



University of
Massachusetts
Amherst

The prevalence of eating disorders and eating disordered behaviors in sororities.

Item Type	open;article;thesis
Authors	Alexander, Laurel A.
DOI	https://doi.org/10.7275/7676004
Download date	2024-11-25 06:55:05
Link to Item	https://hdl.handle.net/20.500.14394/45851



312066011017400

LD
3234
M268
1995
13765

THE PREVALENCE OF EATING DISORDERS AND
EATING DISORDERED BEHAVIORS IN SORORITIES

A Thesis Presented

by

LAUREL A. ALEXANDER

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

MASTER OF SCIENCE

September 1995

Psychology

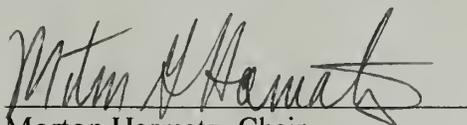
THE PREVALENCE OF EATING DISORDERS AND
EATING DISORDERED BEHAVIORS IN SORORITIES

A Thesis Presented

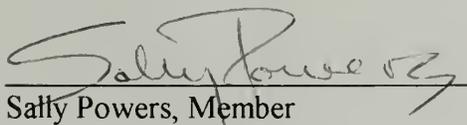
by

LAUREL A. ALEXANDER

Approved as to style and content by:



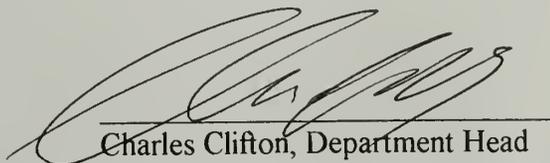
Morton Harmatz, Chair



Sally Powers, Member



Paula Pietromonaco, Member



Charles Clifton, Department Head
Psychology

ABSTRACT

THE PREVALENCE OF EATING DISORDERS AND EATING DISORDERED BEHAVIORS IN SORORITIES

LAUREL A. ALEXANDER, B.A., WASHINGTON UNIVERSITY

M.S., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Morton Harmatz

In this study, the prevalence of bulimia, anorexia, and eating disordered behaviors in campus sororities was examined. Sorority women's scores on the Eating Disorder Inventory (EDI), the Eating Attitudes Test (EAT), and the Bulimia Test-Revised (BULIT-R) were compared with those of women in athletic teams or dance companies and a control group of undergraduate women. It was hypothesized that sorority subjects would be more eating disordered than the control group. It was also expected that sorority subjects would differ from subjects in athletics and dance only on psychological dimensions of eating disorders, which would indicate that sorority women are at a higher risk for eating disorders for a qualitatively different reason than women in dance and athletic groups. These hypotheses were not statistically supported. However, non-significant trends indicated that sorority subjects did exhibit more eating disorders and eating disordered behaviors than the control group. Non-significant trends also indicated that subjects in athletic or dance groups were more eating disordered than sorority subjects. On psychological dimensions of eating disorders, the sorority and athletics or dance groups tended to vary only on the Ineffectiveness subscale of the EDI, which measures self-doubt and insecurity.

The only statistically significant finding of this study was that sorority and non-sorority subjects varied in the sources of societal pressures they identified. Sorority women more often identified other women or themselves as the main sources of pressure to be thin and beautiful. Non-sorority women more often selected men or society in general. Future research is needed to explore the implications of the groups' differences in identified pressure sources and to determine whether the non-significant trends found in this study could be amplified with a larger sample from different campuses and the use of different measures.

TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	iii
LIST OF TABLES	vii
Chapter	
INTRODUCTION	1
Literature Review	1
Definitions	5
Statement of the Problem	8
1. METHOD	9
Design	9
Sample	9
Procedure	9
Measures	10
Eating Disorder Inventory	10
Eating Attitudes Test	11
Bulimia Test-Revised	12
Data Analysis	12
2. RESULTS	14
Performance on Measures	15
Levels of Symptomatology	16
Additional Analyses	17
3. DISCUSSION	23
Group Differences on Eating Disorder Measures	23

Sorority versus Control	23
Sorority versus Activity	24
Pre-Sorority	28
Beliefs about Societal Pressures	28
Conclusions and Future Directions	29
APPENDIX: DEMOGRAPHICS SURVEY.....	32
BIBLIOGRAPHY	39

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1.	Intercorrelations of the EDI subscales, EAT, and BULIT-R	20
2.	Means and standard deviations of scores on the EDI, subscales, EAT, and BULIT-R by group	20
3.	Frequencies of anorexia symptomatology levels by group	21
4.	Frequencies of bulimia symptomatology levels by group	21
5.	Frequencies of sources of beauty pressure identified by sorority versus non-sorority subjects	22
6.	Frequencies of sources of thinness pressure identified by sorority versus non-sorority subjects	22

INTRODUCTION

Literature Review

Eating disorders differentially affect different groups in society. One group that composes approximately 90% of those with eating disorders is women (American Psychiatric Association, 1995). It has been estimated that at least 6 percent of all women have an eating disorder of some kind (American Psychiatric Association, 1987). Because eating disorders generally develop in adolescence and are seen more frequently in women from higher socioeconomic levels, it is not surprising that the prevalence of eating disorders is particularly high in college women (Carter & Eason, 1983; Hesse-Biber, 1989; Mintz & Betz, 1988). Researchers have estimated that 3% (Mintz & Betz, 1988) to 19% (Powers, Schulman, Gleghorn, & Prange, 1987) of college women have bulimia, 1% to 2% have anorexia (Mintz & Betz, 1988), and as many as 61% display eating disordered behaviors while not meeting the criteria for an eating disorder (Mintz & Betz, 1988).

Eating disorders are more prevalent in certain groups focused upon fitness or body appearance. Ballet dancers have long been seen as a group particularly at risk. It has been estimated that as many as 25% of female professional ballet dancers have an eating disorder (Garner, Garfinkel, Rockert, & Olmsted, 1987). Some studies show that women's athletic teams, especially runners and weight lifters, have a higher incidence of eating disorders as well (e.g., Pasmán & Thompson, 1988; Taub & Blinde, 1992). Models and cheerleaders have also been found to be more at risk for developing an eating disorder than the

rest of the population in some studies (Lundholm & Littrell, 1986; Rippon, Nash, Myburgh, & Noakes, 1988).

Although the incidence of eating disorders in athletic and professional groups has been examined, researchers have not yet focused on the prevalence of such disorders in social groups. In studying eating disorders among athletes and models, researchers typically have explained the higher incidence among these groups as stemming from pressures within these activities to maintain a certain weight or body shape (e.g., Garner, Garfinkel, Rockert, & Olmsted, 1987; Petrie, 1993). In fact, some studies have shown that eating disorders are more prevalent only in athletes who participate in sports that require a certain body weight or leanness (Soutjesdyk & Jevne, 1993). Eating disorders and eating disordered behavior stemming from this kind of pressure may be termed "instrumental". Ballet dancers, for example, must be slim in order to dance well, so many dancers develop eating disorders as a weight control technique. Their eating problems are instrumental, or functional. This same reasoning has been used to explain the incidence of eating disorders among other groups (e.g., weight lifters), but it cannot account for social groups in which there is no "practical" reason to maintain a low body weight. One can make the distinction then between athletic groups in which eating disorders and eating disordered behaviors are instrumental and social groups in which eating disorders and eating disordered behaviors are psychologically driven.

