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DISORDERED EATING, ACCULTURATION, AND TREATMENT-SEEKING IN A COMMUNITY SAMPLE OF HISPANIC, ASIAN, BLACK, AND WHITE WOMEN

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The purpose of this study was to examine disordered eating, acculturation, and treatment-seeking in a community sample of Hispanic, Asian, Black, and White women. Participants were 118 women with disordered eating (49 Hispanic, 21 Asian, 23 Black, and 25 White) and 118 healthy controls. Interviews were conducted to assess eating and weight-related behaviors, psychiatric symptoms, acculturation, and health care usage. Results indicated that the four ethnic groups were equally likely to present behavioral symptoms of bulimia, anorexia, or a binge-eating disorder. Hispanics were the most likely to use diuretics, and Black women were the most likely to use laxatives. Despite psychological distress among the eating disorder group, only a small percentage had received treatment during the past year; the eating disorder group was more likely than the controls to report that they had been denied treatment. More acculturated individuals were more likely to suffer from eating problems, and among the eating disorder group, less acculturated individuals were less likely to have received treatment.

The purpose of this study was to examine the relationship between disordered eating, acculturation, and treatment-seeking in a community sample of ethnically diverse women. To date, little is known about eating disorders, the influence of acculturation, and treatment-seeking for eating disorders in women of minority groups.

The study of eating disorders primarily has focused on White adolescents and women. For years, the general belief had been that eating-related problems are rare in women of minority groups. This impression was largely due to the fact that these populations are grossly underrepresented in clinical samples. More recently, research interest has focused on the prevalence and manifestation of eating- and weight-related problems in Black women (e.g., see reviews by Crago, Shisslak, & Estes, 1996; Striegel-Moore & Smolak, 1996). However, very little yet is known about disordered eating patterns in Hispanic or Asian women, and few studies have compared similarities and differences among these four ethnic groups. One study of overweight dieters found no differences in body size assessment nor in perceptions of reasonable weight loss among Hispanic, Asian, Black, and White women and men (Cachelin, Striegel-Moore, & Elder, 1998).

Studies of Black girls and women generally indicate that, although they tend to be heavier than White girls and women (Fisher, Pastore, Schneider, Pegler, & Napolitano, 1994; Kuczynski, Flegal, Campbell, & Johnson, 1994; Rand & Mulda, 1990; White, Hudson, & Campbell, 1985), they report less dissatisfaction with their weight (Rucker & Cash, 1992), diet and exercise less (Abrams, Allen, & Gray, 1993; Casper & Offer, 1990; Emmons, 1992), and perceive themselves to be thinner than they actually are (Desmond, Price, Hallinan, & Smith, 1989). With regard to rates and manifestation of actual eating disorders, however, the findings have been disparate. Some researchers have reported lower rates of clinical eating disorders in Black, as compared to White, females (Gray, Ford, & Kelly, 1987; Gross & Rosen, 1988; Johnson, Lewis, Love, Lewis, & Stuckey, 1984; Nevo, 1985); others have reported similar rates in the two groups (Bruce & Agras, 1992; Lachenmeyer & Muni-Brander, 1988; Maceyko & Nagelberg, 1985; Van Thorre & Vogel, 1985). Because of ethnic differences in body image and body dissatisfaction (e.g., Striegel-Moore et al., 2000; Willey et al., 1996), some experts have hypothesized that there are ethnic differences in risk for...
specific types of eating disorders; Black girls, as compared to White girls, may be at greater risk for developing a binge-eating disorder but at lower risk for developing eating disorders in which the pursuit of thinness is a core symptom (i.e., anorexia nervosa and bulimia nervosa) (Striegel-Moore et al., 2000).

Studies of Hispanic girls and women indicate that eating disorders do occur in this population (Hiebert, Felice, Wingard, Munoz, & Ferguson, 1988; Joiner & Kashubeck, 1996; Snow & Harris, 1989). The rates reported are similar to those for their White counterparts (Bruce & Agras, 1992; Gross & Rosen, 1988; Johnson et al., 1984; Lachenmeyer & Muni-Brander, 1988; Smith & Krejci, 1991), and severity of binge eating may be greater among Hispanics (Fitzgibbon et al., 1998; Smith & Krejci, 1991).

