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BINGE EATING AND BODY IMAGE IN A SAMPLE OF THE DEAF COLLEGE POPULATION

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Abstract

Binge eating and perceptual distortion in body image are two characteristics common to persons with eating disorders. The current study was conducted to see if: (1) the incidence of binge eating in deaf college students is as prevalent as is that among hearing college students and (2) deaf women have different perceptions in body image than hearing women. One hundred deaf students completed written questionnaires administered simultaneously in sign language and spoken English. Results showed that 17% of the deaf college students surveyed reported current binge eating and that 46% of the female deaf college students overestimated their body size. This study determined that eating disorders have made their inroads into the deaf community as portrayed by the evidence of eating disorder and distorted body image among the deaf students in this survey.

Introduction

There are two variables common to all eating syndromes and disorders: the behavior known as binge eating (for the anorexic patient it is a refusal to eat) and a distortion in body image. The presence of either of these features does not warrant a clinical diagnosis of any particular eating disorder or syndrome. In the treatment of any of the eating disorders, focusing on these themes are essential steps toward recovery. Treatment of disorders requires the use of information gleaned from research.

Empirical research in the area of eating disorders has become increasingly prominent in the psychology literature. Data supporting the prevalence of eating disorders in the general population (especially among the college-aged) have allowed appropriate intervention, prevention, and treatment plans to be modeled and implemented.

Eating disorder research among the general population is commonly conducted in college

settings. Following examples set forth by Halmi et. al. (1981), Hart and Ollendick (1985), Nagelberg, et. al. (1984), Katzman et. al. (1984), and Striegel-Moore and Rodin (1986), the exploratory research of this study was conducted among a sample of students at Gallaudet University, the only liberal arts institution for deaf students in the nation. Nearly all of the research conducted on hearing college samples identified that sociocultural pressures on women do influence their eating behaviors and body image. This raised the question about cultural influences on deaf women, such as: "Do deaf women receive the same cultural messages as their hearing counterparts?" "Is body image for deaf women actually different than for hearing women?" One woman stated, "If coming to love and accept our bodies is a difficult process for every woman in this society, it is especially hard with a disability" (Sanford, 1984).

Since social factors influence the psychology of food and eating in white North American culture (Orbach, 1978), the question is raised if minority groups, including non-white and disabled, experience the same set of cultural messages. Very few studies have been conducted among minority groups, but those which have observe that eating disorders tend to relate more to cultural than socioeconomic influences (Nevo, 1985; Hsu, L.K. G. 1987; Lacey J.J. & Dolan, B.M. 1988; Silber, T.J. 1986; Snow, J.T. & Harris, M.B. 1989). In 1987, Gray, Ford and Kelly conducted a bulimia study in a Black college population and determined that food and weight were less important to Black female college students as compared to Caucasian female college students. Other minority studies include a national lesbian health care study. The National Lesbian Health care survey found a lower rate of bulimia and a higher rate of overeating among lesbians (Bradford & Ryan, 1987). No samples of students with physical disabilities have been found in research on eating disorders.

Using the premises set forth by Gray et. al. (1987) that socioeconomic influences are less important in relationship to bulimia than are cultural influences in a Black sample, this study was designed to determine if the same premises are true among a specific disabled population. To date no information has been collected on a deaf sample and considering the differences, if any, in either incidence of eating problems and distortion of body image perception.

Because of their hearing loss, deaf women do not have complete access to the auditory media (radio or television) which propagates the latest diets and exercise programs. The fact that fewer of these messages may be experienced by deaf women does not mean that the message conveyed is any less powerful or compelling. It is the supposition of the researchers that deaf women are equally susceptible to comparing their bodies with other women and to overestimating their body size in similar proportions to their hearing peers.

In fact, Doctors (1976) investigated the sex role perceptions of deaf adolescent women and found they have a more traditional perception of their sex roles when compared to their hearing peers. Wax and Danek (1982) reported that deaf women experience a more limited educational, vocational, and socioeconomic status than their hearing peers. Based on these two observations, deaf women may be at a higher risk for developing an addiction or obsession with food. Also, deaf women may place a greater value on keeping their information private from the "hearing world" than do hearing women (premise based on reports by Falberg, 1985; Vernon, 1965) and, therefore, would be reluctant to share their experiences with "outside" researchers, resulting in smaller number of incidence reporting of eating disorders than hearing college students.

