATUS1	.891	* p < .05
MAJOR1	.591	** p < .01
SES	.091	*** p < .001
AGE	.160	
BMI	.924	
SCALSCOR*	.044	

It is interesting that bingeing, purging, and the use of pills to control weight are determined by SCALSCOR. The higher the SCALSCOR, the more likely you are to manifest these behaviors that reflect disordered eating behaviors and attitudes. No other variable is significant.

## CHAPTER V

## CONCLUSIONS AND IMPLICATIONS

Eating disorders are a debilitating mental illness that affects many young people. This overly exaggerated quest to attain the perfect body can be attributed to the emphasis on extremely thin bodies that are often seen on television and other public materials (Stephens et al., 1999; Morant, 2000). However, research has also suggested that eating disorders are related to insecurities from childhood, low self-confidence, and low self-esteem (Hesse-Biber, 1999).

The literature and published research consistently report that eating disorders are most often seen in upper-middle class females who display attitudes of perfectionism (Beers et al., 1999). In the research reviewed, all of the authors were also in agreement that white females had higher rates of disordered eating behaviors; however, other classes, races, and genders also display these attitudes (Stephens et al., 1999; Nielson, 2000; Nelson et al., 1999).

Also, it seems that group influences have a positive effect on eating attitudes and behaviors (Hausenblas et al., 1998). This can be associated with the study that dietetic students have a higher prevalence of eating disorders (Worobey et al., 1999). For instance, as a group, the dietetic students may work together

to resolve unhealthy eating habits and also learn better ways to handle emotions or issues other than eating.

### Hypothesis Analysis Discussion

The hypothesis, there will be no difference in the eating attitudes and behaviors of dietetic students when compared to students in other majors of study, was disproved. The instrument used in this study found that when major is correlated with the scores from the EAT-26 (SCALSCOR), after controlling for independent variables, dietetic students had a higher prevalence of disordered eating behaviors and attitudes than other students.

Also consistent with literature, this study revealed that socioeconomic status, and race are also positively related to the prevalence of disordered eating behaviors and attitudes. Although the behavioral questions that are associated with eating disorders were not directly correlated with major, SCALSCOR did predict these particular behaviors. Likewise, the SCALSCOR determined that the higher the score the greater prevalence of having disordered eating. Ultimately it was determined that dietetic students scored on average 8.8 points higher on the EAT-26 than other students, indicating that these students were more predisposed to disordered eating.

This study clearly indicates a higher prevalence of unhealthy eating behaviors in dietetic students among this population. More research is needed to determine treatment rates

and if and how this disorder affects the practice of a dietetic professional.

Does having an eating disorder mean that the dietitian cannot practice effectively? It should be noted that many college students outgrow disordered eating, so one cannot determine how the dietetic professional will behave years later. Leslie Bonci, a dietitian and spokesperson for the American Dietetic Association states, "Dietetic students are exposed to the facts about weight and eating, and therefore have a chance to nip disordered eating in the bud. If they go on to become a dietitian, they have even more of an opportunity to learn about a healthy approach to food choices." She also explains that those who have had to cope with disordered eating or even full-blown eating disorders do not necessarily "make someone a terrible dietitian...The person could end up with more empathy...someone who has dealt with food not just as nourishment but sometimes as a 'villain' may be able to bring to the table some understanding of why a client may or may not be able to control his or her eating...Somebody who has had to deal with her own issues can bring compassion" ("Whether eating disorders run high", 1999). There is very little research done to determine how dietitians cope and handle professional issues.

In conclusion, eating disorders are no longer reserved for the white, upper-middle class population, although research and this study revealed that this group still has a higher predisposition to disordered eating. The disorders are also not

resistant to those studying human nutrition and foods. The following recommendations should be considered for further research into this topic: a) more attention should be focused on why students with disordered eating enter the dietetic field, b) dietetic instructors must examine their programs to determine if they are exacerbating eating problems that may promote the development of eating disorders (Worobey et al., 1999), c) determine if preventive programs should be established within the dietetic programs, and d) research should be conducted to determine if having disordered eating behaviors affects the way a registered dietitian performs his/her job.