One social group that seems likely to have a higher incidence of eating disorders is the college sorority. Sorority women are at a higher risk for two obvious reasons -- their age and their higher average socioeconomic status, but it

seems possible that their membership to the group itself could be a risk factor. Striegel-Moore and her colleagues (1993) have found evidence that women who are especially concerned with creating and maintaining an effective social facade are more prone to develop eating disorders as a means of meeting social expectations. Sorority women would seem to be at risk in this way given the social demands that they must meet. Little research, however, has been done on eating disorders in sororities, and the research that has been done has been limited in scope.

One study on eating disorders in sororities was done by Meilman, von Hippel, & Gaylor (1991) in which 229 college women were asked to complete a survey about their food and alcohol purging behaviors and their sorority membership. Of the total sample, 4.8% reported that they purge after eating, and 7.4% reported that they purge after eating and drinking. An additional 9.2% of the subjects were classified as "high-frequency eating purgers" who purge at least 4 times a month (Meilman, von Hippel, & Gaylor, 1991). One hundred and fifty of the subjects identified themselves as members of the sororities, and Meilman et al. found a significantly higher percentage of eating purgers and high-frequency eating purgers among the sorority women. Of the 28 subjects who reported eating purging behavior, 72.2% were sorority members, $p < .04$. Of the 21 subjects who were classified as high-frequency eating purgers, 80% were sorority members, $p < .015$. In addition to these results, Meilman et al. found that 56.6% of the 34 subjects who reported that they purge after drinking were sorority women, which was not a significant difference.

This study provides only a small piece of information about the relationship between sororities and eating disorders. Meilman et al. (1991) assessed the frequency of purging behavior without assessing the frequency of bingeing or other eating disordered behavior. Also, the data were gathered by means of a non-standardized survey. In order to explore eating disorders in sororities more thoroughly, one must include a wide range of behaviors and seek the psychological correlates as well.

In another study of eating disorders in sororities, Crandall (1988) examined the frequency and function of binge eating in sororities. Two sororities were studied. Subjects completed measures of bulimic behavior and self-esteem and were asked to list their "ten best friends (within the house) in order" (Crandall, 1988). Crandall identified groups of friends through cluster analyses and defined a popular sorority woman as one who was listed as a friend by many members.

Having grouped subjects into friendship clusters and identified the most and least popular members of the sororities, Crandall correlated these friendship networks and popularity with bulimic behavior. In one sorority, those women who binged a "moderate" amount were the most popular, and those women who binged "too little" or "too much" were less popular (Crandall, 1988). In the other sorority, however, the most popular women were those who binged the most. Crandall (1988) explained these results as proof of the social contagion of binge eating and gave two further pieces of evidence. A significant contagion coefficient, which measured the correlation between the individual and her friendship group's level of binge eating, was found. This correlation was not found in the subjects who had joined a sorority only 6 weeks prior to the study, which

Crandall cited as evidence that social contagion had not been able to begin yet. Also, friendship group membership was correlated with bulimic behavior but not with self-esteem, which was seen as evidence that something more than the "birds of a feather" principle was at work (Crandall, 1988).

There seem to be several problems with the conclusions drawn in Crandall's study (1988). Crandall demonstrated that the frequency of bingeing increased in the subjects who were friends with binge eaters, and he thereby credited social contagion with the increased prevalence of the behavior. Crandall, however, did not address whether sorority women had a higher frequency of binge eating upon entering the sorority. Another criticism of Crandall's research is that he generalized from binge eating to bulimia. He wrote in conclusion "I argue that there is no great mystery to how bulimia has become such a serious problem for today's women" (Crandall, 1988), when in fact, he did not study bulimia. He focused upon binge eating and identified only a few women in his sample who actually met the criteria for bulimia, which leads one to question the applicability of his conclusions to bulimia in general. As stated above, the prevalence of the spectrum of eating disorders and associated behaviors in sororities has not yet been determined, and a more comprehensive exploration is necessary to meet this task.

Definitions

For the purposes of this study, three different groups of eating disorders and eating disordered behaviors have been identified for examination -- anorexia, bulimia, and subclinical levels of eating disordered behaviors. The presence of these disorders and behaviors will be assessed by self-report measures. Although

an actual diagnosis of anorexia or bulimia cannot be made on this basis, the subject's level of eating disorder symptomatology can be assessed.

In the Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) (DSM-IV; American Psychiatric Association, 1995), the diagnosis of anorexia nervosa is warranted when a person has lost a large amount of weight (15% of body weight), is terrified of gaining weight, has a distorted perception of her/his weight and body size, and experiences amenorrhea. One can see that the American Psychiatric Association (APA) focuses upon both the behavioral (e.g., food restriction) and the psychological symptoms (e.g., fear of weight gain) of anorexia in defining the disorder. This is also the case for the APA's diagnostic criteria for bulimia nervosa which include frequent binge eating accompanied by a sense of lack of control, purging behaviors (e.g., self-induced vomiting or intense exercise), and obsession with weight and body. These criteria also include both behavioral (e.g., recurrent bingeing episodes) and psychological symptoms (e.g., perception of loss of control). The APA proposed these criteria as an attempt to present an atheoretical picture of the two disorders. The Bulimia Test - Revised (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991) is based on the APA's criteria and is structured to assess the severity of a subject's bulimic symptomatology. Although the Eating Attitudes Test (EAT; Garner & Garfinkel, 1979) is not formally structured around the APA's criteria, it does assess the subject's anorexic symptomatology as described in the DSM-IV.

The Eating Disorder Inventory (EDI; Garner, Olmsted, & Polivy, 1983) was developed for the purpose of incorporating the psychological components of eating disorders with those symptoms described in the DSM-III-R, and will be

included in this study primarily because it assesses psychological dimensions of eating disorders that other measures do not address. The psychological dimensions of the scale include: Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness, and Maturity Fears. These dimensions are described in more depth in the Methods section of this paper.

In addition to clinical levels of anorexia and bulimia, subclinical eating disordered behaviors will be assessed in this study. There appears to be a continuum of eating disorders and eating disordered behaviors, ranging from dieting to anorexia (Hesse-Biber, 1989). The behaviors to be considered here are those associated with anorexia and bulimia, but which are insufficient in number or severity to meet the APA's criteria for anorexia or bulimia. There is evidence that the behaviors associated with eating disorders are even more prevalent than clinically diagnosable eating disorders among college women (Hesse-Biber, 1989; Mintz & Betz, 1988). Researchers have found that subclinical levels of eating disordered behaviors are often precursors to clinical anorexia or bulimia and usually persist after an individual no longer meets criteria for these disorders (Drewnowski, Yee, Kurth, & Krahn, 1994). Also, although the incidence of bulimia and anorexia may not increase during the college years, women's eating disordered behaviors do increase significantly, often without ever reaching clinical levels (Hesse-Biber, 1992; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989). Given the prominence of subclinical eating disordered behaviors and the risks associated with them, it is necessary to study the prevalence of these behaviors in the selected populations.

