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## **Alcohol and amphetamine dependencies convoluted with anorexia and bulimia nervosa**

Wendy Sue Briggs

Kelly-Jo Chastain-Carlton

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ALCOHOL AND AMPHETAMINE DEPENDENCIES  
CONVOLUTED WITH ANOREXIA AND BULIMIA NERVOSA

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A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Social Work

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by  
Wendy Sue Briggs  
Kelly-Jo Chastain-Carlton

June 1997

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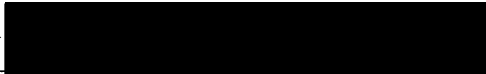
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## ABSTRACT

This study explored the possibility that some individuals with alcohol and amphetamine addictions are initially motivated to use alcohol and amphetamines because of underlying issues involving body dissatisfaction and weight reduction associated with Anorexia and Bulimia Nervosa. Current literature reveals similarities among chemical dependencies and eating disorders.

The research sample was drawn from a 125 bed inpatient drug and alcohol rehabilitation center. Participants included both males and females; their ages ranged from 19 to 46 years, and they had either an alcohol or amphetamine dependency in which treatment was being sought. Thirty-eight questionnaires of the Eating Disorder Inventory-2 (EDI-2) were distributed and completed at the agency. Afterwards, brief formal open-ended interviews were conducted addressing body shape dissatisfaction. The researchers measured the following eight constructs: Body Dissatisfaction (BD), Drive for Thinness (DT), Bulimia (B), Interoceptive Awareness (IA), Interpersonal Distrust (ID), Ineffectiveness (I), Perfectionism (P), and Maturity Fears (MF).

Because this was an exploratory positivist study, measures of central tendency and normative percentile tables, as established by Garner's EDI-2 (1991), were utilized and compared to the results in each of the eight

constructs. In addition, univariate tables were applied to examine the relationship between the control variables, such as gender and age, and the eight constructs. The researchers found that gender was an important variable in relation to the eight constructs, specifically with Drive for Thinness and Body Dissatisfaction. Results indicate that the females in this study illustrated higher percentile scores in regards to the construct of Drive for Thinness. Furthermore, results indicate that both males and females in this study score high in regards to the construct Body Dissatisfaction. However, gender made a difference in the direction of body dissatisfaction. This study is significant to social work practice because treatment approaches and methods can be improved by creating a better union between the individual seeking treatment and the methods of treatment offered.

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## INTRODUCTION:

Throughout history men and women have been conditioned by society to attain the ideal body image. In their study Silberstein, Striegel-Moore, Timko and Rodin state that, "In current society, dieting and exercise are the primary strategies for altering one's body" (1988, p. 221). Dieting and exercise are needed to maintain healthy bodies, however, individuals who suffer from Anorexia and Bulimia Nervosa often take dieting and exercise to the extreme in that they have an intense fear of becoming obese (Lovett, 1990). Sadly, approximately 22% of the individuals who suffer from Anorexia Nervosa die (Bowers, 1987). This percentage may not appear to be high; however, what this means in reality, is that approximately 1 out of every 5 persons suffering from Anorexia Nervosa will die.

According to Abraham and Llewellyn-Jones, "Anorexia Nervosa affects females fifteen-times more commonly than males and usually begins during adolescence or in early adulthood" (1987, p. 47). Further research indicates that males experience obesity before the onset of Anorexia Nervosa (Farrow, 1992; Herzog, Norman, Gordon, and PePOSE, 1984). In addition, Abraham and Llewellyn-Jones state, "Indeed, the illness affects one teenager in every 200, reaching a peak incidence of one in 100 among adolescents aged between 16 and 18" (1987, p. 48).

Lovett states, "Bulimia Nervosa is a condition in which

the patient is preoccupied with food and periodically has binges of overeating" (1990, p.79). Furthermore Lovett contends that the individual experiences a premorbid fear of self-induced vomiting, purging, and episodic starvation (1990).

Both Anorexia and Bulimia Nervosa manifest states of starvation in which the individual is subject to low serum potassium levels that are associated with cardiac arrhythmias and cardiac arrest (Halmi and Falk, 1981). The research indicates that up to 85% of individuals affected by Bulimia Nervosa are female and up to 15% are male (Cepik, Arikan, Boratav, and Isik, 1995; Farrow, 1992; Herzog, et al., 1984).

Often we hear others jokingly say that they would like to have a little Anorexia in order to lose weight. Unfortunately, Anorexia and Bulimia Nervosa are similar to other types of addictions, such as alcohol and amphetamine dependencies; these addictions can be life threatening. People with alcohol and amphetamine addictions lose weight too; however, we do not hear anyone wishing for an alcohol or drug addiction in order to lose weight. Anorexia and Bulimia Nervosa are serious illnesses and deserve to be treated as such by the general population, the medical, and social work professions as well.

Recent studies have documented the incidence of alcohol and chemical abuse among individuals with eating disorders



(Bulik, 1987; Grilo, Levy, Becker, Edell, and McGlashan, 1995; Holderness, Brooks-Gunn, and Warren, 1993; Katz, 1990; Suzuki, Higuchi, Yamada, Mizutani, and Kono, 1993). Specifically, Schuckit, Tipp, Anthenelli, Bucholz, Hesselbrock and Nurnberger (1996) state that between 14% and 50% of males and females who suffer from Bulimia Nervosa also may be dependent on alcohol. Furthermore, Schuckit et al. (1996) found that up to 33% of women who suffered from Anorexia Nervosa also had problems with substance abuse and alcoholism. There is some speculation as to why this relationship exists (Taylor, Peveler, Hibbert, and Fairburn, 1993; Varner, 1995).

The literature indicates that alcohol and amphetamines have been used as purging mechanisms for Anorexia and Bulimia Nervosa (Bulik, 1987; DSM-IV, 1995; Killen et al., 1987; Suzuki et al., 1993). The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) splits Anorexia into two subtypes, the restrictive type, in which the individual loses weight by dieting and excessive exercise without bingeing or purging, and the binge-eating/purging type, in which the individual binges then purges via laxatives and diuretics (1995). The DSM-IV also contends that persons with Anorexia Nervosa, subtype Binge-Eating/Purging Type ". . . are more likely to have other impulse-control problems, to abuse alcohol or other drugs . . ." (1995, p. 541).

Currently, research addresses populations with known eating disorders (Bulik, 1987; Holderness, et al., 1993; Suzuki, et al., 1993). Unfortunately, there are gaps in the literature specifying why individuals may initially use alcohol, amphetamines, or both. Since alcohol and amphetamine use can be a purging mechanism, the researchers in this study examined the population from a chemical dependency rehabilitation center to discover the prevalence of those individuals who manifest behaviors associated with Anorexia and Bulimia Nervosa. The paradigm used for this study was specifically chosen for its exploratory nature.