Obesity, which often accompanies binge eating, is common among Hispanic women and is recognized as a major health issue in this population (Hazuda, Haffner, Stern, & Eifler, 1988; Kuczynski et al., 1994). Some evidence indicates that Hispanic culture may be more tolerant of overweight or obesity than is White American culture. Studies of Hispanic adolescents indicate that their perceptions of whether or not they are overweight are more strongly influenced by their weight relative to peers than by their weight relative to health-based standards (Hall, Cousins, & Power, 1991). Findings with Hispanic women indicate that, although they may report similar levels of body dissatisfaction as White women, they still are more likely to rate themselves as attractive (Altabe, 1998) and are less likely to diet and exercise (Harris & Koehler, 1992; Stern, Pugh, Gaskill, & Hazuda, 1982). Preliminary research with men indicates that Hispanics, like Blacks, prefer heavier female figures than do White men (Allison, Huy, Fournier, & Heynsfield, 1993), creating for women a subculture in which heavier figures are acceptable.

Similarly, plumpness traditionally has been accepted in Asian cultures as a sign of prestige and affluence. As a result, many researchers have believed that eating problems are rare in Asian countries (Hall, 1995). Recent reports of disordered eating in Japan (e.g., Matsuurra, Fujimura, Nozawa, Iida, & Hirayama, 1992) and China (see Lee, 1993) are, therefore, unexpected. One possible explanation is that Asian and American women may be attempting to compensate for negative images of their culture in the United States by pursuing physical perfection represented by the White American beauty ideal (Hall, 1995). Matsuurra and colleagues (1992) found that young women in Japan, who generally tend to be smaller than White American women, wished to lose weight because they misperceived their weight to be heavier than it actually was. Desire for thinness and overestimation of one's current size are both associated with anorexia nervosa. Although the rate of anorexia nervosa in Asian women is believed to be low, the actual rate of this disorder in non-White populations is unknown (Pumariega, Edwards, & Mitchell, 1984).

Of the few empirical studies that have investigated eating disorders in Asian women, a number (Button, Revel, & Palmer, 1998; Hill & Bhatti, 1995; Ratan, Gandhi, & Palmer, 1998; Wardle, Bindra, Fairclough, & Westcombe, 1993) have been on Asian Britains (i.e., immigrant women from the Indian subcontinent), and their findings do not generalize to Asian Americans (Lucero, Hicks, Bramlette, Brassington, & Welther, 1992). The studies that have been conducted with Asian Americans (i.e., of Japanese, Chinese, Korean, or Vietnamese heritage) generally have found lower rates of disordered eating than in White women (Akan & Grilo, 1995; Johnson et al., 1984; Lucero et al., 1992; Nevo, 1995).

When examining disordered eating in women of various ethnicities, acculturation becomes a variable of interest and importance (Nasser, 1988). Exposure to and adoption of Western values concerning attractiveness and thinness have been proposed as primary risk factors for the development of eating disorders (Striegel-Moore, Silverstein, & Rodin, 1986); acculturation level is one way to measure exposure to and adoption of U.S. social values (Olmedo & Padilla, 1978). To date, the limited research in this domain has produced equivocal results. Some researchers have reported a significant positive relationship between higher acculturation level and increased disordered eating (Davis & Katzman, 1999; Pumariega, 1986), yet other studies have not found such a relationship (Akan & Grilo; Furukawa, 1994; Joiner & Kashubeck, 1996; Lester & Petrie, 1995; Ogden & Elder, 1998). The inconsistency in results among the studies is probably due to the different populations studied as well as the various definitions and measures of acculturation employed. "Acculturation" can be defined and measured in numerous ways, ranging from language usage to sense of ethnic affirmation (Phinney, 1988); in this study we used several variables (language, country of birth, and parents' country of origin) that are considered to be basic to the concept of acculturation and that can be used with different ethnic groups. The role acculturation plays in disordered eating among minority women remains unclear and needs to be further investigated.

