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The application of developmental counseling and therapy (DCT) theory to group treatment of binge eating and weight management.

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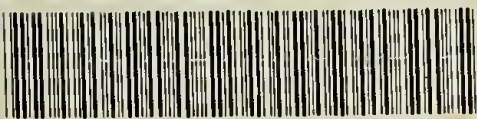
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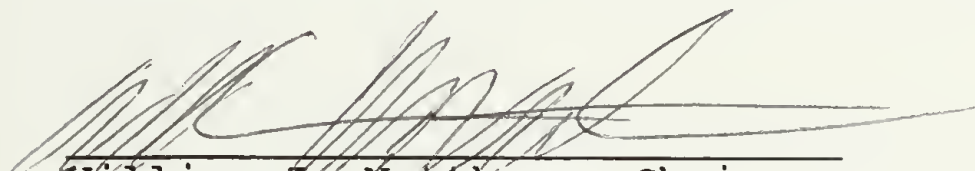
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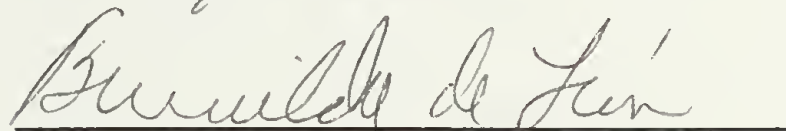
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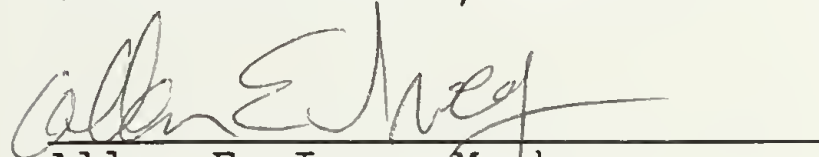
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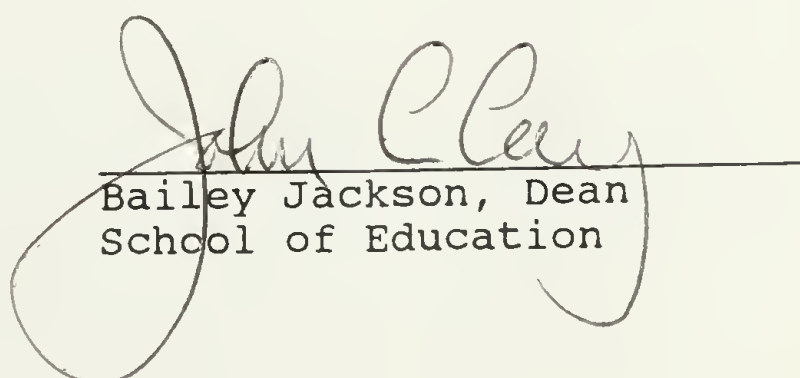
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DEDICATION

This work is dedicated to my mother and my sister, with appreciation and gratitude for a lifetime of loving support.

ACKNOWLEDGMENTS

Many people obviously contribute to a work such as this, and I am grateful for all who have helped me through their writings, discussion, supervision, or clinical example throughout the course of my study. In particular, I wish to thank the members of my dissertation committee: William Matthews, Ph.D., Chair; Allen Ivey, Ed.D.; Rothlyn Zahourek, R.N., M.S., C.S.; and Brunilda deLeon, Ph.D. This team allowed me to work independently yet were always available for concise, clear, and focusing assistance when needed. I deeply appreciate their input. I particularly thank Dr. Ivey, in addition, for his assistance in the creation of the questionnaire instrument used here to assess cognitive developmental level.

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ABSTRACT

THE APPLICATION OF DEVELOPMENTAL COUNSELING AND THERAPY (DCT) THEORY TO GROUP TREATMENT OF BINGE EATING AND WEIGHT MANAGEMENT

MAY 1994

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The proposed study extended the author's comprehensive project study completed in 1992. It aimed to accomplish two goals:

1.) to compare the effects on binge eating and weight loss of two clinical weight management groups: one following a standard cognitive-behavioral format, and the other modified to encompass the tenets of Developmental Counseling and Therapy (DCT) as described by Ivey (1986, 1991a), to see if the binge eaters and others within the groups thereby differ on several outcome measures; and

2.) to analyze patterns of cognitive processing styles to see if trends emerge that might elucidate the nature of the binge eating experience from a DCT viewpoint, and that might therefore suggest new approaches to treatment.

The study found significant differences between the standard (control) and modified (experimental) group on

measures of binge eating and cognitive developmental level change, while differences in depression inventory scores were less significant.

The study therefore offers support for the idea of expanding cognitive behavioral protocols for weight management and binge eating to include a wider variety of cognitive-developmental change strategies. It also implies that people are enabled to change when assisted in broadening their capacity to engage in varied cognitive modes more adaptively and flexibly.

Implications for clinical application and future research exploration are proposed.

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LIST OF ABBREVIATIONS

BDI.....	Beck Depression Inventory
BES.....	Binge Eating Scale
CDL.....	Cognitive Developmental Level
DCT.....	Developmental Counseling and Therapy
CDL1.....	Cognitive-Developmental Level 1
CDL2.....	Cognitive-Developmental Level 2 (study measures discussed in Chapter 4)
DCT Classifications:	
"S".....	Sensorimotor
"C".....	Concrete
"F".....	Formal
"D".....	Dialectic

CHAPTER 1

RATIONALE AND DESCRIPTION OF THE STUDY

This initial chapter will outline the problem the present study is meant to address, the basic contours of the study, its significance and hypotheses. It will end with an outline of the remainder of the dissertation.

The Problem

Problems associated with obesity, repeated unsuccessful dieting, and compulsive overeating have received an enormous amount of attention from the medical and mental health communities, as well as from the popular media and commercial trade.

However, given the large range of treatments available--from over-the-counter products and popular magazine advice to physician-supervised medical programs--few methods have met with consistent, enduring success in helping people achieve and maintain a satisfactory body weight and healthful eating behavior.

The reasons for this are many and complex, and the consequences to physical and psychological health may be considerable. The problems involved have indeed been called "serious and refractory" by some of the foremost writers in the field (Brownell and Wadden, 1992), for much of the voluminous weight management literature points to the relative lack of success of weight

reduction efforts (Wooley and Wooley, 1979, 1984; Ciliska, 1990; New York Times, 1992a,b; Brownell and Wadden, 1992; Garner and Wooley, 1991).

One line of speculation on this problem focuses attention on the heterogeneity of weight loss group participants as a key problem. In other words, a subgroup of participants may indeed have potential to succeed. However, other subgroups likely to be present in weight reduction programs are chronically unsuccessful for various reasons. These people, it is suggested, need to be referred for other types of assistance. This would leave only those likely to succeed in a weight management program and would eliminate many of the multitude of problems that can occur for all groups of potential participants (Brownell and Wadden, 1992).

On the other hand, at least one prominent subgroup of people--those identified as "binge eaters"--can comprise a large percentage of a given weight management program (Spitzer et al., 1992; Wing, 1992; Brownell and Wadden, 1992). Binge eaters are defined as those who regularly consume large quantities of food in short time periods followed usually by remorse, self-loathing, and greater restrictive efforts that are most likely again doomed to fail (Polivy and Herman, 1985; Wing, 1992).

As many writers in the field consider dieting itself to be an actual cause of binge eating and caution against any restrictive efforts, it remains controversial whether

a subgroup of people exists at all that can diet without falling into an unproductive repetitive cycle (Polivy and Herman, 1985; Ciliska, 1990; Garner and Wooley, 1991; Polivy and Herman, 1992). Nevertheless, much has been written to substantiate that those objectively defined as binge eaters constitute a large segment of the weight management program population, and that these individuals are highly likely to fail to lose weight, to drop out, or to quickly regain after participation (Marcus et al., 1988; Telch et al., 1990; Wing, 1992).

Binge eaters are not likely to stop seeking treatment for overweight, even as professionals learn more about the probable futility of their efforts (Spitzer et al., 1992; Wing 1992). This is a population troubled by both aberrant eating patterns and great dysphoria linked to the real or perceived overweight.

One study aimed at reduction of binge eating alone, in fact, showed poor retention of changes gained in a cognitive-behavioral program (Telch et al., 1990). These Stanford University authors speculated that the prospect of gaining weight may have seemed more negative to the participants than the resumption of binge patterns; therefore, initial changes did not last.

Further, programs aimed at eliminating restriction altogether and instead focusing on self-esteem and self-care, in order to alleviate other key problems associated with overweight, have either not published incidental

weight loss figures or report no weight changes (for example, see Roth, 1989, 1992; Fanning, 1990; Ciliska, 1990; Polivy and Herman, 1992; Newsweek, 1992), making such groups a choice only for those so highly motivated to stop the binge-diet cycle that they are willing to forego the possibility of weight loss at all.

Finally, research on the physiology of overeating (Fullerton et al., 1985; Morley and Blundell, 1988; Bennett et al., 1988; Russell et al., 1989; Huebner, 1993), casts doubt on complete lack of restriction as a method of ultimately decreasing overeating or binging as a cognitive binge-diet model such as Polivy and Herman's (1985) much cited work would suggest.

The Present Study

What is currently not described in the literature is any attempt to help those who binge eat lose weight moderately and realistically (considering current knowledge of body type, family history, and other factors), while at the same time attempting to directly address and alter the sabotaging binge eating pattern. This author's recent comprehensive project (1992a) comprised such an attempt by expanding a standard cognitive-behavioral protocol (Brownell, 1990) to include interventions suggested by Developmental Counseling and Therapy (DCT) theory (Ivey, 1986, 1991a).

In general, cognitive-behavioral approaches to weight management have reported the highest success rates in the literature, especially when combined with relapse prevention methods (Brownell and Wadden, 1992). The cognitive-behavioral approach can and usually is used within weight management treatment of all types today--from commercial to pharmacological (Brownell and Kramer, 1989; Brownell and Wadden, 1992). Its methods have become widely accepted and adopted.

Even so, the cognitive-behavioral work has also been shown, repeatedly, to have limited value in helping people maintain change in the long run and does not help a significant number of clients at all (Brownell and Wadden, 1992; Coker et al., 1993).

Cognitive-behavioral programs consist primarily of interventions from two basic categories: those prescribing concrete behavioral tasks (monitoring, stimulus control, etc.) and those aimed at increasing formal operational pattern recognition (writing down feelings present when eating, etc.).

In contrast, Developmental Counseling and Therapy (DCT), a metatheoretical framework conceived by Allen Ivey, Ed.D. (1986, 1991a), uses a neo-Piagetian system to identify different cognitive processing styles or modes (i.e. sensorimotor, concrete, formal, and post-formal/dialectic) in which clients process experience and

interact with chronic problems, and from which therapists can strategically provide interventions.

The referenced comprehensive project expanded the standard cognitive-behavioral format, therefore, to include additional interventions from the DCT spectrum, most prominently those at the sensorimotor and post-formal ends of the spectrum. It ultimately did show promise in helping binge eaters succeed in modifying their binge patterns while achieving modest weight losses within the type of program typically sought by this population: one aimed at weight reduction primarily.

Accordingly, the study herein described systematically compared the binge eaters within two weight management groups. One group followed a state-of-the-art cognitive-behavioral protocol for weight management. Binge eating was addressed, but only within a straightforward cognitive-behavioral (stimulus control, monitoring, etc.) format.

The other group (experimental group) followed a similar protocol that additionally included a wider range of interventions to cover the DCT spectrum: that is, sensorimotor exercises, in class and as homework, and ongoing discussions of broad dialectical issues. In this group, also, participants were asked to set their own goals for participation, in a co-constructive manner consistent with DCT philosophy, after identifying their own general cognitive style and learning about how a

range of possible interventions (sensorimotor, formal, etc.) can be of assistance in their efforts to succeed in making concrete behavioral changes.

The study compared the two groups on various outcome measures: binge eating score, weight loss, cognitive developmental levels, and depression, which often co-exists problematically with binge eating and worsens prognosis when present (Swift et al., 1986; Marcus et al., 1988).

Additionally, the study undertook an analysis of identified cognitive styles to look for common patterns in the styles of those who binge eat. It was hoped that this effort would provide some beginning insight into, and perhaps a clearer definition of this compulsive behavior using the DCT conceptualizations.

The cognitive pattern of formal operational as a predominant general style and sensorimotor as a level or mode in which clients become chronically engaged with the problem was suspected to represent this population, for theoretical reasons as well as based upon comprehensive project observations.

This study sought to verify whether this may indeed be a characteristic of binge eaters in general and to speculate on what this means if so. Of course, if other patterns emerge, this would provide further clarification or direction for future study.

Significance of the Study

This study was meant to offer a significant contribution to the field of counseling psychology in several ways.

First, it aimed to develop a much-needed and called-for (Brownell and Wadden, 1992; Telch et al., 1990), group modality within the fields of weight management and binge eating treatment that can simultaneously address modest weight loss goals and the cessation of binge eating. Also important, it aimed to do this in a way that may succeed with the inevitably heterogenous population that continually seeks such services, unlike the treatments most widely provided within clinical settings (Brownell and Wadden, 1992). Indeed, the study will suggest whether a typical cognitive-behavioral protocol can be effectively expanded to include intervention alternatives that may be better suited to a variety of individuals not currently well-served.

Second, the study aimed to provide a written questionnaire instrument that may be of use for identifying predominant cognitive processing style. While this study did not undertake widespread testing of the instrument's reliability and validity, it could provide an initial screening of such that can later be pursued in more depth.

Third, the study sought to identify whether a particular style of cognitive processing is typical of

the binge eating population. It then would speculate on what types of interventions this may suggest as most effective, and what theoretical implications exist, if so.

Finally, this study represents the first empirical study of the application of DCT theory to group treatment. As such, it not only adds to our body of knowledge and technique in group treatment, but also offers another small but significant increment in the growth and validation of DCT as a scientific metatheory within the field of counseling psychology (also see Rigazio-DiGilio, 1989).

Hypotheses

The hypotheses to be explored within the format described above included the following:

1. Participants in the experimental group will attain lower scores on the binge eating measures post-treatment and at 3-month follow-up.

2. Participants in both groups will achieve equivalent, modest weight losses (approximately 5% of starting body weight) immediately following the program.

3. Participants in the experimental group will have regained less weight at follow-up than others.

4. Participants in the experimental group will show lower Beck Depression Inventory scores than the comparison group at post-test and at follow-up.

5. Participants who binge eat will emerge as more likely to follow a formal/overall, sensorimotor/problem cognitive developmental level pattern.

6. Those with lowered binge eating scores will prove to have shifted cognitive developmental level vis-a-vis the problem behavior (binge eating; i.e. sensorimotor to another level).

Outline of the Remainder of the Dissertation

Following this overview chapter, Chapter 2 presents relevant theoretical and empirical foundations in six major parts. It distills the vast obesity literature and the smaller but still substantial binge eating literature to present the theoretical and empirical underpinnings that inform this study. Theories of etiology and treatment as well as treatment problems and outcome research will be included. The chapter will also outline the theoretical and practical tenets of DCT and how it relates to the work at hand. Finally, the foundations of the author's work and experimentation that led to the development of the present study will be covered.

Chapter 3, Research Methodology, presents the design, subject selection, instrumentation, hypotheses, and statistical procedures of the study. Chapter 4 will present study results and discuss implications, limitations, and new questions suggested by the study overall. Chapter 5 will succinctly summarize the work that precedes it and reflect on its meaning.

CHAPTER 2

THEORETICAL AND EMPIRICAL FOUNDATIONS

This chapter is arranged in six major parts in order to present the major theoretical and empirical underpinnings of the present study. An overview of obesity and binge eating research, of traditional cognitive-behavioral weight management treatment, of Developmental Counseling and Therapy (DCT) and its application to the present project, and of the current project's development are included.

Obesity: An Overview of Etiological Theories and Treatment Research

The Problem of Obesity

Research into the causes and treatment of obesity began in the late 1950's and early 1960's (Stunkard, 1959; Brownell and Jeffery, 1987). At that time studies first took note of the still-escalating trend for Americans to be considerably overweight (Williamson et al., 1990).

Various measures of what constitutes "ideal weight" have been used, but the standard has often been the Metropolitan Life Insurance Tables (1983). These tables, first developed as predictors of early mortality, have been used to define what is ideal, healthy individual body weight until recently. The validity of the tables

has been called into question by a number of researchers, even though they were updated a decade ago, and alternatives (see Consumer Reports, "On Health", 1991) have subsequently been developed to take additional relevant factors (e.g. aging) into account.

However, even with today's more generous measures of the ideal, the number of overweight individuals in American society is still very high. As judged by the criterion of 20% over desirable weight (Kuczmarski, 1992), 24% of men and 27% of women are obese in America today. These numbers are higher in many minority and low socioeconomic status populations (Sobal and Stunkard, 1989), and in older populations (Williamson et al., 1990). In African-American women over 45, for example, prevalence rates are as high as 60% (Van Itallie, 1985).

The National Center for Health Statistics summary in 1980 cited 28.4 percent of American adults aged 25 to 74 as overweight, and between 13 and 26 percent of American adolescents aged 12 to 17. The Center called this a 39 percent increase over the previous 10-year period (Agras, 1993).

Associated eating problems--binging, chronic dieting, clinical and sub-clinical eating disorders--have risen in various minority populations (Langer, et al., 1991; Smith and Krejci, 1991; Snow and Harris, 1989), as well as in the upper classes, and so these phenomena seem to no longer be restricted to the more privileged in our

society (Mirkin, 1990). Obesity and other eating problems seem to have become truly society-wide problems.

Concerns about the dilemma of obesity persist for a variety of reasons. The foremost involves the effect of obesity on physical health. Obesity has been linked to greater rates of hypertension, diabetes, cardiovascular disease and other illnesses (Brownell and Wadden, 1992). Fat found in the upper body, particularly in the intra-abdominal cavity, is especially dangerous to cardiovascular health (Bjorntorp, 1985). Men are more prone to this type of obesity than women, and treatment studies are predominantly of women, so this poses a particular public health concern beyond the general risks associated with obesity overall (Brownell and Wadden, 1992).

Social and emotional problems are also involved. Overweight people are consistently rated as the least likable and least attractive in experimental studies (Bray, 1986). The obese are also discriminated against in the workplace and in the college entry process (Bray, 1986).

Women in even the smallest large clothing size (14) have been judged as unfriendly, incompetent, and undesirable in recent studies (Lennon, 1992). Those who are obese, as well as dieters in general in many cases, score lower on measures of self-esteem and higher on measures of depression (Ciliska, 1990; Goldsmith et al.,

1992). It remains unclear whether this results from or causes the problems of obesity and/or chronic dieting. Most likely, a complex interplay is involved. Nevertheless, these measures of psychological health are also of concern in viewing the problem overall.

The social and emotional factors result to some degree from the great value our culture has placed on slenderness. Slenderness has come to be equated with self-control, success, sexual attractiveness, and even moral superiority (Brownell, 1991a,b). Overweight people are often seen as lazy, lacking willpower, gluttonous, or asexual (Brownell, 1991a,b), even though research has repeatedly proven these stereotypes wrong.

So it is for medical and social reasons most people first seek or are referred for weight management treatment. Recently it has been estimated that \$30 billion (double what was spent in 1980) is spent by Americans in weight loss efforts, and a conservative estimate is that 40% of women and 24% of men are dieting in this country at any given time (Brownell, 1991a). A recent (1992) Newsweek report put the average number of current dieters at 30 million women and 18 million men in the U.S.

The poor success rates of weight control programs account for some of the phenomenon--people keep returning to programs, trying new ones, etc. in an attempt to manage their weight. Included in the phenomenon is also

the fact that even people who are not clinically overweight may seek treatment to attain some fashionable body type or because they imagine that being even thinner will increase their sexual desirability or their feelings of self-control and success (Brownell, 1991a; New York Times, 1992).

Clinical treatment methods--many of which have now been borrowed by the self-help treatment industry--vary depending upon the particular etiology believed responsible for the obesity. Whatever the model, however, it has until recently been accepted nearly universally that people become overweight by consuming more energy in the form of calories in food than they expend in basic metabolism and activity. In other words, one must take in approximately the same number of calories that one needs to maintain one's body processes and activity level; otherwise, excess calories are stored by the body as fat. The problem for most overweight Americans, it has been assumed, is that they eat a high calorie diet and maintain a sedentary lifestyle. Therefore, eating less and/or exercising the body more is likely to result in weight loss.

So, with the exception of the biological theories of obesity (see below), and with recent research putting greater emphasis on activity (Stern, 1984; Stern and Lowney, 1986; Grilo, Wilfley, and Brownell, 1992) and reduced fat consumption (see Ornish, 1990, 1993), most

models of etiology and treatment assume that overeating is the basic problem in obesity, and that reducing food intake is the basic goal. New research casts doubt on this long-held assumption. Nevertheless, to understand what has been done in the weight control field to date, it is important to see how various theoretical approaches explain why people overeat and how best to help them stop. Some of the key lines of thinking are outlined below.

Overeating and Obesity: Main theoretical models

Psychodynamic

The traditional psychodynamic model holds that people who overeat are fixated at an infantile level of oral gratification (e.g. Freud, 1946). Because they did not successfully move on to the next psychosexual developmental stage in a relatively smooth fashion, these individuals continue to gain a feeling of security and pleasure from ingesting through the mouth.

More contemporary psychodynamic thinking (e.g. Battegay, 1991), would alter this view somewhat and focus on the mother-child interactions of this early infancy phase and conclude that because the mother did not respond to the infant's needs adequately, the child remains "hungry" emotionally and fills this need throughout life with food. Alternately, the mother may overstimulate and overfeed the child and leave a child

"greedy" for more and more to incorporate without ever learning to tolerate frustration or to realistically identify and satisfy needs.

Overeaters are seen to have an insatiable need to incorporate objects (Battegay, 1991). Other writers (e.g. Wolman, 1982) note the "protective" function of fat, which deters sexual advances and gives a person a feeling of extra "presence" and perhaps therefore power in the world. Recent research (Humphrey, 1986; Battegay, 1991) has validated some assumptions about the parental relationships and personality styles of overeaters that seem to corroborate psychodynamic formulations. However, other writers would still call the assumptions into question (e.g. Streigel-Moore and Rodin, 1986).

The traditional psychodynamic viewpoint would hold that lasting weight loss can come only after therapeutic healing of the underlying emotional conflicts and losses, as the eating behavior is effective as a neurotic solution to such. Individual or group psychotherapy would aim toward helping people identify reasons for eating and to learn to satisfy emotional needs differently.

Behavioral

Behavioral theory holds that overeating is a learned response to a stimulus (palatable food, a social situation made more relaxed by eating, etc.) that is inherently reinforcing (Cattanach and Rodin, 1988; Brownell and Wadden, 1992). In other words, the eating is pleasurable for its own sake and also may have secondary rewards for the person--such as feeling more calm, feeling part of a social group, etc.

While strict learning theory has been seriously challenged by recent studies clearly implicating physiological factors (Brownell and Wadden, 1992), its methods are still primary in most weight control programs. They seem to work for many people, at least in the short term, even if psychodynamically defined issues are also apparently present (Stunkard, 1986).

Behavioral methods focus on stimulus control, self-monitoring, and reinforcement of alternate behavior. Contemporary behavioral therapy often, and most efficaciously (Brownell and Jeffery, 1987; Wolf and Crowther, 1992; Wilson, 1993), includes cognitive components as well.

Because behavioral theory, and particularly contemporary cognitive-behavioral theory, forms the basis of most group treatments of obesity and binge eating today, it will be elaborated in more depth below.

Family Process

Writers addressing the family process issues involved in overeating stress how overeating becomes part of a family's interactional style or custom. This might perhaps be first motivated by a desire to have enough in times of shortage, or by an unconscious desire to "stuff" feelings and not communicate directly with one another, or by a habitual custom of socializing and bonding around the activities of eating (Stuart and Orr, 1987; Doherty and Harkaway, 1990).

Whatever the cause, the pattern of overeating can persist throughout the generations of a family's history and makes it extremely difficult for an individual within the family to change. The habits, the feelings of loyalty and connection to the family, are formidable obstacles to any individual's efforts.

Lasting change, according to some family process models (e.g. Doherty and Harkaway, 1990), ideally comes through treatment with a systemic focus so that the family-reinforced thinking and activities related to overeating can be elucidated and changed.

Feminist

Feminist writers have focused attention on the issues of obesity and overeating because the vast majority of people seeking help for eating-related problems in this culture, and the majority of those

consuming mass market dieting products, are women. Women's discontent with their body size and their efforts to reduce it are so commonplace, in fact, that some writers have called this discontent normative for women in this culture (Rodin, et al., 1984).

According to feminist analysis, widespread problems with weight control and eating spring from the culture's obsession with thin women. Its idealization of a "perfect" female body, as revealed in the mass media, pressures women to adopt an unnatural body ideal (Orbach, 1978). Recent empirical work has given substantial credence to this view by delineating a dose-response relationship between media reinforcements (ads, articles, etc.) directed toward women vs. men and the incidence of eating disorders within each gender group (Anderson and DiDomenico, 1992).

The feminist view further points out that given this pressure, given their less powerful position vis-a-vis men, and their typical socialization, women naturally aspire to fulfill the externally provided view of the ideal, even if it does not suit their physical or emotional needs at all. Thus a profound conflict begins between desiring to eat and trying not to that can lead to eating disorders, chronic dieting, overeating, and even disorders of desire (e.g. sexual) not directly related to eating (Liss-Levinson, 1988; Root, 1991).

Feminist writers also note that fullness, feeding, and orality are often conceived as aspects of the feminine, and so ongoing prejudice of the obese may be seen as fear of, disdain for, and domination of women's power (Orbach, 1978; Chernin, 1985). This same fact, of women's close relationship to food, makes eating a natural and safe arena for the expression of conflicts (Chernin, 1985; Liss-Levinson, 1988).

Disordered eating has been further described as a developmental arrest for women within a culture that has no clear place for women entering larger cultural spheres for the first time in history (Chernin, 1985; Surrey, 1991; Romney and Goli, 1992). Discussion has also focused on the disruption of the internalized mother-daughter relationship (characterized by attachment and continuity) within this culture, where feminine values are debased (Surrey, 1991). The guilt over surpassing the mother, and grief over the mother's unlived life in this culture can contribute to a view of eating problems (Chernin, 1985; Mirkin, 1990) as stalled rituals in women's development into the wider culture.

Feminist theorists would consider any treatment method incomplete that did not bring to consciousness these cultural issues. Relapse, they would assert, is inevitable if women do not learn how to set their own standards for their weight and eating within this hostile environment and to relearn how to eat naturally (Orbach

1978; Surrey, 1991). Some (e.g. Wooley and Wooley, 1979, 1984; Wooley et al., 1979; Stuart and Orr, 1987; Ciliska, 1990; Garner and Wooley, 1991) even assert that dieting doesn't really even work, and is possibly harmful. These writers advocate working instead toward acceptance of a wide range of body types while rejecting dieting altogether.

Addictions

Writers in the addictions fields (Schaefer, 1987; May, 1988) often speak of overeating as a form of substance abuse or compulsive habit meant to cover feelings and memories and to avoid the painful aspects of intimate contact in relationships. Some writers (Greeson, 1990) even posit a physical basis for addictions to certain foods or the inability to stop eating certain foods.

Accordingly, groups like Overeaters Anonymous stress people's following a "program" much like that of Alcoholics Anonymous to deal with overeating behavior as if it were an addictive illness. Other kinds of addictive habit control programs (e.g. Greeson, 1990) aim to break overeating patterns in ways similar to in- or outpatient substance abuse treatment with a "12-step" focus.

From the scientific community (Wurtman et al., 1985; Wurtman, 1988; Huebner, 1993), compatible theories hold that neurotransmitter irregularities lead to cravings for

more of certain foods (e.g. carbohydrates) in great amounts in order to regulate moods. While "carbohydrate craving" theory remains controversial (Brownell et al., 1986b; Heatherton and Baumeister, 1991; Jansen et al., 1989; Kales, 1990; Weinstein, 1993), theories positing neurological reward mechanisms--much as exist with drug and alcohol addiction--seem to hold more promise for integration with other theories (Huebner, 1993).

Other

The preceding covers the most frequently explored theoretical areas addressing why people overeat. However, there also exists a variety of theoretical discussions that have not spawned as vast a research literature. Some less central ideas worth mentioning are that of eating as a reaction to stress, which is supported by both psychosocial and physiological research (Blundell, 1986; Cattanach and Rodin, 1988); diet failure as a function of low self-efficacy--using Bandura's 1977 self-efficacy model as a starting point (Desmond and Price, 1988; Velicer et al. 1990; Stotland and Zuroff, 1991); chronic, persistent overeating as a gender-specific posttraumatic stress response (Root, 1989, 1991; also see this chapter, pp. 50-51); and eating as a means of cognitive narrowing to avoid aversive self-awareness (Heatherton and Baumeister, 1991; Baumeister, 1992).

This last idea, that of "escape theory", is especially congruent with the DCT focus taken in the present study and will be further explored in the latter parts of this chapter.

Biological Views of Obesity

All of the thinking outlined thus far assumes that weight is malleable, that weight loss is simply a matter of reducing food intake and that changing the feelings, attitudes, thoughts, or behaviors involved in eating should result in successful weight loss--as Wolman (1982) wrote, overeating and obesity arise primarily from "a defect in the mental apparatus". However, much recent research has called this fundamental assumption into question.

