
Relationship Among Family, Peer Networks, and Bulimic Symptomatology in College Women

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ABSTRACT

This study tested the explanatory power of a sociocultural model in predicting bulimic symptomatology. Specifically, the family and peer systems of a sample of 141 college women were assessed using a variety of measures. The results revealed that high scores on the Bulimia Test were negatively correlated with scores on the cohesion subscale of the Family Adaptability and Cohesion Evaluation Scale. It was also found that the prevalence of bulimic symptomatology within a woman's peer system significantly predicted bulimic symptomatology in subjects. Pressures to diet from family and friends were also found to be associated with higher rates of bulimic symptomatology in these subjects. However, experiences of general problems in the peer systems of these subjects did not significantly predict bulimic symptomatology. Implications of this research are discussed.

RÉSUMÉ

Cette étude a vérifié les facultés explicatives du modèle socioculturel dans la prévision de la symptomatologie de la boulimie. Plus particulièrement, on a étudié, à l'aide de divers moyens et sur un échantillon de 141 femmes universitaires, les systèmes familiaux et les groupes affinitaires. Les résultats ont révélé que des scores élevés sur le *Bulimia Test* [test de boulimie] étaient corrélés négativement avec les résultats de la sous-échelle d'évaluation de la cohésion faisant partie de la *Family Adaptability and Cohesion Evaluation Scale* [l'échelle d'évaluation de l'adaptabilité et de la cohésion familiales]. On a également trouvé que la prédominance de la symptomatologie boulimique à l'intérieur du réseau relationnel d'une femme constituait un indicateur de prévision important de sa propre boulimie. Les pressions pour maigrir, subies de la part de la famille et des amis, étaient également associées à des taux plus élevés de symptomatologie boulimique chez les mêmes sujets. Cependant, les problèmes généraux éprouvés à l'intérieur des groupes de pairs de ces sujets ne contribuaient pas de façon significative à prédire la symptomatologie boulimique. Les implications de ces recherches sont étudiées.

In recent years, counsellors and therapists have increasingly had to address client issues around eating problems (Peterson & Mitchell, 1999). In the past decade alone, there has been an increased incidence in eating-related problems among women (Irving, 1990; Stice, Schupak-Neuberg, Shaw, & Stein, 1994). Specifically, eating disorders occur in about 1-3% of the population with more than 90% of these cases being women (American Psychiatric Association, 1995).

According to the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) (American Psychiatric Association, 1995), bulimia is characterized by episodes of binge eating and inappropriate methods of weight loss to prevent weight gain. This

behaviour usually persists at least twice a week for at least three months and is defined by the DSM-IV as “. . . eating in a discrete period of time an amount of food that is definitely larger than most individuals would eat under similar circumstances “ (p.545). This “discrete period of time” usually refers to a time limit of less than two hours. Binge eating is usually accompanied by a feeling of lack of control followed by feelings of guilt and shame which may leads many individuals to try to conceal their symptoms (American Psychiatric Association, 1995).

Along with binge eating, an individual with bulimia will often feel the need to vomit after a binge episode. This is referred to as purging, and it is common in 80-90% of the individuals who have bulimia (American Psychiatric Association, 1995). The reasons for vomiting usually include a relief from physical discomfort and a relief from the fear of gaining weight. Often vomiting becomes a goal whereby an individual will binge in order to vomit, eventually leading to vomiting even after the ingestion of small amounts of food (American Psychological Association, 1995).

Other features of bulimia include obsession with body shape and weight, high levels of dissatisfaction with one's body, excessive exercise, and low self-esteem (American Psychiatric Association, 1995).

There are two common subtypes of bulimia nervosa cited by the DSM-IV:

Purging Type. This subtype describes presentations in which the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas during the current episode or past episodes.

Nonpurging Type. This subtype describes presentations in which the person has used other inappropriate compensatory behaviours, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas during the current episode (American Psychiatric Association, 1995, p.547).

Most bulimics fall within the normal weight range, however, it has been found that approximately 15% of bulimics are underweight and about the same percentage are overweight (Johnson & Connor, 1987; as cited in Shisslak, Pazda, & Crago, 1990).

