Coed Versus Single-Sex Residence Halls: Correlates of Disordered Eating Behavior

Kari Flicek & Betsey Urbas

Faculty Sponsors: Carmen Wilson-VanVoorhis & Betsy L. Morgan,
Department of Psychology

ABSTRACT

Research has shown an increase of more than 500% in the occurrence of eating disorders over the past 20 years (Latzer & Schatz, 1999). Of the 5 million Americans affected every year by these disorders, 90% are female (Cox, Lantz, & Mayhew, 1997). Incidences on college campuses are on the rise as well. Often referred to as the "breeding ground" for disordered eating behavior (Striegal-Moore, Silberstein, & Rodin, 1986), college campuses nationwide show prevalence rates of 3-19% for bulimia and 1-2% for anorexia nervosa for females (Striegel-Moore, Silbersteing, Frensch & Rodin, 1988). Previous research has shown that residence hall composition may have an effect on eating behavior. It has been found that women living on coed floors have significantly higher levels of bulimic symptomalogy and showed higher levels of body dissatisfaction, drive for thinness, and self-induced vomiting than those living on single-sex floors (Berg, 1988). Variables such as body awareness (Garfinkel & Garner, 1982), fear of negative evaluation (Boskind-Lodhal, 1976; Pyle, Mitchell, & Eckert, 1981), and inconsistent sex role attitudes and behaviors (Rost, Neuhaus, & Florin, 1982) have been given as possible explanations for the discrepancy found in disordered eating behaviors among women living in coed versus single-sex residence halls. The current research investigated the prevalence of disordered eating behaviors between single-sex and coed residence halls in men and women, and also explored these instigating variables and their effects on disordered eating behavior. Male and female participants from both single-sex and coed residence halls at two midsized, Midwestern universities completed questionnaires containing measures of disordered eating behavior, body awareness, fear of negative evaluation, and sex role behavior and attitudes. We predicted that females who live in coed residence halls will have a higher incidence of disordered eating than those living in single-sex residence halls. We also predicted that men will have a lower incidence of eating disorders than women. We found no effect of residence hall composition on eating behaviors, yet found main effects of gender on feminine attitudes, eating behavior on fear of negative evaluation, and gender as well as eating behavior on social physique anxiety. Although our main hypothesis was not supported, the transition and adjustment to the college environment still may cause or exacerbate disordered eating behaviors, and therefore educational programs may be needed.

INTRODUCTION

Eating disorders are characterized by disturbances in eating behavior and patterns. The prevalence of eating disorders is increasing at a rate of epidemic proportion; over the past 20 years, research has shown an increase of more than 500% in the incidence of these disorders. It is estimated that 5 million Americans are affected by an eating disorder every year (Latzer & Schatz, 1999, Becker, Grinspoon, Kilbanski, & Herzog, 1999). Ninety percent of all individuals with an eating disorder are women and girls, making these diseases the third most common chronic illness among females in the United States (Cox, Lantz, & Mayhew, 1997; Steiner-Adair & Purcell, 1996). The two most common forms of eating disorders are anorexia nervosa and bulimia nervosa.

Individuals with anorexia have an intense fear of gaining weight or becoming fat, even though they are underweight. The essential feature of anorexia nervosa is a disturbance in perception of body shape and weight. Weight loss is accomplished primarily through reduction in total food intake that in most eventually ends up being a very restricted diet sometimes limited to only a few foods.

Bulimia Nervosa is "characterized by repeated episodes of binge eating followed by inappropriate compensatory behaviors such as self-induced vomiting, misuse of laxatives, diuretics, other medications, fasting, or

excessive exercise" (APA, 2000). Binge eating is defined as eating an amount of food that is larger than most people would eat during some similar period of time and under similar circumstances. In addition to binge eating, some individuals engage in purging behaviors designed to compensate for or get rid of the food they consumed such as vomiting and the misuse of laxatives and diuretics. Purging relieves the physical discomfort of the binge, and it reduces the fear of gaining weight. Diagnostic criteria require binge eating and compensatory behaviors to occur at least twice a week for three weeks (APA, 2000).