Research with animals (Keesey, 1986; Brownell et al., 1986a), has shown a marked tendency for the body to defend its weight within a certain range--that is, to adjust metabolically so that the original weight is maintained despite greater or lesser amounts of food intake. Weight trends within families and in twins reared apart (Stunkard et al., 1990) and various studies showing that the obese do not necessarily eat more than others (see Ciliska, 1990) also suggest a probable genetic component to any individual's weight.

The resulting "set-point" theory attempts to explain the tenacity of obesity in many people. This theory

asserts that the body will naturally maintain a weight within a certain range. A high-calorie diet and low activity level will put people at the high end of their particular ranges, while a low-calorie diet and high activity level will encourage weights at the low ends. This means that the body adjusts within that range and is unlikely to grow much lighter or heavier than the end points of the range, no matter what is eaten, except in extreme states such as starvation.

Those who endorse the set-point theory suggest that treatment should aim at helping people make healthier food choices and to exercise more--for the overall health benefits of doing so, beyond the goal of weight loss specifically--recognizing that limits exist on how much weight loss might conceivably be achieved or maintained. Writers who focus on fat cell composition, a key aspect of obesity, as a fundamentally difficult to change (see Ciliska, 1990; Brownell and Wadden, 1992) reach similar conclusions.

Even where the above ideas are not completely endorsed, it is generally accepted that chronically obese people often do metabolize food differently than their thinner counterparts (Ciliska, 1990; Friedman, 1990). Additionally, some research suggests that neural differences may exist among the obese which cause them to have aberrant appetite and satiety mechanisms (Morley and Blundell, 1988), glucose metabolism (Russell et al.,

1989), or carbohydrate cravings to modulate neurotransmitter processes (Wurtman, 1984, 1986).

However, despite the above lines of inquiry, efforts continue overwhelmingly to aim toward reduction as a prime goal. Surgical, pharmacological, and medically-supervised very-low-calorie diet interventions, with limited success, have been used to manage severe obesity (over 100% of ideal body weight) where other methods have consistently failed.

Here, the obesity is considered to be in the seriously health-threatening range (Brownell and Wadden, 1992). The strictly medical approaches may be turned to in these cases where the obesity level is clearly dangerous--including dental stapling, gastric surgery, metabolic starvation (through very-low-calorie medically supervised diets), and anorectic drugs (Blundell, 1986).

Nevertheless, some of these methods are extremely invasive and/or highly risky in themselves and are not commonly used as treatments. Very-low-calorie medically supervised diets are perhaps most common, but their success rates are poor in general (Wadden et al., 1988, 1992).

Pharmacotherapy holds some promise in the direction of using drugs to decrease appetite, alter nutrient choice, slow speed of ingestion, or increase satiety (Blundell, 1986). However, many of the neural mechanisms involved are not yet fully understood, and weight is

almost always regained after successful drug-induced weight loss (Morley and Blundell, 1988). For ultimately, as one medical researcher has said, "external constraints and long-term habits...may be sufficiently powerful to overcome the effect of the drug....<people> are continually confronted by that constellation of environmental circumstances which contributed to the initial weight problem." (Blundell, 1986, p. 200).

Most chronically overweight people, then, the severe as well as the "moderately obese" (e.g. 20-40% over ideal body weight), continue to be treated in traditional ways, as if they can lose and maintain loss by simply reducing calories--even though research is equivocal about the actual health dangers involved (Wooley and Wooley, 1979; Ciliska, 1990; Garner and Wooley, 1991), and even though dieting itself poses some risks to be discussed below.

Diet-Induced Problems

One theory of overeating, and even of obesity itself in some cases, implicates reduced calorie dieting not as a solution but as a main culprit. There are several aspects of dieting that indeed seem to cause or exacerbate difficulties with ongoing maintenance of stable weight, healthful eating behavior, and their psychological health concomitants.

Physiologically, the body has been shown (Keesey, 1986; Brownell et al., 1986a; Blackburn, 1989) to adjust

metabolically to dieting, as if conserving energy for existence during famine. The metabolism doesn't necessarily return to a normal rate after dieting stops, so that the same amounts of food after a diet will take longer to metabolize (Bennett et al., 1988; Brownell and Steen, 1991). In other words, people will gain more now from the same amount of food eaten.

It is in fact common for people to regain more weight than they had originally lost after dieting, and this metabolic process is often cited as the cause (Fanning, 1990). Some studies, too, suggest that repeated dieting, even where reduced body weight is maintained, can unknowingly lead to potentially harmful disproportionate levels of adiposity (Stein et al., 1992).

Research has also suggested that dieting leads to binge eating in a causal sequence (Polivy and Herman, 1985; Herman and Polivy, 1986). Binge eating (or non-purging bulimia) is defined as the intake of large (more than a "normal" eater would typically consume) quantities of food in a single episode, in a short time period (less than two hours). An out-of-control feeling is typical, as are post-episode feelings of remorse or self-loathing (Beglin and Fairburn, 1992; Devlin et al., 1992).

Some define the feeling of control as more central than the actual calorie intake (Beglin and Fairburn, 1992; Wilson, 1992; Rossiter et al., 1992). Studies of

typical intake still do find high consumption rates among most binge eaters, though some find a substantial number of people meeting other criteria for nonpurging bulimia whose binges are in a more modest (e.g. 600 calorie) range (Rossiter et al., 1992). Bingers themselves tend to define the element of control or lack of it as the key, rather than amount consumed (Beglin and Fairburn, 1992).

Binge eating can lead to overweight and/or continued chronic dieting, in unending cycles. Polivy and Herman (1985, 1986) suggest that the phenomenon is better explained cognitively than physiologically, as they claim that calorie deficits and the possible need for more food do not fully explain the binge eating cycle. They explain that dieters replace physiological cues for hunger and satiety with strictly cognitive ones that are subject to great distortion. They posit a "boundary model" of hunger and satiety, where a dieter imposes a cognitive satiety boundary at odds with her or his natural one. Once this cognitive boundary is exceeded, as in experimental eating situations, dieters consistently eat vastly more than non-dieters. In other words, a violation of self-imposed diet rules leads causally to inhibition of restraint.

The diet-binge cycle--or "yo-yo dieting" as it is sometimes called--has been implicated recently in several studies as a serious health risk in itself (Brownell and

Wadden, 1992). It has also been implicated by some as a key etiological factor in various clinical eating disorders (Morley and Blundell, 1988; Brownell and Steen, 1991; Huebner, 1993). All of this has led some writers to suggest, and to back with voluminous research evidence, that the phenomenon is probably more harmful than moderate obesity left untreated (Wooley and Wooley, 1984; Ciliska, 1990; Fanning, 1990; Garner and Wooley, 1991).

A further complication that may arise from dieting itself concerns body image and interoceptive awareness. Women with chronic weight or binge eating problems show great discrepancies between perceived and actual body size. They "feel fat", even after losing weight, and some researchers suggest that they will eat to regain the pounds they feel are more real to them (Wooley and Kearney-Cooke, 1986; Franzen et al., 1988; Cash, 1992). Even if not, they may continue to diet even when not healthful. The ability to gauge hunger and satiety is also seriously impaired in chronic dieters (Blundell, 1990; Morley and Blundell, 1988).

Therapy directed at body image correction and interoceptive awareness specifically has dramatically improved success rates for bulimia treatment (Freeman et al., 1985; Kaslow and Eicher, 1988) but has not been part of typical weight management programs. The call for such

has increased (Pruzinsky, 1990; Cash, 1992), but few programs routinely address these issues.

Further, programs aimed at body image specifically do not attract anywhere near the number of respondents as weight control programs do--many dieters and overeaters do not identify their problem as one primarily of body image dysphoria, though weight loss success is positively correlated with change on this measure (Stunkard, 1986; Cash, 1992). Weight management programs are where the problem could be more widely addressed.

Another problem is that self-esteem, depression, and other emotional health factors, as mentioned above, seem to be negatively affected by dieting itself, especially by the--nearly inevitable--dieting failures and regains (Ciliska, 1990). And those who endorse the idea of a neural mechanism involved in nutrient intake and neurotransmitter function (e.g. Wurtman, 1986; Blundell, 1990) posit a direct and perhaps inevitable connection between dieting and dysphoric mood states.

Given the above problems, and the dismal prospects for treatment success (see below), some writers have argued that dieting should not be undertaken at all except in extreme cases where obesity exceeds 100% of ideal body weight (Wooley and Wooley, 1979, 1984; Ciliska, 1990; Garner and Wooley, 1991).

Indeed, a review of the medical literature related to obesity shows a much less clear picture of health

risks than is popularly believed. In a broad review of the medical research literature, Ciliska (1990) found that for levels of obesity less than 100% above ideal body weight (i.e. mild-to-moderate obesity), there is not a single risk factor that is clearly and unequivocally exacerbated by excess weight. In other words, studies report conflicting, mixed, or inconclusive results. Ciliska (1990) also notes that the health risks of underweight and "weight cycling"--yo-yo dieting--are at least as clearly apparent (also see Blackburn, 1989 and Brownell and Steen, 1991). Garner and Wooley's (1991) comprehensive review of the obesity treatment literature reached very much the same conclusions.

The same writers who challenge the medical arguments for dieting claim that social-emotional health is also more damaged by dieting itself than by the obesity. (Again, see Ciliska, 1990, and Garner and Wooley, 1991, for cogent arguments supporting this idea.)

Despite the considerable challenges to current thinking on obesity and dieting, however, weight management programs continue to attract a large clientele, and this trend shows no sign of abatement. Further, while efforts to aggressively change body weight may produce more problems than they solve, recent research suggests that very modest (e.g. 5%) weight losses can provide physical and psychological health

benefits that may make smaller changes, for some, worth pursuing (Brownell and Wadden, 1992).

Treatment Success

Diets, in short, usually do not work. A recent New York Times review article (1992) indicated that after five years, 100% of those studied who'd lost 22 pounds or more in behavioral therapy had not kept the weight off (after one year 77.3% had regained the weight). Other methods reviewed showed comparable rates. These data were compiled for a National Institutes of Health panel on the effectiveness of weight loss techniques.

Treatment programs, with the exception of cognitive-behavioral, rarely report success rates, and high attrition makes final outcome rates difficult to interpret in any case (Volkmar et al., 1981; Brownell and Jeffery, 1987; Chiauuzzi, 1991). Also, people regain and diet again within the follow-up periods in many cases, and a substantial percentage of people underreport weight in telephone follow-up studies (Smith et al., 1992), further confusing result reports.

Cognitive-behavioral methods have proven the best in terms of ability to evaluate results, and have reported the best results compared to other methods. Cognitive-behavioral therapy, in addition, has been shown to improve the otherwise rather dismal prospects of lasting success within medical (e.g. supervised very-low-calorie

fasting diets) treatments of obesity (Wadden et al., 1992).

A key problem with all weight loss methods written about is attrition. The first study of attrition rates within commercial weight loss groups (Volkmar et al., 1981) found attrition rates of 70%. A cognitive-behavioral review article in 1987 (Brownell and Jeffery) reported 20% attrition rates as typical. More recent studies (Brownell and Wadden, 1992) report attrition rates of only 15% as typical, although other recent reports sharply differ (Chiauzzi, 1991) and find rates ranging from 20 to 80%, depending upon a host of known and unknown variables.

Much work has gone into reducing attrition in clinical weight loss programs--through financial incentives, spouse involvement, contests, and other methods (see Gormally et al., 1980; Rosenthal et al., 1980; Colvin and Olson, 1983; Brownell, 1984; Perri et al., 1987; Brownell and Jeffery, 1987).

It has also been discovered, as previously mentioned, that people who binge eat comprise a large part of the dieting and clinical weight program population. These people have a particularly poor prognosis for weight loss and maintenance and drop out of programs at high rates (Keefe et al., 1984; Marcus et al., 1988; Wing, 1992). Therefore, rates of success might be considerably different for binge eaters versus

non-binge eaters, and yet few programs differentiate between the two apparently different types of client.

Finally, treatment success is probably confounded by many of the diet-induced problems discussed above. Much work is currently underway (Brownell and Wadden, 1992) on pinpointing who is likely to succeed in a weight loss program and directing others to alternate resources in order to maximize overall program success and to minimize the physical and psychological sequelae to repeated unsuccessful dieting. Indeed, this is a strong current trend in the cognitive-behavioral work, to be elaborated more fully below.

The Problem of Binge Eating

As mentioned above, binge eaters are more likely to drop out of weight loss programs and to fail or regain weight more readily than others. Further, their problems with adhering to a program can cause a state of negative contagion within a group and can cause facilitator morale problems (Marcus et al., 1988; Brownell and Wadden, 1992). Programs randomly assigning people to a cognitive-behavioral group or to a cognitive-behavioral group with a binge eating component showed no significant differences in outcome (Marcus et al., 1988).

It was believed that the continued focus on restraint did not allow for remission of binge eating, much as Polivy and Herman's (1985) theory would predict.

On the other hand, a study aiming primarily to reduce binge eating (Telch et al., 1991), showed poor retention of changes and speculated that perhaps the prospect of not losing weight at all motivated people to resume restrictive efforts that led once again to binging.

Clearly, this issue is complex, as restraint has been shown by others to be key to binging as well. However, it is not the only factor involved, it is not even a necessary precipitant to binging in some, and some studies cast doubt on whether breaking of restraint induces counterregulation uniformly in all eaters (Tuschl, 1990; Arnow et al., 1992; Hamilton et al., 1992; Jansen et al., 1992a).

Nevertheless, there are problems involved in screening people for binge eating in typical weight loss programs, in excluding them from programs, and in finding options for their treatment elsewhere (Brownell and Jeffery, 1987; Brownell and Wadden, 1992). Many binge eaters are--and perhaps will only be--identified through their search for weight control, however, and they are likely to continue to comprise a large portion of the weight loss program population (Spitzer et al., 1992). A way to deal with the binge eating phenomenon within the weight loss milieu itself seems needed.

The next main section will address the phenomenon of binge eating in some depth.

Obesity and Overeating: A complex view

As all of the preceding suggests, obesity and overeating in our culture are not simple matters. They are complex problems involving physiological, social, emotional, and cultural components. The prevailing view of obesity today is one of complex etiology, and even the long-established cognitive-behavioral treatment experts are calling for a consideration of a broader range of treatment options (Brownell and Wadden, 1992).

Binge Eating: An In-Depth Focus on the Problem

Much of what has been said about obesity, above, could also apply to binge eating, as many writers have considered obesity to result from vast and uncontrolled amounts of food consumption. It has become clear, however, that this is not always, or even most often, the case.

Further, the phenomenon of binge eating can exist as a serious problem in the absence of obesity, or in cases of mild obesity only. Confirming recognition of this fact comes from the inclusion of a "binge eating disorder" category in the upcoming Diagnostic and Statistical Manual of the American Psychiatric Association--fourth edition (DSM-IV).

For these reasons, as well as in response to the importance this study has placed on examining the binge eating phenomenon specifically within its groups, an

exploration of binge eating distinct from obesity is included here. Both similarities and differences in etiological and treatment theories will be described.

The Phenomenon of Binge Eating

Binge eating was first described as a phenomenon within the obese population in 1959 by Stunkard in his seminal studies of the treatment of overweight. It was not until recent years, however, that study of the phenomenon began in earnest within weight management treatment and research (Keefe et al., 1984; Polivy and Herman, 1985; Marcus et al., 1988, 1990; Brownell and Wadden, 1992; Wing, 1992; Spitzer et al., 1992).

Binge eating study grew in response to the increasing realization within the field that clinical weight loss and loss maintenance results were consistently poorer than hoped, even within the promising cognitive-behavioral programs (Garner and Wooley, 1991; Brownell and Jeffery, 1987; Brownell and Wadden, 1992).

Keefe et al. (1984) first identified binge eaters as a subgroup within a group weight management program and systematically compared their outcomes with others. Their results suggested that binge eating individuals lost significantly less weight and had significantly higher regain rates than others. They also found a surprising 30% of participants meeting full DSM criteria for bulimia. Further studies have confirmed the

difficulties encountered by binge eaters in clinical weight management programs.

Marcus et al. (1988), for example, found bingers more likely to drop out of treatment and to regain at a more rapid rate than non-bingers, in addition to replicating the Keefe et al. results.

But while it is now generally acknowledged that the binge eating population comes to weight management treatment with a poor prognosis (Brownell and Wadden, 1992), little has been achieved in the way of helping this group to stop the problematic behavior and/or achieve even modest weight loss and maintenance goals. A recently published naturalistic history of the disorder, in fact, is subtitled "Extraordinarily high rates of chronicity, relapse, recurrence, and psychosocial morbidity" (Keller et al., 1992).

Furthermore, estimates of the presence of binge eaters within clinical weight management programs range from 30%, using conservative criteria (i.e. the proposed DSM-IV binge eating disorder full criteria; Spitzer et al., 1992); to 46%, using elevated scores on Gormally's (1982) widely-used binge eating scale (Smith et al., 1992); up to nearly 80%, using looser criteria requiring positive responses on some but not all DSM-IV criteria (Devlin et al., 1992). Estimates of 25-50% are often used in discussion of prevalence within the literature (Devlin et al., 1992).

Assessing the literature, further problems arise with definition of the binge eating phenomenon. Much work discusses binge eaters as non-purging bulimics and includes such individuals in reports of bulimia nervosa theory and treatment research (e.g. Wilson, 1993).

More recent work, however, focuses on the binge eater who does not purge and differentiates this person from the purger and from the obese individual who does not binge eat at all (e.g. Marcus et al., 1988; Devlin et al., 1992; Mitchell, 1992). What studies have been done suggest that the binge eater scores higher on depression and other varied measures of psychopathology than the obese non-binger or the normal person but shows less severe psychological symptomatology than the bulimic who does purge (Swift et al., 1986; Marcus et al., 1988; Kirkley et al., 1992).

One recent study defined three distinct groups within the clinically obese population: obese non-bingers, obese bingers, and obese binge-purgers, with the non-bingers showing the least and the binge-purgers showing the most concomitant psychopathology (Kirkley et al., 1992). These data accord with previous studies and again point to the heterogeneity and the range of psychological difficulties present in any given clinical weight management program. They also may enlighten studies finding depression an overall common occurrence among the obese seeking weight management services

(Goldsmith et al., 1992; Black et al., 1992)--it may be that binge eating and not necessarily obesity itself is more consistently correlated.

Recently, a DSM-IV work group has developed proposed criteria for a "binge eating disorder" separate from bulimia nervosa to describe the binge eating pattern (Spitzer et al., 1992). Thus, future studies may benefit from a clearer distinction between the two populations. However, many individuals who suffer as binge eaters may not meet the full criteria but may nevertheless respond to similar clinical interventions within weight management programs (Marcus et al., 1988; Devlin et al., 1992).

Indeed, the DSM-IV surveys revealed that only 2% of the general population met the full diagnostic criteria (contrasted with 30% of the clinical weight management population), while the number of people in both populations tripled when a less restrictive version of the criteria was applied (Spitzer et al., 1992; Devlin et al., 1992).

As with obesity, a range of theories exists to explain the etiology of binge eating and to suggest compatible methods of treatment. Some are similar to those described for obesity, above, but with some minor variations and differences. Some apply to binge eating alone. The major theories are outlined below.

Binge Eating: Main theoretical models

Psychodynamic

Psychodynamic explanations of binge eating generally mirror those outlined for obesity in Part 1, as they assume that uncontrolled eating is the cause of obesity.

However, as psychodynamic discussions approach the issue of bulimia (which can include efforts to purge other than the DSM-III-R requisite vomiting and laxative use--such as strenuous exercise or extreme dieting), other factors are highlighted. The bulimic's ambivalence about her female sexuality is typically emphasized. In other words, the person both wants independence as a woman, and ego syntonic sensual expression, and wants to get rid of any reminders of merger (seen as a feminine tendency), and any reminders of unacceptable sensual appetites (Wolman, 1982; Stunkard, 1986; Schwartz, 1988).

The fact that bulimics are usually more sexually active than anorexics, who are posited to fear and reject their sexuality, and that bulimia onset is usually post-adolescent (rather than pre-) are thought to corroborate this connection.

The psychodynamic formulation that bingers may fear abandonment as they attempt to assert themselves as adults, and eat in response to triggers to such has in fact received some empirical support (Patton, 1992). Humphrey's studies (1986, 1987, 1988), too, some of which are referenced in Part 1, have additionally shown

empirical support for family interactions, emotional responses, etc. seeming to fit predicted psychodynamic formulations.

The psychodynamic viewpoint overall, finally, is partially echoed by the feminist (see below), as feminist theorists also view bulimia as expressing women's profound ambivalence about their roles and self-expression in patriarchal culture.

Psychotherapy from the purely psychodynamic viewpoint, in other words to address underlying conflicts and not necessarily directly address the eating, is not commonly researched as a treatment mode. Initial studies suggested efficacy; however, treatment is slow (e.g. 30 months), often expensive, and does not seem well-suited to many individuals (Stunkard, 1986)--perhaps making it a less promising area to develop.

Behavioral

As described for obesity theory previously, the behavioral viewpoint sees binge eating as a learned behavior. Here, however, reinforcements maintaining the behavior are typically theorized to include relief from anxiety and unpleasant emotional states as well as the transient pleasurable effects of the foods ingested.

While considerable research casts doubt on whether binging relieves anxiety (Jansen et al., 1989; Katzman, 1989; Heatherton and Baumeister, 1991; Arnow et al.,

1992), behavioral therapies are among the most successful reported to date for the disorder (Smith et al., 1992; Wolf and Crowther, 1992; Wilson, 1993) and are used even when psychodynamic or physiological viewpoints are simultaneously endorsed (Stunkard, 1986; Craighead and Agras, 1991; Wilson, 1993). See Part 3 for more discussion of the behavioral approach, particularly the much-used cognitive behavioral.

Family Process

Again, the discussion of family process obesity theory applies in part to eating patterns such as bingeing as well. Additionally, however, family therapy researchers (Minuchin et al., 1978; Mirkin, 1990; Dare et al., 1990; Pike and Rodin, 1991) have focused on eating disorders in general and bulimia in particular to determine what types of families or family interactions might contribute to the problems in question.

While the feminist contention that conflict over dependence vs. independence, loyalty to affiliative ideals vs. cultural expectations of individuality has been corroborated by some (Mirkin, 1990), factors about particular family structures likely to coexist with bulimia have been noted. These typically include the "enmeshed" types of family styles described by Minuchin et al. (1978) that embody both an emotional intrusiveness and a lack of sensitivity to emotional needs.

Rigidity in the face of the need to change, as well as a denial of conflict, are also typical. Pike and Rodin (1991) have additionally identified the perception of poor family cohesion, by both binge eaters and their mothers, as commonly present among the eating disordered in several clinical and subclinical groups. Mothers' attitudes toward body weight and eating, in this work, also emerged as a key predictor of daughters' subsequent development of compulsive eating, bulimia, or anorexia nervosa.

These writers point to the need for a systemic focus to therapy, whether or not the entire family engages in treatment. Treatment recommendations within the literature also include structural family work; Bowenian exercises focused on individuation; and work on the sociocultural level (Minuchin et al., 1978; Doherty and Harkaway, 1990; Mirkin, 1990; Dare et al., 1990). Mirkin (1990), in particular, advocates bringing relational theory and feminist political awareness to structural family therapy efforts with bulimia.

Feminist

The feminist focus described previously in Part 1 fully applies here as well. The problems of obesity, chronic dieting, body image dysphoria, and eating disorders are seen as having similar roots and similar, complex solutions.

Further, with eating disorders in particular, including binge eating, the phenomenon of projective identification among women has been used to explain some of their widespread occurrence, contagion, and tenacity (Romney and Goli, 1992). This phenomenon--of identifying with another because one has unconsciously attributed one's own unacceptable impulses and attributes to that person--is seen as partly explaining women's intense overinvolvement and interest in others' disordered eating, their fear of becoming eating disordered, and their vulnerability to following a pattern similar to cohorts'.

Again, this work sees disordered eating as a path that simultaneously helps women conform to and defend against the cultural imperative to be thin. The use of projective identification on a group level, further, is seen as illustrative of women's conflicts between separation and relationship and between competition and cooperation--key concepts in a culture that does not value women's relational socialization and makes professional success difficult in some ways (Chernin, 1985; Surrey, 1991; Romney and Goli, 1992).

The disproportionately high rate of eating disorders within women's college dormitories and on women's college campuses is seen to illustrate how groups of women at a particularly apt developmental age use disordered eating to express many key desires and ambivalences commonly

present (Surrey, 1991; Romney and Goli, 1992), and elaborated in the previously mentioned section.

Addictions

As Overeaters Anonymous, the 12-step group modelled after Alcoholics Anonymous, has been found to contain over 80% binge eaters (meeting full DSM-IV proposed diagnostic criteria; Spitzer et al., 1992), it not surprising that the binge eating habit is considered from an addictions viewpoint by many (see Roth, 1989; Greeson, 1990).

Some physiological research (see below) sees addiction to binge patterns as reinforced by neural mechanisms (Guillemin et al., 1977; Fullerton, 1985; Marrazzi and Luby, 1986; Huebner, 1993) thereby offering alternative treatment possibilities to the 12-step "disease model" substance abuse paradigm--cognitive-behavioral as well as somatic methods in particular.

The idea of food as a substance used addictively, to numb pain, provide relief from disturbing cognitions, or to distract from difficult life problems, accords with two following theoretical areas (escape theory and sexual trauma) as well, though they label the binge eating behavior somewhat differently.

Restraint Theory

Restraint theory, first put forth by Polivy and Herman (1985, 1986), has been described earlier. While it is often used to describe diet-induced problems and the futility of many weight reduction efforts, it is in itself a theory of how binge eating develops and is maintained. In fact, many writers have traced the beginning of disordered eating to initial dieting efforts (Morley and Blundell, 1988; Brownell and Steen, 1991; Huebner, 1993).

However, whether all bingers are at first dieters is not entirely clear--while the pattern may be extremely common, there do exist obese persons who do not embark on diets and who nevertheless describe eating binges as a problem. Arnow et al. (1992), furthermore, in a descriptive study of obese binge eaters, clearly identified negative mood as a factor as frequently inciting a binge as abstinence violations.

Even so, it is extremely common to find that obese binge eaters resemble non-obese binge eaters more than they do obese non-bingers in their patterns of restraint and their attitudes toward dieting (Kirkley et al., 1992), a finding which has repeatedly supported the tenets of restraint theory.

Escape Theory

One theory that has been applied to binge eating specifically, whether the binger is obese or not, is Heatherton and Baumeister's (1991) escape theory. These writers speculate that binge eating arises from an attempt to reduce dysphoric self-awareness (from overly high expectations of self and perceived expectations of others, perhaps combined with low self-esteem, for example).

In this view, binge eating is but one possible behavioral expression of the need to "escape" to "lower levels of awareness", where the immediate body sensations are all that are focused on, and distressing higher thoughts are temporarily avoided. Sadomachistic sexual behavior, drug-taking, and other addictive behaviors are seen as having similar motivations (Baumeister, 1992).

Some laboratory experiments (Herman and Polivy, 1986; Heatherton and Baumeister, 1991; Hamilton et al., 1992; Arnow et al., 1992; Merola et al., 1992) have suggested that bingers do indeed eat less when in a situation where levels of self-awareness are kept high. These writers suggest cognitive-behavioral work on expectations and self-esteem as treatment.

Trauma

Root (1989,1991) has advanced the argument that persistent, disordered eating, including binge eating in

widespread numbers of women, is a gender-specific posttraumatic stress response related to women's experience of physical and sexual abuse in this culture.

Root cites the fact that studies have reported sexual abuse histories in 70% of eating disordered women. Eighty-two percent of women with "abnormal eating patterns" in another study were found to have such histories (Root, 1991). Other writers have likewise found sexual abuse and posttraumatic stress phenomena (such as dissociative tendencies, numbing, flashbacks), in women with eating disorders as well (Oppenheimer and Howells, 1985; Goldfarb, 1987; Root and Fallon, 1988; Torem and Curdue, 1988; Smolak et al., 1989; Demitrack, et al., 1990; Goldner et al., 1991).

Waller (1992) in a recent empirical study notes a broader range of occurrence estimates in the literature and questions whether abuse is really more common among the bingeing population than within the culture in general. His study, however, did find a correlation between severity of bingeing and reports of unwanted sexual experiences, and between eating disorder severity and familial incest.

The idea here is that eating disorders, whether bingeing, binge/purging, or self-starvation, may provide a chemically induced dissociative state, not unlike that caused by drugs or alcohol to the person experiencing posttraumatic sequelae. This numbs the intrusive

emotions, memories, and disturbing thoughts typical of this syndrome, and also provides a pervasive preoccupation with which to distract the person from having to attend to the possibly more disturbing trauma phenomena.

Studies have indeed found higher levels of dissociative phenomena of all types among the eating disordered, whether they have reported abuse experiences or not (Demitrack et al., 1990; Goldner et al., 1991). Here, the eating disorder may as hypothesized serve to "medicate" posttraumatic stress phenomena in people already prone to dissociative protective mechanisms. However, writers also point out that metabolic disturbances caused by the aberrant eating itself may tend to create dissociative-type states in themselves.

Females, of course, are at not only at great risk of experiencing traumatic abuse at many stages of life (Root, 1991; Herman, 1992), they are also at greater risk of pursuing this type of maladaptive coping mechanism, disordered eating, for all of the reasons outlined in the feminist discussions, above.

