TREATING EATING DISORDERS: EFFICACY OF
COGNITIVE-BEHAVIORAL MODALITIES IN A CLINICAL SETTING

by

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A Master's Research Project submitted in partial fulfillment
of the requirement for the degree
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ABSTRACT

The purpose of this project was to provide information to the administration of the treatment facility regarding the maintenance and effectiveness of cognitive-behavioral modification skills learned in therapy. The patients selected for the study were those with diagnoses of anorexia nervosa, bulimia, binge-eating disorder, or combinations of these pathologies, and all participants were post-treatment six months to one year. A telephone survey was conducted with a sample of 30. Questions asked pertained to specific areas of cognitive, behavioral and social interactive function. A further intent of this study was to suggest specific recommendations in various areas that might need improvement. This researcher anticipated finding sociological commonalities between those with eating disorders by conducting a patient chart review. It was further anticipated that this review might demonstrate some of the biopsychosocial aspects of eating disorders etiology. Cognitive-behavioral therapeutic modalities, the treatments of choice at this facility, appeared to be most in need of refinement in areas that concerned weight perceptions and exercise moderation. The study demonstrated definite improvements in food consumption and caloric intake, as well as in areas of interpersonal relationships and diminished feelings of isolation and withdrawal. While overall improvement exists, the findings indicated few startling gains and showed areas of treatment where change appeared static.
DEDICATION

In memory of my parents, Mary and Jules Levitt—who guide me still.
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Introduction

This study was undertaken as a follow-up study to analyze and evaluate the efficacy of treatment protocols that are currently in use in eating disorder treatment centers. The study was conducted under the auspices of The Willow Creek Eating Disorders Treatment Center at Samaritan Behavioral Health's complex in Scottsdale, Arizona. This treatment program is known nationally, and primarily employs cognitive-behavioral treatment modalities on an in-patient and day-treatment basis, as well as family restructuring techniques. The parameters encompassing the time-frame for the study included patients who have been out of treatment for approximately six months to one year. This time element is a critical factor in the eating disordered patient's life because of the extreme necessity to reinforce and sustain healthy eating habits that contribute to health and well-being. It is believed (Butow, Beumont, & Touyz, 1993) that the maintenance of skills acquired in treatment and applied in the real world, demonstrate positive cognitive and behavioral changes. These changes, are anticipated to prove constant over time. Traditionally, eating disordered individuals contend with a great deal of recidivism throughout their lives.
This researcher hoped that the outcome of the study might substantiate the effective maintenance of treatment through the use of cognitive-behavioral treatment modalities, since these are the protocols of choice employed in both hospital and day treatment centers worldwide. Another goal of this research was to attempt further confirmation of the biopsychosocial etiology for eating disorders. The latter paradigm postulates that eating disorders are a multi-caused pathology that have biological, psychological, and sociological components. Additionally, the results of the evaluation might serve as a gage to help streamline programs to better serve the needs of the eating disordered population.

Development of the Problem

The treatment center assessed in this study treats a broad range of patients that comprise diverse social, ethnic, age, gender, and economic backgrounds. Further, this treatment center has never conducted a study of this kind and was therefore receptive to the project. This was particularly true of the facility's chief executive officer, who encouraged this researcher to conduct this study, and urged the directors of the center to consent to its implementation. Research on the project was conducted during July and August of 1998.

The treatment center has comprehensive programs that include treatment teams composed of psychiatrists, counselors, dietitians, group and individual therapists, family counselors and support services. Cognitive reframing and
Restructuring and behavioral modification techniques along with family counseling are the normative approaches in use. Family counseling is administered using a structural format that follows Salvador Minuchin's (1978, 1981, 1984) theories in the treatment of anorexia nervosa. The program also has a high patient to therapist ratio, employing two clinical psychologists, a dietitian, a psychiatric technician, and two counselors. The usual patient census is between six and twelve individuals, some of whom are hospitalized and some are day patients. All participants attend educational and process groups, individual counseling, dietetic, psychiatric, and psychological evaluations and consults for approximately 9 hours daily, Monday through Friday. The routine is highly structured and includes three supervised meals in the hospital cafeteria. Patients at this site are predominantly female, ranging from adolescence to mid-life (approximately age 10 to 42). Although there were exceptions to this norm; two nine year old boys, and several women and men in their mid-sixties were admitted to the program during this researcher's eight month internship at this site.

Need for the Study

The researcher did not find any completed studies devoted to the efficacy of eating disorders treatment in hospital settings from a cognitive-behavioral perspective with either hospitalized or day-treatment subjects. Further, an international data base search that incorporated the current and popular
biopsychosocial paradigm of eating disorders (based in cognitive-behavioral treatment approaches) proved futile. Therefore, the need for a study that attempted to assess the efficacy of cognitive-behavioral treatments in hospital and day treatment settings became highly important.

Purpose of the Study

The purpose of this study was to assess the perceived effectiveness of cognitive-behavioral treatment protocols for the primary eating disorders of Anorexia Nervosa and Bulimia, along with the associated Binge-Eating disorder.

Research Question

Have the cognitive-behavioral and family restructuring modalities acquired in treatment retained their efficacy in those patients who are six months to one year post-treatment?
CHAPTER 2
THE LITERATURE REVIEW

Introduction

The etiology and treatment of eating disorders represents some of the most complex and perplexing challenges to clinicians. The reasons for this situation arise from the fact that these pathologies are rooted in multi-dimensional causations and therefore must be viewed from a biological, psychological, and sociological perspective. Each individual must be perceived as a unique entity, encompassing symptomologies that may be exclusive to their particular situation. The first section of this chapter briefly defines Anorexia Nervosa and Bulimia Nervosa, along with Binge-Eating disorder. The complete DSM-IV diagnostic classification for these pathologies is contained in Appendix A. Following this, is a brief explanation of the biopsychosocial paradigm of eating disorders, and a comprehensive review of data that will support the aforementioned biopsychosocial model as well as the cognitive aspects of eating disorders. Discussion of the research will serve to examine areas of concern.

The following list outlines the breadth of the findings:

1. Western standards and societal pressures of the feminine ideal of beauty and media influence
2. Gender identity, autonomy, and self-loathing
3. Dysfunctional cognitions and cognitive styles
4. Self-worth, control, guilt and anxiety
5. Negative self-perceptions and emotional states
6. Normal and abnormal processing of food terms
7. Eating disorders and aging populations
8. Ethnicity and eating disorders
9. Binge-Eating Disorder
10. Psychopathologies (i.e. narcissism, masochism, borderline)
11. Perfectionism
12. Cognitive narrowing and cognitive difficulties (i.e. lower verbal scores)
13. Sexual and physical abuse and the accompanying shame and self-denigration
14. Obsessive compulsive disorder, biochemical changes in the neuroendocrine system and compromised immunity
15. Depression
16. Parental and family climate, overprotection, control and enmeshment
17. Feminist perception

The fourth and fifth sections respectively, comprise a summary of the literature, followed by a discussion of treatment protocols that are currently employed. These protocols are predominantly behavioral modifications, and cognitive and family restructuring techniques. Appendix B demonstrates the commonly utilized modalities that are widely employed in the treatment of eating disorders and are specifically followed at Samaritan Behavioral Health's Willow
Creek Treatment Center in Scottsdale, Arizona. The chapter closes with a summary of the essential elements brought forth in chapter two.

**Definitions of Eating Disorders**

Eating disorders are characterized by a willful weight loss to the point of extreme starvation, an obsessive fear of becoming fat, and a severely distorted image of one's own body shape and size. By its very definition, Anorexia Nervosa (AN) is a treatment-resistant disorder (Hamburg, Herzog, & Brotman, 1996). The hallmark of AN is denial, and an anorectic does not typically initiate treatment without some subtle or overt coercion. Therefore, most patients with AN are resistant to some degree, and this makes the normal course of treatment very difficult. Clinicians, as well as the patient's family members, are continually concerned with the patient's non-compliance and/or non-response to treatment protocols. Traditionally, these treatment plans have dealt with behavioral modifications and cognitive and family restructuring, self-esteem and control issues, and nutritional education.

Bulimia Nervosa (BN) is another eating disorder primarily affecting young women; it is characterized by episodes of voracious and excessive binge eating, followed by purging behavior or extreme food restriction. BN is generally considered a less treatment-resistant condition than AN. The reason for this opinion is that bulimics are distressed by their behavior and more readily seek treatment. Hamburg, Herzog, and Brotman (1996) stated: “Several bulimic
patients evaluated in our outpatient unit have had the disorder for an average of 6 years by the time they seek treatment" (p. 264). It is with this challenge in mind, that this researcher has attempted to demonstrate through literature review, the complex nature of eating disorders, and to illustrate the biopsychosocial model surrounding the pathologies of Anorexia Nervosa and Bulimia Nervosa and combinations of these symptomatologies.

The fundamental difference between AN and BN is the refusal of anorectics to eat a sufficient quantity of food to maintain an adequate level of nourishment and normal body weight. AN may result in a physically impoverished body and is fatal in 20% of patients, secondary to suicide and cardiac arrest (Theander, 1985). The DSM-IV (American Psychiatric Association, 1994) diagnostic criteria for AN stipulates that individuals must either weigh 15% below what is expected compared to age and height norms, or fail to make expected developmental gains.

Eating disorder not otherwise specified is the DSM-IV designation that refers to variations of the Anorexia Nervosa and Bulimia Nervosa diagnoses. An additional category is binge-eating disorder. Binge-eating disorder is characterized by recurrent episodes of binge eating in the absence of the regular use of inappropriate compensatory behaviors (i.e., laxatives and emetics) characteristic of Bulimia Nervosa (DSM-IV, 1994).
Biopsychosocial and Cognitive Aspects of Eating Disorders

At present, no single etiologic theory for AN or BN can claim global appeal. Genetic vulnerability such as hypothalamic dysfunction, mood disorder variant, and autoaddiction models, are not totally accepted by clinicians. However, most authorities accept that developmental factors and social learning contribute substantially to the appearance of eating disorders (American Psychiatric Association, 1994). The following review of the literature provides a comprehensive overview that substantiates the biopsychosocial aspects and cognitive and affective components of the pathologies of eating disorders.

