

# A PILOT STUDY OF THE EATING/DIETING BEHAVIORS AND ATTITUDES OF COLLEGE-AGED WOMEN WHO ARE HEARING IMPAIRED VS. THEIR HEARING PEERS

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## Abstract

Eating disorders have recently come into focus as a significant problem with college-aged women. Professional literature addresses eating disorders in several cultural minorities; however, women who are hearing-impaired have not been recognized as a group that may have significant issues with food. This preliminary study is a comparison of two groups of college-aged women (hearing and hearing-impaired), and their feelings about their bodies, dieting and eating. The survey tool is based on criteria from the Diagnostic and Statistical Manual Revised-III, 1987, (DSMR-III) for eating disorder behavior, and also serves as a basis for a larger scale study. The results indicate that women who are hearing-impaired do not show a difference in their attitudes toward food and dieting behaviors. This study also shows a trend toward bingeing behaviors, diet pill usage and skipping meals by women who are hearing-impaired. Recommendations for professionals who work with women who are hearing-impaired are also discussed.

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## Introduction

Eating disorders, specifically anorexia and bulimia, have come into focus lately as an increasing problem among many young women,

especially on college campuses. Anorexia is a disorder where women starve themselves, while women who are bulimic will overeat and then purge themselves through vomiting or other means. They are both serious and addictive in nature; professional intervention normally is needed to stop the eating disorder cycle.

A variety of factors cause eating disorders including societal influences, familial dysfunction, distorted body image, and other psychological issues. Women who are hearing-impaired, as a group, have these same concerns, but they have been largely ignored as a population with eating disorder issues. The reasons for this may be due to communication barriers in screening women who are hearing-impaired for eating disorders, or the false idea that they are immune to societal influences because they are hearing-impaired.

The fact is that any woman can have issues about dieting and eating behaviors. Unfortunately, to date, only one study has been conducted on binge-eating and body image with women who are deaf by Hills, Rappold and Rendon (1991). Further research is needed to determine the numbers of women who are exhibiting anorexic or bulimic behaviors and are also hearing-impaired.

This study will attempt to show that college-aged women who are hearing-impaired and their hearing peers have similar attitudes towards body image and eating/dieting behaviors. This is based on criteria established from the DSMR-III (Diagnostic and Statistical Manual III-Revised,

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1987), and also from the self report of the women interviewed.

### **Literature Review**

Empirical research in the area of eating disorders has become increasingly prevalent in the psychological journals, along with research pertaining to the hearing-impaired population. Unfortunately, there has only been one previous study that deals with both of these issues by Hills, et al. (1991).

Previous research that specifically focuses on eating disorders indicates that the prevalence of bulimia and anorexia, especially on college campuses, has increased over the past decade due to a variety of societal, emotional, and familial factors (Halmi, Falk & Schwartz, 1981), (Katzman, Wolchick & Braver, 1984). Hart and Ollendick (1985) concluded that familial problems such as poor communication, can increase the risk of body image and eating disorder problems. In addition, Silverstien (1988) reports that societal pressures and restrictive, over-protective environments may pre-dispose women to dieting and food abuse.

Research on women who are hearing-impaired has shown that there may be emotional and familial issues that young women who are hearing-impaired face. A report from the National Deaf Women's Conference of 1976, held at Gallaudet, indicated that women who are hearing-impaired have significant difficulties with communication within the home and familial interaction, along with feelings of isolation. Self-esteem issues, communication problems and a restrictive home environment combined, can all set the stage for eating disorder behavior in a young woman who is hearing-impaired.

Hills, et al. (1991) tied these issues together and concluded that women who are college-aged and deaf are not immune from the influences of society simply because they cannot hear. Hills, et al. (1991)

also reported that deaf, female college students do behave in binge eating behaviors and have body image problems. Based on this research and previous studies on both eating disorders and women who are hearing-impaired, prevalence of eating disorders with women who are deaf or hard-of-hearing is not an issue that can be easily ignored.

### **Methodology**

#### **Recruitment of Subjects**

Ten college-aged hearing women and ten women who are hearing-impaired were recruited from undergraduate anatomy and physiology classes on the Northern Illinois University Campus. Subjects were chosen by handing out a sign up sheet that was developed for "a study of eating."

Subjects were contacted over the telephone or TDD (Telecommunication Device for the Deaf) and given a detailed description about what the study would involve. Subjects were then given specifics about the study and asked to bring a sample of a day's eating behaviors.

Referral information was developed for individuals who felt that they needed support or were in considerable crisis about their eating behaviors and wanted additional information. Subjects who were curious about the results of the study were also given the name and number of the author to contact upon completion .

#### **Tools**

A survey instrument was developed based on criteria developed from the DSMR-III (1987). This instrument included questions that are based on diagnosis for anorexia nervosa, and bulimia. Compulsive overeating and bulimarexia are also diagnosed by some professionals to be eating disorders; however, they are not listed separately in the DSMR-III.

