Rehabilitation of obesity

Patricia Ann Thomas

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REHABILITATION OF OBESITY

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

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Rehabilitation Counseling

by
Patricia Ann Thomas
June 1998
REHABILITATION OF OBESITY

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June 1998

Approved by:

Dr. Joseph Turpin, First Reader        Date: 6/10/98

Dr. Dudley Wiest, Second Reader
To my mother

Who loved to cook,

and cooked in, love.

(1919 - 1998)
ABSTRACT

This project investigates the many influences throughout the life span that interact to cause obesity. Heredity factors, overfeeding in infancy and childhood, repeated dieting, inactivity, lifestyle and psychosocial conditions all contribute to the incidence of obesity. In the United States, in 1995, 27.5 percent of the adult population was considered obese, that is, 20% or more above the ideal body weight according to life insurance data. Current methods of treatment have a remarkably high failure rate in weight management and techniques such as; low calorie diets, starvation regimens, extensive exercise, or drugs have only been partially and temporarily successful, if not misguided and potentially dangerous to many individuals. Long term control of obesity is uncommon due to the extremely high recurrence rate. In this project, it is determined that important attention to individualized programs be initiated due to the unique interaction of environmental and psychological factors in each experience of weight gain. Participants were 8 women between the ages of 19 and 50 years old who were either obese or had been obese and were in different phases of weight loss and maintenance. Subjects were interviewed on videotape and qualitative results were presented. Results confirmed that obesity is a multidimensional problem and that solutions are complex and must address environmental condition, cognitive psychological states, stigma, metabolic mechanisms, exercise, familial associations, and significant barriers in our existing culture. A holistic rehabilitative approach is introduced that reestablishes a new relationship to the body and incorporates psychosocial, motivational, and relapse prevention methods through alternative therapies and enjoyable exercise activities with involved personal care.
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INTRODUCTION

Although considerable research has been conducted in an attempt to understand
the etiology of obesity and to identify the techniques and processes that result in
successful weight loss, no definitive answers have been found (Morton, 1988; Kral, 1988).
As a result of this research, the complex variables associated with obesity include
environmental and social factors as well as psychological and biological mechanisms that
necessitate a broad range of treatment approaches.

The lack of success of the current treatment approaches indicates that a genuine
understanding of the problems faced by the obese population have not been addressed.
Previous health care professionals viewed obesity as simply a problem of overeating that
could be cured by a diet sheet (Asher 1988). We must turn our efforts towards developing
more enlightened and integrative approach that realistically confront this condition.

It was reported in the 1995 U.S. National Center for Health Statistics that 27.5
percent of the adult American population is obese. The condition of obesity exists when an
individual is 20 percent or more over their ideal weight (Asher 1988). The ideal weight per
height is considered to be that weight at which the population of a certain height has the
lowest death rate, according to life insurance data.

The condition of morbid obesity exists when an individual is 100 or more pounds
over an ideal body weight. The word “morbid” also has the connotation that the excessive
weight is life-threatening to the individual (Grana, Coolidge & Merwin, 1989). Kral
(1988) states that,
All obesity by definition is 'morbid' - it is a disease - and the weight criterion of 100 lbs is arbitrary, it is likely that the risk in the vast majority of people for dying prematurely or developing life-threatening or debilitating conditions at this level of weight is extremely high (p. 298).

It is shocking that a condition affecting 27.5 percent of the population and causing untold damage to the national health is still not receiving adequate treatment.

This project is presented in an effort to demonstrate the need for a multidisciplinary treatment approach for long term maintenance for individuals who struggle with obesity. It is in this pursuit that I introduce an integrative, holistic program for weight loss on a long term basis case by case and one on one.
CHAPTER ONE

Review of Literature

Early Onset Obesity

A variety of factors, most of which are found in the family environment influence childhood and adolescent obesity. In 1985, prevalence of obesity in children ages 6-11 years increased by 50% from 1970, and 40% in children between the ages of 12 to 17 years (Dietz, 1989). Clearly, early onset obesity constitutes a major health problem and merits reformation of embedded social conditioning. Developmental psychologist, Kathleen Berger (1988), cites this familiar scenario.

In some families, parents take satisfaction in watching their children eat, always urging them to have another helping. The implication is that a father's love is measured by how much food he can provide, a mother's love, by how well she can cook, and a child's love by how much he or she can eat. This is especially true when parents or grandparents grew up in places where starvation was a real possibility. Not surprisingly, in the U.S., immigrants from developing countries and their children and grandchildren are more likely to be overweight. (p. 252)

Upon investigation, Goldblatt, Stunkard and Moore (1965), found that prevalence of obesity is directly related to the time immigrants have lived in the United States. However, they report that the prevalence of obesity is greatest in the first generation immigrants and declines to the level of the general population by the third generation.

Other variables that may promote obesity in childhood that stem from parenting patterns is the notion that a fat baby is healthy and happy. Pediatricians Pantell, Fries and Vickery (1984) warn,

"Remember, a crying infant is not always hungry; comforting may be all
that is called for. With an infant, you must overcome the feeling that too much is better than not enough, and that a fat baby is a healthy baby” (p. 340).

This concept along with other traditional attitudes towards cleaning the plate (think of the starving orphans of Asia), can be a tragic combination of concepts, and lead to social problems and premature death as an adult (Berger, 1988).

In the first two years of life and during adolescence, when total body fat increases in anticipation of the rapid growth that follows, the number of fat cells is particularly likely to increase (Berger, 1988). The actual number of cells is related to nourishment, for malnutrition slows down the rate of cell multiplication, and overfeeding speeds it up (Grinker, 1981). This is one more reason why fat babies and adolescents become adults who want more food and gain weight more easily than people who were not overfed as children. Even when these adults diet and lose weight, their bodies still contain those extra cells that fill up with fat again. Pantell, Fries and Vickery (1984) describe that too many calories during infancy will cause too many fat cells and these fat cells never go away. Even with the strictest of diets in later life, it will be possible only to reduce size but not the number of fat cells. This would seem to explain why chubby babies are more likely than average weight babies to become overweight children and obese adults.