Eating disorders, specifically, Anorexia Nervosa, Bulimia Nervosa, and the associated Binge Eating disorder are primarily manifested in women. Lancelot and Kaslow (1994) cited a study that stated that the female to male ratio of eating disorders is approximately 10 to 1. This was true regardless of the diagnostic criteria utilized. Anorexia nervosa (AN) and bulimia nervosa (BN) are predominantly seen in affluent Western societies and primarily in adolescent populations, but not exclusively (Habermas, 1992). Today, there is a consensus that AN is a multidetermined disorder. This review of the literature attempts to provide a broad overview of the subject including relevant research data in support of the biopsychosocial model as it pertains to eating disorders. Emphasis will be on the cognitive and affective aspects of these pathologies. Biological vulnerability, psychological predisposition, family situation, and social climate may all influence the risk of developing AN and/or BN.
Anorexics have been divided into two broad groups (a) restrictors who maintain a general uninterrupted pattern of dietary restriction and (b) bulimics who exhibit periodic episodes of binge-eating and self-induced purging (Stoylen & Layberg, 1990). Women are at an increased risk for developing eating disorders due to societal pressures to attain standards of thinness that are equated with the feminine ideal of beauty. This pursuit of thinness is characterized by an all-consuming quest that overrides the individual's physical and psychological well-being (Perpina, Helmsley, Treasure, & de Silva, 1993). Stice (1994) suggested three general categories of societal pressures on females: (a) the thin-ideal body shape, (b) the central importance of appearance in the female gender role, (c) and the importance of appearance for societal success. The latter category is specific to mate selection, self esteem, and positive life opportunities such as career goal attainment. The feminist social model of AN views the illness as a social disorder, fostered by a male dominated society, that places undue importance on the female body as an object, and pressures females to diet in order to achieve a thinner, idealized shape. In addition, the women's movement subtly associates a thinner shape with a rejection of women's traditional roles.

**Literature Review**

The increased incidence of eating disorders in the past several decades has been influenced by all areas of the media. Stice (1994) found that bust-to-
waist measurements of models appearing in women's magazines have decreased steadily from 1950 to 1981. Likewise, Stice's research indicated that for the past decade beauty pageant winners weighed less than the average contestant. Stice (1994) pointed out that Miss America contestants have reduced waist, hip, bust size, and weight, and a corresponding increase in height from 1970 to 1984. New Zealand eating disorder centers found a significant increase in Bulimia from 1977 to 1986, as did research data from studies in Scotland, New York, and England. Stice hypothesized that individuals at risk for developing eating disorders may be attracted to vocations that emphasize body image and shape such as dance, drama, and sports like gymnastics (Kaslow & Lancelot, 1994).

Habermas (1992) said that BN demonstrates the conflicts that are typical of female adolescence involved in the development of gender identity and autonomy, as well as the abuse of cultural techniques such as dieting. Habermas's research further demonstrated that body dissatisfaction for bulimic women was found to be above the 90th percentile, and that these results may be interpreted as an intense self-loathing. Garfinkel, Goldbloom, Davis, Olmsted, Garner, and Halmi (1992) concluded that women with self-esteem issues, and a tendency to be overweight, could be expected to display extreme levels of dieting behavior as well as body dissatisfaction. Their cross-sectional study found that low body dissatisfaction may occur along with significant weight and shape concerns, but high body dissatisfaction with low weight and shape
concerns was a rarity. Subjects in the high body dissatisfaction group highly monitored their dieting.

Butow, Beumont, and Touyz (1993) demonstrated that cognitive processes in eating disordered individuals have to do with dysfunctional cognitions and cognitive styles. Their research demonstrated that patients exhibited a lack of awareness of the role played by inner sensations and food and body words that trigger dysfunctional eating behaviors. Anorectics tended to evaluate self-worth almost entirely in terms of self-control. Both anorectics and bulimics emphasized feelings of negativity in their views of themselves, but anorectics showed a more severe sense of self-isolation. Further, Butow and colleagues found that unlike, bulimics, anorectics have a tendency to think in absolute terms in the area of eating, as well as in all aspects of life. This indicates a deeper psychopathology in the anorexic patient group. Another contributing factor in the cognitive area is that normal controls and the eating disordered have differing concepts surrounding weight, attitude to sexuality, self-image, and complexity of thought structure. Patients seemed to have a morbid fascination with the rules of weight control and weight concerns seemed to be dominant in their thinking. Over dependence on rigid self-control was a paramount factor. These self-imposed regulations are a means to controlling one's life. A subject that will be dealt with in the discussion on familial influence in eating disorders.
In addition, research by Butow and colleagues (1993) demonstrated that eating disorders expressed themselves differently in the attitudes of anorexics and bulimics. The latter appeared to associate low weight with positive self-attributes and anorectics appeared much more ambivalent about weight. Both AN patients and nonrestrainers who were mainly normal weight were satisfied with their weight. This held true for those AN patients who were dangerously underweight. Butow and colleagues believed that ambivalence may stem from the fact that these subjects have a need to maintain safe eating practices that maintain weight at critically low levels. Anorectics feel guilt and anxiety when they eat and are afraid that they will not be able to stop eating. These feelings are tied to a need for safety that is perpetuated in their self-imposed controlled eating environment. In this way the anorectic feels control over her life. AN patients describe themselves as unhappy, fearful, of weak character, abnormal and of low confidence.

Stoylen and Laberg (1990) demonstrated that bulimics with stabilized weight tended to see themselves as similar to others and were on a par with controls. Deficits in self concept and social function were not as strong in bulimia as they were in anorexia. Restricting anorectics and anorectic bulimics reported the greatest deficits in social functioning. Further, these researchers found that bulimics evaluated themselves more negatively following a failure experience and tended to overeat when stressed or depressed. Negative emotional states frequently triggered binge-eating episodes for BN patients.
Bulimics typically started binge-eating following a severe diet regime in an attempt to undo the feared consequences of the binge. This pattern tended to perpetuate a cyclic effect. The distorted belief that physical attractiveness and social acceptability as characteristics of successful womanhood is a central key issue in eating disorders.

Perpina and colleagues (1992) further investigated the body and food related information processing of AN and BN patients using the Stroop color-naming task. The main objective of this study was to examine aspects of eating disorder psychopathology in clinical groups and in the normal population. They found that patients with anorexia nervosa differed from controls in the processing of food terms. Patients with bulimia nervosa processed body terminology differently. BN patients are most concerned with weight and appearance and those with AN are more concerned with eating. Both clinical groups were slower than controls in color naming the body and food words in the Stroop task. High and low drive for thinness was also evaluated. Findings showed that high drive was associated with a slower processing of body, but not food related terms, and high restraint was associated with a slower processing of both food and body related terminology. Bulimic and restrained normal subjects were slower than the unrestrained group in diet related words that constitute food information.

While it is a widely held belief that AN and BN are seen predominantly in female adolescents and young adults, studies by Gupta and Schork (1993)
showed that this is not exclusive to these age groups. Their research indicated that in our North American aging society there is a widespread preoccupation with maintaining youthful looks and body shape. Apparently, the effects of aging upon appearance are not necessarily related to chronological age of the individual. Gupta and Schork (1993) indicated that an individual's internal locus of control, or the degree to which the individual sees life's outcomes as being dependent upon their own abilities and efforts, is an important predictor of whether or not the aging process has a negative impact upon body image. In this same study Gupta and Schork assessed geriatric populations living in institutions. Findings concluded that older women continued to report greater dissatisfaction with their body shape than men. These researchers chose to study a non-clinical geriatric population since there has been little research in this domain. Age population spread was from 30 to 65+ years. The women scored higher on concerns regarding age-related bodily changes than did men, and held a belief that a thin shapely body was associated with favorable looks. Women in the 31 to 45 year group were the only population that did not share concerns about wrinkles and other physical signs of aging. The researchers deduced that this was because this age group is investing a great amount of time and energy in areas of career and family. Concerns about wrinkles were significantly higher in the older groups. However, major concerns dealt with weight loss and body toning, rather than skin rejuvenation. This supports earlier studies by Gupta (1990) that appearance of some earlier signs of aging can
precipitate the onset of AN in late life among highly vulnerable individuals. Rand and Kuldau (1990) reported six cases of late onset bulimia in women over age 55. As is the case with general eating disorders, these subjects were socioeconomically classified as middle to upper class women. Rand and Kuldau (1990) found no racial differences in bulimic behaviors and symptoms, but this was because black subjects were not represented in meaningful proportions.

Raich, Rosen, Deus, Perez, Requena, and Gross (1990) found that there was a lower prevalence of bulimic symptoms and general eating disorders among black females, which the authors attribute to the less restrictive weight standards held by black compared with white women. Their research found drastic weight reducing behaviors and incidences of bulimia in American Hispanics and Native Americans, but extremely rare incidences among women in Chinese, Greek, and Middle Eastern countries. Research differs on this racial/ethnic element. The multisite study conducted by Spitzer and Colleagues (1992) demonstrated binge eating disorder (BED), as a possible co-characteristic of bulimia, that was prevalent in white and non-white control samples. However, the term non-white was not clearly defined. A predominance of bulimia of 4.1% in women aged 18 to 30 was found in non-clinical subjects as a result of the Raich study. This result compared favorably to an earlier mentioned study where a 3.9% prevalence within the same age group was found. The Gupta study demonstrated that disturbed eating
behaviors appear throughout adult life. Eight of the 23 cases identified were over 45 years old.

Johnson, Tsoh, and Varnado (1996) stated that binge-eating often begins in the context of an unsatisfactory interpersonal situation and that anxiety and depression stemming from the interpersonal interactions often trigger the behavior. The binging in turn leads to a loss of control over food intake. Body image distortion is identified as a perceptual error where the individual's body size and shape are experienced by that individual as much larger than its actual size. These perceptions are limited to the perceptions of one's own body. The authors suggest that the widespread nature of BED indicates that future DSMs include BED as a separate and formal eating disorder instead of a subtype of bulimia that is distinguished by those that purge and those that do not purge. The purging type displays self-induced vomiting, laxatives, diuretics or enemas. The nonpurging type employs fasting and/or exercise as the primary compensatory method for caloric intake. Johnson and colleagues (1996) along with earlier research by Spitzer, Yanovski, Wadden, Wing, Marcus, Stunkard, Devlin, Mitchell, Hasin and Horne (1993) concluded that BED was only slightly more common in females than males. These data held true for the community nonpatients as well as the college samples. Apparently, this is one eating disorder that demonstrates more gender equanimity (Spitzer et al., 1992).

Other pertinent data from the Johnson and colleagues (1993) study showed that 9.7% of those with BED had a history of alcohol abuse and 12.6%
a history of drug abuse. Sexual abuse history constituted 19.6%. Those with BN constituted 29.3% with a history of alcohol abuse and a 21.3% history of drug abuse. The non-patient community had a 2.3% alcohol abuse history and a 5.5% drug related history. These data suggest a possible premorbid or comorbid condition as relates to substance dependency and BED. Most studies conducted with clinical populations have reported a mean age in early to mid 40's for individuals suffering from BED this was further corroborated in a study by Castonguay, Eldredge, and Agras (1995). This research supported earlier data that suggested that in many cases the development of binge eating may postdate the development of obesity, and may pose a risk factor for the exacerbation of obesity, since these individuals seem to have a pattern of continual weight loss and gain. Further data supports that binge eaters meet the criteria for one or more psychiatric disorders more often than nonbinge eaters (60% as opposed to 28%). Castonguay and colleagues indicated that purging bulimics tended to exhibit more psychological distress than nonpurging bulimics. Purgers also showed greater narcissistic, masochistic, and borderline traits, and nonpurgers were more likely to be obese, and to present with a history of substance abuse. Generally, these data confirm that binge eaters suffer from less psychopathology than those who purge. Castonguay and team (1995) defined binge eating as characterized by consumption of large amounts of food in a short period of time, accompanied by a feeling of lack of control over the eating episode. Hunger is cited by only 38.2% of individuals as a binge trigger.
This rate is significantly lower than that found for food cravings, 69% and negative mood (boredom/loneliness 60%; depressed mood at 83%). Individuals with BED are not more restrictive in their eating habits, but do have a greater preoccupation and distress over eating and therefore engage in more dieting. These erratic eating patterns may in part be determined by intense perceived hunger. Castonguay and colleagues stressed the need for more research in order to confirm this potential link.