Statement of the Problem

The prevalence of clinical eating disorders and subclinical eating disordered behaviors in sororities on one campus was examined. The frequency of these behaviors in college women in general was compared to that of women in sororities and women involved in athletic teams or dance companies. It was hypothesized that both eating disorders and eating disordered behaviors would be found more frequently in sorority members than in college women in general.

It was also hypothesized that women in sororities would differ from those in athletic teams and dance companies in psychological symptoms (e.g., maturity fears and ineffectiveness), although the frequency of eating disorders and eating disordered behaviors in the two groups may not differ. Having proposed that eating disorders and eating disordered behaviors are instrumental for athletic teams and dance groups, it was, therefore, expected that women in those groups would display a lower level of psychological distress than sorority women, for whom eating disorders and eating disordered behaviors are psychologically driven.

Finally, as a first step in looking at the possible causal relationships between eating disordered behaviors and sororities, sorority members were compared with women who indicated that they were planning to join a sorority. It was hypothesized that eating disorders and eating disordered behaviors would be equally prevalent in these two groups and more prevalent in those women who plan to join a sorority than in college women in general, which would suggest that women who are predisposed to eating disorders and related behaviors are inclined to join sororities.

CHAPTER 1

METHOD

Design

The first part of this study was inferential; the second part was descriptive in design. Data was gathered through surveys and various measures. Analyses of variance and non-parametric analyses were used to examine the data.

Sample

Subjects were recruited from the psychology department's human subjects pool and from campus sororities. Recruitment directly from the sororities was necessary because the percentage of women in sororities at the University of Massachusetts is too small to rely on an adequate number of sorority members signing up for the study through the usual human subjects pool.

It was hoped that approximately 200 women would participate. The experimental group consisted of those subjects who identified themselves as members of a sorority. Those subjects who actively participated in dance companies or in athletic teams were identified as the activity comparison group, and women who stated that they were planning to join a sorority in the future comprised the pre-sorority comparison group. Finally, those women who did not participate in any of the activities mentioned above comprised the control group.

Procedure

Respondents were asked to complete several questionnaires. They completed a demographics survey, which included questions about their sorority membership, any prior or current involvement in dance and/or athletics, and their

current and past weight and dieting history (see Appendix). Next, they completed 3 measures of eating disorders and eating disordered behavior.

Measures

Eating Disorder Inventory

The EDI (Garner, Olmsted, & Polivy, 1983) was used to assess the respondents' level of psychological distress as related to eating disorders. The EDI (Garner, Olmsted, & Polivy, 1983) is one of the most widely used measures in eating disorders research (e.g., Garner, Garner, & Rosen, 1993; McDonald & Thompson, 1992; Rippon, Nash, Myburgh, & Noakes, 1988). As discussed above, it was designed to assess both the psychological and behavioral symptoms of anorexia nervosa and bulimia and has been shown to be an effective diagnostic tool for both clinical and nonclinical populations (Klemchuk, Hutchinson, & Frank, 1990).

There are eight subscales included in the EDI. The subscales are as follows: 1.) Drive for Thinness which indicates excessive preoccupation with dieting, weight, and attaining thinness; 2.) Bulimia which measures the tendency toward bingeing and self-induced vomiting episodes; 3.) Body Dissatisfaction which indicates whether specific parts of the body associated with pubertal changes are believed to be too large (e.g., hips); 4.) Ineffectiveness which reflects feelings of self-doubt, self-loathing, powerlessness, and insecurity; 5.) Perfectionism which assesses excessive need to achieve and perform at a superior level; 6.) Interpersonal Distrust which indicates feelings of detachment and intentionally distancing oneself from others; 7.) Interoceptive Awareness which measures one's feelings of being unable to trust one's perceptions of emotions and

bodily sensations, especially hunger; and 8.) Maturity Fears which reflects the desire to avoid entering adulthood to remain in the safety of childhood. Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness, and Maturity Fears subscales focus on the psychological components of eating disorders. Bulimia and Drive for Thinness subscales focus primarily on the behavioral components, but provide valuable information on the psychological components as well.

Garner, Olmsted, and Polivy (1983) found high internal consistency coefficients for the subscales included in the EDI and high item-scale correlation coefficients. Adequate criterion-related validity, convergent validity, and discriminant validity have been established for the EDI (Garner, Olmsted, & Polivy, 1983). The EDI has been included in this study primarily because of the thoroughness with which it assesses the various psychological components of anorexia and bulimia. Although scores on all eight subscales will be examined in the study, the six subscales that focus exclusively on psychological dimensions will be used primarily to ascertain the respondents' level of psychological distress.

Eating Attitudes Test

The Eating Attitudes Test (Garner & Garfinkel, 1979) is a 40-item questionnaire designed to evaluate behavioral and attitudinal components of anorexia. The EAT has been widely used in eating disorders research with both clinical and nonclinical populations (e.g., Garner, Garner, & Rosen, 1993; Hesse-Biber, 1989). High reliability coefficients (Thompson & Schwartz, 1982) and criterion validity (Gross, Rosen, Leitenberg, & Willmuth, 1986) have been found.

This measure has been included primarily because of the thoroughness with which it assesses the behavioral components of anorexia.

Bulimia Test-Revised

The Bulimia Test-Revised (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991) is a 36-item instrument designed to assess bulimia in accordance with the DSM-III-R diagnostic criteria. Thelen, Farmer, Wonderlich, and Smith (1991) updated the BULIT to reflect the changes in diagnostic criteria made from the DSM-III to the DSM-III-R. The BULIT-R is an effective tool for assessing bulimia in clinical and non-clinical populations (Thelen, Farmer, Wonderlich, & Smith, 1991; Welch, Thompson, & Hall, 1993). Adequate internal consistency and test-retest reliability have been found for the BULIT-R (Thelen et al., 1991). Adequate concurrent and discriminant validity have also been found by Thelen et al. (1991). This scale has been included primarily because of the thoroughness with which it assesses the cognitive and behavioral components of bulimia.

Data analysis

First, subjects were categorized according to their group (i.e., sorority, pre-sorority, activity (athletic team or dance company), or control). The groups' average scores (and standard deviations) on the EAT, BULIT-R, and the eight EDI subscales were calculated. One-factor ANOVAs of score on eating disorder measure by group were conducted to see if there was a significant difference in scores on each measure according to group membership. To insure that these measures were independent of each other, their intercorrelations were calculated, as suggested by Huberty and Morris (1989).

Next, the data were examined through non-parametric methods in order to gain a different perspective on the data collected. Two sets of levels of eating disordered behavior were established based upon the subjects' scores on the eating disorder measures. One set included 3 levels of anorexic symptomatology (i.e., clinical anorexic, subclinical anorexic, and asymptomatic) which were determined by the subjects' scores on the EAT. The second set included 3 levels of bulimic symptomatology (i.e., clinical bulimic, subclinical bulimic, and asymptomatic) which were based upon the subjects' scores on the BULIT-R. The cut-off scores for both sets were designated according to the normative scores for pathological and control groups. Next, the frequency of each of these levels was calculated for the two sets as a function of group (i.e., sorority, activity, pre-sorority, or control). A χ^2 test was conducted on anorexia level by group and another χ^2 test on bulimia level by group to see if certain eating disorder levels were overrepresented in the sorority, pre-sorority, or activity groups.

