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PREVALENCE AND PSYCHOLOGICAL CORRELATES OF
EATING DISORDERS AMONG COLLEGE WOMEN

Lisa M. Lyons

A thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree in the Graduate Division
of Rowan University
May 5, 1998

Approved by _____

Date Approved 5-5-98

Abstract

Lisa M. Lyons
Prevalence and Psychological Correlates
of Eating Disorders Among College Women
May 5, 1998
Dr. Dihoff, Advisor
School Psychology Program

Eating disordered behaviors of fasting, binge-eating, and vomiting and purging have increased in prevalence and are approaching epidemic proportions. It is estimated that 1 in 100 females age 12 to 18 are anorexic, while as many as 1 in 4 college-age women are thought to be bulimic or engage in other forms of disturbed eating. Research indicates that those who are eating disordered are more dissatisfied with their bodies, have lower self-esteem, and have a greater tendency to endorse sociocultural mores regarding thinness and attractiveness. The present study investigated a) the prevalence of eating disorders among college women, and b) the relationship between eating disorders and body dissatisfaction, self-esteem, and degree of endorsement of sociocultural mores regarding thinness and attractiveness. The Eating Disorder Inventory and the Sociocultural Attitudes Toward Appearance Questionnaire were administered to 66 undergraduate females at a college in Southern New Jersey. Results indicated a 21% prevalence rate for eating disorders, and

strong correlations between disturbed eating and greater body dissatisfaction, lower self-esteem, and greater tendency to endorse sociocultural beliefs regarding the desirability of female thinness and attractiveness. Because of the increasing prevalence of eating disorders, and the fact that dieting is occurring in vast numbers as early as elementary school, education, awareness, and early intervention is critical in our schools.

Mini-Abstract

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“Courage is not the absence of fear; it is the making of action in spite of fear, the moving out against the resistance engendered by fear into the unknown and into the future.” - M. Scott Peck

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Chapter 1: The Problem

Body dissatisfaction, weight preoccupation, and eating disorders are becoming increasingly salient problems among young women (Klemchuk, Hutchinson, & Frank, 1990). Eating disordered behaviors of fasting, binge eating, and vomiting and purging have increased in prevalence and are approaching epidemic proportions. It is estimated that 1 in 100 females age 12 to 18 are anorexic, while as many as 1 in 4 college-age women are thought to be bulimic or engage in other forms of disturbed eating. Both anorexia nervosa and bulimia nervosa can cause serious medical complications, even death. The increasing prevalence of disturbed eating and the degree to which young women are dissatisfied with their bodies are cause for great concern. Because of the increased requests among college students to be treated for eating disorders and the clinical information that these issues have become a recognized problem among young women, it is pertinent to conduct a study which focuses on these issues.

Purpose

The purpose of the present study is to assess the extent to which young women in college are plagued by disturbed attitudes and behaviors concerning eating, weight, and shape. Psychological correlates such as self-esteem, and body dissatisfaction, and endorsement of sociocultural attitudes regarding thinness and attractiveness will also be explored.

Hypothesis

Attempts to determine the actual frequency of eating disturbances among young women have been inconsistent. This is due in part to the wide array of operationalized criteria used to define eating disorders (Mintz & Betz, 1988). Prevalence rates of eating disorders as a clinical syndrome among college women range from 1 percent to 20 percent. However, prevalence rates for eating disordered behaviors (i.e. chronic dieting, bingeing or purging alone, laxative abuse, and subclinical bulimia) reach as high as 64 percent. Previous research has indicated that disturbed eating is strongly correlated with body dissatisfaction, lowered self-esteem, and greater tendency to endorse sociocultural beliefs about thinness and attractiveness.

The present study will assess the prevalence of eating disorders among college women. It will examine attitudes and behaviors concerning eating, shape and weight, as well as some psychological traits related to eating disorders. A prevalence rate in the range of 5 to 20 percent is expected. The

present study also anticipates a strong correlation between disturbed eating and increased body dissatisfaction, lower self-esteem, and greater endorsement of sociocultural mores regarding thinness and attractiveness.

Theory: Sociocultural, Personality, and Behavioral Influences

Specifying the etiology of eating disorders has proven to be a difficult task. Although there has been much speculation, there is a general lack of consensus among researchers in the field. The general lack of consensus reflects the complexity of these disorders, and accounting for them by a single cause is both futile and misleading (Polivy and Herman, 1993). The main factors implicated in the etiology of eating disorders are: having a family history of an eating disorder, affective disorder, substance abuse, or obesity; and a personality history of affective disorder, obesity, or sexual abuse. Further factors include certain personality traits, disturbed family relationships, and parental overconcern with dieting and body shape or weight (Hsu, 1990). The contemporary glorification of thinness in today's society has been implicated as well (Fairburn and Wilson, 1993). Hilde Bruch, an icon and pioneer in the eating disorder field, maintained that "all eating disorders begin with the perception, real or imagined, that one is fat" (Bruch, 1978). This perception is fundamental in all etiologies, and is indicative of virtually all eating disordered individuals.

The model of etiology presented in this thesis is based upon three major factors that may predispose an individual to developing an eating disorder. The

three factors are: sociocultural influences (such as the current diet culture), personality variables (such as low self-esteem and endorsement of sociocultural mores regarding thinness and attractiveness) and chronic behavioral patterns (such as dieting and excessive exercising); all of which develop in response to cultural and individual predispositions (Fairburn and Wilson, 1993).