Although there is growing recognition that women from ethnic minority groups do suffer from eating disorders, the rate of minority women found in eating disorder clinics still is very low: approximately 3% to 5% even in cities with large minority populations (M. Strober, June 20, 1999, D. Wilfley, June 20, 1999, personal communications). This pattern is consistent with findings in the general mental health literature indicating that individuals from minority groups do suffer from mental health problems but tend not to seek treatment (Bernal & Encuautegui-de-Jesus, 1994; O'Sullivan, Peterson, Cox, & Kirkeby, 1989; Pomeas & Williams, 1989; Ying & Miller, 1992). Particularly as compared to Whites, individuals from minority groups are much less likely to seek treatment for psychological problems (Dew, Dunn, Bromet, & Schulberg, 1988; Marin, Marin, Padilla, & de la Rocha, 1983; Wells, Goldberg, Hough, Burnam, & Karno, 1988). The reluctance to seek
treatment has been attributed to a number of individual factors, such as feelings of shame, and to external variables, such as language barriers.

Some evidence indicates there may be a relationship between level of acculturation and treatment-seeking for psychological problems: acculturation level has a significant effect on ratings of counselor trustworthiness among Hispanics (Pomales & Williams, 1989), and acculturation is a predictor of attitude toward utility of mental health service in Chinese Americans (Ying & Miller, 1992). We are not aware of any studies that have examined treatment-seeking for disordered eating among different ethnic groups or the role acculturation plays in treatment-seeking for eating disorders.

The goal of the present study was to examine disordered eating, acculturation, and treatment-seeking in a community sample of Hispanic, Asian (Japanese, Chinese, Korean, Vietnamese heritage), Black, and White women. The following main questions were addressed by this research: Among a sample of women who currently meet the clinical criteria for eating disorder in terms of eating symptoms, psychiatric distress, and weight, does race/ethnicity make a difference? Are these individuals being treated? Does acculturation play a role in their likelihood of receiving treatment? To begin to answer these questions, we employed a case-finding procedure to identify women with an eating disorder and then examined differences among the ethnic groups with respect to eating disorder symptomatology, associated features such as psychological distress and smoking for weight control, and treatment-seeking. Specifically, we made three predictions. First, there would be differences in eating disorder symptomatology among the ethnic groups, with Black and Hispanic women more likely than Asian women to report binge eating and Asian and White women more likely than Black and Hispanic women to report symptoms of anorexia nervosa. Second, individuals with eating disorders would be more acculturated than individuals without an eating disorder. Third, there would be differences in treatment-seeking among the ethnic groups, with White women more likely to have received treatment than women of minority groups. Furthermore, we wanted to explore the influence of acculturation variables and to examine the relationship of acculturation to treatment-seeking in an ethnically diverse sample of eating disorder cases.

Research on eating disorders among racial or ethnic college groups has been conducted mostly by means of survey studies. This methodology has been criticized because survey instruments tend to result in false positive cases (Striegel-Moore & Smolak, 1996). Therefore, in the present study, determination of diagnostic status was made using a structured clinical interview (Fairburn & Cooper, 1993). To avoid the potential biases inherent in recruiting patient samples, women were recruited directly in the community for a study of eating- and health-related behaviors. To control for any confounding effects of demographic variables on our variables of interest, a control group was matched to the eating disorder cases on ethnicity, age, and education, as these variables are known to influence eating and weight (for a review, see Striegel-Moore & Cachelin, 1999).

METHOD

Participants and Recruitment

For this study, we interviewed 325 women and then used only those with probable eating disorders and their matching controls. The final sample consisted of 118 women with current disordered eating (49 Hispanic, 21 Asian, 23 Black, and 25 White) and a control sample of 118 women with no history of eating disorders (49 Hispanic, 21 Asian, 23 Black, and 25 White) who were matched on mean age and education level to the cases. Mean age for the total sample (N = 236) was 27.1 years, ranging from 18 to 44 years old, mean Body Mass Index (BMI) was 26.5, and average level of education attained was graduation from a two-year college.

Participants were recruited by way of flyers posted in the urban Los Angeles area, at local colleges and universities, community organizations, adult schools, malls, grocery stores, theatres, and laundromats. The flyers asked for women over the age of 18 to participate in a study on women's health. Respondents below the age of 18 or over the age of 45, those not fluent in English, and those who had been pregnant or had a baby within the past four months were excluded from the sample.