The escape model as proposed by Heatherton and Baumeister (1991) stated that binge eaters have high personal standards and expectations, falling short of these expectations and standards creates a painful self-awareness. Binge eaters narrow their attentional focus in order to avoid self-reflection and meaningful thought. This cognitive narrowing releases eating inhibitions that may result in binge eating and a susceptibility to irrational beliefs and thoughts.

Andrews (1997) found that there is strong evidence for the link between sexual and physical abuse and eating disorders. This abusive family environment in childhood was associated with depression in the mothers and bulimia in the daughters. Abusive experiences are thought to be associated with psychiatric disorder, particularly depression brought about by shame. Shame in humans is closely related to involuntary submissive behavior and there is empirical data to support the association between the two. Andrew's research addressed shame aspects that included self-consciousness and embarrassment about general appearance, and exposure of specific body parts, as well as
concealment of different body parts, and feelings of mortification concerning others' comments about appearance and body parts. This researcher concluded that bodily shame might play a mediating role in the link between early abuse and bulimia.

DeGroot, Kennedy, Rodin, and McVey (1992) found correlations between sexual abuse and AN and BN. Psychologically and cognitively, women with eating disorders who have experienced sexual abuse have difficulty meeting the demands of biological maturity, particularly the age-appropriate development of sex-role identity and sexuality during adolescence. De Groot and colleagues (1992) found similar rates of sexual abuse among women with bulimia with sexual experiences have been found to be more common in women with BN. In this study 25% of AN and BN outpatients reported previous sexual abuse. Closer scrutiny showed that this study by De Groot and team was limited by the lack of a control group, and the fact that previous reports showed no evidence of an obvious difference in sexual attitudes or behavior based on the presence or absence of sexual abuse.

Pitts and Waller (1992) studied the effects of sexual abuse and the self-denigratory beliefs that followed the abusive act(s) of 41 women with BN or AN. Bulimic or anorexic symptoms have the temporary effect of distracting the individual from these self-denigratory beliefs. Pitts and colleague (1992) compared the potential values of general self-esteem with specific self-denigratory beliefs and the levels of bulimic symptomology. Their results
indicated that subjects possessed poor self-esteem and that the frequency of vomiting was linked specifically to the extent of self-denigratory belief that were the consequences of the abuse. Frequency of binging was not explained by either of the aforementioned variables. The authors assumed that vomiting was a response to the self-denigratory cognitions and emotions following abuse and not to the act of abuse itself or a lessening of self-esteem. The purging behavior may serve as a distraction, a blocking mechanism, or self-punishment.

According to Garfinkel and colleagues (1992) there is strong evidence for eating disorder psychopathology and comorbidity of obsessive-compulsive disorder, depression, trauma, and dissociative experiences. Patients who suffered from major depression at follow-up were more likely to also have anorexia or bulimia than were patients without depression. Research showed no significant differences in the lifetime prevalence of affective disorders in patients who were diagnosed with an eating disorder at a 10 year follow-up compared to those who recovered. However, subjects with diagnosable eating disorders had more current depression than those without an eating disorder. Garfinkel and colleagues found that depression at follow-up may not be the sole result of abnormal eating and may also be attributed to social dysfunction and maladaptation. These researchers demonstrated that social dysfunction and maladaptation were measured by the socioeconomic state of average outcome scores which comprises the nuclear family relationships, social activities, employment records, namely, multiple areas of social functioning. The most
depressed patients had poorer social adaptation. Herpertz-Dahlman and Remschmidt (1993) found that social maladaptation was not only characteristic for long-lasting eating disorders, but was equally true for other chronic psychiatric disorders. The eating disorder may become the final pathway for chronic psychiatric disorders.

According to Fornari and Colleagues (1991) anorectics had more frequent lifetime rates of depressive disorders as opposed to anxiety disorders. These researchers concluded that bulimic-anorectics were more likely to co-present a major depressive disorder than bulimics. Further, bulimic-anorectics were also more likely than anorectics to qualify for obsessive-compulsive disorder. Lastly, bulimic-anorexics appeared to be the most pathological of the eating disordered subgroups.

Kennedy (1992) found significantly reduced levels of hormone melatonin in those patients with eating disorders who had concurrent major depression. Fahy and colleagues (1993) replicated a study by Kasvikis, (1986) which established an identical result; eleven percent of female patients with obsessive-compulsive disorder had a past history of anorexia nervosa. Female obsessive-compulsives resemble eating disordered patients in their higher than normal body dissatisfaction, perfectionism, and ineffectiveness scores on the Eating Disorder Inventory. It follows that the overly perfectionist characteristics of the eating disordered seem to either mimic or are possibly comorbid with the symptomology of OCD.
Vanderlinden, Vandereycken, Van Dyck, and Vertommen (1992) describe dissociation as a kind of mental avoidance or escape technique which results in amnesia for a traumatic event. Physical and/or sexual abuse, and neglect would be instigators of dissociative mechanisms. Their findings showed that only 3% of females reported physical abuse, while males reported more often. The interesting hypothesis is posited that perhaps female eating disordered patients dissociate physical abuse to a greater extent than other traumatic experiences. The outcome of the study showed that 12% of the patient sample with eating disorders reported DIS-Q (Dissociative Quotient) scores as high as the scores of patients with dissociative disorder. Bulimics ranked high in scores as a group and binge eating was seen as a way of coping with the feelings and memories associated with trauma.

Kennedy (1992) associated obsessive-compulsive disorder (OCD) with eating disorders from a biological perspective. He linked disturbances in the serotonin (5-HT) neurotransmitter system. Evidence suggests that a central 5-HT disturbance may be associated with several psychiatric disorders, including depression, alcoholism, anxiety, OCD, AN and BN. Further studies by Kennedy (1992) demonstrated that changes in diet influence 5-HT functioning. This is particularly true in women. Biochemical changes in other neuroendocrine systems occur. Kennedy found that these systemic alterations may affect prolactin, a milk producing enzyme, and tryptophan, an amino acid produced in the digestive tract and essential to human nutrition.
Research conducted by Pomeroy, Mitchell, and Eckert (1991) evaluated the risk of infection and compromised immune function in anorexia nervosa patients. Aside from caloric malnutrition, their research concluded that the anorectic patient usually consumes a diet that is sufficient in carbohydrates and deficient in fats, and protein. The anorectic is prone to staphylococcal skin infections, bacterial infections, pneumonia and hypoglycemia. Pomeroy and colleagues (1991) found that this condition was attributed to a generally low consumption of proteins and fats in the diet. Anorectic individuals have an increased resistance to viral infections such as colds or influenza. Their research showed that when AN patients gained weight they were more susceptible to viral infection. Further experimentation using mice showed that chronic protein insufficiency resulted in an enhanced cell-mediated immunity for viral infection. Bone marrow was found to be abnormal in severe AN patients, but natural killer cells and T-lymphocytes and B-cells appeared within normal limits. Research conducted by Pomeroy and colleagues found that there are blood factors that may activate the formation of tumors, and that other types of T-cells were elevated beyond those of controls. In addition, their research concluded that some, as yet undefinable immune function activity does change at the cellular level in AN patients. Further studies are needed to confirm or deny these data. When compared with other forms of starvation, AN patients are clearly at lower risk for impaired immunity.
Cognitive difficulties arise in eating disorders. Pendleton-Jones, Duncan, Brouwers, and Mirsky (1991) demonstrated that underweight anorexics showed more cognitive difficulties than normal weight bulimics; they scored lower than normal controls on four out of five neuropsychological domains. Lower verbal scores suggested that these individuals were more compromised neuropsychologically. Pendleton-Jones, Duncan, Brouwers & Mirsky (1991) found that these patients also scored significantly lower on WAIS Information than a mixed group of psychiatric control patients. Their research demonstrated that attending difficulties may stem from metabolic changes that accompany severe weight loss and/or repeated binging, vomiting, and laxative abuse. Conclusions in this study did not support the previously held hypothesis of differential right-hemisphere brain dysfunction as a contributing factor in eating disorders. Pendleton-Jones and team pointed out that due to ethical reasons there are very little data in the areas of starvation and its effect on cognitive processes.

Le Grange, Eisler, Dare, and Russell (1992) research mentioned the comorbidity related to AN and BN that involved personality disorders (PD). These eccentric or odd groups are characterized by paranoid, schizoid and schizotypal behaviors; impulsive or dramatic groups are characterized by borderline, narcissistic, histrionic, and antisocial behaviors, and anxious or fearful groups, that are composed of avoidant, dependent, and compulsive and passive aggressive personalities. Le Grange and colleagues demonstrated that
impulsiveness is a distinguishing feature of patients with AN who have BN features, as opposed to the restricting AN groups. AN and BN patients with impulsive personality disorders accounted for 55% of the borderline personality disorders. Avoidant personality disorder was exhibited in 60% of the AN group. The outcome of this research strongly suggested that there was a comorbidity between AN and BN in regards to personality disorders.

A two year outcome study of 31 BN and 20 AN patients conducted by Fichter and Quadflieg (1996) reported a parental family climate described as affectionless control. The latter was deemed as a risk factor for psychiatric disturbance. This climate was described by a high degree of control or overprotection, and a low degree of care, especially by fathers in the BN sample. However, the AN patients idealized their families in the same manner as the healthy adolescents. Research from Fichter and colleague showed that both situations were seen in the family's of AN and BN patients. The instrument used by Fichter and Quadflieg was the Parental Bonding Instrument (PBI). These findings may be attributed to the fact that (a) the PBI measures family atmosphere subjectively perceived by the patient and (b) that AN patients may tend to idealize their family climate or may not reveal negative family environment and/or pathology.