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**APPENDICES**

Appendix A

Survey Cover Letter

APPENDIX A

Survey Cover Letter

**Marshall University****Huntington, West Virginia**

Dear Student,

April 2001

My name is Brandi Hicks and I am a Graduate Student at Marshall University in Family and Consumer Sciences. I graduated from the Marshall University Dietetic Internship in July 2000. I am now employed as a registered dietitian in this community. Part of Master of Arts degree requires me to do an in depth research project and submit my findings in a thesis.

Your participation will help me fulfill this requirement of this degree. Your participation is totally voluntary. However, all answers will be completely confidential. You should complete the survey anonymously. To insure total confidentiality, you are being supplied with an envelope in which you will place your survey when completed. The surveys will then be returned to me.

I appreciate your time and your help with my research.

Sincerely,

Brandi E. Hicks  
Graduate Student

These findings are consistent with the literature reviewed. However, the  
results do not provide a clear picture of the relationship between

the variables. The results suggest that there is a positive relationship  
between the variables. The results also suggest that there is a negative  
relationship between the variables. The results indicate that the  
relationship between the variables is complex and requires further  
research.

**APPENDIX B**  
**Survey Instrument**

The survey instrument consists of a series of questions designed to  
measure the variables of interest. The questions are presented in  
a Likert scale format. The questions are as follows:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The organization is committed to ethical behavior.	1	2	3	4	5
2. The organization has a clear code of ethics.	1	2	3	4	5
3. The organization provides adequate training on ethics.	1	2	3	4	5
4. The organization has a strong ethical culture.	1	2	3	4	5
5. The organization's policies are consistent with ethical principles.	1	2	3	4	5
6. The organization's leadership is committed to ethical behavior.	1	2	3	4	5
7. The organization's employees are held accountable for ethical behavior.	1	2	3	4	5
8. The organization's ethical behavior is consistent with its values.	1	2	3	4	5
9. The organization's ethical behavior is consistent with its mission.	1	2	3	4	5
10. The organization's ethical behavior is consistent with its vision.	1	2	3	4	5



10. Feel extremely guilty after eating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
11. Am preoccupied with a desire to be thinner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
12. Think about burning up calories when I exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
13. Other people think that I am too thin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
14. Am preoccupied with the thought of having fat on my body	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
15. Take longer than others to eat my meals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
16. Avoid foods with sugar in them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
17. Eat diet foods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
18. Feel that food controls my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
19. Display self-control around food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
20. Feel that others pressure me to eat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
21. Give too much time and thought to food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
22. Feel uncomfortable after eating sweets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
23. Engage in dieting behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
24. Like my stomach to be empty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
25. Enjoy trying new rich foods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
26. Have the impulse to vomit after meals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—
Total Score (see below for scoring instructions)							—

EAT-26 David M. Garner & Paul E. Garfinkel (1979), David M. Garner et al. (1982)

**Please respond to the following questions:**

1. Have you gone on eating binges where you feel that you may or may not be able to stop? (Eating much more food than most people would under the same circumstances) Circle the most appropriate response.

Yes  No

If YES, how many times in the last 6 months? \_\_\_\_\_

2. Have you ever made yourself sick (vomited) to control your weight or shape?

Yes  No

If YES, how many times in the last 6 months? \_\_\_\_\_

3. Have you ever used laxatives, diet pills, or diuretics (water pills) to control your weight or shape?

Yes  No

If YES, how many times in the past 6 months? \_\_\_\_\_



4. Have you ever been treated for an eating disorder?

Yes

No

If YES, when? \_\_\_\_\_

5. Have you recently thought of or attempted suicide?

Yes

No

If YES, when? \_\_\_\_\_