Instrument and Procedure

Each participant completed a phone interview conducted by a trained interviewer. Interviews lasted on average from 15 to 30 minutes, and participants were compensated $5 for their time. The interview was originally designed as a screening tool for the New England Women's Health Project, a study of risk factors for Binge Eating Disorder in White and Black women (see Striegel-Moore, Willey, Pike, Dohm, & Fairburn, 1999); it assesses eating- and weight-related behaviors, psychiatric symptoms, and health care usage. Other questions were added for this study to examine acculturation and smoking for weight control. (The complete interview is available on request.) Items of particular interest to this study are described next.

Sample Characteristics

Information was gathered about participants' age, height and weight, ethnicity (White, Black, Asian, Hispanic), and highest level of education (grade 6 or less, grade 7–12 without graduating, high school graduate or high school equivalent, some college, graduate of a two-year college, graduate of a four-year college, some graduate or professional school, completed graduate or professional school). Body mass for each participant was calculated as weight in kilograms divided by height in meters squared (BMI).

Eating- and Weight-Related Behaviors

Questions from the Eating Disorder Examination (EDE; Fairburn & Cooper, 1993) were used to identify key behav-
Disordered Eating in Various Ethnicities

Probable bulimia nervosa (BN). During the past three months, binge eating occurred at a minimum average frequency of two times per week, with no gap in occurrence of two weeks or longer. Binge eating must have been accompanied by regular compensatory behavior(s)—fasting, purging (e.g., vomiting, laxative use), and/or excessive exercise—occurring on average at least one time per week for the past three months. Importance of weight/shape is present.

Probable binge eating disorder (BED). During the past six months, binge eating occurred at a minimum average frequency of two days per week, with no gap in occurrence of two weeks or longer. Binge eating must have occurred in the absence of any compensatory behavior. Marked distress regarding the binge eating is present.

Probable anorexia nervosa (AN). Self-maintained low weight (BMI ≤ 18) occurred for three months or longer. Low weight must have been achieved by means of regular fasting, excessive exercise, and/or purging. Importance of weight/shape is present.

Probable eating disorder not otherwise specified (EDNOS). There was a regular occurrence of purging behavior (e.g., vomiting, laxative use) in the absence of any binge eating or a regular occurrence of behavioral symptoms of bulimia nervosa but at a frequency of less than two times per week.

Smoking

Questions were developed to examine smoking for weight control. Participants who reported smoking regularly (i.e., approximately one pack per day) were asked if they began smoking as a dieting strategy, if they use smoking to reduce appetite, if they use smoking to control or lose weight, and if fear of weight gain is one of the reasons they have not quit smoking. These questions were asked in a yes/no format.

Psychiatric Symptoms

Sixteen questions (yes/no format) from the General Health Questionnaire (GHQ; Goldberg, 1978) were used to assess psychiatric symptomatology. Endorsement of seven or more items was considered indicative of some psychological distress.

Treatment-Seeking

Questions from the Health Care Utilization Questionnaire (HCUQ; Striegel-Moore, Pike, & Wilfley, 1995) were used to find out how many months during the past year the participant had been covered by any health insurance; whether she had been unable to obtain certain medical or psychological treatments because of not having insurance for the services or because of having exceeded the amount of coverage allowed under insurance for these services (i.e., treatment denial); and on how many days during the past year the participant had received any treatment for eating problems (including medical treatment, hospitalization, individual/group/family therapy, or involvement in a self-help group).

Acculturation

The following questions were used to assess each participant's level or degree of acculturation: whether or not English is her primary language; whether or not she is bilingual (i.e., speaks a language other than English regularly); whether or not she was born in the United States; and whether her mother and father were born in the United States. We chose these variables because they are considered to be the more basic components of acculturation; although there is no widely accepted operational definition of acculturation, these variables are included in most instruments to measure the concept of acculturation (Phinney, 1998).