CHAPTER 2

RESULTS

Two hundred and fifty-three women participated in the study. After 14 subjects who did not fully complete the measures were eliminated, a sample of 239 remained. Of this sample, 103 respondents reported being current sorority members, 3 reported being sorority members in the past, and 6 indicated that they were planning to join a sorority in the future. All nine campus sororities participated in the study. Due to the unexpectedly small number of subjects who were designated "pre-sorority" or past sorority members, it was decided to collapse across these categories such that anyone who indicated present, past, or future membership in a sorority were included in the sorority group.

A similar problem arose in defining the activity comparison group. Only 17 subjects identified themselves as being members of an athletic team or dance troupe and not sorority members. In order to boost the size of this comparison group, subjects who were sorority members and activity members were excluded from the sorority group and included in the activity comparison group. These changes resulted in the following final group sizes: 89 women in the sorority group, 41 in the activity comparison group, and 109 in the control group.

Before the planned analyses were conducted, the intercorrelations of the measures were calculated to insure that conducting multiple ANOVAs instead of a MANOVA was appropriate. As can be seen in Table 1 (see p. 20), the EAT, BULIT-R, and 8 EDI subscales were all significantly intercorrelated; for all r s, $p < .001$. Despite these large intercorrelations, each of the measures has been designed and demonstrated to pinpoint different aspects of eating disorders and

eating disordered behaviors (e.g., Garner et al., 1983; Gross et al., 1986; Thelen et al., 1991). As such, the measures can be termed "conceptually independent," so multiple ANOVAs were determined to be an acceptable method of analysis (Huberty & Morris, 1989).

Performance on Measures

One-way ANOVAs of group by measure were performed on the data. The groups' mean scores on the EAT, EDI, and BULIT-R are listed in Table 2 (see p. 20). Groups were not found to vary significantly by total EAT score, $F(2, 238) = 1.50, p > .05$). However, simple examination of the groups' means indicates that they vary in an interesting direction. On average, the activity group ($M = 57.59$) scored lower than the sorority group ($M = 61.06$), which scored lower than the control group ($M = 63.46$). A lower score indicates more severe pathology.

The ANOVA of group by BULIT-R approached statistical significance, $F(2, 238) = 2.43, p = .09$. On this measure, the activity group ($M = 73.42$) scored higher than the sorority group ($M = 69.54$), which scored higher than the control group ($M = 65.52$). Unlike the EAT, higher scores on the BULIT-R indicate more severe pathology.

Analyses of variance were performed for each of the 8 EDI subscales. Mean scores on Body Dissatisfaction, Interoceptive Awareness, Interpersonal Distrust, Maturity Fears, Perfectionism, and Drive for Thinness subscales did not vary significantly by group; for all F s, $p > .05$. However, the ANOVAs of group by Bulimia ($F(2, 238) = 2.78, p = .06$) and group by Ineffectiveness ($F(2, 238) = 2.54, p = .08$) both approached significance. On the Bulimia subscale, the activity group ($M = 11.54$) scored lower on average than the sorority group ($M = 13.57$),

which scored lower than the control group ($\underline{M} = 13.67$). Conversely, the activity group ($\underline{M} = 18.07$) scored higher on the Ineffectiveness subscale than the sorority group ($\underline{M} = 15.37$), which scored higher than the control group ($\underline{M} = 15.24$). Lower scores on EDI subscales reflect more severe pathology.

Levels of Symptomatology

Subjects were grouped into one of three levels of anorexic symptomatology -- clinical, subclinical, or asymptomatic. In Table 3 (see p. 21), the frequencies of each of these levels by sorority, activity, and control groups are listed. A χ^2 test of anorexic level by group was performed to determine whether more severe levels of symptomatology are overrepresented in the sorority or activity groups. The analysis approached significance, $\chi^2(4, \underline{N} = 239) = 8.18$, $p = .09$. As opposed to the sorority women (9%), subjects in the activity group (24%) or control group (20%) were considerably overrepresented at the subclinical anorexic level. Also, a somewhat higher percentage of sorority (6%) and activity group subjects (7%) fell in the clinical anorexic range than control subjects (3%).

Subjects were also grouped into three levels of bulimic symptomatology -- clinical, subclinical, or asymptomatic. In Table 4 (see p. 21), the frequencies of each of these levels by sorority, activity, and control groups are listed. As with anorexic levels, a χ^2 test of bulimic symptomatology level by group was performed. The results of this analysis were not statistically significant, $\chi^2(4, \underline{N} = 239) = 7.52$, $p > .05$. However, tabulation of the frequencies and percentages shows that many more activity group subjects (22%) fell in the subclinical bulimic range than sorority (9%) or control subjects (7%).

Additional Analyses

Post-hoc analyses were conducted to look at how the respondents' beliefs about societal pressures impacted eating disorder measures and differentiated groups. Subjects were asked whether they think there is pressure to be thin in society, and if so, where they think the pressure comes from (e.g., the media). Subjects were asked the same open-ended questions about pressure to be beautiful in society.

Although analyses revealed no significant differences between the three groups in terms of their ideas on these questions, analyses collapsing over the activity group did yield significant results. It seemed likely that sorority women would differ from non-sorority women in their perceptions of the pressures to be beautiful and thin because sororities are social groups in which membership is often based partially upon beauty or attractiveness. This is not a qualifying characteristic for participating in an athletic team or dance troupe. Consequently, it was decided to exclude the activity variable from this analysis. Since the subjects from the activity group either were or were not sorority members also, they were re-distributed according to their sorority/non-sorority designation. Once this was accomplished, 112 women comprised the sorority group and 127 comprised the non-sorority group.

Chi square analyses indicated that sorority and non-sorority women believe that pressure to be beautiful comes from different places, $\chi^2(7, N = 239) = 14.46$, $p < .05$. In Table 5 (see p. 22), the frequency with which different sources were identified is given. The majority of both sorority (69%) and non-sorority (67%) subjects identified the media as the most influential source of pressure. However,

more sorority women identified other women (8%) or the self (3%) than non-sorority women did (respectively, 3% and 1%), and more non-sorority women identified men (13%) and society in general (12%) than sorority women did (respectively, 9% and 4%).

Significant differences in ideas about the source of pressure to be thin were also found, $\chi^2(8, N = 239) = 22.63, p < .01$. The frequency with which different sources were identified can be found in Table 6 (see p. 22). As with beauty pressure, the majority of both sorority (67%) and non-sorority (65%) identified the media as most influential source of pressure to be thin. Similar differences were also found. More sorority women identified other women (9%) or the self (3%) than non-sorority women did (respectively, 3% and 1%), and more non-sorority women identified men (12%) and society in general (17%) than sorority women did (respectively, 8% and 4%).

With one exception, there were no significant differences in beliefs about the sources of pressures to be thin or beautiful by anorexic or bulimic symptomatology levels; for all χ^2 s, $p > .05$. Bulimic symptomatology levels varied significantly with respect to sources of thinness pressure, $\chi^2(16, N = 239) = 30.19, p < .05$. Asymptomatic subjects were most likely to identify the media (69%), then society in general (10%), men (7%), and other women (6%) as the main sources. Three per cent of asymptomatic subjects identified family or the self as main sources of pressure to be thin. Subclinical bulimic subjects were also most likely to identify the media (56%), but they also identified society (16%), men (12%), and other women (4%) as main sources. Finally, clinical bulimic subjects were

most likely to identify the media (50%), then men (35%), and then equally likely to identify society (5%), other women (5%), or self (5%).