Thienemann and Steiner (1993) researched family environment of eating disordered and depressed adolescents. Families of anorexics were described as being more enmeshed, overprotective, and more rigid than normal families.
AN and BN families used significantly more confusing, disorienting, ignoring, and walled-off communication behaviors than did normal families. MMPI testing showed AN families were perfectionist, withdrawn, and isolated. AN-BN patients reported family atmosphere as more conflicted than did the restrictor anorexics. Less fostering of independence, less direct expression, and less cohesiveness were additionally exhibited by families of bulimics. These families also were less intellectually, culturally, and recreationally oriented, yet had achievement expectations as high as those of normal families. A similar study by Shugar and Krueger (1995) supported the hypothesis that anorexic behavior and family communication style are mutually interdependent. These data resulted from the implementation of the Family Aggression Scale. Relevant research on sociocultural models by Greben and Kaplan (1995) pointed to the family systems model in AN. This condition is defined not only by the behavior of one family member, but also by the interrelationship of all family members (see p. 42-47 for discussion of structural family therapy).

**Treatment Modalities for the Eating Disorders**

The cognitive-behavioral approach is the current treatment of choice for AN and BN. This treatment has two goals: (1) control of binge-eating, and (2) identification and challenge of distorted beliefs regarding food, body shape, and weight. Binge-eating is not the initial target for direct modification, but may be ultimately life-threatening, therefore it must be curtailed. The thinking here is
that if binge-eating can be controlled, vomiting could cease to be an issue. The treatment approach that follows from this theoretical position emphasizes cognitive restructuring, similar to that originally used with depressed patients (Beck, Rush, Shaw, & Emery, 1979). The cognitive approach stresses identification of dysfunctional cognitions and is directed toward black-and white thinking, distorted beliefs (I must be thin to be happy), and the relationship between emotion and behavior. By challenging and altering dysfunctional cognitions, the treatment targets the maladaptive patterns of emotion and behavior, with the aim of decreasing or eliminating the inappropriate binge-purge cycles. The majority of eating disordered patients can be treated on an outpatient basis, as is the case at Samaritan Behavioral Health's Willow Creek Eating Disorders Treatment Center. Exceptions to this general rule include patients with significant medical complications, due to food deprivation or stomach and intestinal ailments, suicidal patients, or those who fail an adequate trial of CBT. Appendix B provides an overview of specific interventions and at what stage these interventions are instituted in treatment.

Fairburn, Marcus, and Wilson (1993) advocate 19 sessions of treatment (50 minutes each) over 20 weeks. These researchers further recommended that clinicians contract with patients for a specified number of sessions. Each session is designed to increase motivation and delineate clearly defined patient goals. It is believed that a clear termination date helps both patients and therapists approach their designated goals. At Willow Creek, the treatment plan
and goals vary according to the severity of the case. Generally, treatment continues for a maximum of 12 weeks. However, these 12 weeks are highly structured and intensive and comprise the interventions that are listed in Appendix B under “functions of the intervention.” It must be noted that the three stages of treatment over the 20 week period (Fairburne et al., 1993) would correspond to Willow Creek's 12 week model. The latter, program meets Monday through Friday, from 7:45 a.m. to 4:30 p.m., which includes a dietician supervised breakfast, lunch, dinner, and snacks. Therefore, there is more concentrated reinforcement of treatment modalities at the Willow Creek.

Program activities encompass group and individual psychotherapy, provided on a daily basis, didactic group programing, which includes information on adaptive coping skills, relaxation techniques, assertiveness training, social skills building, and relapse prevention techniques. Each patient is required to develop a relapse prevention plan which is developed and reviewed throughout the course of treatment. Since the majority of patients are female, there are groups related to societal feminist issues as relates to eating disorders, with great emphasis placed on areas of self-esteem, self-worth, and assertiveness. Family dynamics as well as body shape and image therapy is provided in group format. All groups follow a cognitive restructuring and behavioral modification treatment approach. Additionally, there are family groups that are held from 4:30 to 5:30 p.m. that are educationally designed to disseminate nutritional information and knowledge of food plan exchanges. These skills are taught so that the patient's
nutritional intake may be casually monitored at home. Family group sessions also serve as therapeutic process groups; forums that provide supportive environments for shared concerns and issues, as well as the application of family restructuring techniques. This protocol follows the structural family therapy model designed by Salvator Minuchin (see explanation of Minuchin's structural family therapy and its relationship to AN, p. 42-47). Daily goal setting is the purpose of the first morning group session at Willow Creek. Patients are continually queried as to the progress of their goals. This technique is utilized in order to demonstrate that the patient has the ability to moderate herself/himself in an appropriate, non-self-destructive manner. Skills are applied to practical matters of nutritional intake and the development of constructive, positive thought processes. Patients begin to see that they do have control over their lives in areas other than food intake. The process is intended to replace powerlessness with power.

During the early stages of counseling, the therapist is initially more active than the patient in treatment, but the responsibility shifts to the patient as treatment progresses. The reason for this transition is often due to the fact that patients are weak and tired at the onset of treatment, and thought processes are impaired. In addition, the patient may exhibit major depressive symptomology. Because patients are not typically cured (they may retain residual problems secondary to the eating disorder) during treatment, the ultimate goal is to have
patients become their own therapists as they continue to work to reduce their symptoms after formal treatment is terminated.

**Stages of treatment:** The researcher will use the cognitive-behavioral treatment utilized for binge-eating disorder as a demonstration of the efficacy of the CB model because Binge-eating may be an integral part of both AN and BN symptomatology, and may often severely compromise the patient's life. This researcher has observed the commonality of dual symptomatologies in both AN and BN patients.

In the first phase, (weeks 1-4) treatment emphasis is placed on normalizing eating patterns through initiating changes in cognitions and behaviors that illicit positive outcomes. The cognitive-behavioral model takes into account the relationship among binging, purging, dietary restraint concerns about shape and weight, and low self-esteem. Explanation of the model usually begins with the presenting complaint such as Binge-eating, and its relationship to purging. Patients usually have no problem understanding that purging is an effective means of weight control. However, the relationship between strict dieting and Binge-eating may be less clear initially. Episodes of Binge-eating encourage dieting, but dieting also promotes Binge-eating. In the latter case, rigid food rules (i.e., rules about forbidden foods) are usually established as a consequence of dieting. Patients typically attempt to restrain themselves from these foods or reduce their food intake, which results in a state of deprivation (Polivy & Herman, 1993). Because the forbidden foods are usually enjoyable
(i.e., chocolate cake or ice cream) and deprivation heightens awareness of food, these foods are eventually eaten; this initiates a binge that might have been prevented if the food had not been forbidden.

Additionally, overconscientious concerns about shape and weight promote dieting and increase the risk of future binge episodes. The binges elicit concern about shape and weight and perpetuate renewed efforts at dieting. Further, a poor self-concept or low self-esteem may foster concerns about shape and weight. Shame centering around Binge-eating may have a negative impact on self-esteem and may eventually heighten concerns about shape and weight, renewing efforts at dieting. Review of the model with patients is designed to inform them of treatment targets and the rationale of targeting each element of the cycle (i.e., Binge-eating, dietary restraint, body image, and self-esteem).

Patients are asked to self-monitor food intake and binge episodes, in order to highlight aspects of the model, help them identify predisposing factors and consequences to Binge-eating, and ultimately normalize eating patterns. Self-monitoring begins in stages one to four and continues throughout treatment. Normalizing food intake is accomplished by providing and monitoring regular meals and healthy snacks. Willow Creek affords constant supervision of patients in day treatment, to the extent of accompanied visits to the bathroom (this is to ensure that patients do not purge) and the journalizing of daily food intake is mandatory. It is expected that during the first stage of treatment the patient has learned skills that will modify dietary restraint. They now eat regular
meals and scheduled snacks throughout the day, and have learned to avoid
dangerous, low calorie foods that do not provide adequate nutrition and caloric
intake.

In stage 2 (weeks 5-8) some of the avoided foods that were perceived as
detrimental to body shape and image are re-introduced into the patient's diet.
Further, patients are taught how to shop for foods and how to select
appropriately when dining out. The patients are instructed to make a grocery list
of the avoided foods. The list is divided into a four-step hierarchy, with each
step reflecting foods that are more dangerous because of their potential effects
on shape and weight. Subjects are taught each week, for 4 weeks, to introduce
the foods within the corresponding hierarchy step. Patients are instructed not to
vomit after eating, and therefore, exposure to the feared foods is a completed
task, ultimately eliminating the cycle of control. Patients who are unable to
complete this assignment may be guided in-session by the therapist. If self-
monitoring has been accomplished in stage one, then the caloric intake is
gradually increased. Daily food diaries are kept and will reveal whether patients
are eating according to plan. At this point, binge-eating should be generally
controlled, but since relapse is high, patients are counseled to be aware of
triggers that may potentiate the binge-purge cycle. An example of a significant
trigger would be a difficult interpersonal issue. The patient is advised to journal
possible solutions to the problem, evaluate the possibilities, isolate the best
solution(s), and then write down the steps involved in its execution. The
remaining sessions in the second phase of treatment are devoted to altering the maladaptive cognitions and belief systems that maintain the eating disorder. After identifying the distorted cognition(s) (e.g., *I am getting fat* after a 2 pound weight gain) and writing it down, patients are taught to evaluate the evidence for and against the thought and to generate alternative explanations (e.g., Is the weight gain due to fluid retention? Is it normal for weight to fluctuate?). Patients are also taught to look for errors in their reasoning about eating and food. Dichotomous thinking (referred to as black-and-white/all or nothing thinking) is one of the most unproductive cognitive styles. Finally, patients are taught to distinguish between subjective thinking and objective reality (e.g., the feeling of fat vs. body mass index, a statistical indicator of height-to-weight ratio).

A technique known as exposure can be used to elicit dysfunctional thoughts between sessions. Examples include standing in front of a full-length mirror, wearing form-fitting clothing, and engaging in activities such as aerobics where comparison of shape and weight is likely to occur. Patients are instructed to write down their thoughts that occur during exposure, and then to practice their techniques for disputing and challenging these thoughts. Other behavioral experiments can be used to test the dysfunctional thoughts. An unbiased opinion from a trusted friend on the patient's shape and weight, or that the patients decides each morning whether they are fat and determines whether the
decision coincides with the weight on the scale (usually it does not), thereby providing the patient with a reality check.

Dysfunctional attitudes regarding shape and weight include such beliefs as these: If I were skinny, all my problems would be gone; thin people are happy and successful, and I would be more valuable as a person if I were thin. Dysfunctional attitudes are best conceptualized as conditional assumptions or rules that patients use to govern their behavior. The process of altering dysfunctional attitudes is generally accomplished with repeated practice at challenging dysfunctional cognitive processes and examining the advantages and disadvantages of the attitudes. Behavioral experiments may be used in conjunction with challenging dysfunctional attitudes. For example, patients may be asked to identify an attractive woman and compare her shape and weight to their own. These exposure exercises will invariably elicit dysfunctional thoughts which can be used to sharpen skills of disputing problematic thoughts and should be discussed at the following session.