Sociocultural Influences

The cultural pressures on women to be thin and diet have been linked to the expression of eating disorders such as anorexia nervosa and bulimia nervosa (Polivy & Herman, 1993; Striegel-Moore, Silberstein, & Rodin, 1986; Garner, Garfinkel, & colleagues, 1980). Since the 1960's, Western society has placed increasing demands on women to be slim, idealizing thin bodies, and denigrating overweight. In her book, *The Body Betrayed*, Kathryn J. Zerbe, M.D. notes that the intense societal pressures to be thin make it very difficult for women to make good decisions about their bodies and remain true to their deepest needs and selves. She quotes a well-known line from Shakespeare, "To thine own self be true," and asks "what forces us away from the knowledge we have, and thus from our truest selves, to acquiesce to a cultural stereotype? What compulsions force us to abandon our deeper ideals and values, finally even betraying our body to follow the crowd?" (Zerbe, 1993, p. 100).

We live in a society in which dieting, weight, and body image are literally an obsession. This is evident by looking at the multi-billion dollar fitness and

diet industry, and a society that thrives on it. Television and magazines play a critical role; the average model is almost 25% thinner than the average woman. Only 1% of the female population represents that ideal, yet millions try to starve (the anorexic) or purge (the bulimic) themselves into it. The association of beauty and the feminine ideal is reflected and amplified by the mass media; the roles women play are represented (with very few exceptions) by young, thin, highly attractive women. The influence of television and magazines is especially problematic because models in these media are seen as realistic representations of actual people rather than carefully manipulated images (Heinberg, Thompson, & Stormer, 1995). Attempting to fit this contemporary beauty ideal is often biologically unattainable for most women and often leads to a high degree of body-image dissatisfaction. Feminine beauty ideals have been modeled for centuries, however, historically, figures of art were romanticized as unattainable, while today's media blur the boundaries between glorified figure and reality (Freedman, 1986). In addition, the ideal of feminine beauty has changed considerably over the years. A notorious study conducted by Garner, Garfinkel, Schwartz, & Thompson (1980) lends strong support to this. Garner and his colleagues gathered data from Playboy centerfolds and winners of the Miss America Pageant from the 1950's to the late 1970's. Results strongly support the idea that there has been a "gradual but definite evolution in the cultural ideal body shape for women over that 20 year period." They found a significant trend toward a thinner and more "tubular" body shape. Indeed, a

woman considered magnificent during the Renaissance period would be considered fat and “out of shape” by today’s standards.

Central to the analysis of the sociocultural influences is that women are at a much greater risk for development of an eating disorder than are men. Why is it that women are at such a disproportionate risk? Identity formation, involving beliefs about the nature, consistency, and value of the self, appears to be more difficult for girls than boys, as reflected in girls’ greater identity instability, higher self-consciousness, greater concerns about popularity, lower body esteem, and lower self-esteem (Hill & Lynch, 1983; Simmons, Blyth, & McKinney, 1983). Although self esteem generally improves from middle to late adolescence, poor body esteem remains a major source of self-devaluation for adolescent girls (Striegel-Moore, 1993). It seems that gender identity, and gender roles in particular, play a key role. Gender roles are the pattern of behaviors considered to be appropriate for males and females within a particular culture. A child’s understanding of appropriate gender behaviors is strongly influenced by the cultural stereotypes to which he or she is exposed (Gormly & Brodzinsky, 1989). Far more often than men, women will go to great lengths to fulfill an image consistent with the female stereotype and project a favorable impression. In a study by Pliner and Chaiken (1990), women indicated that they would eat less to project an image of femininity and of desirability than they would under circumstances where being perceived as desirable or feminine was less salient. It has been found that women are much more concerned than men

in gaining social approval and avoiding disapproval (Simmons & Rosenberg, 1975). In Western culture, thinness is glorified and fatness is villified; it has been consistently shown that the value society places on slimness and dieting behavior is crucially important to the formation of eating disorders. In cultures where “plumpness” is valued, eating disorders are rare (Zerbe, 1993). To put this in broader perspective, we live in a society in which images of femininity and desirability are persistently salient. The risk for eating disorders is bound to increase within a society where so much value is placed upon on thinness, attractiveness, and conforming to the feminine ideal of beauty.

Personality Variables

If culture plays such profound role in the formation of eating disorders, why is it that only certain women place such importance, and go to such extreme measures, to conform to what society believes they should be? Why, in a society obsessed with weight and appearance, doesn't every women suffer from an eating disorder? This is where personality variables factor in.

A woman may be inclined to follow a cultural prescription for what she “should be” because it helps to elevate her self-esteem. In her book *Fasting Girls* (1988) Joan Jacobs Brumberg explains how women have “internalized the notion that the size and shape of the body is a measure of self-worth” (p. 248). Because women with eating disorders struggle with self-esteem issues, they may attempt to perfect the body at all costs; to do so means to elevate and

sustain the self (Zerbe, 1993). The question, "Am I good enough?" literally becomes "Am I thin enough?" (Siegel, Brisman & Weinshel, 1988). Girls who feel insecure about themselves, and worry about how they are valued by others, may focus on physical appearance because such a focus provides a concrete way to construct an identity. Suffering from lack of identity and low self-esteem, they may attempt to create an adequate self by pursuing an adequate physical self (Stiegel-Moore, 1993). Women who lack a sense of inner acceptance may look outward to society for external acceptance. If society can accept her, perhaps she can accept herself, too. Such means to attain self-esteem are sure to be fleeting, for the source from which it comes is not internal and permanent, but rather external and transitory.

