

COMPARISON OF TWO INTERVENTIONS FOR WOMEN WITH  
WEIGHT-RELATED BODY IMAGE DISTURBANCES

BY

NAOMI S. BERGER

A Thesis  
Submitted to the Faculty of Graduate Studies  
in Partial Fulfillment of the Requirements  
for the Degree of

MASTER OF ARTS

Department of Psychology  
University of Manitoba  
Winnipeg, Manitoba

(c) July, 1991



National Library  
of Canada

Bibliothèque nationale  
du Canada

Canadian Theses Service    Service des thèses canadiennes

Ottawa, Canada  
K1A 0N4

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-315-76607-7

Canada

COMPARISON OF TWO INTERVENTIONS FOR WOMEN WITH  
WEIGHT-RELATED BODY IMAGE DISTURBANCES

BY

NAOMI BERGER

A thesis submitted to the Faculty of Graduate Studies of  
the University of Manitoba in partial fulfillment of the requirements  
of the degree of

MASTER OF ARTS

© 1991

Permission has been granted to the LIBRARY OF THE UNIVER-  
SITY OF MANITOBA to lend or sell copies of this thesis, to  
the NATIONAL LIBRARY OF CANADA to microfilm this  
thesis and to lend or sell copies of the film, and UNIVERSITY  
MICROFILMS to publish an abstract of this thesis.

The author reserves other publication rights, and neither the  
thesis nor extensive extracts from it may be printed or other-  
wise reproduced without the author's written permission.

## ABSTRACT

This investigation compared the effectiveness of two interventions designed to improve weight-related body image among college women. The study was an attempt to replicate and extend the findings of previous research which indicate that cognitive restructuring is effective in improving body image. In addition, the study provided an empirical test of the position that hypnosis augments the effectiveness of cognitive restructuring techniques. Female introductory psychology students completed Shor and Orne's (1962) Harvard Group Scale of Hypnotic Susceptibility, Form A and were classified into either More Susceptible or Less Susceptible groups. Subjects were then randomly assigned to receive cognitive restructuring (CR), hypnotically-augmented cognitive restructuring (CRH) or no treatment control (NTC). Those assigned to the interventions participated in four audiotape-delivered sessions that applied cognitive restructuring techniques to the problem of negative weight-related body image. Subjects in the CRH condition experienced these sessions while in a hypnotized state. At pretest and posttest multiple aspects of body image and other areas of psychosocial functioning were assessed. The influence of hypnotic susceptibility and weight status on the outcome of the interventions was also assessed. The results of the study support the efficacy of cognitive techniques in enhancing women's body image. Both CR and CRH

groups produced significantly greater improvement on body image variables than the control group. Contrary to expectation, the CRH program was no more effective than the CR program in enhancing subjects' body image. The study's theoretical and practical implications are discussed and directions for future research are offered.

## ACKNOWLEDGEMENTS

I am deeply indebted to Michael Thomas, my advisor, for his guidance, expert advice and encouragement at all stages of this thesis. I wish to thank my committee members, Michael Lebow and Joe Rallo, for their comments and guidance towards the completion of this project. Special thanks to Robert Balshaw of the University of Manitoba Statistical Advisory Service, for his advice and assistance in developing and implementing a data analysis strategy. Also, thanks to Maureen Flaherty for her help in preparing the audiotaped interventions, to Dawn Perrault for her assistance with data gathering, and to Joel Pauls for provision of equipment. To the students who participated in the study I wish to again thank all of you because without your help completion of this project would have been impossible. Lastly, a special thank you to my husband, Greg Viflanzoff, for the immeasurable love and support and he has shown me throughout this work, and for the untiring assistance he has offered toward the completion of this and so many other projects.

## CONTENTS

ABSTRACT .....	i
ACKNOWLEDGEMENTS .....	iii
<u>Chapter</u> .....	<u>page</u>
I. INTRODUCTION.....	1
Possible Association with Eating Disorders .....	4
Effects on Mental Health and Adaptive Functioning .....	7
Need for Alternative Approaches .....	9
Review of the Weight-Related Body Image Intervention Literature .....	12
Developmental Approaches to Improving Body Image .....	13
Cognitive Restructuring Approaches to the Treatment of Negative Body Image .....	16
Summary of the Intervention Literature .....	24
Hypnotically-Augmented Cognitive Restructuring ..	31
Current Study .....	39
Overview and Hypotheses .....	41
Hypothesis Set 1 .....	41
Hypothesis Set 2 .....	42
Hypothesis Set 3 .....	43
Hypothesis Set 4 .....	45
Hypothesis Set 5 .....	46
Hypothesis Set 6 .....	47
II. METHOD .....	48
Subjects .....	48
Assessment Instruments and Materials .....	49
Body Image Measures .....	49
Measures of Psychosocial Functioning .....	55
Control Variables .....	57
Audiotapes .....	59
Procedure .....	60
Intervention Sessions .....	64
III. RESULTS .....	71
Attrition .....	71
Pretreatment Analyses .....	72
Susceptibility to Hypnosis .....	81
Start Week .....	82
Intersession Interval .....	82
Relations among the Dimensions of Body Image Assessed: Hypothesis Set 1 .....	84
Impact of Treatment Condition, Susceptibility to Hypnosis, and Weight Status on Body Image	

and Psychosocial Outcomes: Hypothesis Sets 2 - 5 .....	85
Organization of Variable Groupings .....	85
General Analysis Strategy .....	88
Hypotheses 2A, 2B, 2C and 2D .....	88
Hypotheses 2E and 2F .....	94
Hypotheses 3A, 3B, 3C and 3D .....	100
Hypotheses 3E and 3F .....	102
Hypotheses 4A, 4B, 4C and 4D .....	102
Hypotheses 4E and 4F .....	102
Hypotheses 5A, 5B, 5C and 5D .....	102
Hypotheses 5E and 5F .....	106
Demographic Variables: Hypothesis Set 6 .....	106
Supplementary Analyses .....	106
Analyses on Generalization Variables .....	106
Analyses on ABI .....	112
External Help and Weight Change .....	119
 IV. DISCUSSION .....	 120
Dimensionality of Weight-Related Body Image ....	120
Effects of Treatment Programs .....	122
Effects of Programs on Body Image	
Satisfaction .....	124
Effects of Programs on Body Image	
Importance .....	129
Effects of Programs on Body Image Perceptual	
Distortion.....	130
Effects of Programs on Psychosocial	
Variables .....	134
Effects of Programs on Generalization	
Variables .....	136
Effects of Programs on Appearance-Related	
Cognitions .....	138
Relative Efficacy of CR and CRH	
Interventions .....	140
Effects of Hypnotic Susceptibility on	
Outcome .....	143
Theoretical and Practical Implications .....	147
Limitations of the Study and Directions for	
Future Research .....	149
Improving the Treatment Program .....	159
 REFERENCES .....	 163
 <u>Appendix</u> .....	 <u>page</u>
A. BODY-SELF RELATIONS QUESTIONNAIRE .....	182
B. BODY ESTEEM SCALE.....	187
C. BODY CONSCIOUSNESS QUESTIONNAIRE.....	190

D. APPEARANCE BELIEFS INVENTORY.....	193
E. BECK DEPRESSION INVENTORY.....	197
F. ROSENBERG SELF-ESTEEM SCALE.....	204
G. TEXAS SOCIAL BEHAVIOR INVENTORY.....	206
H. PRETEST AND POSTTEST SUBJECT INFORMATION QUESTIONNAIRE.....	211
I. FEEDBACK QUESTIONNAIRE.....	213
J. OUTLINE OF AUDIOTAPE FOR SESSION 1.....	215
K. OUTLINE OF AUDIOTAPE FOR SESSION 2.....	238
L. OUTLINE OF AUDIOTAPE FOR SESSION 3.....	255
M. OUTLINE OF AUDIOTAPE FOR SESSION 4.....	263
N. FEEDBACK TO PARTICIPANTS.....	269

LIST OF TABLES

<u>Table</u>	<u>page</u>
1. Cell Sizes, Sample Characteristics and Initial Mean Scores on Outcome Measures for Final Sample .....	75
2. Multivariate and Univariate F-Statistics for First Assessment.....	80
3. Percentages of More and Less Susceptible CRH Subjects with HGSHS:A Equivalency Scores Corresponding to "More" and "Less" Designations.....	83
4. Rotated Factor Loadings of Body Image Outcome Measures.....	86
5. Intercorrelation Matrix of Variables for First Assessment Session.....	89
6. List of Five Variables Used for Data Analysis in Study.....	91
7. Multivariate and Univariate Analyses of Variance for Satisfaction Variables.....	95
8. Pre- and Posttest Means and Standard Deviations of Satisfaction Variables for Experimental and Control Groups.....	96
9. Pre- and Posttest Means and Standard Deviations of Satisfaction Variables for Overweight and Not Overweight Groups.....	97
10. Pre- and Posttest Means and Standard Deviations of BSRQ AE for Overweight and Not Overweight Subjects in Experimental and Control Groups....	98
11. Pre- and Posttest Means and Standard Deviations of BES WC for Overweight and Not Overweight Subjects in Experimental and Control Groups....	99
12. Multivariate and Univariate Analyses of Variance for Importance Variables.....	103
13. Pre- and Posttest Means and Standard Deviations of BSRQ AI for Experimental and Control Groups...	104
14. Pre- and Posttest Means and Standard Deviations of BSRQ AI for More and Less Susceptible Overweight	

and Not Overweight Subjects in Experimental and Control Groups.....	105
15. Multivariate and Univariate Analyses of Variance for Distortion Variables.....	107
16. Pre- and Posttest Means and Standard Deviations of Distortion Variables for Experimental and Control Groups.....	108
17. Multivariate and Univariate Analyses of Variance for Psychosocial Variables.....	109
18. Pre- and Posttest Means and Standard Deviations of BES SA for Overweight and Not Overweight Groups.....	110
19. Multivariate and Univariate Analyses of Variance for Generalization Variables.....	111
20. Analysis of Variance for ABI.....	115
21. Pre- and Posttest Means and Standard Deviations of ABI for Experimental and Control Groups...	116
22. Pre- and Posttest Means and Standard Deviations of ABI for Overweight and Not Overweight Groups.....	117
23. Correlations between ABI Change Scores and Body Image Change Scores.....	118

## INTRODUCTION

In the last few decades there has been a marked increase in the number of women concerned about weight-related aspects of their appearance (Polivy & Herman, 1983). This concern typically takes the form of intense dissatisfaction with one's weight, and a desire to weigh less. It is often accompanied by chronic or intermittent dieting attempts. This phenomenon of intense negative affect regarding one's body weight has been labelled weight dissatisfaction (Bergner, Remer & Whetsell, 1985; Butters, 1985) and is the object of increasing attention among researchers and clinicians.

The numbers of women who experience weight dissatisfaction appear large. Miller, Coffman and Linke (1980) found that among college women, 70% thought of themselves as overweight, although only 39% were so classified from actual weight and skinfold measurements. Mintz and Betz (1986), also studying a college population, calculated a measure of dissatisfaction with weight by taking the discrepancy score between a subject's desired "ideal" weight and her actual weight. Women classified by the experimenter as being normal weight reported on the average being 10 pounds above their ideal desired weight.

Dissatisfaction with weight is equally prevalent among adolescent girls. (Crisp, 1984; Davies & Furnham, 1986). A recent survey of three U.S. high schools found 21% of adolescent girls were statistically overweight by Metropolitan Life Insurance criteria, but 63% felt "too fat" (Rosen & Gross, 1987). Similar results have been reported by investigators using samples of English (Crisp, 1984; Davies & Furnham, 1986) and Swedish (Nylander, 1971) adolescents.

The extent to which dissatisfaction with weight is a problem in the general population has been assessed by two large scale magazine surveys. Berscheid, Walster and Bohrnsted (1973) analyzed a stratified sample of 2013 Psychology Today readers drawn from a total of 6200 survey respondents. They found that approximately half of the women responding were dissatisfied with their weight. A second study, "Feeling Fat" (Glamour magazine, 1984) found 75% of respondents felt "too fat"; only 25% of these were actually heavier than they should be according to 1983 Metropolitan Life Insurance Company tables. Thirty per cent of the respondents were underweight according to 1983 Metropolitan Life standards; of these underweight women, 45% viewed themselves as too fat.

Although the external validity of magazine survey results is limited, they do provide a rough sketch of the prevalence of weight dissatisfaction in the general public. These surveys suggest a majority of women are dissatisfied with their weight, although not overweight according to the most widely used norms (Butters, 1985).

The large numbers of women who initiate diets in order to lose weight have also been documented (Dwyer & Mayer, 1970; Jakobovits, Halstead, Kelley, Roe & Young, 1977; Miller et al., 1980). Polivy and Herman (1987) coined the term "normal dieting" to describe the prevalence of dieting and its related mentality. They point out that among young women, dieting is more prevalent than not dieting, and is therefore normative, or "normal" behavior (Polivy, Garner & Garfinkel, 1986; Polivy & Herman, 1983; Rodin, Silberstein & Striegel-Moore, 1985).

Estimates of the prevalence of dissatisfaction with one's weight and associated diet attempts have been based largely on research using college and high school populations. Because of this, it is difficult to assess the extent to which this problem is shared by older segments of the female population. But even assuming that weight dissatisfaction is experienced primarily by younger women, the numbers of women experiencing this problem are

staggering and represent a cause for concern among researchers and practitioners. Two features of this problem which indicate the need for concern and action are a) the possible causal connection between dissatisfaction with body weight and the development of clinical eating disorders and b) the negative psychological correlates of weight dissatisfaction.

#### Possible Association with Eating Disorders

Considerable speculation has related the increased incidence of the eating disorders anorexia nervosa and bulimia to the soaring rates of weight dissatisfaction in Western cultures and the resulting increased incidence of diet attempts (Garfinkel & Garner, 1982; Polivy, Garner & Garfinkel, 1981; 1986; Polivy, Herman, Olmsted & Jazwinski, 1984; Striegel-Moore, Silberstein & Rodin, 1986; Wooley, 1987).

Observed similarities between "normal" dieters and anorexia and bulimia patients have prompted some researchers and clinicians to suggest that that anorexia and bulimia fall at one end of a continuum of disordered eating, with weight dissatisfaction and intermittent dieting at intermediate points along the continuum (Button & Whitehouse, 1981; Fries, 1977; Garner, Olmsted & Garfinkel, 1983; Garner, Olmsted, Polivy & Garfinkel, 1984; Nylander,

1971; Striegel-Moore et al., 1986). If dieting and eating disorders are conceived of as different points along a continuum of eating pathology, the implication is that movement along the continuum represents a quantitative rather than a qualitative shift; dieting and its psychological concomitants, if exacerbated, may develop into a full-blown eating disorder.

Other experts disagree, maintaining that the initiation of diet attempts in individuals who will eventually develop eating disorders stems from pre-existing psychopathology, rather than dissatisfaction with weight. Crisp (1965), for example, argued that women with anorexia nervosa and normal dieters diet for very different reasons: the normal dieter restricts her intake in order to achieve positive goals such as improved appearance and self-esteem; the anorexic, on the other hand, uses dieting as an escape from the psychosocial demands of maturation. Similarly, Bruch (1973) distinguishes sharply between dieting and the more severe psychopathologies of eating. She argues that true eating disorders involve distortions of body image and internal perceptions, accompanied by an underlying sense of ineffectiveness. Weight control becomes an arena for the patient's struggles over autonomy and competence. Crisp and Bruch thus hold that true eating disorders and the milder syndromes seen in dieters are qualitatively different. In

their view, dissatisfaction with one's weight and related diet attempts cannot, simply by increasing in severity, develop into eating disorders.

The continuum-discontinuum controversy remains unresolved. The cross-sectional data currently available support the existence of a disjunction between weight-dissatisfied and eating disordered women: these groups display equal levels of body shape and diet concerns, but differ with respect to psychological and cognitive characteristics such as those postulated by Bruch (1973) and Selvini-Palazzoli (1978) (Polivy & Herman, 1987). These results are complicated, however, by the finding that some women who do not meet the strict diagnostic criteria of anorexia nervosa or bulimia display both body shape and diet concerns and the less obvious psychological deficits discussed by Bruch and Selvini-Palazzoli at levels comparable to those of eating disordered individuals (Olmsted & Garner, 1986; Polivy & Herman, 1987). It has been suggested that dissatisfaction with weight and related diet attempts may have preceded the development of more severe pathology in these individuals (Polivy & Herman, 1987). As Polivy and Herman (1987) point out, without longitudinal data we cannot determine whether a continuum or progression exists in the sense that people with one component (body shape and diet concerns) develop the second (more severe) component.

