University Students' Risk for Disordered Eating

Laura Calderon

INTRODUCTION

Eating disorders, including anorexia nervosa, bulimia nervosa, binge-eating disorder, and atypical eating disorder (eating disorder not otherwise specified) are estimated to occur in more than 5-10 million Americans, with most prevalence in young and adult females (Patrick, 2002). It is estimated that 85% of these disorders had their onset during the adolescent period (*Journal of American Dietetic Association*, 2001). The prevalence of eating disorders has increased dramatically over the past three decades according to researchers (Fisher et al., 1995; Kreipe and Birndorf, 2000). In fact, eating disorders are the third most common chronic illness in female adolescents. However, many who display "disordered eating" symptoms do not meet the current DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders) criteria for either anorexia nervosa or bulimia nervosa and may be classified as EDNOS (eating disorders not otherwise specified); in fact, EDNOS account for about 50% of the population of eating disorders (American Psychiatry Association, 2000).

The EAT-26 (Eating Attitude Test-26 item) has been used to screen for eating disorder risk or symptoms of disordered eating, and has been used in the National Eating Disorders Screening Program (Garner et al., 1982). The EAT-26 alone does not yield a specific diagnosis or an eating disorder, but does show risk for disordered eating. Scores at or above 20 suggest a risk for an eating disorder. According to Garner (1997), approximately 15% of adolescent or young adult females score at 20 or more on the EAT-26. The term "disordered eating" is more inclusive and includes such behaviors as meal skipping, binging, use of laxatives, purging, food avoidance and food restriction. "Disordered eating" covers a broad spectrum of eating behavior including eating disorders, while the term "eating disorder" is defined quite specifically by diagnostic criteria (Asgarian, 2003)

METHODS

The survey instrument was distributed in a university entry level Nutrition course. This course is an elective that does not count towards general education requirements. There is no health or nutrition major at this university. The survey consisted of the Eating Attitudes Test (EAT) 26 item instrument (Garner et al., 1982), demographic data, and several questions known to be related to disordered eating. This instrument has been widely used in the National Eating Disorders Screening Program. In addition demographic information was also collected on this survey. This data included self-reported height and weight (current, lowest, highest) age, gender, ethnicity, participation in sports or athletics, and current class level in school. An additional 5 questions related to disordered eating were also asked. These included: (1) Have you gone on eating binges where you feel that you may not be able to stop? (2) Have you ever made yourself sick (vomited) to control your weight or shape? (3) Have you ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape? (4) Have you ever been treated for an eating disorder? (5) Have you recently thought of or attempted suicide?

The surveys were distributed during one large lecture style Nutrition class and collected within 20 minutes of distribution. The students were instructed not to put their name on the survey; the survey was anonymous. The instructor was available to answer any questions that the students had regarding the survey. All students in class on that particular day completed the survey. A total of 144 usable surveys were collected and analyzed. The data were analyzed using the Statistical Package for the Social Sciences, version 9.0 (1988).

A presentation on the risks of disordered eating followed the survey. Resources, and referrals were distributed; appointments with the faculty and health center were encouraged.

RESULTS

The study population was the entire class of students in a basic Nutrition, non-majors, course at a university in California. See Table 1 for the demographic characteristics of this population. The age range was 18-26, with a mean age of 21; 92.4% of this population was 22 years of age or younger. 26% of the population was male with the remaining 73.6%

being female. The majority of students were Caucasian (58.3%), followed by Asian (15.3) and Hispanic (12.5) with only 1.4% Afro-American (Table 1). Of interest is that none of the students scored at or above a BMI of 30, denoting obesity, while 18.5% were classified as overweight (BMI 25.0-29.9).

In this study, 23.6% of females scored at or above 20 on the EAT-26 (Table 2). Only 1% of the male population showed a score of 20 or over on this screening test. Additionally, 9.4% of the females scored above 30 on this screening test, suggesting the presence of a clinical disorder. None of the males scored above 30 on the EAT-26.

Table 2 also shows the responses to the five questions on the survey. Of interest is the number of females who reported that they had binged, purged, used laxatives or had been treated for an eating disorder during the past 6 months, and yet scored less than 20 on the EAT-26. When these students are added to the number who scored over 20 on the EAT-26, clearly 42.5% of this female population show a risk for disordered eating.

Table 1: Characteristics of the student population surveyed (N=144)

	N	*%*
Gender		
Male	38	26.4
Female	106	73.6
Ethnicity Caucasian	84	58.3
Asian-American	22	15.3
Afro-American	2	1.4
Hispanic	20	13.0
American – Indian	0	0
Other	16	12.0
University education level	58	40.3
Fresh man	39	27.1
Sophomores	22	15.3
Juniors	25	17.3
Seniors		

Table 2: EAT-26 and question scores in females N=106

	N	*%*
EAT-26:		
Score >20	25	23.6
Score >30	10	9.4
Questions:	*Number YES*	*%*
1. Have you gone on eating binges where you feel that you may not be able to stop?	28	26.4
Within the past 6 months?	24*	22.6
2. Have you ever made yourse lf sick (vomited) to control your weight or shape?	7	6.6
Within the past 6 months?	4**	3.8
3. Have you ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?	14	13.2
Within the past 6 months?	7***	6.6
4. Have you ever been treated for an eating disorder?	6****	5.7
5. Have you recently thought of or attempted suicide?	7	6.6
EAT-26 scores >20 + those with symptoms of disordered eating within the past 6 months who scored less than 20 on the EAT-26.	45	42.5

*13 of these scored less than 20 on the EAT-26.
**1 scored less than 20 on the EAT-26.
***5 scored less than 20 on the EAT-26.
****1 scored less than 20 on the EAT-26.