Over the last 20 years, the incidence of anorexia has remained stable, while the incidence of bulimia has increased significantly (Rolls, Federoff, & Guthrie, 1991). The onsets of both diseases range from late adolescence to early adult life, and frequently accompany stressful life events, such as leaving for college (APA, 2000). Indeed, past research has shown that eating disorders and disordered eating are widespread on college campuses (Mintz & Betz, 1988; Harris, 1995), and college campuses have been called the "breeding ground" for the development of eating disorders (Striegal-Moore, Silberstein, & Rodin, 1986). While it is estimated that approximately 1-3% of the general population is affected by an eating disorder (Shisslak, Crago & Estes, 1995), 3-19% of college females suffer from bulimia nervosa and 1-2% from anorexia nervosa (Striegel-Moore, Silberstein, Frensch & Rodin, 1988). The rate of males with bulimia is one-tenth of that in females (APA, 2000). There are many factors that can play a role in the development of eating disorders such as body dissatisfaction, drive for thinness, and social physique anxiety (Lofton, 2000). The college environment and experience often tend to drive many of these factors (Klemchuk, Hutchinson, & Frank, 1990).

College is often the first experience living from home, and individuals have to learn how to move from dependence on their parents and friends to independence and autonomy (Provost, 1989). Research has suggested that during this time of turbulence, weight is often perceived as something that can be controlled when everything else appears to be out of control. Dieting then becomes a way to take control and gain independence (Rolls et al., 1991). During this overwhelming time students also discover who they are and begin to develop intimate relationships. Dating is strongly emphasized on college campuses and may bring about competition regarding the achievement of beauty (Streigel-Moore et al., 1986). The college environment can be seen as a semi-closed environment, a community where interests and values are shared, that may encourage an individual to be overweight or underweight depending on the feedback that is provided to be thinner or fatter. Within this community societal values are also held regarding the "ideal-thin" body shape and are reinforced by interacting as a member of the community. The college community and the values from within the community, therefore intensify the sociocultural pressure to be thin by providing a context in which people should live their lives (Sobal, 1995).

A variety of studies have focused on the college environment as it relates to the incidence of eating disorders, but one study focused specifically on the residence hall population in connection to disordered eating (Berg, 1988). Berg investigated the incidence of eating disorders among college females living in both coed and single-sex residence halls and examined differences in prevalence rates between coed and single-sex floors within coed buildings. Berg measured symptoms of anorexia nervosa including dieting behavior, preoccupation with weight, fear of fatness, and body image variables; assessed the cognitive and behavioral dimensions of both anorexia and bulimia; and measured the presence of bulimia using a standard scale. Twelve percent of respondents scored in the anorexic range and 15% fell in the bulimic range (Berg, 1988). Women living on coed floors had a significantly higher incidence of bulimic symptomalogy and showed higher levels of body dissatisfaction, drive for thinness, and self-induced vomiting than those living on single-sex floors.

One possible explanation of the results is that the presence of males increases women's awareness of body appraisal by others. Garfinkel and Garner (1982) suggest that many young women entering a coed residence not only have to cope with leaving home, but also may struggle with living in close contact with men for the first time. A second possible explanation focuses on fear of rejection by men (Boskind-Lodahl, 1976; Pyle, Mitchell, & Eckert, 1981). According to Boskind-Lodahl (1976), women with bulimia define their self-worth according to the approval of men, and therefore have a strong fear of men and their power to reject. Women living in coed halls with men rather than single-sex halls may feel more threatened by the possible rejection of men. A related explanation suggests that an inconsistency in sex role attitudes and behaviors may relate to eating disorder behaviors. Recent research found that women with bulimia experience a significant attitude-behavior discrepancy with sex role behavior being less "liberated" than sex role attitude (Rost, Neuhaus, & Florin, 1982). Individuals with bulimia often espouse "liberated" attitudes and state that they want to be independent, when their actual behavior conforms to the traditional behavior of passivity and dependency. This gap may become a significant source of anxiety and a possible binge precipitant (Rost et al., 1982). Females living among men may be more aware of this gap and therefore subject to disordered eating behavior.

Berg's study not only confirmed the high rates of eating disorders among female college students, but also highlighted the possibility that residence hall composition may be related to disordered eating behavior. There is

evidence that individuals who are psychologically vulnerable to developing eating disorders have difficulty adapting to changes in lifestyle (Neuman & Halvorson, 1983). Since a majority of students are away from home for the first time, it is possible that residence hall living is a situation that could serve as a catalyst for the development or exacerbation of eating problems.