Further research is necessary to clarify the relations between weight dissatisfaction, dieting, and clinical eating disorders. But regardless of whether weight dissatisfaction is causally related to the development of anorexia nervosa or bulimia, there is evidence that dissatisfaction with one's body weight and associated diet attempts put women at risk for other psychological deficits which may themselves seriously impair social, academic, and career-related activities.

#### Effects on Mental Health and Adaptive Functioning

It is well-documented that for women, satisfaction with one's weight is central to the self-evaluation of physical appearance (Berscheid, et al., 1973; Cash, 1985; Fallon & Rozin, 1985; Gray, 1977). The self-evaluation of physical appearance has in turn been consistently related to several measures of adaptive functioning, including self-esteem, vulnerability to depression, and fears of social criticism and rejection (e.g., Archer & Cash, in press; Berscheid et al., 1973; Cash, 1985; Cash, Cash & Butters, 1983; Cash & Soloway, 1975; Cash & Winstead, 1983; Cash, Winstead & Janda, 1986; Franzoi & Herzog, 1986; Lerner, Karabenick & Stuart, 1973; Noles, Cash & Winstead, 1985; Rosen & Ross, 1968). These two bodies of findings together suggest that dissatisfaction with one's weight may prove to be a strong

predictor of psychological and social dysfunction. This hypothesis was supported by a recent study (Dykens & Gerrard, 1986) in which a group of women who indicated dissatisfaction with their current weight (but did not exhibit symptoms of eating disorders) were compared with a second group of women who indicated satisfaction with their weight. The results indicated that whereas all subjects scored within the normal range on the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1966) and Tennessee Self-Concept Scale (Fitts, 1965), the weight-dissatisfied women scored significantly higher than the comparison group on a number of clinical scales. In particular, women who indicated dissatisfaction with their weight showed greater depression and reported lower self-esteem than did the comparison group.

There is also considerable evidence linking dieting behavior with poor psychological adjustment. In adult populations, dietary restraint, as measured by the Restraint Scale (Herman & Polivy, 1980) has been correlated with depression and social anxiety (Rosen, et al., 1987). Adult women repeat dieters have also been shown to have lower than normal self-esteem (Dykens & Gerrard, 1986; Heatherton, Polivy, Pliner & Herman, 1986). Moreover, there is evidence that the psychological correlates of weight-changing efforts are more extensive in females than in males (Rosen, Gross & Vara, 1987).

Because the studies cited above were all correlational in nature, no statements can be made regarding the direction of causality. For example, in explaining the well-documented relationship between dieting and poor self-esteem, it has been suggested that concern about weight and repeated diet failures are predisposing factors in the development of poor self-esteem. An alternative formulation is that low self-esteem is an antecedent of concern about weight and of weight loss attempts (e.g., Striegel-Moore et al., 1986). Additional research is necessary in order to establish the causal primacy of weight dissatisfaction and dieting and their correlated pathologies. In the meantime, clinicians must be sensitive to the possibility that weight dissatisfaction and dieting failure impact negatively on psychological and social functioning.

#### Need for Alternative Approaches

Dissatisfaction with one's weight is now normative among young Western women (Polivy & Herman, 1987) but a growing body of evidence suggests this attitude can be self-destructive and pathological. Professional responses to weight dissatisfaction are needed that help avert its potential dangers. In light of this need for helpful professional responses, it is ironic that the psychological profession has responded to women's growing dissatisfaction

with their weight largely by providing assistance in diet attempts (Willmuth, 1987).

Dieting aid has been criticized as a professional response to women's weight concern because it reinforces the message, perpetuated the media and societal norms, that women of any degree of overweight should be dissatisfied with their body shape and with themselves. This message is particularly inappropriate for women whose degree of overweight is not associated with health risks. In facilitating the weight loss efforts of these women, therapists and researchers reinforce the attitude that a woman's worth is equated with her conformity to a rigid and unrealistic standard of beauty (Willmuth, 1987).

In addition, there is evidence that dieting is rarely successful in the long term and can actually intensify and perpetuate the weight problems it was intended to reduce. Reviews of the literature suggest that most weight-management programs are not successful: losses are small and are typically regained after termination of the program (Beller, 1977; Bolocofsky, Spinler & Coulthard-Morris, 1985; Stunkard & Penick, 1979). Behavioral programs have been shown more successful in weight-management in the short term, but few studies have shown continued weight loss after termination of the program (Bolocofsky et al., 1985).

Moreover, there is evidence that dieting can create more problems than it solves (Polivy & Peter, 1985; Willmuth, 1987). Nisbett (1972) discusses the notion of a "set point", a weight range for a given individual which the body will try to defend, despite changes in food intake. Attempts to change weight by dieting may trigger countering metabolic changes, resulting in rebound weight gain when normal eating is resumed. There is also evidence that dieting may lead to rebound binge eating that will contribute to the chronicity of the problem (Orbach, 1978; Polivy & Herman, 1983; Ryan & Roughan, 1984).

In sum, dieting assistance represents an unsatisfactory professional response to the problem of weight dissatisfaction among women who are not clinically obese. It is an unsatisfactory response because it is likely to be unsuccessful in effecting weight loss, and may contribute to a vicious circle of regaining even more weight and repeated diet attempts. It is also unsatisfactory because it reinforces the notion that any degree of overweight is unacceptable, rather than promoting acceptance of one's body and oneself. There is clearly a need for alternative approaches for helping women deal with their dissatisfaction and overconcern with their body weight. With the need for alternative approaches in mind, the following section of the review will turn to an evaluation of the effectiveness of a number of such approaches.

Review of the Weight-Related Body Image Intervention Literature

In recent years a number of reports have appeared in the literature describing interventions designed to improve women's body image.<sup>1</sup> Some of these interventions have been targeted at negative body image in general, but have acknowledged the important role of weight-related aspects of body image. Other programs have focused specifically on weight-related body image. For the present purposes, these interventions have been classified as a) developmental or b) cognitive restructuring interventions. (It should be recognized that only those interventions dealing with weight-related aspects of negative body image have been included in this review. For a review of interventions relevant to other aspects of the broader body image construct, see Butters, 1985).

---

<sup>1</sup> A number of interventions aimed at women with clinically diagnosed eating disorders have incorporated strategies aimed at decreasing concerns with weight and body shape (cf., Garner & Bemis, 1982). However, many researchers maintain that eating disordered vs. weight-dissatisfied women have body concerns which, although similar in form, derive from different underlying

Developmental approaches to improving body image. A number of authors have described the etiology of weight dissatisfaction in terms of the interaction of sociocultural factors and events in a woman's individual developmental history (e.g., Hutchinson, 1982; Willmuth, 1987; Ryan & Roughan, 1984). The former category is thought to include factors such as the cultural norms equating a woman's worth with her physical attractiveness, the current societal preference for a slim physique, and increasing social pressure, especially for women, to conform to ideal physical types. Items listed in the latter category include familial interactions, and significant events during childhood and adolescence. Consistent with this interactional view, some researchers have targeted interventions at reworking historical material and challenging sociocultural norms believed to contribute to the client's weight dissatisfaction.

---

causes (see Polivy & Herman, 1987, for a review of these arguments). Conclusions based on body image interventions aimed at eating disordered populations may therefore not be generalizable to nonclinical populations. With this in mind, the following section reviews only interventions aimed at populations who indicate body image concerns, but do not fit the clinical diagnosis of eating disorders.

Hutchinson (1982) examined the impact of a treatment based on the use of guided visio-kinesthetic imagery on the alteration of negative body image in women. Subjects were 30 physically and psychologically healthy women of normal weight between 24 and 40 years old, all of whom presented themselves as disliking or denying their bodies. There was no control group. The intervention consisted of eight weekly group meetings involving guided imagery exercises. The imagery exercises were intended to help the participants access and rework buried historical and emotional material relating to body image development, and to convey a sense of each woman's power to willfully manipulate and control her body imagery. Hutchinson (1982) reports that the results were dramatically positive, with both quantitative and qualitative measures indicating significant improvement in both body image and self-image. However, she does not provide summary statistics and does not indicate what dependent measures were used and when they were administered. Moreover, the lack of a control group in this study makes it difficult to confidently assert that the changes observed were due to the treatment program.

Ryan and Roughan (1984) examined the effectiveness of a group therapy program designed to help women break their obsessional preoccupation with weight and body image, as well as eating. Subjects were both normal and overweight

women with chronic concerns about overweight, body image and eating behavior. Subjects were solicited from the community via newspaper advertisements. There was no control group. The treatment consisted of a 10-week course designed to help subjects overcome their preoccupation with eating, weight and body image. The approach was based on Bruch's (1975) psychosocial concepts and Bateson's (1972) systemic theory, and was described as using traditional group techniques. The contributions of social environment, early learning and familial experience, present family structure and inappropriate treatment modalities, both in the development of the problem and as barriers to change, were examined. Subjects were also given opportunities to participate in experiments designed to increase their control over their eating behavior. The authors note that the program is being evaluated and report that preliminary assessment produced encouraging short-term results. They report that women who were moderately overweight to average weight but preoccupied with their body image were especially likely to leave the program having achieved their goals of becoming more comfortable with their bodies and less preoccupied with food. Although the authors suggest that the subjects became significantly more accepting of their body weight by the end of the program, the validity of this assertion is severely limited by the lack of a control group. Additional problems

with this study concern the lack of information reported. No data are presented regarding the number of subjects, the nature of measures used to evaluate treatment effectiveness and when these measures were administered, or summary statistics.

Cognitive restructuring approaches to the treatment of negative body image. Cognitive restructuring therapies attempt to challenge irrational or dysfunctional beliefs and self-statements and replace them with more rational or self-enhancing cognitions. The reasoning underlying attempts to change a client's beliefs or self-statements is the hypothesis that the way an individual thinks about a situation determines how he or she responds emotionally (for a more detailed exposition of cognitive approaches see Beck, 1976; Beck, Rush, Shaw & Emery, 1979; Ellis, 1962; Meichenbaum, 1977). There is considerable anecdotal evidence that inaccurate or dysfunctional beliefs (e.g., beliefs about the disastrous effects on one's life of any weight gain) characterize the thinking of weight-dissatisfied individuals (Polivy & Herman, 1987; Willmuth, 1987). Based on the premise that irrational self-statements or cognitions play a role in the etiology of women's body image dissatisfaction, a number of investigators have adopted a cognitive restructuring approach to improving women's body image.

Bergner, Reimer and Whetsell (1985) tried to improve women's self-esteem and body image using three different group counseling approaches which they labelled Visual, Kinesthetic, and Visual-Kinesthetic. The subjects were 24 volunteers ranging in age from 21 to 63 years, all of whom perceived themselves as having a negative body image. Eighty per cent of the subjects were within the desired healthy weight range for their heights according to the National Centre for Health Statistics, 1980. Subjects were randomly assigned to one of the three treatment conditions or to a waiting list control group. Treatment consisted of eight weekly sessions of small group therapy based on cognitive restructuring principles (Maultsby, 1984) and feminist therapy tenets (Gilbert, 1980). The treatment was designed to allow each subject to a) access self-statements about her appearance which cause her emotional distress and b) learn to change these self-defeating statements into statements that were more accurate and self-enhancing. All groups were led by the same team of a female counseling psychology graduate student with training in rational behavior therapy and a male counseling psychology graduate student with training in body-centred therapies. The conditions differed with respect to the approach used (visual processing or movement-sensation processing) to access and modify cognitions. All subjects completed the Body-Cathexis and

Self-Cathexis Scales (Secord & Jourard, 1953), which assess satisfaction with one's body and with oneself, respectively. Measures were administered two weeks before the first session and again in the last week of treatment. The results indicated no significant improvement in Body-Cathexis for subjects in the three treatment conditions relative to the control subjects. Pretest to posttest increases in Self-Cathexis were significantly greater for subjects in two of the treatment conditions as compared to controls. There were no significant differences between the three treatment groups on any of the dependent variables. A difficulty with this study was that no attempt was made to corroborate the premise that cognitions cause or maintain negative body image, and that changing cognitions plays a role in improving body image. It was not established whether subjects had engaged in negative self-statements about their bodies prior to treatment, whether the extent of such self-talk decreased as a result of treatment, and whether the extent of more positive self-talk increased as a result of treatment.

Dworkin and Kerr (1987) compared three counseling interventions for effectiveness in improving women's body image satisfaction and self-concept. Seventy-nine female college students who considered themselves to have a body image problem served as subjects. Subjects were accepted

into the study only if they met the following criteria: a) dissatisfaction with body image to the extent that it interfered with other areas of their life, b) no physical disability, and c) weight not more than 20% above or below the ideal weight ranges on the 1953 Metropolitan Life Insurance Tables for their height and frame size. Subjects were randomly assigned to one of three treatment conditions or a no-treatment control group. All therapy conditions involved three individual therapy sessions, conducted according to a structured protocol, as well as homework assignments. The Cognitive Therapy condition emphasized changing negative self-statements to more positive ones. The Cognitive Behavior Therapy condition was the same as the Cognitive Therapy condition, except that the additional behavioral techniques of self-reinforcement and a fantasy exercise were employed. The Reflective condition did not include techniques of changing irrational thoughts to more positive ones. Instead, it focused on exploring feelings about body image during major developmental periods of the woman's life. The therapy was conducted by six female counseling psychology graduate students, two of whom were assigned to each experimental condition. Subjects completed the Body Cathexis Scale before beginning treatment and again following the final session. The results indicated that although all subjects improved on the measures of body image

and self-concept, therapy was better than no therapy. The cognitive techniques were most effective for improving body image, whereas cognitive and cognitive-behavioral were the most effective for improving self-concept. This study demonstrates that short term cognitive therapy can be effective in increasing women's body acceptance and self-esteem. A weaknesses of this study was the investigators' failure to collect data addressing the proposed mechanism of change. Although the cognitive techniques were effective in improving body image, no data were obtained regarding correlated changes in self-defeating or self-enhancing body-related cognitions. A second problem involves the grounds for comparison of the effectiveness of three sets of therapeutic techniques. The authors note that the reflective techniques used in this study lacked the depth and complexity of true client-centred techniques, and were originally conceived of as an attention-control condition. Because of this it would not be valid, on the basis of this study, to conclude that cognitive therapy techniques are superior to reflective techniques in improving women's body image. Finally, the lack of followup data means that the durability of changes is unknown.