The third stage of treatment (weeks 9-12) is a phase of treatment that involves maintenance of treatment gains and relapse prevention. A maintenance plan should be written down with the aid of the therapist; it should contain the active components of treatment that the patient found helpful, and behavioral indicators of when the plan would be appropriately instituted. The difference between a lapse and a relapse should be discussed. Patients should understand that they will be vulnerable to binge-eating at times of stress, and
should be encouraged to examine life events and the possible relationship between the events and their binging behavior. However, a lapse (one or two episodes of binging-purging) does not indicate a full-blown relapse of the eating disorder.

Broadening patient's experiences to incorporate pleasurable activities that are compatible with a food focus may be helpful in preventing relapse in the opinion of this researcher. At the beginning of treatment many with eating disorders report that they spend the majority of their waking hours thinking about food, planning what and when to eat, or worrying about the consequences of eating. For many, the process is simply one of all consuming thoughts about food and the ways to avoid it. When given a list of pleasurable activities, patients tend to focus on activities such as losing weight, exercising, or staying on a diet. Patients often report that they do not know how to have fun because the eating disorder has taken over their lives. Therefore, along with the procedures outlined above, patients should be encouraged to include more activities in their lives that do not include food, exercise, or anything that relates to these categories. These changes should be introduced early in treatment, with the recommendation that patients engage in one pleasurable activity each week. Completing these activities should be independent of success with other treatment goals. Pleasurable activities should not be used as a reward if patients are successful in scheduling meals or completing a week without binging-purging behaviors. Therapeutically, it is hoped that pleasurable
activities will expand the patient’s positive experiences and leave them less time to think about food, thereby decreasing the probability of relapse.

**Treatment of Anorexia Nervosa:** In the case of individuals who are diagnosed exclusively with Anorexia Nervosa (and not with a secondary diagnosis of Bulimia and/or Binge-Eating Disorder), all the elements in the biopsychosocial model of AN (Appendix C) are targets for treatment. Restoration of weight and of normal eating is the first priority, followed by challenging distorted thoughts and beliefs secondary to schematic processing, and finally by examination of sociocultural influences and underlying self-esteem deficits. Behavioral Therapy (BT) with the anorectic patients predominantly involves the application of learning principles to eliminate the maladaptive eating and weight control patterns of behavior. BT has been recognized as being most effective in the acute phase of illness, where stabilization and normalization of weight and eating may be critical (Halmi, 1982, 1985). Interventions generally aim to alleviate symptoms by altering the external social and environmental factors that maintain the pathologic eating and dieting behaviors. Functional analyses are completed to identify the predisposing events (i.e., puberty and other critical adjustments), and consequences associated with a reduction of food intake. Cinciripini, Kornblith, Turner, and Hersen (1982) discuss a treatment paradigm that is then designed to reward desirable behaviors and discourage undesirable behaviors. Positive and negative reinforcers are used to effectively facilitate weight gain. Positive reinforcers such as increased social
privileges, access to visitors, and exercise privileges, are made contingent on weight gain and the demonstration of healthier eating behaviors. Punishment for restrictive eating, weight loss, or vomiting after meals comprise delayed discharge, isolation, enforced bed rest, and in extreme cases, tube feedings. These techniques are widely employed at Willow Creek.

Vitousek and Hollon (1990) acknowledged that cognitive behavioral therapy for AN offers powerful strategies for modifying the distorted beliefs associated with eating and body shape and for addressing the developmental themes, interpersonal themes, and central belief systems responsible for the disorder. Bruch (1973; 1978), a recognized authority on eating disorders, was the first to discuss the benefits of CBT for AN. One particular advantage of this treatment approach is its compatibility with other psychological treatments, especially more traditional psychotherapy, where developmental deficits are seen as central pathognomonic factors. CBT with anorectic patients needs to address the following:

1. Idiosyncratic beliefs about weight and shape.
2. The interaction between physical and psychological components of the disorder.
3. The patient's desire to retain certain focal symptoms.
4. The development for motivation for treatment, with an emphasis on the gradual evolution of a trusting therapeutic relationship.
5. Fundamental self-esteem deficits.

A longer duration of therapy than is typical of depression or anxiety disorders may be required for AN. Some of the predisposing character traits of
AN and BN that prove reliable are described in Appendix C along with their treatment protocols.

Garner and Bemis (1985) have developed a comprehensive CBT approach for AN modeled after Beck, Ellis, and Meichenbaum. The essence of this cognitive-behavioral treatment approach is described by Garner and Bemis (1985) as teaching patients to analyze the utility and validity of their food and weight-related beliefs on a moment-to-moment basis. The primary focus of treatment is on identifying and modifying the dysfunctional beliefs and assumptions that govern patient's behavior. These authors postulate that anorectics share a number of characteristic beliefs, including the belief that complete control over their bodies is necessary, and that there is a perfect balance between hunger and satiation without the need for readjustment. Confronting the anorectic on the illogical nature of such beliefs will only be viewed as a personal attack. The first step in treatment is to recognize how patient's weight control strategies are intended to fulfill important functions for the patients, and to appreciate that these strategies have been partially self-serving. The next step for the therapist is to ask whether the weight control measures can provide everything that patients had intended, and to evaluate the emotional and physical costs of the extreme dieting. Much effort in the first few sessions of therapy is devoted to helping patients construct an exhaustive list of both the pros and cons of their disorder, and to begin the process of exploring these implications. Behavioral exercises (e.g., role playing and/or rehearsal)
may then be used in conjunction with various cognitive techniques to help patients gather data regarding how events influence their feelings and thoughts, and to afford opportunities to practice different ways of interpreting the environment.

Operationalizing distorted beliefs helps patients to analyze their validity. For example, a patient who believes that thinness equals popularity can be asked to operationalize popularity in concrete terms, using a list of specific criteria that one would use to assess another person's popularity. The patient is then asked to evaluate whether popularity diminishes with weight gain.

Verbalizing beliefs also facilitates cognitive change by allowing the beliefs or thoughts to be analyzed more critically. Anorectic patients frequently make errors in information processing, such as dichotomous thinking (if I eat one cookie, I will eat the box), magnification (if I gain more than 5 pounds I will have to kill myself), and mind reading (that woman who stared at me must have been thinking how fat I have become). Therefore, having patients articulate their beliefs provides an opportunity to test their validity.

Decentering is a process through which patients learn how to become more objective by stepping back from their experience to evaluate it from alternative perspectives. For example, a patient who is overly concerned about how others perceive her weight can be asked to establish some criteria to decide when her appearance and behavior are actually eliciting responses from others in her social environment. Such a patient may predict that weight gain will result
in strangers staring at her legs. By counting a number of times that staring at her legs actually occurs before and after the behavioral change, the patient may come to accept the fact that she is not being scrutinized by others as much as she initially predicted.

Decatastrophizing is a technique used to help patients cope with anxiety associated with weight gain. When patients are forced to focus on specific fears rather than making global predictions of catastrophe, they can reality test the actual degree of threat posed by an event. Specific problem-solving techniques can be used to increase the patient’s perception of having available resources to cope with the danger. An example of this is to have a patient imagine being told by her boyfriend that she is no longer attractive to him because she has gained weight. By having the patient anticipate the painful feelings and thoughts associated with this scenario, the therapist can inoculate (terminology credited to Meichenbaum) the patient and help her become desensitized enough to cope. The patient may also be asked how she would help a friend cope in a similar situation, and can be asked to develop a list of the things she can tell herself in order to feel better.

Challenging the shoulds is a technique intended to help patients evaluate the reasonableness of some of their arbitrary self-expectations and personal rules of living, such as I should always diet, or I should always exercise. The emphasis is on having the patients recognize how their strict, unattainable personal expectations lead to extreme stress and diminished self-esteem.
Gathering data is a technique used to help patients empirically evaluate the accuracy and validity of their dysfunctional beliefs. For example, if a patient has a belief that no man will ever talk to her if she gains 5 pounds, she can be asked to make a list of the number of male friends she had before she began her dieting, and the number of male friends she has made since her extreme weight loss began.

Reattribution techniques are used to assist patients in altering their interpretations of their perceptions. Garner and Bemis (1985) conceptualize the body image disturbance of anorectics as being essentially a cognitive rather than a perceptual phenomenon. The therapeutic strategy they advocate is to alter the anorectic's interpretations of what they see, rather than modifying their misconceptions. For example, a cachectic (one who is wasting away from an illness) patient is encouraged to view her obese self-perception as a manifestation of her illness. This approach avoids any unnecessary conflict that might arise out of attempts to contradict the patient's subjective perception of body image.

**Minuchin's Structural Family Therapy**

Perlmutter (1996) discussed Minuchin's structural approach to family systems therapy as it relates to the treatment of Anorexia Nervosa. However, today bulimia and binge-eating disorder are recognized as additional pathologic eating disorders, therefore, the structural family approach is also applicable in
many of these cases. Minuchin studied families with daughters who were severely anorexic, and usually required inpatient treatment. Perlmutter concurred with Minuchin that families of individuals with anorexia show the five interaction characteristics:

1. Enmeshment. Family members are highly sensitive to each other and tend to feel each other's movements.

2. Overprotectiveness. The parent's nurturance and watchfulness become over protectiveness and exert a strong negative force against the forces of development and change in moving the child into adulthood (separation and individuation).

3. Rigidity. Sequences and behaviors are characterized by rigidity and tend to be expressed the same way no matter what the outside (external) situation may be, and without regard for modification.

4. Lack of conflict resolution. Arguments are never finished, problems are never resolved, and a chronic state of tension and disagreement permeates the family environment.

5. Involvement of a vulnerable symptomatic child. Unresolved conflict between parents leads to involvement of a vulnerable child (p.141).

Because anorexia and other eating disorders may be life threatening, family involvement in assessment and treatment is inevitable. When one examines Minuchin's structural family precepts, one is able to see the synchronicity between his theory and the etiology of anorexia. Minuchin (1974, 1978, 1981, 1984) referred to the anorectic family as a system whose adaptive and coping mechanisms have become unavailable. The author recommends that therapists enter the family by focusing on the immediate life threatening symptoms of anorexia, and move toward the primary goal of helping the patient to give up
these symptoms. Minuchin further suggests moving beyond the identified patient and zeroing in on the family interactions that support the anorectic symptomology. In the process, a shift usually occurs in the therapeutic goal. Because the anorectic patient is free to experience herself/himself as only a part of a dysfunctional system, the family transactional patterns become the targets of therapy. As the family repositions itself, new methods of transaction become possible. In time, family members may experience new patterns that become self-reinforcing. It is hoped that family members who have experienced the efficacy of these patterns will promote their use.