The current research will investigate the prevalence of eating disorders between single-sex and coed residence halls in men and women. We predict that females who live in coed residence halls will have a higher incidence of disordered eating than those living in single-sex residence halls. We predict that men will have a lower incidence of eating disorders than women. However, due to the paucity of literature about disordered eating behavior in men, we are unable to predict any relationship between disordered eating in men and residence hall composition. We hope to add to a small but growing literature on disordered eating behavior among men. Given the previously discussed possible reasons for the discrepancy of disordered eating behaviors among women living in coed versus single-sex residence halls, we will further explore variables such as sex role behaviors and attitudes, body awareness, and fear of negative evaluation and their effects on disordered eating behavior. Since no study to date has specifically evaluated these relationships, we are unable to hypothesize which of the possible explanations might have the most explanatory power. If our other hypotheses are supported, they will suggest that coeducational living in residence halls may cause or exacerbate disordered eating behaviors, and therefore educational programs may be needed.

METHOD

Participants

Participants were 187 students (151 women; 87 in single-sex, 64 in coed halls, and 36 men; 8 in single-sex and 28 in coed halls) at two midsize, Midwestern universities (Winona State University and University of Wisconsin-LaCrosse). Most participants were freshmen and sophomores (88.2%), 53% of participants chose their current hall as their first choice, and students were split as to whether they wanted to live there again in the preceding year (32.6%=yes, 29.9%=no). Average age of participants was 18.82 years, and ethnic backgrounds included mostly Caucasians (96.3%) as well as Native Americans (1.1%), Asian Americans (1.1%), African Americans (.5%), Chicano/Latino/Hispanic (.5%), and other ethnicities (.5%). Completion of the questionnaire indicated informed consent.

Materials and Procedure

The survey consisted of the Eating Disorders Inventory-2, the Bem Sex Role Inventory, the Fear of Negative Evaluation Scale, and the Social Physique Anxiety Scale. Previous research has found these measures to be valid and reliable (Garner, 1990; Shatford & Evans, 1986; Bem, 1981; Hart, Leary, & Rejeski, 1989; Watson & Friend, 1969). Demographic questions included the gender of the participants, year in school and living preference (single-sex or coed hall) prior to entrance into the university as well as subsequent to experience. Questionnaires were distributed to participants' mailboxes, and returned to the front desk of their hall upon completion. Participants were given debriefing information, including where they can get help in case they have questions or want feedback on the results. As an incentive to participate, respondents were entered in a raffle to win a DVD player.

Data Analysis and Dissemination Statement

This study will explore the relationship of disordered eating behavior and residence hall composition using an independent samples *t*-test. Underlying variables relating to these behaviors were examined using 3 2 X 2 X 2 ANOVAS. Independent variables were gender, eating behavior (disordered vs. healthy), and residence hall composition (single-sex vs. coed). Dependent variables were scores on the Bem Sex Role Inventory, the Fear of Negative Evaluation Scale, and the Social Physique Anxiety Scale.

RESULTS

Using an independent samples *t*-test, we found that women scored significantly higher on the Eating Disorders Inventory-2 than men (women=2.83, *SD*=.60; men=2.54, *SD*=.49; t (183)=2.67, p=.008). We used a median split to group participants by eating behaviors. Those scoring in the top 50% on the EDI-2 were classified as "disordered eating," while those scoring in the bottom 50% were classifies as healthy eating.

A main effect of gender on feminine attitudes was found upon analyzing the Bem Sex Role Inventory (women=5.07, *SD*=.57; men=4.58, *SD*=.68; F (1, 144) =11.84, p=.001). There were no main effects for masculine or neutral attitudes nor were any interactions established.

An examination of the Fear of Negative Evaluation Scale revealed a main effect of eating behavior (disordered eating= 19.05, *SD*= 7.78; healthy eating= 10.65, *SD*= 6.81; F (1, 134) = 26.11, p= .000). No main effects of gender or residence hall composition were found, and no interactions between variables surfaced.

Answers on the Social Physique Anxiety Scale showed a main effect of gender (women= 3.18, *SD*= .81; men= 2.49, *SD*= .84; F (1, 145) = 13.80, p= .000) as well as a main effect of eating behavior (disordered eating= 3.58, *SD*= .65; healthy eating= 2.55, *SD*= .71; F (1, 145) = 46.23, p= .000). We observed no main effect of residence hall compositions or any interactions among variables.