The sexual trauma literature does not really conflict with any of the theories outlined in this section, and in some ways it can corroborate them. For example, from a psychodynamic viewpoint, the ritual of the eating behavior can serve as a compulsive attempt to "undo" the experience (Root, 1991; Romney, 1993).

Further, though binge eaters need not be obese, they may be, lending support in these types of cases that the overweight indeed may offer a type of psychodynamic "protection". Family, biological, and other factors may serve in some cases to make individuals more likely to exhibit symptoms in the area of eating rather than in some other way, and, further, can serve to reinforce the syndrome ongoingly.

The trauma viewpoint is particularly compatible with that of escape theory, which basically posits binge eating as a means of "escape" from aversive cognitive processes (Heatherton and Baumeister, 1990). It is also accords well with recent biological theories of addiction (e.g. Huebner, 1993), viewing such eating processes as possible triggers for the same neurobiological reward mechanisms involved in any more traditionally defined substance addiction. It also sheds some light on the tenacity of the problem, for, as Root (1989) asserts, stopping an effective coping behavior is likely to lead to relapse if new understandings and coping skills are not concomitantly provided.

While cognitive-behavioral treatment of binge eating does not necessarily conflict with the trauma perspective, it lacks several therapeutic ingredients often deemed important by writers in the field of trauma treatment (e.g. Root, 1989, 1991; Foa et al., 1991; Herman, 1992; Rivera, 1993): including an awareness of

the stress reducing benefits of the eating behavior and the need to learn new ways of coping; the appreciation, preferably within a group context, of the shared female oppression involved in the incidence of abuse; a return to the individual woman of her sense of control over her own body and a felt connection to its sensory properties; and specific training in stress and anxiety reduction.

Biological Views of Binge Eating

Research in recent years has increasingly focused on the underlying physiological mechanisms present in binge eaters and those with other eating disorders. Aberrant blood sugar metabolism (Russell et al., 1989; Jansen et al., 1989), dysregulation in neuropeptide and related systems (Morley and Blundell, 1988; Woods and Gibbs, 1989), impaired brain serotonin functioning (Jimerson et al., 1990a,b; Wurtman et al., 1985), reinforcement by increased opioid (Fullerton et al., 1985) and/or endorphin function (Huebner, 1993) are all lines of inquiry that have produced experimental support for their ideas.

One particularly influential theory posits that bingers actually crave carbohydrates and eat them in inordinate amounts in order to stabilize brain serotonin levels (Wurtman, 1986, 1988; Walden Health Resources, 1993). While other research casts doubt on the possibility that such a simple, direct connection exists

(Jansen et al., 1989; Jimerson et al., 1990a,b; Weinstein, 1993), the fact that antidepressant medications affecting the neurotransmitter systems in question often do alleviate binge eating, at least while present in the body (Marcus et al., 1990; Craighead and Agras, 1992; Wilson, 1993; Walden Health Resources, 1993) has supported the idea that a neural mechanism is a key site of possible etiology and therapeutic intervention.

Ongoing investigations into the well-known phenomenon of worsened binge eating during many women's premenstrual phases often, likewise, focus on neurotransmitter substances such as serotonin, key neuropeptides, and hormonally-regulated appetite changes (Reid and Yen, 1981; Chuong and Coulman, 1986; Gladis and Walsh, 1987; Bancroft et al., 1988; Brzezinski et al., 1990; Rossignol and Bonnländer, 1991).

Less extensive research into the frequent phenomenon of temporary binge eating cessation during pregnancy likewise supports the centrality of these physiologic systems (Lemberg and Phillips, 1988; Ramchandani and Wedon, 1988). All of this work, while not negating psychosocial perspectives, can be seen as supporting the importance of physiologic considerations in understanding and treating the binge eater.

With all of the physiological research outlined, however, direction of causality is difficult or impossible to ascertain--aberrant eating patterns may be

causing dysfunctions or may be resulting from them. And in any case, as will be discussed below, purely physiological (i.e. pharmacological) therapies alone are not a solution for many people.

The Affective Variant Hypothesis and the Problem of Depression

Because eating disorders, particularly bulimia (whether purging or not), coexist with depression at such a high rate of frequency, the idea was debated for several years that the conditions might actually represent variants of affective disorder rather than distinct clinical entities in themselves (Swift et al., 1986; Hinz and Williamson, 1987).

Findings that bulimics typically have a family history of mood disorder, at least one major depression in their personal history, and depressive characteristics on a variety of psychometric measures have reinforced the belief that the two disorders are related (Swift et al., 1986; Walden Health Resources, 1993). However, the relationship has been found to be complex.

It has been found that depression does not always abate with the cessation of binge eating; for example, through cognitive-behavioral or other means. And while few studies have taken a retrospective approach, it is clear that not all binge eaters were at first depressed. In other words, depression can result from the food

deprivation, the composition of the binger's diet, the distress from being unable to control the pattern, or other factors involved with the bingeing itself (Swift et al., 1986).

As a result of these findings, it has become clear that the eating disorders are separate from affective disorders, though the two often coexist, and that the eating disorders may represent multidimensional, multidetermined conditions not explained in as simple a manner as the affective variant hypothesis would suggest.

From a neurophysiological standpoint, it has been hypothesized that similar neurotransmitter substances but different neural pathways might be involved in the varied expressions of impaired affect, appetite and satiety mechanisms, and impulse control (Jimerson et al., 1990a,b). Psychosocial factors, further, interact in myriad ways to support the expression of eating disorders with or without preexisting mood problems or neural abnormalities (Blundell, 1986, 1990).

The presence of depression, in any case, clearly complicates the treatment of binge eating and may sometimes have to be addressed in its own right. For some, the depression may persist and jeopardize endurance of results; for others the depression may impair motivation or ability to comply with treatment. Therefore, cognitive, somatic, and other therapeutic modes that address depression may need to be included in

binge eating treatment, even though the cessation of the behavior will improve the condition, at least in the short term, for many.

Treatment

Initial studies of cognitive-behavioral bulimia nervosa therapy applied to binge eaters showed improved depression scores and reduced binge eating behavior (Telch et al., 1988). Here, results did not retain at 6-month follow-up, and it was hypothesized that, as weight was not addressed, subjects may have renewed efforts to lose, thereby returning to restrained eating and its usual concomitant binge patterns.

In other words, the subjects may have remained concerned about weight and were therefore less able to retain the learned regular eating habits with this tenacious fear. However, a study including a cognitive-behavioral binge eating component within an otherwise typical weight management program was not differentially successful with the binge eaters (Marcus et al., 1988). Speculation here focused on the possibility that binge eating could perhaps not cease while a focus on restraint continued; the authors suggested that binge eaters may have to work to eliminate the binge pattern first and only then attempt weight loss.

Recently a program aimed in this direction sought to address binge eating among the obese in a cognitive-

behavioral weight management program that lasted longer than the Marcus et al. study (16 as opposed to 10 weeks) and showed similar improvements that did maintain at follow-up (Smith et al., 1992). Here the authors speculated that, as seems to be the case with weight management per se (Brownell and Jeffery, 1987; Brownell and Wadden, 1992), the longer time frame allowed for the better integration and endurance of changes.

They did not comment on the fact that part of the teaching emphasized that binge eating treatment needed to precede weight management, however, and it certainly seems possible that this knowledge might have affected subject behaviors and motivation to retain changes.

"Non-diet" programs (e.g. Ciliska, 1990; Fanning, 1990; Roth, 1989; Garner and Wooley, 1991; Polivy and Herman, 1992; Newsweek, 1992) have also claimed improvements on depression and other measures as well as binge eating cessation, but have not reported weight losses, even though, hypothetically, binge eating cessation should eventuate in at least modest losses. Thus, participants enrolling in such programs tend to be those whose binge or binge-diet behaviors are so dysphoric that they are ready to forego the possibility of weight loss to achieve relief (Ciliska, 1990). The high percentage of binge eaters who seek weight management services (Spitzer et al., 1992) suggests that

many will continue to attempt weight loss even if many past efforts have failed (Wing, 1992).

Recently, Wilson (1993) widely reviewed effectiveness studies for a range of treatments for bulimia (which did not distinguish between purging and non-purging types). While cognitive-behavioral treatments have shown the greatest improvements on various outcome measures, interpersonal therapy (modelled after the NIMH depression study modality) showed good results on a similar range of outcome measures, though in a somewhat longer time frame.

It was suggested that factors delineating who would respond best to each of these types of treatment would be useful to ascertain (Wilson, 1993). As degree of psychopathology has been correlated with failure to respond to cognitive-behavioral therapy (Coker et al., 1993), study of which psychopathological variables respond to which types of therapy would also seem useful.

Pharmacotherapy produced short-term successes but generally was not recommended except in cases where people have failed to respond to any type of psychotherapeutic treatment and are therefore deemed suitable for long-term drug maintenance evaluation. (This group is not rare: many do not respond to cognitive-behavioral work, the treatment most widely recommended and reported on; Keller et al., 1992; Brownell and Wadden, 1992; Coker et al., 1993.)

Otherwise, pharmacotherapy has been found to increase the problematic restraint behavior which leads to bingeing (Craighead and Agras, 1991). Therefore, problems often return once the drug is stopped.

Cognitive-behavioral treatments, on the other hand, reduce restraint. The two modes, which are commonly used separately and in combination, then, are not necessarily compatible, though some combined treatments protocols have shown initial successes (Marcus et al., 1990; Craighead and Agras, 1991; Agras et al., 1992). Further, cognitive-behavioral therapy provided to prevent relapse after cessation of pharmacotherapy has recently shown very promising results (Agras et al., 1992).

The ongoing testing of new anti-depressant medications in the treatment of binge eating, too, suggests that this area may still hold viable options for the future. For example, recent widespread studies of fluoxetine (Prozac) in binge eating treatment have shown much better results on a range of variables than those of other, older anti-depressants (Johnson et al., 1983; Fluoxetine-Bulimia Nervosa Collaborative Study Group, 1992).

However, the above mentioned problems are likely still to challenge and make cognitive behavioral adjuncts to such therapy important in helping people change the psychosocial and environmentally reinforcing aspects of the eating behavior that are likely to sabotage, no

matter how successful the drug therapy (Blundell, 1986; Craighead and Agras, 1991).

Cognitive-Behavioral Approaches

Weight Loss and Maintenance

The cognitive-behavioral weight control researchers have provided the most abundant outcome data in the literature, and have claimed the highest success rates compared to other methods (Brownell and Jeffery, 1987; Brownell and Wadden, 1992). Many of their innovations have become routine parts of commercial weight loss programs as well.

Early behavioral programs (Brownell and Jeffery, 1987; Brownell and Wadden, 1992) focused on stimulus control, self-monitoring, and reinforcement of alternative activities to eating. This was much in line with the behavioral view of stimulus-response control for change. Early programs were able to achieve an average weight loss of eight to ten pounds in programs that were typically eight to ten weeks long.

In recent years (Brownell and Jeffery, 1987; Brownell and Kramer, 1989) programs have evolved to include important cognitive components as well--keeping track of feelings before eating, noting "black and white" or irrational thinking about one's change efforts, etc. They have also added psychoeducation about social support, attitudes, and the importance of exercise.

Discussion and concrete strategizing about relapse possibilities are now recommended as well (Brownell et al. 1986).

The highest weight loss rates reported using a comprehensive cognitive-behavioral framework with relapse prevention techniques (Brownell and Jeffery, 1987; Brownell and Wadden, 1992) are an average 22 pounds in a 16 to 20 week program. The higher program losses are largely due to a longer average program length today, though rate of loss per week (1.4 vs. 1.2 pounds) has risen slightly.

Program length is thought to have increased to "better enable participants to integrate changes" (Brownell and Jeffery, 1987), though writers have not elaborated much on the cognitive or physiological mechanisms by which this integration over time may occur, even though such theoretical justification may be apt.

Unfortunately, however, even with the more comprehensive cognitive-behavioral approaches, though, weight is generally regained at six-month or year-long follow-ups. Regain rates reported in the literature range from 25-75% after one year to 50-100% after five years, on average (Brownell and Jeffery, 1987; New York Times, 1992).

It is difficult to interpret the regain rates: people not in treatment tend to gain one to two pounds per year on average as they age anyway (Brownell and

Jeffery, 1987), so reporting an original weight five years after a program may still represent a lower figure than would have occurred without intervention. Further, some studies report people regaining more than they initially lost (Ciliska, 1990; Fanning, 1990), complicating interpretation. It is also not clear whether the people reporting have attempted additional diets or not.

For instance, a person reporting a regain of ten pounds at one-year follow-up may have regained 20 and then lost ten again--presenting a different picture than the person who simply regained ten. Or, a person may have regained 20 and be currently dieting again, reporting a weight only five pounds higher than at post-program.

It has also been noted that hospital- and university-based weight management programs, which are most studied, may attract those with the most refractory weight problems. This would imply that people with less chronic problems may be succeeding in ways researchers cannot confirm or track (Brownell and Jeffery, 1987).

It is felt, in general, however, by the major cognitive-behavioral workers in the field that relapse prevention (Brownell et al., 1986; Chiauuzzi, 1991) is a key component for all programs, in order to directly address the seemingly inevitable regain problems. Cognitive-behavioral programming for relapse prevention

includes study of the antecedents and consequences of relapse and aims to help people develop alternatives (stimulus avoidance, cognitive restructuring, etc.).

Many of the reportedly more effective programs now include such components, though many programs still do not (Brownell and Jeffery, 1987). And while it seems crucial to include such components in any program, rates of maintenance have apparently not improved substantially in those that have (Brownell and Jeffery, 1987).

Current Trends

The cognitive-behavioral approach is now generally accepted as the treatment of choice for obesity and overeating (Brownell and Jeffery, 1987; Brownell and Wadden, 1992). However, today even its major adherents are beginning to acknowledge the limits of the approach and the complexity of the problem.

The same authors, cited in Chapter I for calling obesity a "serious and refractory" problem, had just five years before exhorted clinicians to "push the limits" of their weight management clients and not "settle" for losses of only 1.5-2 lbs. per week.

Few people ever reach their "goal" weight, long-term maintenance of losses is rarely achieved, and large numbers of people persist in believing they can and should diet to alter body shape--even where real biological limits may exist (Brownell and Wadden, 1992).

A focus on choosing a realistic weight goal, acknowledging that cultural ideal and physiology may conflict, is now deemed important (Brownell, 1991; Brownell and Wadden, 1992). Also, the need to "fit" programs to individuals is being touted--as clearly many individuals do not benefit from the cognitive-behavioral approach, and some, even if a small percentage, do succeed with self-help or other alternatives (Brownell and Wadden, 1992).

Some of the groups underrepresented in the hospital- or university-based cognitive-behavioral programs usually studied, too, such as men and minority persons, may actually be found to prefer such alternatives.

The idea of program screening, as discussed by Brownell and Wadden in their 1992 summary, would assess for binge eating as a factor likely to undermine diet success, but mainly these efforts would place people according to level of obesity, family and dieting history. A strong need has been indicated for additional screening criteria-- criteria defining likelihood of success or failure in traditional programs especially, and information on who is helped by which types of alternative means.

Such screening methods as have been suggested are often difficult for institutions to implement (Brownell and Wadden, 1992). Resources are rarely available for such, and ethical problems also arise in denying people

treatment they may want even if chances of success seem dim.

Nevertheless, cognitive-behavioral programs are likely to continue as primary treatments, whether they continue in heterogeneous groups or not. The focus of the most widely accepted cognitive-behavioral programs (e.g. Brownell, 1989) has come to be lifetime maintenance, as the physical and psychological dangers of repeated dieting, discussed earlier, have repeatedly been validated in the literature, and the advisability of "dieting" itself seriously called into question.

However, most people are referred to or are attracted to such programs because they want or are told they need to lose weight. And the cognitive-behavioral programs still put the development of habits meant to control portions, calorie intake, etc. as primary goals. Thus, "weight loss" remains central, not just "healthy eating" or "lifestyle change".

This is true even where programs encourage people to examine their willingness, at this particular time, to undertake a permanent lifestyle change (Brownell, 1989), and even though program researchers are now calling for "realistic" weight targeting and acknowledging the benefit of much more modest, yet possibly maintained, losses (Brownell and Wadden, 1992).

This may be an inherent problem, as restraint itself may lead directly to overeating (Polivy and Herman,

1986), and the large number of diet program participants who binge eat may not be able to maintain recovery while reduction remains so figural (Marcus et al., 1988).

One recent article (Agras, 1993) described a weight management program that did achieve incidental reductions in binge eating scores. The writers suggested that the "structure" may have helped binge eaters to cope, though it seems more likely theoretically that the contemporary trend toward de-emphasizing extreme restraint may have been involved and may have begun to affect reported scores. This line of speculation was not pursued, however, and neither amount of change nor follow-up scores, furthermore, were provided in this article.

It is partially this dilemma that some of the present program alterations hoped to alleviate--that of helping people to modify behavior, toward modest weight loss, in a way that does not exacerbate binge eating behavior.

Binge Eating

Cognitive behavioral programs for binge eating are relatively new, compared to those for weight management, and they have borrowed many of the same techniques. Monitoring of food intake, stimulus control, tracking of emotional states when urges to binge occur are primary interventions.

As outlined in Part 2, cognitive behavioral programs are also the most studied and report the best results for binge eating treatment (pharmacological and interpersonal therapies are the other treatment modes that have been studied fairly extensively and compared to cognitive behavioral for binge eating).

Some of the problems involved with cognitive-behavioral group treatment of binge eating have already been mentioned. Specifically, it seems that when weight is not addressed at all, binge patterns may return relatively quickly (Telch et al., 1988; Marcus et al., 1988), as group participants may again try to restrain themselves from eating in a problematic way when concerns about weight eventually return.

On the other hand, of course, binge eaters have repeatedly been shown to fare poorly in weight management programs (Keefe et al., 1984; Marcus et al., 1988; Wing, 1992; Agras, 1993). Two exceptions have recently appeared in the literature, both involving single, small group weight management clienteles. The first is outlined above (Agras, 1993) and involves incidental reductions in binge eating scores within a cognitive-behavioral weight management program (with no follow-up figures available).

The other (Smith et al., 1992) addressed binge eating within a weight management program, stressing that binge eating needed to be curbed first, before weight

loss efforts could be expended. Both of these programs followed the somewhat longer (16 week) program length that has been posited to help participants with "endurance and integration" of changes.

In sum, there continues to be a clear and pressing need for programming that addresses both binge eating and weight management more or less simultaneously (Telch et al., 1988; Marcus et al., 1988; Agras, 1993).

Developmental Counseling and Therapy: Background

Theoretical Foundations

Developmental Counseling and Therapy (DCT) is a theoretical framework conceived by Allen Ivey (1986, 1991a). Overall, the theory brings together the basic tenets of Platonic philosophy and neo-Piagetian psychology. It provides behavioral terms and operational definitions of these tenets that can be applied to the understanding of individual development and the process of therapeutic change.

The theory provides a means of assessing a patient's cognitive-developmental level (see Figure 1), adopting a therapeutic approach that matches the patient's needs

Sensorimotor: Focusing on the Elements of Immediate Experience

The client presents concerns in a random, disorganized fashion, and frequently jumps around on topics. Behavior will tend to follow the same pattern—namely, short attention span and frequent body movement. There may be intense concentration on here-and-now experience. At the late sensorimotor level, client exhibits some magical or irrational thinking and some beginning ability to be concrete.

Concrete-Operational: Searching for Situational Descriptions

The client gives concrete, linear descriptions of individuals, often with a fair amount of detail. However, nonverbal clients may give short yes or no responses. Emotions will be described but not reflected upon. At the late concrete level, the client will display some causal reasoning, which is exemplified by *if/then* thinking.

Formal-Operational: Discerning Patterns of Thought, Emotion, and Action

These clients can talk about themselves and their feelings—sometimes even from the perspectives of others. Their conversations tend to be abstract. At the late formal level, these clients can recognize commonalities in repeating behaviors or thoughts.

Dialectic/Systemic: Integrating Patterns of Emotion and Thought Into a System

Most people do not ordinarily make sense of their worlds from a dialectic/systemic frame of reference. A woman who recognizes that sexism may be responsible for some of her difficulties is displaying this level of thinking. In this case, the client is aware of systems of knowledge and is learning how she is affected by the environment. A client who reviews the interview and examines it from several perspectives with varying emotional responses is also operating at the dialectic/systemic level. At the late dialectic/systemic level, the client will be able to challenge his or her integration of systems of operations. Technically, the client is able to reflect on systems of systems of operations. Highly abstract, this form of thinking can lead to complex forms of multiperspective thought.

Figure 1

Four Cognitive Levels (CDL) of Developmental Assessment

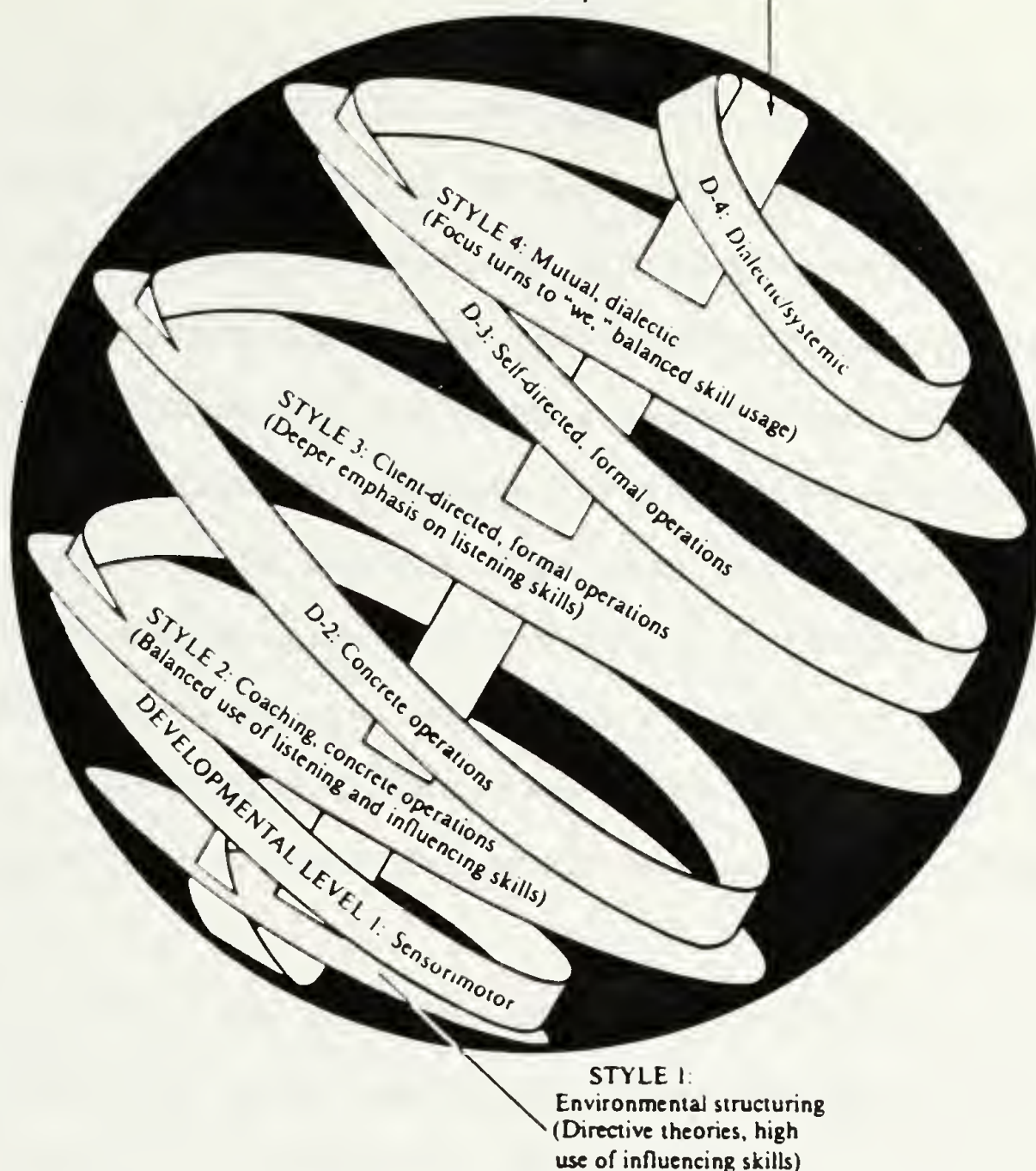
Ivey (1991a)

accordingly, and changing as the patient grows and develops within the dialectic process of the therapeutic relationship.

As a theoretical framework, DCT is meant to be broad enough to serve as a metatheoretical/integrative approach to treatment and specific enough to serve as a treatment model in its own right. It focuses on development as a unifying force, and provides organizing guidelines to interconnect theory, therapy, and research (Ivey, 1986, 1991a; Rigazio-DiGilio, 1989; Goncalves and Ivey, 1992).

Ivey's model expands on the traditional view of development as a linear process. Instead it emphasizes a dialectic, circular, holistic orientation to development (see the developmental spiral diagram in Figure 2). This is a view of human development as a constant movement and flux throughout levels of cognitive-developmental analogues to Piagetian sensorimotor, pre-operational, concrete operational, and formal operational thinking (see DCT Classification System in Appendix A).

DCT provides a general structure from which to assess a patient's predominant level of cognitive functioning, as well as a way of matching intervention to that level and of measuring a patient's growth over the course of therapy (see Appendix B for examples). The DCT treatment model is based on a belief that different change strategies offer varying degrees of utility at different cognitive-developmental levels.



Appropriate theories/applications:

- Style 1: Behavior modification, correctional work
- Style 2: Assertiveness training, decisional counseling, reality therapy, rational-emotive therapy
- Style 3: Person-centered therapy, logotherapy, psychodynamic therapy
- Style 4: Feminist therapy, modern encounter groups, issues of transference, "I-you" talk between counselor and client

Four Therapeutic Environmental Styles and Their Relationship to Developmental Therapy. The developmental theory of psychotherapy is based on the paradox of development: to arrive where we started and to know the place for the first time. Life is simultaneously a journey, a destination, and a state of being. (This diagram was first drawn by Lois T. Grady)

Figure 2

Developmental Spiral Diagram

Accordingly, DCT is a dialectical model that emphasizes the importance of the relational interaction that occurs within therapy and provides constant feedback. According to its view, therapy is a mutually recursive process facilitating a sequence of transitions through cognitive-development levels. This dialectic, mutual approach to therapy therefore focuses on assessing the ever-changing needs of the client throughout the treatment process, or even in the course of a single session, and choosing developmentally appropriate change strategies and theoretical orientations to meet these needs.

Central to this model, also, is the notion of co-constructivism, which holds that the therapist and client are continually affected by each other in a reciprocal process that informs the clinician and the therapy and that acknowledges the importance of the client as an agent of her or his own change.

Ivey views the discovery of the intelligence that transcends and infuses all the other levels of cognitive-development as synonymous with the dialectical awareness of the complexity of the self. Ascending in a spiral fashion, from the world of images and perceptions (sensorimotor), to the world of visible things, concrete action and thought (concrete) to the intelligible world of abstraction and thinking (formal), and arriving at an awareness of the complexity and circularity of the

world's interactions (dialectical), the model posits that useful generalizations from these levels can empower individuals to master whatever developmental tasks they are confronting (Rigazio-DiGilio, 1989).

The Piagetian concepts of accommodation and assimilation also inform this model. How an individual changes or influences the world (assimilation) and how a person is influenced by the environment (accommodation) are viewed as twin processes that stand in dialectical relationship to one another. The struggle to reach a cognitive balance between assimilation and accommodation is called equilibration.

Here, Piaget presented four types of solutions to the problem of equilibration, ranging from overemphasis on assimilation or accommodation to the generation of new totalities or schemas.

In the DCT view, people, even as adults, continually pass through the same fundamental cognitive levels as they continually negotiate and renegotiate equilibration throughout all the tasks, challenges, and processes of life. Simply because a person is a certain chronological age, the clinician cannot necessarily know which cognitive-developmental level will be predominantly in operation at any given time.

All people, further, will typically engage in a combination of several different levels and will most likely present many previously uncompleted developmental

tasks. These incomplete tasks often make it necessary for the clinician, in the beginning phases of treatment, to help move the patient to lower cognitive levels of re-experiencing the world in order to be able to more flexibly move between stages later.

From the first verbal and non-verbal interactions, the clinician can assess the prevailing cognitive-developmental level of the client. Descriptions of the presenting problems will suggest the patient's manner of conceptualizing these concerns. Key terms and phrases suggest various levels. The concrete operational person, for example, will use action and sensory terms. The late sensorimotor person will present a cognitive construction of the problem that may include distortions, deletions and overgeneralizations. The formal operational person may appear to be analyzing the problem from a distance, but often the thought process contains a pre-operational view of the problem or late sensorimotor errors. Finally, advanced dialectical thinking may be encountered in the therapeutic situation, but these patients may still be misinterpreting their world--"their complexity has closed in on itself <and is> still missing important dimensions of the multipotentiality" of the solution (Ivey, 1986, p. 164). Cognitive errors at this level include oversimplification, intellectualization and depersonalization.

Ivey contends that the cognitive balance, or the equilibration style, of a person may be an asset or a detriment to the person's coping ability, and is usually the focus of the clinician's work. Developmentally appropriate therapy aims to move the client to a point from which she or he can access needed cognitive skills in a flexible, task-appropriate manner.

Patients may move quickly between cognitive-developmental levels in response to clinician questioning (Rigazio-DiGilio, 1989). Initially, the clinician can match therapeutic interventions to the patient's level. Here, questions at higher or lower levels may frustrate the client and could even lead to a discontinuation of therapy.