#### PROBLEM STATEMENT AND LITERATURE REVIEW:

The research question for this study suggests that some individuals with alcohol and amphetamine addictions are initially motivated to use alcohol and amphetamines because of underlying issues involving body dissatisfaction and weight reduction associated with Anorexia and Bulimia Nervosa. Hidden within the texts pertaining to eating disorders is the suggestion that individuals with Anorexia and Bulimia Nervosa actually use alcohol and amphetamines as a purging mechanism to control their weight (Abraham and Llewellyn-Jones, 1987; Russell, 1990; Squire, 1984). Schuckit, et al. reports that, ". . . some of the relationship to the eating disorders might also represent the use of drugs in the context of an attempt to control

appetite . . . ." (1996, p.80). Abraham and Llewellyn-Jones suggest that 20% of those individuals affected by Bulimia will abuse alcohol or drugs (1987).

Social workers and other health care professionals are challenged when presented with individuals who manifest symptomatology which appears to be caused by alcohol and amphetamine dependencies, such as weight loss, but in fact, may be related to Anorexia and Bulimia Nervosa. Weight loss may occur with alcohol and amphetamine dependencies. However, weight loss caused by Anorexia and Bulimia Nervosa is usually to the point of emaciation (Akeroyd-Guillory, 1988; Bowers, 1987; Edmands, 1986; Yager, 1994). Knowledge of differential diagnosis and an awareness of Anorexia and Bulimia Nervosa is an essential intervention for social workers and other health care professionals. Health care professionals should not assume that severe weight loss is a result of alcohol or amphetamine dependency without ruling out etiological factors involving an eating disorder.

This phenomenon has been documented by Katz (1990). Specifically, a patient was admitted to a substance abuse rehabilitation center, and, upon admission, it was noted that she was severely underweight; unfortunately, this was attributed to alcoholism (Katz, 1990). As a result, the primary diagnosis went unrecognized; later in treatment it was discovered that she had a long history of Anorexia and Bulimia Nervosa (Katz, 1990). Individuals with alcohol or

amphetamine dependence who manifest behaviors associated with Anorexia and Bulimia Nervosa exhibit similar symptomatology. In order to fully understand the dynamics of Anorexia and Bulimia Nervosa in relation to alcohol and amphetamine dependence, a brief description of both disorders will be presented.

Although Anorexia and Bulimia Nervosa are classified as separate eating disorders in the DSM-IV, they will be viewed on a continuum due to their similarities. Fichter states that, "Hilde Bruch (1973) has expressed the firm opinion that there are important similarities between psychologically based obesity, bulimia and anorexia nervosa" (1990, p. 8).

Those who suffer from Anorexia Nervosa are predominately female, representing up to 95 percent of this population (Bowers, 1987). However, other studies reveal that males may actually represent up to 14 percent of the actual population suffering from Anorexia Nervosa (Farrow, 1992; Herzog, et al., 1984). In Anorexia, the onset for females is usually during early adolescence, and occurs for males much later in adolescence (Farrow, 1992; Herzog et al., 1984).

Studies reveal that approximately 85 percent of persons suffering from Bulimia Nervosa are female and as many as 15 percent are male (Cepik et al., 1995; Farrow, 1992; Herzog et al., 1984). The onset for Bulimia Nervosa in females and

males differ; for females it is between the ages of 15 to 18 and for males it is between the ages of 18 to 26 (Carlat and Camargo, 1991). The research illustrates that males have later onset of Bulimia due to their past history of being obese which does not seem to be a factor with females (Carlat and Camargo, 1991; Cepik et al., 1995; Farrow, 1992; Herzog et al., 1984).

Both disorders include an intense fear of becoming obese which does not diminish as weight loss progresses, and any weight gain creates anxiety (DSM-IV, 1995). In addition, all metabolic systems slow down in order to keep the body alive including the cardiovascular, gastrointestinal, renal and electrolyte, endocrine, and neurological and neuropsychological systems (Akeroyd-Guillory, 1988; Bowers, 1987; Halmi and Falk, 1981; and Weiner, 1985). Secondary symptoms include, dizziness, physical weakness, insomnia, hyperactivity, and lanugo hair, which is a soft downy hair that grows on the body where hair normally does not grow such as the abdomen and face (Edelstein, 1989; and Moorey 1991).

In persons with Bulimia Nervosa the metabolic systems slow down due to electrolyte abnormalities; and the loss of menses is not unusual in females with eating disorders (Akeroyd-Guillory, 1988; Bowers, 1987; Weiner, 1985). Low levels of testosterone have been linked with Anorexia and Bulimia Nervosa in males (Weiner, 1985). Medical

complications for both Anorexia and Bulimia Nervosa in males and females includes malnourishment, hypokalemia (reduced levels of potassium), abdominal bloating, slowed intestinal functioning, hematemesis (vomiting of blood), reduced heart rate, cardiac arrhythmia, and cardiac arrest (Akeroyd-Guillory, 1988; Bowers, 1987; Halmi and Falk, 1981; Weiner, 1985).

Individuals with Anorexia and Bulimia Nervosa also exhibit low self esteem as well as low self worth; have a tendency towards an external locus of control; seek approval from outside achievements, significant others, and peers; and their sense of self and value depends on outside sources (Shapiro, Blinder, Hagman, and Pituck, 1993). Persons with Anorexia and Bulimia Nervosa place all of their self esteem in how much they weigh; as a result, they will resort to various forms of purging to stay thin (Shapiro, et al., 1993). Silberstein, et al. report that a relationship does indeed exist between self esteem and body dissatisfaction for both males and females (1988). However, it is the direction in weight that differs; men seem to be unhappy when underweight, at the same time, women seem to be unhappy when overweight (Silberstein, 1988).

It is interesting to note that the data revealed individuals involved in athletics are at a risk for purging type behavior, especially if weight maintenance is required (Carlat and Camargo, 1991; Farrow, 1992; Lovett, 1990).

Specifically, females who are involved in ballet and gymnastics, and males who are involved in wrestling and boxing have a higher rate of purging behavior associated with Anorexia and Bulimia Nervosa (Carlat and Camargo, 1991; Farrow, 1992; Lovett, 1990). Methods of purging include laxatives, diuretics, excessive exercise, and induced vomiting via a foreign object or ipecac syrup (Bowers, 1987). Lovett best illustrates this in his work with a 15 year old male boxer who started purging at the age of 14 in order to maintain his weight for boxing (1990). The 15 year old reported that, "self-induced vomiting was a common method amongst boxers of keeping their weight low, especially just before a fight" (1990, p.80).

However, several individuals with Anorexia and Bulimia Nervosa use alcohol, amphetamines, and other substances in the effort to stay thin, using them as a purging mechanism in order to control food intake after a few days of normal eating (Bulik, 1987; Holderness, et al., 1994; Katz, 1990; Suzuki, et al., 1993). In Fichter's book, Bulimia Nervosa Basic Research, Diagnosis and Therapy, Russell contends that amphetamines are used to help reduce the fattening effects of food (1990). Unfortunately, cycles of drug use contribute to the onset of bingeing which increases the individual's uncontrolled behavior (Katz, 1990). These findings are in congruence with Grilo's et al. (1995) findings for substance abuse. Grilo contends that

similarities exist between substance abuse and eating disorders (1995). He states that, ". . . increased drug use and binge eating both follow food deprivation" (Grilo, et al., 1995, p. 259).