Researchers who investigate the biological components of obesity contend that overfeeding and increased fat cells in early childhood may not be the only physiologic characteristic of adult obesity. Roche (1981), submits that “fat babies do not always become fat children and adults.” Instead, Roche believes that those who become obese
may be directed more by genes than by childhood diet. Knittle and Hirsch (1968) discovered that obese subjects were found to have three times as many fat cells as their normal weight group, thus establishing that the number of fat cells an adult possesses is essentially fixed and stable, however, heredity plays an important role as well. As early as 1957, scientists discovered that the percentage of fat in the bodies of rats is permanently affected by caloric intake during the suckling period. Further, the number of fat cells an adult possesses is probably influenced both by hereditary and early nutritional history of the individual, and that different individuals maintain whatever set point has been established by heredity and nutritional conditions in childhood.

The association of obesity with television viewing suggests that inactivity may have an important role in the development of childhood obesity. According to a longitudinal study (Dietz & Gortmaker, 1985), excessive television watching (more than twenty-five hours a week) by children is directly correlated with being overweight. Those children who watch several hours of TV a day during middle childhood are more likely to become obese adolescents. The researchers suggest three factors that make TV fattening: while watching television, children burn few calories, consume many snacks, and are bombarded with, and swayed by, commercials for junk foods. The same conditions may also apply to obese adults. Foods marketed to children contain large quantities of saturated fats, carbohydrates and sugar.

Dr. Janet Greeson, noted author and director of nationwide treatment centers for depression recovery and weight management explains the addictive properties of sugar. In
summary she states these processes. The molecular structures of sugar are similar to alcohol when they are broken down in the body. Because of their special neurochemical sensitivity sugar triggers a vicious cycle of craving; at first, eating sweets does make one feel better by raising blood sugar, but when it drops again, the body cries out for more, repeating the cycle. Stress also triggers a sugar craving, causing mind-altering chemicals such as catecholamine to stimulate the appetite. People eat a sweet snack to relieve the stress, and after a sugar drop-off, they are back in the cycle of craving again. Heavy carbohydrate meals can also lead to sugar consumption. They trigger release of the chemical brain-messenger serotonin, an endorphin that reduces mental alertness. Then, when people get drowsy, they turn to sugar again for a quick pick me up. Because of its prevalence in society, and its connection to the joys of childhood, sugar is rarely seen as the drug it is. If certain foods can produce a sense of well-being then continued use could begin the addiction cycle previously mentioned. Greeson (1993) states that, “Food addicts can vividly recall the special foods of their childhood, and you would be amazed at the intensity of the memory” (p. 10).

Dietz (1989) observed in his study of children and time spent viewing television the likelihood of the child to consume the foods advertised. These foods tended to be of high-caloric density, such as sugared breakfast cereals, candy bars, and food sold in fast food chains. He states that, “because obesity rarely occurs among televised characters, the implicit message to children is that there are no consequences to eating as frequently as the characters on television, or consuming the foods that are advertised on television” (p.
Clearly, the two factors of inactivity and sensory saturation in television commercials targeting children inevitably culminate in not only the prevalence of obesity, but in lifelong addictions formed in childhood. Greeson (1993) states,

I have come to the conclusion that many food addictions develop because food is the only mood-altering substance readily available to children, and when they use it to help them over a trauma, it becomes a lifelong coping mechanism. The use of food as a reducer of childhood stress is nearly universal. When babies cry, they get a bottle. (p. 15)

Adolescence

For young people, the years from twelve to sixteen are very eventful as far as their growth and development. Developmental psychologists generally believe that one of the tasks of adolescence is developing a body image and a concept of his or her personal appearance. In the process of acquiring this body image, most adolescents refer to the cultural body ideal- which is currently construed in western society as a slim, shapely woman and a tall, muscular man. These stereotypes are portrayed in movies, television and magazines. Many individuals have a difficult time learning to accept the discrepancy between this narrowly defined cultural ideal and their own appearance, and as a result become dissatisfied with their own bodies. In the 1997 Psychology Today Body Image Survey, 62% of young women ages 13 to 19 reported that they are dissatisfied with their bodies due to weight gain, and young men ages 13 to 19 reported a 41% negative body image. The 1997 Body Image Survey gathered direct information on the media's impact on self-perception. Studies of prime time television indicate that programs are dominated
by people with thin body types and thinness is consistently associated with favorable personality traits. The impact of the media is somewhat selective, affecting most strongly those who are dissatisfied with their shape, and who are generally heavier and farther away from the cultural ideal, Garner (1997).

The pressure placed on adolescents to measure up to images in the media is destructive, not only for self-esteem, but also for physical health. Research shows that dieting to lose weight and fear of fatness, are now common in girls as young as nine years old. This escalates dramatically during adolescence, particularly among heavier girls. The risk of developing an eating disorder is eight times higher in dieting 15 year old girls than in nondieting 15 year old girls, (Garner 1997, Goldfarb, Dykens & Gerrard, 1995).

Hutchinson (1985), author of the book, Transforming Body Image, writes,

We live in a time when for the first time in human history the media are powerful forces in shaping our thoughts, values, ideals and aspirations. Although films and fashion magazines have been influencing the cultural norm for many years, it is only since television that the media have gained the power to manipulate our lives. The majority of people in our society under the age of 35 have been raised by TV, the electronic babysitter, and much of what we have come to believe and have come to know about the world we have learned from this surrogate parent. (p. 64)

Many significant influences throughout children's early experience interact to promote obesity, and these influences are present in most of daily life.

Methods of Weight Reduction

Consideration of previous weight loss methods over the past decades assume an almost medieval approach. Women have wrapped themselves up in plastic sheeting and sat in hotboxes for extended periods of time. They have positioned themselves in front of
rollers that “break up cellulite,” and other assorted machines that jiggle off fat. They have believed and applied the concept that wiring one's mouth shut could lock away urges to eat, in a feudal attempt to obtain sustainable weight loss.

It was even possible in the 1970's to purchase a machine that would shock the stomach by using electrodes, to presumably exercise the muscles while you watched TV! Creams, fasting drinks, and diet pills all promise to assist in weight reduction as well as invasive surgery and liposuction which have become the more contemporary approach to fat removal. The following chapter is a presentation of the methods and results of different approaches to weight loss.