Low self-esteem in eating disordered women seems to propel them toward accepting and internalizing, without question, the sociocultural mores regarding thinness and attractiveness. Consequently, in an effort to increase self-esteem and gain self-acceptance, they relentlessly pursue the societal ideal, often through starvation, self-induced vomiting, abusing laxatives, or exercising excessively. Because the ideal is biologically unattainable by most women, and perfection is unattainable by *any* woman, they are doomed to failure. Perceived failure (and the eating disorder itself) exacerbates feelings of low self-worth. The more a woman believes that "what is fat is bad, what is thin is beautiful, and what is beautiful is good," the more she will work toward thinness and be distressed about fatness. Bulimics in particular tend to accept and internalize

this attitude to a much greater degree than non-bulimic women (Heinberg, et. al. 1995; Striegel-Moore, Silberstein, & Rodin, 1986).

A quote from Zerbe describes the interplay of eating disorders and inner turmoil: “an eating disorder may be the one island of mastery and hope for an individual who is otherwise lost at sea, feeling less than adequate to engage in life or other people. She is often lonely. She struggles to find herself because her life experiences seem so confusing. Her eating disorder may mask highly charged anger, frustration, sadness, or emptiness. When you look her in the face, however, she may look normal, even healthy” (Zerbe, 1993, p. 13). The irony, of course, is just how well the person “appears” to others, both physically and mentally. Strangely, it really isn’t ironic at all, for outward appearances are of paramount importance to an eating disordered individual.

Behavior Patterns

Fallon and Rozin (1985) studied the importance of being thin to middle-upper class white women. They asked over 400 undergraduate men and women to rate their ideal figure by looking at a set of figure drawings. The researchers found that for men, current, ideal, and most attractive were almost identical. In contrast, females perceived their current figures to be heavier than their ideal or than what they believe men’s preferences to be; their distortion of men’s preferences is more in line with their ideal of a female figure. As many as 80% of all high school girls are currently dieting to loose weight. The preoccupation

with losing weight is occurring at earlier and earlier ages (Zerbe, 1993). A study done at the University of South Carolina (ANRED Alert, 1993) looked at attitudes concerning weight among 3,100 grade-school children. Researchers found that 40% of boys and girls believe they are fat. Of those 40%, 30% had dieted, 10% had fasted, and 5% had vomited to lose weight. Children as young as six years old are worried about being too fat. These findings are frightening, to say the least.

The pressure to be thin in order to be attractive has contributed to the soaring prevalence of dieting and related weight control behaviors in young women (Polivy & Herman, 1993; Striegel-Moore, 1993; Striegel-Moore, Silberstein, & Rodin, 1986). Following puberty, girls' body-image satisfaction decreases dramatically and feeling fat leads the list of adolescent girls' concerns about their physical appearance. This often leads to a high degree of body dissatisfaction coupled with feelings of low self-worth.

Consistently, girls who are underweight have been found to be most satisfied with their weight and are least likely to diet, compared to girls of average weight and those who are overweight. Thus, being underweight seems to be an important protective factor regarding the initiation of dieting, and perhaps development of an eating disorder as well. Adolescent girls who diet are significantly more likely to report binge eating than girls who do not (Striegel-Moore, 1993).

There seems to be a hierarchical ordering of progression: Cultural

pressures on females to be thin-->body-image dissatisfaction-->dieting and various weight control efforts-->feelings of deprivation/frustration-->disturbed cognitions and behavior patterns (binge eating and purging, starvation, excessive exercise) -->decreased self-esteem, shame, guilt, depression...

The progression described above is not, by any means inclusive; rather, it is an attempt to show the interplay between cultural pressures and the behavioral patterns which may emerge as a result.

Definitions

Thus far, this paper has primarily referred to eating disorders as a whole; in actuality, however, distinct disorders exist. Anorexia Nervosa (AN) and Bulimia Nervosa (BN) are separate but closely related syndromes whose underlying pathology has been described as a relentless pursuit of thinness. Although the two diseases are separate entities, there is considerable overlap. The most obvious difference between AN and BN is absolute body weight (by definition, AN patients are emaciated).

The definitions of Bulimia Nervosa, Anorexia Nervosa, and Eating Disorders Not Otherwise Specified (NOS), which are from the Diagnostic and Statistical Manual of Mental Disorders-IV of the American Psychiatric Association (1994), are presented below:

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 shape or weight on self-evaluation, or denial of the seriousness of current low body weight.
- D. In females, the absence of at least three consecutive menstrual cycles.
 - Bulimic type*: During the episode of Anorexia Nervosa, the person regularly engages in binge eating or purging behavior.
 - Non-bulimic type*: During the episode of Anorexia Nervosa, the person does not regularly engage in binge eating or purging behavior.

Bulimia Nervosa

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
 - (1) Eating, in a discrete period of time (e.g. within any two-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time in similar circumstances
 - (2) A sense of lack of control over eating during the episode (e.g. a feeling that one cannot stop eating or control how much one is eating).
- B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as: self-induced vomiting; misuse of laxatives, diuretics or other medications; fasting; or excessive exercise.
- C. The binge and inappropriate compensatory behaviors both occur, at minimum, twice a week for three months.
- D. Self-evaluation is unduly influenced by body shape and weight.
- E. The disturbance does not occur exclusively during episodes of Anorexia Nervosa.
 - Purging type*: The person regularly engages in self-induced vomiting or the misuse of laxatives or diuretics.
 - Non-purging type*: The person regularly engages in other inappropriate compensatory behaviors, such as fasting or exercise, but does not regularly engage in self-induced vomiting or the misuse of laxatives or diuretics.