Individuals with both chemical dependencies and Anorexia and Bulimia Nervosa present special problems for inpatient treatment. Most significantly, where does the individual go for treatment? Currently, drug treatment centers only treat drug and alcohol dependence (Yager, 1994). Likewise eating disorder units currently treat only the issues related to eating disorders (Yager, 1994). It is crucial for social workers to be aware of dual diagnosed populations so that appropriate community and family resources can be utilized. It is important to note that not all persons with chemical dependencies have an eating disorder, and not all persons with eating disorders use drugs.

Community based agencies report having clients that need treatment which addresses both chemical dependence and eating disorders. These agencies report that up to 30 to 80 percent of females who seek help for chemical dependencies also have an eating disorder (Elizabeth Vargas, personal communication, November 1996; Michael Mullin, personal communication, November 1996).



#### PROBLEM FOCUS:

This study addressed the question of whether some individuals with alcohol or amphetamine dependencies were initially motivated to use alcohol or amphetamines because of underlying issues with Anorexia and Bulimia Nervosa. With knowledge of the motivating factors for chemical abuse, social workers can also accurately address or rule out an eating disorder if appropriate.

The paradigm incorporated a positivist approach which was exploratory in nature. The relationship between alcohol and amphetamine dependencies and Anorexia and Bulimia Nervosa was established without having to illustrate the cause of the relationship. In addition to individual interviews, the Eating Disorder Inventory-2 (EDI-2) was utilized when exploring ideas pertinent to this study.

The literature reveals similarities among chemical dependencies and eating disorders. It has been theorized that the dynamics of Anorexia and Bulimia Nervosa play important role within the individual who is effected by an eating disorder (Killen, et al., 1987). Killen et al., states that "chemical dependencies may provide relief from depression, anxiety, and other psychosocial problems to which Bulimics appear susceptible" (1987, p. 1541). This study is significant to direct social work practice because treatment approaches and methods can be improved. Implications posited by the research question, that persons

with alcohol and amphetamine dependencies were initially motivated to use alcohol and amphetamines because of underlying issues with Anorexia and Bulimia Nervosa, were found to be more significant than allowable by chance; thus, future research with a larger sample size is recommended.

#### STUDY DESIGN:

The purpose of this study was to explore possible eating disorders, specifically Anorexia and Bulimia Nervosa, which may exist simultaneously with alcohol or amphetamine dependency. Research indicates that alcohol and chemical abuse does indeed occur among individuals with eating disorders (Bulik, 1987; Grilo, et al., 1995; Holderness, et al., 1993; Katz, 1990; Suzuki, et al., 1993). However, most of these studies focus on population samples with known eating disorders (Bulik, 1987; Holderness, et al., 1993; Suzuki, et al., 1993). The goal of this study was to explore the existence of possible eating disorders among alcohol or amphetamine dependency population samples.

Comorbidity of Anorexia or Bulimia Nervosa and a chemical dependency has been established as a significant purging mechanism among persons with diagnosed eating disorders (Bulik, 1987; DSM-IV, 1995; Killen, et al., 1987; Suzuki, et al., 1993). Thus, direct practitioners need to address the possibility that Anorexia or Bulimia Nervosa can be the underlying issue for individuals with alcohol or

amphetamine dependencies. This study set out to examine and explore the possibility of existing high risk purging behavior among this particular group. A research survey design that employed a cross sectional approach was utilized to explore and examine issues raised within the research question: Are persons with alcohol and amphetamine dependencies initially motivated to use alcohol and amphetamines because of underlying issues with Anorexia and Bulimia Nervosa?

**SAMPLE:**

Non-probability sampling methods, specifically snowball sampling and purposive or judgmental sampling techniques, were used to select individuals for the desired sample population. The criteria for selection included individuals of either gender who were 18 years of age and older, and had either an alcohol or amphetamine dependency in which treatment was being sought (inpatient and outpatient).

The population sample was drawn from a 125 bed inpatient (and outpatient) drug and alcohol rehabilitation center. Thirty-eight EDI-2 instruments were distributed at the agency of which 31 were completed and returned. A total of 17 males and 14 females, ranging from ages 19 to 46, participated in the initial survey. Afterwards 9 males and 11 females participated in the open-ended interview addressing body shape dissatisfaction. The rehabilitation

center was chosen because the desired population was already in place.

#### DATA COLLECTION AND INSTRUMENTS:

Data collection involved the use of Garner's "Eating Disorder Inventory-2", EDI-2 survey instrument was utilized to address symptomology related to Anorexia and Bulimia Nervosa (see Appendix D) (1991). In addition, brief formal open-ended interviews were conducted on a voluntary basis for participants wishing to further explore topics within the EDI-2 questionnaire. The researchers in this study expected to find a small percentage of individuals with Anorexia and Bulimia Nervosa hidden within the population of persons with alcohol and amphetamine dependencies.

According to Garner, cutoff scores are not predetermined or fixed; instead, ranges for each construct have been established for eating disordered patients and non-eating disordered patients (1991). A score on or above the cutoff score on the EDI-2 instrument correlates positively with the concept of body dissatisfaction.

Validity and reliability on the EDI-2 have already been established by researchers who have designed and have used the survey (Garner, 1991; Garner and Olmsted, 1984; Slade and Dewey, 1986; Raciti and Norcross, 1987). In her book, The Slender Balance, Squire indicates that the EDI-2 is an accurate instrument to measure the psychological attitudes

and feelings concerning food and weight (1984). Furthermore, the EDI-2 Drive for Thinness construct has been highly correlated with the Eating Attitude Test (EAT) which is used for screening eating disorders (with correlations of .77 to .89) (Garner, 1991). Therefore it is not unusual for various research studies to utilize the EDI-2 as a screening instrument for eating disorders (Garner, 1991). It is important to realize that the researchers of this study are not making a clinical diagnosis, but instead they are viewing behavior similar to the behavior illustrated by Anorexia and Bulimia Nervosa patients. The EDI-2 instrument is effective in measuring the constructs of Body Dissatisfaction (BD), Drive for Thinness (DT), Bulimia (B), Interoceptive Awareness (IA), Interpersonal Distrust (ID), Ineffectiveness (I), Perfectionism (P), and Maturity Fear (MF), in which reliability coefficients ranged from .79 to .95 for all constructs except for Interoceptive Awareness which was .67 (Garner, 1991; Raciti and Norcross, 1987).

The researchers of this study obtained legal permission to employ the EDI-2 instrument by following the guidelines established by Psychological Assessment Resources, Inc. (PAR). Using an instrument which already has established validity and reliability insures the validity and reliability of this particular study. The self measuring properties of the EDI-2 have been examined by researchers and have been found to be reliable in reflecting appropriate

internal consistency, and alpha coefficients ranged from .79 to .93 (Raciti and Norcross, 1987). The constructs which will be measured are also the eight attributes for the variable, Anorexia and Bulimia Nervosa.