Ultimately, therapeutic movement can take one of two directions: horizontal movement (stage enhancement) or vertical movement (stage progression). The therapeutic task, then, is not necessarily to move patients to higher levels of cognitive functioning.

Horizontal decalage, as Piaget referred to it, is also an integral aspect of the process; such lateral movement is sometimes a necessary preliminary to a person's ability to perceive a situation in a more complex way. Earlier uncompleted developmental tasks may need to be accomplished more fully, in addition, before a client can move to a more effective level of cognitive abstraction.

The goal is a more adaptive level of perceiving the environment that allows the person to gain a larger view of reality.

DCT in Practice

So, DCT uses analogues to Jean Piaget's stages (sensorimotor, concrete, formal, dialectic), to describe which cognitive developmental level a client preferentially processes experience through--both generally as a predominant style and in relationship to particular problems. The theory assumes that people, throughout life, operate within all of these modes at different times and in different contexts, and that the ability to do so fully and flexibly is desirable.

Goncalves and Ivey (1992) make four assertions that help explain the DCT model for the clinician in particular:

1. Based on the quality of early emotional relationships (i.e. attachment-separation) the child develops a first nucleus of cognitive organization about the self and family.

2. Based on the first nucleus organization, the individual constructs, across the life-span, models of self and reality that are constricted by the first organizations and limited by the stage of cognitive development.

3. These cognitive models are successively composed by: cognitions based on experience (i.e. sensorimotor cognitions); cognitions based on action (i.e. concrete cognitions); cognitions based on thinking (i.e. formal or meta-cognition); cognitions based on existence (i.e. post-formal or epistemic cognition).

4. Adult cognitive organization results from a self-elaborated coherence derived from the specificity of sensorimotor, concrete, formal and post-formal organizations. (pp. 4-5)

They further state, "...At any given point in time, individuals are primarily operating within one of the four epistemological levels. However, individuals experiencing psychological distress are often relying upon one particular style of epistemological understanding that is both out of synchrony with their internal and external environment and unable to provide facilitative assistance toward effective adaptation. As such, it becomes clinically useful to assess the predominant cognitive-developmental level being utilized by individuals seeking treatment..." (pp. 5)

To illustrate with a simple example, a person may be predominantly formal-operational in school and at work, thinking and speaking abstractly most of the time. However, faced with a personal problem, this same person may resort to diffuse, automatic emotional reactions with no sense of control, perspective, or understanding--a more sensorimotor response. Again, DCT holds that most people operate in a certain level predominantly, and sometimes in another regarding a particular problem.

Research has indicated that clients' developmental level can be reliably identified by independent raters using 50 words or so of their natural language (Rigazio-DiGilio, 1989).

According to DCT, optimal psychological health comes from being able to flexibly reflect upon and act within one's life from all perspectives and that therapy ideally assesses and treats symptom expression at all levels. In other words, a person can ideally be aware of and tolerate internal sensations and feeling states (sensorimotor); describe and act on the particulars of a situation, recognizing cause and effect and making things happen (concrete); reflect abstractly on self and non-concrete relationships (formal); and reflect on larger and more complex systems of influence, or systems-within-systems that may give greater perspective or meaning to existence (dialectic).

Practically speaking, DCT offers a way for therapists to join with clients at their level, work with them to expand options or complete tasks within that level (horizontal growth), or challenge them by mismatching intervention level to move into or develop within another domain (vertical growth).

DCT does not hold that higher is better. Rather, all levels are essential for optimal, mature, integrated functioning, and the various levels can ideally inform each other. Therapist questioning techniques have been shown effective in encouraging client expression at other than that originally presenting (Rigazio-DiGilio, 1989).

Therapy, then, that addresses only one level may be useful but limited. A purely sensorimotor approach, such

as in movement or "primal scream" therapy, is more useful if people can afterward reflect on what the experience means to them (formal). Therapies that aim at understanding only (formal) may not actually help people to effect change (concrete) or to tolerate strong internal emotional states (sensorimotor).

And, in many situations, a dialectic perspective may be considered crucial for change or for relapse prevention--for example, where issues of cultural oppression or strong and decisive family influences are involved. Different developmental levels may be worked with at different times within an overall therapeutic plan (Goncalves and Ivey, 1992), or an entire course of therapy may focus purposely on just one level, as with concrete skills training, or systemically-focused family of origin exploration, leaving other levels for another time perhaps.

Clinical Utility

DCT has been used to conceptualize and work with DSM-III-R Axis II personality disorders (Ivey, 1991a), with children (Ivey and Ivey, 1991), with families (Rigazio-DiGilio and Anderson, 1991), with depressed inpatients (Rigazio-DiGilio, 1989), with therapist supervisees (Rigazio-DiGilio and Anderson, 1991) and within network treatment plans (Ivey and Ivey, 1991), as well as in traditional individual counseling and therapy.

A range of training materials and instruments exist or are being developed to aid in the understanding and use of DCT concepts and methodology (Ivey, 1991a; Ivey, Rigazio-DiGilio, and Ivey, 1991).

One of the most notable and promising instruments is the Standard Cognitive-Developmental Interview (SCDI; see Appendix C) compiled by Ivey, Rigazio-DiGilio, and Ivey (1991). This standardized interview format takes a client through all levels of cognitive experience in describing an aspect of her or his developmental history, and can be used diagnostically, to assess client developmental level, or may even have some ameliorative effects in itself.

Rigazio-DiGilio et al. (1991) have developed sentence completion forms analogous to Hunt et al.'s (1977) conceptual level instruments to assess cognitive developmental level. Ivey (1991b) has developed a self-questionnaire to identify therapists' preferred style. Based on Ivey's 1991 form, this author's comprehensive study (1992a) used a modified questionnaire instrument to identify the preferred processing styles of those in weight management groups.

As DCT is a relatively new theory, much research remains to test its validity and clinical utility as a metaconstruct to the increasingly eclectic practice of counseling and psychotherapy (Rigazio-DiGilio, 1989). Rigazio-DiGilio's 1989 work was a first step in

empirically testing the validity of its constructs and its use in reliably identifying and shifting client levels within the counseling interview.

Many other research directions and questions suggest themselves. The present work aims to view a predominantly cognitive-behavioral psychoeducational group treatment--here for weight management and binge eating cessation--through the DCT lens and to alter it accordingly.

The DCT constructs have seemed particularly well-suited to this task for several reasons that respond to the problems and limits previously described: they allow for a comprehensive range of types of intervention; they emphasize treatment geared to particular individual needs; and they value domains of intervention generally neglected in the most common group treatments that are nevertheless of vital theoretical importance. The present work also considers the use of DCT tenets in conceptualizing the problem of binge eating theoretically, with implications that may extend to other compulsive or addictive behaviors.

DCT Perspectives on the Problem and the Present Program

Overview

Most of the interventions in the typical cognitive-behavioral clinical weight management program would be classified by DCT as concrete or formal operational (see

Appendix D for an outline of LEARN program workbook lessons as an example and Appendix E for a classification of major cognitive-behavioral weight management interventions by DCT classification). That is, they aim to help participants identify exactly what is happening (self-monitoring, weight change charting, behavior chain graphs, etc.) and what to do (eat more slowly, don't shop when hungry or without a list, put fork down between bites, etc.) concretely.

Today's more comprehensive cognitive-behavioral programs also include formal components. For example, participants are helped to identify patterns in when they overeat most, in what kind of social support helps or hinders them, in how their self-talk supports or thwarts their aims, in what kinds of situations are cravings triggered. Then they are encouraged to use concrete strategies accordingly.

Group discussions and written homework exercises are meant to increase formal operational awareness of what the individual is doing, when, and to reinforce conscious concrete behavioral actions. What is mostly lacking in the programs under discussion are interventions at the other ends of the integrated DCT spectrum--the sensorimotor and the post-formal or dialectic. Theoretically, there is much to argue for their inclusion within the typical treatment arena, as discussed below.

Sensorimotor

The cognitive-behavioral protocol for weight management treatment typically includes one class of interventions that might be called "sensorimotor": those that emphasize the importance of exercise. That exercise is important to this effort is underscored by the fact that those who do succeed in losing and maintaining weight losses are predominantly those who do exercise regularly. The reasons for this are more complex than the simple calorie-burning explanation (Grilo et al., 1992) and include self-esteem building and mood elevation.

Within a cognitive-behavioral program, exercise may be monitored concretely using a checklist format. However, in-group movement or exercise activities are not included, and therefore participants are left on their own to comply with exercise prescriptions. And while exercise is routinely prescribed in typical weight loss programs (Grilo, et al., 1992), a noncompliance rate of 50% or more is typical (Grilo and Wilfley, 1992). The faulty thinking that might contribute to a reluctance to exercise may be addressed, but feelings about or within the body are not and any form of actual movement or body use does not occur.

As overweight people are often extremely uncomfortable with such activities (Ciliska, 1990; Brownell, 1990; Brownell and Rodin, 1992), it may be

unreasonable to think that they will engage in them on their own without therapeutic support or "horizontal" growth through incremental, sequential experiences in such areas.

Exercise is of prime importance in the pursuit of weight loss, and addressing people's reluctance to engage in physical activity is therefore vital. However, a range of other possible sensorimotor interventions might conceivably enhance program efforts toward weight reduction or binge eating cessation as well. These are rarely if ever included, and are usually not addressed even in a concrete or formal operational manner as exercise is. The use of such strategies is not unknown in the weight management literature (see, for example, O'Connell, 1985; Zahourek, 1988; Roth, 1989; Fishel, 1989b); they simply have not been widely adopted in the most often used and studied cognitive-behavioral formats.

For instance, typical programs do not include exercises in movement, interoceptive awareness, relaxation, etc., even though this type of therapy would sensibly address some of the key issues involved.

Some studies (Freeman et al., 1985; Slade, 1985; Franzen, 1988), in fact, have found that sensorimotor body image work differentiated those with bulimia nervosa who relapsed from those who did not. The characteristics of the typical person with bulimia nervosa are somewhat different from the typical obese or non-obese binge

eating person. As mentioned previously, studies have found greater degrees of personality disturbance and psychopathology within the bulimia nervosa population (Swift et al., 1986; Prather and Williamson, 1988; Heatherton and Baumeister, 1991; Kirkley et al., 1992).

However, many overlapping traits and issues are involved, and it is surprising that some of the sensorimotor techniques found to be effective with the bulimic groups have not transferred into the accepted weight control protocols, given the high numbers of binge eaters consistently found there, and given the recommendations in the literature for bulimia nervosa-type therapies for severe non-purging bingers (Coker et al., 1993).

Body image change, further, has been identified recently as a factor predicting greater satisfaction with weight losses and concomitantly less fear of regain (Cash, 1992). These factors are hypothesized to predict better long-term maintenance.

Relaxation training is another sensorimotor area that might sensibly be included in a typical weight management program, as overeating has sometimes been viewed as a reaction to stress, and the stress caused by bingeing often leads to more of the same (Cattanach and Rodin, 1988). The presence of participants possibly suffering from some sequelae of trauma, also, would argue

for usable anxiety-reduction techniques (Foa et al., 1991; Root, 1991; Herman, 1992).

The presence of depression and possible neurotransmitter irregularities, further, might argue for the inclusion of various sensorimotor modalities, ranging from exercise (Stern, 1984; Huebner, 1993), nutrient choice plans (Dalvit-McPhillips, 1984; Wurtman, 1988; Walden Health Resources, 1993), and meditation (Kutz et al., 1985; Fishel, 1989a,b), to name a few non-pharmacological possibilities that might therefore enhance a typical program by helping to ameliorate such conditions.

Indeed, if one takes the view that certain neural reinforcements occur directly as a result of binge eating (Marrazzi and Luby, 1986; Morley and Blundell, 1988; Huebner, 1993), activities that can provide such rewards in a less undesirable manner, as the above are sometimes posited to, seem particularly indicated.

Another compelling argument for the inclusion of a comprehensive sensorimotor dimension within weight control treatment is the fact that overeating, reluctance to exercise the body, and binging itself are essentially sensorimotor in nature. In other words, we are trying to deal in concrete and formal operational ways with sensorimotor problems that people often feel are out of their control.

The concrete structuring of the typical program can certainly help people to gain a sense of mastery over the sensorimotor, as can the understanding of personal patterns. But some believe that the body itself (through kinesthetic memory, etc.) is the most immediate and efficient resource for change of body-focused problems (see Kaslow and Eicher, 1988; Pruzinsky, 1990).

This idea is by no means new--nearly 50 years ago, in fact, Fritz Perls wrote in his challenge to psychoanalytic "talk" therapy: "To dissolve <a symptom> one needs the awareness of the symptom in all its complexity, not intellectual introspection and explanations; just as to dissolve a piece of sugar one needs water, not philosophy" (Perls, 1947).

This idea, further, accords with the DCT tenet of horizontal movement--in other words, a full and rich development in one area can then allow easier movement beyond it. It is true, furthermore, that people lose trust in their own sensorimotor experience (by ignoring natural hunger signs and responding to hunger only cognitively, for example) through the rigid structuring of diets, and this is a key problem in the diet-overeat cycle (Polivy and Herman, 1985).

The cutting off of one's own interoceptive experience, also, is a phenomenon frequently associated with trauma sequelae--some of which may represent the binge eaters in any existing group (Root, 1992). So a

reestablishment of ability in this sphere can theoretically make movements into concrete, formal, or post-formal domains more accessible.

People's self-esteem typically drops even further, and weight management efforts fail, when concrete strategies are known, patterns are understood, and still the sensorimotor habits feel uncontrollable. It may be that some people simply cannot succeed at all in maintaining weight losses, stopping binging, accepting a "realistic" weight goal, or regularly exercising without some key change in sensorimotor experience: whether a greater interoceptive awareness, greater comfort in using the physical body for movement, greater confidence that sensorimotor feelings do not have to tyrannize (in other words, that behavior can be by choice, even if feelings are not always), or relief of mood states attained through alternate physical means.

People with binge eating problems may have trouble going directly to a needed concrete action without a more complete sensorimotor base (this idea will be expanded upon later). As discussed, non-compliance in cognitive-behavioral programs is indeed extremely high among binge eaters.

From a DCT standpoint, it may be that many unsuccessful participants need horizontal growth within the sensorimotor dimension, then, before vertical progress can be facilitated.

Dialectic

The dialectic dimension, also, may be a key lack in the present programs. The feminist position, summarized earlier, would particularly claim the necessity of this approach. It may not be possible to help people accept a "reasonable" weight maintained through healthy eating patterns, as suggested by the latest cognitive-behavioral trends (Brownell and Wadden, 1992), while exposed to the existent social pressures and stigmas associated with the heavier female body.

People often need awareness of the complex social nature of their desire to be thin before they can see that it is not necessarily a healthy or natural desire. Programs that have directly addressed these issues have consistently reported lasting improvements in the self-esteem and mood of participants (e.g. Orbach, 1978; Ciliska, 1990; Roth, 1989, 1992; Fanning, 1990; Polivy and Herman, 1992).

Further, understanding the importance of social support (the only standard cognitive-behavioral protocol intervention somewhat "dialectic" in nature) may not be enough in terms of addressing the relationship aspects of overeating. The complex family factors--what one learned in the family, how maintaining weight can express loyalty or anger, etc.--for some may need to be understood before

weight loss or acceptance of oneself as one is can occur (see Doherty and Harkaway, 1990; Pike and Rodin, 1991).

From the point of view of escape theory, also, (Heatherton and Baumeister, 1991; see below), "vertical" movement away from formal operational reflection on self may represent a viable alternative to the "downward" movement to sensorimotor possibly engaged in by bingers--though the theory's authors may not have identified this treatment possibility as such.

Expanding the Cognitive-Behavioral Format

While it may not be possible to include all aspects suggested by an optimal DCT perspective in one group treatment program, some expansion of the most typically used formats is certainly possible and was indeed achieved in the comprehensive project to be outlined in the final part of this chapter.

Additionally, it may be that assessment of an individual's developmental level can guide recommendations for treatment, and that DCT might best guide development of alternative treatments rather than simply the expansion of the most typical--for again, including a wide range of additional interventions within the present format may not always be feasible. A new form altogether may be needed, or a new spectrum of choices for individuals, depending upon their

developmental level and needs. Whatever course is taken, DCT can provide a useful guiding framework.

Client Developmental Level

In addition to the question of program interventions and how they cover the DCT spectrum, there lies the crucial question of client developmental level itself. How clients experience their problem, how they operate predominantly in life in general, and whether their style is compatible with the program's is a question not yet raised by researchers.

The current trend within the cognitive-behavioral weight loss field is, as outlined earlier, toward matching clients to programs. Much remains to be learned about which attributes predict success in which type of program (Brownell and Wadden, 1992; Wilson, 1993).

However, most work thus far focuses on amount of overweight first (differentiating severe from moderate and mild), and on factors such as family health and dieting history second (Brownell and Wadden, 1992). Personality factors are not considered stable enough predictors, at least as of yet, to use in such screening. The issue of cognitive style or developmental level has not been raised as a factor.

Here, Rigazio-DiGilio's (1989) finding that depressed clients could indeed be shifted to more flexible levels of cognitive functioning based on the

therapist's developmental level assessment and resultant strategic questioning, offers promising possibilities for use with the population currently under study.

The factors that are being explored within the mainstream weight management field--obesity level, family history, etc.--are likely important ones. However, DCT theory would raise developmental level as an extremely important factor as well, perhaps even more important, in matching client to program.

For example, can one reasonably expect a group of people with various developmental relationships to the problem to respond to a program that is always concrete and formal in nature? Might their different perceptions and ways of processing explain why some people fail or leave a program? Who is the concrete/formal approach best suited to? Does developmental level predict who will relapse and how? Do binge eaters--or those who revert to narrow sensorimotor experience (see below) frequently, perhaps--need completely separate programs from others?

A New View of the Problem? Integrating DCT with Escape Theory

Thus far this section has focused on intervention level and client developmental level from a DCT perspective. DCT also, however, may be able to deepen our understanding of the problem itself, particularly the difficult binge eating aspect.

An intriguing conceptualization of the problem comes from an integration of DCT with "escape theory" as outlined by Heatherton and Baumeister in their paper "Binge eating as escape from self-awareness" (1991), and in Baumeister's 1992 book, Escape From the Self.

Escape theory aims to explain binge eating and chronic overeating within a framework that is compatible with psychodynamic, learning, biological, and feminist perspectives. The theory seems to offer support for the idea of using a DCT perspective within weight control and binge eating therapy. However, DCT would broaden the scope of escape theory and offer an even greater range of options for intervention.

Escape theory holds that those who overeat (like those who engage in other addictive or compulsive behaviors) are motivated to shift to low levels of awareness when confronted with negative feeling states, which often result from not meeting the expectations (of self, others) one believes one should meet.

In this case, dieters can rarely meet the rigid expectations they place on themselves, or that they perceive are necessary to meet some socially desirable ideal. (Indeed, binge eaters and chronic dieters have been repeatedly shown to have a higher need for approval and a more external locus of control than others; this could be a pre-existing condition or a result of

repeatedly failed diets; Heatherton and Baumeister, 1991.)

Heatherton and Baumeister state: "Central to escape theory is the notion of multiple levels of meaning, which are linked to multiple ways of being aware of oneself and one's activities...In this view, low levels of meaning involve narrow, concrete, temporally limited awareness of movement and sensation in the immediate present. High levels of meaning invoke broader time spans and broader implications. High levels also involve comparison of events (and the self) against broad standards such as norms and expectations...At the lowest levels, self is reduced to body, experience is reduced to sensation, and action is reduced to muscle movement...a shift to low levels of awareness may be a means of removing long-range concerns and lasting implications from awareness." (p. 88)

The "deconstruction" of events cognitively can thus move down from more meaningful levels to more narrowly focused ones, where broader meanings have no salience. There are obvious parallels here to the idea of a continuum of awareness from dialectic, down through formal, concrete, and sensorimotor.

To support the theory in explaining binge eating, experiments have shown that maintaining high levels of self-awareness leads to lower levels of eating in laboratory settings (Heatherton and Baumeister, 1991;

Arnow et al., 1992; Hamilton et al., 1992; Merola et al., 1992).

Heatherton and Baumeister suggest that therapeutic implications of the theory include the need for treating the cognitive processes that set the escapist pattern in motion, such as altering unrealistic expectations and promoting self-acceptance and self-esteem.

This theory can go far to explain how a sensorimotor process becomes so entrenched in individuals (binge eaters as well as perhaps other types of addicts or compulsives) who may operate in many other realms of life at a concrete or formal level. It also can reconcile the experimental research disputing "emotional eating" assumptions (e.g. Katzman, 1989; APA, 1992) with the intuitively appealing notion that binge eating provides a kind of respite or distraction from tensions and concerns, even if people don't consciously identify themselves as in the throes of particular salient emotions when eating begins (Arnow et al., 1992).

DCT may go farther, however, to suggest remediations. For concrete and formal cognitive work, of the varieties suggested by Heatherton and Baumeister, can help people to make changes. But as we have seen, the vast body of existing weight control research suggests that this approach is limited. Binge eaters in particular have a poor prognosis in cognitive-behavioral weight management programs.

DCT would view the sensorimotor activity in a somewhat less pejorative way than does escape theory. For escape theory seems to hold that the cognitive narrowing is an undesirable state and that people should stay at high levels of (perhaps therapeutically improved) self-awareness continually.

DCT would instead suggest that what is needed is not always, for everyone, a vertical move to higher levels of cognition. What may be needed is a horizontal move to a more complete experience within the sensorimotor realm. To understand this more fully, consider the fact that while bulimics and binge eaters have high levels of self-awareness as this term is used in the literature (i.e. consciousness of how they are viewed and how they are performing according to accepted standards) and negative self-focus, as measured by various instruments (Heatherton and Baumeister, 1991), they have correspondingly low levels of internal self-awareness (Franzen et al., 1988; Kaslow and Eicher, 1988).

Various studies have shown such people to have very low levels of interoceptive awareness and, again, inaccurate body image. So actual awareness of what is going on within the self--what one feels, what one's body senses--is consistently very low. When a binger is narrowly focused on the food before her, temporarily ignorant of a higher cognitive field that would perhaps have her not do this, and temporarily subject to all the

cognitive distortions of the sensorimotor level--which are notorious in binge eaters (Strauss and Ryan, 1988; Heatherton and Baumeister, 1991)--she is not aware of her body's actual hunger or satiety or discomfort; neither, usually, is she then actively experiencing her emotional state.

To become more comfortable with experiencing such feelings and sensations on a sensorimotor level--in other words, broadening the sensorimotor experience horizontally--might also widen the narrow focus on the repetitive escapist activity. Here, though, it might not be a more complex, higher meaning-making drawing her away from the limiting sensorimotor activity. It might be said that the quality of the sensorimotor activity itself would have changed.

Repetitive, cognitively-limited action is not necessarily soothing if in ignoring higher cognitive possibilities this way one is now experiencing one's body sensations or emotions, particularly if one has come to trust, respect, and heed one's body and emotions (through therapy, for example). It would follow, also, that a beginning respect for and attention to one's essential body experiences could itself bolster needed self-esteem. This is in fact what sensorimotor work with the eating disordered usually does find (Kaslow and Eicher, 1988; Pruzinsky, 1990).

It could also be, finally, that a different kind of sensorimotor experience--such as that achieved through meditation or "urge surfing" (Marlatt and Gordon, 1985)--can not only help reconnect a person to broad internal awareness processes, but may also, simply, provide relief from higher cognitions in itself, without necessitating the less desired activities. This idea is compatible with Baumeister's (1992) view of various sensorimotor activities as interchangeable in providing the sought relief.

A further expansion of the escape/deconstruction of meaning idea would come, again, from the other end of the DCT spectrum. Expanding cognition to the formal level, where one has the ability to see oneself and one's relations to the wider social sphere, which is stressed by escape theory, is of course helpful in learning to break patterns. However, many chronic dieters are painfully aware of their own patterns and begin to see the ongoing inability to break the habitual sensorimotor activity as a personal fault.

An understanding of familial, gender, and cultural factors can mitigate some of the stigma and negative self-evaluation that comes from thinking one should be able to master something that is complicated by many factors well beyond one's control.

Here again, Baumeister (1992) draws a parallel in discussing the use of the "higher power" concept in 12-

step addictions programs, which draws attention away from self-reflection in a way that is not sensorimotor, though he does not go so far as to make any post-formal type of thinking a suggestion for the therapy of compulsive "escape from self-awareness" or "cognitively deconstructing" activities.

Expanding the escape theory view through DCT, finally, can integrate aspects of various theories and therapeutic approaches into a cohesive understanding of weight control and binge eating. One can begin to understand why a person would shift to a sensorimotor activity regularly and how vertical and horizontal interventions might both be important in gaining conscious control over compulsions that feel impossible to surmount.

Such an expansion, also, may provide a useful and non-pharmacological means of responding to biological theories of the binge eating problem. In other words, if cognitive deconstruction involves a concomitant neural reward that is actually "addicting", a range of alternatives can be provided by both horizontal and vertical interventions that can be reasonably expected to provide such reinforcement in a more desirable way, perhaps more quickly or efficiently for some individuals than concrete environmental structuring or formal operational understanding.

Such alternate interventions, too, might provide interim relief from possibly sabotaging physical discomforts while a person is practicing new behaviors and developing new routines.

Development of the Present Program

History

In 1990, Milford Hospital in Milford, Connecticut sought to offer a weight management program to the public, both as a revenue-producing venture and as part of its overall mission to offer a wide variety of health education programs to its community.

After researching many prospects, the Director of Education decided to adopt the LEARN Program for Weight Control (Lifestyle-Exercise-Attitudes-Relationships-Nutrition). This is a program developed by Kelly Brownell, Ph.D. of Yale University (1990), and his team of psychologists, exercise physiologists, nutritionists, and relapse prevention researchers.

Brownell has been a foremost researcher in the cognitive-behavioral weight control field for nearly 30 years, and his LEARN program is now administered by an independent organization that sells its books, tapes, forms, and newsletters to a wide range of professionals and institutions.

The basic format is a 16-week program that meets once weekly for one hour. Participants pay \$200 for the

program and materials. A workbook is a crucial part of the program, and one workbook lesson per week is assigned as homework. It is recommended that the program be facilitated by a psychotherapist, which Milford Hospital's usually is.

Meetings can be used to discuss lessons, augment lessons, or to simply allow participants to talk. In Milford Hospital's program, most meetings have been used to present new material (approximately 20-30 minutes), with the remaining time used for group discussion (small groups might be formed if a large group was involved).

Additional handouts are occasionally provided to supplement workbook readings.

Participants are typically weighed upon entering the meeting room, and they keep track of their weight on a graph in the workbook. They are required to monitor the food they eat and its caloric content each day, using forms provided in the workbook.

By the third week of the program, participants are asked to commit themselves to some form of aerobic exercise (walking is recommended) for a minimum of three half-hour periods per week. An exercise physiologist speaks to the group during the third meeting to discuss exercise intensity, safety, etc.

Somewhat later, participants are asked to reduce fat intake to no more than 30% of their total caloric intake. Tables in the back of their workbook help them to

estimate this, and a dietitian comes during the fifth meeting to discuss fats and other nutritional issues.

Monitoring forms by the third week include (behavioral modification) checklists to note servings from the four basic food groups, and each week from then on they also include space to note how often suggested behavior modification techniques were used.

For instance, one week might have "using stairs instead of elevator" or "putting fork down between bites" as items to track.

Each lesson is approximately six pages long and contains two or more short sections. Each section discusses some aspect of the Lifestyle-Exercise-Attitudes-Relationships-Nutrition spectrum (see Appendix D).

One week, for instance, might have a section on choosing a support person--a spouse or friend--to help you make changes, and then a section on fats. Another might have a behavioral section on dealing with parties and a cognitive section on overcoming embarrassment related to being seen exercising.

Using the basic LEARN format, which is probably best described as cognitive-behavioral with a strong psychoeducational component, professionals offering the program have latitude for their own innovations. Milford Hospital's program has typically put strong emphasis on the lifetime maintenance issue, stressing the harm of

"yo-yo dieting" and the importance of gradual change within a long-term plan.

This is consistent with the latest cognitive-behavioral trends, though few programs have shifted emphasis completely (Brownell and Wadden, 1992). People are usually encouraged to come to meetings and skip weigh-in, for example, if that would overcome their tendency to not come on a particular evening. Learning is deemed extremely important, and small changes in habit or food choice are encouraged and reinforced, even if calorie goals are not met exactly.

People are urged to target "realistic" weight goals for themselves (Brownell and Wadden, 1992). Discussions cover issues related to the binge eating phenomenon from a cognitive-behavioral viewpoint--the cycle of restraint-overeating-negative affect, the dichotomizing of foods into good/bad and self into good/bad depending on eating behavior, the need to identify and change stimulus situations, etc.

The Comprehensive Project Study

The author's comprehensive project study (1992), which has been mentioned previously, took the above outlined Milford Hospital program and systematically added interventions classified as sensorimotor and as dialectic to the basic concrete-formal array of cognitive-behavioral interventions.

Basic relaxation and interoceptive awareness techniques were taught during group sessions, and visualization exercises were utilized. Discussions and written exercises on the complex familial, feminist, and social issues involved were included as well.

Participants were rated as to predominant cognitive developmental level on the basis of a questionnaire developed by the author adapted from Ivey's (1991b) instrument, "What is Your Preferred Style of Helping". Also, selected Standard Cognitive-Developmental Interviews were conducted for supporting validation.