Perlmutter (1996) and Minuchin (1978) cautioned that therapists must challenge family realities, enmeshment, overprotection, rigidity, conflict avoidance and conflict detouring. The family realities have the ability to convince the therapist that the family is trying to rectify the situation, and that change is impossible. This may result in the therapist's acceptance of the family image, and of their cooperativeness. In so doing, the therapist may wrongly assume the responsibility for change. If this is allowed to occur, the therapist will find herself/himself utilizing the same mechanisms with the anorectic that are used by the parents. The result will be therapeutic failure. Operations that challenge *enmeshment* are also operations that increase the possibility of autonomy for the anorectic child. Gaining autonomy is a critical issue in the anorectic's treatment because control of food intake is a way of having an element of control over one's life. Parents of anorectic children are overly
enmeshed with their offspring. It is essential that the therapist insist on communicating the message of separation and individuation continually and consistently for the parent's benefit. The trick is to accomplish this end without challenging the family's important value of togetherness. Overprotection by parents may be challenged by the therapist. One way to accomplish this is to highlight the anorectic's competent behaviors with great enthusiasm and interest. Because the focus of attention is on the anorectic, the therapist may choose to decentralize the situation and facilitate re-focusing on another sibling's problem(s) (Le Grange, Eisler, Dare, & Russell, (1992). Perlmutter and Minuchin advocate a high level of intensity on the therapist's part when dealing with family rigidity. The technique suggested is to increase the amount of time that the family members spend in conflicted situations. Words alone will produce only fleeting change. The enactment of issues and the development of clearly differentiated tasks are much more effective over time. Finally, in challenging areas of conflict avoidance and conflict detouring both Perlmutter and Minuchin subscribed to the techniques that penetrate the facade of what appears to be family harmony. This may be accomplished by blocking the coalitions of family member's conflict avoidance mechanisms. To achieve this end, the therapist must not act as family referee, but instead act as gatekeeper, preventing intrusion and escape, and maintaining the dialogue and extending its length. The therapist is advised to participate in the family interaction only to promote the intensity of conflict. Regarding conflict detouring, it was suggested
that the anorectic child is used to diffuse stress within the family, such as marital conflicts, therefore the child's symptoms remove the attention from the real issues of marital discord. As a result, parents will have difficulty accepting changes in the system and the anorectic will have difficulty as well, because she may no longer hold the privileged position as the central focus of her family. Perlmutter (1996) concluded that the anorectic's recovery means that she must also assume the responsibilities of adulthood. Responsibilities that may include acceptance of maturation, physical and sexual development, and relating independently to men. This change threatens the individual with the prospect of developing serious intimate relationships outside the family (extrafamilial), and it threatens the family of origin with the loss of their child. Both authors agreed that challenging the structure(s) that maintain the child's involvement as a conflict detouring vehicle requires the use of difficult therapeutic strategies that necessitate spontaneity and "seize the moment" awareness on the part of the therapist.

Aside from curtailing the anorectic's syndrome, the therapist must be effective in the transformation of the spouse subsystem. In order to effect this change, supportive, complementary, transactions must be increased and facilitated by the therapist. The reason for this is to create a clearly bounded subsystem of mother and father, who present a unified, consistent relationship that both parents support. The mother needs to disengage from parenting and concentrate more energy on the spousal subsystem. Additionally, the father's
engagement in parenting must increase. This will enable him to contact his children directly without going through their mother. The mother's role of contact person must be relinquished. Another goal is a transformation of the sibling subsystem, discussed earlier. This subsystem must be decreased and the boundaries opened so that the children may interact with their parents and with the external world. This maneuver eliminates choosing a family representative to meet their needs. In addition, the encouragement of age-appropriate increased autonomy for all the children in the family will generally create a shift of attention from the powerless position of the anorectic child. Finally, the therapist's ultimate goal is to facilitate the formation of effective dyads and triads in the total family system. Underscoring the need for clear family communication among all family members must be encouraged. In this way, flexibility within subsystems will increase and enmeshement decrease and flexible alliances become possible. Clear communication among all family members should be encouraged. In this way, the real nature of family transactions may be recognized (Minuchin, 1974, 1984).

Summary

The breadth of research data clearly shows that eating disorders stem from a classic biopsychosocial model. However, one does not find significant studies that integrate the holistic perspective of the biological, psychological, and sociological aspects of eating disorders. Future research needs to address
this triangular concept of etiology. Each research team has a tendency to focus on some singular particular aspect of study, while disregarding the broader perspective. Other research takes a position of confirming or denying previous studies. However, this researcher feels that it is necessary to heavily weigh the strong and consistent support for the sociological evidence that eating disorders are perpetuated by western societal demands primarily on females. The media consistently bombards the female public with messages that imply the importance of thinness for success in all aspects of life. Films, television, magazines, books and music (both classical and popular), as well as advertising, and videos, all direct their energies toward the goal of female perfection and beauty. Our society in particular, reveres youth, and abhors and fears old age. Research bears out these significant sociological paradigms. The family environment, a product of society, falls into this same realm. Parents often treat their daughters in a more protective and nurturing manner, and therefore exert more control during childhood stages of development that require autonomy for the establishment of positive concepts of self. This is more true for AN patients than for BN patients. The anorectic individual exercises this need for autonomy through decisions about food consumption. The underdeveloped view of self is often caused by the aborted earlier processes of individuation. Likewise, unemotional, demanding, perfectionist parents, may create a situation that fosters the quest for perpetual perfection in their children and promotes the BN condition. Further evidence that onset of eating disorders
is no longer relegated to adolescent and teenage females, and is being
diagnosed among male populations in all age groups, and among women in mid-
life and advanced age, indicates the virulent impact of societal values on
Western populations globally.

From a biological perspective, research is continually providing new
evidence that substantiates that eating disorders do compromise the immune
system, specifically in the area of reduced lymphocyte, B-cell, and natural killer
cell production. These components are critical aids in the destruction of invading
organisms in the human body. Likewise, the strong evidence for eating disorder
psychopathology and comorbidity of obsessive-compulsive disorder, depression,
trauma, and dissociative experiences, seem to go hand-in-hand with poor social
adaptation, particularly in regards to major depressive disorder. In addition,
research demonstrates a strong association of eating disorders to obsessive-
compulsive disorder and the relationship of biochemical changes in the
neuroendocrine system that may result in serotonin imbalances in the body's
neurotransmitter system. The latter, may be responsible for alcoholism, anxiety,
reduced production of tryptophan, and nutritional deficits. One cautionary note
this researcher feels is relevant to express is that there is difficulty in separating
cause from consequence in the discussion of psychologic factors associated
with anorexia and bulimia. For instance, investigators who observe that
anorectics score low on self-esteem questionnaires can only speculate as to
whether low self-esteem is etiologically significant in the development of AN, or
whether it is the result of becoming anorectic. Likewise, investigators who observe the persistence of self-esteem deficits after AN is in remission, cannot conclusively determine whether what is being measured is a durable trait or residual scarring from the disorder itself.
CHAPTER 3

METHODOLOGY

Introduction

This research was conducted to determine whether or not cognitive-behavioral therapeutic skills and structural family therapy acquired in treatment have a sustained, positive effect in the lives of eating disordered individuals once they are mainstreamed into real-life interactive functions that include family, friends, school, and work.

Research Design

The methodology used in this study is descriptive. Descriptive studies explain current behaviors, deal with cross-sectional groups of individuals, and allow for the administration of surveys that may suggest relationships of information (Guide to the Preparation of the Masters Research Paper, Ottawa University, 1997, p. 8). Further, the descriptive format is best suited for gleaning and analyzing the information sought by this researcher, because it is not complex, and the method has the ability to elicit in-depth, but brief responses from those individuals surveyed. The latter characteristic is critical in administering telephone surveys because of the time element and lack of visual proximity.
Population and Sample

The population of interest included all patients who were in treatment in the hospital setting and/or day treatment at Willow Creek. The treatment protocols are the same in either case. The criteria for patient selection were those individuals who were out of treatment programs from six months to one year. These parameters are critical because recidivism often occurs during this time period. Since this study is the first of its kind for this facility, it was thought that future studies might address longer periods of patient skill maintenance.

Age, sex, ethnicity, education, and economic status were variables that were not addressed in the study. The reason for these omissions was that in this researcher's experience the commonality among eating disordered individuals is the eating disorder, which does not appear to discriminate in the cognitive, behavioral, and familial areas that were studied. Additionally, the sample of former patients that met the criteria for study would have been severely diminished. The total number surveyed was 30 and that number constituted 100% of all participants who completed the treatment protocols and who matched the time-frame criteria.

Assumptions and Limitations

The researcher assumed that all respondents were truthful, and that the sample represented a typical population of eating disordered individuals.
Procedure

Initially, meetings with the directors of the Willow Creek Treatment Centers were set. The directors of the Scottsdale facility had several concerns regarding the confidentiality of the patients that they had treated. The reason for this is that many eating disordered individuals contend with issues of severe shame regarding their illness. The researcher responded to this concern with the recommendation that she identify herself as a graduate student who was conducting a follow-up study in order to see how former patients were doing six months to one year post treatment. Further, this researcher disclosed to each respondent that she possessed no knowledge of the details of their treatment in therapeutic sessions. Verbal emphasis was placed on the participant's confidentiality and anonymity in the study. Respondents were also informed that both directors supported the efficacy study and hoped to enhance their programs as a result of the research. This researcher did not meet with resistance from participants regarding any of the anticipated concerns, to the contrary, individuals expressed enthusiasm and the desire to participate in the study. Each telephone interview was concluded in approximately eight to twelve minutes.

Instrumentation

The researcher's survey questionnaire was designed so that respondents might give brief, introspective, answers to queries about the following items:
cognitions and feelings regarding food, consumption of food, weight, shape and body image, self-esteem, isolation, perfectionist tendencies, general health and exercise, satisfying relationships, and support systems. A 5 point Likert scale was used to administer 13 questions (Appendix D). In a trial run, the 7 or 10 point Likert was judged to be too lengthy for use in a telephone survey because individuals tended to lose introspective levels of concentration, and were unable to focus on the content of the questions posited. The answers to the questions were rated 1 (much worse), 2 (worse), 3 (same), 4 (improved), and 5 (much improved) in each of the aforementioned categories. The respondents were instructed to answer each question in the here and now, and in comparison to how she/he felt prior to treatment. All participants were told that they need not answer a particular question if they did not feel comfortable doing so, however, there were no refusals among the sample that was studied.

Method of Analysis

This data were analyzed by computing a frequency count and corresponding percentage of response in each response category for all thirteen items in the survey. In addition, means and standard deviations for all items were calculated and presented in Table 1 in Chapter 4. All data were evaluated in order to see which specific treatment areas were and were not being maintained six months to one year post treatment. Utilization of this information might be applied to streamlining existing treatment protocols, or initiating
workable, more effective alternatives in the future. Further, this researcher felt that it was pertinent to review patient's charts for social history data that might provide additional information for this research project.
CHAPTER 4

PRESENTATION AND ANALYSIS OF THE DATA

Demographics

Age, sex, ethnicity, education, and economic status were variables that were not addressed in the study.