Eating Disorders Not Otherwise Specified (added to DSM-IV in 1994 ed.)

(1) Subthreshold Bulimia Nervosa:

(a) Binge Eating Disorder: eating binges accompanied by significant distress, but without any compensatory behavior (e.g. vomiting, laxative abuse)

(b) eating binges with atypical compensatory mechanisms (e.g. abuse of thyroid medication or diet pills, an individual with diabetes mellitus who intentionally reduces insulin dose).

(c) eating binges at a frequency of less than twice a week for three months.

(d) compensatory behavior in the absence of the consumption of sufficiently large amount of food to meet the criteria for a binge (e.g., self-induced vomiting after eating two cookies).

(e) an individual who repeatedly chews, but does not swallow, large amounts of food (and instead spits it out).

(2) Subthreshold Anorexia Nervosa:

(a) all of the criteria for Anorexia Nervosa are met except the individual continues to have regular menses.

(b) all of the criteria for Anorexia Nervosa are met except the abnormally low weight requirement.

It is very important to note that although individuals with eating disorders whose diagnoses are confirmed by these criteria pose the greatest therapeutic challenge to clinicians, other individuals who may not be formally diagnosed also struggle with feelings about their bodies and eating, and suffer a great deal as well. Eating disorders occur on a continuum, and vary in severity in the general population. In fact, a large number of individuals do not manifest all of the criteria but still have what in medical parlance is termed as “subclinical pathology” (Zerbe, p. 12). The addition of the NOS category, added in 1994,

was implemented for this reason.

Self-esteem

Feeling of personal worth; the way in which an individual views the self, in terms of worth, adequacy, abilities, intelligence, personal attractiveness, popularity, etc.

Body image

An individual's perception of their physical appearance (e.g. attractiveness, body shape and weight)

Assumptions and limitations

The EDI can serve as an economical first step in a two-stage screening process in which individuals who score above a particular "cutoff" are interviewed to determine if they meet the diagnostic criteria for an eating disorder. In the present study, there were no interviews with subjects. It has been found that self-report measures alone are generally inefficient in identifying anorexia and bulimia in non-clinical populations (Garner, 1991). However, the EDI instrument is an extremely effective first step in either determining suspected eating disorders or to identify those individuals highly preoccupied with their weight (Garner, Olmstead, Polivy, & Garfinkel, 1984) in order to study factors related to this attribute or to determine possible future risk for eating disorders.

Overview

In the chapters that follow, literature concerning the prevalence of eating disorders and related psychological and sociocultural factors will be reviewed. A description of sample size, population, the inventories used, and an examination of methodology will follow, as does a discussion of the results and possibilities for future research. It is with great hope that this study will bring attention to the seriousness of these disorders such that school's may implement programs geared toward awareness, prevention, and intervention of eating disorders and related issues.

Chapter 2: Review of Literature

Prevalence of disturbed eating

One major foci of attention in the professional literature has been an attempt to determine the actual frequency of eating disturbances among women in general and among important subgroups of the population, especially college students (Mintz & Betz, 1988). Interpretation of the literature has proven difficult due to the differences in reported frequencies of disturbance across studies. One of the major reasons for this discrepancy is the wide array of operationalized criteria used to define eating disorders (Klemchuk, Hutchinson, & Frank, 1990; Fairburn, Phil, & Beglin, 1990; Kurtzman, Yager, Landsverk, Weismeier, & Bodurka, 1989; Mintz & Betz, 1988; Dykens & Gerrard, 1986). Many studies have failed to take into account the continuous nature of eating disorders. In other words, they have failed to take into account the existence of the eating disorder continuum.

Attempts to operationalize the idea of eating disorders existing on a continuum involves distinguishing between bulimia as the symptom of bingeing

and bulimia as a syndrome, which requires both the behavior of binge eating and the use of one or more compensatory behaviors such as fasting, vomiting, abusing laxatives, or excessive exercise (Mintz & Betz, 1988). Prior to 1987, the *Diagnostic and Statistical Manual of Mental Disorders* (1980) did not distinguish symptom from syndrome groups. The revised edition, the DSM-III-R (1987) did make this distinction, and took into consideration the eating disorder continuum. In 1994, an additional category, "eating disorders not otherwise specified" (NOS) was created and added to the DSM-IV to identify "subclinical" or milder forms of eating disorders. This category accounts for those individuals who are eating disordered but lack one or more features of the disorder (i.e. persons who binge but do not purge, those who purge but do not binge, and chronic dieters). Alternatively, the NOS category also accounts for those individuals who display all of the required features, but are not sufficient in severity. For example, an individual who meets all criteria for bulimia but binges one to seven times per month (versus eight or more) would fall into this category.

Various studies have used college women to study the prevalence of eating disorders. One of the main reasons for studying this population is because the college environment and the college experience are found to potentiate or exacerbate eating-related problems (Klemchuk, et al, 1990; Striegel-Moore, et al, 1986). Running parallel to this finding is the increased rate at which college women are seeking treatment for eating disorders and related disturbances.