Diet

In the 1997 Body Image Survey conducted by Dr. David Garner, it was reported that, “A remarkable 84 percent of women and 58 percent of men report having dieted to lose weight. A sizable proportion of respondents say they have resorted to extreme and dangerous weight-control methods in the last year” (p. 75). This implies that many individuals have become so determined to succeed in weight loss that they are willing to jeopardize their health. People are eager to lose weight want instant results, however, rapid weight loss by any method only augments the “tendency to develop a fat person's chemistry,” (Bailey, 1991, p. 127).

Individuals who fast or severely cut back their calorie intake over a period of days or weeks find that they gain weight even more quickly when they return to their normal eating habits, Berger (1988). When the body is deprived of food it will make more fat and
use less stored fat as a physiological safety mechanism for famine. Bailey (1991), explains that,

In earlier times, people were, like other animals occasionally forced to endure short famines. In those times, they could, like the camel, live off their humps. Humans, being a high evolutionary species, have evolved many biochemical routes, or pathways for the synthesis of fat and have evolved complex biochemical routes to circumvent the use of fat and hence to save it. (p. 126)

The consequence is that after a certain amount of weight loss, additional pounds become much more difficult to lose. The rate of metabolism becomes slower, enabling the body to maintain its weight with fewer calories and the body becomes even more efficient at storing fat (Berger, 1988). As a result, each new attempt of dieting is harder than the last one and each temporary weight loss is followed by an even greater and more permanent gain when the dieter returns to normal eating habits (Striegel-Moore, Silberstein, & Rodin, 1986). With repeated dieting a vicious cycle emerges and if it begins in childhood, can become unmanageable by adulthood, (Berger, 1988). Brownell, Greenwood & Stella (1986), studied the repeated cycles of weight loss and regain, they found that it creates a “dieting induced obesity,” and, food efficiency increases as weight is lost, regained and lost. The increased efficiency is manifested in each successive diet in slower losses, more rapid regains with each loss, and decreased resting metabolic rate. Thus, with a decreased metabolic rate, the same body weight is maintained on fewer calories than was needed in predieting days. Bailey (1991), states that, “Even eating only one meal a day is translated by the body as a twenty-three hour fast, causing a higher percentage of food you eat to be made into fat” (p. 142). This vicious cycle frequently
results in feelings of frustration, guilt and depression, as one's best efforts are "sabotaged" by the body's natural chemistry (Johnson & Conners, 1987).

As Greeson (1993) describes in this scenario, “I know someone who lost a hundred pounds in six months on the Dr. Atkins diet and gained them all back in six weeks! Very few dieters manage to sustain a weight loss, particularly a dramatic one” (p. 4). Dr Greeson further explains that addiction to food is much more difficult to live with than addiction to alcohol or other substances from which people can totally abstain.

There are significant new developments in diet and nutrition spawned by recent AIDS research that relies on immune enhancing foods, herbal medicines and vitamin supplements which when incorporated into diet are promising, and powerfully impact health. It may be through these alternative therapies and holistic interventions that dramatic changes will occur.

Physician Assisted Methods of Weight Reduction

In consideration of the many individuals who self manage weight gain through diet and over-the-counter remedies, there are also significant numbers of individuals who seek help with weight management from physicians.

The following is a summary of the Physician's attitude towards obesity from Dr. Asher's Medical Text on Treatment of Obesity, along with the text by Albert Stunkard, M.D. on conditions of obesity.

The majority of practicing physicians treat obesity of necessity rather than choice. The physician's attitude toward the obese patient more often than not is quite negative.
The reasons for this seem to be that success is generally poor and adequate treatment tends to be time consuming. In his early training a physician is often given the impression that the simple distribution of a diet sheet will solve the problem. After all, the mathematics of the negative caloric balance equation is rather straightforward.

After the new physician is in practice for a short time and has discovered the futility of the diet sheet handout and the admonition to go home and lose weight, he is quick to try the appetite suppressants solicited by the pharmaceutical representatives. The addition of the quick script to the quick diet sheet, again, generally proves disappointing. In defense of his own ego, the practitioner is apt to write the patient off as a glutton who hasn't the fortitude to follow the reasonable program prescribed.

Diet pills have been used too often as the treatment for obesity, and not as an adjunct to additional methods (Shibata, 1974). Tolerance may significantly reduce effectiveness in 6 to 8 weeks. Patients who do seem to benefit may need to adjust dosage upward after a few weeks, which can form a dependence for these drugs. Side effects of diet pills may include; insomnia, nervousness, dizziness, headache, constipation and heart problems (Asher, 1988).

In a search for permanent methods to control obesity, surgical attempts at inducing weight reduction have been derived (Salmon, 1981). The simplest attempt involves removal of excess fat from the abdominal wall, buttocks, and thighs. This method (Asher, 1988), is not only disfiguring but of temporary benefit. Another method to induce weight loss is based on decreasing the amount of food available for absorption by limiting the size
of the stomach pouch, and is the most common method for gastric restriction (Black, Goldstein & Mason, 1992). Gastroplasty is the generic term used for any surgical reduction of gastric volume that does not alter the continuity of the gastrointestinal tract (Kral, 1988). Gastric banding involves a tight external band around the upper part of the stomach that when surgically achieved, further restricts stretching.

Another surgical method to induce weight loss involves the reduction of food absorption by bowel resection in a procedure called intestinal bypass (Shibata, 1974).

Surgical treatment is justified with individuals who endure serious complications of obesity and who cannot benefit from nonsurgical treatment. It is also justified in severely overweight persons with a high likelihood of developing serious complications or even dying prematurely (Kral, 1988). There are several surgical methods, and they differ significantly with respect to side effects and efficacy of weight loss. Kral (1988) states that, “Gastric restrictive operations have had more operative complications, mainly attributable to perforations of the stomach in all types of procedures, and leaks from anastomoses in gastric bypass procedures” (p. 308). Further he reports that even in the absence of technical failures, there is a subgroup of patients who will "out eat" gastric restrictive procedures by selecting soft or liquid high-caloric-density foods, which are not effectively restricted by the gastric operations (p. 309).