The purpose of this study is to present implications determined from an exploratory research study of eating attitudes and behaviors

and body image perception among a college sample of deaf students.

Method

Subjects

The sample consisted of one hundred hearing impaired university summer session students. Fifty-eight were female and forty-one were male. Their ages ranged from 18 to 41, with a mean of 22.9. The male participants showed a wider range of age representation than did the female. The mean height for all subjects was 66.7 inches with a standard deviation of 4.2; mean weight was 148 pounds with a standard deviation of 34.4. Fifty percent of the females and 51% of the males were of normal weight for their height, (Metropolitan Life Insurance Tables). Subjects were classified normal if the weight they reported was 90-110% of the mean ideal weight for a medium frame (Pyle, et. al, 1986). The race of the subjects was primarily Caucasian (83%). Most students were from sophomore or junior classes (71%). Sixty-one percent had two deaf parents. The vast majority preferred to communicate in American Sign Language (ASL) or Pidegeon Sign English (PSE). During the time of the research, most of the students lived in dormitories on campus, with slightly more females living off campus. Table 1 shows the characteristics of the male and female groups.

Instruments

The measurement instruments (self-reported surveys and questionnaires) used in previous studies of eating disorders among college students require that the participants have an 8th grade reading level of written English. If the assessment tool is more clinical in nature, more advanced levels of reading are required. In working with this sample of deaf students, the researchers wanted an instrument that would be completely understood by all the students. The questionnaire that seemed

TABLE 1

SUBJECT CHARACTERISTICS OF MALE AND FEMALE GROUP

Group:	Male	Female
Communication Mode Preferred		
Signed English	4%	2%
American Sign Language (ASL)	60%	42%
Pidgeon Sign English (PSE)	36%	51%
Oral	0%	5%
Hearing Impairment		
Deaf	87%	74%
Hard of Hearing	13%	26%
High School Education		
Mainstreamed	49%	46%
Residential State School	51%	54%
Living Status		
On-Campus/Dorm	80%	68%
Off Campus	20%	32%

most appropriate for this deaf student sample was a 34-item questionnaire developed by Gray and Ford (1985). Gray's questionnaire is an operational version of the DSM-III diagnostic criteria for bulimia and provides demographic as well as attitudinal information about the disorder. However, there were certain words and phrases that needed to be examined before being used with the deaf students. The questionnaire and an accompanying memo were sent to professional staff members at Gallaudet University's Counseling Center, asking for comments on any words or concepts that were difficult to understand. The questionnaires were then modified and the new version distributed, for comments and suggestions, to the paraprofessional student peer counselor staff of the dormitories at the University.

In addition, a drawing titled "How do you see yourself?" (Woolev & Woolev, 1986) was added to the questionnaire (Figure 1). The drawing consists of a series of male and female body shapes, ranging from very thin to obese. Three responses were required: how the person currently perceives his/her body; how the person would like his/her body to look; and which body size is perceived as most sexually attractive. Because of the visual orientation of many deaf students and the significance of body image in the study of eating disorders, the researchers felt this was an important piece of additional piece of information.

Because of the lack of previous studies on deafness and eating disorders, questions regarding demographics of deafness were added to the instrument. These questions were selected from the written intake procedure routinely asked of students who sought psychological counseling through the Gallaudet University Counseling Center. The final version of the instrument used with the deaf students included: 1) a 17-item section regarding eating and related behaviors, as adapted from Gray, et. al., (1985); 2) a 10-item section of demographics; 3) a 15-item section regarding weight and family history also adaptedfrom Gray, et. al., (1985); and 4) the "How do you rate yourself?" drawing.

Procedure

After being introduced to the nature of the study and asked for the cooperation for thirty minutes of their class time, ten summer school instructors granted permission to visit their classes in English, Accounting, Psychology, Mathematics, and Business Administration. Following recommendations from Gray regarding the proposed investigation of deaf students, questionnaires were distributed in the classroom setting and collected at the end of the class period. The administration of the questionnaire was carefully given in both English and American Sign Language (ASL). The ASL version was administered by researcher Hills, who holds certification from the Registry of Interpreters of the Deaf. Students could use whichever mode of sign communication they preferred. To insure anonymity and hopefully elicit more genuine and honest responses from the students no names were written on the questionnaires. Anonymity was emphasized in the study because the maintenance of confidentiality and personal privacy of deaf persons helps to build trust and communication (Falberg, 1985).