Results indicated that binge eating scores were dramatically reduced, compared to historical statistics, among binge eating subjects within the expanded program. Results also suggested that, relative to the problem, participants moved from sensorimotor to other levels of processing as the binge eating behavior ceased.

Weight loss levels were smaller than those typically reported as average in the literature (Brownell and Jeffery, 1987; Brownell and Wadden, 1992). However, mean losses of approximately 5% of body weight were achieved. Follow-up to see how regain rates were affected was not done.

This initial exploratory work formed the basis for the present program, the design of which is outlined in the next chapter.

CHAPTER 3

RESEARCH METHODOLOGY

Overview

The present study derived from the initial exploratory work described above. Its plan was to systematically compare the binge eaters within two weight management groups.

One group followed a state-of-the-art cognitive-behavioral protocol for weight management. As concerns about binge eating arose, group participants were directed to cognitive-behavioral tasks and explanations.

The other group (experimental group) followed a similar protocol that additionally included a wider range of interventions to cover the DCT spectrum: that is, sensorimotor exercises, in class and as homework, and discussions of broad dialectical issues.

In this group, also, consistent with DCT theory, participants were asked to set their own goals for participation after identifying their own general cognitive style and learning about how a range of possible interventions (sensorimotor, formal, etc.) can be of assistance in their efforts to make concrete behavioral changes. In other words, a co-constructive model was attempted using the basic cognitive-behavioral

format and additional intervention types as possible tools.

The present study compared the two groups on various outcome measures: binge eating score, weight loss, cognitive developmental levels, and depression, which, as previously explained, often co-exists problematically with binge eating and worsens prognosis when present (Marcus et al., 1988).

Additionally, the study undertook an analysis of identified cognitive styles to look for common patterns in the styles of those who binge eat. It was hoped that this effort might provide some beginning insight into, and perhaps a clearer definition of this compulsive behavior from a DCT standpoint.

The cognitive pattern of formal/overall, sensorimotor/problem was suspected to represent this population, for theoretical reasons (see discussion of escape theory in Chapter 2, p. 92) as well as based upon comprehensive project observations. This study sought to verify whether this might indeed be a characteristic of binge eaters in general and to speculate on what this means if so. Of course, if other patterns were to emerge, it was hoped that this would provide further clarification or direction for future study.

Hypotheses

The various hypotheses outlined in Chapter I are elaborated here.

1. Participants in the experimental group will attain lower scores on the binge eating measures post-treatment and at three-month follow-up.

It was believed that the group that included the wider range of interventions would better address the needs of the group's binge eaters than a traditional cognitive-behavioral program. The expanded program was thought likely to address areas key to the binge eating problem, as elaborated in Chapters 2 and 3.

2. Participants in both groups will achieve equivalent, modest weight losses (approximately 5% of starting body weight) immediately following the program.

While it might be expected that the traditional cognitive-behavioral program, with its somewhat more intense focus on restraint, would produce higher short-term losses, this has not historically been the case with the populations served at Milford Hospital. The high numbers of binge eaters consistently present in these programs, the levels of chronic obesity, and the greater focus on lifetime habit change rather than short-term

restraint success, probably have contributed to an average weight loss at the lower end of the wide spectrum (e.g. 0-25%) reported in the literature overall (Chiauzzi, 1991). It was believed that the two programs would initially not differ much on weight losses, but that binge eating, developmental level changes, and regain figures would all be more favorable, in contrast, within the experimental group (see below hypotheses as well).

3. Participants in the experimental group will have regained less weight at follow-up than others.

According to this study's logic, participants being treated in a manner that addresses a variety of cognitive processing areas, some of which are particularly relevant and usually ignored, would achieve changes meaningful and integrated enough to last or to provide stronger resilience in the face of relapse.

4. Participants in the experimental group will show lower Beck Depression Inventory scores at post-test and at follow-up.

It was believed that depression, which is sometimes, but not always improved with weight loss alone, would more consistently improve with cessation of binge eating

and a greater cognitive flexibility in the face of the problem. As hypotheses #1 and 6 state, these factors were predicted to show greater improvement in the experimental group.

5. Participants who binge eat will emerge as more likely to follow a formal/overall, sensorimotor/problem cognitive developmental level pattern.

This hypothesis arises from the exploration of DCT and of escape theory (see Chapter 2). If indeed part of the compulsive pattern of binge eating involves "deconstruction" to lower levels of cognitive awareness and meaning-making, a commonly preexisting higher level, one that would disturb a person with reflections about the self, would be posited. This study aimed to investigate whether or not this might be true.

6. Those with improved binge eating scores will prove to have shifted cognitive developmental level vis-a-vis the problem behavior (binge eating; i.e. sensorimotor to another level).

One of the study's basic premises is that binge eaters resist improvement in traditional cognitive-behavioral programs because interventions are not necessarily calculated to allow movement away from the

sensorimotor to higher cognitive developmental levels. A comparison of binge eating score improvements and developmental level was therefore undertaken to explore this hypothesis.

Study Design and Program Formats

The study groups were conducted at Milford Hospital in Milford, Connecticut, where the author has facilitated weight management programs for three years. The DCT (or experimental) group was led by the author. The standard cognitive-behavioral comparison group was led by the hospital's Director of Education, a registered nurse with many years teaching and counseling experience.

The decision to use two therapists arose from the desire to minimize the possibility of expectancy bias, which was considered a greater threat to validity here than the presence of two therapist styles within the study.

Each group was planned to accommodate 10-15 people who were randomly assigned from among those who registered. Group 1 ultimately contained 16 (with one later lost to attrition) and Group 2, 14 (with two lost to attrition).

The hospital advertises its weight management programs in the local press, in a mass-mailed newsletter, and in letters to its professional staff as a program that emphasizes "lifetime maintenance". These typical

avenues of publicity were followed within this study as well, and drew the base of people from which the participants came.

Traditionally, the Milford Hospital program has followed the 16-week LEARN Program for Weight Control developed by Brownell (1990), which incorporates recent research on cognitive-behavioral management of relapse and includes a psychoeducational component on the multiple and complex causes of overweight.

Accordingly, the hospital's programs are differentiated from commercial weight loss programs that emphasize quick weight loss and/or the use of specialized diet food products. The hospital's programs have consistently contained a high percentage of binge eaters, as measured by an "Eating Habits Scoreboard" published in a professional weight management facilitator's newsletter (Wing, 1992), as well as a high percentage of chronically overweight people.

Within the course of the author's cited comprehensive project, the cognitive-behavioral format was modified to include interventions classified as sensorimotor and dialectical (or post-formal). Generally, the standard cognitive interventions were considered formal, and behavioral, concrete. This effort was meant to try to better meet the needs of a broader range of participants, especially binge eaters.

In short, a standard cognitive-behavioral protocol was augmented by sensorimotor and dialectical interventions. Participants were rated pre- and post- for general and problem-related cognitive style according to DCT conceptualizations. A suggestive correlation was found between the augmented program and the attainment of reduced binge eating scores, shifted cognitive-developmental level vis-a-vis the problem, and modest weight loss among the binge eaters within the program--a group notably resistant to cognitive-behavioral weight management strategies (Marcus et al., 1988; Brownell and Wadden, 1992; Wing, 1992) and highly likely to engage in a "sensorimotor" processing style relative to their perceived eating problems.

Indeed, binge eating itself has been described in purely sensorimotor terms: "...self is reduced to body, experience is reduced to muscle movement <and there is> a shift to low levels of self-awareness" (Heatherton and Baumeister, 1991, p. 88).

In the present study, then, the standard program was again augmented by sensorimotor and dialectical interventions within the experimental group, along with other changes, such as goal co-construction, meant to make treatment consistent with DCT principles.

To briefly summarize the standard program, it is a 16-week, one hour per week, program which costs \$200. The program workbook has 16 corresponding lessons with

cognitive-behavioral homework exercises, with one assigned per week. Weekly sessions consist of didactic content and group sharing, support, and problem-solving. An exercise physiologist speaks to the group one week, and a dietitian another.

The present study retained the hospital's usual registration procedures, where people are assigned to groups randomly after paying their fee and providing background/demographic data. All participants were provided with an informed consent letter prior to beginning the program (see Appendix G).

One group then followed the standard LEARN program format, with its usual emphases. It did not include planned additional interventions nor the individual construction of goals to take cognitive processing differences into account. Participants in this group were encouraged, as is typical in most such programs, to follow workbook exercises regularly and to aim to cut food consumption down to certain levels in order to reach a prescribed loss of 1 to 2 pounds per week.

Binge eating, again as is typical, was treated as one obstacle to lowered consumption to be tackled in a cognitive-behavioral change framework along with other habits not conducive to loss.

The second, experimental, group, as previously mentioned, included introductory education on cognitive developmental levels (see educational handout in Appendix

H), goal co-construction, and added sensorimotor and post-formal interventions (see Table 1 and Figures 3 and 4 for specific content and differences between each).

It retained many elements of the standard cognitive-behavioral program as a structure for learning to eat differently. The structure of the standard format was retained for the second group in order to better facilitate comparison with the standard treatment condition. Further, by retaining much of the standard format, it was hoped that

Table 1
Characteristics of Study Groups

Experimental Group	Standard Group
*education on DCT levels	*no education on DCT levels
*goal co-construction	*no goal co-construction
*added sensorimotor and dialectical interventions (e.g. relaxation training, discussion of feminist issues)	*no interventions added to standard protocol
*standard workbook used and selective use encouraged in accordance with individual goals	*standard workbook used and compliance encouraged for all
*participants choose own weigh in schedule	*participants weigh in weekly

- WEEK 1. Introductions; discussion of complex reasons for difficulties losing weight; discussion of DCT and DCT questionnaire; goal-setting assignment.
- WEEK 2. Discussion of goal-setting assignment. Discussion of binge eating cycle and how it relates to DCT levels. Introduction of calorie-targeting formula; calorie targeting assignment for those who opt to do so; deep breathing exercise and homework.
- WEEK 3. Exercise physiologist speaks. Beginning exercise program encouraged.
- WEEK 4. Discussion of strategies for preventing binges (sensorimotor strategies added to book suggestions, discussed and practiced).
- WEEK 5. Dietitian speaks. Beginning monitoring of fat intake levels encouraged.
- WEEK 6. Discussion of sensorimotor (with in-group practice), concrete, and formal strategies for responding to a binge (post-binge strategies)
- WEEK 7. Addictions videotape (includes stress management component and experiential meditation component)
- WEEK 8. Concrete education on food portioning, label reading, etc.
- WEEK 9. Return to discussion on binge prevention: what is working, not working, what have people discovered. Elaboration of cognitive/behavioral strategies. Additional practice with sensorimotor coping/stress reduction strategies.
- WEEK 10. Discussion and in class exercises on family rules, attitudes, learnings about food.
- WEEK 11. Discussion and in class exercises on cultural attitudes about women, eating, and body size.
- WEEK 12. Discussion, in class exercises, and homework on body image.
- WEEK 13. Continued processing of body image learnings.
- WEEK 14. Discussion of cognitive-behavioral relapse prevention, maintenance strategies, assignment to develop 6-month goals and plan for attainment.
- WEEK 15. Sharing of goals and plans.
- WEEK 16. Final wrap-up, good-byes, weigh ins.

Figure 3

Experimental Program Outline
(Major differences from standard program
outlined)

*Group discussion generally centers around weekly lesson topics with reinforcement of cognitive-behavioral principles and strategies. Discussion do not follow the order of the workbook material exactly; some later material (i.e. Lessons 13, 14 on binge prevention strategies) is moved and covered earlier in the group. (Weeks 3, 5, 8, 14, 15, and 16 will cover the same material as in the experimental program).

WEEK 1. Introductions; discussion of complex reasons for difficulties losing weight; discussion monitoring--techniques, importance. Weekly monitoring and weighing in begins.

WEEK 2. Introduction of calorie targeting formula; calorie targeting assigned; beginning exercise program encouraged.

WEEK 3. Exercise physiologist speaks.

WEEK 4. ABC's of behavior; discussion of cognitive-behavioral strategies for preventing binges (lesson 13 material moved up to week 4).

WEEK 5. Dietitian speaks. Beginning monitoring of fat intake levels encouraged.

WEEK 6. Discussion of cognitive-behavioral strategies for responding to a binge (lesson 14 material moved up to week 6).

WEEK 7. Stimulus control techniques.

WEEK 8. Concrete education on food portioning, label reading, etc.

WEEK 9. Black-and-white thinking; irrational self-talk.

WEEK 10. Strategies for parties and restaurant eating.

WEEK 11. Behavior chains.

WEEK 12. Irrational thinking, continued: imperatives, shoulds, comparisons to others.

WEEK 13. Generation of alternate activity lists.

WEEK 14. Discussion of cognitive-behavioral relapse prevention, maintenance strategies, assignment to develop 6-month goals and plan for attainment.

WEEK 15. Sharing of goals and plans.

WEEK 16. Final wrap-up, good-byes, final weigh in.

Figure 4
Contents of Standard Cognitive-Behavioral Protocol

the increased effectiveness the program aimed to achieve could occur within the type of program that binge eaters are highly likely to seek: that is, a program aimed at managing weight.

The cognitive-behavioral format as typically used has much of value to help clients making the kinds of changes under discussion, in any case. Though still limited, cognitive-behavioral protocols have shown the best results in the literature in terms of weight loss, and they show promise in the area of binge-eating reduction as well (Brownell and Jeffery, 1987; Marcus et al., 1988; Telch et al., 1990; Brownell and Wadden, 1992; Smith et al., 1992).

Experiments in the area of using cognitive-behavioral formats to reduce binge-eating and simultaneously reduce weight are still in formative and speculative stages and have not been published to date (Telch et al., 1990; Telch, personal communication, 1993).

The present study did not aim to respond directly to the Telch et al. (1990) study calling for experimental protocols combining weight loss and binge eating treatment goals, though it was likely to achieve some concordant results. It aimed essentially to build upon the author's work with a DCT-modified program to seek the outcome of reduced binge eating within a clinical weight management setting.

A 16- to 20-week format has become more or less standard in clinical weight management programs (Brownell and Wadden, 1992; Brownell and Jeffery, 1987), and was kept here, as weight loss and duration of habit change results have been shown to be greatly improved with a longer program than the 8- or 10-week groups common in the 1960's and 1970's (Brownell and Jeffery, 1987; Brownell and Wadden, 1992).

Further, programs specifically for binge eating that do not address weight loss at all have typically been in the 10-session range (e.g. Telch et al., 1990; Marcus et al., 1988). However, a promising recent study with a purging and non-purging bulimic population, with no focus on weight loss, extended its format to 14 sessions with excellent post-test results (Jones and Stone, 1992).

The idea that integration of changes takes time is substantially supported as well by biological research showing abnormal neurotransmitter metabolites still present over three weeks after prolonged, complete abstinence from bingeing in a strictly controlled hospital research setting (Jimerson et al., 1992).

Changes in such, for many, seem to occur "very slowly", following initial behavioral changes, according to these authors (p. 37). In other words, if physical cravings occur that complicate efforts to effect habit change, a program that supports people until such challenges abate is likely to be most successful. And

while physical sensations of craving are not the only precipitant to binges (Brownell et al., 1986b; Arnow et al., 1992), they are for some individuals particularly problematic.

Some writers would argue that they need to be addressed and given time to alter regardless of the social or behavioral reinforcements identified and altered within therapy (Guillemin et al., 1977; Wurtman, 1986; Marrazzi and Luby, 1986; Huebner, 1993).

Participants were randomly assigned to groups in order to meaningfully measure results of the different program protocols. Further, random assignment was utilized to keep a heterogenous mix of participants in each group, which would not only make results more generalizable, but was particularly desirable in this case.

For here, of course, part of the goal was to see if those who binge eat could learn to change patterns and lose weight within the type of program they usually seek. Contrary to the idea that heterogeneity usually leads to a poorer group outcome overall, the experimental protocol was meant to allow for individual differences and needs to be addressed and met within the overall program framework (also see Table 3, Chapter 4, for participant pre-program characteristics, including pre-test scores).

Table 2
Participant Demographics

Group 1

#	M/F	AGE	WT.
1	F	53	192
2	F	58	175
3	M	32	272
4	F	62	220
5	F	24	236
6	F	36	155
7	F	36	216
8	F	50	172
9	F	36	145
10	F	40	141
11	F	67	230
12	F	58	251
13	F	51	155
14	F	53	165
15	F	46	156
16	F	57	142
\bar{X} =		47	189

Group 2

#	M/F	AGE	WT.
1	M	47	270
2	F	42	222
3	F	49	179
4	F	47	137
5	F	54	180
6	M	27	251
7	F	52	196
8	F	47	165
9	F	46	195
10	F	49	180
11	F	62	212
12	F	43	180
13	F	49	238
14	F	36	252
\bar{X} =		46	204

Two major changes appeared on the present experimental group protocol that diverged from the comprehensive project format. First, participants were educated from the start about how and why certain individuals fail to lose weight or retain losses through typical methods. Participants then were to examine their own developmental level questionnaire responses and ratings to identify their shortcomings and strengths in approaching change goals and to identify what might be the most efficacious change strategies (see Addendum - for experimental program outline).

Then, participants were encouraged to realistically construct their own goals for habit change and for weight loss, given what they had learned about themselves. Usually in weight management programs it is expected that all participants will aim to achieve all goals for change set by the program. If flexibility exists, it is usually in how many pounds per week the person wishes to lose, and even here program guidelines might recommend certain choices.

In the experimental group described here, such a situation was meant to be avoided. A person identified as an extreme binge eater, for example, might see that she falls into a high risk/low chance of success category. Therefore, this person might set as a goal for herself the changing of binge patterns, postponing weight loss altogether or aiming at a very modest loss at first.

She may then decide which types of tasks (sensorimotor, formal) might help her maintain consistency in using concrete behavioral strategies.

Another participant might find that these same tasks seem optional, given her particular situation. It was hoped that in this way the limitations of typical programs would be overcome, allowing individual participants to seek the solutions best suited to their situation and minimizing chances of complete failure for anyone.

Instrumentation

Participants in both groups completed the following measures at pre-, post-, and three-month follow-up periods:

1. General information sheet: to see how and where participants differ, and to see if demographic trends exist that could impact the study. (Administered pre-only.)

2. Binge eating scale: while Wing's (1992) Eating Habits Scoreboard was used for the comprehensive study described and for monitoring binge eating historically among the hospital's weight management groups, Gormally's (1982) Binge Eating Scale (BES) was chosen for the present study.

This scale is widely used and frequently cited throughout the literature (e.g. Marcus et al., 1988, 1990; Telch et al., 1990; Smith et al., 1992). Its internal consistency has been established, and normative score ranges for three levels of binge eating severity published (Gormally et al., 1982).

3. Developmental level measure: for the comprehensive study cited, a written questionnaire instrument was developed by the author to assess client's cognitive developmental level. This questionnaire was a variation on Ivey's (1991) "What Is Your Preferred Style of Helping" questionnaire designed for those in the helping professions to ascertain their predominant cognitive developmental level.

Items were altered where necessary to a more generally applicable wording, and items specifically about eating were added. Analysis of comprehensive study results had suggested that the questionnaire did detect sensorimotor responses on eating-related questions by binge eaters, which changed with lowering of binge eating scores.

It had also detected predominant cognitive developmental level, at least as confirmed by natural language in Standard Cognitive-Developmental Interviews later conducted by the author (see Rigazio-DiGilio, 1989).

A variation on this instrument was developed for the present study in consultation with Dr. Ivey, in order to remedy some of its possible weaknesses. Items were rewritten in such a way as to maximize precision of classification into cognitive level categories (e.g. sensorimotor, concrete, etc.), to shorten length of items for administration ease, and to include a wider variety of defining items.

The questionnaire was pre-tested on a group of individuals with varied dieting and binge eating histories, and their feedback on face validity, ease of comprehension, etc. was integrated into the final version of the instrument.

The method of rank ordering response preferences (e.g. 1 for most preferred, down to 4 for least preferred for each item) was retained in order to force a prioritization, assuming that naturally all participants would utilize all levels in varying degrees and frequencies.

An addition to the revised questionnaire, also, was an open-ended sentence portion meant to gain several sentences of patient language, as in Rigazio-DiGilio's (1991) instrument and Hunt et al.'s (1977) classification instruments and rating system. This addition was meant to gather supporting data for the questionnaire proper, as the questionnaire has not yet been widely tested for reliability and validity.

One additional source of information regarding participant cognitive developmental level experience came from a brief form simply asking participants pre- and post- about their participation in a variety of sensorimotor activities other than binge eating, on the idea that horizontal growth within this level (as opposed to vertical to higher levels) might have positive consequences as well (see Chapter 2, and Baumeister, 1991).

4. Depression measure: the Beck Depression Inventory (1961) was chosen for this study. Since depression often co-exists with binge eating and suggests a poorer prognosis for change and change retention when it persists, depression scores were attained at pre-, post-, and follow-up.

The study aimed to ascertain, in particular, if developmental level shifts correlate with improved depression scores. Beck's instrument has proven valid and reliable as a clinical assessment tool, with reliability scores ranging from .85 to .93 and validity scores of .65 to .77 (see Beck, 1970; Reynolds and Gould, 1981). It is easy to administer and score and has good face validity.

5. Weight (obtained from the hospital scale): while participants in the experimental group were not required

to "weigh in" weekly, weights were obtained at pre-, post-, and follow-up for study purposes.

6. A final program evaluation, to obtain participant feedback on what seemed useful, and not, to them, was administered according to the hospital's usual practices.

Copies of all instrumentation can be found in Appendix F.

Data and Statistical Analysis

Binge eating scores and depression scores were analyzed for significant differences between the two groups' post- scores. Data were subject to analyses of variance between the two groups, with pre- test scores as co-variants.

Additionally, cognitive-developmental level assessments were analyzed for patterns related to whether those who binge eat differ notably as a group in cognitive style from others.

On the CDL questionnaire measure, a weighted score was obtained for each participant (i.e. total sensorimotor response score, total concrete response score, etc.), and also a score representing the level most often chosen as "most preferred". Open-ended question language was rated as to developmental level

using the classification system outlined by Rigazio-DiGilio (1989), derived from Hunt (1977).

Rating was completed by the author and by Ms. Costello, the other group facilitator, with an interrater agreement rate of 95%. Concordance rates between the various CDL assessments were noted.

In several areas it also seemed important to note how often people in each group switched categories, such as from "severe" binge eater to "moderate", from "moderately" to "mildly" depressed, from one cognitive-developmental level to another perhaps more adaptive level of processing. In these cases, chi square analyses were used to search for any significant differences between the standard and the experimental group.

Finally, individual interviews with two binge eaters from each group were also conducted following the program to gather supporting data on the process of developmental level change (or non-change). These interviews were assessed by the author only.

Three-month follow-up occurred at a pre-scheduled session at the hospital; those who did not attend were contacted by phone and mail in an effort to maximize the amount of data available. A three-month follow-up time was chosen for study efficacy. Six-month follow-ups are typical in this area (Brownell and Jeffery, 1987); however, follow-up periods of as little as 10 weeks have been reported (Telch et al., 1990).

The following chapter summarizes and discusses the implications of the study's results.

CHAPTER 4

RESULTS

Overview

The present study yielded support for most of its hypotheses. The sections that follow report and discuss all of these findings. In addition, supplementary sources of information, not directly hypothesized about (for example, participant interviews), are discussed later in order to help clarify and expand upon the meanings of some of the results.

For a general overview of results, please refer to Table 3, Participant Characteristics, and Table 4, Pre-Post Characteristics, below.

(Abbreviations are listed on p. xiv; CDL1 and CDL2 elaborated under Hypothesis 5: Results and Discussion, below.)

Table 3

Participant Pre-Program Characteristics

GROUP 1.

S#	M/F	AGE	WT.	BES	BDI	CDL1	CDL2
1	F	53	192	52	30	C/CS	C
2	F	58	175	40	17	D/FS	D
3	M	32	272	35	4	F	F
4	F	62	220	38	4	C/CS	C
5	F	24	236	44	10	C/FS	C
6	F	36	155	40	14	C/S	CS
7	F	36	216	46	33	CS/S	CS
8	F	50	172	50	13	F/S	F
9	F	36	145	30	10	SD/SC	S
10	F	40	141	25	6	C	C
11	F	67	230	27	20	C	C
12	F	58	251	48	10	S	S
13	F	51	155	19	4	SF/S	S
14	F	53	165	39	10	S	S
15	F	46	156	20	6	C	C
16	F	57	142	16	4	C	C
\bar{X} =		47	189	35.5	12		
SD=		12	42.5	11.5	9		

Modal CDL1 = C/S (C=genl;S=eating; reps. most frequently chosen "most preferred" response)

Modal CDL2 = C (reps. lowest weighted score, or "most preferred" score)

GROUP 2.

1	M	47	270	39	6	CF/S	C
2	F	42	222	40	4	D	D
3	F	49	179	38	13	F	S
4	F	47	137	20	7	C	C
5	F	54	180	48	10	C/S	C
6	M	27	251	26	4	C	C
7	F	52	196	44	17	S	S
8	F	47	165	35	7	C/S	C
9	F	46	195	35	9	S	SF
10	F	49	180	53	15	CF/S	F
11	F	62	212	27	11	D/C	D
12	F	43	180	29	14	S/DF	S
13	F	49	238	42	33	S	S
14	F	36	252	54	4	S/SF	S
\bar{X} =		46	204	38	11		
SD=		8	38	10	7.5		

Modal CDL1 = C/S (C=genl;S=eating; reps. most frequently chosen "most preferred" response)

Modal CDL2 = S (reps. lowest weighted score, or "most preferred" score)

Table 4

Participant Pre-Post Characteristics

GROUP 1.

S#	WT.	BES	BDI	CDL1	CDL2
	Pre-Post	Pre-Post	Pre-Post	Pre-Post	Pre-Post
1	192-175	52-40	30-21	C/CS-D	C-D
2	175-166	40-33	17-12	D/FS-D/FS	D-D
3	272-271	35-30	4-4	F-D/S	F-D
4	220-212	38-35	4-4	C/CS-C/CS	C-C
5	236-218	44-40	10-9	C/FS-C/FS	C-C
6	155-151	40-35	14-10	C/S-C/S	CS-CS
7	216-203	46-39	33-20	CS/S-CS/S	CS-CS
8	172-160	50-41	13-10	F/S-F	F-F
9	145-136	30-29	10-4	SD/SC-SF/C	S-S
10	141-135	25-22	6-4	C-C	C-C
11	230-212	27-22	20-14	C-C	C-C
12	251-214	48-37	10-6	S-SC	S-SC
13	155-150	19-17	4-4	SF/S-SF/S	S-S
14	165-153	39-34	10-9	S-C/S	S-C
15	156-155	20-20	6-6	C-C	C-C
16	142-	16-	4-	C-	C-
\bar{X}	= 189-181	35.5-31.6	12-9		
SD=	42.5-39	11.5-8	9-5.5		
Modal CDL1 = C/S-C/S					
Modal CDL2 = C-C					

GROUP 2.

S#	WT	BES	BDI	CDL1	CDL2
	Pre-Post	Pre-Post	Pre-Post	Pre-Post	Pre-Post
1	262-254	39-33	6-4	CF/S-CFD/C	C-C
2	222-211	40-27	4-2	D-C/F	D-CF
3	180-178	38-24	13-6	F-D	S-D
4	137-135	20-19	7-4	C-CS	C-CS
5	187-184	48-33	10-5	C/S-D/C	C-C
6	251-	25.5-	4-	C-	C-
7	186-184	44-25	17-6	S-S/C	S-C
8	166-163	35-29	7-1	C/S-C	C-C
9	199-195	35-27	9-4	S-C	SF-C
10	180-176	53-24	15-9	CF/S-C	F-C
11	212-	27-	11-	D/C-	D-
12	207-187	29-19	14-3	S/DF-C	S-C
13	237-226	42-39	33-17	S-S/SD	S-S
14	253-208	54-29	4-1	S/SF-C	S-C
\bar{X}	= 205-192	38-27	11-5		
SD=	38-30.5	10-6	7.5-4		
Modal CDL1 = C/S-C					
Modal CDL2 = S-C					

Hypothesis 1: Results and Discussion

Participants in the experimental group will attain lower scores on the binge eating measures post-treatment and at three-month follow-up.

Gormally's (1982) Binge Eating Scale was used to measure extent of binge eating in participants before and after treatment. Gormally cites a mean score of 28.9 for the binge eaters classified as "severe" in his seminal research with this instrument. The "moderate" binge eating group scored 19.6 on average, and the "no problem" group 14.9. Gormally did not specify clear cut-off scores for routinely classifying individuals with this scale.

Cut-off scores have been designated by other researchers, however. Marcus et al. (1990) in a representative study cited 27 as the cut-off score for "severe", 18-26 for "moderate", and 0-16 for "no problem". These scores represent the means of Gormally's original groups with adjustment for the standard deviations.

In the current study, amount of change or reduction was considered foremost. However, movement out of the "severe" category was also deemed important, and so 27 was used as a point of demarcation for this category.

Table 5 shows the pre- and post- scores on the BES for the two study groups.