Gastroplasties are reported as the most benign operations, but are prone to long-term failure of weight loss, and intestinal malabsorptive procedures are more effective, explains Kral, and as a consequence more prone to deficiencies and long-term side effects.
Results from this study indicated that in practice the majority of patients will still weigh 135% to 145% of ideal body weight when they reach a plateau after surgery and will still be obese.

In conclusion Kral (1988) submits that,

Obesity of the degree justifying surgery is discouragingly difficult, if not impossible, to treat successfully over the long term by nonsurgical means. Even such potentially effective methods as jaw-wiring, intragastric balloons, or total or supplemented fasting fail in more than 90% of patients followed for a sufficiently long periods of time. Surgery is also limited in its long-term efficacy, though it seems to be more successful than other modalities. (p. 297)

Exercise

The treatment methods investigated thus far, whether they be surgery, drugs or diet, have not been particularly successful in solving the problem of obesity on a long-term basis, (Johnson & Drenick 1987). Research by Stern (1986), indicates that lack of energy expenditure in daily physical activity is an important predisposing factor for obesity. It is often observed that obese people eat the same or even less than leaner people over a broad age range as they become less active and slowly add weight (Epstein & Wing, 1980). In this regard, regular exercise can have an important role in the prevention and treatment of obesity.

When the number of calories ingested exceeds the daily energy requirement, the excess calories are stored as fat in adipose tissue. Conversely, for weight to be lost, an energy deficit must be created either by decreasing the energy intake (caloric restriction) or by increasing the energy output (exercising). To prevent an increase in body fat and
maintain body weight, a weight-control program must establish an equilibrium between
energy input and energy output (McArdle & Toner, 1988).

Further it is stated that,

Adjustments in the rate of energy expenditure play a significant role in
maintaining the energy balance and in keeping body weight relatively
constant. Regulation is seen more clearly in energy expenditures than in
intake of food (Rosenzweig & Leiman, 1989 p. 506).

Physical activity has by far the most profound effect on human energy expenditure, states
Stern (1986).

The U.S. National Center for Health Statistics report that in 1995, 27.5 percent of
the population is obese. Shell (1982) stated that every excess pound increases their risk of
heart disease and premature death and obesity is a definite risk factor for heart disease,
diabetes and stroke. However, with active people, much lower rates of serious illness and
death are found than in inactive people, Whitbourne (1985). Specifically, offers Williams,
(1980), exercise three or more times a week for at least 30 minutes per workout, increases
heart and lung capacity, lowers blood pressure and increases HDL in the blood. (HDL is a
high density lipoprotein which is a protein that aids in ridding the body of excess fat and
cholesterol) Williams further explains that even if weight remains the same, exercise
reduces the ratio of body fat to body weight, and each of these results helps prolong life.

Bailey (1991), avid enthusiast for exercise, exclaims,

Exercise changes us. It increases the metabolic rate, increases the amount
of muscle, raises the level of calorie-consuming enzymes inside the muscle,
and increases the burning of fats. (p. 106)

Earlier it was established that an individual's set point weight is inherited and
unchangeable, however research now indicates that exercise can lower set point weight through heat production, muscle mass, blood sugar/insulin, hunger control, mood and fat cell enzymes (Bailey, 1991).

McArdle and Toner (1988), found that, many factors affect the energy expended during a particular exercise, the energy cost of most physical activities is generally greater for heavier people, especially in weight-bearing forms of exercise like walking and running, during which the person must transport body weight.

It was also discovered through research conducted by Elsayed, Ismail and Young (1980) that regular exercise even enhances cognitive functioning, especially in middle-aged and older adults, because it improves blood circulation in the brain. Further, Sloane (1985) adds that exercise is the best method of weight reduction due to the propensity to burn calories and decrease the appetite while increasing metabolism, which continues to benefit the individual for several hours after a workout is over.

Bailey (1991) describes the relationship of exercise on hunger and set point in this way;

Hunger control is another factor affecting set point. When fit people engage in exercise, the pH of their blood changes and directly decreases hunger. These blood changes also release endorphins in the brain which elevate mood and indirectly modify hunger by affecting attitude. After all, many of us overeat or eat fattening foods when we are depressed or frustrated. The release of tension and anxiety through exercise helps promote healthy eating. Typically, people with a high set point (a high fat level) are less disciplined about their diets, and they think about food all the time. Fit creatures (including wild animals) eat what they need, while fat creatures eat what they want. (p. 118)

Oberman (1980) noted the associated behavioral changes from regular exercise,
that develop a sense of well being, increased tolerance to anxiety and various psychological stresses, and improved self-image which determined a lower incidence of coronary disease from regular exercise. Further, outcomes of exercise research by Petruzzello (1995) support the efficacy of exercise as a vehicle for reducing affective states of anxiety and depression.

Bailey (1991) proclaims that "the ultimate cure for obesity is exercise," yet, despite the evidence supporting the health benefits of exercise, Courneya (1995) estimates that the overall participation in regular exercise is 10% for the North American population. Results from the 1997 Body Image Survey show a more optimistic account, 97% of both men and women participating in the survey say they exercise over the past year for the purpose of controlling their weight. Dishman (1988), however, found that approximately 50 percent of individuals who begin a structured exercise program will drop out within the first 6 months. This statistic holds regardless of the demographic profile of the sample of the purpose of the exercise.

In the research conducted by Courneya (1995), exercise behavior was investigated to determine which individuals would be inactive or active at a given point in time. Inactive was defined as not exercising at least 3 times a week for at least 20 minutes at moderate intensity, and active is defined as meeting this criteria. By this definition individuals in the survey reported 20 percent of women and 27 percent of men exercise five or more times a week for at least 30 minutes.

Research findings that explore the motivational issues for exercise in obese
individuals are inconclusive. Baumeister, Kahn and Tice (1989) reported that obese subjects “tended to view obesity as an external affliction for which they are not responsible, as proven by their diligent efforts to overcome it” (p. 123). However, Mills (1990) found that obese individuals did demonstrate an internal locus of control and that their obesity is due to factors beyond their control which did not effect factors in their lives that were not food or weight related.