The American Psychiatric Association (1995) summarizes a variety of symptoms common among people with bulimia. The frequency of depressive symptoms or mood disorders are found to be much higher in bulimic individuals than in nonbulimic individuals. Mood disturbances have been found to occur at the same time as the onset of bulimia or shortly after. Anxiety symptoms or anxiety disorders are usually present in most bulimic individuals as well. About one-third of bulimics also have substance abuse or dependency problems. Stimulant dependency or abuse (to control appetite) or alcohol dependency or abuse are the most common substances used/abused by bulimics. Between one-third and one-half of all bulimic individuals have personality features that meet the criteria for one or more personality disorders (American Psychiatric Association, 1995).

The purpose of this study was to test the explanatory power of Pike's (1995) integrated sociocultural and personality model in predicting bulimic symptomatology. This study is a partial replication of Pike's study and uses a sample of Canadian college women.

The Etiology of Bulimia: Theories and Research

The importance for counsellors and therapists to be cognizant of the etiology of bulimia nervosa is axiomatic. Quite clearly, the development and implementation of effective treatment and prevention programs for this disorder rests on a thorough understanding the disorder's etiology as well as the variables associated with the disorder. There are several theories of bulimia nervosa, as well there is an extensive body of research on this disorder. While each of the current theories in its own way may emphasize a particular causal element in the bulimia equation, the literature indicates that there is likely a multicausal effect and that no one model can fully explain why bulimia nervosa develops in some people and not in others.

The Relationship of Certain Personality Variables to Bulimic Symptoms

Recent attention has been directed toward personality and its relationship to disordered eating. It has been found that obsessional, neurotic, and depressive personality characteristics are associated risk factors for eating disorders (Patton, 1988). As well, poor awareness of the signals of bodily urges in eating disordered patients suggest the possibility that chronic dysphoria coupled with difficulties labelling one's own feelings may be associated with disordered eating (Bruch, 1969). Disordered eating patterns may become a learned way of dealing with unpleasant arousal states if this association continues over a long period of time. Heatherton and Baumeister (1991) hypothesized that binge eating is motivated by one's attempt to escape from negative self-perception. Furthermore, low self-esteem and personal ineffectiveness has been found to be prevalent in eating disordered patients (Wagner, Halmi, & Maguire, 1987).

Leon et al. (1993), in their study of personality and behavioural vulnerabilities associated with disordered eating, hypothesized that negative mood and poor interoceptive awareness would be more prevalent in people with eating disorders than it would be in those who do not have eating disorders and that personality factors could have a predictive value in determining who is at risk of developing eating disorders. The results of their work suggested that the greatest predictor variables for bulimia were body dissatisfaction, negative emotionality, and lack of interoceptive awareness.

Ruderman and Besbeas (1992) reviewed the literature on the psychological characteristics of both dieters and bulimics. They found that while eating disordered patients share psychological characteristics with dieters, the bulimics differed qualitatively from the dieters (Garner, Olmsted, & Garfinkel, 1983; Garner, Olmsted, Polivy, & Garfinkel, 1984). These studies attempted to test the continuity and discontinuity models of the relation between dieting and bulimia nervosa. The continuity model predicts that dieters, bulimics, and control subjects fall on a continuum with controls showing the least disturbance and bulimics showing the most. The discontinuity model suggests that dieters are more similar to nondieter controls than to bulimics and that the variables

separating dieters from nondieters are different from the variables separating bulimics from dieters. Ruderman and Besbeas (1992) found support for both the continuity and discontinuity models that characterize the relation between dieting and bulimia.

Psychological characteristics of normal weight and underweight bulimics have been compared in several studies with support for the view that underweight bulimics have the most psychological disturbance (Johnson, Stuckly, Lewis, & Schwartz, 1982; Norman & Herzog, 1983). Other studies have shown few significant differences between the two groups (Fairburn & Cooper, 1984a, 1984b; Garner, Garfinkel, & O'Shaughnessy, 1985).