Butters and Cash (1987) investigated the effectiveness of two cognitive-behavioral treatments designed to improve negative body image. A six-week individual treatment was

compared with a waiting list control group. Control subjects later received a three-week abbreviated treatment. Subjects were 32 physically and psychologically healthy female psychology undergraduates who scored beneath the 25th percentile on the Body-Self Relations Questionnaire Appearance Evaluation Subscale norms for college women (Winstead & Cash, 1984) and whose weight was within 25% of median desirable weight for their height, according to 1983 Metropolitan Life Insurance Tables. Subjects were randomly assigned to two conditions and four therapists. The six-week treatment consisted of individual weekly sessions conducted according to structured protocols and supplemented with homework assignments. The treatment involved relaxation training and systematic desensitization for anxiety experienced about the appearance of body areas and the body as a whole. Cognitive restructuring was used to identify irrational and maladaptive appearance-related cognitions and replace them with more enhancing self-statements. A focus on the non-aesthetic value of the body was also included. Therapists were two male and two female clinical psychology Ph.D. students, each of whom treated four experimental and four control subjects. Dependent measures related to body image included the Appearance Evaluation and Appearance Attention/Importance subscales of the Body-Self Relations Questionnaire (Cash et al., 1986; Winstead and Cash, 1984);

the Body Parts Satisfaction Scale (Berscheid et al., 1973; Bohrnstedt, 1977); the Body Image Detection Device (Ruff & Barrios, 1986), which measures body size estimation accuracy; and the Personal Appearance Beliefs Test, an instrument developed for this investigation to measure the extent to which subjects subscribed to dysfunctional beliefs about appearance. In addition, subjects completed the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), which assesses self-perceived confidence and competence in social situations, and the SCL-90-R (Derogatis, 1977) a self-report inventory of psychological symptoms. Subjects completed the measures before treatment, two weeks after the final session and again at a 7-week follow-up. The results indicated that Cognitive Behavior Therapy subjects experienced significantly greater pretest to posttest improvement than did the control subjects on all body image measures except the Height factor score of the Body Parts Satisfaction Scale. These subjects showed greater satisfaction with their appearance, placed less attention and importance on their appearance, and reported decreased use of the maladaptive self-statements assessed by the Personal Appearance Beliefs Test, relative to their pretest levels. In the absence of interjudge reliability data for actual body widths, the results for the Body Image Detection Device were not reported. All improvements were maintained at 7-week

follow-up, without further gains or subsequent losses. The Cognitive Behavior Therapy also produced significant improvement relative to the control group on the measure of social self-esteem. This effect was maintained at followup. There was no difference between the Cognitive Behavior Therapy group and the control group at post test on the SCL-90-R. The abbreviated treatment given to waiting list subjects omitted the relaxation and systematic desensitization components, but was otherwise identical to the treatment received by the original treatment group. This abbreviated treatment produced results similar to those of the original Cognitive Behavior Therapy group: there were no significant differences between post-test scores of the original Cognitive Behavior Therapy group and post-test (i.e., post-treatment) scores of the Waiting List Control group. A difficulty with this study is that it yields no valid information regarding the efficacy of any of the treatment components comprising the treatment package. Even the two treatments must be compared with caution due to differences in duration, time of year, experience of therapists, and number of pretreatment assessments (Butters, 1985). The strengths of this study, however, are many. Notably, the investigators assessed the degree to which subjects subscribed to "dysfunctional" cognitions about their appearance pre- and post-intervention. They found

that subjects endorsed these presumably dysfunctional cognitions to a significantly lesser extent following the intervention, and also experienced less body image dissatisfaction. These findings do not demonstrate a causal relationship between cognitions and body image satisfaction, but they are consistent with and offer support for such a relationship. This study also demonstrated that cognitive behavioral methods can produce a decrease in the attention or subjective importance assigned to one's appearance. Finally, the collection of follow-up data demonstrated the durability of changes resulting from the cognitive behavioral treatment.

#### Summary of the Intervention Literature

Five studies that evaluated treatments for improving women's negative weight-related body image were reviewed. The quality of the research methods employed was variable: of the five studies, only three used control groups. In addition, only one study collected any follow-up data.

A problem appearing in almost all of the studies reviewed relates to the measures used to evaluate outcome. Of those studies reporting the instruments used to assess change in body image, all but one used Secord and Jourard's (1953) Body Cathexis Scale. The Body Cathexis Scale was the earliest attempt to assess body satisfaction and remains

probably the most popular measure of body satisfaction today (Butters, 1985). However, the scale has been justifiably criticized for being treated as a unidimensional instrument when factor analyses have shown it to be multidimensional (Tucker, 1981; Franzoi & Shields, 1984). Franzoi and Shields (1984), for example, found three factors that emerged (for women) were: a) weight control and body proportions, b) facial features and c) general health and physical strength. Because of its failure to divide items into appropriate subscales, scores on the Body Cathexis Scale are difficult to interpret meaningfully.

Another difficulty is that in the majority of these studies, research and clinical objectives were framed in terms of increasing satisfaction with body image in general, rather than weight-related body image satisfaction in particular. It is well-documented that feelings about one's weight are, especially for women, central to overall body image satisfaction (e.g., Berscheid, et al., 1973; Cash, 1985; Fallon & Rozin, 1985; Gray, 1977). Many of the investigators referred to concern about overweight as a prime factor involved in subjects' body image dissatisfaction and all dealt largely with weight satisfaction in their respective interventions. Yet, even though the dependent measures used in these investigations break down into factors that assess weight-related and other

aspects of body-image, they were interpreted as if they assessed a unitary construct. A more productive approach would be to explicitly recognize weight concern as a target of therapeutic change, so that change along this dimension, which is central to overall body image, can be assessed separately from other dimensions of body image.

A final problem appearing in almost all of the studies reviewed above is the failure of the researchers to acknowledge the multidimensional nature of body image (cf. Cash & Brown, in press; Keeton, Cash & Lewis, 1987; McCrea, Summerfield & Rosen, 1982). With the exception of Butters and Cash's (1987) study and Ryan and Roughan's (1984) investigation, these interventions have focused exclusively on increasing satisfaction with one's body.

A second dimension of body image which may be relevant to this line of inquiry involves the degree to which individuals cognitively focus on the appearance of their bodies. Winstead and Cash (1984) argue that it is important to assess both satisfaction with one's appearance and attention to or importance of appearance to the individual. They argue that the attention/importance dimension can act as an "intensifier" of a person's body evaluation. For example, if two people evaluate their bodies equally negatively, Winstead and Cash (1984) hypothesize that the

individual whose appearance is of greater importance to her will experience more distress. This position is supported by evidence that the correlation between satisfaction with one's body and self-concept is strengthened when one takes into account the subjective importance of different body parts for the individual (Rosen & Ross, 1968). Similarly, Noles (1983) found depression greatest among students who a) evaluated their looks negatively, and b) attended to and placed more importance on appearance.

These studies support the position that the impact of self-evaluation of physical appearance on affective state and psychological functioning is mediated by the subjective importance assigned to appearance. If this analysis is correct, interventions for women experiencing negative body image should not be judged entirely by their effects on body satisfaction. Decreasing the importance of appearance to the individual would be an equally important criterion of success.

A third dimension of body image which may be pertinent to individuals with weight concerns involves the extent to which individuals accurately estimate the size and shape of their bodies. Perceptual distortions have been frequently documented among eating disordered and obese individuals as compared to subjects of normal weight (e.g., Garner,

Garfinkel, Stancer & Molodofsky, 1976; Glucksman & Hirsch, 1969; Slade & Russell, 1973), although there are inconsistencies in this literature (cf. Cash & Green, 1986). Among anorectic women, a significant relationship between perceptual overestimation of one's body size and body satisfaction has been observed: marked overestimators of body dimensions are significantly more dissatisfied with their bodies (Garfinkel & Garner, 1982; Garner & Garfinkel, 1981). This has led some investigators to speculate that size overestimation may be associated with body dissatisfaction among non-clinical populations. To date, it is unclear whether body size estimation inaccuracies also characterize normal weight women not suffering from eating disorders, but who are dissatisfied with their weight. Gleghorn, Penner, Powers & Schulman (1987) using a sample of bulimic and normal women, found that measures of satisfaction with one's body were significantly negatively correlated with distortion of body size. However, these investigators did not compute separate correlations for bulimic and normal subsamples. Other researchers (e.g., Cash & Green, 1986) have found no relationship between body satisfaction and size estimation among normal subjects. The possible relationship between perceptual distortion and body satisfaction among weight-dissatisfied women needs further investigation.

Although the body satisfaction dimension of body image has been central to the evaluation of interventions for women experiencing negative body image, a growing body of evidence suggests that the degree to which an individual attends to and places importance on her appearance may be an equally valid dimension along which to evaluate therapeutic change. In addition, a possible role of perceptual distortion in weight-related body image disturbances requires further investigation. Thus, a multimodal approach to the assessment of interventions for women with negative weight-related body image appears to offer a number of advantages.

In sum, each of the studies reviewed above may be criticized for one or more of the following problems: a) lack of control groups and failure to collect follow-up data, b) treating a multidimensional outcome measure as if it measured a unitary construct, c) framing research and clinical objectives in terms of overall body satisfaction, rather than targeting the dimension of body satisfaction that appears to have the greatest impact on overall body evaluation and psychological functioning, d) failure to acknowledge the multidimensional nature of body image. Despite the methodological and conceptual shortcomings of these studies, it is possible to come to some tentative conclusions regarding the effectiveness of body image interventions.

Unfortunately, the lack of control groups severely limits the inferences that can be made from the body image intervention studies using a developmental approach. Without controls, it is impossible to conclude that any changes in body image were due to the intervention itself. Cognitive-behavioral techniques appear to be the most efficacious of the techniques that have been systematically investigated in relation to improving negative body image. Two thirds of the studies using cognitive techniques demonstrated a significant improvement in subjects' body image. Moreover, some support has been provided for the cognitive model as a mechanism of change in body image variables.

Cognitive techniques have not, however, been consistently successful in improving subjects' body image. Further research is necessary to identify the factors which discriminate between successful and unsuccessful attempts to improve women's body image using cognitive restructuring methods. Each of the studies which used cognitive techniques also incorporated other therapeutic elements into their overall treatment strategy. However, no attempt was made to evaluate the individual components of these interventions to determine which therapeutic elements, individually and in combination, were most effective. There is a need for research which systematically evaluates the

impact of therapeutic elements used in conjunction with cognitive therapy. By equating experimental conditions on all factors except the element of study, researchers can ascertain whether additional therapeutic tools augment the effects of cognitive restructuring in improving women's body image.

#### Hypnotically-Augmented Cognitive Restructuring

There are a number of theoretical considerations which suggest that hypnosis, when used in conjunction with cognitive restructuring techniques, might augment their effectiveness. These considerations encompass a) the facilitating effect of hypnosis on processes involved in all forms of psychotherapy and b) limitations of the cognitive restructuring approach in particular, which may be overcome by the conjoint use of hypnosis.

Mott (1982) notes that although hypnosis is sometimes called a method of treatment, it is more accurate to regard it as a facilitator of a number of different psychotherapeutic methods. The ability of hypnosis to facilitate a wide variety of therapies stems from its capacity to enhance certain processes basic to all forms of psychotherapy. Two such processes which are especially pertinent to the success of cognitive restructuring therapies are a) the learning of new adaptive behaviors and

the unlearning of maladaptive behavior, and b) the acceptance of the therapist's belief system as to the rationale which explains the problem and the treatment required.

Mott (1982) notes that the learning of new adaptive behavior and the unlearning of maladaptive behavior may be enhanced by the hypnotic state, which provides an excellent ground for rehearsal of new adaptive techniques. The ability of the individual to visualize and fantasize is increased in the hypnotic state, and therefore rehearsal of new ways of responding more adaptively can be made quite vivid. The learning of new cognitive patterns and the unlearning of old, self-defeating patterns is central to cognitive restructuring therapies.

Mott (1982) further notes that a belief held in common by the patient and therapist regarding the rationale which explains the patient's problem and the treatment required is central to all psychotherapies. He argues that this identification with the therapist and acceptance of his or her belief system is greatly enhanced by characteristics of the hypnotic state. If this analysis is correct, hypnosis may augment the effectiveness of cognitive restructuring in part by increasing the degree to which subjects accept the rationale offered for the etiology and treatment of their dysphoric condition.

An additional reason hypnosis might be expected to augment the effectiveness of cognitive restructuring therapies concerns limitations inherent in the cognitive restructuring approach, which may be circumvented by the conjoint use of hypnosis.

The premise underlying cognitive restructuring therapies is that activating experiences do not cause individuals to have emotional and behavioral consequences. Rather, individuals mainly cause their own consequences by their beliefs about the experiences they have or anticipate having (Ellis, 1977). In this way, affective responses are seen as dependent on cognitive processes (i.e., affect as post-cognitive). Yet there is evidence that affect is not completely dependent on cognitions (cf. Zajonc, 1980). A number of experimental studies suggest affective judgements may be fairly independent of, and precede in time, cognitive operations commonly thought to be the basis of these affective responses (Eschenroeder, 1982).

Evidence from cognitive restructuring research and clinical case reports supports the position that affect is sometimes relatively independent of cognition. Individuals undergoing cognitive restructuring therapy sometimes report experiencing an emotion but are unable to report any preceding or accompanying thoughts (Eschenroeder, 1982).

Although cognitive therapists such as Ellis deal with such situations by concluding that the individual must be saying something to himself unconsciously, Eschenroeder (1982) criticizes explaining away all observations that do not fit into the cognitive restructuring model by the "dubious construct" of unconscious verbalizations. It has also been noted that affect is not always affected by cognitive restructuring. Some strong emotional responses such as anxiety do not decrease until the individual is repeatedly exposed to the fear-arousing situation, and perceives that they are able to cope with it (Emmelkamp, Kuipers & Eggerat, 1978).

In an attempt to explain these findings, Eschenroeder (1982) cites brain research indicating that the left hemisphere is more specialized for logic and verbal processes, whereas the right hemisphere has a more diffuse, nonlinear processing system (Davidson, 1978; Ornstein, 1972). He suggests that emotions may sometimes be triggered by such non-verbal right brain processes, without antecedent self-verbalizations. If this analysis is correct, the impact of self-statement modification on such emotional responses might be limited (although still appreciable). A more effective approach would be to impact directly on the right hemisphere processes, at the same time as cognitive activity was utilized to change the intensity or quality of emotion.

Hypnosis might be one route to achieve such a direct impact on right hemisphere processes. A large body of research has implicated right cerebral activity in hypnosis (e.g., Morgan, Macdonald & Hilgard, 1974; Reyher, 1977). Hypnosis has been described as a tool for "communicating directly with the right ... hemisphere" (Matthews, Kirsch & Mosher, 1985, p. 92). Hypnosis might thus be expected to augment the effectiveness of cognitive restructuring by impacting on brain processes not directly accessible through traditional cognitive restructuring methodologies.

The considerations outlined above suggest that hypnosis may augment the effectiveness of traditional cognitive restructuring techniques. A number of recent studies have provided qualified empirical support for this position.

A number of researchers have investigated the efficacy of treatments which integrate cognitive techniques with hypnosis. In these investigations, cognitive restructuring skills are developed, implemented and reinforced while the client is in a state of hypnosis. There is typically an emphasis on the identification, vivid imagining and experiencing of self-defeating as well as self-enhancing thoughts and emotions. Both clinical case histories and controlled experiments have demonstrated the effectiveness of hypnotically-augmented cognitive restructuring for a wide

range of emotional and behavioral problems (e.g., Boutin & Tosi, 1983; Marzella, 1975; Reardon & Tosi, 1977; Tosi, Howard & Gwynne, 1982; Tosi & Reardon, 1976). Researchers using this paradigm have stated their impression that hypnosis augments and accentuates the power of cognitive restructuring (cf. Tosi, Howard & Gwynne, 1982). However, the majority of these studies did not use a control condition (i.e., they did not compare the effects of the hypnotically-augmented cognitive therapy with those of cognitive therapy alone.) Because of this, the validity of statements regarding the superiority of hypnotically-augmented cognitive restructuring over traditional cognitive restructuring methods is severely limited.

One recent study (Howard & Reardon, 1986) was designed to explicitly address the question of whether hypnosis augments the effectiveness of traditional cognitive restructuring techniques. This investigation compared the effectiveness of traditional and hypnotically-augmented cognitive restructuring on the performance, muscular growth, anxiety and self-concept of weight-lifters. Subjects in the Cognitive Restructuring condition identified emotionally disturbing situations associated with athletic performance and the associated self-defeating cognitions. Subjects were directed to provide themselves themselves with more

self-enhancing alternative cognitions and were encouraged to use the cognitive restructuring skills they learned in real-life situations. Subjects in the Cognitive-Hypnotic-Imagery condition used hypnotic relaxation and imagery to develop, and rehearse cognitive restructuring skills. The hypnotic state was then used to increase physiological processes associated with improved performance via hypnotic imagery.

The results indicated that the Cognitive Hypnotic Imagery group had significantly greater pretest to posttest increases on all dependent measures compared to the other Cognitive Restructuring group. These changes were maintained at a one-month follow-up. The Cognitive Restructuring group did not show any significant change on the dependent measures across times of measurement. Thus, the Cognitive Hypnotic Imagery group was superior to the Cognitive Restructuring condition.