The experience of exercise in many group programs often involve repetitive exercises and challenging goals that are attainable to only the most fit. Williams and Gill (1995), state that feelings of competence lead to greater intrinsic interest, which in turn lead to greater effort in the motivation of physical activity. This is crucial for overweight individuals for the motivation necessary to maintain a weight loss program when they have become so out of shape that exercise is a monumental effort. Other factors that impede participation in exercise for obese individuals are of a more personal nature that include not being able to buy leotards and exercise clothing in large enough sizes, embarrassment during participation with fit and thin individuals, skin chafing brought on by sweating and friction of movement and the inability to keep up with a fast pace. Epstein and Wing (1980) submit that physical limitations that affect compliance with long term exercise are low back pain, orthopedic problems, poor balance and poor response to environmental heat stress. Greeson (1993) adds that conventional exercise programs in health spas may promote self-loathing and a punitive experience for overweight women, and Hutchinson (1985) warns not to exercise as punishment for wayward flesh.
The Psychological Cost of Obesity

Aside from the difficulty obese persons have losing and maintaining the loss of excess weight, there are many psychosocial problems that accompany obesity. Greenwood and Pittman-Waller (1988) describe that in the United States, there is a strong prejudice against obese people. Wadden and Stunkard (1985) observed that women, adolescent girls and morbidly obese people seem to suffer the most deleterious consequences of society's contempt for obesity. Greenwood and Pittman-Waller (1988) determine that, “from a psychosocial standpoint, it is not surprising that women seem to be more adversely affected by obesity than men because an overweight woman is socially less acceptable than a moderately overweight man” (p. 7).

In addition, emotional factors are closely related to obesity, (Greenwood & Pittman-Waller, 1988). At first it was thought that emotional disturbances caused obesity; now most psychologists tend to think the opposite is true, i.e., that emotional disturbances are the consequences of obesity, however, Greeson (1993) describes,

In fact, unhappiness is the universal symptom expressed by people who come to my treatment centers. But through my experiences I have come to realize that depression is not a symptom of food addiction, but rather the root of the problem. (p. xi)

She explains that her patients today are 80-90 percent women-admitted for depression.

Faubel (1989) contends that obese women are believed to have an extremely negative body image, and in a recent survey, Garner (1997) reports that 66 percent of the female population in this country share a negative body image due to weight. Younger
women ages 13 to 19 years of age reported body dissatisfaction from childhood which continues to the present time, evident in the findings of a 62 percent rate in the adolescent population. It was also reported that teasing during childhood had an indelible effect on women's feelings about their bodies, and this negative construct endured even when body shape had changed. In research conducted by Rosin, Orosan and Reiter (1992), subjects identified personal experiences during childhood that preceded their negative body image. Common antecedents were; being teased, criticized or rejected for being overweight by family or peers, failing publicly in athletic activities, and being physically or sexually abused.

There is a considerable amount of research documenting the prevalence of depression in obese women, (Black, Goldstein Mason, 1992; Grana, Coolidge & Merwin, 1989). Noted Psychiatrist, and clinical investigator Albert Stunkard, describes in his book The Pain of Obesity, an account of the close association between severely depressed moods and a marked reduction in physical activity. Bailey (1991) further documents that emotional stress can decrease the recuperation powers of all body systems, and Greeson (1993) explains that individuals who suppress negative emotions are susceptible to suppression of the defense capabilities of their immune systems. With this new information, it is possible to make the connection between mental state and the immune system which may provide new insight into the alternative treatment approaches now beginning to emerge.

Social introversion and avoidance of social situations is also a characteristic of
obesity (Grana, Coolidge & Merwin, 1989; Black, Goldstein & Mason, 1992), which castigates obese individuals further. It becomes evident that when an obese person participates in daily activities they are subjected to much discrimination and ridicule and coupled with the difficulty they experience in mobility, or even with wardrobe, is understandable. Another characteristic that may be present is described by Greeson (1990), "Addiction is a disease of isolation. Instead of having relationships with other people, the food addict withdraws from social contact to have a relationship with food." (p. 10)
CHAPTER TWO

Method

Participants and Procedures

Participants were 8 women between the ages of 19 and 50 years, who had been previously contacted and expressed an interest in this research. These individuals were either obese or had been obese and were in different phases of weight reduction and maintenance. Participants were from different ethnic backgrounds and were students from San Bernardino Valley College. Subjects were interviewed on videotape and asked 14 questions about their personal experience of weight gain and loss from methods they have tried, their effectiveness and long term success. Associated issues concerning obesity were investigated through an interview format, and qualitative results will be discussed (See Appendix B). Interview questions were structured open ended questions, and participant's anonymity was accomplished through light silhouetting, reverse imaging and digital effects. Interviews were conducted at San Bernardino Valley College in the studio at AUD 3.

Interview Questions

Once more I'd like to make sure that you understand before we begin that if you don't want to answer a question that we can simply move on to the next one, and that we can stop the tape at any point if you are uncomfortable with responding to a particular question.

1. At what age did you begin to gain weight?
2. How long have you been at your present weight?

3. Does your weight have an affect on your self-concept?

4. What was the cause of your weight gain?

5. Has your weight limited you in any way?

6. Have you ever experienced discrimination because of your weight?

7. If you have, how have you dealt with it?

8. What methods have you tried in order to reduce your weight?

9. Were they successful?

10. What methods would you be willing to try for weight loss?

11. Do you participate in any physical activities at this time?

12. Describe yourself as the perfect person you'd like to see yourself as.

13. Do you believe it is possible to reach a target weight and maintain it?

14. At this time are there any comments you would like to share regarding your personal experience?

Synthesis of Responses

The filmed interviews demonstrate that obesity is a multi-dimensional problem and involves several factors within the human experience which are interrelated. Subject responses were in accordance with the research presented previously, and verify that no one explanation suffices for a particular instance of obesity and the condition is generally created through the interaction of a number of influences, unique to each individual.
Age of Onset and Cause of Obesity

The responses to the age of onset of obesity and the cause of weight gain initially reveal a variation of circumstances. Subjects 1, 3, and 7 reported the cause of weight gain due to emotional experiences of depression, stress, problems in the home, frustration and an unhealthy relationship. Subject number 3 who reported the age of onset being, “as long as I can remember,” also included that she experienced personal frustration and bad memories of her past. These three subjects noticed weight gain at age 10 years, early childhood, and at age 16 years.