The questions were arranged into two sub-groups: 1. eating and dieting behavior, and

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### 2. subjective responses to weight and food.

Conversion of the questions into sign language (American Sign Language and Pidgin Signed English) was determined by four individuals, three who use sign as a native language and a certified interpreter.

Two concepts were later revised due to inconsistency in being understood: use of the word diuretics (water pills) and questions referring to "normal binges." It is also very important to note that this survey was developed only for comparative analysis and was not intended for professional diagnosis. Reliability and validity studies on this instrument would need to be conducted to determine its validity as a diagnostic aid. The small sample size of this study is also a limitation of this study and would need to be reconsidered upon reconstruction of this survey.

### Results

The results of this study are presented in two categories to correspond with the self-report survey: 1. Eating and Dieting Behavior and 2. Subjective Responses to Weight and Food. Results are reported comparatively between women who are hearing-impaired (HI group) and women who are not hearing-impaired (N-HI group).

#### Eating and Dieting Behaviors

Weight Issues. Subjects of the HI and N-HI groups all reported that they were at a normal or near-normal weight for their age and height. Statistical analysis of the HI and N-HI groups using a two by two Chi square computation revealed  $\chi^2 = .150, p > .05$ , which was not a significant result.

TABLE 1 - COMPARISON OF DIETING BEHAVIORS BETWEEN COLLEGE WOMEN WHO ARE HEARING IMPAIRED AND THEIR HEARING PEERS.

Dieting Behaviors	N-HI GROUP	HI GROUP
Fasting	0	0
Water Pills (diuretics)	1	0
Hoarding Food	0	0
Secretly Eating	2	1
Dieting Continually	2	1
Exercising Habitually	10	7
Liquid Diets	10	10
Skiping Meals	10	10
Diet Pill	10	10

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In addition, subjects from both groups reported that they had dieted at some time in their lives previous to the study. Eighty percent of the N-HI group felt that their diets had been "successful," while only sixty percent of the HI group reported success. (Success was defined as reaching a goal weight or perceived body image goal. Maintenance of that change was not included.) Chi square analysis showed that there was not a statistically significant difference between the two groups with  $\chi^2 = .6818$ ,  $p > .05$ . However, there was a trend in the N-HI group towards habitual weight gain and loss that was not evident in the HI group of women.

Dieting Methods. Table 1 indicates that subjects used a variety of methods for dieting, with 100% of subjects from both groups reporting the use of diet pills. In addition, liquid diet drinks, and skipping meals were also used by all subjects in the study. Although perceived success of these dieting "tools" was not calculated, several subjects from the HI group indicated that liquid diet drinks were currently popular in the dormitory setting and had been helpful in weight reduction. Other dieting behaviors, such as continual dieting, use of

water pills (diuretics), and secret binge eating behaviors were not widely used in each group, (twenty percent or less of each group used these methods even occasionally).

After comparing results of the dieting behaviors used, it was shown that there was only one area in which the HI and N-HI groups differed: the use of exercise. The N-HI group was much more likely to use exercise as a means to lose weight or maintain weight loss, while the HI group did not report this as frequently. Statistically speaking, the results were not significant, with seventy percent of the HI group reporting the use of exercise, and one hundred percent of the N-HI group indicating exercise use.

Although results indicate that women who are hearing-impaired and their hearing peers are very similar in their dieting behaviors, it should also be noted that similarities tended to be with "unhealthy" behaviors such as meal skipping, diet pills and liquid diets. Healthy dieting/eating behaviors (limiting high-fat foods and exercising moderately) were not often reported by either group.

TABLE 2 - BINGE EATING BEHAVIORS

OCCURRENCE	N-HI GROUP	HI GROUP
Daily	1	1
2 Times Weekly	2	0
1 Time Weekly	2	2
Less Than:		
1 Time Weekly	1	1
Do Not Know	5	1

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**Binge Eating/Purging Behaviors.** Binge eating is defined in the DSMR-III as eating an abnormally large amount of food (more than a typical meal) in a short amount of time. Chronic binge eating behaviors occur two times weekly or more, and are often conducted in secret. Binge eating behavior was reported at an 80% rate for both groups (see Table 2). This result should be considered with caution due to the subjective nature of bingeing behaviors. In addition, overeating in the form of snacking was reported at fifty percent for the N-HI group and a sixty percent response rate for the HI group, which was not statistically significant. However, both of these responses were higher than previous results reported by Hills, *et al.* (1991). Only 21% of the women reported binge eating. Purging behaviors (vomiting after meals, use of laxatives or compulsive exercise) were reported by only one woman in the N-HI group who had been previously diagnosed with the binge-purge cycle of bulimia. No other subjects reported this behavior either previously or at the time of the study.