Several studies have compared normal-weight bulimics with obese bulimics, anorexic subjects, and normal subjects. Shisslak et al. (1990) compared psychological characteristics among underweight, overweight, and normal-weight bulimics and found that bulimic women in all three weight groups were found to have more external locus of control, lower self-esteem, greater psychopathology, and a lower sense of personal effectiveness than did nonbulimics in the three weight groups. Underweight bulimics were found to have the most external locus of control, the lowest self-esteem, and the highest psychopathology of all three groups. Normal-weight bulimics were found to have no clinically elevated scales on the Minnesota Multiphasic Personality Inventory. The overweight bulimics had greater psychopathology than did the normal-weight bulimics but less than did the underweight bulimics. It was also found that depression was higher among overweight bulimics than for both normal-weight bulimics and underweight bulimics (Shisslak et al., 1990).

Family Environment and its Influence on the Development of an Eating Disorder

Recent studies have looked at the relationship between family environment factors and the development of an eating disorder. Felker and Stivers (1994) found that lower expressiveness, lower independence, lower organization, and lower cohesion within a family appear to put a person at a greater risk of having an eating disorder. It was also found that a perception of greater conflict, greater achievement orientation, and greater control within a family was associated with an increased risk for developing an eating disorder (Felker & Stivers, 1994).

Integrated Model: Sociocultural and Personality Model in Predicting Bulimic Symptomatology

Pike (1995) suggests a model which integrates sociocultural and personality models in predicting bulimic symptomatology. In a study of high school girls, Pike (1995) investigated personality, family, and peer factors assessed on three levels. She found that families with bulimic members usually show increased anger, aggression, conflict, and indirect communication with each other, as well as less support and more emphasis on assertiveness and autonomy than do families without bulimic members. This is consistent with earlier findings (Johnson & Flach, 1985; Ordman & Kirchenbaum, 1986; Strober & Humphrey, 1987).

Pike (1995) hypothesized that a lower functioning within the family system and friendship network could result in a number of problems including bulimic attitudes and behaviours. She found a positive association between bulimic symptomatology and dissatisfaction with family cohesion suggesting that a lack of emotional bonding and a feeling of a lack of family cohesion may lead to psychological distress. Pike hypothesized that bulimic behaviour may be a coping strategy that is related to problems in friendship relations. The results of Pike's study also revealed that a sense of ineffectiveness and low interoceptive awareness were associated with the increase in bulimic symptoms. Personality styles were found to be only a modest predictor of bulimic symptomatology. Furthermore, the significance of these personality styles may have been confounded by the association with general psychological distress and may be more predictive of this general distress than it is with specific bulimic pathology (Pike, 1995).

In summary, studies support the view that the level of functioning within a person's family network and peer system significantly predicts bulimic symptomatology. Several models also implicate personality variables in the development of specific symptoms of eating disorders. Finally, the research suggests that a multifactorial model should be considered when formulating a treatment program for women with bulimia.

This present study is a partial replication of Pike (1995) on a sample of Canadian college women. The following research questions were tested:

1. College women who score high on the Bulimia Test (BULIT-R) are more likely to have peer systems that place a greater pressure on them to diet than do the peer systems of college women who score low on the BULIT-R.
2. College women who score high on the BULIT-R have more bulimic members in their peer networks than do college women who score low on the BULIT-R.
3. College women who score high on the BULIT-R score low on the cohesion subscale of Family Adaptability Cohesion Evaluation Scale (FACES-II). Specifically, women who score high on the BULIT-R are more likely to perceive their family as being less cohesive or connected than do women who score low on the BULIT-R.
4. College women who score high on the BULIT-R score lower on the Friendship Questionnaire than college women who score low on the BULIT-R. Specifically, women who score high on the BULIT-R experience a greater rate of general problems in their peer system than do women who score low on the BULIT-R.

METHOD

Participants

Students from four introductory psychology classes at a small eastern Canadian degree-granting college were asked to participate in this study. Participants were primarily of European heritage with a very few from other ethnic back-

grounds. Of the 143 women invited to participate in the study, 141 participated. Of the 141 questionnaire packages received, only 6 questionnaire packages contained missing data.