RESULTS

Multivariate analysis of variance, with age, education, and BMI as the dependent variables, revealed a significant effect of ethnicity (Hispanic, Asian, Black, White), multivariate $F (9, 654) = 3.88, Pillai Trace = .15, p = .0001$, and a significant effect of eating status (eating disordered vs. control), multivariate $F (3, 26) = 3.18, Pillai Trace = .04, p = .02$. Planned univariate tests revealed no significant main effect of ethnicity, $F (3, 228) = 2.43, p = .07$, or eating status, $F (1, 228) = 2.86, p = .09$, on age; nor any significant effect of ethnicity, $F (3, 228) = 2.56, p = .06$, or eating status, $F (1, 228) = 1.53, p = .22$, on education. There were, however, significant main effects of ethnicity, $F (3, 228) = 7.96, p < .0001$, and eating status, $F (1, 228) = 5.67, p = .02$, on BMI: Black women were significantly heavier than the other groups, and Hispanic women were significantly heavier than Asian women; women with disordered eating had

oral symptoms of eating disorders. Binge eating was defined and assessed as “eating within a two-hour period what most people would consider an unusually large amount of food given the circumstances” accompanied by a sense of loss of control; when binge eating was present, information about its frequency and duration was obtained. Information about the frequency and duration of any compensatory behaviors (i.e., vomiting, laxative use, diuretic use, fasting) was obtained. To assess history of low weight, participants were asked what their lowest weight was since the age of 13 (i.e., since they reached their adult height), whether they achieved this weight through their own efforts, how old they were, and how long they maintained the low weight.

Based on the information gathered, individuals with probable current eating disorders were identified. Probable eating disorder categories were defined using the following criteria set forth in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (American Psychiatric Association, 1994).

Probable bulimia nervosa (BN). During the past three months, binge eating occurred at a minimum average frequency of two times per week, with no gap in occurrence of two weeks or longer. Binge eating must have been accompanied by regular compensatory behavior(s)—fasting, purging (e.g., vomiting, laxative use), and/or excessive exercise—occurring on average at least one time per week for the past three months. Importance of weight/shape is present.

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Table 1

Demographic Information for Groups of Eating-Disordered and Control Hispanic, Asian, Black, and White Women

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Eating Disorder</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N = 49)</td>
<td>(N = 49)</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>26.9 (6.1)</td>
<td>26.1 (5.9)</td>
</tr>
<tr>
<td>Education</td>
<td>4.3 (1.1)</td>
<td>4.6 (1.2)</td>
</tr>
<tr>
<td>BMI</td>
<td>25.0 (6.8)</td>
<td>25.5 (5.1)</td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>26.5 (6.2)</td>
<td>24.7 (7.4)</td>
</tr>
<tr>
<td>Education</td>
<td>4.3 (0.9)</td>
<td>4.9 (1.3)</td>
</tr>
<tr>
<td>BMI</td>
<td>23.6 (5.3)</td>
<td>24.3 (5.0)</td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>27.8 (7.1)</td>
<td>27.8 (8.1)</td>
</tr>
<tr>
<td>Education</td>
<td>4.6 (1.3)</td>
<td>4.3 (0.8)</td>
</tr>
<tr>
<td>BMI</td>
<td>32.7 (11.8)</td>
<td>27.8 (6.5)</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>30.6 (6.8)</td>
<td>27.1 (6.0)</td>
</tr>
<tr>
<td>Education</td>
<td>4.8 (1.6)</td>
<td>5.1 (1.3)</td>
</tr>
<tr>
<td>BMI</td>
<td>25.6 (7.8)</td>
<td>23.4 (5.2)</td>
</tr>
</tbody>
</table>

Note: Education level was categorized as follows: 1 = grade 6 or less, 2 = grade 7-12 without graduating, 3 = high school graduate or high school equivalent, 4 = some college, 5 = graduate of a 2-year college, 6 = graduate of a 4-year college, 7 = some graduate or professional school, 8 = completed graduate or professional school.

Table 2

Number of Women in Each Eating Disorder Category, by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>BED</th>
<th>BN</th>
<th>AN</th>
<th>EDNOS</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>15 (31%)</td>
<td>14 (29%)</td>
<td>1 (2%)</td>
<td>19 (39%)</td>
<td>49</td>
</tr>
<tr>
<td>Asian</td>
<td>9 (43%)</td>
<td>1 (5%)</td>
<td>3 (14%)</td>
<td>8 (38%)</td>
<td>21</td>
</tr>
<tr>
<td>Black</td>
<td>10 (43%)</td>
<td>4 (17%)</td>
<td>0 (0%)</td>
<td>9 (39%)</td>
<td>23</td>
</tr>
<tr>
<td>White</td>
<td>12 (48%)</td>
<td>3 (12%)</td>
<td>4 (16%)</td>
<td>6 (24%)</td>
<td>25</td>
</tr>
<tr>
<td>Totals</td>
<td>46</td>
<td>22</td>
<td>8</td>
<td>42</td>
<td>118</td>
</tr>
</tbody>
</table>

Note: Numbers represent counts. Percentages are within-row percentages. BED = binge eating disorder, BN = bulimia nervosa, AN = anorexia nervosa, EDNOS = eating disorder not otherwise specified.