Prevalence and correlates of eating disorders among college women

Mintz & Betz (1988) investigated the prevalence and correlates of eating disordered behaviors among college women. Measures of weight management habits, body image, self-esteem, and degree of sociocultural endorsement of norms regarding thinness were administered to 682 undergraduate women. This study focused on the eating disorder continuum and categorized subjects into six groups: normals, chronic dieters, bingers, purgers, subthreshold bulimics, and bulimics. They also investigated the differences in the psychological and attitudinal characteristics of women classified into the various eating categories. The results indicated a high prevalence of dieting and bingeing behaviors among the women. Although only 3% were classified as bulimic, 61% were classified as having some intermediate form of eating-behavior problem, that is, chronic dieting, bingeing or purging alone, or subthreshold bulimia. 82% of subjects reported one or more dieting behaviors at least daily, and 33% reported more serious forms of weight control (i.e., use of laxatives or vomiting) at least once a month. 38% reported problems with bingeing. Only 33% of the subjects reported what could be considered normal eating behaviors. The bulimia nervosa group reported significantly more dissatisfaction with their bodies than did bingers, purgers, or subthreshold bulimics, who in turn reported more dissatisfaction than did normals. Similarly, bulimics reported significantly lower self-esteem than normals. Bulimics also reported significantly greater endorsement of sociocultural mores regarding thinness and attractiveness than any of the other

five groups. Bulimics also differed significantly from all of the other groups on the degree to which they thought about their weight, feared becoming fat, and reported negative effects of weight on feelings about self, sex, and social life.

Vanderheyden & Boland (1987) assessed the prevalence of eating disorders in 158 undergraduate women, categorizing them along a continuum of severity: normals (those who neither binge nor vomit), binge eaters (those who binge only; labeled as mild, moderate, and severe), and binge-vomitters (those who binge and vomit). The researchers found that 46% of the subjects were categorized as normal, 38% of the subjects as were categorized as mild, moderate, or severe bingers, and 11% of the subjects were categorized as binge-vomitters (bulimic). The strongest predictors of group membership were drive for thinness, dietary restraint, and negative self-image (low self-esteem). They found that increased dietary restraint is associated with increased binge eating, which supports the theory that restraint encourages binge eating. Bulimics commonly report that their bingeing increases in severity prior to the onset of vomiting. These investigators concluded that as binge eating increases in severity, the profile of the binge eater approaches that of the binge vomiter.

Klemchuk, et al (1990) conducted a study using 1,506 undergraduates representing two different campuses. They assessed prevalence, body dissatisfaction, and eating-related problems among college women. They found that approximately 10.1% of the subjects would be classified as pathologically weight preoccupied. The eating disorder group reported strong feelings of body

dissatisfaction and, with the exception of weight loss, this group showed significantly greater pathology of both cognitions and behaviors on all variables. These researchers found a high percentage of college women, irregardless of present eating pathology, were extremely dissatisfied with their bodies, and identified this (along with restrained eating/diet failure) as risk factors for development of full-blown eating disorders.

A study by Dykens & Gerrard (1986) compared the psychological profiles of binge-purgers (bulimics), repeat dieters (women who reported feeling dissatisfied with their weight and engaged in repeat dieting but not bulimic behavior), and normals (women who reported feeling satisfied with their weight and had not dieted within the last year). Of the 424 subjects, 14% were identified as exhibiting bulimic tendencies, 60% of the subjects were repeat dieters, and 26% of the subjects were "normal," indicating they a) had not dieted within the last year, b) rarely, or never, experienced an irresistible urge to binge, c) never purging, and d) satisfied with their weight. It is interesting to note that in this study as well, eating disordered subjects reported that binge eating preceded the onset of purging by almost one year. This study confirms that bingeing and purging are prevalent in the college population. Although bulimics and repeat dieters share a number of personality characteristics (i.e., low self-esteem, external locus of control), bulimics score higher on several clinical measures than do women who are equally dissatisfied with their weight but do not resort to such extreme eating behavior. This suggests that the poor self-

esteem evident in both groups dissatisfied with their weight may be intensified among bulimics due to other variables not afflicting repeat dieters or normals.

Kurtzman, et al (1989) assessed the prevalence of eating disorders and eating disorder related-symptoms among 716 undergraduate women in various subgroups (i.e., athletic teams, sororities, general psychology, etc). Among the different subgroups, 7.5% to 46% reported the presence of individual eating disorder-related symptoms; specifically, 21.32% reported problems with binge eating, 14.6% reported self-induced vomiting, laxative and diuretic use was also prevalent. However, this study indicated that only 2.1% of the subjects were considered as having an "eating disorder" (this is in accord with the strictest of DSM-III (1980) criteria, which did not distinguish between symptomology and syndrome). They found a 4.8% prevalence rate for developing an eating disorder at any time in one's life. This study recognized that although the prevalence rate for eating disorders was 2.1%, the occurrence of other disturbed eating and weight control methods was quite high, indicating cause for concern.

Halmi, Falk, & Schwartz (1981) surveyed 355 college students (both males and females) to determine the prevalence of eating disorders, namely bulimia nervosa. Results indicated that 13% of the subjects experienced all of the major symptoms of bulimia as outlined in the DSM-III (87% were female, 13% were male). They indicated that although self-induced vomiting may accompany the other symptoms of bulimia, the results suggest that it is not a necessary symptom for diagnosis. A significant relationship between laxative

use and self-induced vomiting was found; these forms of purging behaviors occurred in an average of 10% of the subjects. Of the 355 subjects, 43% reported binge eating. The researchers indicated that the symptoms of bulimia may occur in conjunction with anorexia nervosa, but are more likely to occur without (only 1 person of the 355 examined indicated having had anorexia nervosa).