An introduction to the questionnaire was developed in which a standardized presentation in sign language and/or spoken English (depending upon student needs) described eating disorders in general. The definitions of anorexia nervosa and bulimia and their accompanying characteristics were given. Five vocabulary words on the questionnaire (binge, laxatives, diuretics, abnormal, and fast) were defined and clarified for each group of students. concepts introduced were presented on large posterboards and exhibited in the classrooms while students completed the questionnaires. Researcher Hills remained in the classroom to answer questions while students completed the questionnaires.

To insure the welfare of the subjects, it was stated that any student who had concerns or became distressed about the topic should come to the Gallaudet University Counseling Center for follow-up information. Treatment was available in individual and group modalities by researchers Hills and Smith Rappold to students who requested services. Students were also offered information about the results of the study at their request.

Results

The results of the study are presented in two sections: 1) binge eating and related behaviors in the student sample and 2) disturbance in body image, particularly in female students.

Binge Eating and Related Behaviors

Seventeen percent (21% of the women and 12% of the men) of the study group responded affirmatively to the question "Do you currently binge (feel you cannot control your eating, and eat a large amount of food in a short space of time)?" (Daily = 5.9%; few times a week = 23.5%; few times a month = 70.6%).

Nineteen percent of the respondents answered yes to "Did you ever experience bingeing in the past?" No difference was shown between numbers of men and women in relation to binge eating. Of those who reported current binge eating, 56% of the students reported binge eating in the past. Forty-one percent (41%) binged alone; 59% did not. The most common reasons for ending the binge were "When you feel like stopping." and "When you feel stomach pain."

To the question "Do you attempt to control your weight by vomiting (throwing up)?", seven percent responded affirmatively. Five were female (71%). Fourteen percent reported they attempted to control theirweight by strict dieting and fasting. Ten were female (71%). Thirty-nine percent of the subjects indicated they do have a strong fear of gaining weight. Twenty-nine of those students were female (74%). Sixty-six percent indicated that food and weight control were very important in their family. Thirty-eight of those were female (68%).

TABLE 2

SITUATIONS RESPONDENT IDENTIFIED THAT MARKED THE END OF AN EATING BINGE

Question: When you binge, does the binge usually end: (check all that apply)

(n=17)	Yes	No
When you feel stomach pain	63%	37%
When you go to sleep	59%	41%
When someone interrupts you	33%	67%
When you feel like stopping	73%	27%
When you make yourself vomit	19%	81%

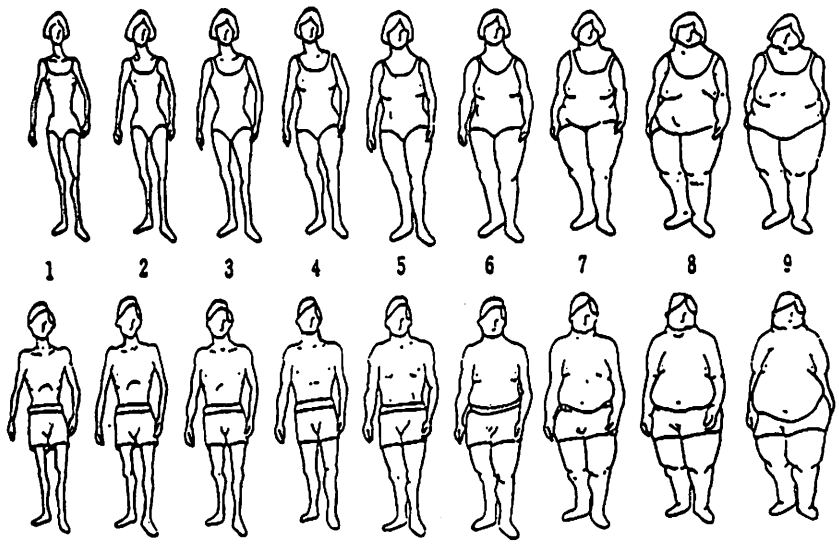
Disturbance in Body Image

According to the 1983 Metropolitan Life Insurance Table, only 20 percent of the female subjects in this study were actually overweight. However, forty-five percent of the female subjects perceived themselves as overweight. A cross tabulation of actual and perceived weight variables revealed that forty-six percent of the female subjects perceived themselves as heaver than their actual weight. Only eight percent of the males perceived themselves as heavier. This suggests that deaf female subjects in this study did indeed perceive themselves as larger than they are.