Eating Symptoms and Associated Features

Chi-square analysis revealed that there were no significant differences between the ethnic groups in terms of probable type of eating disorder. Among the sample of women with disordered eating (N = 118), the various ethnic groups were equally likely to report the key behavioral symptoms of BED, BN, AN, and EDNOS. χ² (9) = 16.24, p = .06 (see Table 2).

With respect to specific behavioral symptoms of eating disorders, among the eating disorder group (N = 118), the different ethnic groups were equally likely to report that they overeat, χ² (3) = 3.76, p = .29, and that they feel a sense of loss of control while eating, χ² (3) = 4.08, p = .25. In terms of purging or compensatory behaviors, Black women were most likely and White women least likely to use laxatives (52% vs. 12%, respectively), χ² (3) = 9.10, p = .03; Hispanic women were most likely and White women least likely to use diuretics (35% vs. 4%, respectively), χ² (3) = 9.12, p = .03. There were no significant differences between the groups in likelihood of vomiting, χ² (3) = 0.97, p = .81, or fasting for weight control, χ² (3) = 2.62, p = .45.

Of the total sample (N = 236), 15% reported smoking regularly. Eating status was not significantly related to the likelihood of smoking; those with disordered eating and the control group were equally likely to smoke (n = 19 and n = 16, respectively), χ² (1) = 0.30, p = .58. However, the eating disorder group was significantly more likely than the control group to report smoking to reduce appetite, χ² (1) = 12.26, p = .0005, to use smoking as a weight control strategy, χ² (1) = 9.63, p = .002, and to report fear of weight gain as one of the reasons they have not quit smoking, χ² (1) = 5.85, p = .02. Among smokers (N = 35), Asians were most likely and Hispanics were least likely to say that fear of weight gain is one of the reasons they have not quit smoking, χ² (3) = 8.69, p = .03. Responses to other smoking-related items were not significantly different among the ethnic groups: smoking as dieting strategy, χ² (3) = 5.37, p = .05; to report fear of weight gain as one of the reasons they have not quit smoking, χ² (3) = 8.69, p = .03. Responses to other smoking-related items were not significantly different among the ethnic groups: smoking as dieting strategy, χ² (3) = 5.37, p = .05; smoking to reduce appetite, χ² (3) = 2.50, p = .48; smoking as weight control, χ² (3) = 6.01, p = .11.

Analysis of covariance, with BMI as covariate, revealed that the group with disordered eating endorsed significantly more psychiatric symptoms than did the control group (M = 9.2 vs. 5.2 items, respectively), F (1, 232) = 11.20, p = .001. Among the eating disorder group, there was no significant effect of ethnicity, F (3, 90) = 1.92, p = .13, or type of disordered eating, F (3, 90) = 1.67, p = .18, on number of psychiatric symptoms endorsed, nor was there any significant interaction effect, F (6, 90) = 1.11, p = .36.

Acculturation and Treatment-Seeking

As measured by the variables of language and country of origin, the eating disorder group was more acculturated...
than the control group. Since nearly all of the Black women were U.S.-born and had U.S.-born parents, this group was omitted for this set of analyses. This set of analyses was conducted on the subsample of Hispanic, Asian, and White women (N = 190). Compared to the control group, individuals with disordered eating were less likely to be bilingual, $\chi^2(1) = 10.17, p = .001$; were more likely to have mothers who are U.S.-born, $\chi^2(1) = 7.24, p = .007$; and were more likely to have fathers who are U.S.-born, $\chi^2(1) = 6.01, p = .01$. This pattern was particularly true for Hispanic women (see Table 3).