The Instruments

Bulimia Test. The Bulimia Test (BULIT) which is a 34-item, self-report, multiple choice questionnaire which allows the measurement of binge eating and specific weight loss behaviours common in bulimia nervosa. The range of possible scores are from 28 to 140. Both reliability and validity of this instrument has been published (Smith & Thelen, 1984). To provide self-report data consistent with the DSM-III-R, the Bulimia Test was revised. The revised Bulimia Test (BULIT-R) was also found to show both reliability and validity for measuring eating problems characteristic of bulimia in a clinical and nonclinical sample (Thelen, Farmer, Wonderlich, & Smith, 1991). The overall validity coefficient was reported at .73, $p < .001$. Test-retest reliability was reported at .95, $p < .001$ (Thelen, Farmer, Wonderlich, & Smith, 1991).

The Family Adaptability and Cohesion Evaluation Scale II. The Family Adaptability and Cohesion Evaluation Scale II (FACES II) (Olson, Portner, & Lavee, 1985) is a 30-item self-report questionnaire that evaluates the level of family cohesion and family adaptability. Family cohesion has been defined as: the emotional bonding that family members have toward one another (Olson et al., 1985). Family adaptability has been defined as: the ability of a marital or family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress (Olson et al., 1985). A Perceived and Ideal version of the FACES II was available, however, this study only used the Perceived version of Faces II. The reason for this choice was that asking family members about his/her ideal family may be plagued with social desirability coupled with idealistic distortion factors (Olson et al., 1985). Although FACES III is the most recent version of FACES, FACES II has been found to have its advantages over FACES III. The Cronbach alpha level for adaptability and cohesion has been found to be higher for the FACES II than for FACES III, the correlation between adaptability, cohesion and social desirability in FACES II has been found to be less problematic, and the concurrent validity for both subscales on the FACES II is higher than for FACES III (Olson et al., 1995). The reliability for the adaptability and cohesion subscales were reported at .93, and .79, respectively. Concurrent validity for the cohesion and adaptability subscales were reported at .93 and .79, respectively (Anderson & Gavazzi, 1990; Lee, 1988).

The Friendship Questionnaire. The Friendship Questionnaire (Pike, 1995), is a 30-item, self-report questionnaire designed to evaluate the quality of friendships among adolescents. Items are scored on a 5-point scale from almost never (1) to almost always (5). Four subscales were produced: (a) Comfort and Intimacy, (b) Mutual Support, (c) Social Contact, and (d) Emotional Expression. Internal consistency of these scales is supported by Cronbach's alphas of .79, .77, .78, and .69, respectively (Pike, 1995).

Anorexia and bulimia within the social system. Anorexia and Bulimia within the Social System is a subjective report by participants of the number of friends and family members who had been diagnosed with anorexia or bulimia nervosa currently or in the past. This approach was used by Pike (1995) and includes three scores based on these reports: anorexia and bulimia nervosa among female family members, anorexia and bulimia nervosa among male family members, and anorexia and bulimia nervosa among friends. Participants simply indicate the number of friends and family members who they believe have anorexia and/or bulimia nervosa.

The Social Pressure to Diet Scale. The Social Pressure to Diet (Pike, 1995), is a four-item scale that assesses the extent to which participants feel pressured by their friends and families about their weight and to the extent to which they feel encouraged to diet by these two networks. The four items on the scale ask respondents to rate: (a) the extent to which friends encourage her to diet, (b) the extent to which she has been encouraged to buy clothing that is too small hoping that they will fit after weight loss, (c) the extent to which family members encourage her to diet, and (d) the extent to which the respondent has been teased about her weight. Response options range from does not describe me at all (1), to describes me very well (4). The Cronbach alpha level was reported at .75 (Pike, 1995).