Eating disorders among other populations

Fewer studies have been done on alternative populations, but they do exist, and indicate strong parallels with studies of college populations. Williams, Schaefer, Shisslak, Gronwaldt, & Comerici (1986) studied eating attitudes and behaviors among 72 female adolescents, grades 7-12. Subjects were categorized as normals, dieters, and suspected bulimics. They found 54 subjects to be normal, 9 dieters, and 8 suspected (subthreshold) bulimics (11%), and 1 bulimic. The researchers found that 60% of the subjects regularly skipped meals, 35% viewed themselves as overweight or very overweight, 56% worried about their weight, 35% felt guilty after eating, 24% reported fear of loss of control while eating, 22% reported bingeing until uncomfortable, 8% reported vomiting after eating, and 4% reported using drugs to loose weight. They point out that young women classified as dieters or as having a subthreshold eating disorder may be especially vulnerable to developing a full-blown eating disorder later on in life (perhaps in college).

Carter & Duncan (1984) conducted a study among 421 high school girls to assess the prevalence and correlates of binge-eating and vomiting in a high school population. The researchers found that 38 subjects (9%) reported self-induced vomiting. Of the vomiters identified, 89% indicated that they would use another means of weight control if it were as effective as vomiting. The authors believe that the practice of bulimia is alarmingly prevalent in many public and private schools. They suggest that school psychologists implement programs of prevention which primarily focus on self-esteem.

Johnson, Lewis, Love, & Stuckey (1984) investigated the incidence and correlates of bulimic behavior in 1,268 high school females. They found that 21% of the total sample reported weekly or greater episodes of binge eating. The use of evacuation techniques for weight control was "surprisingly high," with 4% of the sample using self-induced vomiting on a weekly or greater basis and 3% using laxatives with equal frequency. When using the criteria according to the DSM-III, 8% of the subjects carried a probable diagnosis of bulimia. When an additional frequency variable of binge eating weekly or greater was added, the incidence dropped to 4.9%. The authors equate the high prevalence rate of bulimic behaviors and the increased cultural emphasis on thinness for women which appears to have created a standard for body size among women that has resulted in an increase in the prevalence of prolonged restrictive dieting and more drastic measures of weight control such as self-induced vomiting and laxative abuse. Results from the current study lend further support to the notion

situations.

Endorsement of sociocultural mores regarding thinness and attractiveness

Studies have shown that eating disordered women express substantially greater acceptance of sociocultural mores regarding thinness and attractiveness than do non-eating disordered women (Thompson, Heinberg, & Stormer, 1995; Fallon, 1990; Striegel-Moore, Silberstein, & Rodin, 1986; Williamson, Kelley, Davis, Ruggerio, & Blouin, 1986). In concordance with this, these women aspire to a thinner ideal body size than do normal controls.

Assumptions and limitations of previous studies

Most studies use self-report questionnaires and some conduct private interviews. It is assumed that subjects are truthful in their responses, however, the validity of self-reports is not known. A limitation is that those with eating disorder symptomology who wish to avoid detection may choose not to respond or participate when made aware of the nature of the study; this would present a lower prevalence rate than actually exists in the population. This is not surprising, due to the secret nature of these disorders; hence, one may wonder if truly accurate and precise prevalence rates can ever be truly measured.

Summary

Previous research clearly indicates that in terms of disturbed eating

behaviors, “normal” is not “normative”--rather what is normative among young women reflects, to varying degrees, less than healthy eating behaviors and attitudes concerning shape and weight. Irregardless of whether eating disorders as a syndrome or eating disordered behaviors (as symptomology) are being studied, it is clear that a vast majority of young women are plagued by disturbed eating, bingeing and purging, chronic dieting, poor body-image, and chasing a societal ideal which is biologically unattainable for most women.

The present study will attempt to assess the extent to which young women in college women are plagued by disturbed attitudes and behaviors concerning eating, weight, and shape. Self-esteem and the degree to which these women are dissatisfied with their bodies will also be examined. The Eating Disorder Inventory, which assesses these issues, will be used. The “Attitudes Towards Appearance Questionnaire” will be administered to examine the relationship between disturbed eating and degree of endorsement of sociocultural mores regarding thinness and attractiveness.

Chapter 3: Design of Study

Sample

Data were collected from 66 first year female students in an introductory psychology course at a college located in Southern New Jersey. The average age of the participants was 18 years old. Participation in the study was voluntary.

Measures

Participants were asked to fill out two questionnaires. The first questionnaire is the Eating Disorder Inventory, which was extracted from the Eating Disorder Inventory-2. The original EDI is a self-report questionnaire, which comprises 64 items rated on a 6 point scale and yields scores on eight clinically derived and empirically revised subscales. The current version, the EDI-2, retains the 64 original items, and with 27 additional items, adds three new constructs that form the “provisional subscales” (which are optional). The provisional subscales will not be used for this study.