Findings and Results

The presentation of the data in this chapter is organized in the order in which the questions were asked. Frequency counts, percentage response, means and standard deviations are provided for all questions and appear in Table 1. The sample size numbered 30, and all participants responded to all questions. Respondents were asked to rate themselves according to how they felt currently as compared to their feelings prior to treatment. Their responses ranged from much worse (1) worse (2), no change (3) to Improved (4) and Much Improved (5). Analysis of the data is presented in Table 1.
<table>
<thead>
<tr>
<th>Item</th>
<th>Percentage and Frequency (#) of Response</th>
<th>Mean Response</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Thoughts about food/relationship concerning food.</td>
<td>0 (0) 20.0 (6) 40.0 (12) 30.0 (9) 10.0 (3)</td>
<td>3.3</td>
<td>.92</td>
</tr>
<tr>
<td>2. Daily intake of food and calories</td>
<td>3.3 (1) 10.0 (3) 33.3 (10) 43.3 (13) 10.0 (3)</td>
<td>3.5</td>
<td>.94</td>
</tr>
<tr>
<td>3. Feelings about your weight</td>
<td>3.3 (1) 20.0 (6) 36.7 (11) 40.0 (12) 0 (0)</td>
<td>3.1</td>
<td>.86</td>
</tr>
<tr>
<td>4. Perceptions about body shape and self-image</td>
<td>0 (0) 16.7 (5) 33.3 (10) 50.0 (15) 0 (0)</td>
<td>3.3</td>
<td>.76</td>
</tr>
<tr>
<td>5. Ability to nurture self</td>
<td>3.3 (1) 3.3 (1) 50.0 (15) 40.0 (12) 3.3 (1)</td>
<td>3.4</td>
<td>.76</td>
</tr>
<tr>
<td>6. General self-esteem</td>
<td>0 (0) 20.0 (6) 43.3 (13) 30.0 (9) 6.7 (2)</td>
<td>3.2</td>
<td>.86</td>
</tr>
<tr>
<td>7. General health</td>
<td>3.3 (1) 13.3 (4) 26.7 (8) 53.3 (16) 3.3 (1)</td>
<td>3.4</td>
<td>.89</td>
</tr>
<tr>
<td>8. Current level of exercise participation</td>
<td>0 (0) 13.3 (4) 60.0 (18) 26.7 (8) 0 (0)</td>
<td>3.1</td>
<td>.63</td>
</tr>
<tr>
<td>9. Relationships at home and school/work</td>
<td>0 (0) 0 (0) 33.3 (10) 46.7 (14) 20.0 (6)</td>
<td>3.9</td>
<td>.73</td>
</tr>
<tr>
<td>10. Satisfaction with outside social involvements</td>
<td>0 (0) 3.3 (1) 40.0 (12) 36.7 (11) 20.0 (6)</td>
<td>3.7</td>
<td>.83</td>
</tr>
<tr>
<td>11. Support from individuals and groups</td>
<td>0 (0) 0 (0) 10.0 (3) 53.3 (16) 36.7 (11)</td>
<td>4.3</td>
<td>.64</td>
</tr>
<tr>
<td>12. Experience of isolation and withdrawal</td>
<td>0 (0) 0 (0) 33.3 (10) 63.3 (19) 3.3 (1)</td>
<td>3.7</td>
<td>.53</td>
</tr>
<tr>
<td>13. Feelings of perfectionism</td>
<td>0 (0) 6.7 (2) 63.3 (19) 30.0 (9) 0 (0)</td>
<td>3.2</td>
<td>.57</td>
</tr>
</tbody>
</table>
The range of the mean responses for all questions was 3.1 to 4.3 indicating that participants responded favorably to the items in the survey. Questions 3 and 8 represented the least favorable response, while Question 11 elicited the most favorable response.

Table 2 represents the overall level of change expressed as a percentage of response when Worse and Much Worse and Improved and Much Improved are combined.

<table>
<thead>
<tr>
<th>Question No.</th>
<th>% Worse</th>
<th>% No Change</th>
<th>% Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20.0</td>
<td>40.0</td>
<td>40.0</td>
</tr>
<tr>
<td>2</td>
<td>13.3</td>
<td>33.3</td>
<td>53.3</td>
</tr>
<tr>
<td>3</td>
<td>23.3</td>
<td>36.7</td>
<td>40.0</td>
</tr>
<tr>
<td>4</td>
<td>16.7</td>
<td>33.3</td>
<td>50.0</td>
</tr>
<tr>
<td>5</td>
<td>6.6</td>
<td>50.0</td>
<td>43.3</td>
</tr>
<tr>
<td>6</td>
<td>20.0</td>
<td>43.3</td>
<td>36.7</td>
</tr>
<tr>
<td>7</td>
<td>16.6</td>
<td>26.7</td>
<td>56.6</td>
</tr>
<tr>
<td>8</td>
<td>13.3</td>
<td>60.0</td>
<td>26.7</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>33.3</td>
<td>66.7</td>
</tr>
<tr>
<td>10</td>
<td>3.3</td>
<td>40.0</td>
<td>56.7</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>10.0</td>
<td>90.0</td>
</tr>
<tr>
<td>12</td>
<td>0</td>
<td>33.3</td>
<td>66.7</td>
</tr>
<tr>
<td>13</td>
<td>6.7</td>
<td>63.3</td>
<td>30.0</td>
</tr>
</tbody>
</table>

With the exception of Question 3, the percentage of neutral or improved responses for all questions was at least 80%. For Question 3, 76.7% of the
participants felt no change or improvement in their feelings about their weight. Responses to Question 8 demonstrated the least positive responses, while question 11 was the most positive, with question 12 a close second. In areas of perfectionism, (question 13) the data did not reflect any startling behavioral change.
Summary

The purpose of this project was to provide information to the administration of the treatment facility regarding the maintenance and effectiveness of cognitive-behavioral modification skills learned in therapy. The patients selected for the study were those with diagnoses of anorexia nervosa, bulimia, binge-eating disorder, or combinations of these pathologies, and all participants were post-treatment six months to one year. A telephone survey was conducted with a sample of 30. Questions asked pertained to specific areas of cognitive, behavioral and social interactive function. The study demonstrated definite improvements in food consumption and caloric intake, as well as in areas of interpersonal relationships and diminished feelings of isolation and withdrawal. While overall improvement exists, the findings indicated few startling gains and showed areas of treatment where change appeared static. Cognitive-behavioral therapeutic modalities, the treatments of choice at this facility, appeared to be most in need of refinement in areas that concerned weight perceptions and exercise moderation.
Conclusions

Questions 1,3,4,6, and 13 were constructed in order to assess cognitive areas of major concern. Answers to question 1 demonstrated that 40% of the sample found that they had no changes regarding their thoughts about and their relationship to food. However, this percentage is offset by the 30% who found they had improved and the 10% who felt they were much improved. Questions 3 and 4 discussed feelings and perceptions about weight and body shape which are related to cognitions. Some eating disordered patients actually do perceive their weight and body shape as considerably larger than they really are. This may be due to neurological abnormalities that develop due to malnutrition (personal statement by director of the eating disorder clinic where the research was conducted, August, 21, 1998). The study concluded that 40% of the respondents felt that they had improved. However, this figure appeared less important when compared to the 30% who felt there was no change, and the 20% who felt that their disorder was worse than before treatment. The responses to question 4 demonstrated that 50% of the participants felt that they had improved their perceptions of weight and shape, and 33.3% felt no change.

Question 6 concerned self-esteem, another important variable in the treatment of eating disorders. Forty-three percent of those surveyed felt there was no significant change since treatment, and 36.7% perceived favorable degrees of improvement, but 20% had a decline in self-esteem. Question 13 dealt with perfectionism, another critical factor in eating disorders. The respondents did
not fare as well in this category, with slightly better than 63.3% stating that there was no change. The results in this cognitive area show overall improvement, but no startling gains, and a lack of therapeutic maintenance in areas of perfectionism.

Questions 2, 5, 7, and 8 assessed behavioral aspects of treatment. Question 2 demonstrated marked improvement in intake of food and calories, with 53% reported improvement in this area. This is the single most important area of maintenance in eating disorder behavioral therapy because it has life sustaining ramifications. Question 5 addressed the ability to nurture oneself. Here, 50% of respondents stated no behavioral change and 43.3% felt improvement. The interpretation of these percentages reflects an acceptable level of improvement. Question 7 discussed general health perceptions. The significance of this question is its interpretation. If a patient is doing well then it may be assumed that general health has been maintained or improved. The respondents reported a 53.3% improvement in general health, and 26.7% at a status quo position. Question 8 addressed exercise issues. In this area, there was little change for 60% of those sampled. Some improvement was reported by 26.7% of those surveyed. Therapeutic modalities need some improvement in areas of exercise moderation. The consideration in this matter is important because over exercise may reduce the positive weight gains effected through additional food and caloric intake.
Questions 9, 10, 11, and 12 were concerned with relationships and interaction with others. Particular emphasis was placed on family relationships and support. In Question 9 the researcher emphasized the home situation over other outside interactions. While 33.3% viewed their general relationships at pre-treatment levels, 66.7% demonstrated various degrees of improvement.

Question 10 addressed satisfaction with social involvements outside the home. Those queried answered favorably with a 56.7% improvement response rate, while 40% viewed their outside social involvements as unchanged. Question 11 concentrated on support primarily from family, as well as friends teachers, co-workers, and organized support groups. The greatest improvement in the study was reflected in this variable, with an 90% improvement rate. An insignificant 10% showed no change in this area. Question 12 addressed isolation and withdrawal from family and friends, here to, emphasis was on family. Again, improvement was demonstrated in a 66.3% response.

The area of interpersonal relationships appeared to have the largest overall improvement in this study, thus, validating successful therapies that are maintained by patients. The data supported the fact that structural family therapy and the cognitive behavioral therapies that addressed relationship and support issues were highly successful. Those therapies that dealt with intrapersonal cognitive and behavior issues showed general improvement, in most areas with the exception of perfectionism and exercise modification.
The only conclusions that were drawn from the chart review of patient's social histories supported the theory that sexual, physical, and emotional abuse are contributing factors to eating disorder pathologies. In this study, 50% of the sample had histories of childhood abuse. Vickie Berkus, M.D., Ph.D., medical director of Sierra Tucson, in Tucson, Arizona, an internationally known eating disorders and chemical dependency treatment center, stated that 70% of her patient census have histories of abuse (personal communication, July 30, 1998). The patient intakes and histories at the research site were detailed but did not necessarily include sufficient data on the biological, psychological, and sociological aspects of each patient. This facility did not consider this information to be mandatory, therefore, the researcher did not have a data pool that was conclusive, which was further compromised by a small population sample.