Table 1. Intercorrelations of the EDI subscales, EAT, and BULIT-R.

	BULIT-R	EAT
BULIT-R	1.00	-.7632
EAT	-.7632	1.00
BodyDis	-.5004	.5056
Bulimia	-.8330	.7052
IA	-.5913	.6716
Ineff	-.5497	.5629
IntDist	-.3503	.3744
MatFear	-.3249	.3904
Perfect	-.2431	.2966
Thin	-.7314	.7866

KEY: BodyDis = Body Dissatisfaction, IA = Interoceptive Awareness, Ineff = Ineffectiveness, IntDist = Interpersonal Distrust, MatFear = Maturity Fears, Perfect = Perfectionism, Thin = Drive for Thinness

Table 2. Means and standard deviations of scores on the EDI subscales, EAT, and BULIT-R by group.

	Sorority	Activity	Control
BodyDis	5.5169 (6.5836)	4.3171 (5.8755)	5.6422 (6.5341)
Bulimia	13.5730 (4.9678)	11.5366 (5.2635)	13.6697 (5.2986)
IA	14.4382 (6.8903)	14.5610 (6.7307)	15.3945 (6.9416)
Ineff	15.3708 (6.8047)	18.0732 (6.9548)	15.2385 (7.5534)
IntDist	10.7753 (5.0447)	12.5122 (4.3939)	11.2018 (5.3399)
MatFear	10.2135 (5.2925)	10.6585 (5.4204)	9.5872 (5.2884)
Perfect	5.1348 (3.4746)	5.1220 (3.8483)	5.2477 (3.6290)
Thin	7.1573 (6.0017)	6.3171 (5.7421)	7.7339 (6.3968)
EAT	61.0562 (17.7977)	57.5854 (19.4087)	63.4587 (19.4110)
BULIT-R	69.5393 (20.5338)	73.4146 (20.6009)	65.5229 (20.5285)

Table 3. Frequencies of anorexia symptomatology levels by group.

	Sorority (N=89)	Activity (N=41)	Control (N=109)
Clinical Anorexic	5	3	3
Subclinical Anorexic	8	10	22
Asymptomatic Anorexic	76	28	84

Table 4. Frequencies of bulimia symptomatology levels by group.

	Sorority (N=89)	Activity (N=41)	Control (N=109)
Clinical Bulimic	7	4	9
Subclinical Bulimic	8	9	8
Asymptomatic Bulimic	74	28	92

Table 5. Frequencies of sources of beauty pressure identified by sorority versus non-sorority subjects.

	Control	Sorority
Society	15	4
Media	85	77
Family	1	1
Men	16	10
Other Women	4	9
Self	1	3

Table 6. Frequencies of sources of thinness pressure identified by sorority versus non-sorority subjects.

	Control	Sorority
Society	21	4
Media	83	75
Family	1	1
Men	15	9
Other Women	4	10
Self	1	3

CHAPTER 3

DISCUSSION

Group Differences on Eating Disorder Measures

Sorority versus Control

Sorority women did not report significantly more eating disorders or eating disordered behaviors than control subjects. Also, when grouped into symptomatology levels, sorority women were not significantly more likely to fall in the higher symptomatic levels of anorexia or bulimia than control subjects. However, a statistically non-significant trend in the direction of the study's primary hypothesis was found. Sorority subjects tended to score more pathologically on the EAT, BULIT-R, and the Bulimia subscale than control subjects. Sorority women scored less pathologically than control subjects only on the Ineffectiveness subscale, a measure of self-doubt and insecurity. These non-significant trends suggest that sorority women may exhibit more eating disorders and eating disordered behaviors than college women in general.

The lack of statistical support for the main hypothesis can be explained in several ways. First, the results may simply indicate that sorority women are not more prone to develop eating disorders and eating disordered behaviors. However, the consistent pattern of EAT, BULIT-R, and Bulimia subscale means in the expected direction suggests that sorority women may actually be more likely to have eating disorders and eating disordered behaviors than college women in general.

The differences in group means may not have reached statistical significance because of the small sample sizes. Once the subject pool was divided

into sorority, activity, and control groups, it became apparent that the sample sizes were considerably smaller than had been hoped. Perhaps with a larger sample the difference between sorority and control women would be more pronounced and reach statistical significance. Another possibility is that the sorority system at the University of Massachusetts Amherst may not be representative of sororities nationwide. Examination of eating disorders in sororities at a variety of campuses would be useful in determining this. Future research on the prevalence of eating disorders in sororities is needed to resolve these issues of sample size and sample generalizability.

Lack of statistical significance for this analysis may also be explained by social desirability. Little research has been done on social desirability in sororities. In one study, Magaro and Ashbrook (1985) found that sorority women as a group develop feelings of self-worth mostly through "maintenance of an external orientation" and are likely to be overly concerned with searching for approval from others. It would seem likely then that sorority members are especially attuned to social norms and what is socially acceptable. Consequently, sorority women's responses on the eating disorder measures may have been somewhat suppressed by their awareness of the socially desirable responses. This would account for the less than statistically significant trend for sorority women to be more eating disordered than controls. Future research on sororities should include a measure of social desirability to clarify this possibility.

Sorority versus Activity

Sorority women did not report significantly more eating disorders or eating disordered behaviors than activity group subjects. Also, when grouped into

symptomatology levels, sorority women were not significantly more likely to fall in higher symptomatic levels of anorexia or bulimia than activity subjects. These results match the study's hypothesized relationship, but non-significant trends suggest that the results may not be definitive. On the EAT, BULIT-R, and Bulimia subscale, activity group subjects consistently scored in a more pathological direction than sorority subjects. This trend indicates that activity group subjects may be more eating disordered than sorority subjects, who, in turn, may be more eating disordered than controls.

Again, there is more than one possible explanation for the obtained results. The lack of statistical significance may reflect an actual lack of relationship between group membership and eating disordered behaviors. However, it also seems quite possible that statistical significance in these analyses was not met because of the small sample size of the activity group. As mentioned above, the sample sizes of the groups were not large. The analyses approached statistical significance, and the consistency of the pattern of means across measures suggests that the groups' differences may be meaningful. Future research using larger sample sizes will better determine whether or not the prevalence of eating disorders in sorority and activity women varies significantly.

Counter to expectations, sorority women did not display significantly more psychological distress than activity group subjects. However, one non-significant trend hints at interesting possibilities. On most of the measures of psychological distress, the two groups' means are approximately identical, but on the Ineffectiveness subscale sorority women's means tended to be considerably lower than the activity group. This trend, which approached statistical significance,

indicates that sorority women may exhibit more self-doubt and insecurity than activity group subjects, as was hypothesized.