Procedure

Female students in four introductory psychology classes were asked to participate in this study. Students were introduced to the researcher by the professor at the beginning of class. The males in the class were instructed that they may leave the class. Each female participant was given a questionnaire package in an envelope which included all of the measurement scales and a cover letter explaining the study. The participants were informed that the study focused on college female health issues, specifically eating patterns and dieting. The females were asked to retrieve the cover letter from the questionnaire envelope and read along silently as the researcher read the letter out loud. After the instructions were given, the participants were informed that their participation was completely voluntary and anonymous and that if they did not wish to participate they could either remain seated or they could leave. Participants were asked to pass in their questionnaire package at the front of class upon completion, making sure that the envelope was sealed. Participants were also informed that if they had any questions regarding this study that a professional psychologist would be available to them. Participants were informed that they may view the results of the study upon completion and were thanked for their time and cooperation.

RESULTS

Stepwise multiple regression analysis was performed using the Social Pressures to Diet Scale, Adaptability and Cohesion subscales of FACES II, the number of bulimic women in a peer system and the four subscales of the Friendship

Questionnaire (comfort and intimacy, mutual support, social contact and emotional expression) as predictors of bulimic symptomatology as measured by the bulimia test BULIT-R (see Table 2 for a report of the means and standard deviations on the FACES II, Friendship Questionnaire, Social Pressures to Diet Scale, and BULIT-R).

Similar to Pike's (1995) finding, the Social Pressure to Diet Scale was the best available predictor in predicting disordered eating and accounted for 23% of the explained variance of the scores on the BULIT-R. Anorexia and bulimia within a peer system was the second variable to be added to the regression equation and added an additional 3% of the explained variance in BULIT-R scores. When the cohesion subscale of FACES II was added to the regression equation, a further 4% of the variance in BULIT-R scores was explained.

The test of significance of the individual regression weights (see Table 1 for regression summary) revealed that the Social Pressure to Diet Scale, family cohesion, and anorexia and bulimia within peer systems were in fact significant predictors of bulimic symptomatology. Specifically, the Social Pressure to Diet Scale revealed a $t(1, 135) = 5.85, p < .05$, the cohesion subscale of FACES II revealed a $t(1, 135) = 2.78, p < .05$, and anorexia and bulimia with peer systems revealed a $t(1, 135) = 2.75, p < .05$. After the Social Pressure to Diet Scale was selected as the best available predictor of BULIT-R scores, family cohesion and anorexia and bulimia within peer system were added consecutively to the equation and significantly added predictive power to the Social Pressure to Diet Scale.

Table 1
Summary of Stepwise Regression Analysis for Variables Predicting BULIT-R Scores (n = 141)

Variables	<i>b</i>	<i>seb</i>	β
Model 1			
Social Pressures to Diet	4.05	.65	.47
Model 2			
Social Pressures to Diet	3.74	.64	.44
Anorexia and Bulimia within peer systems	4.06	1.53	.20
Model 3			
Social Pressures to Diet	3.68	.63	.43
Anorexia and Bulimia within peer systems	4.16	1.50	.21
Family Cohesion	-.28	.10	-.20

Note: $R^2 = .23$ for model 1; $R^2 = .26$ for model 2; $R^2 = .30$ for model 3

In summary, it was found that the Social Pressure to Diet Scale, anorexia and bulimia within peer systems, and the cohesion subscale of the FACES II explained a significant amount of variance in BULIT-R scores. Specifically, the results of this study supported the hypotheses that college women who score high on the BULIT-R will score low on the cohesion subscale of FACES-II; college women who score high on the BULIT-R are more likely to have peer systems that place a greater pressure on them to diet than do the peer systems of college women who score low on the BULIT-R; college women who score high on the BULIT-R will have more bulimic members in their peer networks than do college women who score low on the BULIT-R. The results of this study did not support the hypothesis that college women who score high on the BULIT-R will score lower on the Friendship Questionnaire than college women who score low on the BULIT-R.