Subjects 2, 4, and 5 reported the cause of weight gain from childbirth, medication for a hysterectomy and a low thyroid condition. The age of onset for these subjects were 20 years old, 40 years old and 15 years old.

Subject number 6 reported the onset in Jr. High School, from inactivity and “eating anything I wanted, mostly candy.”

Subject number 8 reported the onset of obesity at age 7 or 8 years old, and then stated, “I've been big all my life, my whole family is big.” These responses include factors of stress, depression, overeating, inactivity, family environment and biological and genetic mechanisms which all influence the onset of obesity during the life of an individual. Further it was evident that the subjects responses reflected some uncertainty as to cause and onset of weight gain due to the incongruity of these associated answers. Given the relevance of an individual's understanding of the cause of weight gain and age of onset, it may be beneficial at the beginning of a treatment program to include a counseling
Dieting

All 8 subjects reported using diet restriction methods which included diet pills, fad diets, fasting and starvation. Subject number 1 stated that after she tried a starvation technique she only gained more weight afterwards. Subject number 2 reported that she, "just can't follow a diet by its-self." Subject number 3 explained that, "I tried starving myself and put myself in the hospital with that one." Subject number 4 stated that "I tried fad diets, and Slim Fast. While using Slim Fast I realized that I was lactose intolerant and got very sick off that." This same individual has lost a considerable amount of weight recently with Phen Fen. She explained that, "I felt great, and had reached my target weight - but when I returned to the weight loss clinic they wouldn't give me anymore Phen Fen and I began to regain the weight." She now reports "after the Phen Fen I had a horrible craving for sweets that I could not control, and never before had I had cravings like that!"

Subject number 5 reported dieting and trying Slim Fast.

Subject number 6 reported trying soup diets, lo-carb diets, low fat diets and liquid diets, with minimal success.

Subject number 7 lost 20 lbs with diets and diet pills, only to regain, “lots.”

Subject number 8 also reported dieting when she was younger. When subjects were asked about the success of dieting no long term results were evident. Subject number 4 explained, “Everything I've tried, I'd lose but it would come right back - now I'd like to try something that would really help.”
Exercise

In response to the question if the subjects participated in any physical activities, six subjects were currently exercising in programs, and one subject reported that she had a very active lifestyle. According to the definition previously mentioned by Courneya (1995), only three of the eight subjects are active enough to benefit from their efforts.

The subjects were then asked: Do you believe it is possible to reach a target weight and maintain it? Their responses were the following. Subject number 1: "Yes, I have currently maintained my weight for the last seven years through exercise and diet." Subject number 2: "Oh yes, dancing controls my weight." Subject number 3: "Yes, with help and support - its not easy, especially if you have a lot of problems, you're alone a lot and you tend to get frustrated." Subject number 4: "I don't know - I seriously doubt it. I've tried so many times and I'll get down and it will come right back." Subjects number 5, 6, and 7 answered yes, and Subject number 8 replied; "Not for me, but probably for other people."

The implication from the above mentioned responses that six out of eight individuals interviewed believe that it is possible to reach their goal weight and maintain it over a long period of time, suggests a sense of hope that may enhance a treatment approach with long term maintenance goals.

The length of time an individual has carried weight may determine a motivational level for success during a weight loss program, or at what point in the dieting yo-yo phase they might be in, or, a set point weight. Subject number 4 has currently lost considerable weight from the Phen Fen diet program, and at the time of this interview reports that "the
weight is coming back.” This individual had been obese and has maintained her weight for “about six months.” The remainder of the self-reports vary in time from three to eight years approximately.

The next question that was asked was, What methods would you be willing to try? These are their responses. Subject number 1 replied, “Jaw wiring, a fat camp or to exercise every day.” Subject number 2 answered, “Aerobics, dancing or diet pills (although she then explained that diet pills did not work and were too expensive for her).” Subject number 3 reported, “I would like to find a program of exercise that I can handle. I have severe back problems and all of the programs out there are real fast. They tend to make me hurt real bad so I don't want to do them again if you are going to be in pain. I would like to try group counseling and that kinda stuff.” Subject number 4 replied, “Something that could help. I've tried so many in the past. I'd be willing to try anything. I've even thought of liposuction but I don't have that kind of money and I'm not heavy enough for surgery.” Subject number 5 and 6 stated that they would try anything but surgery. Subject number 7 stated, “I'd try anything that was safe - I'd do it!” Lastly, subject number 8 reported that, “I don't know...anything. I don't know if I'd be happier if I was smaller.” These results indicate that all eight subjects demonstrate a willingness to try again to lose weight if there was a new program that was safe or that could really produce some results.

**Psychological Cost of Obesity**

Body weight is a powerful determinate of personal identity and self-perception as
was shown when 6 out of the 8 subjects initial response to the question (Describe yourself as the perfect person you'd like to see yourself as) answered with weight loss. Only two subjects answered without identification to body weight. These responses were, subject number 7 “Just being myself” - and subject number 8, “It took me this long to be happy with myself, I am 44 years old and I am happy with who I am.” In The 1997 Body Image Survey it was reported that the dominate factor that regulates our feelings about ourselves is our body weight. “Body weight alone accounts for 60% of our overall satisfaction with ourselves” (p. 42).

Further questions regarding self-concept and discrimination will be directly quoted. Subject number 1, “My weight came after I had kids, and the weight just hangs on. I would exercise, but then I'd gain more. I went to the doctor and I hoped it was a thyroid condition - so I got some tests done. When I came back the doctor gave me a diet sheet. I was hoping it was a thyroid problem instead of a weight problem - but I found out what the problem was - it was me.” She also reported instances of discrimination, and when asked how have you dealt with it she replied, “I go where overweight people are accepted, our office is full of fat women.” Subject number 2 answered that “no, my weight does not have an affect on my self-concept because I know it will not stay here (weight).” Subject number 3 stated that she hadn't experienced discrimination because of her weight, and here is her reply, “Never really thought about it, possibly, I might have but didn't pay attention to it because I don't think of myself in terms of weight, but I'm sure I probably have.” She also commented that, “Sometimes my weight has an effect on my self-concept, but not
always.” Subject number 4 described the affect of weight on her self-concept in this way.