Although apparently demonstrating the superiority of hypnotically- augmented cognitive restructuring to cognitive restructuring alone, this study is methodologically flawed. The Cognitive Hypnotic Imagery condition was not equated to the Cognitive Restructuring condition on all variables except the use of hypnosis. The Cognitive Hypnotic Imagery condition contained additional elements, such as the use of

imagery and the focus on physiological changes, which were completely absent from the Cognitive Restructuring treatment. Because of these differences in the content of the therapeutic sessions, the different outcomes between the two groups cannot be confidently attributed to the use of hypnosis in conjunction with the cognitive restructuring techniques. A second interpretational problem is that in the current study, the cognitive restructuring techniques, when used alone, had almost no effect on the dependent measures. This is in contrast to many other studies of cognitive restructuring, which have shown it to be an effective therapeutic technique (cf. Rachman & Wilson, 1980). It is unclear whether the failure of cognitive techniques to effect change in the current study is due to the nature of the problem being treated, or to failure to perform the cognitive restructuring methods as adequately as has been done in other investigations. At any rate, conclusions that cognitive techniques administered under hypnosis are more effective than cognitive techniques alone must be made cautiously. A more accurate picture of any advantage cognitive-hypnotic therapies may have over cognitive therapies alone might be gained from studies in which cognitive restructuring leads to improvement in the dependent variables.

In sum, hypnosis has been used to augment cognitive behavioral techniques, with success. However, there is a need for methodologically sound research which compares cognitive restructuring and hypnotically-augmented cognitive restructuring when they are equated on all factors except the presence of the hypnotic state. This will be necessary before conclusions can be reached about whether hypnosis augments the effectiveness of cognitive restructuring.

#### Current Study

The current study compared the effectiveness of two programs designed to improve weight-related body image among college women. Subjects were randomly assigned to receive cognitive restructuring, hypnotically-augmented cognitive restructuring, or no-treatment control. In the current investigation, weight-related body image is conceptualized as involving both a low self-rating of one's weight-related appearance and also assigning a high level of importance and attention to weight-related appearance. Therefore, outcome measures were selected to assess change along the body image dimensions of body satisfaction as well as attention/importance. In addition, change along the perceptual distortion dimension was assessed.

Because satisfaction with weight-related aspects of appearance has been identified as central to women's overall

self-evaluation of physical appearance, the current study explicitly targeted satisfaction with weight-related aspects of appearance. Change along this dimension was assessed separately from change in overall body satisfaction.

This study also provided a test of the position that hypnotically-augmented cognitive restructuring is superior to traditional cognitive restructuring approaches. To provide an adequate test of this hypothesis, experimental conditions were equated on all factors except the use of hypnosis. The use of imagery was incorporated into both experimental conditions, and a motivational component was in the cognitive restructuring condition to control for demand characteristics associated with hypnosis.

Because an individual's susceptibility to hypnosis may be a factor in the effectiveness of an intervention involving hypnosis, the current study controlled for and examined the effects of hypnotic susceptibility across groups.

The current study also examined the effect of weight status (overweight vs. not overweight) on the effectiveness of the interventions. The current intervention was designed to promote and enable women's acceptance of their bodies, as opposed to preoccupation with their body weight and attempts to lose weight through dieting. Although this objective is

seen as appropriate for women of normal weight, underweight, or slight overweight, it would not be appropriate to discourage weight loss attempts for individuals whose level of overweight is associated with health risks. Therefore, women classified as clinically obese were excluded from participation in the study. The designation "overweight" as used in this investigation refers to women who are above the median desirable weight for their age and height, but are not clinically obese.

Overview and Hypotheses. This study used a two x two x three factorial design, with two levels of hypnotic susceptibility (More Susceptible vs. Less Susceptible), two levels of weight status (Overweight vs. Not Overweight), and three conditions (Cognitive Restructuring, Hypnotically-Augmented Cognitive Restructuring, and No-Treatment Control). There were four times of measurement (pretest, posttest, 3 and 6-month follow-ups). However, only pretest and posttest data were available for use in the current analyses. Subjects were assessed for change along three dimensions of body image, as well as a number of psychosocial areas known to be related to body and weight concerns.

Hypothesis Set 1. The first set of hypotheses concerns relationships among the three aspects of body image

assessed. It was predicted that subjects' scores on measures of body image would reflect the existence of a distinct dimensional structure of weight-related body image for the current sample. In particular, it was predicted that body image measures reflecting satisfaction with appearance and those reflecting the degree of attention and importance assigned to appearance would be identifiable as distinct dimensions of body image. (Hypothesis 1A). No prediction was made regarding the possible existence of a third distinct dimension reflecting perceptual distortion of body dimensions. (Hypothesis 1B).

The second, third and fourth sets of hypotheses concern the absolute and relative impact of the three treatment conditions on body image outcome measures. The influence of hypnotic susceptibility and weight status on the body image outcome measures are also addressed.

Hypothesis Set 2. It was predicted that subjects who received hypnotically-augmented cognitive restructuring would show significantly greater gains in their satisfaction with their appearance than would subjects who received cognitive restructuring alone (Hypothesis 2A). Both experimental groups were predicted to show significantly greater gains in satisfaction than that of a no-treatment control group (Hypothesis 2B). No prediction was made

regarding possible main or interaction effects of hypnotic susceptibility on subjects' pre- to posttest gains in satisfaction (Hypothesis 2C). No prediction was made regarding possible main or interaction effects of weight status on subjects' of pre- to posttest gains in satisfaction (Hypothesis 2D).

In addition to evaluating the relative efficacy of the treatment programs and the no-treatment control group, it is also important to demonstrate the absolute efficacy of the two treatment programs. Therefore, it was further hypothesized that subjects who received hypnotically-augmented cognitive restructuring would exhibit a significant pre- to posttest improvement in their satisfaction with their appearance (Hypothesis 2E). Subjects who received cognitive restructuring alone would also exhibit a significant pre- to posttest improvement in their satisfaction with their appearance (Hypothesis 2F).

These effects were expected to be reflected through changes on both 1) measures of satisfaction with body appearance in general (BSRQ AE) and 2) measures of satisfaction with weight-related appearance (BES WC).

Hypothesis Set 3. It was predicted that subjects who received hypnotically-augmented cognitive restructuring would show significantly greater decreases in the degree of

attention and importance they assigned to appearance than would subjects who received cognitive restructuring alone (Hypothesis 3A). Both experimental groups were predicted to show significantly greater decreases in attention/importance than that of a no-treatment control group (Hypothesis 3B). No prediction was made regarding possible main or interaction effects of hypnotic susceptibility on subjects' pre- to posttest decreases in attention/importance (Hypothesis 3C). No prediction was made regarding possible main or interaction effects of weight status on subjects' pre- to posttest decreases in attention/importance (Hypothesis 3D).

In terms of absolute efficacy of the interventions, subjects who received hypnotically-augmented cognitive restructuring were predicted to exhibit a significant pre- to posttest decrease in the degree of attention/importance they assigned to their appearance (Hypothesis 3E). Subjects who received cognitive restructuring alone were also predicted to exhibit a significant pre- to posttest decrease in the attention/importance assigned to appearance (Hypothesis 3F).

These effects were expected to be reflected through changes in the following measures: BSRQ AI, BCQ PU.

Hypothesis Set 4. It was predicted that subjects who received hypnotically-augmented cognitive restructuring would show significantly greater gains in body size estimation accuracy than would subjects who received cognitive restructuring alone (Hypothesis 4A). Both experimental groups were predicted to show significantly greater gains in accuracy than that of a no-treatment control group (Hypothesis 4B). No prediction was made regarding possible main or interaction effects of hypnotic susceptibility on subjects' pre- to posttest gains in accuracy. (Hypothesis 4C). No prediction was made regarding possible main or interaction effects of weight status on subjects' pre- to posttest gains in accuracy (Hypothesis 4D).

In terms of the absolute efficacy of the interventions, subjects who received hypnotically-augmented cognitive restructuring were predicted to exhibit a significant pre- to posttest increase in body size estimation accuracy. (Hypothesis 4E). Subjects who received cognitive restructuring alone were also predicted to exhibit a significant pre- to posttest increase in body size estimation accuracy. (Hypothesis 4F).

These effects were expected to be reflected through changes on the IMM BPI's for shoulder, waist and hip.

Hypothesis Set 5. The fifth set of hypotheses concerns the absolute and relative impact of the three treatment conditions on outcome measures related to psychosocial functioning. The influence of hypnotic susceptibility and weight status on psychosocial outcomes are also addressed.

It was predicted that subjects who received hypnotically-augmented cognitive restructuring would show significantly greater improvement in psychosocial adjustment than would subjects who received cognitive restructuring alone (Hypothesis 5A). Both experimental groups were predicted to show significantly greater improvement in psychosocial adjustment than that of a no-treatment control group (Hypothesis 5B). No prediction was made regarding possible main or interaction effects of hypnotic susceptibility on subjects' pre- to posttest improvement in psychosocial adjustment (Hypothesis 5C). No prediction was made regarding possible main or interaction effects of weight status on subjects' pre- to posttest improvement in psychosocial adjustment (Hypothesis 5D).

In terms of the absolute impact of the interventions, subjects who received hypnotically-augmented cognitive restructuring were predicted to exhibit a significant pre- to posttest improvement in psychosocial adjustment. (Hypothesis 5E). Subjects who received cognitive

restructuring alone were also predicted to exhibit a significant pre- to posttest improvement in psychosocial adjustment (Hypothesis 5F).

These effects were expected to be reflected through changes in the following measures: BDI, RSES, TSBI.

Hypothesis Set 6. A final set of hypotheses concerns the relationships between subjects' demographic characteristics and the effectiveness of the intervention. No predictions were made regarding the nature of such relationships.

## METHOD

Subjects

Female introductory psychology students served as voluntary participants in exchange for experimental credit. Female students in introductory psychology classes received a project description and a form to request participation. In addition, a questionnaire assessing self-reported weight and height and symptoms of bulimia and anorexia nervosa (operationalized from DSM III-R criteria following Katzman & Wolchik, 1984) were included. Women who met all of the following inclusionary and exclusionary criteria were contacted to participate in further sessions: a) a desire to participate in the program; b) self-reported weight not more than 15% above the median desirable weight for her height (Metropolitan Life Insurance Tables, 1983); c) self-reported symptomatology indicating the diagnosis of eating disorder would not be appropriate, according to operationalized DSM III-R criteria; d) access to a tape recorder. Three hundred and fourteen women volunteered for the study. Fifty-eight were eliminated from the study (but offered a referral for counseling) because their responses to the pre-screening measure met DSM III-R criteria for anorexia nervosa or bulimia. Of the 314 women screened, 162 met all criteria, and from these 123 were randomly selected. Eighty-five subjects participated for the study's duration.

### Assessment Instruments and Materials

Body image measures. The Body-Self Relations Questionnaire (BSRQ) (Winstead & Cash, 1984) was administered to assess self-evaluation of physical appearance (Appearance Evaluation subscale) and the cognitive disposition of attending to and assigning importance to one's appearance (Appearance Attention/Importance subscale). These BSRQ subscales contain 18 and 20 items respectively and use a 5-point, Likert type response format. Previous research has attested to the temporal stability and convergent, discriminant and construct validity of these BSRQ subscales (e.g., Cash & Green, 1986; Cash et al., 1986; Noles et al., 1985; Winstead & Cash, 1984). A copy of the abbreviated form of the BSRQ used (i.e., Appearance Evaluation and Appearance Attention subscales) is contained in Appendix A.

The Body Esteem Scale (BES) (Franzoi & Shields, 1984) was administered as a measure of weight-specific body image satisfaction. The BES was constructed to reflect the factor breakdown of the Body Cathexis Scale (Secord & Jourard, 1953), one of the most widely used measures of body image satisfaction. In factor analysis of the Body Cathexis Scale (Franzoi & Shields, 1984), the three factors that emerged, for females, were a) weight control and body proportions, b)

facial features and c) general health and physical strength. In developing a new instrument to reflect the existence of these three factors, Franzoi and Shields used 23 of the original Body Cathexis items which had high loadings on the factors obtained, along with 16 new items. Subsequent factor analyses resulted in a final 35-item version of the scale yielding somewhat different factors. For females these were a) Sexual Attractiveness b) Weight Concern and c) General Physical Condition. The Sexual Attractiveness subscale measures women's attitudes about body parts and functions associated with facial attractiveness and sexuality. The Weight Concern subscale measures women's attitudes towards body parts that can be physically altered through exercise or control of food intake, and body functions associated with food intake. The third subscale, Physical Condition, reflects women's feelings about their stamina, strength and agility. Internal consistencies of .78, .87, and .82 were found for these factors, respectively. The response format for the individual items involves 5-point Likert scales ranging from have strong negative feelings (1) to have strong positive feelings (5). Scores for each subscale are obtained by summing responses to all items comprising that subscale, with higher scores indicating greater body esteem on that dimension. There is evidence of the discriminant validity of the scale for

women, in that anorexic females differed significantly from non-anorexics on the Weight Concern subscale (Franzoi & Shields, 1984). Moreover, the Weight Concern subscale of the BES has been found in previous research to be a strong predictor of overall feelings of physical attractiveness, whereas the other two Body Esteem subscales were only weak predictors of self-rated physical attractiveness (Franzoi & Herzog, 1986). A copy of the BES is contained in Appendix B.

The Body Consciousness Questionnaire (BCQ) (Miller, Murphy & Buss, 1981) was used to assess the degree to which subjects are habitually aware of and concerned about the way their bodies appear to others. The instrument consists of 15 items which subjects rate on 5-point Likert scales ranging from extremely uncharacteristic (0) to extremely characteristic (4). Factor analysis has revealed three factors: Private Body Consciousness assesses the disposition to focus on internal bodily sensations (e.g., "I'm very aware of changes in my body temperature.") Public Body Consciousness assesses a chronic tendency to focus on and be concerned about the external appearance of one's body (e.g., "I want to make sure my hair looks right"). The third factor, Body Competence, measures a respondent's self-evaluation of bodily strength, grace and effectiveness (e.g., "I'm more coordinated than most people").

Test-retest reliabilities for the scales were .69, .73, and .83, respectively (Miller, Murphy & Buss, 1981) indicating the measure is acceptably stable over time. The subscale pertinent to the current study's hypothesized effects is the Public Body Consciousness Subscale. A copy of the BCQ is contained in Appendix C.

In administering the BES and BCQ, subscales not pertaining to the study's hypothesized effects (i.e., BES SA, BES PC, BCQ PR, BCQ BC) were retained to maintain the integrity of the instruments. At analysis, they were analyzed to determine whether any generalization of effects to aspects of body image not directly targeted by the intervention had occurred.

The Image Marking Method (IMM) (Askevold, 1975) was used to assess body size estimation accuracy among subjects. Methods used to examine body size estimation can be divided into "whole body" methods and those that measure "body part" estimation. It has been argued (cf. Birtchnell, Lacey & Harte, 1985) that the latter approach is especially suitable for women because of evidence that women tend to judge their bodies on a part-by-part basis, whereas men tend to make whole body judgements (Crisp & Kalucy, 1974), and because women have a much clearer view of what they like and don't like about their bodies (Huenemann et al, 1966). The IMM,

introduced by Askevold (1975) is a "body part" method which has an internal consistency coefficient of .60 (Garner & Garfinkel, 1983). This method is described in detail by Askevold (1975). The subject stands at arm's length from a 1.5 by 1.0 metre piece of paper taped to a wall. She is asked to imagine that she is standing before a mirror, looking at her reflection. The investigator stands behind the subject and touches body points on the subject's shoulder, waist and hip. After each touch, the subject marks on the paper where they felt these points would be in the imaginary mirror. The actual widths are then recorded. Body size estimation accuracy was calculated according to the formula proposed by Slade and Russell (1973): Body Perception Index (BPI) = average perceived size/actual size multiplied by 100. Gleghorn, Penner, Powers and Schulman (1987), using bulimic subjects, found reliability estimates ranging from .72 to .92 for the three body regions assessed by the IMM over a two to three minute interval. These authors also reported moderate correlations between BPIs obtained using the IMM and those obtained with other "body parts" methods. The IMM has discriminated between groups of bulimic women and normal controls, with bulimics showing significantly greater overestimation of their body dimensions (Whitehouse, Freeman & Annandale, 1986).

There is considerable evidence that estimates of body size are strongly influenced both by the choice of whole body vs. body part methodology, and by the particular instrument used (cf. Whitehouse et al., 1986). In particular, "body part" methods appear to produce more marked overestimation of size than do whole body methods (Birtchnell et al., 1985). However, given that the current data were to be evaluated in terms of changes in estimation accuracy pre- to postintervention, rather than absolute accuracy of estimation, it was judged that the IMM would provide an acceptable index of body size estimation accuracy, could be administered within the time constraints of the assessment sessions, and would be acceptable to the subjects.