There are approximately 7-10 questions within each construct. Each question within a particular construct offers a close-ended response. A participant is forced to choose Always, Usually, Often, Sometimes, Rarely, and Never. Each response is given a weighted value ranging from 0 to 3 with 3 being the most symptomatic in pathology. Specifically Always or Never is weighted at 3 depending on the positive or negative direction of symptomatic pathology; the next least symptomatic responses are 2, 1, then 0 respectively. Ninety-one questions make up the EDI-2 instrument, however, only 64 questions were used. Thus, each construct addressed had 7 to 10 questions. These questions (for each construct) are added together to yield the raw score for each construct. The eight constructs are not added together because they are intended to be analyzed separately.

The probability of purging behavior, weight loss, and body dissatisfaction correlates with a score compared to normative scores for eating disordered patients and non-eating disordered patients as established by Garner in the EDI-2 Professional Manual (1991). In addition to alcohol and amphetamine dependence, other independent variables, which

will be used as control or extraneous variables, include gender and age. The dependent variable being addressed in this study is the Anorexia and Bulimia Nervosa Disorders.

The open-ended interviews included questions that explored issues relating to drug use, weight loss, and purging behavior which are associated with Anorexia and Bulimia Nervosa Disorders. When participants admitted to these issues on the open-ended interview they were asked questions such as, "Are you ever concerned about your weight to the point that you feel you must go on a diet?" and, "If so, what methods do you use to diet including alcohol and drugs?"; "Are you concerned about gaining weight?"; "Do you ever compare yourself with people who are thinner than you?" and if so, "Do you feel good or bad about your body?"; and "Have you ever made yourself throw up?"

A significant strength of this study is that open-ended interviews are employed. Garner contends that interviews allow for a rich understanding of constructs and related concepts (1991). By using such interviews, a detailed understanding of the sample population being studied was established. However, limitations to the study do exist. Garner, Olmsted, and Polivy have found that self-report instruments may reflect the denial as expressed by an individual with an eating disorder in that high scores may not be illustrated (1983). Furthermore, generalizability is limited in that the final sample population was small and

lacking in geographical diversity. In addition, the results of this study cannot be generalized to other populations. Qualitative data, even with open-coding, were subjected to interpretive analysis. While an exploratory positivist study can be broad in design yielding freedom to the researcher, at the same time, it is limited in that it may only hint at the answers to the ideas and concepts that are being explored.

#### PROCEDURE:

Fliers were distributed informing possible participants of the initial survey to be conducted. Thirty-eight EDI-2 surveys were distributed, and 31 individuals completed the instrument. Afterwards, the researchers obtained 20 open-ended interviews, each lasting approximately 30 to 45 minutes. Unfortunately, anonymity could not be offered because open-ended interviews were administered face to face after the initial survey was completed. Thus, confidentiality was explained and offered to the participants. It was important that the participants be aware that any identifiable information would be replaced by methods of coding as soon as possible.

For all formal standardized open-ended interviews, stage note taking techniques were utilized. Specifically, detailed notes were drawn unobtrusively, followed by journal note taking within 24 hours. Open-ended coding methods were



employed for construct and variable analysis. In order to open code the data, the researchers numbered each line of notes and then looked for emerging patterns and themes and categorized them appropriately. In addition, files were kept for coding purposes (i.e. code books and bibliography updates).

The data collection time frame incorporated a span of approximately six weeks. During this time, surveys were distributed, completed, and collected; afterwards all voluntary interviews of participants took place. Both researchers were present for the interviews; and actual data collection was performed by both researchers who conducted this study.

#### PROTECTION OF HUMAN SUBJECTS:

Each participant was presented with an informed consent explaining the voluntary nature of the survey. Individuals were also informed that refusal or withdrawal from the study at any time during the study would not be penalized. Individuals were also made aware that there existed no intention to deceive or harm the participants involved in the study. In the event that psychological or emotional distress occurred, participants had access to adequate referral resources. Finally, participants were informed of their rights to confidentiality.

#### QUANTITATIVE DATA ANALYSIS:

This study adopted a positivist paradigm which was exploratory in nature; therefore, quantitative and qualitative data analysis measurements were used for this study. The data addresses the research question that persons with alcohol and amphetamine dependencies are initially motivated to use alcohol and amphetamines because of underlying issues of Anorexia and Bulimia Nervosa.

Specifically, the quantitative procedures to examine the research question utilized 64 out of 91 questions from Garner's Eating Disorder Inventory-2 (EDI-2) (1991). The EDI-2 measures whether or not a person is preoccupied with weight. The DSM-IV states that preoccupation with weight is a clear indication for Anorexia and Bulimia Nervosa, and meets part of the criteria for these disorders (DSM-IV, 1995).

Scores were obtained for each construct from a drug and alcohol population. Data was then separated by gender so that comparisons could be made to normative scores for eating disordered patients and nonpatient male and female college comparison groups as established by the EDI-2 Professional Manual (See Appendix A, Tables 1-3) (Garner, 1991).

Due to the exploratory nature of this study, measures of central tendency such as the mean and median were used to compare with the normative measures of central tendency

already established. Garner suggests that the aggregate scores above the normative range (for each construct) should be examined individually, and the mean should be calculated for the extreme scores of each construct (1991). Statistical tests such as the Chi-Square cannot be used with univariate analysis.

In addition, univariate analyses were applied to examine the relationship or connection between the control variables, such as gender and age. Specifically, the researchers were interested in gender differences and how they connected with purging behavior. Considerable differences were found between the males and females as can be seen in the data collected. Age played no significant role in this particular study.

The researchers found that, for the female drug/alcohol group, the mean score for the construct, Drive For Thinness (DT), was actually higher than the mean for the nonpatient female comparison group, 7.1 and 5.5 respectively. Furthermore, the extreme mean (those scores above the normative) was 14.2, this would indicate that within the construct of DT there is a possibility of high risk for purging behavior (Garner, 1991; Raciti and Norcross, 1987). In fact, the mean established for the DT construct in the eating disorder female subgroup population is lower (13.8) than the extreme mean for the population being studied.

The researchers found that the mean for the construct

Bulimia (B) was also higher than the mean for the nonpatient female comparison group, 2.6 and 1.2, respectively. It was found that the extreme mean for the drug and alcohol female subgroup was higher than the eating disorder female population, 9.0 and 7.2, respectively. Although the mean for the construct Body Dissatisfaction (BD) was lower than the mean for the nonpatient female comparison group, the extreme mean was much higher (21) than the mean for the eating disorder female patient group (14.7).

It is interesting to note that with the constructs Ineffectiveness (I), Interpersonal Distrust (ID), and Introceptive Awareness (IA), the means for the drug and alcohol female group were higher than the nonpatient female comparison group; however, the means for the drug and alcohol female subgroup extreme were higher than the means for the combined eating disorder subgroup. With the construct of Perfectionism, the researchers found that the mean for the female drug and alcohol group was lower than the female nonpatient control group; however, the extreme mean was higher than the eating disorder female group. It is important to note that females typically score lower than males on the construct for Maturity Fears (Garner, 1991). The researchers found that the mean for the drug and alcohol female group was higher (6.1) than the means for both the nonpatient female comparison group (2.7) and the eating disorder female subgroup (4.6). Furthermore, the mean for

the female drug and alcohol group was even higher than the mean for the male drug and alcohol group (3.9) and the nonpatient male group (2.8).