Table 5
Binge Eating Scale Scores

GROUP 1			
S#	Pre-	Post-	3-mo.
1	52	40	42
2	40	33	33
3	35	30	30
4	38	35	35
5	44	40	42
6	40	35	35
7	46	39	39
8	50	41	41
9	30	29	29
10	25	22	23
11	27	22	24
12	48	37	40
13	19	17	-
14	39	34	33
15	20	20	-
16	16	-	-
$\bar{X} =$	35.5	31.6	34

GROUP 2			
1	39	33	30
2	40	27	27
3	38	24	25
4	20	19	20
5	48	33	30
6	25	-	-
7	44	25	24
8	35	29	29
9	35	27	24
10	53	24	26
11	27	-	-
12	29	19	17
13	42	39	39
14	54	29	29
$\bar{X} =$	38	27	26

As Table 5 illustrates, Group 2, the experimental group, had a greater overall reduction in Binge Eating Score. Group 1's mean BES dropped by 4 points (35.5-31.6), while Group 2's dropped by 11 points (38-27). Group 2 started, then, with a slightly higher mean, but both means still fell into the category labelled "severe" (the starting difference between the means was not statistically significant).

An analysis of variance suggests that the post-difference of 11 vs. 4 points here is significant at the $p < .01$ level.

The number of individuals moving out of the "severe" category also differed between groups, with 1 such person in Group 1 and 7 in Group 2. Chi square analysis suggests, again, that this difference is significant at the $p < .01$ level.

In sum, subjects in the experimental group did indeed differ in amount of improvement in the area of binge eating, as hypothesized. This improvement, furthermore, was achieved at the same time as modest ($X=4.6\%$) weight losses were achieved, as was also hoped (see Chapters 1 and 2).

Of course, it was supposed throughout this study that a wider range of intervention types, congruent with cognitive-developmental theory, would better allow participants to stop unwanted binging behavior. It could be argued, though, that the somewhat reduced emphasis on

following restriction directives allowed people to binge less. This explanation does not account for the standard focus within the Milford Hospital program, however, which does emphasize "realistic" weight loss goals. Further, both groups did average similar weight losses overall ($\bar{X}_1=5.4\%$; $\bar{X}_2=4.6\%$; see Table 6, below).

Cognitive-developmental level changes within the groups will be discussed in detail later in this chapter. However, it should be noted here that Group 2 had both a significantly lower mean binge eating score post-program, significantly more people moving out of the "severe" binge eating category, and also significantly more individuals moving to higher cognitive-developmental levels as measured by this study's instruments.

Specifically, people in this group were more likely to have fewer "sensorimotor" responses, especially related to eating behaviors, on post-test measures, and to have more "concrete" (and to some extent, "dialectic") responses in evidence. For example, no one in Group 2 endorsed "I feel the food is in control" as "most preferred" on post-test (item #9 on CDL questionnaire), while some in Group 1 continued to endorse this choice.

Finally, it should be noted that all but one participant in Group 1 did receive a lower (that is, improved) post-score on the BES, even though the mean difference was not significant and only one person actually moved out of the "severe" category. In other

words, these subjects were endorsing at least some lower weighted items on the scale (for example, from "I feel unable to control my urges to eat...and fear I will never be able to stop"--4 pts.--to "Frequently, I feel I cannot control my urge to eat, but at other times I can control them"--3 pts.

There is recent literature (Agras, 1993), citing reduced binge eating scores obtained in a weight loss program following the LEARN protocol. This is the first time such a phenomenon has been written about, and no reduction amounts nor follow-up scores were reported. This "unexpected turn of events" was thought to derive from the participants' adherence to a structured eating program. In other words, this particular program may have produced greater adherence to concrete change goals, for some as yet unknown reasons.

Speculation that did not occur here, but that seems perhaps more plausible, is that there has been a growing trend away from strict restraint models to the more realistic, lower weight loss goal models that have been described, which theoretically will produce less bingeing. Many standard LEARN program settings have endorsed this view, which may at times have a more positive effect on binge eating than past models.

It appears that the LEARN program as followed in Group 1 did help people contain or reduce their overall binge eating behavior. The present study would suggest

that a model broadening the cognitive-behavioral intervention range better supports such changes, both at post-test and at follow-up.

Three-month follow-up results in fact supported Hypothesis 1. Group 1's BES increased to 34, nearly its starting average, though several individuals in the group did maintain changes. Clearly, these individuals did struggle more to do so than did participants in Group 2.

Group 2's three-month BES average score fell by one point, to 26, with several individuals continuing a gradual downward trend in their overall binge eating score pattern. Again, it is supposed that these people were better able to self-perpetuate changes.

They may also have been less discouraged by their modest weight loss percentages, as well, given their own participation in setting goals and means of attaining them. Avoidance of a return to restriction patterns can only help binge eating reduction efforts, as has been frequently stressed throughout this work.

Hypothesis 2: Results and Discussion

Participants in both groups will achieve equivalent, modest weight losses (approximately 5% of starting body weight) immediately following the program.

Congruent with current research and recommendations on weight loss amounts that are safe, reasonably achievable and maintainable, and still offer some health advantages (Brownell and Wadden, 1992; Brownell, 1993; Wilmore, 1993), a target range of 5% weight loss was hoped for among participants in both groups. Table 6 shows the actual weights achieved.

Table 6

Weights

GROUP 1.

S#	Pre-	Post-	% Loss	3-mo
1	192	175	9	170
2	175	166	5	165
3	272	271	0	270
4	220	212	3	210
5	236	218	8	217
6	155	151	3	149
7	216	203	5	204
8	172	160	5	160
9	145	136	6	134
10	141	135	4	132
11	230	212	8	213
12	251	214	15	215
13	155	150	3	150
14	165	153	7	152
15	156	155	0	154
16	142	-	-	-
\bar{X} =	189	180	5.4	179.6

GROUP 2

1	262	254	3	252
2	222	211	6	201
3	180	178	1	176
4	137	135	1.5	136
5	187	184	1.5	182
6	251	-	-	-
7	186	184	1	182
8	166	163	1.5	162
9	199	195	2	190
10	180	176	2.5	176
11	212	-	-	-
12	207	187	8	182
13	237	226	5	220
14	253	208	18	194
\bar{X} =	205	192	4.6	187.7

Group 1 began with a mean weight of 189 lbs., and had a mean loss of 9 lbs. and 5.4% of body weight by the program's end. Group 2 began with a higher mean weight, 205 lbs., and ended with a mean loss of 13 lbs. and 4.6% of body weight.

While these numbers support Hypothesis 2, it should be noted that Group 2's mean loss represents a much wider range and lower modal loss percentage than Group 1, which showed somewhat higher loss percentages when individual subject scores are considered. It could be argued, therefore, that the group following the standard cognitive-behavioral protocol achieved slightly better weight loss results at post-program.

If this is true, it could be hypothesized that the reduced emphasis on conformity to weight loss goals in Group 2 had a small impact on amount of weight loss achieved during the program. It could also be, however, that those with higher starting weights simply have more difficulty losing (see Brownell and Jeffery, 1987, for a discussion of this).

Hypothesis 3: Results and Discussion

Participants in the experimental group will have regained less weight at follow-up than others.

It was hypothesized that participants in the experimental group would have greater retention of losses due to a better match between their cognitive developmental level, generally and vis-a-vis their eating behavior and problems, and the interventions presented. In other words, more lasting and self-perpetuating change was expected where problems were actually addressed in a way that accounted for the cognitive level in which they were experienced. Further, the experimental program overall provided a wider range of options for learning and change methods, ideally meeting more of the needs involved for more people.

Hypothesis 3 was partially supported, in that Group 1, on average, retained their average loss of 5% of body weight, while Group 2, on average, continued to lose, achieving an overall loss percentage of 8% after the program and three-month follow-up periods.

As neither group showed significant regain during this period, it is not possible to test the idea that eventual regain will be less within the experimental group. As three-month norms are not available, further, it is difficult to tell which results are closer to what is typical in a cognitive-behavioral weight management program follow-up. That is, do people usually continue t

to lose, or do people regain immediately, or do people maintain for some period before regaining? Looking at one-year follow-up data, the latter two speculations seem most apt.

Group 2's apparent ability to continue toward change goals on their own, after completing the program, fits with this study's hypothesizing overall.

Qualitatively, in discussing retention, post-program efforts, relapse, etc. with participants in the follow-up session, the Group 2 participants were notably more optimistic about their efforts to continue change on their own. They had not, generally, voiced dissatisfaction with their low initial weight loss percentages and rather maintained relatively more faith in their ability to "stay on track" than the others.

Here, too, their improved binge eating status, both at post and at follow-up, could only help their retention and continued change efforts.

Hypothesis 4: Results and Discussion

Participants in the experimental group will show lower Beck Depression Inventory scores than the comparison group at post-test and at follow-up.

The Beck Depression Inventory (BDI) was administered to obtain depression levels within the groups. Beck's (1961) standard score ranges were referred to. That is, 0-9 signifies no depression; 10-15, mild depression; 16-19, mild-to-moderate depression; 20-29, moderate-to-severe depression; and 30+, severe depression (Kavan, 1990).

Both groups began with mean scores in the mildly depressed range ($\bar{X}_1 = 12$; $\bar{X}_2 = 11$). These starting scores are somewhat less severe than reported in other weight loss/binge eating treatment reports in the literature (e.g. Swift et al., 1986). The starting range within the groups was quite wide, however (4-30/group 1; 4-33/group 2), suggesting the presence of some moderately and severely depressed people in each group.

Table 7 records BDI scores for both groups.

Table 7
Beck Depression Inventory Scores

GROUP 1.

S#	Pre-	Post-	3-mo.
1	30	21	24
2	17	12	13
3	4	4	4
4	4	4	4
5	10	9	9
6	14	10	12
7	33	20	24
8	13	10	10
9	10	4	6
10	6	4	6
11	20	14	16
12	10	6	8
13	4	4	-
14	10	6	4
15	6	6	-
16	4	-	-
\bar{X} =	12	9	10.7

GROUP 2

1	6	4	4
2	4	2	2
3	13	6	6
4	7	4	5
5	10	5	7
6	4	-	-
7	17	6	6
8	7	1	4
9	9	4	4
10	15	9	6
11	11	-	-
12	14	3	4
13	33	17	17
14	4	1	1
\bar{X} =	11	5	5.5

Group 1 began with a mean BDI score of 12, mild depression, and ended with a mean score 3 points lower, 9, no depression. Group 1 began with a mean BDI of 11, mild depression, and ended with mean score 6 points lower, 5, no depression. Analysis of variance suggests that these post-test differences are not significant ($p < .09$).

In each group, roughly equivalent numbers of people (8, 6) moved into lower score categories (e.g. from "moderate" to "mild" or from "mild" to "no" depression). Chi square analysis did not reveal this difference between the groups to be significant.

It must be said, then, that Hypothesis 2 was not supported. However, it should be noted that only one individual remained depressed at all in Group 2; this individual began severely depressed, 33, and ended in the mild-to-moderate range, 17. Six in Group 1, on the other hand, retained a score showing some degree of depression.

Previous studies have suggested that weight losses, when first achieved, correspond to improvement in depression scores, while difficulty in achieving or maintaining losses tends to increase depression scores (Stunkard, 1959; Brownell and Jeffery, 1987). So, weight loss could explain BDI improvements in either group here, as could any concomitant improvements in binge eating scores (Swift et al., 1986). However, given this study's focus on cognitive-developmental level, it must also be

emphasized here again that the group with more change in level overall (Group 2) also showed the (slightly) greater improvement in the area of depression.

Finally, however, it must be considered that these groups did not start with scores as high as one would have expected, given the severity of binge eating present.

So it may be that the degree to which either program in this study could have impacted depression can perhaps not be fully commented upon at this time.

At three-month follow-up, Group 1's average BDI score had edged back up 1.7 points, just crossing the line into the mildly depressed category again, but not reaching the pre- level. Group 2's average BDI score stayed about the same, at 5.5. While, again, these numbers do not represent significant changes, they are congruent with this study's hypothesizing overall.

Hypothesis 5: Results and Discussion

Participants who binge eat will emerge as more likely to follow a formal/overall, sensorimotor/problem cognitive developmental level pattern.

Hypothesis 5 emerged in response to trends noted in the comprehensive project research as well as in response to Heatherton and Baumeister's (1990) paper on binge eating as escape from self-awareness (see Chapter 2, p. 94). That is, that if people are limited to abstract self-reflective processes in their cognitive and problem-solving lives, they will be likely to resort to repetitive sensorimotor activities, often without perceived choice, as respite from this limited and self-enclosed perspective. This line of thinking, then, was applied to the analysis of the overall cognitive-developmental level assessments obtained in this study.

As outlined in Instrumentation, in Chapter 3, several measures were used to ascertain client developmental levels. The questionnaire developed for this study was scored two ways. The first (CDL1) represents the most frequently chosen "most preferred" response, whether it be sensorimotor (S), concrete (C), formal (F), or dialectic (D). (Recall that each item had each an "S", "C", "F", and "D" rank ordered choice.) Where two letters appear under CDL1, two categories were chosen an equal number of times. Where a second letter is separated from the first by a "/", this second letter

#2, 3, 4, and 9 on the instrument) and is only noted in cases where the response frequencies for these items differs markedly from the general pattern of responses on the instrument.

The second score (CDL2) represents a weighted response score. In other words, all the "S" responses were totalled, all the "C" responses, etc. The resultant lowest score here represented "most preferred" overall. Where two letters are noted, the second lowest score was within a point of the lowest and is included here, almost as if it were a "tie".

The open ended sentences on this questionnaire were rated using Hunt et al.'s (1977) guidelines by the author and Ms. Costello, as previously explained. An interrater agreement level of 95% was obtained. Here, where two letters appear, two modes of processing could easily be distinguished. Figure 5 provides examples of sentences coded "S", "C", "F", etc. for purposes of clarification.

SENSORIMOTOR:

(When I focus on my family I) "am overwhelmed by the obligations....there's too much to do, too little time, and no one helps out....without a fight."

(When I think about food I) "want to eat....and even thinking of what to cook is too hard, every day, every week, every month, every year. I'm too tired to deal with it all."

CONCRETE:

(When I focus on my family I) "want what is best for them....I want them to be happy, and to feel good about the way they look and the things they do."

(When I think about food I) "try to think about the best way to prepare it. Since I really enjoy cooking and trying new recipes. I honestly enjoy eating and must learn portion control and making better choices. However, weighing and measuring is time-consuming and bothersome."

FORMAL:

(When I focus on my family I) "....want my folks to be well and happy. I want to achieve my goals, and I think about how to lose my anger from within."

(When I think about food I) "think about meals with family and friends, but I also think about things like why I must raid the refrigerator between 12:00 and 6:00 a.m. I don't understand why I do this."

Figure 5

Examples of Open-Ended Sentence Passages Coded
"S", "C", or "F" by Raters

Table 8, below, provides an overview of the beginning CDL assessments. An asterisk appears where concordance of CDL assessment was achieved across measures.

Table 8

Cognitive-Developmental Level Ratings

GROUP 1

S#	Sentence	CDL1	CDL2	Concordance
1	C	C/CS	C	*
2	-	D/FS	D	*
3	F	F	F	*
4	C	C/CS	C	*
5	S	C/FS	C	partial
6	C	C/S	CS	*
7	S	CS/S	CS	*
8	-	F/S	F	*
9	-	SD/SC	S	*
10	C	C	C	*
11	C	C	C	*
12	C	S	S	*
13	S	SF/S	S	*
14	S	S	S	*
15	C	C	C	*
16	C	C	C	*

GROUP 2

1	C	FC/S	C	*
2	C	D	D	partial
3	F	F	F	*
4	C	C	C	*
5	C	C/S	C	*
6	C	C	C	*
7	S	S	S	*
8	C	C/S	C	*
9	S	S	SF	*
10	C	CF/S	F	*
11	F	D/C	D	partial
12	-	S/DF	S	*
13	S	S	S	*
14	C	S/SF	S	partial

- = too little writing to accurately assess

Hypothesis 5 was not supported given the assessments made here. The patterns suggested in the comprehensive study were not as commonly seen and cannot be said to be typical or indicative of the binge eating pattern of these participants. However, those with high binge eating scores were likely to have an "S" rating in their food/eating-related responses, and many had "S" elements highly endorsed in predominantly concrete response protocols.

For example, the same person (e.g. Group 2, S's #5, 8), might endorse preferences for "planful and deliberate" and "clear and precise material that tells me how to proceed", speaking generally, and "feel compelled to eat it right away" and "the food is in control" regarding eating in particular.

Finally, and this will be elaborated more fully below, those with the most post-program improvements in binge eating, to some extent depression, and also to some extent weight loss, were more likely to have shifted to "C" score levels, especially in the problem area, no matter where they began. That is, the ability to approach problems in a concrete manner (endorsing such statements as "I make a plan for the future" or "I need to learn what to do", as opposed to "I feel anger, remorse, sadness" or "I feel the food is in control") seems to be key. This, of course, is what behavioral

methods aim for generally, and what those who fail to change have typically been unable to do.

The present results in no way contradict others' (e.g. Heatherton and Baumeister, 1991; Arnow et al., 1992) findings that binge eaters may resort to repetitive, narrow modes of sensorimotor experiencing when uncomfortable cognitions about the self predominate. Such thinking may indeed represent a common "trigger" to such behavior.

The present analysis simply implies that one's predominant "preferred" cognitive processing style, across many behavioral realms, may not relate to whether or not one engages in bingeing or other similar behaviors. Rather, what may be more important is one's flexibility, one's ability to take a desired action when one believes one wants to.

Bingers here began with compromised flexibility, no matter what their overall general cognitive style. That is, when confronted with "trigger" situations, whether unpleasant thoughts, tempting food, stress, fatigue, negative emotions, they felt compelled to react in one automatic (sensorimotor) way with no other volitional behavioral choice possible.

Hypothesis 6: Results and Discussion

Those with lowered binge eating scores will have shifted cognitive developmental level vis-a-vis the problem behavior (binge eating; i.e. sensorimotor to another level).

Hypothesis 6 was supported in this research. Table 9 shows CDL levels pre- and post- for both groups.

Table 9

Cognitive-Developmental Level Ratings Pre- and Post-

GROUP 1

S#	Sentence Pre-Post	CDL1 Pre-Post	CDL2 Pre-Post
1	CS-D	C/CS-D	C-D
2	-	D/FS-D/FS	D-D
3	F-D	F-D/S	F-D
4	CF-C	C/CS-C/CS	C-C
5	S-D	C/FS-C/FS	C-C
6	CS-C	C/S-C/S	CS-CS
7	S-C	CS/S-CS/S	CS-CS
8	-	F/S-F	F-F
9	-	SD/SC-SF/C	S-S
10	C-C	C-C	C-C
11	C-C	C-C	C-C
12	CS-CS	S-SC	S-SC
13	S-C	SF/S-SF/S	S-S
14	S-C	S-C/S	S-C
15	C-C	C-C	C-C
16	C-	C-	C-

GROUP 2

1	C-F	CF/S-CFD/C	C-C
2	C-C	D-C/F	D-CF
3	F-F	F-D	S-D
4	C-C	C-CS	C-CS
5	C-F	C/S-D/C	C-C
6	C-	C-	C-
7	S-C	S-S/C	S-C
8	CF-F	C/S-C	C-C
9	S-C	S-C	SF-C
10	CS-F	CF/S-C	F-C
11	FC-	D/C-	D-
12	C-C	S/DF-C	S-C
13	S-C	S-S/SD	S-C
14	C-C	S/SF-C	S-C

As Tables 8 and 9 make clear, one consistent CDL assessment, across all measures, was made in few individual cases. This is understandable, as all people are posited to engage in all levels of cognitive processing in different situations and at different times. This is one of the inherent problems in measuring CDL.

For example, participants' open-ended sentences often, but not always, reflected these post-program changes. It seems that people's written expression does not always, although it may, reveal the same cognitive style preferences that responses to a questionnaire instrument do. People's varied ability levels in the area of written expression may be reflected here as well.

Nevertheless, there was in nearly all cases some duplication of preferred response modes across measures, so that differences between pre- and post-program can be identified. In Group 1, it appears that six individuals showed CDL differences at post-test, and that nine did not. In Group 2, all 12 individuals completing the program showed CDL changes. This is a between-group difference significant at the $p < .01$ level, according to chi square analysis.

In nearly all cases, movement was to higher levels of processing--i.e. from "S" to "C" or "F". The most frequent post-test level that participants moved to was "C" (though some "F"s and "D"s are also apparent), even

where the pre-test assessment was not "S" (also see the preceding section). This may reflect an adaptive, efficient, accomplishment, in that those who moved into the "C" category were likely to have improvements in binge eating, and to a notable but lesser extent, in depression and weight loss as well.

Concrete response preferences include such statements as "I prefer clear and precise material that tells me how to proceed" or "I see how something fits into my dietary needs for the day <before deciding to eat it>", etc. This is clearly the type of ability that cognitive-behavioral programs aim to help participants achieve, and that binge eaters have historically had problems in achieving.

The movement to higher levels, particularly to concrete levels, was apparent in both groups, though it was more frequent in Group 2. Where Group 1 participants show score improvements, and weight losses, such movement is also often apparent.

Only one post-test change to "S" was noted. This was in Group 2 (S#4). It is hypothesized that as this person shows little change in either weight or binge eating habits, her case may fit the restraint theory model of increased problematic eating behavior where restraint is imposed. Stated differently, restraint strived for in the absence of self-supports congruent with one's cognitive-developmental needs may lead to

decreased, or at least, unimproved, ability to achieve one's change goals.

In a few cases, also, people started with "D" assessments and ended with "C", which may appear to be more constricted. Again, it must be emphasized that "C" is what is adaptive when it comes to trying to control one's behavior in a given area. Understanding systemic patterns, or oneself, is not helpful if the intellect seems divorced from the ability to act.

On the other hand, upward movement to "F" or "D" may imply that a broadening of perspective either helped or resulted from the subject's change efforts. It must be remembered here, too, that a person's ability to engage in concrete problem-solving can still have increased, even if final "most preferred" score is "F" or "D".

This indeed seems readily apparent in reading through individual protocols. The reverse of this is also true: that a person moving to a most preferred score of "C" usually also completed a protocol showing a higher level of "F" and "D" responses than before. Analysis of change patterns of all four categories of weighted scores was not undertaken here, yet trends can still be noted.

While some people, too, showed post-test changes in general, not merely eating-related, cognitive-developmental level, this was not always the case. In many cases, it was problem-related CDL only that showed

notable change. It may be that, in some cases, people's efforts in the program allowed them to achieve, or at least to express, a greater range or flexibility in their cognitive approach overall, and that for others this flexibility was more noted in a narrower sphere of experience.

Ancillary Measures

This study utilized two ancillary measures not directly hypothesized about, with the idea that they might provide additional clarifying information about the study's hypotheses and results.

The first such measure was a brief form asking participants pre- and post- about number of sensorimotor activities engaged in per week (both exercise and other). The second was information gleaned from selected participant post-program interviews and written evaluations meant to explore subjects' own perceptions of what may have helped their change process.

The sensorimotor activities form was provided to see if participants, especially in the experimental group, actually increased their engagement in sensorimotor activities (meditation, visualization, breathing exercises, bathing, massage) as a result of change efforts in the program. The experimental group was expected to have a greater increase in this area, in

response to the experience and discussion provided within this group.

On the other hand, it could have been that such experience and discussion did not transfer to outside group time, and this would have been of interest. Alternatively, it could have been that change in general, regardless of method used or group participated in, corresponded with greater engagement in alternative sensorimotor activities. This idea would be congruent with either DCT or escape theory, as elaborated in Chapter 2.

Review of these forms showed that such alternate sensorimotor activity did increase (pre-post mean = 1.5 to 3) in the experimental group and to change little in the standard group (pre-post mean = 1.5 to 1).

Nevertheless, while it is intriguing to speculate that a wider range of sensorimotor activity, of a non-compulsive, more self-supporting nature, helped people to gain more access to concrete cognitive abilities, this is also not the only important factor. Participant interviews (two people from each group were interviewed) and written post-evaluations did not often cite such activities as directly helpful, so if they were, this did not seem obvious to the subjects themselves.

What was cited most frequently as helpful differed somewhat between the two groups. People in both groups frequently mentioned the group support and the concrete

behavioral suggestions (monitoring, etc.) as helpful. Education about the role of fats, and how cutting them can be helpful, was also frequently mentioned.

(It seems as if the contemporary emphasis on fats reduction helps people naturally move away from a restrained eating posture--"I can still eat, but it should be low fat"--and seemed to help people in both groups to some degree in modifying behaviors.)

However, people in Group 2 also frequently mentioned (N=7) interventions that could be classified as "dialectic", whereas no one in Group 1 did so.

The following quotations illustrate:

"It was great to find out that this isn't all my fault..."

"It was helpful to talk about this as a 'woman's issue'....I hadn't thought of this before..."

"I can deal with my family much better now at holiday and other eating times...."

"I don't feel as much like I have to look like some magazine ideal anymore...."

"It was helpful to understand that many women struggle like this, and it's not just that I've been a failure....sometimes I've had impossible expectations....this was very freeing...."

To summarize, ancillary sources of information in this study did provide support for the idea that expansion of intervention type, according to DCT theory,

helped participants to change. This expansion, of course, mostly took the form of increased attention to sensorimotor and dialectical additions to the protocol--those that are typically absent from a cognitive-behavioral program and theoretically indicated for binge eaters.

CHAPTER 5

SUMMARY AND CONCLUSIONS

Overview

In sum, the present study extended the author's comprehensive project study completed in 1992. It aimed to accomplish two goals: 1.) to compare the effects on binge eating and weight loss of two clinical weight management groups: one following a standard cognitive-behavioral format, and the other modified to encompass the tenets of Developmental Counseling and Therapy (DCT) as described by Ivey (1986, 1991a), to see if the binge eaters and others within the groups thereby differ on several outcome measures; and 2.) to analyze patterns of cognitive processing styles to see if trends emerge that might elucidate the nature of the binge eating experience from a DCT viewpoint, and that might therefore suggest new approaches to treatment.

The study found significant differences between the standard (control) and modified (experimental) group on measures of binge eating, depression, and cognitive developmental level change. The study therefore offers support for the idea of expanding cognitive behavioral protocols for weight management and binge eating to include a wider variety of cognitive-developmental change strategies. It also implies that people are enabled to

change when assisted in broadening their capacity to engage in varied cognitive modes more adaptively and flexibly.

Specifically, the study explored six hypotheses and found support for most. The experimental group showed significantly ($p < .01$) greater improvements in binge eating scores, both in terms of post-test differences and in terms of proportions of people moving out of the "severe" binge eating category.

Participants in both groups achieved equivalent, modest weight losses (approximately 5% of starting body weight) immediately following the program, as was hypothesized. Neither group showed notable regain at the relatively short three-month follow-up session. Those in the experimental group, however, continued to lose weight at a modest rate, while those in the standard group did not.

Post-test differences on the Beck Depression Inventory proved to be significant only at the $p < .09$ level.

Subjects in this study were notable, however, for their rather uncharacteristically low BDI scores to begin with (i.e. similar groups usually show more elevated BDI scores generally).

A variety of cognitive-developmental processing styles was found throughout both study groups, contradicting the hypothesis that formal/overall,

sensorimotor/problem would be a common pattern. However, an assessment of "sensorimotor" was more likely to be present for binge eaters, specifically in response to eating-related questions. General, or overall, cognitive-developmental style appeared to be unrelated.

It was noted, in addition, that movement to "concrete" as an assessed preferred mode of relating to the problem was most frequently associated with change.

General Conclusions and Discussion

Overall, the above conclusions argue for the expansion of standard cognitive-behavioral methods in the treatment of obesity and binge eating.

The standard cognitive-behavioral program (non-experimental group) here, as has been fairly typical of this program in the past, followed current research and theory in emphasizing "realistic" weight loss goals, lifetime maintenance, and relapse prevention. It resulted in modest (approximately 5%) weight losses, which are currently being recommended by leaders in the clinical weight management field (Brownell and Wadden, 1992; Brownell, 1991a,b), and participants, at least at three-month follow-up, were able to retain these losses.

The standard program, also as is typical, produced small improvements in both binge eating and in depression inventory scores. These changes did not reach the level of statistical significance; however, it should be noted

that nearly all participants did in fact achieve some modicum of change in the direction of improvement.

The standard group benefited as well, it seems, from the contemporary emphasis on fat reduction and education about same. This current trend in health recommendations (e.g. Ornish, 1991, 1993) apparently is found to be quite helpful by participants themselves. It may be an indirect way that people can follow to achieve small weight reductions without the excessive restraint that repeatedly has been found to lead to binge eating (Polivy and Herman, 1985; Arnow et al., 1992).

The experimental group, however, clearly benefitted more extensively from the programming they were involved in. Specifically, their program included an expanded range of intervention types to accord with DCT theory. Mostly these additions took the form of sensorimotor (relaxation, visualization, etc.) and dialectic (feminist and cultural discussion) exercises in class and as homework. This group also set its own goals for change in a co-constructive manner also consistent with DCT theory.

The differences in this group are believed to have contributed to a significantly greater reduction in binge eating score, a significantly higher proportion of people moving out of the "severe" binge eating category, and a significantly higher number of people moving out of the

"sensorimotor" cognitive mode in relation to eating as measured by this study's instruments.

Theoretically, the experimental program's expansions were posited to indeed promote such differences. First, the binge eating experience is described as one of narrow sensorimotor experiencing. It was believed that a broader, more extensive range of sensorimotor experiencing would allow for more flexible growth within and out of this processing level.

Second, the issues around weight and overeating in this society have wide-reaching familial, cultural, and gender-specific etiological factors and consequences. It was believed that awareness of these issues might be crucial to the cognitive broadening, flexibility, and perspective-taking also posited to be of importance in achieving lasting habit change.