This finding was verified by the "How do you see yourself?" drawing portion of the survey. The female students consistently selected a "preferred" body size that was smaller than their current one.

FIGURE 1

MODE RESPONSES OF BODY TYPES SELECTED BY STUDENTS



From: "Use of the Danish Adoption Register for the Study of Obesity and Thinness" by A. Stukard, T. Sorenson, and F. Schulsinger, in The Genetics of Neurological and Psychiatric Disorders. Edited by S. Kety, 1980, p. 119. Copyright 1983 by Raven Press. Taken from article "Thinness Mania", S. Woolev, O.W. Woolev, American Health, October 1986, P. 70.

Question: Look at the different picture above. Then, mark on top of the body that you feel:

	Male	Female
Is what you look like now	4.5	4.0
Is what you want to look like	4.0	3.0
Is what is most sexually attractive	4.0	3.0

Discussion

The results of this study support the hypotheses that deaf female college students binge eat and have a distorted body image. This confirms the researchers belief that disordered eating and dissatisfaction with one's body is as much of a problem for deaf college-aged women as it is with other college-aged women in society. However, it appears that binge eating in deaf college students is less than hearing students. A possible explanation for this finding lies in the fact that the sample was drawn from a summer school population. Summer school students may include more members of the community at large, making this sample not representative of a deaf cultural setting. If the study were repeated during the academic school year, different results may have been found.

Further analysis of the binge eating variable is consistent with previous research among hearing students in that more students reported binge eating in the past than in the present. If remittent binge eating occurs, then the nineteen percent (19%) who binged in the past could possibly be in remission and likely to binge again. Another consistency with studies among hearing students in that daily binge eating is less common than monthly or yearly binge eating.

At this point, several speculations can be made about eating disorders among deaf college students. One student reported daily binge eating and four reported weekly binges. It appears that this constitutes "recurrent" binge eating, a clinical criteria for bulimia nervosa (American Psychological Association, 1987). There is strong indication that students who answered affirmatively to the vomiting, strict dieting and fasting questions are currently bulimia or bulimarexic. Two male subjects reported being anorexic in the past. Additional research in this area should include a measurement instrument that includes all the DSM III-R diagnostic criteria for anorexia and bulimia nervosa.

The most important finding of the present study is its consistency with previous research in the field of eating disorders with regard to sex differences. As evident by the reported higher tendency among female students in the current binge eating, vomiting, strict dieting and fasting variables, there was a greater tendency among female students to experience disordered eating behaviors. There was also a greater tendency among female students to hold beliefs and attitudes common to hearing women with eating disorders, such as "feeling" overweight, experiencing strong fears of gaining weight, and feeling that food and weight control was emphasized in their families.

The most provocative finding in this study is the disturbance in body image that the female deaf college students revealed. Almost half (46%) of the female subjects held a distorted perception of weighing more than their actual weight. Earlier in this article, we indicated that poor body image can result in disturbances in hunger awareness and set the stage for disordered eating in women. It is safe to speculate that deaf female college students are indeed at risk for developing eating disorders.

The implications of this study are crucial for mental health professionals who work with deaf college students and those who work with deaf individuals in the community. The women in this study were predominately younger underclass women, and, therefore, findings cannot be attributed to the general deaf female population. However, the large number of college women in our sample who overestimated their body size suggests that deaf female members of the community at large may be at risk for eating disorders as well. Clinicians who work with deaf women in particular need to be alert to the possibilities that their clients may struggle with eating disorders.

For mental health professionals working with deaf individuals in the general population, routine assessment procedures should address concerns around food and weight. Due to the secretive and embarrassing nature of eating disorders, anorexic and bulimia women could be overlooked by clinicians who perform psychological assessments on deaf individuals if these questions are not directly asked.

In terms of preventions, more intervention in the area of eating disorders among deaf students is needed. Both in mainstreamed programs and residential state schools for the deaf, faculty and staff members should be aware of students at risk for eating disorders. School counselors and psychologists need specialized training in this area so that deaf students with eating disorders can receive appropriate treatment. Mental health field counselors need to acknowledge that eating disorders exist in the deaf community and attempt to get more education and information to better serve the treatment needs of the deaf population.

Young female deaf adolescents should learn that eating disorders are life threatening. School curriculums should include discussions on body image and cultural influences in their health and sexuality courses. Students need instruction on making health choices around food choices and understand the implications for their bodies when these choices are not made.

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