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TITLE: The Relationship Between Physical, Sexual, and Emotional Abuse and Unhealthy Weight Loss Behaviors

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ABSTRACT
The authors investigated the relationship between abuse in adult relationships and the tendency to engage in unhealthy weight loss behaviors. Undergraduate women responded to questions regarding weight loss behaviors, whether or not they had recently been in an abusive relationship, and perceived body image. Results indicated that women who had recently been in abusive relationships were more likely to endorse unhealthy weight loss. Implications for college counselors are discussed.

Body image and a desire to lose weight are important concerns among college women. For example, in a representative sample of 4,609 U.S. undergraduate students, Lowry et al. (2000) found that 60% of college women were trying to lose weight, although only 30% were considered overweight based on body mass indices. In turn, studies have shown that college students often engage in unhealthy weight loss behaviors. For example, Mintz and Betz (1988) reported that 64% of undergraduate women engaged in behaviors classified as binging, purging, chronic dieting, or subthreshold bulimic activity. Eighty-two percent reported that they engaged in at least one dieting behavior daily. Similarly, Mintz and O’Halloran (2000) found that approximately 24% of their undergraduate sample engaged in behaviors that meet Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV; American Psychiatric Association [APA], 1994) criteria for an eating disorder. Correspondingly, unhealthy weight loss behaviors are an important clinical concern for counselors who work with college women.

A factor that may be associated with unhealthy weight loss behaviors is the experience of physical, sexual, or emotional abuse (de Groot & Rodin, 1999; Kent, Waller, & Dagnan, 1999; Read, Stern, Wolfe, & Ouimette, 1997). Much of this research has focused solely on the major diagnosable clinical disorders (i.e., anorexia or bulimia nervosa) and has primarily addressed abuse that has occurred in childhood. Results of this line of research have been mixed, with some studies reporting a relationship between childhood abuse and unhealthy weight loss behaviors (e.g., Douzinis, Fornari, Goodman, Sitnick, & Packman, 1994; Mazzeo & Espelage, 2002) and other studies reporting little or no relationship (e.g., Pope & Hudson, 1992).

The relationship between more recent (i.e., adult) physical, sexual, or emotional abuse and unhealthy weight loss behaviors has not been as well examined as has been the relationship with childhood abuse. Several studies have documented a relationship between sexual victimization, physical assault, and other types of trauma and poor body image/low self-esteem (e.g., Billingham & Patterson, 1998; Read et al., 1997), but these studies did not address actual unhealthy weight loss behaviors as an outcome variable. We did, however, locate two studies that addressed the relationship between abuse in an adult relationship and unhealthy weight loss behaviors. Kaner, Bulik, and Sullivan (1993) found a significantly greater incidence of adult physical abuse in women with bulimia than in a female nonbulimic control group (40.0% versus 5.9%, respectively), whereas Kenardy and Ball (1998) reported that recent abuse predicted disordered eating in women ages 18 to 22 years.

Although this research provides preliminary evidence supporting a relationship between experiencing abuse as an adult and unhealthy weight loss behaviors, several unanswered questions remain. First, these studies did not address the relationship between recent emotional abuse and unhealthy weight loss behaviors, focusing only on sexual and physical abuse. Given the evidence of a relationship between childhood emotional abuse and later weight loss pathology (e.g., Kent & Waller, 2000; Kent et al., 1999), exploring this relationship in adults seems warranted. Second, because we could locate only two
studies that examined the relationship between experiencing sexual or physical abuse as an adult and unhealthy weight loss behaviors, it seems important to attempt to replicate these prior findings. Finally, neither of these two studies looked specifically at college students, indicating a need to study population of individuals who experience a high incidence of poor body image and unhealthy weight loss behaviors.

The purpose of the present study was to examine the relationship between recent abuse in women (i.e., in the past 12 months) and the tendency to engage in unhealthy weight loss behaviors. Specifically, we predicted that, after controlling for perceived body image/weight, women who had been involved in emotionally, physically, and/or sexually abusive relationships in the past 12 months would be more likely to endorse unhealthy weight loss behaviors than would women who had not been in abusive relationships. We controlled for body image because the belief that one is overweight is likely to be related to attempts to lose weight, and we wanted to investigate the relationship between abuse and unhealthy weight loss behaviors after controlling for the influence of this factor.

METHOD

PARTICIPANTS AND PROCEDURE

This project represented a secondary analysis of data. The purpose of the original project was to collect general descriptive information about the overall physical and mental health of an undergraduate student body. Data for this study were collected from 463 female undergraduate students (all of the female students in the larger project) at a large, public university in the northeastern region of the United States. Male students were not included in this project because a very small percentage of them reported being in abusive relationships or engaging in unhealthy weight loss behaviors (e.g., no male students reported vomiting or taking laxatives to lose weight in the past 30 days). There was a small amount of missing data for most of the items, so we used pairwise deletion procedures for all analyses.