Although the lack of statistical significance may reflect a lack of relationship between group membership and psychological distress, these analyses may not have reached significance once again due to sample size. Another possibility is that the measures of psychological distress that were included in this study did not explore essential areas of distress. The EDI subscales that measure psychological distress related to eating disorders are largely based on psychodynamic theorists' ideas about the emotional turmoil that lies at the heart of a young woman's eating disorder (e.g., Bruch, 1979). For example, the Maturity Fears subscale measures a person's fear of becoming an adult and leaving childhood, which has been proposed by psychodynamic theorists as a powerful factor in the development of eating disorders, especially anorexia. More direct, atheoretical measures of psychological distress may better tap the intrapsychic pains associated with eating disorders and accentuate between-group differences. An extension of this part of the study using a large sample size and different psychological measures would be useful in clarifying these findings.

The groups' different scores on Ineffectiveness raises some interesting questions as well. The Ineffectiveness subscale is not an established measure of self-esteem, but it explores related concepts and may be viewed as an index of low self-esteem. On this subscale, activity group subjects exhibited less distress than sorority subjects, who showed less than controls. Less distress can be seen as reflecting higher self-esteem. Although activity group members appeared to have higher self-esteem, they reported more eating disorders and eating disordered

behaviors. Similar results were found for sorority subjects, although at a lesser level.

These results call into question the relationship between self-esteem and eating disorders. Many researchers have concluded that eating disorders and eating disordered behaviors are usually accompanied by low self-esteem (e.g., Mintz & Betz, 1988). There is considerable research on the benefits of exercise for positive self-esteem (e.g., Holloway, Beuter, & Duda, 1988; Plummer & Koh, 1987), but there is also evidence that exercise and athletics may be related to eating disorders (e.g., McDonald & Thompson, 1992). Likewise, membership in a selective social group bolsters one's self-esteem, but studies, such as Crandall's (1988), indicate that sorority membership may be linked to eating disorders. It appears, then, that women who exercise or who are members of a sorority may have higher self-esteem, but they may also be more susceptible to eating disorders and/or eating disordered behaviors. This may be an indication that eating disordered behaviors are an effective method of weight management for athletes, and as such do not cause them distress. Similarly, eating disordered behaviors may be functional for sorority women in that they help women meet society's ideal body size. There is no research to support or refute these possibilities.

One explanation of this apparent contradiction is that different types of self-esteem may be related to eating disorders. Perhaps the types of self-esteem that are boosted by exercise and/or sorority membership have no bearing on eating disorders. Exploration of the implications of this is beyond the scope of this thesis. The nature of this apparent inconsistency needs to be explored further in future research.

Pre-Sorority

Exploration of the causal relationship between eating disorders and sororities was made impossible by the surprisingly small number of subjects who indicated that they are planning to join a sorority. Consequently, no conclusions can be made at this time regarding the study's hypothesis that eating disorders and eating disordered behaviors are more prevalent in women who plan to join a sorority than in college women in general. Future research should target this group of "pre-sorority" women to investigate whether eating disordered women join sororities or if eating disorders develop in women who join sororities.

Beliefs about Societal Pressures

The only statistically significant results that were found in this study concern subjects' perceptions of societal pressures to be thin and beautiful. After collapsing across the activity group, it was found that sorority women and non-sorority women have different beliefs about the sources of societal pressures to be thin and beautiful. The majority of both groups identified the media as the main source of societal pressure. However, more sorority women identified other women or themselves as the sources of pressure than non-sorority subjects did. Also, more non-sorority women identified society in general or men as the primary sources than sorority subjects did.

This information most likely reflects the orientation of the two groups' attention and priorities and may have implications for the development of eating disorders. It appears that sorority women may be more internally focused in their ideas and evaluations of pressure. They experience pressure as emanating from themselves and the women around them. Non-sorority women, on the other hand,

appear to be more externally focused in their ideas and evaluations of pressure. They do not identify the pressure as coming from within, but see it in the institutions that surround them. These differences may simply reflect character differences between the two groups, or it may have more direct implications for the development of eating disorders.

If sorority women are more likely to develop eating disorders and eating disordered behaviors than control subjects, as suggested by this study, then the sources of pressure that they identify may be more influential in general. The results of this study do not support this conclusion. Only bulimic symptomatology level was found to vary significantly with beliefs about the sources of societal pressures to be thin. The main sources of pressure that clinical bulimic subjects identified were not identical to those identified by sorority subjects. Most clinical bulimic subjects chose the media or men as the main source. Consequently, sorority women do not appear to select the sources of pressure that are associated with more pathological symptomatology. No research to date has been done on the relationship between perceptions of pressure source and the development of eating disorders. The results of this study indicate that there is more to be understood here.

Conclusions and Future Directions

The results from this study are not conclusive. However, statistically non-significant trends indicate that eating disorders and eating disordered behaviors are more prevalent in sorority women than in college women in general. Sorority women obtained more pathological scores on the EAT, BULIT-R, and Bulimia subscale than controls. The consistency of this pattern across measures indicates

that sorority women are more likely to be eating disordered than other college women. Before drawing conclusions as to whether or not sorority women truly are more susceptible, more research will need to be done. Future studies should secure a larger sample of sorority members from a number of different campuses if possible. The causal relationship between sorority membership and the development of eating disorders also needs to be explored by looking at women as they enter sororities and over time in the sorority.

With regards to the activity group, there are clear trends. Again, these trends are not statistically significant, but they are compelling in their consistency across measures and analyses. On the EAT, BULIT-R, and Bulimia subscale, activity group subjects scored in a more pathological direction than sorority subjects, who, in turn, topped control subjects. Given the analyses that were done in this study, there are indications that women involved in dance or athletics may be at more of a risk for eating disorders and eating disordered behaviors than those who are not. Further analysis of these data will be a first step in evaluating this possibility. It seems likely that future research that utilizes a larger sample will demonstrate that women who participate in sports or dance troupes are more eating disordered than sorority members, who, in turn, are more eating disordered than controls. Once this is established, examination of the causal factors involved will need to be explored. Relatedly, research is needed to examine the role of exercise in the development and maintenance of eating disorders and to clarify the relationship between athletic team or sorority membership, self-esteem, and eating disorders. Much research has been done on athletes' susceptibility to eating disorders, but little has been done on how basic exercise impacts eating disorders.

Beginnings of this research can be seen in this study, and it will likely prove to be a rich source of information.

The only statistically significant result of this study was that sorority and non-sorority subjects varied in the sources of societal pressures they identified. Sorority women more often selected other women or themselves as the main source of pressure to be thin and beautiful. Non-sorority women more often selected men or society in general. The relationship of these identified sources to eating disorders could not be determined from this study, and should be investigated further.

In conclusion, this study raises many more questions than it has answered. It is limited by its sample size and some of its measures, but regardless of these difficulties, hints of important information are evident in the study's findings. Women who participate in athletic teams and dance troupes are likely to be more eating disordered than sorority women, who are likely to be more eating disordered than college women in general. Once this has been verified, new areas of research will need to be filled in, including the causal relationship between group membership and the development of eating disorders. Also and perhaps more importantly, campus mental health professional will need to be alerted, so they can help women in these groups cope with the pain of eating disorders and eating disordered behaviors and recover.