**Recommendations**

Cognitive therapeutic modalities that concern perceptions and feelings about weight, and behavioral approaches to exercise moderation appear to be most in need of refinement. These factors are at the root of most eating disorders. The eating disorders treatment center might consider the implementation of more psychodynamic therapies for patients on an individual basis and families on a group basis.
Currently, there is little counseling that allows families the opportunity to discover the part that they play in producing an eating disordered individual. The central issues of parental control and emotional dependence are rarely addressed. Family therapy is conducted with the intention of raising awareness and empathy, understanding of the principles of food exchanges, and covert monitoring of patients when they return to the home environment.

Patient therapy is primarily conducted in groups, where psychodynamic approaches are absent. Since most patients spend approximately three months in treatment, there is ample time to acknowledge some of the deeper issues surrounding eating disorder etiology. Similarly, the therapies that address perfectionist tendencies, a component of self-worth, seem to be limited in maintaining long-term change. The majority of group work is devoted to self-esteem improvement techniques. Treatment protocols might be reviewed in order to isolate the particular factors that contribute to the 16.7% differential between those patients who improved, and those whose self-esteem became worse. Assuming the above recommendations are effected, a second follow-up study might be conducted to see if the changes in the program have shown improvement in those patients who are out of treatment from six months to one year. If improvement proves to be the case, the next phase of research might consider an examination of treatment efficacy in patients who have been out of the program for more extended periods of time.
REFERENCES


APPENDIX A

DIAGNOSTIC CRITERIA FOR

ANOREXIA NERVOSA AND BULIMIA NERVOSA
DIAGNOSTIC CRITERIA FOR 307.1 ANOREXIA NERVOSA

A. Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., weight loss leading to maintenance of body weight less than 85% of that expected; or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).

B. Intense fear of gaining weight or becoming fat, even though underweight.

C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on a self-evaluation, or denial of the seriousness of the current low body weight.

D. In postmenarcheal females, amenorrhea, i.e., the absence of at least three consecutive menstrual cycles. (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration.)

Specify type:

Restricting Type: during the current episode of Anorexia Nervosa, the person has not regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas)

Binge-Eating/Purging Type: during the current episode of Anorexia Nervosa, the person has regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas)

DIAGNOSTIC CRITERIA FOR 307.51 BULIMIA NERVOSA

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:

(1) eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.

(2) a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.

C. The binge eating and inappropriate compensatory behavior both occur, on average, at least twice a week for 3 months.

D. Self-evaluation is unduly influenced by body shape and weight.

E. The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

Specify type:

Purging Type: during the current episode of Bulimia Nervosa, the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas.

Nonpurging Type: during the current episode of Bulimia Nervosa, the person has used other inappropriate compensatory behaviors, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas.

APPENDIX B

COGNITIVE-BEHAVIORAL TREATMENT STRATEGIES FOR AN & BN
<table>
<thead>
<tr>
<th>Intervention</th>
<th>Specific steps in the intervention and the point at which they are introduced in therapy</th>
<th>Function of the intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction of the cognitive model of BN</td>
<td>Occurs in session 1 and is referred to throughout the course of treatment. Therapist introduces the relationship between binging and purging, and describes how it is maintained by extreme dieting, concerns about shape and weight, and low self-esteem.</td>
<td>To inform patients that treatment will involve more than decreasing binging-purging, but will also target modification of dietary restraint, and distorted attitudes toward shape and weight.</td>
</tr>
<tr>
<td>Self-Monitoring</td>
<td>Begins in session 1 and continues throughout treatment. Patients monitor all food and liquid intake, record subjective binges and any purges attempted, and make a general comment on concomitant emotional state.</td>
<td>To identify antecedents and consequences of binge eating and to begin to normalize eating patterns.</td>
</tr>
<tr>
<td>Psychoeducation</td>
<td>Occurs in the first stage of treatment (session 1-8). Patients are given information on body weight (a specific weight vs. a weight range; a 5-to 6-lb. fluctuation in weight is considered normal), physical consequences of binging-purging, ineffectiveness of purging to control weight, and impact of diet on mood.</td>
<td>To help patients become better informed about the negative consequences and ineffectiveness of their behavior.</td>
</tr>
<tr>
<td>Scheduling Meals</td>
<td>Begins in session 1 or 2 and continues throughout treatment. Patients are encouraged to eat three planned meals plus two or three snacks.</td>
<td>To decrease dietary restraint (i.e. fasting) and to normalize eating patterns.</td>
</tr>
<tr>
<td>Stimulus control of eating</td>
<td>Occurs in the first stage of treatment. Includes a variety of techniques, including eating in one room of the house, eating slowly and chewing food thoroughly, sitting down to eat, eating off a plate, not engaging in other behaviors while eating, ridding the pantry of tempting foods, shopping with a list, shopping when not hungry and purchasing foods that require preparation.</td>
<td>To assist in preventing a binge.</td>
</tr>
<tr>
<td>Decreasing dietary restraint</td>
<td>Occurs in the second stage of treatment (sessions 9-16). Involves gradual introduction of avoided foods over a 4-week period and increase in energy intake to a range of 1500-1800 calories/day</td>
<td>To modify strict dieting and deprivation.</td>
</tr>
<tr>
<td>Intervention</td>
<td>Specific steps in the intervention and the point at which they are introduced in therapy</td>
<td>Function of the intervention</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Problem solving</td>
<td>Occurs in the second stage of treatment. Involves a series of steps: writing down a problem (work-related, social, relationship-related, etc.) listing and evaluating potential solutions, identifying the best solution and the steps involved in carrying it out, and evaluating its success.</td>
<td>To isolate and prevent the remaining intermittent binge episodes.</td>
</tr>
<tr>
<td>Cognitive restructuring</td>
<td>Occurs in the second stage of treatment. Patients are taught to identify and challenge dysfunctional thoughts and to look for errors in reasoning (e.g., dichotomous &quot;black-and-white&quot; reasoning.</td>
<td>To alter distorted beliefs regarding shape and weight.</td>
</tr>
<tr>
<td>Behavioral experiments</td>
<td>Occurs in the second stage of treatment. Examples include standing in front of a full-length mirror, wearing form-fitting clothing (particularly when feeling fat), comparing body shape and weight to other woman's, and comparing subjective feeling of fatness and weight according to a scale.</td>
<td>To assist patients in practicing cognitive restructuring and gaining evidence that does not support their beliefs.</td>
</tr>
<tr>
<td>Maintenance plan</td>
<td>Occurs in the third stage of treatment (sessions 17-19). Patients prepare a written list of interventions that were helpful and the appropriate times to put them into place. Therapist differentiates a lapse from a relapse and educates patients that they will be vulnerable to binging during times of stress.</td>
<td>To prevent relapses.</td>
</tr>
<tr>
<td>Broadening patients' experience past a food focus</td>
<td>Occurs early in treatment (session 2 or 3) and continues throughout treatment. Therapist gives patients Adult Pleasant Events Schedule from Lineham (1993) and instructs them to engage in one pleasurable event each that has nothing to do with food and is not dependent upon success/progress with CBT.</td>
<td>To prevent relapses and decrease patients' focus on food.</td>
</tr>
</tbody>
</table>

(Adapted from Vitousek, K. B. & Ewald, L. S., 1993, pp. 221-257)
APPENDIX C

BIOPSYCHOSOCIAL MODEL OF AN & BN
## BIOPSYCHOSOCIAL MODEL OF AN & BN

<table>
<thead>
<tr>
<th>Secondary predisposing factors</th>
<th>Primary predisposing factors</th>
<th>Symptomatology</th>
<th>Maintaining factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic vulnerability</td>
<td>Associated personality features:</td>
<td>Anorectic belief:</td>
<td>Positive reinforcement:</td>
</tr>
<tr>
<td>Family environment</td>
<td>Low self-esteem</td>
<td>Thinness is the solution to personal distress</td>
<td>Feelings of success, virtue, pride and superiority</td>
</tr>
<tr>
<td></td>
<td>Over-compliance with authority</td>
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<tr>
<td></td>
<td>Helplessness</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Hypersensitivity to rejection</td>
<td>Anorectic behaviors:</td>
<td>Increases sense of control</td>
</tr>
<tr>
<td></td>
<td>Perfectionism</td>
<td>Dieting</td>
<td>Attention/concern from others</td>
</tr>
<tr>
<td></td>
<td>Preference for simplicity and certainty</td>
<td>Exercise</td>
<td></td>
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<tr>
<td></td>
<td>Sociocultural variables</td>
<td>Binging</td>
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<td>Environment that equates thinness with beauty and personal worth</td>
<td>Purging</td>
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<td></td>
<td>Precipitating factors</td>
<td>Eating Rituals</td>
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<td>Experience of loss</td>
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<td>Failure</td>
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<td>Disappointment</td>
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<td>Onset of puberty</td>
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</table>

(Adapted from Vitousek, K. B. & Ewald, L. S., 1993, pp. 221-257)
APPENDIX D

TELEPHONE SURVEY QUESTIONNAIRE
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Since completing the program at Samaritan Behavioral Health's Willow Creek Treatment Center, rate yourself according to how you feel currently as compared to before treatment in the following areas that I will read to you. The scale will contain a range of five degrees of choice.

The selections are

(1) Much worse  (2) worse  (3) no change  (4) improved  (5) much improved

Select the answer that best describes how you feel in the present (now).

1. Are your thoughts about food and your relationship concerning food
2. Is your daily intake of food and calories
3. Are your feelings about your weight
4. Are your perceptions about your body shape and general self-image
5. Is your ability to nurture yourself
6. Is your general self-esteem
7. Is your general health
8. If exercise was a part of your activity program before SBH, rate yourself as to your current participation
9. Are your relationships at home and school and/or work
10. Is satisfaction in social involvements outside the home
11. Is your support system from individuals (i.e. family, friends, teachers, co-workers) or organized support groups
12. If you experienced feelings of isolation or withdrawal from family and friends prior to entering Willow Creek Treatment Center what is your current experience in these areas.
13. If you experienced feelings of perfectionism prior to entering Willow Creek, are these tendencies--
BIOGRAPHICAL SKETCH

Linda Cohen was born and raised in New York City. She is the product of the Manhattan public school system and was a member of the National Honor Society. Linda attended Hunter College for two years and left school when she married. While raising her two daughters, Linda pursued a sales and marketing career and was a senior executive in several major corporations, and was a principal in a manufacturing company. Throughout her life she has enjoyed extensive global travel, both for pleasure and business. Balance in life is a prime focus for Linda who hikes, plays tennis, and enjoys gym workouts. Spirituality and meditation in the Eastern tradition are important components of her daily practice. Linda moved to the Valley of the Sun eleven years ago with her husband. In 1997 she completed her undergraduate studies in psychology at Ottawa University, and was graduated in May of that year with distinction for her undergraduate paper on psychoneuroimmunology. She has recently co-authored an article for The Family Journal that is a couple's satisfaction inventory. Her specialty is marriage and family counseling with an emphasis on geriatrics. Linda's long-term goal is to administer a multi-care facility for long-lived individuals and implement progressive and innovative practices that enhance the latter stages of the life-cycle.