Finally, the simple practice of self-goal setting may also mitigate against the problematic restraint-binge cycle, as it encourages free choice and realistic assessment of one's needs and abilities.

It may be that the participants in the experimental group were able to finally approach the concrete and formal operational tasks necessary to ultimate success in a way that had meaning and relevance for them. That is, they may have been able to, in Piaget's terms, assimilate and accommodate these approaches because their own

current modes of cognitive experiencing were accounted for.

The results of this study provide support for these ideas. They also suggest that cognitive-developmental level is something that may be measurably changed when concrete behavioral changes are achieved. That is, an habitual unwanted behavior may be experienced in a highly sensorimotor manner--it may feel like one has no conscious control over one's emotional or motor behavior in particular circumstances.

The ability to relate to these circumstances more adaptively, perhaps by thinking about them and choosing to act differently, and then actually doing so, means that one has begun to experience the problem from a different, perhaps concrete or formal operational, level predominantly.

This appears to be what occurred among this study's participants, and these changes were measurable. There are both clinical and research implications arising from this finding, as will be mentioned more fully below.

This study, finally, provided as hoped a means of addressing binge eating and modest weight loss goals simultaneously. It seems that the DCT tenets were most helpful in creating an experimental program capable of doing so by addressing multiple levels of the multi-determined experience typically involved.

Limitations

While all of the preceding provides much support for the study's primary hypotheses, the study's limitations should be noted as well.

First, the small number of subjects in these groups, and the small number of groups in the study, provide a suggestive picture of how a varied range of interventions can affect those with different cognitive-developmental styles and different problem severity levels. More people and more groups would be necessary to strengthen the statements made here about such effects.

Also, it must be conceded that the measurement of cognitive-developmental level through questionnaire instruments is relatively new and untested. Wider studies of instrument validity and reliability would need to occur to corroborate the validity of the CDL assessments made here.

This study, overall, provided quite strong support for several of its hypotheses, given the group sizes and novelty of the assessment instruments. This is perhaps much more encouraging than if smaller differences had been found. Still, caution must be used in viewing the results overall because of the limitations stressed here.

Future Implications

Clinical

The most obvious implication of this research for clinical practice is that group treatment of obesity and binge eating may be more effective when standard cognitive-behavioral methods are expanded to include sensorimotor and dialectical interventions as well as concrete and formal operational.

This is theoretically sound, as people may relate differently, cognitive-developmentally, to standard interventions. Some may find more facility with interventions of one type than another. Also, particularly with binge eating, concrete strategies are notoriously difficult for people to engage in and to stay involved with. Interventions from the full DCT spectrum can likely facilitate this engagement. Again, the idea of greater assimilation and accommodation when current modes of experiencing are accounted for applies.

These tenets probably also hold true in clinical work with individuals. However, an adaptive range of

intervention is more accessible and probably used more regularly in individual work. Group work, of necessity, is often is more standardized and limited in intervention range because of the need to address several people at once.

An interesting question not addressed by the present study is whether the above would hold true with other compulsive, out-of-control-feeling behaviors. Some of the same reinforcing mechanisms may be present (relief from anxiety, social, psychological, and neural reinforcements, etc.). Presumably, a range of cognitive-developmental levels would also be present within a client population, and presumably, too, concrete action to stop the behavior would have proven difficult.

Some work in other clinical spheres lends support for the idea that this may be true. For example, Kabat-Zinn's (1991) stress management program claims to have helped people overcome a variety of compulsive behaviors. This program is an example of one featuring predominantly sensorimotor (meditation) modalities.

And, as previously described (Chapter 2, pp. 98-99), the wide proliferation of 12-step groups addressing many problems suggests that many people are finding help in dealing with a variety of problems in a manner that stresses looking at a much wider sphere than oneself (dialectic). These programs, at the same time, provide the external control often necessary for those operating

in a sensorimotor mode of processing (see Figure 2). It may indeed be, then, that consideration of the DCT spectrum of processing styles and intervention types is indicated whenever people feel frustrated in trying to change repetitive, compulsive behaviors that involve a sensorimotor component, not merely for binge eating, and not merely for group treatment.

Research

The work here suggests that research to address the above clinical questions would be compelling, potentially useful and promising. Research with other types of populations, besides binge eating groups, including both groups and individuals, could see whether the possibilities offered here prove true or viable.

Also, continuing research in the area of cognitive-developmental level assessment seems of utmost importance if claims for DCT's efficacy are to be made. Assessment using questionnaire devices, interview techniques, open-ended sentence techniques, and comparisons among them, could be most useful.

In sum, it seems likely that continuing research into the clinical and theoretical issues explored here can only help clarify our understanding, and our ability to treat, the complex and multi-determined problems that have been addressed in this work.

APPENDICES

- A. STANDARD COGNITIVE-DEVELOPMENTAL CLASSIFICATION
SYSTEM AND EXAMPLES
- B. DCT ANALYSIS/CLASSIFICATION/GUIDELINES FOR
THERAPEUTIC INTERVENTION
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APPENDIX A

STANDARD COGNITIVE-DEVELOPMENTAL CLASSIFICATION SYSTEM AND EXAMPLES

by Allen E. Ivey and Sandra A. Rigazio-DiGilio
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GENERAL GUIDELINES

This classification system is required to rate the Standard Cognitive-Developmental Interview. Two scorers will independently classify the level of cognitive-development predominantly characterized by the patient's verbal behavior during different sections of the interview using the criteria set forth below. "Predominant" is defined as the cognitive-developmental level that stands out above all others.

The Assessment Phase

Each scorer will receive a typescript of the dialogue that occurred between the interviewer and patient during the assessment phase of the interview. The task for the rater is to determine the level of cognitive development predominantly represented in the patient's conceptualization of a family issue. Ratings will be made on a four-point classification scale which identifies the four basic dimensions of cognitive development: sensori-motor/elemental, concrete operational/situational, formal operational/pattern, and dialectic/transformational. It should be noted that, although more than one level may be used by the patient, the task of the scorer is to determine which of the four levels is predominantly used as a frame of reference during the assessment phase. Two methods of rating will be used:

- 1) The raters will classify each patient statement using the criteria defined on the following pages. Predominant cognitive-developmental level will be computed by percentages of client responses in each of the four cognitive-developmental categories (Ivey, 1983).
- 2) The raters will complete a holistic classification by adding overall subjective clinical expertise to the above data to provide a more overall impression (Carkuff, 1969).

The Treatment Phase

Each scorer will also receive eight intervention sections that occur during the treatment phase of the interview, divided to reflect the eight cognitive-developmental sub-divisions defined below. The group of typescripts will be randomized and will include only the patient statements. The task of the scorer is to holistically review each section and determine the cognitive-developmental sub-division predominantly reflected within the patient statements.

Ratings will be made on a eight point classification system which sub-divides each of the four basic dimensions of developmental cognition by early and late indicators: early and late sensori-motor/elemental, early and late concrete operational/situational, early and late formal operational/pattern, and early and late dialectic/transformational. Again, although more than one sub-division may be identified in each section the task of the scorer is to determine which of the eight is predominantly used by the patient within each section. Raters will use only the holistic method of classification for these eight sections.

COGNITIVE-DEVELOPMENTAL DIMENSIONS CRITERIA FOR RATING

I. SENSORI-MOTOR/ELEMENTAL DIMENSION

A. Early sensori-motor/elemental sub-division

Key words: see/hear/feel

The patient randomly focuses on fragments and pieces of sensori-based data as s/he talks about the visual, auditory, and/or kinesthetic elements of a situation/issue.

Affect

- o The patient shows minimal distinction between sensory input and emotions.
- o The patient is dominated by sensory stimuli and affect

Cognition

- o The patient shows minimal ability to coordinate the elements of sensory-based data into an organized Gestalt.

B. Late sensori-motor/elemental sub-division

Key word: belief

The patient provides a view of reality that makes sense of the sensori-based data reflective of the situation/issue in a somewhat incomplete or irrational manner.

Affect

- o The patient's emotions remain sensory-based and reactive.
- o The patient is unable to act on her/his emotions.

Cognition

- o The patient offers interpretations that, no matter how sophisticated, are illusory and irrational, stated in a way that the patient could not take effective actions based on the beliefs.

II. CONCRETE OPERATIONAL/SITUATIONAL DIMENSION

A. Early concrete operational/elemental sub-division

Key word: do

The patient describes the situation/issue from a single self-perspective, in a linear, relatively organized sequence of concrete specifics. Her/his

explanation has a major emphasis on facts and some focus on a few basic feelings.

Affect

- o The patient describes general emotions simply, from one perspective, and with a lack of differentiation.
- o The patient expresses emotions outwardly.

Cognition

- o The patient focuses predominantly on a factual description of the concrete details of a situation/issue from his own perspective. There is minimal emphasis on evaluation or analysis.

B. Late concrete operational/elemental sub-division

Key words: if ..., then

The patient organizes the elements/facts of the situation/issue into linear "if ..., then" statements that may lead to issues of causation. S/he may be able to control and describe actions, and may be able to think in terms of antecedents and consequences. The focus is on facts and actions as opposed to feelings, analyzation, evaluation, or awareness of patterns. Logic and reversibility may be evident.

Affect

- o The patient is able to control and describe broad-based, undifferentiated, outwardly focused affect.

Cognition

- o The patient demonstrates linear "if ..., then" thinking, emphasizing causality and predictability from a single perspective.
- o The patient is able to control and describe actions and the impact of actions.
- o The patient is able to apply logic and reversibility to concrete situations/issues.
- o The patient is able to separate thoughts and actions.

III. FORMAL OPERATIONAL/PATTERN DIMENSION

A. Early formal operational/pattern sub-division

Key word: pattern

The patient distances from description of sensory experience and moves toward examination and/or analyzation of the facts of a situation/issue or to examination and analyzation of the self. S/he is

able to identify repetitive behavior, thoughts, and affect related to various similar situations and issues.

Affect

- o The patient demonstrates an awareness of the complexity of feelings

Cognition

- o The patient describes repeating patterns of thought, behavior, and affect in the self that occur across situations.
- o The patient engages in analysis of self and situation.

B. Late formal operational/pattern sub-division

Key word: patterns of patterns

The patient is able to analyze patterns of patterns or multiple perspectives of behavior, thought, and feeling from the vantage points of the self and the contextual fields within which s/he interacts. The patient is able to see larger, consistently repeating patterns of behavior, thought, and feeling in her/his life and examine how s/he thinks and feels about the evolving theme/view of reality.

Affect

- o The patient demonstrates an ability to analyze her/his patterns of feelings.
- o The patient demonstrates an ability to identify others' feelings and be empathic.
- o The patient demonstrates an awareness that feelings can be validly expressed in multiple ways.

Cognition

- o The patient demonstrates an ability to examine the patterns of self and situation.
- o The patient demonstrates an ability to organize and analyze different situations/issues abstractly.
- o The patient may coordinate and discover new patterns, compare and contrast different situations, and form this into a Gestalt.

IV. DIALECTIC/TRANSFORMATIONAL DIMENSION

A. Dialectic/transformational/integrative sub-division

Key words: integrate, put together

The patient demonstrates an ability to generate an integrative picture that combines thought and action and shows an awareness that personal constructions

of reality are cogenerated via the family network.

Affect

- o The patient offers a wider range of emotions and recognizes that it can change contextually.
- o The patient recognizes that s/he can change/adapt to new situations.

Cognition

- o The patient demonstrates an ability to coordinate concepts and put together a holistic integrated picture.
- o The patient demonstrates an awareness that the evolving integration was coconstructed in a dialectical or dialogic relationship with family, history, culture, etc.

B. Dialectic/transformational/deconstruction sub-division

Key words: challenge the integration, action
The patient demonstrates an ability to criticize and challenge her/his own integrated system and discover alternative perspectives. The patient will be able to think about moving toward action based on these alternative perspectives.

Affect

- o The patient is able to look at her/his entire realm of emotions and then still move beyond in an infinite reflection on reflections.

Cognition

- o The patient intellectualizes and challenges her/his assumptions/integrations.
- o The patient can identify the flaws in the reasoning/logic of her/his integration from various relational perspectives.
- o The patient demonstrates an ability to think about action in relation to her/his new perspectives.
- o The patient demonstrates an ability to think about action in relation to her/his new perspectives.

EXAMPLE I:

LATE SENSORI-MOTOR: ...the sense I make of it is that my whole world is crumbling down around me....There's nobody I can trust to be there.

LATE FORMAL: ...because I think the way I see things, is life is stable, things should remain constant and when these things change, I'm totally thrown for a loop.

EARLY DIALECTIC: ...it's clear that what I learned when I was growing up has not really prepared me for dealing with loss....This talk is making it kind of clear that no one ever told me or taught me how to deal with loss. So, at this point my reaction is to completely pull into myself and become paralyzed.

EXAMPLE II:

LATE SENSORI-MOTOR: ...It's like...unless I feel that way because of just being an overwhelming...sense of not being able to handle all these things that are going on.

LATE FORMAL: ...when I do what I should do for others, I stay in control...until I wear myself to the breaking point...but when I sit to re-evaluate...to think about me...the feelings that I have are too much to bear...it's like when I know what is expected of me I am in control, but when I think about what I need...I am out of control.

EARLY DIALECTIC: I think that being brought up in a family that had an alcoholic in it [makes me feel like I have] an overwhelming sense of responsibility for everybody else. When you're in an alcoholic atmosphere, your needs just don't count.

EXAMPLE III:

LATE SENSORI-MOTOR: ...it's my fault why I feel this way right now and I really can't make sense of why I let this happen...

LATE FORMAL: ...If I can't manage to keep things running smoothly, then I think I am weak...not strong enough for this family of adventurers....I should be able to hold things together and if I can't, then that does say something bad about me.

EARLY DIALECTIC: ...[My mother] never let me do things on my own....She always closely watched and helped. I felt inadequate when she had to do everything over for me. And I think that helped me to feel less than perfect....and this has left me with some feelings of not being strong enough or not being competent enough.

APPENDIX B

DCT ANALYSIS/CLASSIFICATION/GUIDELINES FOR THERAPEUTIC INTERVENTION

To facilitate the transformation to the next stage of development, consider some strengths that are identified in the client. Recognition of these strengths by the therapist may assist the client in approaching the developmental tasks of the next stage. It will be difficult to make the transformation to the next stage unless the client has some awareness of personal strengths within the present stage. Furthermore, some minimal understanding or competence is needed at each level before the client can move to the next level.

1. Preparation—Identify the Problem
 - a. Goal: To obtain a general picture of the problem or concern and search for magical thinking, irrational thought or behavior, discrepancy between the real and ideal, or a *conflict* faced by client.
 - b. Basic Techniques: "Could you tell me what you'd like to talk about?" Listening skills to draw out facts, feelings, and possibly underlying meanings of client concerns.
 - c. Theoretical Options: Range from free association and discussing a new dream to identifying behavioral problems.
2. Sensori-Motor Issues
 - a. Goal: To ground the client in sensory reality and to note basic elements of the situation.
 - b. Basic Techniques: "What did you see?" "Hear?" "Feel?" Perhaps give some special emphasis to how the body felt. Offer solid attending skills (culturally appropriate eye contact, body language, vocal tone, and verbal following).
 - c. Theoretical Options: Relaxation training exercises, Gestalt excitation techniques, neurolinguistic programming (R), overlapping techniques of seeing, hearing, and feeling, or simply ask: "What behavior did you see? What did you hear? How did you feel?" A careful functional analysis as conducted by a skilled behavioral therapist to search out stimulus-response conditions is also representative of this sensori-motor grouping. Through functional analysis, it is possible to lead to later specific concrete operations and linear cause-and-effect explanations of the problem.
 - d. Transformational Question: "How do you organize the things you see, hear, feel?" "What sense do you make of these elements?"
3. Preoperational Issues
 - a. Goal: To clarify the preoperational, magical, or irrational ideas or behavior. At issue is for the therapist to hear the client's frame of reference as it is brought to the interview. As such, this phase is often tied with phase 1.
 - b. Basic Techniques: Listening to the client's description of the

(Rigazio-DiGilio, 1989)

situation. Directly restating key words or constructs of the client may help access his or her unique constructions of the event. Attempt to draw out specific facts, feelings, and interpretations of the event.

- c. Theoretical Options: Infinite (as always). For cognitive processing, the search for irrational ideas will be important. In behavioral therapy, the distinction between present behavior and desired behavior may represent the preoperational issue. In psychodynamic therapy, the issue may be the desire to understand as compared with present lack of understanding. Each theoretical school has its own constructions of the important irrational or preoperational dimensions that should be addressed in therapy.
- d. Transformational Question: "Could you give me a specific example of your concern?" The client may already have presented an example. The goal is to move the client away from repeating the preoperational idea to a discussion of either sensori-motor elements or concrete details.

4. Concrete Operations

- a. Goal: To draw out in linear, sequential form the concrete specifics of the client's concern. We are not interested in interpretation; rather we want to know specific things that happened in the most concrete form possible. Avoid subjective and evaluative language.
- b. Basic Techniques: Questions and listening skills oriented to drawing out concrete aspects of the situation. A major emphasis on facts. "What happened specifically? What did you say? What did the other person say? What did you *do*? What did he or she *do*?" Distinguished from preoperational in that there the client's interpretation of data may be encouraged to discover irrational dimensions. Here, the emphasis is on mutually agreed on facts, with a limited emphasis on feelings.
- c. Theoretical Options: Mainly behavioral. Even if working in a psychoanalytic orientation, the goal is still to obtain the concrete specifics of a trauma, a dream, or a "triggered" reaction.
- d. Transformational Question: "Given these facts, what causes what?" This question may lead to a return to the preoperational, irrational level of functioning but introduces the late concrete operational issue of causation into the discussion.

5. Late Concrete Operations

- a. Goal: To arrive at a mutually satisfactory system explaining a situation, usually with an "if/then" dimension. The client should be able to operate predictably in thought and action in the environment.
- b. Basic Techniques: Drawing out what happens before and after the occurrence of the problem, concern, conflict, or irrational idea. "What happened just before?" "Then, what happened?"

"What was the result?" This can be represented by an antecedent-behavior-consequent in terms of behavior or as the ABCs of rational-emotive therapy.

- c. Theoretical Options: Behavioral and RET options seem to be clearest, but their systematic formulations may be used in psychodynamic therapy, family therapy, or another framework.
 - d. Transformational Question: "Is this a repeating pattern?" "Are there other situations where you act out this sequence?"
6. Early Formal Operational Thinking
- a. Goal: To identify and think about behavior and thoughts, particularly repeating patterns of behavior.
 - b. Basic Techniques: "You seem to have a tendency to repeat that particular behavior, thought, or interpretation. How do you feel or think about this pattern?" "What does this pattern of behavior or thought mean to you?" "What function does this particular pattern serve for you?" The focus of these techniques will tend to be on the client and the client's constructions or interpretations of the situation.
 - c. Theoretical Options: Rogerian client-centered therapy with its emphasis on thinking about feelings and, to some extent, meanings is a framework often effective at this level. Frankl's logotherapy and much of humanistic psychology seem to operate at this self-analytical level.
 - d. Transformational Question: "How is this pattern related to other patterns that may be undergirding your thinking and behavior?"
7. Late Formal Operational Issues
- a. Goal: To assist the client to see larger, consistently repeating patterns in his or her life. In effect, we started at the sensorimotor level with many small fragments of thought or behavior, organized them at the preoperational level into sometimes useful (but nonetheless magical) thinking, moved then to concrete descriptions of behaviors and thoughts, then to still larger patterns of thoughts and behaviors, and, at this level, to examining patterns of patterns.
 - b. Basic Techniques: "We see the pattern of behavior you had with your children and the pattern you use with your employees. How might these two patterns relate? Do these two patterns form a still larger pattern?" "What is the feeling you have connected with this (these) patterns? Free associate from that feeling to an earlier period of life."
 - c. Theoretical Options: The psychodynamic therapies of Freud, Jung, and Adler are often characteristic of this level of cognition. Any therapy that deals with reframing reality, particularly from an unconscious orientation, follows this general

model. Note that all these orientations still come from a "self-oriented" model in that the client is constructing reality.

- d. Transformational Question: "We've constructed a comprehensive picture that seems to repeat itself—there are positives and negatives in that pattern. How is or was that pattern developed or constructed in a family, social, or historical context?" This transformational question moves to dialectical awareness that personal constructions and meanings are cogenerated in a context of relationship.

8. Dialectical Thinking

- a. Goal: To develop awareness that "reality" is constructed in a dialectical or dialogic relationship with one's family, one's history, one's gender—a host of relational issues. The distinction between knowledge (*episteme*) and intelligence (*noesis*) is not critical at this stage, but awareness that either may be a co-constructed view may be useful.
- b. Basic Techniques: A major change occurs in that the client is encouraged to move beyond his or her own history and think about history is codeveloped or cogenerated with others. As such, questions that bring out awareness of the impact of one's family, ethnic background, race, gender, and so on all help the client see that his or her constructions were developed in the context of a network of relationships.
- c. Theoretical Options: Family therapy, feminist therapy, and Lacanian conceptions all seem to emphasize the dialectic. However, the analysis of transference phenomena in analytic frameworks can lead to dialectic awareness, as can some orientations to object relations theory. All these systems in various ways lead the client to see him- or herself in a coconstructed, codeveloped context.
- d. Transformational Question: "We've seen that your original problem or conflict can be viewed from many perspectives. Identify the flaws in the reasoning or logic behind each of those perspectives." At issue here is developing awareness that *all* perspectives in a deconstructionist framework have fatal illogical, preoperational flaws. We have traveled all this distance to find ourselves again at the beginning.

9. Deconstruction

- a. Goal: To encounter Platonic *noesis* (intelligence) that each piece of hard-won knowledge has inherent flaws. We may find a perfect form, but it soon slips away from us. This may require a willingness to live with the unknowable and to accept the logic of our illogic.
- b. Basic Techniques: "Each of our constructions, ideas, or behaviors contains internal contradictions. Let us seek out and challenge those contradictions. Confront the contradiction!" Even concepts taken for granted such as gender, race, or a specific

pattern of life are all open for reinterpretation and systematic deconstruction as one examines their meaning.

- c. Theoretical Options: Derrida and deconstruction theory, post-feminist and post-structural theory, some orientations to literary criticism, some modern feminist approaches. The implications of these new philosophic trends are only now beginning to be dimly sensed by the therapeutic field.
- d. Transformational Question: "Is there a unity within this diversity?" This question for some deconstructs deconstructivism and leads us back to the unity of sensori-motor experience and the unity we can experience with others. It suggests that what we originally defined as a "problem" may in truth have been an opportunity.

Which is the higher consciousness?

Sensori-motor	Setting and experiencing a flower
Concrete operational	Putting the flower in an arrangement
Formal operational	Writing a poem about the flower
Dialectical	Analyzing the poem about the flower (or analyzing the analysis of the poem about the flower)

Have we arrived at the "end" only to begin again?

APPENDIX C

THE STANDARD COGNITIVE-DEVELOPMENTAL INTERVIEW (SCDI)

by Allen E. Ivey, Sandra A. Rigazio-DiGilio, and Mary Bradford Ivey
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GENERAL GUIDELINES

In order to ensure standardization, the interviewer must adhere to the format (e.g., sequence and content of questions) below.

The only techniques that can be used at the discretion of the interviewer are those from Ivey's Basic Listening Sequence (Ivey, 1971; 1983). These techniques are attending, encouraging, paraphrasing, reflecting feelings, reflecting meanings, and summarizing and are meant to elicit further data and ensure clarity.

INTRODUCTION TO PATIENT

INTERVIEW GOAL

To join the patient and ensure comfort and cooperation

INTERVIEWER TASK

To clarify parameters of interview and to begin

INTERVIEWER STATEMENTS

"This interview will take approximately 45 minutes to complete. Although I will be audiotaping, the interview will be typed out and all names deleted before anyone from the research team reviews it. Therefore confidentiality is ensured."

OPENING PRESENTATION OF FAMILY ISSUE

INTERVIEW GOAL

To obtain a broad picture of a family issue; the key facts and feelings as organized by the patient with minimal interference from interviewer. To assess the predominant cognitive-developmental level used by the patient.

INTERVIEWER TASK

To obtain 3-5 sentences, or approximately 50-100 words in response to the interviewer statement below.

To listen for patient's presentation of a family issue to use as the foundation for the next phase.

INTERVIEWER STATEMENTS

"To begin with, I would like you to respond to a statement that I hope will stimulate you in some way. I would like you to say as much as you can about what happens for you when you focus on your family."

Summarize to ensure clarity.

EARLY SENSORI-MOTOR/ELEMENTAL ISSUES

KEY WORDS: SEE HEAR FEEL

INTERVIEW GOAL

To obtain an understanding of how the patient organizes her/his visual, auditory, and kinesthetic representation of a family issue, and to ensure s/he knows you understand.

INTERVIEWER TASK

After making the introductory statement below, use at least one question from each sensory category below to facilitate patient's punctuation of her/his sensory reality of the chosen issue. Accept randomness.

Do not attempt to move the patient beyond the specific elements as these elements are remembered. Focus on the patient's self-perceptual frame of reference.

Aim for here and now experiencing, not understanding or interpreting.

STAGE CRITERION

The patient should talk about the situation, self, or issue in a relatively random way which concretizes the problem. Interviewer may receive fragments and pieces of sensori-based data as s/he talks about what is seen, heard, and felt.

INTERVIEWER STATEMENTS

INTRODUCTORY STATEMENT

"You mentioned that ... (family issue). During this interview, I'm going to ask you some questions about this and I would like you to respond as best as you can. It will be important for you to try to directly respond to the questions I ask you. To begin with I would like you to find one visual image that occurs for you when you focus on ... (family issue presented).

SENSORY PUNCTUATIONS

A. Visual Perceptions

1. "What are you seeing?" (Change to do/did if too powerful).
2. "Describe the scene where it happened in detail."

B. Auditory Perceptions

1. "What are (did) you hear(ing)?"
2. "How are (did) people sound(ing)?"
3. "Describe the sounds that happened in detail."

C. Kinesthetic Perceptions

1. "What are (did) you feel(ing) in your body at this (that) moment?"
2. "How are (did) you feel(ing)?"
3. "What are (did) you feel(ing) while this is (was) going on?"

Summarize key perceptions of patient's, using her/his important words and phrases.

LATE SENSORI-MOTOR/ELEMENTAL ISSUES

KEY WORDS: BELIEF

INTERVIEW GOAL

To obtain an understanding of how the patient makes sense of the elemental issues: her/his interpretation of the elemental data discussed, or the frame of reference that s/he brings to the interview.

INTERVIEWER TASK

To encourage patient to discuss her/his interpretation of the example by asking any of the interpretation questions below.

To discourage any further experiencing statements or any discussion of facts.

Do not challenge patient's interpretation.

STAGE CRITERION

Patient should provide a frame of reference or view of reality that, to her/him, makes meaning and sense out of the sensori-based data. At this stage, the interpretation may be incomplete or irrational.

INTERVIEWER STATEMENTS

Paraphrase if necessary.

Restate key words and phrases to assist patient to access her/his unique construction of the example.

INTERPRETATION QUESTIONS

- A. "How do you make sense of all this?"
- B. "What do you think about all of this?"
- C. "How do you explain all of this?"
- D. "How do you put this all together?"
- E. "What meaning does all this have for you?"
- F. "What one thing stands out for you from this?"

Summarize to ensure clarity.

EARLY CONCRETE OPERATIONAL/SITUATIONAL ISSUES

KEY WORD: DO

INTERVIEW GOAL

To obtain concrete and specific facts pertaining to the patient's issue. The major emphasis is on description and facts with a limited emphasis on feelings and with no emphasis on evaluation or analysis.

INTERVIEWER TASK

After obtaining a good idea of how the patient experiences and interprets the situation, summarize and assist her/him to discuss the concrete details of the situation in linear, sequential form with major emphasis on facts. Assist by using any or all of the behavioral tracking questions listed below.

To encourage discussion of specific things that happened in as concrete a form as possible.

To discourage any further interpretation or subjective/evaluative verbalizations.

STAGE CRITERION

The patient should describe events in a linear relatively organized sequence with a few basic feelings. It may be that the patient offers a single perspective on the problem at this stage.

INTERVIEWER STATEMENTS

INTRODUCTORY STATEMENT

"I think I have an idea about how you think and feel about this ... (family issue; paraphrase or summarize data from previous two segments). It would now be helpful for me to get an idea of an example where these images, thoughts, and feelings occur for you. Tell me all the facts."

BEHAVIORAL TRACKING QUESTIONS

- A. "Can you tell me specifically what happened?" (use if example already presented)
- B. "Could you give me an specific example?" (use if an example has not been presented)
 - 1. "What did you say (do) then?"
 - 2. "And then what happened?"
 - 3. "What did the other person say (do)?"

LATE CONCRETE OPERATIONAL/SITUATIONAL ISSUES

KEY WORDS: IF ..., THEN

INTERVIEW GOAL

To arrive at a mutually satisfactory system explaining the situation under discussion, usually with an "if/then" dimension which may lead to issues of causation. To draw out what happens before and after the occurrence of the example/situation provided by the patient.

INTERVIEWER TASK

Search for antecedent and consequent conditions while still discouraging interpretation. The emphasis remains on description, not on evaluation or analysis. The question below are meant to assist the patient to review what happened before and after the situation.