APPENDIX: DEMOGRAPHICS SURVEY

Age _____ Year in school _____

1. What is your mother's highest level of education? (Please pick only one):
 - (A) High school or trade school
 - (B) Some college
 - (C) College graduate
 - (D) Some graduate school
 - (E) Graduate degree (masters, doctorate, or professional degree)

2. What is your father's highest level of education? (Please pick only one):
 - (A) High school or trade school
 - (B) Some college
 - (C) College graduate
 - (D) Some graduate school
 - (E) Graduate degree (masters, doctorate, or professional degree)

3. What is your approximate cumulative grade point average?
 - (A) No grades yet (first-semester student)
 - (B) Below 2.0 (C- or lower)
 - (C) 2.0 - 2.9 (C/C+)
 - (D) 3.0 - 3.4 (B/B+)
 - (E) 3.5 - 4.0 (A/A-)

4. Are you a member of a varsity athletic team?
 - (A) yes
 - (B) no

If yes, which varsity team are you involved in? (If you are involved in more than 1, please name only the one team you are most involved in.) _____

5. How many hours a week do you spend doing activities related to the team?
 - (A) not involved in a varsity team
 - (B) 1-3 hours
 - (C) 4-6 hours
 - (D) 7-10 hours
 - (E) more than 10 hours

6. How many years have you participated in this sport?
 - (A) not involved in a varsity team
 - (B) 1 year or less
 - (C) 2-3 years
 - (D) 4-5 years
 - (E) more than 5 years

7. Are you a member of a junior varsity athletic team?
(A) yes
(B) no

If yes, which junior varsity team are you involved in? (If you are involved in more than 1, please name only the one team you are most involved in.) _____

8. How many hours a week do you spend doing activities related to the team?
(A) not involved in a junior varsity team
(B) 1-3 hours
(C) 4-6 hours
(D) 7-10 hours
(E) more than 10 hours

9. How many years have you participated in this sport?
(A) not involved in a junior varsity team
(B) 1 year or less
(C) 2-3 years
(D) 4-5 years
(E) more than 5 years

10. Are you a member of an intra-mural (club) athletic team?
(A) yes
(B) no

If yes, which intra-mural team are you involved in? (If you are involved in more than 1, please name only the one team you are most involved in.) _____

11. How many hours a week do you spend doing activities related to the team?
(A) not involved in an intra-mural team
(B) 1-3 hours
(C) 4-6 hours
(D) 7-10 hours
(E) more than 10 hours

12. How many years have you participated in this sport?
(A) not involved in an intra-mural team
(B) 1 year or less
(C) 2-3 years
(D) 4-5 years
(E) more than 5 years

13. If you are not currently a member of an athletic team, have you ever been?
(A) yes
(B) no

14. How many years were you a member of that athletic team?
(A) never involved in an athletic team
(B) 1 year or less
(C) 2-3 years
(D) 4-5 years
(E) more than 5 years

15. Are you a member of a sorority?
(A) yes
(B) no

If yes, of which sorority are you a member? _____

16. During which year of college did you join the sorority?
(A) not involved in a sorority
(B) freshman year
(C) sophomore year
(D) junior year
(E) senior year

17. How many hours a week do you spend doing activities related to the sorority?
(A) not involved in a sorority
(B) 1-3 hours
(C) 4-6 hours
(D) 7-10 hours
(E) more than 10 hours

18. If not currently a member of a sorority, were you ever a member of a sorority?
(A) yes
(B) no

If yes, of which sorority were you a member? _____

19. How many hours a week did you spend doing activities related to the sorority?
(A) never a member of a sorority
(B) 1-3 hours
(C) 4-6 hours
(D) 7-10 hours
(E) more than 10 hours

20. If not currently a member of a sorority, are you planning to join a sorority?
(A) yes
(B) no

If yes, which sorority are you planning to join? _____

21. Are you currently involved in a dance troupe or company?
(A) yes
(B) no
22. How many hours a week do you spend doing activities related to dance?
(A) not involved in dance
(B) 1-3 hours
(C) 4-6 hours
(D) 7-10 hours
(E) more than 10 hours
23. How many years have you been involved in a dance group?
(A) not involved in dance
(B) 1 year or less
(C) 2-3 years
(D) 4-5 years
(E) more than 5 years
24. If not currently involved in dance, have you ever been involved in a dance troupe or company?
(A) yes
(B) no
25. How many years were you involved in a dance group?
(A) never involved in dance
(B) 1 year or less
(C) 2-3 years
(D) 4-5 years
(E) more than 5 years

For questions #26-45, you will be asked to rate the importance of a number of characteristics for a given topic.

★ Rate each characteristic using the following scale:

- (A) very important
- (B) important
- (C) somewhat important
- (D) not very important
- (E) unimportant

PLEASE DO NOT FORGET TO RECORD YOUR ANSWERS ON THE OPSCAN FORM

What are the characteristics that people find attractive in you?

- | <u>characteristic</u> | <u>rating</u> |
|-----------------------|---------------|
| 26. intelligence | _____ |
| 27. facial beauty | _____ |
| 28. personality | _____ |
| 29. figure (body) | _____ |

When you meet someone whom you are romantically interested in, what are the characteristics that attract you to them?

- | <u>characteristic</u> | <u>rating</u> |
|-----------------------|---------------|
| 30. handsomeness | _____ |
| 31. personality | _____ |
| 32. physique | _____ |
| 33. intelligence | _____ |

What are the characteristics that men find attractive in women?

- | <u>characteristic</u> | <u>rating</u> |
|-----------------------|---------------|
| 34. personality | _____ |
| 35. facial beauty | _____ |
| 36. intelligence | _____ |
| 37. figure (body) | _____ |

What characteristics are important to have in order to be popular?

- | <u>characteristic</u> | <u>rating</u> |
|-----------------------|---------------|
| 38. figure (body) | _____ |
| 39. intelligence | _____ |
| 40. facial beauty | _____ |
| 41. personality | _____ |

What characteristics are important to have in order to be successful in the career you would like to have?

- | <u>characteristic</u> | <u>rating</u> |
|-----------------------|---------------|
| 42. facial beauty | _____ |
| 43. personality | _____ |
| 44. intelligence | _____ |
| 45. figure (body) | _____ |

For questions 1-14, please respond directly on the questionnaire.
Do not answer these questions on the opscan form.

1. What is your current weight? _____ pounds
2. What is your current height? _____ feet, _____ inches
3. How much would you ideally like to weigh? _____ pounds
4. Do you consider yourself to be: (Please pick only one)
 - (A) overweight _____
 - (B) underweight _____
 - (C) normal weight _____
5. What is the most you have ever weighed (excluding during pregnancy)? _____ pounds
 - A. When did you first reach this weight? _____ months ago
 - B. How long did you weigh this weight? _____ months
6. What is the least you have weighed as an adult? _____ pounds
 - A. When did you first reach this weight? _____ months ago
 - B. How long did you weigh this weight? _____ months
7. What weight have you been at for the longest period of time? _____ pounds
 - A. At what age did you first reach this weight? _____ years old

8. If your weight has changed a lot over the years, is there a weight that you keep coming back to (when you are not dieting)? Yes No
- A. If yes, what is that weight? _____ pounds
- B. At what age did you first reach this weight? _____ years old
9. Have you ever been on a diet for the purpose of losing weight? Yes No
- A. If yes, at what age did you first go on a diet? _____ years old
10. What is the most weight you have ever lost? _____ pounds
- A. Did you lose this weight on purpose? Yes No
- B. What weight did you get down to? _____ pounds
- C. At what age did you reach this weight? _____ years old
11. How much do you think you would weigh if you did not consciously try to control your weight? _____ pounds
12. Do you work-out (i.e., weight lifting, jogging, swimming, aerobics, etc.) on a regular basis?
 Yes No
- A. If yes, how many times a week do you work-out? _____ times per week
- B. How long, on the average, do you work-out each time? _____ hour(s)
- C. How many years have you been working out? _____ years
13. Do you feel that there are pressures to be thin in our society? Yes No
- A. If yes, where do you think these pressures come from?