Table 2

Means and Standard Deviations for Subscales on the FACES II, Friendship Questionnaire, Social Pressures to Diet Scale, and BULIT-R (n = 141)

Variables	<i>M</i>	<i>SD</i>
FACES II		
Adaptability	45.15	9.17
Cohesion	59.15	12.88
Friendship Questionnaire		
Comfort and Intimacy	25.03	3.80
Mutual Support	21.06	3.85
Social Contact	16.24	3.36
Emotional Expression	19.16	3.78
Social Pressures to Diet Scale	5.52	2.05
BULIT-R	48.79	17.96

DISCUSSION

The objective of this study was to evaluate the relationship between family and peer networks and bulimic symptomatology. In support of Pike's (1995) model, it was found that the level of family cohesion played a significant role in the prediction of bulimic symptomatology. Furthermore, it was found that the amount of emphasis placed on dieting and weight loss within family and peer networks was significantly related to bulimic symptomatology. The incidence of bulimia within a peer system was also found to significantly predict bulimic

symptomatology. What was not found to be a significant predictor of bulimic symptomatology, and contrary to Pike's (1995) findings, was the level of general conflict within the peer system. As can be seen from Table 2, problems within the peer network included a low level of comfort and intimacy, mutual support, social contact and emotional expression.

The results of this study suggest that bulimic women are more likely to perceive their family network as being low in cohesion and emotional bonding than do nonbulimic women. Dissatisfaction with family cohesion may put someone at risk for general psychological distress. As a result, disordered-eating patterns may become a coping mechanism for some women as a means of dealing with feelings of loneliness and alienation that is experienced within the family network (Pike & Rodin, 1991). Bulimic behaviour may be a means of ridding oneself of negative feelings by engaging in purging behaviour and may be an attempt to gain comfort and nurturance during eating episodes (Humphrey; as cited in Pike & Rodin, 1991).

In support of Pike's (1995) findings, it appears that a moderate predictor of bulimic symptomatology include concerns with weight and dieting within family and peer systems. Furthermore, exposure to social pressures to diet from family networks and peer systems is associated with an increased risk for disordered-eating patterns. The rate of eating disturbance within a peer network appears to result in a significant social influence that is associated with an increased risk of eating disturbances. Specifically, as been suggested previously by Pike and Rodin (1991), the mother-daughter relationship may contribute significantly to disordered eating in college women. Pike and Rodin (1991) have suggested that mothers of bulimic women want their daughters to be thinner and rate their daughters as less attractive than mothers of nonbulimic women. Pike and Rodin (1991) also found that mothers were influential as models for certain eating behaviours and attitudes. This notion may explain why weight and diet concerns within the family and peer network significantly predicted bulimic symptomatology.

This study did not find that the number of general problems in the peer systems were significant predictors of bulimic symptomatology as was found by Pike (1995). This discrepancy may be due to the difference in the age of the samples. Pike (1995) investigated bulimic symptomatology among high school girls while the current study investigated bulimic symptomatology among college women. A further factor in the non-significant results might relate to the modest psychometric attributes of the scales used. Finally, this discrepancy may be explained by a recent theory on the stages of peer-group development in adolescence which argues that peer relationships are more influential during early adolescence than in early adulthood (Dunphy; as cited in Atwater, 1992). This theory suggests that the relationship between adolescent cliques and crowds changes throughout adolescence. Stage five of this theory suggests that after graduation from high school, individuals tend to take different paths; some leave school to work and others to attend college. More relationships between couples tend to last longer and often

end in marriage. These changes result in a reduced need for the support and closeness of the adolescent cliques and crowds (Dunphy; as cited in Atwater, 1992). Peer networks in the college population may not be as close knitted and may be more loosely associated than in high school peer networks. The level of comfort and intimacy, mutual support, social contact and emotional expression within a college peer system, therefore, may have less effect on the development of bulimic symptomatology. Because college peer systems may be more loosely associated, general problems within the peer system may not increase the likelihood that a college individual will report higher rates of bulimic symptomatology. While this study did not find peer influence to be as strong as did Pike (1995), it did find that peer networks still appear to be an influential factor in bulimia nervosa among college women. Further investigation of how peer networks influence rates of bulimia nervosa in females from high school through college appears warranted.

The integrated model investigated in this study significantly predicts bulimic symptomatology in college women and demonstrates the importance of investigating the functioning of the family and peer networks of women with bulimia. Particularly, there is an increased likelihood that an individual will report higher rates of bulimic symptomatology if she: (a) perceives her family to be low in cohesiveness; (b) is exposed to eating problems by members in her peer network; (c) and feels pressure to achieve a societal ideal weight from both her family and peer networks.