“Yes! Big time, I feel depressed and don't want to do anything or go anywhere. I just sit home and do nothing. I don't feel good about myself when I'm heavy, I'm real self-conscious.” When asked if she had any further comments she replied, “It's been a hard struggle. I've been teased in the past about my weight and it bothers me, its been a horrendous struggle. I've tried everything and no matter what, I'm still fat. I don't know what else I can do to get down, and I don't know how.” Subject number 5 said that sometimes in the summer her weight had an affect on her self-concept. Subject number 6 reported that, “Yes, I don't feel good about myself and don't want to go anywhere and don't like to do anything.” Subject number 7 replied, “Yes, I tend to hate myself when I look in the mirror, I don't like what I see and it makes me feel less than other people.”

When she was asked if she had any further comments she would like to share, she became emotional, and replied, “In my group of friends I am the only overweight one and I can't buy cute clothes. They make fun of fat people and I put myself in their position.” Subject number 8 answered that yes, her weight had an affect on her self concept. Also when asked if she had experienced discrimination because of her weight she stated, “Yes, when I was younger - everybody at school made fun of me. It made me self-conscious.”

Garner (1997) discusses this finding from the Body Image Survey, “Teasing during childhood or adolescence has an indelible effect on women's feelings about their bodies. Women say that the negative fallout can last for decades no matter what shape they're currently in.” (p.34) The importance of self-concept and body image is that it may dictate emotional well-being and associations to illness and recovery, as will be discussed.
CHAPTER THREE

Discussion

It seems futile to address weight loss from a single approach when so many different factors and influences are involved in the etiology of obesity. If weight gain originates by overeating and inactivity, it can't be reversed by not eating, especially if an individual turns to food for security, love and comfort, or if the act of eating relieves stress and boredom, or suppresses anger and the effects of trauma (Shabata, 1984; Greeson, 1993). Linder (1984) describes that,

The use of food to allay tension, pain, frustration, anxiety and other emotional symptoms is so common that obese individuals are fully aware that food is being used to make unbearable situations tolerable. (p. 143)

Dr. Janet Greeson (1993) explains that in fact, food addicts are used to stuffing down their feelings with food. If then, extra weight serves as an emotional barricade that can protect a person against painful memories and negative messages, diets can never work because they don't address the problem.

Despite the favorable evidence that has been cited for the positive effects of exercise and increased activity for metabolic rehabilitation with weight loss, only 3 out of 8 subjects in this project are active enough to benefit from their efforts. Williams and Gill (1995) determine that,

To serve as an effective adjunct in weight reduction and maintenance, exercise should be of dynamic endurance so that energy expenditure may be maximized. (p. 363-364)

However, it has been shown that obese individuals may regard exercise as punitive,
painful and futile because the approach has included fast pace routines conducted in gyms and health spas where discrimination proliferates. Subject number 3 stated, “I’d like to find a program of exercise that I can handle. All of the programs out there are real fast and tend to make me hurt real bad, so I don’t want to do them again if your gonna be in pain.” From the results of this project an exercise design for individuals that are obese would include; 1) Exercise that graduates from low intensities to higher levels of energy expenditure over an extended period of time. 2) The individual should be protected from exercise that injures muscles, joints and connective tissues in the early stages, and 3) Exercise should be individually designed to be enjoyable so that participation is continued for longer periods. Subjects number 1 and 2 reported that they enjoyed dancing, and subject number 1 has maintained her exercise program for 7 years.

Many popular weight loss programs offer remedies without any definitive knowledge as to the basic mechanisms of obesity or personal histories of the individuals these products are marketed to. In this present study it was shown that overweight subjects would be willing to try almost anything to lose weight, even after adverse consequences were experienced as a result of a profit driven blanket approach. The complexity of the problem of obesity and the interindividual variability common to each personal experience, emphasizes the need for individually tailored interventions.

Perhaps the starting point of a successful program for weight loss would be in a holistic approach where the whole person - mind, body and spirit, are considered. Many approaches for weight loss focus on a particular aspect of the problem. For example
research and treatment on negative body image in obese women by Rosen, Orosan and Reiter (1995) found that through a psychological approach using cognitive restructuring techniques improvement for negative body-image could be determined. However, strictly using therapy without any other intervention did not result in complete elimination of body dissatisfaction in their sample.

Behavioral techniques for the treatment of obesity apply mental conditioning to improve self-esteem and substitute old behavior patterns from existing cues (Linder 1984). These techniques are based on reinforcement and reward. What could be a salient reward for the obese? Shabata (1974) states that the enjoyment of eating, and the fact that it “helps soothe a troubled soul,” has from the beginning of life led to obesity in some people (p. 197), which was the self-report form subject number 8. Further, food is a reward and is ingrained in our culture, whether it is to celebrate a promotion, as a symbol of success, or to reward a child for good behavior at the doctor’s office. Bruch (1974) describes the problem of double conditioning with this example,

The situation is more complicated since the child is offered a piece of cake as a bribe for cleaning the plate. The child soon learns that eating less-tasty foods such as some vegetables leads to the rewarding taste treat of dessert. (p. 144)

By adulthood, the behavior is well established and the individual feels extremely uncomfortable until the conditioned response is achieved (Linder 1984).

Perhaps an integrative approach combining techniques that target body and mind may prove more successful.

If an individual is experiencing emotional stress exercising the body becomes a
futile experience. Bailey (1991) states that, "Emotional stressors of divorce or death of a loved one, results in more protein breakdown than repair. If your body is stressed in any way, it would be silly to add the stress of high intensity exercise (p. 37).

Greeson (1993) further describes the impact on the immune system when individuals are experiencing trauma and unhealthy stress.

Unhealthy stress decreases the body's protein and fat synthesis and glucose use, diminishing the amount of insulin it produces. It also creates a domino effect that begins in the brain with an increase in the production of the hormone corticosterone, which in turn decreases the number of T-cells and natural killers which patrol the immune system. (p. 92)

This is further rational that mind, body and spirit are connected, and treatment for one or two areas without the other cannot produce any substantial results.