### Subjective Responses to Weight and Food

**Overeating/Body Image.** All respondents expressed concern over their personal appearance. The survey did not question subjects about appearing attractive to the opposite sex, which was to avoid a heterosexual bias, yet, seventy percent of hearing women and eighty percent of hearing-impaired women added that their largest concern with their weight was based on how they looked to men. Additionally, half (fifty percent), of the HI group and seventy percent of the N-HI group reported that they spent "a lot of the day" or "most of the day" thinking about food and what their body image is. This was not a statistically significant difference, however, a noted trend with women who were in the N-HI group and a possible increasing trend with women in the HI group.

Subjective reasons for overeating or bingeing behaviors are listed in Table 3, with the most common reasons reported as stress, boredom, loneliness. The least frequent reasons for overeating were reported as happiness, comfort,

TABLE 3 - REASONS FOR OVEREATING BEHAVIOR.

Reasons	N-HI GROUP	HI GROUP
Boredom	10	4
Loneliness	1	1
Comfort	0	0
Anger	0	0
Happiness	0	0
Stress	9	5
No Feelings	0	2

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anger and not being able to identify reasons for overeating. There was a significant difference in the HI and the N-HI group in reasons for overeating. Women who were in the HI group were less aware of why they overeat, but were also less likely to overeat due to boredom.

**Daily Eating Behaviors.** All subjects were asked to report a day of typical eating behaviors. Concurrent with previously reported results, skipping meals was reported by all of the subjects in the N-HI group, and ninety percent of subjects in the HI group. The most common meal skipped was breakfast in both groups. Reasons for this behavior were not asked, as the food lists were Bwritten privately by the subjects to insure confidentiality and as much accuracy as possible.

Another noted trend was late-night eating behaviors or restrictive dieting behaviors through the day, then snacking at night. Favorite foods were listed as pizza, "beer nuggets" (deep fried dough served with pizza sauce) or popcorn, which are all common snack foods for students on the Northern Illinois University campus.

Although caloric intake differed from person to person, daily average caloric intake for the HI group was calculated to be 1,345.2 calories daily, which is slightly below the typical 1,500 calories for a woman from the age of 18-25. The N-HI group reported similar results at 1,242 calories daily, which is not statistically different, but is considered to be a "dieting" caloric intake, based on guidelines from the American Medical Association (1992).

### **Discussion**

This study supports the general hypothesis that the behaviors and attitudes of women who are

hearing-impaired, in regards to weight, dieting and food issues on the NIU campus, do not differ from that of their hearing peers. However, there are several subtle differences and trends that should be addressed: 1. Women who are hearing-impaired show equal usage of diet pills, skipping meals, liquid dieting, and also equal their hearing peers in binge eating behaviors; 2. Women who are hearing-impaired also show a slight difference in exercise habits and are less knowledgeable as to why they engage in such behaviors as binge eating; 3. Concern over how men perceive women who are hearing-impaired was also a common self-reported concern.

Due to this trend of using unhealthy means to control weight and other emotional issues such as feelings of isolation or lack of communication, it is suggested that similar research be conducted on a larger scale to see if the trends continue across a larger group of subjects.

It is also suggested that information on eating disorders in general be provided for professionals who work with young women who are hearing-impaired to aid them in recognition and referral. This may include providing information about eating disorder behavior at the grade school level and including teachers the process of awareness.

Finally, appropriate means of identification should also be considered in the field of eating disorders, and adaptations made to aid in communication or other special needs of women who are hearing-impaired. Testing and other screening devices may need to be revised for the purpose of determining eating disordered behavior in women who do not use English as a primary language. In addition, psychologists and programs that serve women who are at risk for eating disorders need to be educated concerning the special needs of the hearing-impaired population.

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## **References**

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- American Psychiatric Association (1987). *Diagnostic and statistical manual of mental disorders (3d ed., rev.)*, pp. 64-69. Washington, DC.
- Doctors, S. (Ed) (1976). *Report of the National Deaf Women's Conference*. Washington D.C.: Gallaudet College.
- Halmi, K.A., Falk, J. & Schwartz, E. (1991). Binge eating and vomiting: A survey of a college population. *Journal of Psychology and Medicine*, 11(4), 697-706.
- Hart, K.J. & Ollendick, T.H. (1985). Prevalence of bulimia in working women and university women. *American Journal of Psychiatry*, 142(7), 851-854.
- Hills, C., Rappold, E. & Rendon, M. (1991). Binge eating and body image in a sample of the deaf college population. *Journal of the American Deafness and Rehabilitation Association*, 25(2), 23-27.
- Katzman, M.A., Wolchick, S.A. & Braver, S.L. (1984). The prevalence of binge eating and bulimia in a nonclinical college sample. *International Journal of Eating Disorders*, 3, 53-62.