The implications of this study for counselling are significant. As Pike (1995) suggests, this model highlights society's influence on female development and the detrimental effects of Western society's promotion of an excessively thin ideal for women. Pike (1995) suggests that women have become targets of pressure to conform to the thin ideal through various forms of media at an early age. As a result, the discrepancy between the real and ideal self, determined by society, greatly influences a female's sense of self and self-worth (Berndt & Hestenes, 1996; Stice & Shaw, 1994). As suggested by this study, this pressure to conform to the thin ideal, from family and friends, increases the risk for bulimia nervosa. Counselling should, therefore, explore the cultural construction and evolution of the thin ideal with the client, and address how the family and peers may pressure the client to conform to this ideal. It is important to explore with the client if (1) closing the gap between the real and ideal self is a realistic goal, and (2) if the thin ideal is attainable, knowing the media's portrayal of the ideal woman is a fabrication.

The results of this study also highlight the usefulness of combining individual and family therapies in the treatment of bulimia nervosa. Issues regarding the impact of family dynamics on the development of bulimia nervosa need to be addressed. The inclusion of family members in therapy would prove useful in addressing familial issues around emotional bonding, preoccupation with the thinness, and pressure to conform to the thin ideal. Facilitating change in the familial patterns of interaction, bonding, and attitudes around weight and

dieting, coupled with individual therapy, may increase the effectiveness in treating bulimia nervosa.

With respect to limitations, this study did not make a systematic attempt to collect data on the race and socioeconomic background of the participants. Collection of this demographic data in future studies would prove to be useful. Secondly, regression models are based on correlations and, therefore, cannot suggest causality. Also, this study assumes that eating problems are placed on a continuum and that predictors of subclinical eating problems will be similar to predictors of clinical disorder of bulimia nervosa. It would be beneficial for future studies to use a sample that included women who were diagnosed with bulimia nervosa to determine the extent to which predictors of the nonclinical sample can be applied to clinical cases. It is also important to note that the results of this study only apply to college women, therefore caution is warranted when generalizing the results to other samples, particularly those diagnosed with an eating disorder. Finally, this study is based exclusively on self-report which may be subject to social bias.

References

- American Psychiatric Association. (1995). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: American Psychiatric Association.
- Anderson, S. A., & Gavazzi, S. M. (1990). A test of the Olson Circumplex Model: Examining its curvilinear assumption and the presence of extreme types. *Family Process, 29*, 309-324.
- Attie, I., & Brooks-Gunn, J. (1989). Development of eating problems in adolescent girls: A longitudinal study. *Developmental Psychology, 25*, 70-79.
- Atwater, E. (1992). Peers. In Carol Wada (Ed.), *Adolescence* (pp. 145-166). Toronto: Prentice Hall, Inc.
- Berndt, T. J., & Hestenes, S. L. (1996). The developmental course of social support: Family and peers. In L. Smolak, M. P. Levine, & R. Striegel-Moore (Eds.), *The developmental psychopathology of eating disorders: Implications for research, prevention and treatment* (pp. 77-108). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Bruch, H. (1969). Hunger and instinct. *The Journal of Nervous and Mental Disorder, 149*, 91-114.
- Fairburn, C. G., & Cooper, P. J. (1984a). Binge-eating, self-induced vomiting and laxative abuse: A community study. *Psychological Medicine, 14*, 401-410.
- Fairburn, C. G., & Cooper, P. J. (1984b). The clinical features of bulimia nervosa. *British Journal of Psychiatry, 114*, 238-246.
- Felker, K. R., & Stivers, C. (1994). The relationship of gender and family environment on eating disorder risk in adolescents. *Adolescence, 29*, 821-834.
- Garner, D. M., Garfinkel, P. E., & O'Shaughnessy, M. (1985). The validity of the distinction between bulimia with and without anorexia nervosa. *American Journal of Psychiatry, 142*, 581-587.
- Garner, D. M., Olmsted, M. P., Polivy, J., & Garfinkel, P. E. (1984). Comparison between weight-preoccupied women and anorexia nervosa. *Psychosomatic Medicine, 46*, 255-266.
- Heatherton, T. F., & Baumeister, R. F. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin, 110*, 86-108.
- Johnson, C. L., & Flach, A. (1985). Family characteristics of 105 patients with bulimia. *American Journal of Psychiatry, 142*, 1321-1324.
- Johnson, C. L., Stuckey, M. K., Lewis, L. D., & Schwartz, D. M. (1982). Bulimia: A descriptive survey of 316 cases. *International Journal of Eating Disorders, 2*, 3-16.