The Appearance Beliefs Inventory (ABI) was employed as a simple, face-valid measure of dysfunctional weight- and appearance-related cognitions. This instrument was adapted from the Personal Appearance Beliefs Test (Butters, 1985) which measures the extent to which individuals subscribe to presumably dysfunctional beliefs about their appearance. The ABI consists of 10 items which were constructed to conform with specific cognitive errors described by Beck, Rush, Shaw and Emery (1979) or other cognitive processes known to diminish body image. Also included were dysfunctional cognitions which clinical accounts have identified as typical of women with negative weight-related

body image (e.g., the belief that it is important to achieve and maintain a slim physique to be worthwhile or lead a satisfying life.) Subjects make 5-point Likert-type ratings of the extent of their agreement with these statements. The subject's score is taken as the sum of the ten item scores, with higher scores indicating greater endorsement of the dysfunctional cognitions. A copy of the ABI is contained in Appendix D.

Measures of psychosocial functioning. The Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) was employed to assess depression in subjects. The BDI was developed as a scale for assessing the depth or severity of depressive symptoms. It consists of 21 items covering a range of affective, behavioral, cognitive and somatic symptoms. For each item, respondents select among alternative responses reflecting increasing levels of severity. In scoring, each response is assigned a weight. A subject's score is calculated by summing the weighted responses, with higher scores reflecting more severe depressive symptomatology. With adult subjects, internal consistency reliabilities have been above .9 (Beck & Beamesderfer, 1974). Validity tests have shown BDI scores to be correlated with clinical judgments of depression severity (Beck, 1967; Bumberry, Oliver & McClure, 1987; Hammen, 1980) and with several self-report measures of

depression (Beck & Beamesderfer, 1974). A copy of the BDI is contained in Appendix E.

The Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) was employed as a measure of general self-esteem. The Rosenberg Self-Esteem Scale is a global measure of self-esteem which provides a subjective estimate of the respondent's overall feelings of satisfaction or dissatisfaction with the self. The scale consists of 10 questions, each answered on a 4-point scale from strongly agree to strongly disagree. These questions constitute a Guttman Scale, with items grouped into 6 categories. Each category is scored on the basis of its component item or items, and the respondent's score is taken as the sum of the six category scores, with higher scores indicating lower self-esteem. Silber and Tippett (1965) reported test-retest reliability over a two-week period of .85 and correlations of .56 between the Rosenberg Self-Esteem Index and psychiatrists' ratings of self-esteem. A copy of the RSES is contained in appendix F.

Two short (16-item) forms of the Texas Social Behavior Inventory (TSBIA and TSBIB) (Helmreich & Stapp, 1974) were used to assess subjects' self-perceived confidence and competence in social situations. The original (32-item) TSBI is a validated measure of social self-esteem or

perceived social competence (Helmreich & Stapp, 1974). All items are rated on 5-point Likert scales ranging from not at all characteristic of me to very much characteristic of me. Each item is given a score from 0 to 4, with higher scores reflecting greater self-perceived confidence, social dominance and social competence. The two short forms of the TSBI were developed in response to a need for equivalent forms for use in research settings where retesting for changes in social self-esteem is indicated. Comparisons of TSBI A and TSBI B and the original scale were based on data from over 500 male and female university students. Correlations with the long form were .973 (males) and .974 (females) for TSBI A, and .973 (males) and .977 (females) for TSBI B (Helmreich & Stapp, 1974). Factor analysis and part-whole correlations verified the similarity of the two forms. (Helmreich & Stapp, 1974). Helmreich and Stapp concluded that the short forms are statistically and logically consistent and can be used with confidence to provide reliable indices of social self-esteem. Copies of the TSBI A and TSBI B are contained in Appendix G.

Control variables. A number of variables known to influence body image were assessed with a Subject Information Questionnaire (SIQ). Percentage overweight or underweight has been related to dissatisfaction with weight (Cash & Green, 1986; Davies & Furnham, 1986) and to body

size estimation accuracy (Collin, McCabe, Jupp & Sutton, 1983; Garner et al., 1976; Schonbruch & Schell, 1967). The pretest SIQ therefore included a self-report measure of height and weight to identify subjects who were within, above and below the recommended weight range for their height, according to 1983 Metropolitan Life Insurance norms. In addition, the post-test SIQ included a two-part item asking subjects to retrospectively assess weight change since the first assessment session, by indicating a) if weight had increased, decreased, or stayed the same, and b) the amount of change if any. This measure was included to help assess the relationship between weight change and body image change. Several demographic characteristics have been found to be related to body image (e.g., Campbell, Converse & Rodgers, 1976). Age, marital status, education and parents' socioeconomic status were accordingly treated as control variables. A final item on the post-test SIQ asked subjects whether they had sought any additional treatment or help from friends for their concern about weight since the first assessment session. Copies of the pretest and posttest SIQ are contained in Appendix H.

During the initial assessment only, the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) (Shor & Orne, 1962) was administered. Adapted from the individually administered Stanford Hypnotic Susceptibility Scale, Form A

(Weitzehoffer & Hilgard, 1959) the HGSHS:A is regarded as an efficient device for initial screening of hypnotizability within groups (Sheehan & McConkey, 1979).

A 6-item Feedback Questionnaire developed for the current study was administered to subjects at the first post-test session. This instrument was not statistically analyzed. A copy of the Feedback Questionnaire is contained in Appendix I.

Audiotapes. Two sets of audiotapes were used in this investigation. Subjects in the hypnotically-augmented cognitive restructuring condition listened to tapes from set A, whereas subjects in the cognitive restructuring condition listened to tapes from set B. Each set A tape began with a fifteen minute standardized hypnotic induction, following Shor and Orne (1962). This was followed by a segment devoted to cognitive restructuring. Parts of these cognitive restructuring segments were adapted from Butters (1985). After the cognitive restructuring segment, subjects in the hypnotically-augmented condition were brought out of their trance. The tape then reviewed the highlights of the session and gave a homework assignment. Each set B tape began with a fifteen minute motivational discussion. The cognitive restructuring segment and assignment of homework which followed were the same as that used for the

corresponding Set A tape. Thus, the tapes used by subjects in both experimental conditions were identical with respect to the cognitive restructuring and homework components. The tapes differed in that set A tapes include portions to induce and remove a hypnotized state, whereas set B tapes include portions relating to the subject's motivational state.

A female graduate student in clinical social work served as the audiotape narrator for both sets of tapes. The narrator was blind to the experimental hypotheses and had no direct contact with subjects before or during the study.

### Procedure

Participants in this study first attended a group session in which they were further informed of the goals and procedures of the study. Those wishing to continue signed a consent form and completed the battery of pretest measures. A median split of the scores on the HGSHS:A determined a woman's assignment to either the More Susceptible or the Less Susceptible group. Women with scores at, or above, the median score of 8 were designated "More Susceptible" to hypnosis and women with scores below the median were designated "Less Susceptible" to hypnosis. On the basis of self-reported height and weight, subjects were further

classified as Overweight or Not Overweight. Any woman whose self-reported weight exceeded the the median desirable weight for her height, according to 1983 Metropolitan Life Insurance norms, was classified as Overweight. From each of the four subject groupings formed by crossing the hypnotic susceptibility classification with weight status<sup>2</sup> (i.e., More Susceptible and Overweight, More Susceptible and Not Overweight, Less Susceptible and Overweight, Less Susceptible and Not Overweight), an equal number of subjects were randomly selected to serve as participants in the experiment. Participants from each of the four subject groups were then randomly assigned to one of the following three sets of therapeutic techniques: cognitive restructuring (CR), hypnotically-augmented cognitive restructuring (CRH), and no-treatment control group (NTC).

---

<sup>2</sup>Because self-reported weights may not be accurate among individuals with body image disturbances, (M. Lebow, personal communication, Sept. 26, 1989), an empirically-derived correction factor was computed. A random subsample (n=25) of participants were weighed by the experimenter following the initial assessment and the discrepancy between actual weight and self-reported weight was computed for each

Subjects in the two experimental conditions (CR and CRH) received four sessions of cognitive restructuring either with or without hypnosis. The sessions were conducted by means of audiotapes which were loaned to the subjects. Subjects signed out each of the four audiotapes, in sequence, from the experimenter. Each time a subject returned a tape, a brief check on the tape's content was performed to determine whether the subject listened to the tape. As a precautionary measure, subjects in the CRH condition were instructed to listen to the awakening instructions even if a session is interrupted.

Homework assignments were given in order to facilitate the generalization of effects. Materials necessary for the session's homework assignment (e.g., worksheets, activity logs) were given out together with each tape, as a package. Instructions for the homework assignment were provided at the end of each tape, and were also included in written form with each package. Checks on the completion of homework assignments were performed to verify subjects' compliance.

---

subject. The mean discrepancy was 1.14 kg. A regression analysis performed on the subsample data, using actual weight as the predictor variable, failed to reveal systematic variation in the size of discrepancy across the weight range of the sample. Because the correction factor

The audiotape format was considered advantageous in that it allows subjects to listen to and return tapes when it is convenient for them. However, this procedure is capable of introducing internal validity problems by creating variability in the spacing of intervention sessions across subjects. To address this issue, the dates on which subjects sign out and return each tape were recorded, so that spacing could be included in the data analyses. An additional problem with the audiotape format is that subjects may repeat sessions of the same tape. In order to prevent this, subjects were instructed to listen to each tape only once. Subjects were told that copies of the tapes could be obtained from the experimenter at the conclusion of the study, if repeated use of the tapes were desired.

Subjects were randomly assigned to one of three start dates for the intervention, which were staggered at one-week intervals, so that demand for copies of a given tape did not exceed supply at any given time. Subjects completed a posttest assessment approximately one week after their final intervention session, and follow-up assessments

---

produced such slight differences from subjects self-reported weight, it was decided to use self-reported weights in assigning subjects to conditions and for purposes of analysis.

approximately three months and six months after their final intervention session. Thus, posttest and follow-up assessments were staggered to correspond with the assignment of subjects to starting dates for the intervention. NTC subjects were randomly assigned to the posttest and follow-up dates. All assessments were conducted on a group basis by the experimenter. Accurate responding was stressed, and subject code numbers were used to assure individual confidentiality.

After the follow-up measures were taken, oral and written feedback were provided to all subjects. (Feedback was mailed to subjects who had dropped out of the study.) This feedback included a description of the nature and purpose of the study, as well as information regarding resources available in the community to help them deal with weight-related body image problems. A copy of the written feedback provided to subjects is contained in Appendix N.

Interventions sessions. In Session 1, the narrator of the tape-recorded sessions introduces herself. She briefly discusses the problem of "negative weight-related body image", its prevalence, possible causes, and effects on personal happiness.

At this point, the A and B versions of the first tape diverge. The Set A tape introduces the use of hypnosis to

the CRH subjects with the statement, "We believe this type of program may be especially effective when presented to a person while she is in a hypnotized state. Therefore the next few minutes of the tape will be used for a hypnotic induction, similar to the one you experienced in the initial group testing session." A standardized hypnotic induction, following Shor & Orne (1962) follows.

The Set B tape, on the other hand, tells subjects in the CR condition that "We believe this type of program may be especially effective when presented to the person while she is in a highly motivated state. So for the next few minutes of the tape I am going to lead you through some motivational exercises before continuing." A motivational discussion follows.

Both versions of the tape next discuss the nature of self-talk, how it is triggered by specific environmental events and results in specific emotional states. The narrator explains the A-B-C (antecedent-beliefs-emotional consequences) model of Ellis (1962) to subjects and presents Ellis' (1962) conclusions that maladaptive or negative attitudinal statements are related to negative emotions. The tapes then move to the role of self-statements in the problem at hand. They deal with the role of maladaptive self-statements or beliefs in maintaining emotional distress

about one's weight-related appearance. The narrator provides examples of inaccurate or dysfunctional self-statements and beliefs believed to characterize the thinking of individuals who have weight-related body image problems. She stresses that these statements can be modified in an adaptive way, using cognitive restructuring, to reduce body image dissatisfaction. Tape A concludes with awakening instructions; Tape B, with instructions for normalization of motivational state.

The homework assignment for the first week involved three activities. Subjects first performed an exercise for recognition of negative self-talk. To become aware of the self-talk they engage in when their bodies are under observation (by others or themselves) subjects were instructed to look at themselves in a mirror and record any self-statements made. The second part of the homework assignment involved filling out a Cognitive Scenarios Worksheet (Butters, 1985). This worksheet reviews the self-defeating thought patterns outlined on the tape and asks subjects to indicate the degree to which each of the thought patterns described applies to her thinking about her weight. The third part of the homework assignment was to continue to monitor and record negative self-statements regarding weight and appearance throughout the week and note the resulting emotions. An outline of the audiotapes and

copies of the homework materials for Session 1 are contained in Appendix J.

Session 2 provides further rehearsal of the cognitive therapy concepts used in the previous session. Following hypnotic induction (Tape A) or motivational discussion (Tape B), several typical cognitive errors concerning appearance are detailed on both tapes. Examples of rational counterarguments are presented. These examples are presented to subjects as an impetus for them to identify their own negative self-statements and develop more self-enhancing alternatives. The narrator also discusses the concept of habitual cognitive/emotional patterns and the importance of regular practice in changing maladaptive cognitions. Tape A concludes with awakening instructions; tape B, with normalization instruction for motivational state. For homework, both tape A and tape B instruct subjects to identify self-defeating thoughts they are prone to have and write down three counterarguments for each. In addition, subjects were taught and assigned to use a Four-Column Worksheet (adapted from Butters, 1985) whenever they feel dissatisfaction with their weight-related appearance during the following week: a) monitor negative affect in specific situations b) identify automatic thoughts and cognitive errors that occur c) attempt to reframe/restructure her thinking to reach a more desirable

emotional state and monitor the resulting changes in affect. An outline of the audiotape and copies of the homework materials for session 2 are contained in Appendix K.<sup>3</sup>

In Session 3, the focus is on the role of imagery in achieving cognitive and emotional changes. Following hypnotic induction (Tape A) or motivational discussion (Tape B), subjects in both conditions are instructed to think of one of the situations they have identified in previous homework assignments in which they typically experience negative feelings about their weight-related appearance, and for which they have identified self-defeating cognitions or beliefs. The tapes instruct subjects to identify cognitive and emotional changes they would like to accomplish in that situation. The tapes then guide subjects through an imagery experience. The narrator instructs subjects to recall (via imagery) the incident or typical situation, to identify the negative cognitions, and to reexperience the negative

---

<sup>3</sup> Hypnotic induction and motivational discussion for A and B tapes, respectively, have been omitted from Appendix K and subsequent appendices. These portions of the tapes for Sessions 2, 3, and 4 are the same as that presented in Appendix J. (Session 1).

emotional consequences. The subject is directed to experience as much negative affect as possible. The narrator reinforces this entire sequence with statements like " Notice how unhappy you feel when you think in this way." The subject is then instructed to stop visualizing this scene. The tapes suggest that the subject use alternative cognitions, associated with more self-enhancing processes. Again the subject focuses (via imagery) on the same situation, but this time she substitutes more self-enhancing statements, and experiences positive emotions as a result. The narrator reinforces this sequence with statements like, "Notice how much better you feel when you think and talk to yourself in this new way." Tape A concludes with awakening instructions; Tape B, with instructions to normalize motivational state.

The homework assignment for the third week involved further practice of imagery. Subjects were given guidelines for writing their own imagery scripts and instructed to practice visualizing themselves using only positive self-statements and experiencing positive affective consequences. An outline of the audiotape and copies of homework materials for session 3 are contained in Appendix L.

Session 4 begins with hypnotic induction (Tape A) or motivational discussion (Tape B). The remainder of both tapes provides a review of the skills taught in the program. In addition, a number of strategies for the maintenance of improvements post-intervention are presented. These include using a) stress inoculation techniques (Meichenbaum, 1985) and b) relapse prevention strategies when facing an apparent failure to cope with negative body image thoughts/feelings (Marlatt and Gordon, 1985). There is also an assertiveness approach to use when others continue to reinforce the subject's dissatisfaction and preoccupation with her weight. The session concludes with awakening instructions (Tape A) or instructions to normalize motivational state (Tape B). An outline of the audiotape and copies of homework materials for session 4 are contained in Appendix M.