The researchers found different results within the male population. For the constructs, Drive for Thinness (1.1), Body Dissatisfaction (4.6), and Perfectionism (6.3), the means for the male drug/alcohol group were lower than the means for the male comparison group (DT=2.2, BD=4.9, P=7.1). However, the extreme means for the male drug/alcohol group (DT=3.2, BD=8.3, P=9.1) were higher than the male comparison group. For the male drug/alcohol group, the means for the constructs Bulimia and Maturity Fears were slightly higher than the means for the male comparison group; and the extreme means for the male drug/alcohol group were doubled that of the male comparison group. It is important to note that the means for the constructs, Ineffectiveness, Interpersonal Distrust, and Introceptive Awareness within the male drug/alcohol group (I=5.4, ID=5.5, IA=4.6) were considerably higher than the means for the male comparison group (I=1.8, ID=2.4, IA=2.0). Furthermore, the extreme means were even higher for the male drug/alcohol group (I=11.9, ID=9.6, IA=10.8).

Garner suggests that individual scores within each construct should be compared to the EDI-2's Normative Tables (see Appendix A, Tables 4-6) which are the conversion of raw scores to percentile ranks for the following groups:

Combined Eating Disordered Patients, Nonpatient College Females, and Nonpatient College Males (1991). The researchers of this study found that 4 out of 14 females scored higher than the ninetieth percentile for the construct DT; 5 out of 14 females scored above the seventy-ninth percentile for the construct BD; 5 out of 14 females scored above the ninetieth percentile for the construct I; 4 out of 14 females scored above the ninetieth percentile for the construct ID; 6 out of 14 females scored above the ninetieth percentile for the construct IA; and 10 out of 14 females scored above the ninetieth percentile for the construct MF.

Results for the males were somewhat different. Five out of 17 males scored above the ninetieth percentile for the construct B; 6 out of 17 males scored at or above the eighty-fifth percentile for the construct BD; 6 out of 17 males scored at or above the ninety-third percentile for the constructs, I, P, and ID; 7 out of 17 males scored above the ninetieth percentile for the construct IA.

#### QUALITATIVE DATA ANALYSIS:

Along with the Eating Disorders Inventory-2 this study utilized an open-ended interview addressing body shape dissatisfaction in which 15 questions were asked to 20 individuals, both male and female (see Appendix C). Specifically, the researchers contend that alcohol and

amphetamine dependencies are a purging mechanism related to the cycle of Anorexia and Bulimia Nervosa.

Emerging patterns and themes were explored and examined. The researchers of this study found that 8 out of 11 females were preoccupied with their physical appearance, specifically with parts of their bodies in which they were dissatisfied and felt were too big. When the researchers asked what types of dieting methods they used, 6 out of 11 females openly stated that they used amphetamines such as cocaine, speed, and crack cocaine to lose weight. Other methods included skipping meals, excessive exercise (4 to 7 times a week for 1 hour), over the counter diet aids, and surgery (stomach stapling). Seven of the 11 females were concerned about gaining more weight, and 3 out of the 7 females were especially concerned about weight gain since being off of drugs.

When asked about bingeing and purging behavior, 2 out of 11 females said that they made themselves throw up after eating a meal which made them feel bloated. In addition, four females stated that they made themselves throw up in order to lose weight. It is interesting to note that 8 out of the 11 females said that they were depressed because they did not like their bodies or how they looked. The frequency of depression ranged from 2 times a month to 2 times a week.

The researchers also found that 9 out of 11 females compared themselves to other people who were thinner than

them in which 6 felt badly about themselves. Specifically, 3 were unhappy with parts of their bodies, 3 wanted to be thinner, and 4 said that they were ashamed of their bodies. It is important to note that the researchers considered all of the participants to be within the normal range of body weight for their particular height and frame. Responses indicated that 5 out of 11 females found themselves thinking about their body shape too much. When asked what they would think of their bodies if they viewed themselves naked in a full length mirror, 8 out of 11 stated that they needed to lose weight and 5 out of the 8 manifest body dissatisfaction.

Interestingly, the researchers found that 5 out of 11 females had only female family members who were overweight. In addition, 10 out of the 11 females had a family member who used either drugs or alcohol of which 5 family members actually used both drugs and alcohol.

In viewing the males interviewed in the study, 7 out of 9 males reported that they were preoccupied with how they look. Responses included a desire to be more "buff", a need to be thinner, and a concern over facial appearance. In response to the question of feelings of depression because of body appearance, 4 out of 9 males responded in the affirmative. Two of the 4 wanted to be heavier, specifically, they desired to be more muscular. The other two males responded that they would prefer to be thinner,



however, one actually was thin.

Four out of the 9 males said they have dieted to lose weight, including exercising, changing their diet, eating less, vomiting, and using amphetamines, such as cocaine and speed, to depress the appetite. One male went to the extreme of sleeping in garbage bags in order to sweat off the fat. Currently, 4 out of the 9 males are concerned about gaining more weight. Three of those 4 males stated that they want to gain muscle weight, however, only one male stated that he wanted to lose weight while, at the same time, having a desire to be muscular. These same four males stated that they exercise excessively because they feel a need to get in shape and gain more muscle weight.

When the researchers asked the males if they ever compared themselves to people who were thinner or more muscular than they, 5 out of 9 replied that they do compare themselves to others. Three of that 5 felt badly when comparing themselves to other males who were more muscular. One male reported that he felt bad because he wanted to be thinner. When looking at themselves naked in a full length mirror, 3 out of 9 males expressed that they feel dissatisfied with their bodies.

It is interesting to note that 7 out of the 9 males had family members who were overweight. Furthermore 6 out of the 9 males had family members who used drugs or alcohol. Specifically, two of the 6 had family members who used

drugs, and the remaining 4 had family members who abused alcohol.

#### DISCUSSION:

This study proposed that some individuals with alcohol and amphetamine dependencies are initially motivated to use alcohol and amphetamines because of underlying issues involving body dissatisfaction and weight reduction which are associated with, and considered a purging mechanism for, Anorexia and Bulimia Nervosa. Univariate analysis were used in determining differences for age and gender. However, no significant differences were found between age and behavior linked to eating disorders for this particular study. The researchers found that gender made a difference and played an important role in various areas of this study.

The researchers discovered higher scores within the drug/alcohol female group than one would expect to find in normal population samples within each construct on the EDI-2, with the exception of Perfectionism. Garner contends that the three most significant constructs (for female populations) measuring behavior associated with Anorexia and Bulimia Nervosa are Drive for Thinness, Bulimia, and Body Dissatisfaction (1991). It is interesting to note that within the female population being studied, the means for Drive for Thinness, Bulimia, and Body Dissatisfaction were higher than one would expect to find. In fact, the means

for these three constructs were higher than the female comparison group as established by Garner's EDI-2 Professional Manual (1991). Furthermore the extreme means for these three constructs were higher than Garner's means for the combined eating disordered female subgroup (1991).