In a recent article about crossover doctors (physicians who blend traditional and alternative medicine), Neimark (1997) interviews a physician who treats individuals with heart disease. His program combines conventional treatment of medication and surgery but also includes lifestyle and dietary changes, support groups, meditation, spirituality and self empowerment. In the article Neimark explains that many of the crossover doctors were at one time patients seeking help and these techniques worked in their recovery.

Neimark further reports that, "At last count, 34 of the country's 125 medical schools were offering courses in alternative medicine" (p. 54).

The results of this project attempt to describe the unique individual experience of being overweight in our culture and the personal struggle each individual must bear. The next chapter will introduce a comprehensive program which hopefully will put the past attempts at weight loss in perspective and the future success within our vision.
APPENDIX A: An Integrative Plan

Beauty and the Obese

It becomes apparent that as clinical investigators, who determine that lack of motivation as a major factor in failure to reduce weight through exercise for obese persons, can’t imagine what it feels like to try and squeeze into a leotard (if you could find one in size 2X) and work out in front of floor to ceiling mirrors, with 20 or 30 slim and young women in various shades of spandex with fast paced hip-hop aerobic routines using techno disco rave club music.

This kind of exercise environment fosters the discriminatory attitude and self-loathing that accompanies the mind-body war women of weight encounter.

The aim of this new plan will be to improve self-image and develop a new relationship with the body through creative therapy techniques and individualized and varied exercise designs.

It begins with an in-home exercise program with an Exer-buddy, who is a personal trainer who comes into the home at a designated time every day.

At the initial interview, an intake questionnaire will explore what sports and activities the individual enjoys; physical limitations and areas of concern, and the desire for change. Individuals will also be given a pre-formatted journal which will record personal history, attitudes about self and weight, target weight and how long the individual has been overweight. The Exer-buddy and client will then design a workout program that graduates intensity slowly with minimal stress on the body.
The Exer-buddy as the initiator of exercise in the home works to build in the success of the individual, during the initial phase of the program. Foremost, the exercise must be enjoyable to the client. Why else do it if it isn’t fun? Play can nurture the spirit, and promote participation for the life long habits we are hoping to instill. Co-designed programs may include partner sports, bike riding, pool play/workouts or even slow stretching or sit-ups on the bed.

The trainer will also emphasize the importance of writing daily in their journal for self-discovery and expression. On the first Friday after 4 days of participation in the daily exercise, a counseling session will evaluate progress and explore personal history and self-concept. Each Friday evening of the month a workshop will be held at the center. These are timed to offset weekend obstacles for relapse. They will be a group activity which will incorporate different therapies and self-help skills, as well as social interaction and self-exploring supportive themes.

Workshop themes may include an overview of the functional integrity of the female body thorough discussion of human physiology. Questions would include, what has your body done for you in this lifetime of yours? Responses would include healing, childbirth, mobilization, etc. The goal of this session would be to establish a different relationship with your body and be the foundation for self-respect and admiration for the body. This would promote a real caring for the body, instead of self loathing that motivates self-destructive behaviors of binge eating, weight gain and depression.

When motives are based on self-love and acceptance, true change can occur and be
sustained for a lifetime. This change cannot happen when the mind and body are in opposition. Both components must be joined together as a whole person without internal contradictions, (Hutchinson, 1985).

The group would then take a few minutes to construct a hierarchy of body parts they find difficult to accept and love. We would discuss the biological and physiological functions contained in those parts. For example, disgusting stomach flab was the result of the birth of three children. The leader would then validate the experience of living in a woman’s body and introduce an affirmation regarding transformation and awareness of unique and individual beauty. Individuals would then discuss negative attitudes held about their bodies, and reconstruct negative with a positive description from a loving and respectful self.

The next part of the session would consist of an inner experience of the body through a class in Tai Chi, and then end with a brief blessing/closure about inner healing.

Further workshop themes would include nutrition and cooking classes that develop healthy menus and teach individuals how to shop and prepare food differently. With a focus on immune enhancing foods and vitamins, interesting new creations can be discovered with a dinner afterwards. From my experience, many overweight women are excellent cooks who know about secret ingredients and herbs, and networking in this way will provide an outlet for creativity and socialization. In the project previously discussed, subject number 1 explained that when she encountered discrimination, she “went to where the fat people are.” An interest in healthy menus and food preparation may be the most
important self-help skill in this program.

Other themes in these workshops will incorporate mood, body image, and attitude through different therapies and movement styles. These integrated techniques of therapies are based on the premise described by Avedon (1974), a recreation therapist who states, "The personality of a patient and his attitude toward his illness are major factors that influence desire to expend effort and maintain interest," (p. 121).

The environment for this movement and therapy center will hope to instill a new relationship with exercise that are growth inspired and non-threatening. The program will also attempt to undo the negative association of exercise as punishment by introducing classes of water ballet, Tai Chi, movement therapy, massage and modern dance. The self expressive quality of this mode of exercise could be a vehicle for reducing affective states of anxiety and depression.

The incorporation of different movement techniques target many of the cognitive and perceptual components associated with negative self-image, and shift inner perception to self-love and acceptance. It is expected that the curative factors found through these movement activities will create tangible change through competence and mind/body cohesion that will enable a transformation to occur. It is further expected that the built-in success component of daily exercise with an Exer-buddy will assist in relapse prevention.

Marlatt (1985), has established a model for relapse prevention that includes issues during and after weight loss. It was found that relapse prevention programs boosted long term results only when teamed with continuing therapist contact. This present program
assists to control environmental habits and conditioning in the home and also through workshop participation. Further, through counseling and therapies other issues are addressed regarding weight. For example, weight gain may serve women to conceal their sexuality as a defensive posture against harassment, rape and sexual abuse. Continual support is necessary when individuals reach their target weight and live in their new bodies.

Inspired by the alternative approaches crossover doctors have initiated and legitimized that adopt holistic incorporation of prayer, meditation, exercise, herbal remedies, art and music therapy, acupuncture, biofeedback, therapeutic touch and imagery, workshops presented at the center will include a diverse group of physical, emotional and spiritual therapies in a comprehensive treatment plan for obesity.
APPENDIX B

Refer to the attached videotape.
REFERENCES


Johnson, D. & Drenick, E.J. (1987) Therapeutic fasting in morbid obesity: long term follow up. Archives of Internal Medicine, 137; 1381-1382.