## RESULTS

Attrition

Twenty-three subjects failed to complete the treatment programs, eleven (27.5%) from the CR treatment and twelve (27.9 %) from the CRH intervention. Additionally, 15 subjects (37.5%) in the no-treatment condition were unable to provide posttest data and were not included in the data analyses. This difference in attrition was not significant,  $F(2, N=123)=1.21$ ,  $p > .05$ . The final sample consisted of 85 subjects who were divided unequally among the twelve conditions of the study (Table 1).<sup>4</sup>

In order to determine whether there were systematic differences between subjects who completed the study and those who dropped out, A MANOVA was computed on the pretest values of the entire range of outcome measures, as well as HGSHS:A scores, BMI, and demographic variables. This MANOVA, using study completion as the predictor variable, was not significant,  $F(22, 76)=0.93$   $p > .05$ .

---

<sup>4</sup>Due to scheduling difficulties, posttest IMM data were not collected on 6 subjects. For analyses involving IMM BPI data,  $n=79$ .

Attrition may also be said to occur when subjects complete all assessments but fail to adhere to the treatment regimen. Subjects' compliance with the treatment program was assessed by checks on the content of the audiotaped interventions and by checks on the completion of assigned homework. Of those subjects who completed the program and provided posttest data, only one subject failed to pass all content and homework checks.

#### Pretreatment Analyses

A 3 (Groups) x 2 (Susceptibility) x 2 (Weight Status) MANOVA was computed on the pretest values of outcome measures and demographic variables. This analysis indicated that there were no significant differences among the treatment and control groups at pretest,  $F(38,138)=123$ ,  $p >.05$ . The MANOVA main effect was significant for Susceptibility,  $F(19,69)=1.91$ ,  $p <.03$ . The Weight Status main effect approached significance,  $F(19,69)=1.69$ ,  $p <.06$ . These results indicate the initial nonequivalence of subjects assigned to different levels of Susceptibility and Weight Status in the original sample. However, when the pretest data were reanalyzed using only subjects who completed the study and provided posttest data, neither of these effects achieved significance, nor was the Group effect significant. (For all analyses to follow, only the data of subjects who completed the study were used).

Table 2 shows the results of the MANOVA and subsequent univariate analyses conducted on the pretest data of the sample of subjects with completed data. Despite the initial multivariate equivalence of the final sample, examination of univariate analyses indicated that there were significant differences at pretest on a number of outcome measures. These univariate analyses revealed that the Overweight subjects were initially less satisfied with body appearance in general (BSRQ AE) and with weight-related appearance in particular (BES WC) than the Not Overweight subjects. Univariate analyses also indicated that More Susceptible subjects assigned greater initial attention and importance to appearance (BSRQ AI, BCQ PU), had initially more positive evaluations of their physical coordination and agility (BCQ BC), and had greater initial confidence in social situations (TSBI) than did Less Susceptible subjects. Subjects in the CRH treatment group had initially greater satisfaction with weight-related appearance (BES WC) than did subjects in CR and NTC groups. Finally, a significant Group x Susceptibility interaction was obtained for educational attainment. However, the significance of this interaction belies the homogeneity of the sample. The range of responses to the item assessing educational attainment was restricted to two response levels, both of which reflect university undergraduate status. Initial scores on the

remaining demographic variables did not vary systematically across the conditions of the study. Table 1 presents the initial mean scores on outcome measures, as well as demographic characteristics of the final sample.

Separate 3 (Groups) x 2 (Weight Status) x 2 (Susceptibility) ANOVAs were computed on each of HGSHS:A score, self-reported weight, and the Body Mass Index (BMI) of weight/squared height recommended by Health and Welfare Canada (Canadian Guidelines, 1988). As expected, the More Susceptible group had significantly higher HGSHS:A scores ( $M=9.59$ ) than did the Less Susceptible group ( $M=5.62$ ). The Overweight group had significantly higher self-reported weights ( $M=64.10$  kg) and higher Body Mass Index values ( $M=23.41$ ) than the Not Overweight group (means of 54.86 kg and 20.22, respectively). An unexpected finding was that self-reported weight was also associated with the level of hypnotic susceptibility. Although the Less Susceptible group was, on the average, 2.08 kg lighter than the More Susceptible group at pretest, it is important to note that they were also an average of 1.62 cm shorter. Thus, although the weights differed, anthropomorphic indices of overweight (i.e., height/weight and BMI) indicate the essential equivalence of the two Susceptibility groups.

Table 1

Cell Sizes, Sample Characteristics and Initial Mean Scores on  
Outcome Measures for Final Sample

Group	n	BSRQ		BES		
		AE	AI	SA	PC	WC
CR						
Overweight						
More	7	45.86	88.14	46.57	31.14	17.42
Less	8	50.25	77.25	47.13	29.75	19.75
Not overweight						
More	9	47.89	81.33	43.22	29.56	20.11
Less	6	57.83	83.67	43.50	32.17	24.33
CRH						
Overweight						
More	6	48.67	84.17	43.33	32.83	22.50
Less	8	47.60	82.75	49.63	32.38	23.75
Not overweight						
More	9	60.67	83.11	45.11	30.44	31.00
Less	7	56.29	82.14	47.86	31.57	26.86
NTC						
Overweight						
More	6	39.50	81.33	42.83	29.50	18.00
Less	7	42.86	81.57	40.00	27.71	18.00
Not overweight						
More	8	58.50	86.38	48.50	33.13	26.38
Less	4	54.00	74.50	44.50	27.50	22.50
Overall sample	85	51.00	82.44	45.34	30.73	22.75

Table 1 (continued)

Cell Sizes, Sample Characteristics and Initial Mean Scores  
on Outcome Measures for Final Sample

Group	BCQ			ABI	BDI	RSES	TSBI
	PU	PR	BC				
CR							
Overweight							
More	17.71	13.29	10.00	37.14	18.14	3.14	34.43
Less	16.38	13.00	9.13	33.50	8.25	2.00	32.35
Not overweight							
More	18.67	14.11	8.89	36.89	16.11	2.89	31.11
Less	19.50	13.83	10.67	34.67	14.67	2.33	36.50
CRH							
Overweight							
More	19.33	14.33	10.17	36.67	14.67	2.33	36.50
Less	18.25	13.50	9.88	34.88	15.38	3.00	33.25
Not overweight							
More	19.67	14.56	10.00	30.00	9.56	2.11	36.89
Less	19.43	12.43	9.00	32.00	13.43	2.71	30.43
NTC							
Overweight							
More	21.00	13.00	10.50	37.07	14.50	2.50	36.50
Less	19.43	14.43	8.00	37.00	16.14	3.14	27.43
Not overweight							
More	21.63	14.38	9.50	32.63	13.25	1.63	40.13
Less	17.75	13.00	8.75	31.25	19.75	3.25	28.75
Overall sample	19.07	13.71	9.53	34.50	13.89	2.52	33.56

Table 1 (continued)

Cell Sizes, Sample Characteristics and Initial Mean Scores  
on Outcome Measures for Final Sample

Group	BPI <sup>a</sup>			Weight <sup>b</sup>	Height <sup>c</sup>	BMI	HGSHS:A	Age
	SHD	WST	HIP	(kg)	(cm)			
CR								
Overweight								
More	90.06	112.01	111.25	65.32	166.19	23.67	9.86	18.57
Less	76.86	109.51	102.63	64.03	164.78	23.56	5.37	20.25
Not								
overweight								
More	77.67	108.14	107.18	55.71	162.00	21.21	9.22	18.56
Less	75.43	117.12	106.40	54.09	162.98	20.36	4.33	18.00
CRH								
Overweight								
More	76.46	97.82	93.69	63.33	164.68	23.35	9.83	19.83
Less	82.72	92.11	107.08	60.28	162.56	22.81	5.62	22.00
Not								
overweight								
More	68.64	100.48	98.55	53.23	165.66	19.41	9.00	18.78
Less	81.29	106.48	110.87	53.12	161.47	20.37	6.00	20.00
NTC								
Overweight								
More	79.43	115.25	97.48	65.76	165.95	23.87	10.00	18.17
Less	78.17	107.50	105.90	64.48	166.55	23.22	5.57	18.57
Not								
overweight								
More	74.72	105.43	91.67	57.39	168.28	20.19	10.00	18.63
Less	69.29	105.70	93.20	52.61	163.20	19.72	6.50	19.50
Overall								
sample	77.77	105.98	102.65	59.12	164.56	21.80	7.68	19.26

Table 1 (continued)

Cell Sizes, Sample Characteristics and Initial Mean Scores<sup>d</sup>  
on Outcome Measures for Final Sample

Group	Marital status		Socioeconomic status					Education	
	married	other	<20	20-30	30-40	40-50	>50	high	univ
CR									
Overweight									
More	0 (0%)	7 (100%)	2 (29%)	0 (0%)	2 (29%)	0 (0%)	3 (43%)	5 (71%)	2 (29%)
Less	0 (0%)	8 (100%)	0 (0%)	0 (0%)	1 (20%)	1 (20%)	3 (60%) <sup>e</sup>	6 (75%)	2 (25%)
Not overweight									
More	0 (0%)	9 (100%)	1 (11%)	2 (22%)	1 (11%)	1 (11%)	4 (44%)	6 (67%)	3 (33%)
Less	0 (0%)	6 (100%)	0 (0%)	1 (17%)	3 (50%)	1 (17%)	1 (17%)	5 (83%)	1 (17%)
CRH									
Overweight									
More	0 (0%)	6 (100%)	3 (50%)	0 (0%)	1 (17%)	0 (0%)	2 (33%)	6 (100%)	0 (0%)
Less	1 (13%)	7 (88%)	2 (29%)	0 (0%)	1 (14%)	0 (0%)	4 (57%) <sup>f</sup>	6 (75%)	2 (25%)
Not overweight									
More	0 (0%)	9 (100%)	0 (0%)	0 (0%)	3 (38%)	1 (13%)	4 (50%) <sup>g</sup>	8 (89%)	1 (11%)
Less	0 (0%)	7 (100%)	0 (0%)	1 (14%)	1 (14%)	3 (43%)	2 (29%)	4 (57%)	3 (43%)
NTC									
Overweight									
More	0 (0%)	6 (100%)	0 (0%)	1 (17%)	1 (17%)	1 (17%)	3 (50%)	4 (67%)	2 (33%)
Less	0 (0%)	7 (100%)	3 (50%)	0 (0%)	2 (33%)	0 (0%)	1 (17%) <sup>h</sup>	5 (71%)	2 (29%)
Not overweight									
More	0 (0%)	8 (100%)	0 (0%)	1 (13%)	1 (13%)	2 (25%)	4 (50%)	3 (37%)	5 (62%)
Less	0 (0%)	4 (100%)	1 (33%)	0 (0%)	0 (0%)	1 (33%)	1 (33%) <sup>i</sup>	4 (100%)	0 (0%)
Overall sample	1 (1%)	84 (99%)	12 (15%)	6 (8%)	17 (22%)	11 (14%)	32 (41%)	62 (73%)	23 (27%)

Table 1 (continued)

**Note.** BSRQ=Body Self Relations Questionnaire, AE=Appearance Evaluation Subscale, AI=Attention/Importance Subscale. BES=Body Esteem Scale, SA=Sexual Attractiveness Subscale, PC=Physical Condition Subscale, WC=Weight Concern Subscale. BCQ=Body Consciousness Questionnaire, Pu=Public Body Consciousness Subscale, Pr=Private Body Consciousness Subscale, BC=Body Competence Subscale. ABI=Appearance Beliefs Inventory. BDI=Beck Depression Inventory. RSES=Rosenberg Self-Esteem Scale. TSBI=Texas Social Behavior Inventory. BPI=Body Perception Index, SHD=Shoulders, WST=Waist, HIP=Hips. BMI=Body Mass Index. HGSHS:A=Harvard Group Scale of Hypnotic Susceptibility, Form A. More=More Susceptible. Less=Less Susceptible. Other=single,divorced. Socioeconomic status=family income in thousands of dollars. High=high school. Univ=some university.

a n=79.  
 b Self-reported weight, measured in nonmetric units and converted to the rounded SI equivalent.  
 c Self-reported height, measured in nonmetric units and converted to the rounded SI equivalent.  
 d Values on this page are n's and rounded percentages.  
 e SES data provided by 5 subjects.  
 f SES data provided by 7 subjects.  
 g SES data provided by 8 subjects.  
 h SES data provided by 6 subjects.  
 i SES data provided by 3 subjects.

Table 2

Multivariate and Univariate F-Statistics for First Assessment

Variable	Effect						
	Grp (A)	Susc (B)	Wtstat (C)	A x B	A x C	B x C	A x B x C
MANOVA	1.10	1.68	1.67	1.26	0.85	1.51	0.68
BSRQ AE	1.39	0.01	10.90**	1.96	1.49	0.02	0.37
BSRQ AI	1.21	7.74**	0.01	0.43	0.01	0.14	2.09
BES WC	4.90*	0.09	8.03**	1.06	0.47	0.07	0.38
BES SA	0.75	0.01	0.64	1.47	1.06	0.00	0.17
BES PC	1.88	1.47	0.14	0.41	1.70	3.29	1.86
BCQ PU	1.64	6.34*	0.64	1.55	0.61	0.08	1.00
BCQ PR	0.02	1.23	0.37	0.03	0.03	0.20	0.16
BCQ BC	1.27	4.21*	0.02	0.61	1.60	7.18**	0.96
BPI SHD	0.08	0.03	0.97	2.91	0.14	1.43	0.13
BPI WST	1.58	0.00	0.13	0.05	0.46	1.11	0.07
BPI HIP	0.92	0.52	0.06	1.69	0.38	0.13	0.27
RSES	0.23	0.34	0.03	2.87	0.02	0.00	0.26
BDI	0.36	0.23	0.05	1.77	0.32	0.38	0.00
TSBI	1.89	7.82**	0.00	1.12	1.35	0.91	0.76
ABI	0.05	3.09	1.42	0.86	1.21	0.42	0.02
Education	0.28	0.32	0.36	3.52*	0.19	0.85	0.68
Marital	0.70	0.64	0.64	0.70	0.70	0.64	0.70
Age	2.87	0.88	0.20	0.63	1.34	0.01	0.17
SES	0.59	0.84	2.51	2.38	0.65	0.45	1.90

Note. Grp=Group. Susc=Susceptibility. Wtstat=Weight Status.

\* $p < .05$  \*\* $p < .01$ .

### Susceptibility to Hypnosis

Subjects were initially assigned to More vs. Less Susceptible conditions on the basis of a median split on their pretest HGSHS:A scores. Subjects who scored at or above the median of 8 were assigned to the More Susceptible group, whereas those scoring 7 or lower were assigned to the Less Susceptible group. To determine whether subjects adhered to their More Susceptible vs. Less Susceptible designation throughout the experiment, a short form of the HGSHS:A, consisting of HGSHS:A items 3, 6 and 10, was administered to CRH subjects following each session. HGSHS:A full form equivalency scores were assigned to each of the eight possible combinations of responses to these three items. Assignment of equivalency scores was consistent with recommendations for the use of short form equivalency scores in situations where time constraints prevent use of the full HGSHS:A (Weitzenhoffer, 1962). Equivalency scores of 8 or more were designated "More" and equivalency scores of 7 or lower were designated "Less". As shown in Table 3, using this criterion, subjects' initial assignment to More and Less Susceptible groups did not reflect a susceptibility status that remained stable across the course of the study. Although 80 percent of More Susceptible subjects in the CRH group adhered to their initial susceptibility classification across the four

sessions of the intervention, only 27 percent of Less Susceptible subjects adhered to their initial classification throughout the intervention.

#### Start Week

To determine if there were any differences at posttest between those experimental group subjects who were assigned to start week 1 (n=29), start week 2 (n=21) or start week 3 (n=6), a MANOVA was computed on the posttest data of the entire range of dependent variables for subjects in the CR and CRH groups. The MANOVA analysis using startweek as the predictor variable was not significant,  $F(26,84)=0.98$ ,  $p > .05$ . The data were therefore collapsed across start week for the remainder of the analyses.