STAGE CRITERION

The patient may be able to organize previous segments into linear "if/then" statements, may be able to control and describe action, and may be able to think in terms of antecedents and consequences. Logic and reversibility may be evident and patient may be able to think about actions and the impact of actions.

INTERVIEWER STATEMENTS

ANTECEDENT/CONSEQUENT QUESTIONS

- A. "What happened just before all this occurred?"
- B. "What happened afterwards?"
- C. "What was the result?"
- D. "So if you do _____, then what happens?"
- E. "Given the facts as you describe them (paraphrase or summarize previous statements), what do you think causes/triggers what?"

EARLY FORMAL OPERATIONAL/PATTERN ISSUES

KEY WORD: PATTERN

INTERVIEW GOAL

To move from description to examination and/or analysis of the facts of the situation and/or of the self. To facilitate the patient's identification of and examination of repetitive behavior, thoughts, and affect related to situations perceived to be similar to the primary example and related self.

INTERVIEWER TASK

To move patient away from sensory experiences and toward abstract thinking by asking some of the questions below until the patient demonstrates an ability to identify and think about repeating patterns of behaviors, thoughts, and affect that occur in situations similar to the primary example.

STAGE CRITERION

The patient will be able to offer an isomorphic situation(s) where the same sensori-motor elements and concrete-operational issues occur. The patient will be able to analyze both situation and self in this isomorphic example.

INTERVIEWER STATEMENTS

Paraphrase/summarize the linear, sequential format described previously using the patient's main constructs, key words, and phrases.

Move toward an examination of the situation by asking some of the questions below until the patient provides an isomorphic example.

- A. "Are there other situations that you find yourself in when you are with your family, where this same set of events and feelings occur for you?"
- B. "Does this kind of thing happen a lot for you in your family?"
- C. "Does this kind of thing happen a lot?"

Move toward an examination of self by asking some of the questions below until the patient shows an ability to interpret her/his repeating patterns of behavior thought, and affect.

- A. "What are you saying to yourself when that happens?"
 - B. "How do you think about yourself/see yourself in that family situation?"
 - C. "Have you felt ... thought ... acted that way in other family situations?"
 - D. "You seem to have a tendency to repeat that particular behavior/thought/interpretation. For example ... (paraphrase)."
1. "What do you think about this tendency of yours?"
 2. "What does this pattern of behavior/thought mean to you?"
 3. "What function does this pattern of behavior/thought serve for you?"

LATE FORMAL OPERATIONAL/PATTERN ISSUES

KEY WORDS: PATTERN OF PATTERNS

INTERVIEW GOAL

To assist the patient to identify and examine larger, consistently repeating patterns in her/his life and to analyze these patterns from the vantage point of the self and the contextual fields within which the patient interacts.

INTERVIEWER TASK

To assist the patient to identify and examine similar situations and repetitive patterns of thoughts, behaviors, and actions in the self and in others from a multitude of perspectives that account for similarities and differences. This will be accomplished by asking some of the questions below until the patient demonstrates an ability to recognize similarities, differences, and complexities.

STAGE CRITERION

At this stage the patient may be able to examine patterns of patterns. Situationally, s/he will be able to compare and contrast different situations and coordinate this into a Gestalt, manifest in an ability to gain multiple-perspectives and a fundamental unity for situations. In relation to the self, the patient will be able to examine patterns in the self and be able to recognize mixed and complex feelings.

INTERVIEWER STATEMENTS

"You have just shared with me two ways where you (and others) behave/think/feel the same way ... (paraphrase or summarize). You have also shared with me what you think this all means for/about you ... (paraphrase or summarize)."

- A. "Do you see anyway these patterns are connected?"
- B. "Putting the two issues together, how would you synthesize them?"

We see the pattern of behavior and thought that you had/that can occur with _____ and the pattern of behavior and thought that you had/that can occur with _____."

- A. "How do you think these patterns relate?"
- B. "Do these examples speak to even a larger pattern?"
- C. "What is the feeling you have connected with these examples?"
- D. "What do you think these examples speak to?"
- E. "What is similar about them?"
- F. "How do you think your way of reacting in each situation is similar?"

DIALECTIC/TRANSFORMATIONAL/INTEGRATIVE ISSUES

KEY WORDS: INTEGRATE PUT TOGETHER

INTERVIEW GOAL

To assist the patient in moving to an awareness that personal constructions of reality are cogenerated via a network of relationships (this section of the interview will limit itself mainly to the network of family relationships). To obtain a basic organizational summary of how the patient integrates what has been shared. To assist the patient to perceive this integration from several different perspectives.

INTERVIEWER TASK

To ask questions from the list below that assist the patient to see the impact of this network of relationships and to integrate the knowledge that has been shared throughout the first half of the interview.

STAGE CRITERION

The patient should be able to generate an integrative picture of what has been shared and view this from several perspectives, some which encompass the idea of reality as coconstructed.

INTERVIEWER STATEMENTS

Summarize information gained at the early and late formal levels, and follow with a question related to integration (A) and coconstruction (B).

A. INTEGRATION:

1. "Given what you have said about your family, yourself, and your situation (summarize using key words and phrases), how might you make sense of all these ideas as a whole?"
2. "What meaning do you get here?"
3. "What stands out for you from this session?"
4. "How would you synthesize this experience?"

B. COCONSTRUCTION:

1. "It seems we have been able to determine a pattern of thinking, feeling, and behaving that repeats itself for you when you are with your family. How do you think this pattern developed in your family, either in your family of origin, previous family environments, or your current living arrangement?"
2. "Are there other situations in your family that contribute to the way you think and behave too?"
3. "What other situations help to form the way you think and behave?"
4. "How did people learn these ways of thinking and acting in your family?"
5. "What rule are you operating under?"
6. "How do you suppose this way of thinking and acting came about for you?"
7. "How do you suppose this way of thinking or acting came about in your family?"

DECONSTRUCTION/TRANSFORMATIONAL ISSUES

KEY WORDS: CHALLENGE THE INTEGRATION

INTERVIEW GOAL

To assist the patient to develop an awareness that all assumptions/rules can be challenged and found to have flaws and/or that there are a multitude of vantage points from which to perceive any assumption or rule; to challenge the patient's perceptions. To assist the patient to move toward action based on this move forward alternative perspectives.

INTERVIEWER TASK

To assist patient to view her/his integration from several vantage points and to discover/challenge its parameters/flaws by asking a few questions from the first set labeled **challenging statements**.

To assist patient to rethink her/his integration and to discover new/alternative perspectives by asking a few questions from the second set, labeled **alternative statements**.

To assist patient to move toward action based on her/his situational/self/belief system examination by asking a few questions from the third set labeled **action statements**.

STAGE CRITERION

Patient will be able to criticize and challenge her/his own integrated system and discover alternative perspectives. Patient will be able to move toward action based on these alternative perspectives.

INTERVIEWER STATEMENTS

Paraphrase or summarize knowledge obtained from previous segment:

- A. "We've seen that your original example ... (paraphrase/summarize) is a typical pattern and that this pattern and your thoughts about it have developed for you within your family of origin/previous family/current family into rules of behaviors and thoughts."

CHALLENGING STATEMENTS

- A. "I wonder if it is possible to identify any flaws in these rules; any ways that these rules for thinking and acting are not valid or reasonable ... or ... don't you get what you need?"
- B. "Can you see any flaws in what everyone has learned?"
- C. "Can you see some flaws in your reasoning in the statements above?" If you were to criticize your integration, what might the major issue be?"

ALTERNATIVE STATEMENTS

- A. "Are there other ways to look at these rules you have learned ... or these situations?"
- B. "If you could add to or change these rules how would you do so?"
- C. "What could another point of view be on this?"
- D. "How might another family member describe your situation?"

ACTION STATEMENTS

- A. "When you are feeling that way, do you or could you do anything about it?"
- B. "Given the complexity of all these possibilities, what commitment might you follow despite all this?"
- C. "Will you do anything about it?"
- D. "What action will you take based on this new awareness?"
- E. "What one thing stands out for you and what will you do about it?"

E N D

"I hope this way of discussing you and your family offered some new thoughts for you. We all appreciate your willingness to participate. Now that the interview is over, do you have any questions you might want to ask me about our session?"

APPENDIX D

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MASTER LIST OF TECHNIQUES

Lifestyle Techniques

1. Keep An Eating Diary
2. Maximize Awareness Of Eating
3. Examine Patterns In Your Eating
4. Prevent Automatic Eating
5. Identify Triggers For Eating
6. Weigh Yourself Regularly
7. Keep A Weight Graph
8. Use The ABC Approach
9. Alter The Antecedents To Eating
10. Do Nothing Else While Eating
11. Follow An Eating Schedule
12. Eat In One Place
13. Do Not Clean Your Plate
14. Put Your Fork Down Between Bites
15. Pause During The Meal
16. Shop On A Full Stomach
17. Shop From A List
18. Buy Foods That Require Preparation
19. Keep Problem Foods Out Of Sight
20. Keep Healthy Foods Visible
21. Remove Serving Dishes From Table
22. Leave The Table After Eating
23. Serve And Eat One Portion At A Time
24. Follow The Five-Minute Rule
25. Avoid Being A Food Dispenser
26. Use Alternatives To Eating
27. Use Techniques For Eating Away From Home
28. Prepare In Advance For Special Events
29. Plan In Advance For High-Risk Situations
30. Identify Your Behavior Chains
31. Interrupt Your Behavior Chains

Exercise Techniques

32. Keep An Exercise Diary
33. Understand Six Benefits Of Exercise
34. Increase Walking
35. Maximize Pleasure Of Walking
36. Increase Lifestyle Activity
37. Use Stairs Whenever Possible
38. Know The Calorie Values Of Exercise
39. Use The Pulse Test For Fitness Feedback

Master List of Techniques *(continued)*

40. Choose And Use A Programmed Activity
41. Always Warm Up And Cool Down
42. Experiment With Jogging
43. Experiment With Cycling
44. Experiment With Aerobics
45. Counter The Exercise Threshold Concept

Attitude Techniques

46. Weigh Advantages And Disadvantages Of Dieting
47. Realize Complex Causes Of Obesity
48. Distinguish Hunger From Cravings
49. Confront Or Ignore Cravings
50. Set Realistic Goals
51. Use The Shaping Concept For Habit Change
52. Counter Food And Weight Fantasies
53. Ban Perfectionist Attitudes
54. Beware Of Attitude Traps
55. Stop Dichotomous Thinking
56. Counter Impossible Dream Thinking
57. Focus On Behavior Rather Than Weight
58. Banish Imperatives From Vocabulary
59. Be Aware Of High-Risk Situations
60. Distinguish Lapse And Relapse
61. Outlast Urges To Eat
62. Cope Positively With Slips And Lapses
63. Use Six Steps To Gain Control During Lapses
64. Be A Forest Ranger For Urges And Lapses

Relationship Techniques

65. Identify And Select Partner
66. Tell Your Partner *How To Help*
67. Make Specific And Positive Requests Of Partner
68. Reward Your Partner
69. Do Shopping With Your Partner
70. Have Partner Do Shopping For You
71. Have Partner and Family Read This Manual
72. Exercise With Partner
73. Refuse Pressures To Eat
74. Use Pleasurable Partner Activities

Nutrition Techniques

75. Eat Less Than 1,200 Calories Per Day
76. Be Aware Of Calorie Values Of Foods
77. Know The Four Food Groups
78. Eat A Balanced Diet
79. Get Adequate Protein In Diet
80. Get Adequate Carbohydrate In Diet
81. Increase Complex Carbohydrates
82. Limit Fat To 30% Of Total Calories
83. Make Low-Calorie Foods Appetizing
84. Consume Adequate Vitamins
85. Take No More Than Recommended Doses Of Vitamins
86. Increase Fiber In Diet

STUDY PROGRAM INTERVENTIONS BY DCT CLASSIFICATION

D=dialectic

- assessing dieting readiness (F)
- targeting goal weight (C)
- targeting calories (C)
- monitoring food intake (C)
- diary analysis (F)
- setting up support relationship (C,F)
- behavior chain charts (C)
- ABC charts (C)
- walking or other exercise (S)
- eating from four food groups (S,C)
- cognitive strategies, analysis of self-talk, etc. (C,F)
- behavior modification strategies (C)
- nutrition education (C)
- lapse, relapse strategies (C,F)
- progress assessment (F)

```
-sensorimotor:   breathing exercises/homework  
                 meditation exercise  
                 visualization exercises/homework  
                 "urge surfing" (Marlatt, 1985)/homework  
  
-dialectical discussions: family issues  
                         feminist/cultural issues  
                         dialectic focus added to all  
                           basic formal discussions--  
                             e.g.augmenting LEARN info.  
                               on social support, etc.
```

APPENDIX F
INSTRUMENTATION

- DEMOGRAPHIC INFORMATION SHEET
- BINGE EATING SCALE (BES)
- BECK DEPRESSION INVENTORY (BDI)
- DEVELOPMENTAL LEVEL MEASURE ("EATING AND
WEIGHT MANAGEMENT QUESTIONNAIRE")
- SENSORIMOTOR ACTIVITY QUESTIONNAIRE
- FINAL PROGRAM EVALUATION

LEARN Program Participant Questionnaire

Name: _____

Background Information:

Current Weight _____

Age _____

Goal Weight _____

Marital Status _____

Approximately how many diets have you attempted in the past? _____

For how many years have you considered yourself overweight? _____

Are other people in your family overweight? _____ Who? _____

1. Describe what usually happens when you begin a diet:

2. Describe your greatest difficulty in "sticking with" a diet:

3. How does it usually happen that you regain lost weight?

EATING HABITS CHECKLIST

Instructions: Below are groups of numbered statements. Read all of the statements in each group and mark on this sheet the one that best describes the way you feel about the problems you have controlling your eating behavior.

- #1.
1. I don't feel self-conscious about my weight or body size when I'm others.
 2. I feel concerned about how I look to others, but it normally does not make me feel disappointed with myself.
 3. I do get self-conscious about my appearance and weight which makes me feel disappointed in myself.
 4. I feel very self-conscious about my weight and frequently, I feel intense shame and disgust for myself. I try to avoid social contacts because of my self-consciousness.
- #2
1. I don't have any difficulty eating slowly in the proper manner.
 2. Although I seem to "gobble down" foods, I don't end up feeling stuffed because of eating too much.
 3. At times I tend to eat quickly and then, I feel uncomfortably full afterwards.
 4. I have the habit of bolting down my food, without really chewing it. When this happens I usually feel uncomfortably stuffed because I've eaten too much.
- #3
1. I feel capable to control my eating urges when I want to.
 2. I feel like I have failed to control my eating more than the average person.
 3. I feel utterly helpless when it comes to feeling in control of my eating urges.
 4. Because I feel so helpless about controlling my eating I have become very desperate about trying to get in control.
- #4
1. I don't have the habit of eating when I'm bored.
 2. I sometimes eat when I'm bored, but often I'm able to "get busy" and get my mind off food.
 3. I have a regular habit of eating when I'm bored, but occasionally, I can use some other activity to get my mind off eating.
 4. I have a strong habit of eating when I'm bored. Nothing seems to help me break the habit.
- #5
1. I'm usually physically hungry when I eat something.
 2. Occasionally, I eat something on impulse even though I really am not hungry.
 3. I have the regular habit of eating foods, that I might not really enjoy, to satisfy a hungry feeling even though physically I don't need the food.
 4. Even though I'm not physically hungry, I get a hungry feeling in my mouth that only seem to be satisfied when I eat a food, like a sandwich, that fills my mouth. Sometimes, when I eat food to satisfy my mouth hunger, I then spit out the food so I won't gain weight.

- #6.
1. I don't feel any guilt or self hate after I overeat.
 2. After I overeat, occasionally I feel guilt or self hate.
 3. Almost all the time I experience strong guilt or self hate after I overeat.
- #7
1. I don't lose total control of my eating when dieting even after periods when I overeat.
 2. Sometimes when I eat a "forbidden food" on a diet, I feel like I "blew it" and eat even more.
 3. Frequently, I have the habit of saying to myself "I've blown it now, why not go all the way" when I overeat on a diet. When that happens I eat even more.
 4. I have the regular habit of starting strict diets for myself, but I break the diets by going on an eating binge. My life seems to be "Feast or Famine".
- #8
1. I rarely eat so much food that I feel uncomfortably stuffed afterwards.
 2. Usually about once a month, I end up eating such a quantity of food. I end up feeling very stuffed.
 3. I have regular periods during the month when I eat large amounts of food, either at mealtimes or at snacks.
 4. I eat so much food that I regularly feel quite uncomfortable after eating and sometimes a bit nauseous.
- #9.
1. My level of caloric intake does not go up very high or down very low on a regular basis.
 2. Sometimes after I overeat, I will try to reduce my caloric intake to almost nothing to compensate for the excess calories I've eaten.
 3. I have a regular habit of overeating during the night. It seems that my routine is not to be hungry in the morning but to overeat in the evening.
 4. In my adult years, I have week long periods where I practically starve myself. This follows periods where I overeat. It seems I live a life of feast or famine.
- #10.
1. I usually am able to stop eating when I want to. I know when "enough is enough".
 2. Every so often, I experience a compulsion to eat which I can't seem to control.
 3. Frequently, I experience strong urges to eat which I seem unable to control, but at other times I can control my eating urges.
 4. I feel incapable of controlling urges to eat. I have a fear of not being able to stop eating voluntarily.
- #11.
1. I don't have any problems stopping eating when I feel full.
 2. I usually can stop eating when I feel full but occasionally overeat leaving me feeling uncomfortably stuffed.
 3. I have a problem stopping once I start and usually I feel uncomfortably stuffed after I eat a meal.
 4. Because I have a problem not being able to stop eating when I want, I sometimes have to induce vomiting to reduce my stuffed feelings.

- #12. 1. I seem to eat just as much when I'm with others (family, social gatherings) as when I'm by myself.
 2. Sometimes, when I'm with other person's I don't eat as much as I want to eat because I'm self-conscious about my eating.
 3. Frequently, I eat only a small amount of food when others are present, because I'm very embarrassed about my eating.
 4. I feel so ashamed about my overeating that I pick times to overeat when I know no one will see me. I feel like a "closet eater".
- #13. 1. I eat three meals a day with only an occasional between meal snack.
 2. I eat three meals a day but I also normally snack between meals.
 3. When I am snacking heavily, I get in the habit of skipping regular meals.
 4. There are regular periods when I seem to be continually eating, with no planned meals.
- #14. 1. I don't think much about trying to control unwanted eating urges.
 2. At least some of the time, I feel my thoughts are pre-occupied with trying to control my eating urges.
 3. I feel that frequently I spend much time thinking about how much I ate or about trying not to eat anymore.
 4. It seems to me that most of my waking hours are pre-occupied with thoughts about eating or not eating. I feel like I'm constantly struggling not to eat.
- #15 1. I don't think about food a great deal.
 2. I have strong cravings for food but they last only for brief periods of time.
 3. I have days when I can't seem to think about anything else but food.
 4. Most of my days seem to be pre-occupied with thoughts about food. I feel like I live to eat.
- #16. 1. I usually know whether or not I'm physically hungry. I take the right portion of food to satisfy me.
 2. Occasionally, I feel uncertain about knowing whether or not I'm physically hungry. At these times its hard to know how much food I should take to satisfy me,
 3. Even though I know how many calories I should eat, I don't have any idea what is a normal amount of food for me.

(Gormally et al., 1982)

BDI

Date: _____

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

This questionnaire consists of 21 groups of statements. After reading each group of statements carefully, circle the number (0, 1, 2 or 3) next to the one statement in each group which **best** describes the way you have been feeling the **past week, including today**. If several statements within a group seem to apply equally well, circle each one. **Be sure to read all the statements in each group before making your choice.**

- 1 0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.

- 2 0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.

- 3 0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.

- 4 0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.

- 5 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

- 6 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

- 7 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.

- 8 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.

- 9 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

- 10 0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

- 11 0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I don't get irritated at all by the things that used to irritate me.

- 12 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.

- 13 0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.

Subtotal Page 1

CONTINUED ON BACK

THE PSYCHOLOGICAL CORPORATION
HARCOURT BRACE JOVANOVIĆ, INC.

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9-018359

- 14 0 I don't feel I look any worse than I used to.
 1 I am worried that I am looking old or unattractive.
 2 I feel that there are permanent changes in my appearance that make me look unattractive.
 3 I believe that I look ugly.

- 15 0 I can work about as well as before.
 1 It takes an extra effort to get started at doing something.
 2 I have to push myself very hard to do anything.
 3 I can't do any work at all.

- 16 0 I can sleep as well as usual.
 1 I don't sleep as well as I used to.
 2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
 3 I wake up several hours earlier than I used to and cannot get back to sleep.

- 17 0 I don't get more tired than usual.
 1 I get tired more easily than I used to.
 2 I get tired from doing almost anything.
 3 I am too tired to do anything.

- 18 0 My appetite is no worse than usual.
 1 My appetite is not as good as it used to be.
 2 My appetite is much worse now.
 3 I have no appetite at all anymore.

- 19 0 I haven't lost much weight, if any, lately.
 1 I have lost more than 5 pounds.
 2 I have lost more than 10 pounds.
 3 I have lost more than 15 pounds.

I am purposely trying to lose weight by eating less. Yes _____ No _____

- 20 0 I am no more worried about my health than usual.
 1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
 2 I am very worried about physical problems and it's hard to think of much else.
 3 I am so worried about my physical problems that I cannot think about anything else.

- 21 0 I have not noticed any recent change in my interest in sex.
 1 I am less interested in sex than I used to be.
 2 I am much less interested in sex now.
 3 I have lost interest in sex completely.

_____ Subtotal Page 2

_____ Subtotal Page 1

_____ Total Score

EATING AND WEIGHT MANAGEMENT QUESTIONNAIRE

For Each Question, Mark 1 As Your First Preference;
Down to 4 As Your Last Choice. Each questions, then,
should have a 1,2,3, and 4 answer on the choices given.

1. What kind of learning experiences do you usually find the most helpful?
 - a. clear and precise material that tells me how to proceed_____
 - b. experiential or emotionally involving_____
 - c. those that help me to understand myself_____
 - d. presentation of many complex perspectives_____
2. When a party or other social event involving food is set, you
 - a. feel tension, fear, excitement, anger or other emotion_____
 - b. make concrete plans for eating moderately_____
 - c. think about overindulging in the past and why you think you do this_____
 - d. realize there are many complex issues involved in social eating and overindulgence: you, the situation, family, culture, etc._____
3. When you see a favorite food, and desire it, do you
 - a. feel compelled to eat it right away_____
 - b. decide whether or not, and how much, it fits into your dietary needs for the day_____
 - c. think of how your response fits a noticeable and predictable pattern_____
 - d. realize that many associations are involved in your craving, such as feeling good with the food at family gatherings, etc._____
4. After overeating, do you
 - a. feel remorse, anger, sadness, or other emotion_____
 - b. think about your patterns and wonder about the repetitions in the eating/feeling cycle_____
 - c. realize that issues from your family, the culture, and other sources contribute to the tendency to overeat_____
 - d. make a plan to not do so in the future_____
5. Emotionally, you tend to
 - a. like to understand your feelings_____
 - b. prefer doing to feeling_____
 - c. feel deeply and immediately; feel easily in the body_____
 - d. note that your feelings change with the context or perspective you take_____

6. You describe yourself as, most often,
 - a. planful and deliberate_____
 - b. sensory and/or impulsive_____
 - c. analytical and synthesizing_____
 - d. self-aware_____
7. People most often describe you as
 - a. planful and deliberate_____
 - b. good at analyzing situations from several points of view_____
 - c. emotional and quick to react and/or creative and playful_____
 - d. self-aware_____
8. Regarding your hopes for change (in relation to eating and weight management), you
 - a. believe that if you follow the program, you can succeed_____
 - b. fear that you will not be able to control yourself no matter what you try_____
 - c. think that exploring your eating patterns, thoughts and attitudes will be helpful_____
 - d. believe that a variety of different learnings and experiences will be key_____
9. In general, you would describe your relation to eating and weight management in the following way
 - a. I need to learn what to do_____
 - b. I need to learn why I overeat_____
 - c. I feel that the food is in control_____
 - d. I know that my problems with food are not all my fault, and I am noticing some of the influences involved_____
10. When you relay information or a story to someone you
 - a. provide many details--and sometimes people seem to want to rush you to the "bottom line"_____
 - b. tend to tell about how you related to the situation: how you thought, felt, etc.; yet you can get to the "bottom line" quickly if necessary_____
 - c. believe people need to experience things directly; so you tell in a vivid, emotional, or lively way_____
 - d. focus on which aspects are most important, depending on the listener and the context_____

In the next part, you will find two incomplete sentences. Please finish each sentence, plus write at least three more of your own after it. There are no right or wrong answers here--we are interested in your first and strongest responses: how you think, feel, and act in relation to the issues at hand. Please write as quickly but as clearly as possible.

1. When I focus on my family I

2. When I think about food I

How often each week do you:

	<u># times/wk.</u>	<u>Length of time Each Episode</u>
Exercise	_____	_____
Meditate	_____	_____
Practice Relaxation		
Techniques(breathing, visualization,progressive relaxation	_____	_____
Engage in other physically relaxing activities (baths, yoga, stretching, massage)	_____	_____
Specify:	_____	

LEARN PROGRAM
FINAL EVALUATION

1. How would you rate the LEARN Program overall?

1	2	3	4	5	6	7	8	9	10
Poor				Average					Excellent

2. How would you rate your facilitator overall?

1	2	3	4	5	6	7	8	9	10
Poor				Average					Excellent

3. What aspects of the program were MOST helpful?

4. What aspects of the program were LEAST helpful?

5. Please tell us about any changes you would make to the program.

6. Other comments?

APPENDIX G

INFORMED CONSENT LETTER

September 23, 1993

Dear LEARN Program Participant:

We are pleased you have decided to participate in the LEARN Program, and we hope that you find the program helpful in your efforts to manage your weight and eating habits.

This year, the LEARN groups are being studied as part of Terese Weinstein's doctoral dissertation at the University of Massachusetts. The study will track the effects of various LEARN Program interventions on weight, binge eating, and depression. You will be asked to complete a packet of questionnaires for this purpose at the beginning of the program, at the end of the program, and three months following the completion of the program. It is hoped that this study will provide important information on effective ways to help people manage weight and problem eating behaviors.

The questionnaires will have your name on them, as we will need to compare responses with weight loss figures, etc. However, they will be held in strictest confidence, with only the undersigned having access to them. Your name will not be used in any publication or oral presentation of the results.

A subgroup of people from the programs will be asked to be interviewed as part of our effort to gain more in-depth information. These individual interviews will be taped. Your name will not appear on the tape labels or be recorded. Tapes are for researcher (i.e. Terese and Joan) use only.

To denote your agreement to participate in the study, please sign the attached informed consent form and return it to your group facilitator. Your participation in any part of the study is completely voluntary, and you are free to withdraw at any time.

Thank you very much!

Sincerely,

Terese Weinstein, M.F.T.
LEARN Program Coordinator

Joan Costello, R.N.
Director of Education

THE APPLICATION OF DEVELOPMENTAL COUNSELING AND THERAPY
(DCT) THEORY TO GROUP TREATMENT OF BINGE EATING AND WEIGHT
MANAGEMENT

STUDY PARTICIPANT'S INFORMED CONSENT

I volunteer to participate in the study described in the attached letter. I understand that:

1. I will be asked to complete a questionnaire packet before, immediately after, and three months after the program. Questionnaires will address my eating habits, moods, and thoughts about related issues.
2. If I agree to be interviewed as well, this interview will address what I have found to be helpful in my own change process. The interview will be taped.
3. Only Terese Weinstein and Joan Costello will have access to the questionnaire forms; they will be held in strict confidence.
4. My name will not be used in any publication or oral presentation of study results (i.e. in the final dissertation or oral examination). I will not be identified personally at any time.
5. My name will not be recorded on tape if I am interviewed, nor will it appear on the tape label.
6. I may withdraw from part or all of this study at any time without prejudice.
7. I am free to participate or not participate without prejudice.
8. I may review the final results (i.e. in the written dissertation) if I so request.

Researcher Signature

Participant Signature

APPENDIX H

DCT LEVEL EDUCATIONAL HANDOUT FOR EXPERIMENTAL GROUP

CHANGE STRATEGIES

These are just a few examples of the different types of strategies that can assist you in your efforts to make changes in your habits and lifestyle. You may be more comfortable with one type than another; however, sometimes you need to try a combination of strategies in order to achieve your goals.

Body-Centered Activities

These are techniques and practices that can help you feel more comfortable and confident about using your body and more connected to your body and inner feelings. Strategies include physical exercise, meditation, deep breathing, "urge surfing", visualization, yoga, dance, body image exercises, massage, baths (some of these practices will be covered in class).

Concrete Tasks

These are the kinds of behavioral tasks your workbook offers many examples of: trying smaller meal portions, shopping with a list, putting junk foods out of sight, putting your fork down between bites, choosing lower fat items, writing down what you eat, mapping out "behavior chains."

Noticing Patterns

Here again, your workbook offers much help. It is important to be able to notice patterns in how, what, when, and why you overeat. Your weekly monitoring can assist you in this, as can keeping your own journal of related feelings and events. Defining the particular triggers to your problem behavior is the key.

Putting the Problem in Context

It is often helpful to realize that you are not the sole cause of your problem--many factors from our culture and society at large, as well as factors related to your family and perhaps your ethnic background have contributed to the way you relate to food and your body today. We will discuss these factors in class and you can explore them in further depth in your own time.

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