The median age of the students was 21 years (range = 18-54 years). Most of the participants were White (75%), with other ethnic representations as follows: 9% African American, 7% Hispanic or Latino, 6% Asian or Pacific Islander, and 3% other. Of the participants, 20% indicated that they were 1st-year, 25% were 2nd-year, 36% were 3rd-year, 18% were 4th-year, and 1% were 5th-year or beyond students. Some participants were recruited from a random sample of undergraduate classes at the university where the survey was administered. In addition, instructors of large lecture classes were asked permission to provide the opportunity for their students to participate. One of the researchers (the third author participated in some data collection) or a research assistant administered the survey. Students either completed the survey before or after class or during an academic class meeting, depending on arrangements with the instructor. Participants were informed that their participation in the survey was voluntary, they could skip any question that they did not feel comfortable answering, they would remain anonymous, and they should not identify themselves in any way on the survey.

MEASURE

Participants completed the National College Health Assessment (NCHA; American College Health Association, 2000). The NCHA has 58 content areas that assess health, risk, and protective behaviors in college students, as well as the consequences of such behaviors and various perceptions among the students. Many of the areas have multiple subitems, making the total number of items approximately 500. The NCHA was pilot tested in 1998 and 1999 at 19 universities, and norms for the instrument were established in 2000 when the NCHA was administered to more than 16,000 students at 28 universities (American College Health Association, 2001). The NCHA was not designed to be an instrument with empirically developed scales and subscales, so the primary purpose of reliability and validity analyses involved comparing data from the NCHA with other national databases to see if similar patterns emerged among the items (e.g., frequency of occurrence, item reliability). Results from the NCHA were generally consistent with the other national databases, leading the authors of the survey to conclude that scores on the instrument were reliable and generalizable to college students nationwide (American
College Health Association, 2001). For the purposes of this study, we focused on the items that assessed abusive relationships, methods of weight loss, and body image.

Abusive relationships. The NCHA asks if the respondent has been in an emotionally abusive, physically abusive, or sexually abusive relationship in the past 12 months. Respondents answer each item via a yes/no format. Because this was a secondary analysis of data and more specific measures of abuse were not available, it was necessary for participants to rely on their own interpretations of emotional, physical, and sexual abuse.

Unhealthy weight loss behaviors. The NCHA asks if in the past 30 days the respondent has engaged in any of the following behaviors in an effort to lose weight: "exercise," "diet," "vomit or take laxatives," or "take diet pills." To respond, participants answer a series of four yes/no items regarding the behaviors. For the purposes of this study, vomiting or taking laxatives and taking diet pills to lose weight were considered unhealthy weight loss behaviors, although we do recognize that diet or exercise can also be used in an unhealthy manner. Nonetheless, diet and exercise are generally recommended as healthy options for weight loss, whereas vomiting, taking laxatives, and taking diet pills are often unhealthy choices for weight loss (e.g., French & Jeffery, 1994; Serdula et al., 1993). Only 9 participants indicated that they engaged in both unhealthy weight loss items (i.e., they answered "yes" for both vomiting or taking laxatives and taking diet pills), so we coded participants categorically as either engaging or not engaging in unhealthy weight loss behaviors over the past 30 days.

Self-perceived body image. The NCHA asks participants to describe their weight and provides five response options: "very underweight," "slightly underweight," "about the right weight," "slightly overweight," and "very overweight." For our sample, only 20 participants described themselves as "very underweight" or "very overweight." Because of the small numbers for these categories, these responses were combined into either the underweight or overweight category, so respondents were categorized into one of three categories: underweight, about the right weight, or overweight.

RESULTS

DESCRIPTIVE STATISTICS

Frequencies were calculated for each of the abuse variables, weight loss methods, and the body image item. Results were that, in the past year, approximately 19% (n = 88) of the women reported being in an emotionally abusive relationship, approximately 3% (n = 14) reported being in a physically abusive relationship, and approximately 5% (n = 23 women) reported being in a sexually abusive relationship. Although these rates are lower than has been reported in some previous studies (e.g., Neufeld, McNamara, & Erd, 1999), they are comparable to those in other recent research (e.g., Rinfret-Raynor, Riou, Cantín, Drouin, & Dubé, 2004). The most commonly reported weight loss method in the past 30 days was exercising (52%), followed by dieting (47%), taking diet pills (12%), and vomiting or taking laxatives (6%). Seventeen percent of the sample reported engaging in an unhealthy weight loss method during the past 30 days. The majority of the participants (56%) believed that they were "about the right weight," whereas 36% believed that they were overweight and 8% believed that they were underweight.