Again, the Black group was omitted for this set of analyses. Among the sample with disordered eating (N = 95), those who are bilingual, $\chi^2(1) = 6.93, p = .008$, are foreign-born, $\chi^2(1) = 4.51, p = .03$, and who have mothers who are foreign-born, $\chi^2(1) = 5.05, p = .02$, and fathers who are foreign-born, $\chi^2(1) = 4.54, p = .03$, were significantly more likely to have received treatment (in the past year). In other words, individuals who were less acculturated (as measured by these variables), as compared to those who were more acculturated, were less likely to seek treatment for their existing eating problems.

Overall, only 22 (19%) of the women with current disordered eating (N = 118) had received any treatment for their eating problems during the past year. Likelihood of treatment-seeking was not associated with ethnicity, $\chi^2(3) = .85, p = .84$, education, $F(1, 112) = 1.69, p = .10$, or type of disordered eating, $\chi^2(3) = 2.75, p = .43$. Although both groups were covered by health insurance for the same length of time in the past year ($M = 8.8$ and 8.6 months, respectively), $F(1, 213) = .32, p = .75$, individuals with eating disorders were significantly more likely than controls to report having been denied medical or psychological treatment sometime during the past year, $\chi^2(1) = 9.69, p = .002$.

**DISCUSSION**

Among a community sample of women with disordered eating, we found few differences in presentation of symptomatology based on ethnicity. Women of various ethnicities (i.e., Hispanic, Asian, Black, and White) were equally likely to report the key behavioral symptoms of bulimia nervosa, anorexia nervosa, or a binge-eating disorder. This finding is consistent with other research that has found eating disorder presentation to be similar in minority and White women (Le Grange, Telch, & Agras, 1997; Ratan et al., 1998). We did find, however, some differences with respect to specific purging behaviors. The Hispanic women in our sample were significantly more likely than the other ethnic groups to use diuretics, and the Black women were the most likely to use laxatives. These patterns have been reported by other investigators as well (Emmons, 1992; Pumariega, Gustavson, Gustavson, Motes, & Ayers, 1994; Story, French, Resnick, & Blum, 1995). These results suggest that use of other less conventional compensatory methods (such as using herbal or laxative teas) might be more frequent in ethnic subgroups than in Whites, and that clinicians and researchers would want to take this into consideration when working with minority women.

In our study, smokers with disordered eating were significantly more likely than non-eating-disordered smokers to use cigarettes as a means of weight control and appetite reduction and to report fear of weight gain as one of the reasons they have not quit smoking. The relationship between smoking and body image concerns has been demonstrated previously for adolescent and college populations (Camp, Klesges, & Relyea, 1993; Klesges & Klesges, 1988; Wiseman, Turco, Sunday, & Halmi, 1998). Given the serious health consequences associated with smoking, professionals who treat individuals with eating disorders should address this behavior.

We found differences between the eating disorder and control groups in reported motivation for smoking (i.e., for weight control) but did not find a difference in prevalence of smoking between the two groups. This result suggests that weight concern, which is proposed to be a major reason that young women begin smoking, is a motivational factor only for some groups of women. In terms of smoking prevention strategies for young women, efforts should be made
to address motivational factors other than weight concern, such as peer pressure and family influences.

As expected based on available research (for a review, see Mitchell & Mussell, 1995; Morey & Kurtz, 1995; Schles-sier-Stropp, 1984), psychological distress was high in the eating disorder group. Despite this reported distress, however, relatively few (19%) of the women with current disordered eating had received any treatment for their eating problems during the past year. Although both groups were covered by health insurance for the same length of time in the past year, individuals with eating disorders were significantly more likely than controls to have been denied medical or psychological treatment. This result is perhaps due to the possibility that those with eating disorders are more likely than controls to have sought treatment for their eating problems and/or other problems that covary with eating disorders and that are not typically covered by insurance benefits. Lack of coverage is one probable contributing factor to why these individuals are not receiving needed treatment. Systematic studies are needed to examine where in the referral process and for what reasons treatment denial is occurring. Alternatively, shame about the eating disorder symptoms may keep some women from seeking treatment. Given that effective treatments have been developed for eating disorders, research is needed to address potential barriers to help-seeking.