- Kashubeck, S., Walsh, B., & Crowl, A. (1994). College atmosphere and eating disorders. *Journal of Counseling and Development*, 72, 640-645.
- Lee, C. (1988). Theories of family adaptability: Toward a synthesis of Olson's Circumplex and the Beavers Systems model. *Family Process*, 27, 73-85.
- Leon, G. R., Fulkerson, J. A., Perry, C. L., & Cudeck, R. (1993). Personality and behavioral vulnerabilities associated with risk status for eating disorders in adolescent girls. *Journal of Abnormal Psychology*, 102, 438-444.
- Mintz, L. B., & Betz, N. E. (1988). Prevalence and correlates of eating disordered behaviors among undergraduate women. *Journal of Counseling Psychology*, 35, 463-471.
- Norman, D. K., & Herzog, D. B. (1983). Bulimia, anorexia nervosa, and anorexia nervosa with bulimia: A comparative analysis of MMPI profiles. *International Journal of Eating Disorders*, 2, 43-52.
- Olson, D. H., Portner, J., & Lavee, Y. (1985). *Faces III Manual*. St. Paul: Family Social Science, University of Minnesota.
- Ordman, A. M., & Kirschenbaum, D. S. (1986). Bulimia: Assessment of eating, psychological adjustment, and familial characteristic. *International Journal of Eating Disorders*, 5, 865-878.
- Patton, G. C. (1988). The spectrum of eating disorder in adolescence. *Journal of Psychosomatic Research*, 32, 579-584.
- Peterson, C., & Mitchell, J. (1999). Psychosocial and pharmacological treatment of eating disorders: A review of research findings. *JCLP/In Session: Psychotherapy in Practice*, 55, (6), 685-597.
- Pike, K. M. (1995). Bulimic symptomatology in high school girls. *Psychology of Women Quarterly*, 19, 373-396.
- Pike, K. M., & Rodin, J. (1991). Mothers, daughters, and disordered eating. *Journal of Abnormal Psychology*, 100, 198-204.
- Ruderman, A. J., & Besbeas, M. (1992). Psychological characteristics of dieters and bulimics. *Journal of Abnormal Psychology*, 101, 383-390.
- Scarano, G. M., & Kalodner-Martin, C. R. (1994). A description of the continuum of eating disorders: Implications for intervention and research. *Journal of Counseling and Development*, 72, 356-361.
- Shisslak, C. M., Pazda, S. L., & Crago, M. (1990). Body weight and bulimia as discriminators of psychological characteristics of among anorexic, bulimic and obese women. *Journal of Abnormal Psychology*, 99, 380-384.
- Smith, M. C., & Thelen, M. H. (1984). Development and validation of a test for bulimia. *Journal of Consulting and Clinical Psychology*, 52, 863-872.
- Stice, E., Schupak-Neuberg, E., Shaw, H., & Stein, R. (1994). Relation of media exposure to eating disorder symptomatology: An examination of mediating mechanisms. *Journal of Abnormal Psychology*, 103, 836-840.
- Stice, E., & Shaw, H. E. (1994). Adverse effects of the media portrayed thin-ideal on women and linkages to bulimic symptomatology. *Journal of Social and Clinical Psychology*, 13, 288-308.
- Thelen, M. H., & Farmer, J., Wonderlich, S., Smith, M. (1991). A revision of the bulimia test: The BULIT-R. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 3, 119-124.

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