ABUSIVE RELATIONSHIPS AND UNHEALTHY WEIGHT LOSS BEHAVIORS

Logistic regression analyses were conducted in order to examine the relationship between being in an abusive relationship in the past 12 months and engaging in unhealthy weight loss behaviors. Logistic regression was used for three main reasons: (a) The dependent variable was coded categorically (engaging or not engaging in unhealthy weight loss behaviors); (b) we wanted to calculate odds ratios that would provide a relative measure of risk between those who have and have not been involved in abusive relationships in the past 12 months; and (c) in examining the relationship between abusive relationship and unhealthy weight loss behaviors, we wanted to control for the effect of perceived body image. Therefore, we conducted two hierarchical logistic regression analyses in which perceived body image (i.e., underweight, about the right weight, or overweight) was entered on Step 1, followed by the abusive relationship measures on Step 2. For the first analysis, on Step 2, we entered a variable that
indicated whether or not the individual had experienced any abuse, regardless of type, in the past 12 months. Assuming a significant effect for this variable, we then conducted an analysis in which experiencing different types of abusive relationships was entered separately on Step 2, which allowed us to determine the relative effects of each specific type of abusive relationship.

As expected, perceived body image was significantly related to engaging in unhealthy weight loss behaviors, chi[sup2](1, N= 445) = 24.88, p < .001, odds ratio (OR) = 3.11, with those who perceived themselves as overweight most likely to engage in unhealthy weight loss behaviors. After controlling for this effect, experiencing any type of abusive relationship in the past 12 months was also related to engaging in unhealthy weight loss behaviors, chi[sup2](1, N= 445) = 11.88, p = .001, OR = 2.62, with individuals who reported being in an abusive relationship more likely than those not in an abusive relationship to engage in unhealthy weight loss behaviors (29% versus 13%, respectively). Because the effect of experiencing any type of abusive relationship over the past 12 months was statistically significant, we conducted another analysis in which the different types of abuse were entered separately on the second step. Results from this analysis yielded an overall effect for the three variables entered together, chi[sup2](3, N= 445) = 18.58, p < .001, but individually, only being in a physically abusive relationship over the past 12 months was statistically significant at the .05 level, Wald Test = 5.86, p = .015, OR = 5.07. However, the relationship between emotional and sexual abuse and engaging in unhealthy weight loss behaviors approached statistical significance (p = .06-.07), and the odds ratios for both variables were relatively high (see Table 1). Therefore, we conclude that, in the present sample, experiencing physical abuse over the past 12 months was clearly a strong risk factor for engaging in unhealthy weight loss behaviors but that experiencing any type of recent abuse might be a potential risk factor as well.

DISCUSSION

In this study, we investigated the relationship between abuse in current or recent relationships and the tendency to engage in unhealthy weight loss behaviors. We examined physical and sexual abuse, as well as emotional abuse, whereas prior research did not address emotional abuse or, in the case of Kaner et al. (1993), addressed only physical abuse. Thus, results from our study could make a potentially important contribution to both the unhealthy weight loss behavior and abusive relationship literature. We hypothesized that those women who reported being in an abusive relationship in the past 12 months would be more likely to also report engaging in a greater number of unhealthy weight loss behaviors. Consistent with our hypothesis, a significant relationship emerged between report of being in an abusive relationship and report of engaging in unhealthy weight loss behaviors, even after controlling for the effects of body image.

Results from the present study are consistent with prior, albeit limited, research that documents a relationship between current abuse and disordered eating (Kaner et al., 1993; Kenardy & Ball, 1998). Our results indicated a statistically significant relationship between report of physical abuse and report of unhealthy weight loss behaviors because the relationship was the strongest when the three types of abuse variables were individually examined. This finding is somewhat surprising, given that some research has indicated that emotional abuse experienced in childhood is a stronger predictor of later eating pathology than childhood physical abuse or childhood sexual abuse (Kent et al., 1999). Perhaps the violence of the physical abuse creates a sense of urgency to lose weight and prevents women from either caring about losing weight in a healthy manner or understanding that their weight loss methods of choice are unhealthy. In addition to being violent, physical abuse also takes an emotional toll, perhaps creating a greater desire to lose weight. We cannot make conclusive statements about emotional or sexual abuse and the link to unhealthy weight loss behaviors, because the results in this study approached, but did not achieve, statistical significance.