The first three subscales assess attitudes and behaviors concerning eating, weight, and shape (*Drive for Thinness, Bulimia, Body Dissatisfaction*), and the five additional subscales tap into psychological traits clinically relevant to eating disorders (*Ineffectiveness, Perfection, Interpersonal Distrust, Interoceptive Awareness, Maturity Fears*). The EDI does not provide a unitary score by which to identify eating disordered individuals or to differentiate between anorexia nervosa and bulimia nervosa. Rather, the manual provides norms and a normative profile with the mean scale scores (with 99% confidence bands) for clinical (eating disorder) and nonclinical groups as a guide for evaluating individual profiles. The eight subscales are described below:

Drive for Thinness: Items on this subscale assess excessive concern with dieting, preoccupation with weight, and fear of weight gain. This construct was derived from Bruch who described the “drive for thinness” or the “relentless pursuit of thinness” as the cardinal trait of eating disorders.

Bulimia: Items on this subscale assess the tendencies to think about and to engage in bouts of uncontrollable overeating (bingeing). The presence of binge eating is one of the defining features of bulimia nervosa.

Body Dissatisfaction: Items on this subscale measure dissatisfaction with the overall shape and with the size of those regions of the body that are of greatest concern to those with eating disorders (i.e. stomach, hips, thighs, and buttocks).

Ineffectiveness: Items of this subscale assess feelings of general inadequacy, insecurity, worthlessness, emptiness, and lack of control over one’s life. Bruch originally described the “overwhelming sense of ineffectiveness” as the underlying disturbance in eating disorders. This construct is conceptually very closely related to self-esteem or negative self-evaluation, but goes beyond these constructs to include feelings of emptiness and aloneness.

Perfectionism: Items on this subscale measure the belief that only the highest standards of personal performance are acceptable and the belief that outstanding achievement is expected by others (parents, teachers).

Interpersonal distrust: Items on this subscale assess an individual's general feeling of alienation and reluctance to form close relationships.

Introceptive Awareness: Items on this scale measure confusion and apprehension in recognizing and accurately responding to emotional states.

Maturity Fears: Items on this subscale assess the desire to retreat to the security of childhood.

Psychometric information reported is based on 770 nonpatient female college students who were enrolled in first and second year psychology classes at the University of Toronto and 889 eating disorder patients. Internal consistency of each subscale as determined by Cronbach's alpha ranges from .83 to .93 for the eating disorder sample and ranged from .79 to .92 for female college students. In order to establish criterion-related validity, self-report EDI patient profiles were compared with judgements made by clinicians who knew the patient's psychological presentation. All correlations were significant at ($p < .001$). Each scale demonstrated significant correlations with established measures of conceptually similar constructs, and dissimilar constructs were unrelated.

The second questionnaire is the Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ) which was developed to assess women's recognition and acceptance of societally sanctioned standards of appearance.

Psychometric information reported is based on three studies conducted at

the University of South Florida. Subjects in the first two studies were female undergraduates enrolled in introductory psychology courses. In the first study, Cronbach's coefficient alphas were .93 for the nine-item Internalization scale and .81 for the seven-item Awareness scale. For the second (cross-validation) study, alphas were .88 for the Internalization scale and .71 for the Awareness scale. A final study was undertaken to test convergence between the SATAQ and existing measures of body image disturbance and eating dysfunction. Correlations reflect good convergence between the SATAQ and other measures ($p < .01$).

Design and Analysis

Eating-group membership: This study will assess the prevalence of suspected eating disorders among the sample. To meet this objective, parameters of the EDI data from the present sample will be compared to the norms and confidence intervals presented in the manual. It is expected that the present sample will be comparable to the (nonclinical) college sample. The percentage of subjects from the present sample whose scores are comparable to that of the eating disorder group will be reported. Subjects will be categorized as 1) eating disorder group and 2) normals.

Correlational Analysis: This study will also examine whether significant correlations exist between eating group membership and measures of self-esteem, body dissatisfaction, and degree of endorsement of sociocultural

attitudes regarding thinness and attractiveness. Pearson's product-moment correlation will be utilized to determine significance.

Testable Hypotheses

Null Hypotheses:

- 1) The prevalence of eating disorders among females in the present sample will not fall within the predicted range of 5 to 20 percent.
- 2) There will be no significant correlation between eating group membership and measures of self-esteem, body dissatisfaction, and degree of endorsement of sociocultural mores regarding thinness and attractiveness.

Alternate Hypotheses:

- 1) The prevalence of eating disorders among the sample will fall within the range of 5 to 20 percent.
- 2) There will be a significant correlation between eating group membership and measures of self-esteem, body dissatisfaction, and degree of endorsement of sociocultural mores regarding thinness and attractiveness.

Summary

The EDI-2 and SATAQ, both valid and reliable measures, will be used to assess body dissatisfaction, self-esteem, and endorsement of sociocultural beliefs regarding attractiveness, as well as an eating disorder prevalence rate.

Chapter 4: Analysis of Results

Restatement of Hypotheses

Null Hypotheses:

- 1) The prevalence of eating disorders among females in the present sample will not fall within the predicted range of 5 to 20 percent.
- 2) There will be no significant correlation between eating group membership and measures of self-esteem, body dissatisfaction, and degree of endorsement of sociocultural mores regarding thinness and attractiveness.

Alternate Hypotheses:

- 1) The prevalence of eating disorders among females in the present study will fall within the range of 5 to 20 percent.
- 2) There will be a significant correlation between eating group membership and measures of self-esteem, body dissatisfaction, and degree of endorsement of sociocultural mores regarding thinness and attractiveness.

Interpretation of Results

The first null hypothesis is accepted because the expected prevalence rate for eating disorders of 5 to 20% was not found. A prevalence rate of 21% was found among the sample.