DISCUSSION

This college population, located in a middle to upper-class coastal community, appear to have a higher risk for disordered eating than other college populations. Although most surveys of adolescent and/or college age females report that approximately 15% score at or above 20 on the EAT-26, this college population showed a higher risk for disordered eating with 23.6% of the females scoring at or above 20. There may be several reasons for this. First, the mean age for this population is 21 years of age, a young student population. It is known that symptoms of disordered eating appear most in adolescence and early adulthood. Second, the ethnicity is primarily Caucasian, and eating disorders are thought to occur more frequently in the Caucasian population. Third, a large percentage (72.2%) engage in athletics, sports, or recreational physical activity. Some studies have shown a higher degree of disordered eating in those who participate in sports. Since this course was offered through the Physical Activities Department, it might be that students in sports and athletics are more aware of the offering of this class, have had instructors encourage them to take this class, or just have more interest in nutrition related topics when compared to other students.

Of interest is the number of females who reported that they had binged, purged, used laxatives or had been treated for an eating disorder during the past 6 months, and yet scored less than 20 on the EAT-26. When these students were added to the number who scored over 20 on the EAT-26, clearly 42.5% of this female population show a risk for disordered eating. Disordered eating, is an even more inclusive term including behaviors such as restrictive eating, food avoidance, meal skipping, dieting, use of laxatives, purging and use of diuretics. If these

behaviors had been measured, the statistic would be much higher for disordered eating. Disordered eating is probably a precursor to full fledged eating disorders. Prevention efforts to target those with disordered eating tendencies at high schools and universities could be beneficial in preventing eating disorders.

Eating disorders are often not noticeable, and therefore often not treatable, until they become more advanced. Those with disordered eating tendencies tend to be very secretive about their behaviors. Therefore, programs to prevent and intervene with existing eating disorders need to be aggressive in their approach. Intervention should not solely be services offered at a Student Health Center. Intervention should include screenings, visits to dorms, on-campus programs, and awareness campaigns.

The Student Health facility on this campus is very aware of the problem of eating disorders on the campus and has taken measures to prevent and intervene with appropriate measures. A follow-up on the student population would certainly be helpful in determining whether or not the intervention activities are successful.

ACKNOWLEDGEMENTS

I would like to acknowledge Patrick Thompson, MS, RD for his input into this project.

REFERENCES

American Psychiatric Association: *Diagnostic and Statistical Manual for Mental Disorders*. 4th Ed. APA Press, Washington DC (2000).

Asgarian, L.: Preventing disordered eating. SCAN, a practice group of the Amer. Diet. Assoc., accessed on 2/21/03 at http://www.nutrifit.org/nutr_info/prevented.html.

Fisher, M., Golden, N.H., Datzman, K.D., Dreipe, R.E. and Schebendach, J.: Eating disorders in adolescents" a background paper. *J. Adol. Health Care*, **16:** 420 - 437 (1995).

Garner, D.M., Olmsted, M.P., Bohr, Y. and Garfinkel, P.E.: The eating attitudes test: psychometric features and clinical correlates. *Psycho. Med.,* **12:** 871-878 (1982).

Garner, D.M.: Psychoeducational printiples in treatment. In: *Handbood of Treatment for Eating Disorders.* D.M. Garner and P.E. Garfinkel (Eds.). Guilford Press, New York (1997).

Journal of the American Dietetic Association. Position of the American Dietetic. Association: nutrition intervention in the treatment of anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified (EDNOS). *J. Am. Diet. Assoc.,* **101:** 810-819 (2001).

Kreipe, R.E., Birndorf, D.O.: Eating disorders in adolescents and young adults. *Med. Clin. N.Am.,* **84:**1027-1049 (2000).

Patrick, L.: Eating disorders: a review of the literature with emphasis on medical complications and clinical nutrition. *Altern. Med. Rev.,* **7:**184-202 (2002).

Statistical Package for Social Sciences (SPSS), Version 9.0., SPSS, INC., Chicago, IL (1998).

KEYWORDS Eating Disorders. Disordered Eating. Anorexia Nervosa. Bulimia Nervosa. University. Student

ABSTRACT 144 usable EAT-26 surveys were returned at one point in time in order to determine disordered eating characteristics amongst college age students at one university in California. This study examined the presence of disordered eating, as evidenced by the EAT-26, in a university population. In addition, demographic data, as well as behaviors known to be related to disordered eating were collected. Risk for disordered eating was much higher than expected with 23.6% of the females in this population scoring above 20 on the EAT-26. When other risk factors for disordered eating are factored in, 42.5% of the female population in this particular class showed a risk for an eating disorder. This study demonstrates the importance of an eating disorder intervention at the college campus. In addition, it is speculated that some campuses, for a variety of reasons, may have a higher population of eating disordered females. A presentation on the risks of disordered eating followed the survey. Resources, and referrals were distributed; appointments with the faculty and health center were encouraged.

Author's Address: **Laura Calderon,** 5212 Barwick Road, Santa Barbara, CA, 93111, USA.
Telephone : (805) 683-6174 or (323) 343-5439, *Fax:* (323) 343-6482
E-mail: lcalder@calstatela.edu