There are several potential reasons why women who have been in all types of abusive relationships are more likely to endorse unhealthy weight loss behaviors. Intuitively, it seems that if one has experienced abuse at the hands of a loved one, self-esteem would inevitably suffer. For some women, this drop in self-esteem may result in efforts to change their appearance by losing weight. Perhaps such
maladaptive weight loss behaviors stem from a desire to please the abuser. It is possible that women may perceive abuse as a signal that their partners are unhappy with them and believe that they will be more "lovable" if they lose weight. The strong societal pressures on women to be thin combined with low self-esteem and a desire to please the abuser may prompt many women to lose weight. Others have speculated that eating disorders develop as a defensive response to abuse (e.g., Costin, 1996; Root & Fallon, 1989). For example, an individual may engage in unhealthy weight loss behaviors in an attempt to gain control over his or her body or to try to define a sense of self. A woman who has experienced abuse may not feel that she has control over much in her life if she feels powerless in her relationship. She may feel that the abuser has the power to hurt her, both emotionally and physically. Unhealthy weight loss may also be an outlet for anger or a result of the dissatisfaction that the woman feels toward her body. If the woman feels anger toward her body, she is not likely to worry about losing weight in a healthy manner; instead, the anger may induce her to harm herself. The feeling of powerlessness, combined with the anger and shame that the woman who has experienced abuse feels toward herself, could make her turn to unhealthy weight loss behaviors as a way to cope. The results of this study have important implications for counselors. Previous studies have indicated that a large number of undergraduate female students engage in maladaptive weight loss behaviors (Mintz & Betz, 1988). Many of these individuals engage in subthreshold symptomatic behaviors that do not meet the DSM-IV (APA, 1994) criteria for a diagnosable eating disorder but still show symptoms of unhealthy weight loss behaviors (Mintz, O'Halloran, Mulholland, & Schneider, 1997; Mulholland & Mintz, 2001). Similarly, we found that 17% of the women in our sample reported engaging in an unhealthy weight loss method during the past month. Thus, counselors working with college women should be aware of the potential for coexistence between adult abusive relationship experiences and unhealthy weight loss behaviors, and we recommend that individuals presenting with one problem be screened for the other.

Women in abusive relationships also may require somewhat different treatment for unhealthy weight loss behaviors than women who are not being abused. For example, engaging in unhealthy weight loss behaviors may be seen as being related to low self-esteem, but the woman experiencing both disordered eating and abuse may be also be trying to lose weight to express the anger that she feels about being abused. Thus, the counselor working with the abused woman may deal with different environmental factors and motivation than if he or she was working with a woman who had not been abused. Unfortunately, recent research has indicated that many counseling center staffs have not had specific training in treating either eating disorders (43%) or sexual abuse (31%; Stone, Vespia, & Kanz, 2000). Although it is beyond the scope of this article to offer screening and treatment recommendations, it is important to understand the potential for the co-occurrence of abuse and unhealthy weight loss behaviors, and we encourage college counseling centers to enhance their training of staff in these areas.

There were limitations to our study. Our study was a secondary analysis of existing data and used categorical questions to assess for both abuse and disordered eating. Future studies could include more sensitive and detailed measures to assess the relationship between the frequency and/or severity of abuse and the tendency to engage in unhealthy weight loss behaviors. In addition, we used a self-report measure to assess both the presence of abuse and the type of weight loss behavior endorsed. Participants may have falsified information on these questionnaires, although this is unlikely because anonymity was assured. Also, our study did not provide a definition of abuse for the participants, so participants' interpretations of abuse may have varied to some extent. This may be one of the reasons why prevalence rates in our study were somewhat smaller than have been reported elsewhere (e.g., Rinfret-Raynor et al., 2004). Furthermore, our sample included only undergraduate students from one university, so future studies should address replication with a broader population. Finally, questions remain about co-occurrence and causality between entering adult abusive relationships, on one hand, and engaging in disordered weight management behaviors, on the other hand. Answering questions regarding co-occurrence and causality may help guide treatment.

Establishing a relationship between the report of recent abuse and the report of unhealthy weight loss behaviors means that counselors should be conscious of potential co-occurring problems when an individual presents with either problem. Results from this study provide direction for future studies.
about, and treatment responses for, women who are experiencing two psychologically and physically unhealthy conditions.

ADDED MATERIAL

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TABLE 1 Hierarchical Logistic Regression Analyses Examining the Relationships of Being Involved in an Abusive Relationship Over the Past 12 Months and Engaging in Unhealthy Weight Loss Behaviors

<table>
<thead>
<tr>
<th>Analysis and Variable</th>
<th>B</th>
<th>Wald Test</th>
<th>OR</th>
<th>95% Cl (OR)</th>
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<tbody>
<tr>
<td>Analysis 1</td>
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<tr>
<td>Step 1</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Body image</td>
<td>1.13</td>
<td>22.27</td>
<td>3.11</td>
<td>1.94-4.98</td>
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<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Any abuse</td>
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<td>12.29</td>
<td>2.62</td>
<td>1.53-4.49</td>
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<tr>
<td>Analysis 2</td>
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<td>Step 1</td>
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<tr>
<td>Step 2</td>
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</table>

REFERENCES


activity, food choice, and weight management goals and practices among U.S. college students. American Journal of Preventive Medicine, 18, 18-27.