#### Intersession Interval

To determine whether the spacing of sessions influenced outcome, the longest interval between signing out subsequent tapes was calculated for each subject in the CR and CRH groups. A median split of the data yielded 23 subjects whose longest interval was above the median of twelve days, and 33 subjects who signed out subsequent tapes at intervals of less than or equal to twelve days. A MANOVA computed on the posttest data of the entire range of dependent variables using this predictor variable was non significant,  $F(13,42)=1.05$ ,  $p > .05$ . Spacing of sessions did not influence outcome and was eliminated from subsequent analyses.

Table 3

Percentages of More and Less Susceptible CRH Subjects with HGSHS:A Equivalency Scores Corresponding to "More" and "Less" Designations

Initial susceptibility classification	HGSHS:A Equivalency Score		
	More	Less	Varied
More susceptible	80%	0%	20%
Less susceptible	40%	27%	33%

Note. More=subjects earning equivalency scores corresponding to "More" designation across all four sessions. Less=subjects earning equivalency scores corresponding to "Less" designations across all four sessions. Varied=subjects whose equivalency scores varied between "More" and "Less" designations across sessions.

Relationships among the Dimensions of Body Image Assessed:Hypothesis Set 1

The analysis strategy for the current investigation is based on the premise that adequate evaluation of body image interventions entails assessment of the attention and importance subjects assign to appearance, as well as their satisfaction with appearance. It is further hypothesized that assessment of a third aspect of body image, perceptual distortion, is an important measure. This approach implies that appearance-related body image is composed of distinct dimensions. Because of the lack of empirical evidence in the literature substantiating this dimensionality, the first purpose of the present investigation was to provide data concerning the factor structure (dimensionality) of the body image outcome measures used.

Subscale scores for the pretest body image variables were subjected to factor analysis (see Table 4). A principal-components solution was employed. The initial communality estimates were based on the squared multiple correlations between each subscale and all other subscales taken together. Factors were rotated to orthogonal simple structure according to the Varimax criterion. A minimum eigenvalue of 1.0 was employed for factor extraction. Each step of this analysis was conducted according to criteria specified prior to inspection of the results.

The principal-factor solution produced three distinct factors among the subscales comprising the body image outcome measures, each with eigenvalues greater than 1.0. These three factors combined to account for 79% of the total variance among the subscales. The subscale loadings on each factor, and their factor names, are presented in Table 4. Inspection of the factor loadings indicates that each subscale loads considerably more highly on one factor than on the others. Factor I consisted of those subscales measuring the degree of perceptual distortion in estimating one's body dimensions (BPI SHD, BPI WST, BPI HIP). Factor II consisted of those subscales having to do with satisfaction with one's physical appearance (BSRQ AE, BES WC). Factor III consisted of subscales which tapped attention and importance assigned to appearance (BSRQ AI, BCQ PU). These three distinct factors correspond to the three dimensions of body image proposed.

Impact of Treatment Condition, Susceptibility to Hypnosis, and Weight Status on Body Image and Psychosocial Outcomes: Hypothesis Sets 2 - 5

Organization of variable groupings. Given the large number of dependent variables in the present study, it was decided that multivariate analyses of variance (MANOVAs) would be the most appropriate statistical procedure. Because the dependent variables can be categorized into a

Table 4

Rotated Factor Loadings of Body Image Outcome Measures

Subscale	Factor		
	I "Perceptual Distortion"	II "Satisfaction with Appearance"	III "Importance of Appearance"
BSRQ AE	-0.02	0.91	-0.12
BES WC	-0.05	0.92	-0.02
BSRQ AI	-0.12	-0.16	0.83
BCQ PU	-0.06	-0.04	0.87
BPI SHD	0.86	-0.07	0.04
BPI WST	0.85	0.06	0.05
BPI HIP	0.92	-0.10	-0.03

number of groups, it was not considered appropriate to include all the dependent variables in a single analysis. Therefore, the variables were divided into smaller groups of related measures for the purposes of analysis.

A combination of two criteria were used to generate the variable groups: a) conceptual criteria (i.e., grouping those variables that seem to tap a particular aspect of body image or psychosocial adjustment) and b) empirical criteria (i.e., grouping of variables that showed at least moderate correlations with one another). For the intercorrelation matrix of the dependent variables used in this study, see Table 5. Using the above criteria, five variable groups were generated and given the following names: a) Satisfaction variables; b) Importance variables; c) Distortion variables; d) Psychosocial variables; e) Generalization variables.<sup>5</sup> (See Table 6 for a breakdown of which specific variables comprise each of the five variable groups.)

---

<sup>5</sup> Conceptually, the BCQ PR subscale can be categorized among the Generalization variables. However, the BCQ PR was only weakly correlated with the other variables comprising this variable group and was therefore excluded from the main analysis of the data.

General analysis strategy. A 3 (Groups) x 2 (Susceptibility) x 2 (Weight Status) MANOVA on difference scores (using Wilks's Lambda criterion) was performed for the each of the body image and psychosocial variable groups. This was followed by univariate analyses of variance (ANOVAs) whenever the MANOVAs were significant. The predicted result in each case was a significant Group effect. If the ANOVAs yielded significant main effects or interactions, multiple comparisons using Fisher's protected LSD procedure assessed between-group differences in the extent of change. For each of the body image and psychosocial variable groups, pre-planned multivariate comparisons investigated the significance of pre- to posttest changes within CR, CRH and NTC groups. Significant within-group changes were predicted for the two experimental groups but not for the no-treatment control group. Univariate tests of the assumptions of normality and homogeneity of variance were routinely performed.

Hypotheses 2A, 2B, 2C and 2D. The 3 x 2 x 2 MANOVA performed on the Satisfaction variable group revealed significant main effects of Group,  $F(4,144)=2.75$ ,  $p < .05$ , and Weight Status,  $F(2,72)=5.51$ ,  $p < .01$ . Since these were significant, univariate ANOVAs were performed. Multivariate and univariate analyses of variance for the Satisfaction variable group are summarized in Table 7.

Table 5

Intercorrelation Matrix of Variables for First Assessment  
Session

Variable	Variable						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
BSRA AE (1)	---						
BSRQ AI (2)	-.20	---					
BES SA (3)	.56	-.10	---				
BES WC (4)	.69	-.17	.37	---			
BES PC (5)	.38	.05	.38	.43	---		
BCQ PU (6)	-.03	.36	.01	.01	.20	---	
BCQ PR (7)	.07	.16	.06	.02	.21	.62	---
BCQ BC (8)	.38	.08	.32	.38	.68	.36	.37
BPI SHD (9)	-.07	.18	.02	-.09	-.08	-.04	.02
BPI WST (10)	-.01	.07	-.00	.00	-.00	.04	.06
BPI HIP (11)	-.08	.09	-.03	-.14	-.20	-.05	.00
BDI (12)	-.41	.16	-.41	-.35	-.30	.02	.06
TSBI (13)	.52	-.10	.50	.43	.37	.07	-.00
RSES (14)	-.53	.19	-.45	-.37	-.33	.06	.04
ABI (15)	-.58	.62	-.33	-.59	-.17	.21	.17

Table 5 (continued)

Intercorrelation Matrix of Variables for First AssessmentSession

Variable	Variable							
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
BCQ BC (8)	---							
BPI SHD (9)	.04	---						
BPI WST (10)	.04	.55	---					
BPI HIP (11)	-.10	.71	.69	---				
BDI (12)	-.21	.09	.01	-.06	---			
TSBI (13)	.45	.04	-.10	-.11	-.48	---		
RSES (14)	-.38	.05	-.00	.02	.66	-.53	---	
ABI (15)	-.07	.11	.02	.10	.37	-.38	.40	---

Note. Critical values of  $r(83)=0.21(p<.05)$ ,  $0.28(p<.01)$

Table 6

List of Five Variable Groups Used for Data Analysis in Study

Variable group	Assessment instruments
1. Satisfaction variables	BSRQ AE BES WC
2. Importance variables	BSRQ AI BCQ PU
3. Distortion variables	BPI SHD BPI WST BPI HIP
4. Psychosocial variables	BDI RSES TSBI
5. Generalization variables	BES SA BES PC BCQ BC

The ANOVA computed on the BSRQ AE revealed significant main effects of Group,  $F(2,73)=3.89$ ,  $p < .05$ , and Weight Status,  $F(1,73)=11.09$ ,  $p < .01$ . Multiple comparisons revealed that subjects assigned to CR experienced greater change in BSRQ AE scores than those who received no treatment,  $t(73) = 2.46$ ,  $p < .02$ . CRH subjects also showed significantly greater change than did subjects in the no treatment group,  $t(73) = 2.42$ ,  $p < .02$ . Gains for subjects assigned to CR vs. CRH did not differ,  $t(73) = .01$ ,  $p > .05$ . Inspection of the pre- and posttest means (see Table 8) reveals the significant changes for the experimental groups were consistently in the hypothesized direction of more favorable evaluation of their appearance. The extent of gains was also influenced by subjects' Weight Status, with Overweight subjects showing significantly greater improvement than Not Overweight subjects. However, as can be seen in Table 9, Overweight subjects had significantly lower initial BSRQ AE scores than did Not Overweight subjects. It is therefore unclear whether differential change by weight status reflects the influence of subjects' weight per se, or is a statistical artifact due to differences in initial score.

The ANOVA computed on the BES WC revealed a significant Group x Weight Status interaction,  $F(2,73)=3.20$ ,  $p < .05$ . The Group main effect for BES WC approached significance,  $p$

=.06. Multiple comparisons indicate that in the CR group, Overweight subjects experienced significantly greater gains in satisfaction than did Not Overweight subjects,  $t(73)=2.33$ ,  $p < .03$ . In the CRH group, Overweight subjects again experienced greater gains ( $M=4.36$ ) than Not Overweight subjects ( $M=0.75$ ), but this trend did not reach significance,  $t(73)=1.86$ ,  $p < .07$ . In the no-treatment group, the direction of means was reversed. Not Overweight subjects experienced gains which exceeded those of Overweight subjects, although not to a significant degree.  $t(73)=1.09$ ,  $p > .05$ . Again, Weight Status is confounded with initial satisfaction, (see Table 11) making interpretation of these results unclear. Overweight subjects had initially lower BES WC scores than did Not Overweight subjects. Differences in improvement between overweight and not overweight subjects may thus be due not to weight level per se, but rather to initial level of body image satisfaction.

Before concluding presentation of results pertinent to hypotheses 2A through 2D, further attention to the multivariate Weight Status main effect is merited. Interpretation of the multivariate Weight Status main effect can be facilitated by examination of the nonsignificant multivariate Group x Weight Status interaction. Failure of this multivariate interaction to achieve significance

suggests that greater change occurred for Overweight vs. Not Overweight subjects, regardless of whether or not treatment was received. However, examination of the pre- and posttest means for the univariate analyses (tables 10 and 11) reveals that differential change by weight status was more marked in the treatment groups than in the control group for both BSRQ AE and BES WC, although this pattern attained significance only for the latter variable.

Hypotheses 2E and 2F. Because the hypothesized within-group changes were specified separately for both satisfaction with appearance in general (BSRQ AE) and satisfaction with weight-related appearance in particular (BES WC), these were assessed with pre-planned univariate analyses, (rather than multivariate analyses) in departure from the general analysis strategy described above. Pre-planned univariate comparisons revealed significant pre- to posttest improvement in BSRQ AE scores for the CR group,  $F(1,73)=18.38$ ,  $p < .0001$ , and for the CRH group,  $F(1,73)=18.45$ ,  $p < .0001$ . Pre-planned univariate analyses failed to reveal any significant differences between pre- and posttest BSRQ AE scores for the NTC group,  $F(1,73)=0.28$ ,  $p > .05$ . Planned comparisons conducted on the BES WC likewise revealed significant pre- to posttest improvement in satisfaction with weight for CR subjects  $F(1,73)=22.19$ ,  $p < .0001$  and CRH subjects  $F(1,73)=6.21$ ,

Table 7

Multivariate and Univariate Analyses of Variance for  
Satisfaction Variables

Source	Multivariate $\underline{F}$	Univariate $\underline{F}$	
		BSRQ AE	BES WC
Grp (A)	$\underline{F}(4,144)=2.75^*$	$\underline{F}(2,73)=3.89^*$	$\underline{F}(2,73)=2.87$
Susc (B)	$\underline{F}(2,72)=0.04$	$\underline{F}(1,73)=0.00$	$\underline{F}(1,73)=0.06$
Wtst (C)	$\underline{F}(2,72)=5.51^{**}$	$\underline{F}(1,73)=11.09^{**}$	$\underline{F}(1,73)=2.71$
A x B	$\underline{F}(4,144)=0.97$	$\underline{F}(2,73)=1.15$	$\underline{F}(2,73)=0.31$
A x C	$\underline{F}(4,144)=1.57$	$\underline{F}(2,73)=0.78$	$\underline{F}(2,73)=3.20^*$
B x C	$\underline{F}(2,72)=0.65$	$\underline{F}(1,73)=1.20$	$\underline{F}(1,73)=0.60$
A x B x C	$\underline{F}(4,144)=0.39$	$\underline{F}(2,73)=0.03$	$\underline{F}(2,73)=0.51$

Note. Grp=Group. Susc=Susceptibility. Wtstat= Weight Status.

\* $p < .05$  \*\* $p < .01$

Table 8

Pre- and Posttest Means and Standard Deviations of  
Satisfaction Variables for Experimental and Control Groups

Variable	Assessment time	
	1	2
BSRQ AE		
CR	50.03 (11.62)	56.83 (10.24)
CRH	53.76 (11.52)	60.30 (9.33)
NTC	48.84 (15.02)	50.16 (12.59)
BES WC		
CR	20.23 (5.69)	25.17 (6.01)
CRH	26.40 (8.01)	28.83 (7.50)
NTC	21.40 (7.19)	22.44 (7.57)

Table 9

Pre- and Posttest Means and Standard Deviations  
of Satisfaction Variables for Overweight  
and Not Overweight Groups

Variable	Assessment time	
	1	2
BSRQ AE		
Overweight	46.02 (12.51)	54.19 (12.51)
Not overweight	55.86 (10.99)	57.95 (9.86)
BES WC		
Overweight	19.98 (5.73)	23.98 (7.42)
Not overweight	25.47 (8.00)	27.30 (7.12)

Table 10

Pre- and Posttest Means and Standard Deviations of BSRQ AE  
for Overweight and Not Overweight Subjects in  
Experimental and Control Groups

Group	Assessment time	
	1	2
CR		
Overweight	48.20 (11.75)	59.13 (10.56)
Not overweight	51.87 (11.59)	54.53 (9.72)
CRH		
Overweight	48.07 (11.14)	58.57 (9.69)
Not overweight	58.75 (9.61)	61.83 (9.05)
NTC		
Overweight	41.31 (14.29)	43.77 (11.50)
Not overweight	57.00 (11.38)	57.08 (10.04)

Table 11

Pre- and Posttest Means and Standard Deviations of BES WC  
for Overweight and Not Overweight Subjects in  
Experimental and Control Groups

Group		Assessment time	
		1	2
CR	Overweight	18.67 (5.68)	25.80 (7.20)
	Not overweight	21.80 (5.43)	24.53 (4.69)
CRH	Overweight	23.21 (5.82)	27.57 (4.69)
	Not overweight	29.19 (8.77)	29.94 (8.23)
NTC	Overweight	18.00 (4.40)	18.00 (4.65)
	Not overweight	25.08 (7.95)	27.25 (7.26)

$p < .02$ , and an absence of significant pre- to posttest improvement for NTC subjects,  $F(1,73)=1.15$ ,  $p > .05$ .

Hypotheses 3A, 3B, 3C and 3D. The  $2 \times 2 \times 3$  MANOVA computed on the Importance variable group yielded a significant main effect of Group,  $F(4,144)=3.52$ ,  $p < .01$ . Neither Weight Status nor Susceptibility main effects achieved significance, nor were there any significant interactions.

Univariate ANOVAs were performed and were found to be significant for BSRQ AI, Group main effect,  $F(2,73)=7.02$ ,  $p < .01$ ; and for the Group  $\times$  Weight Status  $\times$  Susceptibility interaction,  $F(2,73)=3.50$ ,  $p < .05$ . No significant univariate effects were obtained for the BCQ PU. Table 12 summarizes the multivariate and univariate analyses of variance for the Importance variable group.