Although only 3 out of 14 females, scoring above the ninetieth percentile, were in the extreme group for Bulimia, the qualitative open-ended interview revealed that 4 out of 11 females openly stated that they made themselves throw up in order to lose weight. It is also important to note that 3 out of the 4 females who disclosed bulimic behavior were not among the same 3 individuals who revealed bulimic behavior in the EDI-2. This would indicate that actually 6 females out of 14 females exhibited self induced vomiting behavior which is associated with Anorexia and Bulimia Nervosa.

This was found to be true for the construct Drive for Thinness as well. Four out of 14 females scored higher than the ninetieth percentile as established by Garner in his EDI-2 Professional Manual (1991). However, the opened-ended interview indicated that 7 out of 11 females felt they wanted or needed to lose weight. The qualitative data reveal that the most common method of weight loss was amphetamine use. Specifically, 6 out of 11 females stated that they used cocaine, speed, or crack cocaine in order to control their appetite for weight loss, and then they became

addicted. These findings suggest that over 50% of the females in this study first desired to be thin, and then resorted to amphetamine use in order to achieve their weight loss. These findings seem to be consistent with Abraham's and Llewellyn-Jones' and Schuckit's, et al. findings that amphetamines are used to control the appetite in eating disordered populations (1987; 1996).

Furthermore, when the construct for Body Dissatisfaction was addressed, 5 out of 14 females scored higher than the combined eating disordered female subgroup. The extreme mean for this construct was 21 and the combined eating disordered females mean was 14.7. Although only 5 females scored high, this is more than what one would expect to find considering all 5 females scored higher than the seventy-ninth percentile. In addition, the qualitative data revealed that 8 out of 11 females were dissatisfied with their bodies in that they either needed to lose weight, spot reduce, or found themselves comparing their own bodies to other females. Together the qualitative and quantitative data reveal that at least 8 out of 14 females were dissatisfied with their bodies.

Although this study was small in numbers and lacking in diversity, it is of the researchers' opinion that more females were preoccupied with weight and body shape than one would expect allowable by chances of probability alone. Certainly, this is manifest when viewing the percentile

scores. Within this study's population, the data indicate that some participants may be at risk for bingeing and purging behavior. Each of the eight constructs measures behavior associated with bingeing and purging, and high mean scores are correlated with the risk for this type of behavior (Raciti and Norcross, 1987). Clearly there is a difference between diagnosed Anorexia and Bulimia Nervosa and being at high risk for the types of behaviors associated with these disorders (DSM-IV, 1995). However, social workers and other health care professionals must not ignore the symptomatology convoluted within eating disorders and chemical dependencies.

In examining the males, Garner states that males usually score higher than females on these three constructs: Perfectionism, Interpersonal Distrust, and Maturity Fears (1991). It is interesting to note that although the males in this study scored higher in these areas than the male college group, the females in this study scored even higher than the males.

In viewing the males, the EDI-2 indicated that 9 out of 17 males were concerned about their body shape, in which 6 were above the eighty-fifth percentile, and their mean score was higher than the score for the male comparison group (8.3 and 4.9 respectively). The males were just as concerned as the females were about gaining weight; however, there was a difference in the direction of weight gain for both genders.

In congruence with Silberstein's findings, the researchers of this study found that males were concerned about gaining weight; however, the males desired to be heavier and more muscular (1988). As one can infer from the data females were also concerned about weight; however, the females wanted to lose weight.

Furthermore, like Lovett, the researchers of this study found that male athletes who must maintain a maximum weight may be at a higher risk for behavior associated with Anorexia and Bulimia Nervosa (1990). Specifically, the researchers found that one male in this study manifested bulimic type behavior in that he made himself throw up in order to lose weight for wrestling. It is important to note that the individual presented this behavior only during the wrestling season.

Although this was a small study, one cannot ignore the implications posited by the data itself. Further research is encouraged by the authors of this study which may address possible issues concerning eating behavior associated with Anorexia and Bulimia Nervosa within a chemical dependency population.

#### SOCIAL WORK IMPLICATIONS:

It is important to note that data revealing high percentages of purging behavior via alcohol and amphetamine dependency cannot constitute a clinical diagnosis of an

eating disorder. It is equally important to note that high percentages of purging behavior within this population should not be ignored because they may indicate a high risk toward the development of a possible eating disorder. Professionals treating this population should be aware of these results because it could change treatment planning or justify differential diagnoses for ruling out purposes. At the same time these findings cannot be generalized to other populations. Implications for direct social work practice include changing current treatment to better serve the needs of those persons who have both an eating disorder and an alcohol or amphetamine dependency.

APPENDIX A: TABLES 1-6



Table 1

Combined Mean for Eating Disorder Subgroups  
Compared to Nonpatient Female Comparison Group

Subscale	Combined Eating Disorder Subgroup (CEDS) (N=889)			Nonpatient Female Comparison Group (FCG) (N=205)		
	M	SD	Median	M	SD	Median
DT	13.8	5.9	16	5.5	5.5	4
B	7.2	4.9	8	1.2	1.9	0
BD	14.7	8.1	14	12.2	8.3	12
I	11.8	8.2	11	2.3	3.6	1
P	9.1	5.1	10	6.2	3.9	6
ID	7.1	5.1	7	2.0	3.1	1
IA	11.1	7.1	10	3.0	3.9	2
MF	4.6	4.9	3	2.7	2.9	2

DT : Drive for Thinness

B : Bulimia

BD : Body Dissatisfaction

I : Ineffectiveness

P : Perfectionism

ID : Interpersonal Distrust

IA : Introceptive Awareness

MF : Maturity Fears

Table 2

Female Drug/Alcohol Group Compared to Female  
Drug/Alcohol Subgroup Extreme

Subscale	Drug/Alcohol Female Group (D/AFG) (N=14)			Drug/Alcohol Female Subgroup Extreme (D/AFSE) (N=*)		
	M	SD	Median	M	SD	Median
DT	7.1	6.7	4	14.2	2.7	14
B	2.6	3.8	1	9.0	2.9	8
BD	10.6	8.7	9	21.0	2.6	21
I	4.9	3.8	3	8.7	2.1	9
P	5.2	5.0	4	12.7	2.2	11
ID	3.3	3.3	2	6.5	2.1	6
IA	5.9	4.2	5	9.8	2.7	10
MF	6.1	3.3	7	7.8	1.7	7

\*: For Drive for Thinness: N=6; Bulimia: N=3;  
Body Dissatisfaction: N=5; Ineffectiveness:  
N=6; Perfectionism: N=3; Interpersonal  
Distrust: N=6; Introceptive Awareness: N=6;  
Maturity Fears: N=11

Table 3

Comparison of Nonpatient Male College  
Subgroup, Male Drug/Alcohol  
Group, and Male Drug/Alcohol Extreme