We did find a relationship between our acculturation variables (language, parents' country of origin) and disordered eating. The more acculturated women were more likely to suffer from eating problems. This result is in accord with some other studies (Davis & Katzman, 1999; Pumariega, 1986) and with the general belief in the field; perfecting one's body to meet Western ideals may be a means of acculturating to societal values. However, as discussed, empirical investigations of acculturation so far have resulted in inconsistent findings, possibly because of the different definitions and measures of acculturation used. We employed several variables that are considered to be basic to the definition of acculturation. These variables are essentially of two types: those that entail involvement or effort on the part of the individual toward becoming acculturated (e.g., language learning or becoming bilingual), and those that do not require individual effort or commitment (e.g., being born in the United States), which is not within the individual's control (Phinney, 1998). We found bilingualism consistently to have a strong relationship with our variables of interest. We are currently conducting a follow-up study using a scale to assess degree of ethnic identity or commitment (Phinney, 1992). Nevertheless, further studies are needed that use more uniform definitions and measures of acculturation in order to clarify its influence on disordered eating.

We found that, among our sample of women with disordered eating, the women who were less acculturated as measured by language, country of birth, and parents' country of origin were significantly less likely than the more acculturated women to have sought or received treatment for their existing eating problems. This pattern was evident across different ethnic groups, and, unlike what we had predicted, there were no ethnic differences in likelihood of obtaining treatment. The underrepresentation of minority patients in clinical settings may be due to referral biases (Davis & Yager, 1992; Ratan et al., 1998). However, it may also be due to hindrances or barriers to treatment-seeking that face women of minority groups. For example, fear of "losing face" or shame is characteristic of Asian cultures, and fear of being discriminated against or treated unfairly might deter some Black women from seeking treatment. Future studies are needed that investigate hindrances to treatment-seeking among women of different ethnicities.

The fact that the White women in our study were as unlikely as the other ethnic groups to have received treatment for their eating problems might be explained by the nature of the sample: almost half of the White group had parents who are foreign-born. Our participants were recruited from an urban area with a high immigrant population. This group probably was not representative of White samples typically studied in most other research and found in clinics.

An interesting observation from our study was that flyers posted in an urban community yielded a notable number of minority women with eating disorders. Although prevalence rates are not known, one can conclude that disordered eating is not an uncommon problem in these populations, and certainly it is a problem worthy of further attention. In addition, long-term or follow-up studies are needed to examine the (natural) outcome of these individuals over time. Research with White women suggests that eating disorders have a fluctuating course that is characterized by occasional periods of remission and changes in symptomatology (Cachelin et al., 1999). Such information is not yet available for minority women.

The main limitations of our study were the somewhat small sample size of some of the ethnic groups and the self-selected nature of our sample (i.e., participants were individuals who elected to be in the study by responding to a flyer). Individuals who responded to the flyer were fluent in English and therefore fairly acculturated. Further studies are needed that use translated instruments (e.g., in Spanish or Chinese) and that include participants representing a wider range of acculturation levels. Additionally, in this study we examined only current disordered eating and therefore cannot comment on our findings in relation to past histories of eating disorder. (We are currently conducting a follow-up study examining lifetime histories of eating disorder.) The strengths of our methodology were that we used a structured interview to collect data, included carefully matched controls, and used a case-finding approach to sample from an ethnically diverse community population that is not typically represented in research.

Limitations notwithstanding, this study adds to our knowledge of eating disorders in Hispanic and Asian women as well as to our understanding of the role of acculturation. The findings from this preliminary study
have important implications for the future study and treatment of disordered eating among minority populations. Our results indicate not only that the key behavioral symptoms of eating disorders are similar in different minority groups, but also that afflicted individuals are unlikely to be receiving treatment. Moreover, acculturation appears to be associated both with the likelihood of having an eating problem and with the likelihood of getting treatment.

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NOTES

1. These individuals were referred to as “probable eating disordered,” as opposed to “eating disordered,” because full clinical interviews were not conducted to establish all criteria (American Psychiatric Association, 1994) for each eating disorder.

2. One might debate whether education should be treated statistically as a categorical or continuous variable. We condensed education into three categories (1 = high school education or less, 2 = college education, 3 = graduate education) and conducted chi-square analyses. As before, there were no significant differences among the groups. (Table depicting frequencies for educational level by group membership is available by request.)

REFERENCES


Disordered Eating in Various Ethnicities