14. Do you feel that there are pressures to be beautiful in our society? Yes No
- A. If yes, where do you think these pressures come from?

BIBLIOGRAPHY

- American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (3rd ed.-revised). Washington, D. C.: Author.
- American Psychiatric Association (1995). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, D. C.: Author.
- Bruch, H. (1979). The golden cage. Toronto: Random House.
- Carter, J. A., & Eason, J. (1983). The binge-ing and purging syndrome within a college environment: Bulimarexia. College Student Journal, 17 (2), 107-115.
- Crandall, C. S. (1988). Social contagion of binge eating. Journal of Personality and Social Psychology, 55 (4), 588-598.
- Drewnowski, A., Yee, D. K., Kurth, C. L., & Krahn, D. D. (1994). Eating pathology and DSM-III-R bulimia nervosa: A continuum of behavior. American Journal of Psychiatry, 151 (8), 1217-1219.
- Garner, D. M. (1991). Eating Disorder Inventory-2: Professional Manual. Odessa, Florida: Psychological Assessment Resources, Inc.
- Garner, D. M., & Garfinkel, P. E. (1979). The Eating Attitudes Test: An index of the symptoms of anorexia nervosa. Psychological Medicine, 9, 273-279.
- Garner, D. M., Garfinkel, P. E., Rockert, W., & Olmsted, M. P. (1987). A prospective study of eating disturbances in the ballet. Psychotherapy and Psychosomatics, 48, 170-175.
- Garner, D. M., Garner, M. V., & Rosen, L. W. (1993). Anorexia nervosa "restricters" who purge: Implications for subtyping anorexia nervosa. International Journal of Eating Disorders, 13 (2), 171-185.
- Garner, D. M., Olmsted, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. International Journal of Eating Disorders, 2, 15-34.

- Gross, J., Rosen, J. C., Leitenberg, H., & Willmuth, M. E. (1986). Validity of the Eating Attitudes Test and the Eating Disorders Inventory in bulimia nervosa. Journal of Consulting and Clinical Psychology, 54 (6), 875-876.
- Haimes, A. L., & Katz, J. L. (1988). Sexual and social maturity versus social conformity in restricting anorectic, bulimic, and borderline women. International Journal of Eating Disorders, 7 (3), 331-341.
- Hesse-Biber, S. (1989). Eating patterns and disorders in a college population: Are college women's eating problems a new phenomenon? Sex Roles, 20 (1- 2), 71-89.
- Hesse-Biber, S. (1992). Report on a panel longitudinal study of college women's eating patterns and eating disorders: Noncontinuum versus continuum measures. Health Care for Women International, 13, 375-391.
- Holloway, J. B., Beuter, A., & Duda, J. L. (1988). Self-efficacy and training for strength in adolescent girls. Journal of Applied Social Psychology, 18 (8), 699-719.
- Huberty, C. J., & Morris, J. D. (1989). Multivariate analysis versus multiple univariate analyses. Psychological Bulletin, 105 (2), 302-308.
- Klemchuk, H. P., Hutchinson, C. B., & Frank, R. I. (1990). Body dissatisfaction and eating-related problems on the college campus: Usefulness of the Eating Disorder Inventory with a nonclinical population. Journal of Counseling Psychology, 37 (3), 297-305.
- Lundholm, J. K., & Littrell, J. M. (1986). Desire for thinness among high school cheerleaders: Relationship to disordered eating and weight control behaviors. Adolescence, 21 (83), 573-579.
- Magaro, P. A., & Ashbrook, R. M. (1985). The personality of societal groups. Journal of Personality and Social Psychology, 48 (6), 1479-1489.
- McDonald, K., & Thompson, J. K. (1992). Eating disturbance, body image dissatisfaction, and reasons for exercising: Gender differences and correlational findings. International Journal of Eating Disorders, 11 (3), 289-292

- Meilman, P. W., von Hippel, F. A., & Gaylor, M. S. (1991). Self-induced vomiting in college women: Its relation to eating, alcohol use, and Greek life. Journal of American College Health, 40, 39-41.
- Mintz, L. G., & Betz, N. E. (1988). Prevalence and correlates of eating disordered behaviors among undergraduate women. Journal of Counseling Psychology, 35 (4), 463-471.
- Pasman, L., & Thompson, J. K. (1988). Body image and eating disturbance in obligatory runners, obligatory weight lifters, and sedentary individuals. International Journal of Eating Disorders, 7 (6), 759-769.
- Petrie, T. (1993). Disordered eating in female collegiate gymnasts: Prevalence and personality/attitudinal correlates. Journal of Sport and Exercise Psychology, 15, 424-436.
- Plummer, E. K., & Koh, Y. O. (1987). Effect of aerobics on self-concepts of college women. Perceptual and Motor Skills, 65, 271-275.
- Powers, P. S., Schulman, R. G., Gleghorn, A. A., & Prange, M. E. (1987). Perceptual and cognitive abnormalities in bulimia. American Journal of Psychiatry, 144 (11), 1456-1460.
- Rippon, C., Nash, J., Myburgh, K. H., & Noakes, T. D. (1988). Abnormal eating attitude test scores predict menstrual dysfunction in lean females. International Journal of Eating Disorders, 7 (5), 617-624.
- Stoutjesdyk, D. & Jevne, R. (1993). Eating disorders among high performance athletes. Journal of Youth and Adolescence, 22 (3), 271-282.
- Striegel-Moore, R. H., Silberstein, L. R., Frensch, P., & Rodin, J. (1989). A prospective study of disordered eating among college students. International Journal of Eating Disorders, 8 (5), 499-509.
- Striegel-Moore, R. H., Silberstein, L. R., & Rodin, J. (1993). The social self in bulimia nervosa: Public self-consciousness, social anxiety, and perceived fraudulence. Journal of Abnormal Psychology, 102 (2), 297-303.

- Taub, D. E., & Blinde, E. M. (1992). Eating disorders among adolescent female athletes: Influence of athletic participation and sport team membership. Adolescence, 27 (108), 833-848.
- Thelen, M. H., Farmer, J., Wonderlich, S., & Smith, M. (1991). A revision of the Bulimia Test: The BULIT-R. Psychological Assessment, 3, 119-124.
- Thompson, M. G., & Schwartz, M. (1982). Life adjustment of women with anorexia and anorexic-like behavior. International Journal of Eating Disorders, 1, 47-60.
- Welch, G., Thompson, L., & Hall, A. (1993). The BULIT-R: Its reliability and clinical validity as a screening tool for DSM-III-R bulimia nervosa in a female tertiary education population. International Journal of Eating Disorders, 14 (1), 95-105.