The second null hypothesis is rejected because significant correlations were found between eating group membership and self-esteem, body dissatisfaction, and degree of endorsement of sociocultural mores. Specifically, eating group membership is significantly correlated with self-esteem ($r = .719$; $p < .001$). Likewise, eating group membership is significantly correlated with body dissatisfaction ($r = .952$; $p < .000$). Eating group membership is also strongly correlated with the SATAQ: degree of endorsement of sociocultural mores regarding thinness and attractiveness ($r = .612$; $p < .001$). See table 4.1 below:

Table 4.1: Pearson's Product Moment Correlations Between EDI Scores (Eating Group Membership) and Self-Esteem, Body Dissatisfaction, and Endorsement of Sociocultural Mores Regarding Thinness and Attractiveness

EDI Score	Variable	Pearson Corr.	Sig. (two-tailed)
Eating Grp. Membership	Self-Esteem	$r = .719$	$p < .001$
	Body Dissatisfaction	$r = .952$	$p < .000$
	Endorsement of Sociocultural Mores	$r = .612$	$p < .001$

Statements of Significance

The first alternate hypothesis is rejected because a higher prevalence rate for eating disorders was found among the sample than was expected. The second alternate hypothesis is accepted because significant correlations were found between eating group membership and measures of self-esteem, body dissatisfaction, and degree of endorsement of sociocultural mores regarding thinness and attractiveness.

Summary

As stated, the first null hypothesis was accepted because the expected prevalence rate of 5 to 20% was not found. Results indicate that a higher prevalence rate for eating disorders exists among the sample (21%). Initially, an even higher prevalence rate was found; however, in order to minimize the number of false positives, the strictest of criteria were used to determine the current estimate of 21%. Clearly, high scores on the eating disorder measure are strongly correlated with greater body dissatisfaction, lower self-esteem, and greater degree of endorsement of sociocultural mores regarding thinness and attractiveness (degree to which the subject accepts and internalizes the current societal ideal regarding feminine beauty).

Chapter 5: Summary and Conclusions

Previous research clearly indicates that in terms of disturbed eating behaviors, “normal” is not “normative”--rather what is normative among young women reflects, to varying degrees, less than healthy eating behaviors and attitudes concerning shape and weight. It is clear that a vast majority of young women are plagued by disturbed eating, bingeing and purging, chronic dieting, poor body-image, and chasing a societal ideal which is biologically unattainable for most women. The result is a relentless battle between psyche and soma which leaves women highly dissatisfied with their bodies, and lures them into an endless cycle of extreme weight control measures with hope that they can somehow defy nature.

Using the Eating Disorder Inventory and the Sociocultural Attitudes Towards Appearance Questionnaire, attitudes and behaviors concerning eating, shape, and weight, as well as some psychological traits related to eating disorders (body dissatisfaction, self-esteem, and degree of endorsement of sociocultural mores regarding thinness and attractiveness) were examined. A

prevalence rate for eating disorders among the sample was ascertained using the norms and confidence intervals provided by the EDI manual.

Conclusions

- 1) A prevalence rate for eating disorders of 21% was found among the sample which is congruent with much of the literature on eating disorders.
- 2) Also in accordance with the literature, very strong correlations were found between eating group membership and body dissatisfaction, self-esteem, and degree of endorsement of sociocultural mores regarding thinness and attractiveness. Specifically, high scores on the EDI were significantly correlated with high scores on the body dissatisfaction scale; high scores on the EDI were also strongly correlated with high scores on the self-esteem scale (higher scores indicate lower self-esteem); likewise, high scores on the EDI were strongly correlated with endorsement of sociocultural mores regarding attractiveness (higher scores indicating a greater degree of endorsement of the societal ideal).

Discussion

Previous research indicates that eating disorders are increasing in prevalence and are approaching epidemic proportions; it is estimated that 1 in 100 girls ages 12 to 18 are anorexic, while as many as 1 in 4 college women are

thought to be bulimic or engage in other forms of disturbed eating. The present study found prevalence rate for eating disorders of 21%, which is congruent with the literature. It is critical to keep in mind that very strict criteria were used to determine the prevalence rate. Had this study a) used lower cut-off scores or, b) examined eating disorder-related symptoms (i.e. chronic dieting, bingeing or purging alone, laxative abuse, subclinical bulimia) it is likely that a higher prevalence rate would have been detected. Also in accordance with previous research, this study found significant correlations between disturbed eating and greater body dissatisfaction, lower self-esteem, and greater tendency to endorse sociocultural beliefs regarding desirability of female thinness.

The results of this study appear to indicate that many college women suffer from disturbed attitudes and behaviors concerning eating, shape, and weight. It is very important to note that subjects who are among the 21% (suspected of having an eating disorder) pose the greatest therapeutic challenge to clinicians; however, other individuals who may not fit all of the criteria (DSM-IV) also struggle with feelings about their bodies and eating, and suffer a great deal as well. Eating disorders exist on a continuum, and vary in severity among the general population. In fact, a large number of individuals do not manifest all the criteria but still have what in medical parlance is termed as “subclinical pathology” (Zerbe, 1993, p. 12).

Implications for further study

Because the prevalence of eating disorders is increasing, it is crucial to conduct additional research that focuses on understanding, on education (prevention), and on counseling (intervention), particularly in our schools. Dieting behaviors are occurring in great proportions at earlier and earlier ages, usually beginning in the elementary years. It is quite apparent that awareness and early intervention is critical for our young.

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