Subscale	Male College Group (N=101)		Male D/A Group (N=17)		Male D/A Extreme (N=*)	
	M	SD	M	SD	M	SD
DT	2.2	4.0	1.1	1.6	3.2	1.2
B	1.0	1.7	1.9	2.4	4.7	1.8
BD	4.9	5.6	4.6	4.4	8.3	2.3
I	1.8	3.0	5.4	4.6	11.9	5.6
P	7.1	4.7	6.3	3.4	9.1	1.4
ID	2.4	2.5	5.5	4.3	9.6	2.6
IA	2.0	3.0	4.6	5.9	10.8	4.6
MF	2.8	3.4	3.9	4.3	8.4	4.8

\*: For Drive for Thinness: N=5; Bulimia: N=5;  
Body Dissatisfaction: N=9; Ineffectiveness:  
N=7; Perfectionism: N=8; Interpersonal  
Distrust: N=8; Introceptive Awareness: N=6;  
Maturity Fears: N=8

Table 4

Conversion of Raw Scores to Percentile Ranks  
for Nonpatient College Females (N=770)

Raw Score	DT	B	BD	I	P	ID	IA*	MF
30+								
29								
28								
27								
26			98					
25			97					
24			95					
23			93					
22			92					
21			90					
20			87					
19	99		86					
18	98		84					
17	97		82					
16	96		79	99				
15	94		76		99			
14	91	99	74	98	98		99	
13	90		69		96		98	
12	89		65		93			
11	86	98	63	97	91	99	97	99
10	84	97	59	96	87	98		
9	81	96	55	95	82	97	96	98
8	76	95	51	94	77	95	94	97
7	73	94	47	93	71	93	93	96
6	69	93	42	92	66	91	91	94
5	64	90	37	89	55	88	87	93
4	60	88	31	87	46	82	83	88
3	55	85	25	81	36	76	77	79
2	46	77	20	72	26	66	70	65
1	36	64	16	61	15	54	60	46
0	25	50	10	47	8	36	39	30

\*N=273

Table 5

Conversion of Raw Scores to Percentile Ranks  
for Nonpatient College Males (N=223)

Raw Score	DT	B	BD	I	P	ID	IA*	MF
30+								
29								
28								
27								
26								
25								
24								
23								
22								
21								
20								
19			99					
18								
17			98					
16			97					
15			96		99			
14			95		98			
13					96			
12	99		92		93	99		
11			91		88	98		99
10	98		89	99	86	97		98
9			88	98	81	96	99	
8	97	99	85	96	74	94		96
7	96	98	80	95	66	90	98	95
6	94	97	78		58	86	97	93
5	93	96	71	93	52	80	95	91
4	92	95	67	92	39	74	93	87
3	86	93	58	87	34	66	88	75
2	79	88	51	80	22	56	81	69
1	73	79	41	72	12	42	75	54
0	59	68	28	55	6	24	57	32

\*N=129

Table 6

Conversion of Raw Scores to Percentile  
Ranks for Eating Disordered Patients (N=889)

Raw Score	DT	B	BD	I	P	ID	IA	MF
30+								
29				99				
28								
27				98			99	
26			84				98	
25			80	96			97	
24			75	94			96	
23			70	92			95	
22			67	90			93	
21			64	87			91	
20	88	98	60	85			89	99
19	81	95	56	83			87	
18	73	92	53	81			84	98
17	61	88	49	78	96	99	81	
16	53	84	47	74	93	98	78	96
15	47	78	44	69	89	97	73	
14	41	73	41	66	84	95	70	95
13	35	67	37	62	80	93	66	94
12	30	62	34	58	74	89	62	92
11	27	56	30	53	67	85	58	91
10	23	51	28	50	60	82	52	89
9	20	44	24	46	54	77	47	88
8	17	39	22	42	47	72	41	85
7	14	32	18	38	41	67	36	82
6	11	27	15	33	34	60	29	77
5	9	21	12	29	29	55	25	71
4	7	15	9	25	23	47	20	65
3	6	12	7	20	17	39	16	54
2	4	7	6	15	11	32	11	42
1	3	5	3	11	7	23	6	28
0	2	3	2	5	4	13	3	17

## APPENDIX B: INFORMED CONSENT

The study in which you are about to participate is designed to explore the possibility that some people's eating habits and concerns about their weight may influence their drug and alcohol use. You will be asked to fill out a questionnaire, which will take about 15 minutes. If you request, you may participate in a brief 10-15 minute interview after filling out the questionnaire. This study is being conducted by Wendy Sue Briggs and Kelly-Jo Chastain-Carlton, under the supervision of Dr. Morley Glicken, professor of Social Work at California State University San Bernardino. The study has been accepted and approved by the Institutional Review Board of California State University, San Bernardino.

The information you provide will be held confidential by the researchers. All responses will be destroyed upon completion of the research. At the conclusion of this study (June 1997), you may receive a report of the results by contacting Dr. Glicken at (909)880-5557.

Your participation in this study is voluntary, and if you become uncomfortable you are free to withdraw at any time without penalty. "I have been informed of, and understand, the nature and purpose of this study, and I agree to participate, and I am at least 18 years of age." Please check appropriate box below.

Yes, I understand.                No, I do not understand.

APPENDIX C: EATING DISORDER INVENTORY-2

Please circle the letter for each question that describes you the best. Please do not correct initial answers.

Scoring (based on pathology, scoring was either negative or positive for each question):

Never = 0 or 3, Rarely = 0 or 2, Sometimes = 0 or 1, Often = 1 or 0, Usually = 2 or 0, Always = 3 or 0.

	<u>A</u>	<u>U</u>	<u>O</u>	<u>S</u>	<u>R</u>	<u>N</u>
1. I eat sweets and carbohydrates without feeling nervous.	0	0	0	1	2	3
2. I think my stomach is too big.	3	2	1	0	0	0
3. I wish I could return to the security of childhood.	3	2	1	0	0	0
4. I eat when I am upset.	3	2	1	0	0	0
5. I stuff myself with food.	3	2	1	0	0	0
6. I wish that I could be younger.	3	2	1	0	0	0
7. I think about dieting.	3	2	1	0	0	0
8. I get frightened when my feelings are too strong.	3	2	1	0	0	0
9. I think my thighs are too large.	3	2	1	0	0	0
10. I feel ineffective as a person.	3	2	1	0	0	0
11. I feel extremely guilty after over-eating.	3	2	1	0	0	0
12. I think my stomach is just the right size.	0	0	0	1	2	3



Scoring (based on pathology, scoring was either negative or positive for each question):

Never = 0 or 3, Rarely = 0 or 2, Sometimes = 0 or 1, Often = 1 or 0, Usually = 2 or 0, Always = 3 or 0.