DISCUSSION

The results of our study did not support our main hypothesis, yet offered reinforcement with regards to supplementary hypotheses. Namely, we found no effect of residence hall composition on the eating behavior of the residents, contrary to what Berg found in her 1988 study. She observed that females living in coed residence halls had a higher incidence of disordered eating than females living in single-sex residence halls. The main disparity in our research was simply a slight difference in the actual composition of the residence halls we observed in comparison to those that Berg studied in her work. In our study, we looked at coed halls containing single-sex floors, whereas Berg investigated coed floors within coed residence halls. Even though the halls we utilized were coed, no interaction between the single-sex floors within the hall may have occurred. Because of this limited or nonexistent contact between males and females, the females didn't encounter the experience of living in such close contact with individuals of the opposite sex. As was discussed in Berg's study (1988), this close contact was thought to possibly cause stress that may lead to disordered eating.

Berg (1988) explained this discrepancy through the fear of rejection by males, level of approval by males, and sex role difficulties. We took her research a step further and actually examined and tested these explanations, discovering that while residence hall composition may have little or no effect on eating behavior, other variables such as body awareness, sex role behaviors and attitudes, and fear of negative evaluation in fact do.

The Fear of Negative Evaluation Scale produced results showing a main effect of eating behavior on fear of negative evaluation. Those people with more disordered eating scored higher on the Fear of Negative Evaluation Scale. Berg (1988) and Boskind-Lodahl (1976) suggested that women's disordered eating was a result of fear of rejection by men. Given this notion, it may be that the fear of being evaluated negatively may lead to disordered eating, although given the quasi-nature of the independent variable, the data are truly correlational in nature.

Scores on the Social Physique Anxiety Scale illustrated main effects of gender and eating behavior, meaning women and those with disordered eating reported more anxiety about their body image. Past research has found that men are more satisfied with their bodies and are more likely to see themselves as underweight and want to be heavier. Women, on the other hand, are less content with their body shape, and they desire to be thinner than they perceive themselves to be and thinner than men actually like them to be (Fallon & Rozin, 1985). In conjunction, women's status has been more dependent on physical attributes than that of men, and therefore they are under more pressure to conform to the current physical ideal (Mazur, 1986 & Seid, 1989), which, today, is portrayed through the media as slim and flawless.

Other notable findings include results from the Bem Sex Role Inventory, which revealed a main effect of gender of feminine attitudes—in other words, women gave more feminine answers than men. On the other hand, there was no main effect of gender on masculine or neutral attitudes, meaning women gave just as many masculine and neutral answers as men. This coincides with the notion that within our society it's fine for females to be tomboys and at the same time be girly, yet it is unacceptable for men to be the slightest bit feminine.

LIMITATIONS

There were many limitations and confounds within our research that may have affected our results and should therefore be addressed. For example, our sample size was smaller than we had expected, perhaps due to the fact that we conducted our data collection during a busy time of the semester. Not only did this factor affect the representative nature of our population, there were also far more female participants than male participants in our study and the number of coed residents who participated far outweighed the single-sex residents who took part. Other limitations include the fact that we did not take sexual orientation into consideration or look at the amount of interaction that occurs in the residence halls as a whole.

Regardless of whether residence hall composition does in fact have an effect on eating behavior, programs need to be implicated and utilized to inform and educate students on the dangers of eating disorders. As was mentioned

before, the transition to college can be very trying and arduous, and if an individual is not psychologically and emotionally adapting to this new environment, ways to gain control of their lives may surface through weight and eating pattern manipulation (Rolls, Federoff, & Guthrie, 1991). Students need knowledge and skills that enable them to challenge cultural messages and norms that lead to disordered eating behavior and body intolerance (Steiner-Adair & Purcell, 1996). Informing a smaller part of the community of this epidemic is the first step to understanding and preventing its persistence in society as a whole.

ACKNOWLEDGEMENTS

We would like to thank Dr. Carmen Wilson-VanVoorhis and Dr. Betsy L. Morgan for their help and guidance throughout this experience, as well as the UW-L Undergraduate Research Grant committee for believing in our research and amply funding our work. We would also like to extend our gratitude to all the residents that participated and took the time to fill out our lengthy questionnaire.

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