	<u>A</u>	<u>U</u>	<u>O</u>	<u>S</u>	<u>R</u>	<u>N</u>
13. Only outstanding performance is good enough in my family.	3	2	1	0	0	0
14. The happiest time in life is when you are a child.	3	2	1	0	0	0
15. I am open about my feelings.	0	0	0	1	2	3
16. I am terrified of gaining weight.	3	2	1	0	0	0
17. I trust others.	0	0	0	1	2	3
18. I feel alone in the world.	3	2	1	0	0	0
19. I feel satisfied with the shape of my body.	0	0	0	1	2	3
20. I feel generally in control of things in my life.	0	0	0	1	2	3
21. I get confused about what emotion I am feeling.	3	2	1	0	0	0
22. I would rather be an adult than a child.	0	0	0	1	2	3
23. I can communicate with others easily.	0	0	0	1	2	3
24. I wish I were someone else.	3	2	1	0	0	0
25. I exaggerate or magnify the importance of weight.	3	2	1	0	0	0

Scoring (based on pathology, scoring was either negative or positive for each question):

Never = 0 or 3, Rarely = 0 or 2, Sometimes = 0 or 1, Often = 1 or 0, Usually = 2 or 0, Always = 3 or 0.

	<u>A</u>	<u>U</u>	<u>O</u>	<u>S</u>	<u>R</u>	<u>N</u>
26. I can clearly identify what emotion I am feeling.	0	0	0	1	2	3
27. I feel inadequate.	3	2	1	0	0	0
28. I have gone on eating binges where I felt that I could not stop.	3	2	1	0	0	0
29. As a child, I tried very hard to avoid disappointing my parents and teachers.	3	2	1	0	0	0
30. I have close relationships.	0	0	0	1	2	3
31. I like the shape of my buttocks.	0	0	0	1	2	3
32. I am preoccupied with the desire to be thinner.	3	2	1	0	0	0
33. I don't know what's going on inside me.	3	2	1	0	0	0
34. I have trouble expressing my emotions to others.	3	2	1	0	0	0
35. The demands of adulthood are too great.	3	2	1	0	0	0
36. I hate being less than best at things.	3	2	1	0	0	0
37. I feel secure about myself.	0	0	0	1	2	3
38. I think about bingeing (overeating).	3	2	1	0	0	0
39. I feel happy that I am not a child anymore.	0	0	0	1	2	3

Scoring (based on pathology, scoring was either negative or positive for each question):

Never = 0 or 3, Rarely = 0 or 2, Sometimes = 0 or 1, Often = 1 or 0, Usually = 2 or 0, Always = 3 or 0.

	<u>A</u>	<u>U</u>	<u>O</u>	<u>S</u>	<u>R</u>	<u>N</u>
40. I get confused as to whether or not I am hungry.	3	2	1	0	0	0
41. I have a low opinion of myself.	3	2	1	0	0	0
42. I feel that I can achieve my standards.	0	0	0	1	2	3
43. My parents have expected excellence of me.	3	2	1	0	0	0
44. I worry that my feelings will get out of control.	3	2	1	0	0	0
45. I think that my hips are too big.	3	2	1	0	0	0
46. I eat moderately in front of others and stuff myself when they're gone.	3	2	1	0	0	0
47. I feel bloated after eating a normal meal.	3	2	1	0	0	0
48. I feel that people are happiest when they are children.	3	2	1	0	0	0
49. If I gain a pound, I worry that I will keep gaining.	3	2	1	0	0	0
50. I feel that I am a worthwhile person.	0	0	0	1	2	3
51. When I am upset, I don't know if I am sad, frightened, or angry.	3	2	1	0	0	0

Scoring (based on pathology, scoring was either negative or positive for each question):

Never = 0 or 3, Rarely = 0 or 2, Sometimes = 0 or 1, Often = 1 or 0, Usually = 2 or 0, Always = 3 or 0.

	<u>A</u>	<u>U</u>	<u>O</u>	<u>S</u>	<u>R</u>	<u>N</u>
52. I feel that I must do things perfectly or not do them at all.	3	2	1	0	0	0
53. I have the thought of trying to vomit in order to lose weight.	3	2	1	0	0	0
54. I need to keep people at a certain distance (feel uncomfortable if someone tries to get too close).	3	2	1	0	0	0
55. I think that my thighs are just the right size.	0	0	0	1	2	3
56. I feel empty inside (emotionally).	3	2	1	0	0	0
57. I can talk about personal thoughts or feelings.	0	0	0	1	2	3
58. The best years of your life are when you become an adult.	0	0	0	1	2	3
59. I think that my buttocks are too large.	3	2	1	0	0	0
60. I have feelings I can't quite identify.	3	2	1	0	0	0
61. I eat or drink in secrecy.	3	2	1	0	0	0
62. I think that my hips are just the right size.	0	0	0	1	2	3

Scoring (based on pathology, scoring was either negative or positive for each question):

Never = 0 or 3, Rarely = 0 or 2, Sometimes = 0 or 1, Often = 1 or 0, Usually = 2 or 0, Always = 3 or 0.

	<u>A</u>	<u>U</u>	<u>O</u>	<u>S</u>	<u>R</u>	<u>N</u>
63. I have extremely high goals.	3	2	1	0	0	0
64. When I am upset, I worry that I will start eating.	3	2	1	0	0	0

APPENDIX D: GUIDELINES FOR OPEN ENDED INTERVIEWS

1. When you're bored, do you ever start to think about how you look? If so, in what way?
2. Are you ever concerned about your weight to the point that you feel you must go on a diet? If so, please explain what methods you use to diet, including alcohol and amphetamines.
3. Are you concerned about gaining more weight?
4. After eating a meal, do you ever feel fat or bloated? How big was the meal? How did you get rid of that feeling?
5. Have you ever cried because you didn't like your body or how you looked? How often does this occur?
6. Do you ever compare yourself with people who are thinner than you? Do you feel good or bad about your body? Are you ashamed of how you look?
7. Do you find yourself thinking about your shape too much?
8. What would you think about your body if you saw

- yourself naked in a full length mirror?
9. What types of clothing do you like to wear (loose/snug)?
  10. When do you prefer to weigh yourself, in the morning or evening?
  11. Have you ever made yourself throw up? If so why? How often does this occur?
  12. Have you ever pinched your stomach to see how fat it was?
  13. Have you taken laxatives to lose weight?
  14. Do you exercise more than you really want just because you feel that you need to lose weight? If so, how many times per week do you exercise and how often?
  15. Are any of your family members overweight or use drugs or alcohol? If so how much?

#### APPENDIX E: DEBRIEFING STATEMENT

The study you have participated in was designed to gain some understanding of Anorexia and Bulimia Nervosa in relation to drug and alcohol use. The researchers wanted to examine whether or not some people use drugs or alcohol for the first time to control their weight.

The research data was collected by using questionnaires and interviews. All responses were confidential. The researchers were not making a judgement on personal drug or alcohol use, nor on eating habits. If you have any questions or concerns regarding the research, please contact students Wendy Sue Briggs and Kelly-Jo Chastain-Carlton through the CSUSB Social Work office: (909)880-5501. If you would like to discuss any discomforts you may have as a result of participating in this research study, counselors in the facility are available to you. Thank you for your valuable time and efforts placed into this study. Your participation is greatly appreciated.



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