Multiple comparisons revealed that change in the BSRQ AI was significantly greater for subjects in the CR group than for no-treatment subjects,  $t(73)=3.73$ ,  $p < .001$ . Similarly, CRH subjects experienced greater change than subjects who received no treatment,  $t(73)=2.38$ ,  $p < .02$ . Subjects in the two treatment groups did not differ from one another  $t(73)=1.42$ ,  $p > .05$ . Examination of pre- and posttest means (see Table 13) indicates that changes for the experimental groups were in the hypothesized direction of decreased attention and importance assigned to appearance.

Multiple comparisons conducted on the Group x Susceptibility x Weight Status interaction indicate that the effect of Weight Status on pre- to posttest improvement in BSRQ AI scores differed across levels of hypnotic susceptibility. Moreover, as Table 14 indicates, the nature of this Weight Status x Susceptibility interaction varied across treatment and control conditions. In the CR group, Overweight was associated with significantly greater improvement than Not Overweight among More Susceptible subjects,  $t(73)=2.13$ ,  $p < .04$ . Among Less Susceptible subjects, this pattern also occurred but did not achieve significance,  $t(73)=0.44$ ,  $p > .05$ . In the CRH group, Overweight subjects showed greater mean improvement than Not Overweight subjects to an extent that did not differ across levels of hypnotic susceptibility, and was not significant in each case, ( $t_s(73)$  of 0.35 and 0.41 for More and Less Susceptible subjects, respectively,  $p_s > .05$ .) In the no treatment group, Overweight subjects in the Less Susceptible condition showed greater mean improvement than their Not Overweight counterparts, but this difference was not significant,  $t(73)=1.28$ ,  $p > .05$ . In the More Susceptible condition, the pattern of means was reversed, with Not Overweight subjects showing significantly greater improvement than Overweight subjects,  $t(73)=2.31$ ,  $p < .03$ .

Hypotheses 3E and 3F. Pre-planned multivariate comparisons indicated that pre- to posttest decreases in the attention and importance assigned to appearance were significant for CR subjects  $F(2,72)=15.62$ ,  $p < .0001$ , and for CRH subjects  $F(2,72)=6.33$ ,  $p < .003$ . Subjects in the control group failed to show significant improvement from pre- to posttest,  $F(2,72)=2.29$ ,  $p > .05$ .

Hypotheses 4A, 4B, 4C and 4D. The  $2 \times 2 \times 3$  MANOVA conducted on the Distortion variable group revealed no significant effects at the multivariate level (Table 15). Because significant effects were not obtained at the multivariate level, univariate analyses were not examined.

Hypotheses 4E and 4F. Multivariate planned comparisons revealed that pre- to posttest change in body size estimation accuracy was significant for subjects in both treatment conditions and in the no-treatment control group,  $F_s(3,61)=3.14$  to  $6.90$ ,  $p_s < .05$ . Taken together, the analyses on the Distortion variable group indicate that all groups modified their estimations of body width from pre- to posttest, with no differential change among treatment and control conditions. Pre- and posttest mean scores on Distortion variables are presented in Table 16.

Hypotheses 5A, 5B, 5C and 5D. The  $2 \times 2 \times 3$  MANOVA

Table 12

Multivariate and Univariate Analyses of Variance for  
Importance Variables

Source	Multivariate $\underline{F}$	Univariate $\underline{F}$	
		BSRQ AI	BCQ PU
Grp (A)	$\underline{F}(4,144)=3.52^{**}$	$\underline{F}(2,73)=7.02^{**}$	$\underline{F}(2,73)=0.17$
Susc (B)	$\underline{F}(2,72)=0.50$	$\underline{F}(1,73)=0.84$	$\underline{F}(1,73)=0.06$
Wtst (C)	$\underline{F}(2,72)=0.62$	$\underline{F}(1,73)=0.90$	$\underline{F}(1,73)=0.18$
A x B	$\underline{F}(4,144)=0.91$	$\underline{F}(2,73)=0.32$	$\underline{F}(2,73)=1.40$
A x C	$\underline{F}(4,144)=0.62$	$\underline{F}(2,73)=1.27$	$\underline{F}(2,73)=0.04$
B x C	$\underline{F}(2,72)=1.51$	$\underline{F}(1,73)=0.87$	$\underline{F}(1,73)=1.66$
A x B x C	$\underline{F}(4,144)=1.91$	$\underline{F}(2,73)=3.50^*$	$\underline{F}(2,73)=0.29$

Note. Grp=Group. Susc=Susceptibility. Wtstat= Weight Status.

\* $p < .05$  \*\* $p < .01$

Table 13

Pre- and Posttest Means and Standard Deviations of BSRQ AI  
for Experimental and Control Groups

Group	Assessment time	
	1	2
CR	82.30 (7.66)	74.90 (9.50)
CRH	83.00 (7.90)	78.27 (10.38)
NTC	81.92 (11.98)	81.36 (8.60)

Table 14

Pre- and Posttest Means and Standard Deviations of BSRQ AI  
for More and Less Susceptible Overweight and Not Overweight  
Subjects in Experimental and Control Groups

Group	Assessment time	
	1	2
CR		
More		
Overweight	88.14 (4.88)	76.14 (10.92)
Not overweight	81.33 (8.14)	77.44 (8.19)
Less		
Overweight	77.25 (4.50)	69.13 (7.86)
Not overweight	83.67 (9.22)	77.33 (10.60)
CRH		
More		
Overweight	84.17 (8.38)	77.00 (13.65)
Not overweight	83.11 (8.80)	77.33 (12.14)
Less		
Overweight	82.75 (4.95)	78.88 (4.85)
Not overweight	82.14 (10.43)	79.66 (11.60)
NTC		
More		
Overweight	81.33 (16.28)	86.00 (9.74)
Not overweight	86.38 (9.83)	81.63 (8.30)
Less		
Overweight	81.57 (7.46)	79.00 (6.71)
Not overweight	74.50 (15.59)	78.00 (10.58)

conducted on the Psychosocial variable group revealed no significant effects (Table 17). In the absence of significant effects at the multivariate level, univariate analyses were not examined.

Hypotheses 5E and 5F. Multivariate planned comparisons showed significant pre- to posttest increases in psychosocial adjustment for each of the two treatment groups and for the control group,  $F_s(3,71)=5.47$  to  $6.79$ ,  $p_s<.005$ .

Demographic Variables: Hypothesis Set 6

To determine the effects of age, education, marital status and socio-economic status on outcome, the initial strategy for data analysis entailed the inclusion of demographic variables as part of the design. However, examination of demographic variables indicated that the number of subjects with demographic characteristics falling outside the sample modal levels was too small to test the relationship of demographic characteristics to outcome. Therefore, the principle analysis of the data collapsed across demographic variables.

Supplementary Analyses

Analyses on Generalization variables. In order to determine whether there was generalization of impact to nontargeted components of body image, a 3 (Group) x 2 (Susceptibility) x 2 (Weight Status) MANOVA was computed on

Table 15

Multivariate and Univariate Analyses of Variance for DistortionVariables

Source	Multivariate F	Univariate F		
		BPI SHD	BPI WST	BPI HIP
Grp (A)	F(6,122)=1.22	F(2,64)=1.40	F(2,64)=0.51	F(2,64)=1.85
Susc (B)	F(3,61)=0.37	F(1,64)=0.06	F(1,64)=1.00	F(1,64)=0.14
Wtst (C)	F(3,61)=1.30	F(1,64)=1.79	F(1,64)=0.26	F(1,64)=0.03
A x B	F(6,122)=1.13	F(2,64)=2.75	F(2,64)=0.01	F(2,64)=0.71
A x C	F(6,122)=1.89	F(2,64)=0.18	F(2,64)=1.94	F(2,64)=0.94
B x C	F(3,61)=0.42	F(1,64)=0.10	F(1,64)=1.19	F(1,64)=0.82
A x B x C	F(6,122)=0.63	F(2,64)=0.61	F(2,64)=0.06	F(2,64)=0.11

Note. Grp=Group. Susc=Susceptibility. Wtstat= Weight Status.

Table 16

Pre- and Posttest Means and Standard Deviations of  
Distortion Variables for Experimental and Control Groups

Variable	Assessment time	
	1	2
BPI SHD		
CR	80.29 (13.70)	81.62 (13.86)
CRH	77.70 (17.10)	79.05 (7.90)
NTC	75.91 (16.55)	83.15 (13.56)
BPI WST		
CR	111.28 (24.28)	111.21 (29.42)
CRH	98.50 (16.27)	106.10 (23.29)
NTC	108.59 (22.99)	113.62 (21.70)
BPI HIP		
CR	107.23 (18.68)	95.33 (16.24)
CRH	103.25 (17.02)	93.72 (14.27)
NTC	97.16 (21.30)	95.96 (16.65)

Table 17

Multivariate and Univariate Analyses of Variance for Psychosocial Variables

Source	Multivariate F	Univariate F		
		BDI	TSBI	RSES
Grp (A)	F(6,142)=1.16	F(2,73)=0.13	F(2,73)=0.14	F(2,73)=2.63
Susc (B)	F(3,71)=0.86	F(1,73)=2.19	F(1,73)=0.01	F(1,73)=0.07
Wtst (C)	F(3,71)=1.29	F(1,73)=1.63	F(1,73)=1.88	F(1,73)=3.17
A x B	F(6,142)=0.53	F(2,73)=1.58	F(2,73)=0.13	F(2,73)=0.14
A x C	F(6,142)=1.53	F(2,73)=2.77	F(2,73)=3.20*	F(2,73)=0.30
B x C	F(3,71)=1.05	F(1,73)=0.92	F(1,73)=0.23	F(1,73)=3.19
A x B x C	F(6,142)=0.26	F(2,73)=0.67	F(2,73)=0.22	F(2,73)=0.35

Note. Grp=Group. Susc=Susceptibility. Wtstat= Weight Status.

\*p<.05

Table 18

Pre- and Posttest Means and Standard Deviations of BES SA  
for Overweight and Not Overweight Groups

---

Group	Assessment time	
	1	2
Overweight	45.16 (8.11)	48.10 (8.19)
Not overweight	45.51 (6.08)	46.23 (6.26)

---

Table 19

Multivariate and Univariate Analyses of Variance for  
Generalization Variables

Source	Multivariate F	Univariate F		
		BES SA	BES PC	BCQ BC
Grp (A)	F(6,142)=0.34	F(2,73)=0.56	F(2,73)=0.33	F(2,73)=0.06
Susc (B)	F(3,71)=0.92	F(1,73)=1.38	F(1,73)=0.83	F(1,73)=0.00
Wtst (C)	F(3,71)=2.83*	F(1,73)=6.86*	F(1,73)=2.33	F(1,73)=0.03
A x B	F(6,142)=1.33	F(2,73)=3.04	F(2,73)=0.61	F(2,73)=0.09
A x C	F(6,142)=0.57	F(2,73)=0.44	F(2,73)=0.58	F(2,73)=0.82
B x C	F(3,71)=0.87	F(1,73)=0.29	F(1,73)=0.03	F(1,73)=1.88
A x B x C	F(6,142)=0.86	F(2,73)=1.79	F(2,73)=0.17	F(2,73)=0.35

Note. Grp=Group. Susc=Susceptibility. Wtstat= Weight Status.

\*p<.05

the Generalization variable group. The MANOVA yielded a significant main effect of Weight Status,  $F(3,71)=2.83$ ,  $p < .05$ . Subsequent univariate analyses revealed only one significant effect, the Weight Status main effect for BES SA,  $F(1,73)=6.86$ ,  $p < .05$ . Examination of the pre- and posttest means (see Table 18) indicates that Overweight subjects had significantly greater improvement than Not Overweight subjects in their self-evaluation of sexual attractiveness. Multivariate and univariate analyses of variance for the Generalization variable group are summarized in Table 19. Multivariate comparisons revealed significant within group improvement from pre- to posttest for both the CR group,  $F(3,71)=4.51$ ,  $p < .007$ , and the CRH group,  $F(3,71)=4.09$ ,  $p < .01$ . No significant change occurred from pre- to posttest for the no treatment group,  $F(3,71)=1.16$ ,  $p > .05$ .

Analyses on ABI. The goal of the interventions in the present study was to improve subjects' body image. The method by which this change in body image was to be accomplished was through a change in subjects' thinking about their appearance. Information about the extent to which body-related cognitions were changed by the intervention provides important evidence regarding whether the interventions worked in a manner consistent with the proposed mechanism of change.

A 3 (Groups) x 2 (Susceptibility) x 2 (Weight Status) ANOVA computed on the ABI difference scores yielded a significant effect for Group,  $F(2,73)=5.85$ ,  $p < .01$ , and for Weight Status,  $F(1,73)=4.81$ ,  $p < .05$ . The analysis of variance for the ABI is presented in Table 20. Multiple comparisons showed the decrease in dysfunctional cognitions to be significantly greater for CR than for the no-treatment group,  $t(73)=3.31$ ,  $p < .002$ . CR subjects also had significantly greater decrease in dysfunctional cognitions scores than did CRH subjects,  $t(73)=2.32$ ,  $p < .03$ . CRH did not differ from NTC,  $t(73)=1.12$ ,  $p > .05$ . The extent of change in ABI scores was also influenced by subjects' Weight Status, with Overweight Subjects showing significantly greater decreases in dysfunctional cognitions than Not Overweight subjects (Tables 21 and 22).

Pre-planned univariate analyses on the ABI revealed significant pre- to posttest decreases in the extent of dysfunctional appearance-related beliefs for the CR group,  $F(1,73)=34.47$ ,  $p < .0001$ , and for the CRH group,  $F(1,73)=6.67$ ,  $p < .02$ . Pre-planned comparisons failed to reveal any significant differences between pre- and posttest ABI scores for the no treatment control group,  $F(1,73)=0.65$ ,  $p > .05$ .

Taken together, these analyses reveal that the extent of reduction in dysfunctional cognitions differed significantly between groups. Although decreases produced by the CRH treatment did not differ significantly from those experienced by untreated subjects, treated subjects were less likely to endorse dysfunctional beliefs at posttest than at pretest, whereas control subjects made no change. In addition, improvement was greater for Overweight than for Not Overweight subjects. These results closely parallel the differential improvement in body image by treatment group and weight status detailed above. Thus, these results provide evidence consistent with a change in cognitions as the mechanism of the observed change in body image. Pearson correlation coefficients calculated between change scores for the ABI and those for body image outcome measures provide further support for a central role of body-related cognitions in body image modification. Change in ABI scores was positively correlated with change in BSRQ AI ( $r = .47$ ,  $p < .001$ ), indicating that greater decreases in dysfunctional cognitions were associated with greater decreases in the attention and importance assigned to appearance. Change in ABI scores was negatively correlated with change in BSRQ AE, BES WC, and BES SA ( $r_s = -.31$  to  $-.58$ ,  $p_s < .005$ ), indicating that greater decreases in dysfunctional cognitions were associated with greater increases in body image satisfaction

Table 20

Analysis of Variance for ABI

Source	df	<u>F</u>
Grp (A)	2,73	5.85**
Susc (B)	1,73	0.09
Wtst (C)	1,73	4.81*
A x B	2,73	0.50
A x C	2,73	0.65
B x C	1,73	0.49
A x B x C	2,73	1.35

Note. Grp=Group. Susc=Susceptibility. Wtstat= Weight Status.

\* $p < .05$  \*\* $p < .01$

Table 21

Pre- and Posttest Means and Standard Deviations of ABI  
for Experimental and Control Groups

---

Group	Assessment time	
	1	2
CR	35.60 (5.71)	29.10 (8.12)
CRH	33.10 (6.86)	30.50 (7.14)
NTC	34.84 (9.25)	33.44 (8.09)

---

Table 22

Pre- and Posttest Means and Standard Deviations of ABI  
for Overweight and Not Overweight Groups

Group	Assessment time	
	1	2
Overweight	36.00 (6.50)	30.90 (8.25)
Not overweight	33.02 (7.74)	30.84 (7.61)

Table 23

Correlations between ABI Change Scores and Body Image  
Change Scores

---

Body image measure	<u>r</u>
BSRQ AE	-.58**
BES WC	-.55**
BSRQ AI	.47**
BCQ PU	.21
BPI SHD	.05
BPI WST	.22
BPI HIP	.20
BES PC	-.17
BES SA	-.31*
BCQ BC	-.17

---

\*p<.005    \*\*p<.001

As Table 23 indicates, change in ABI scores was not significantly correlated with change in the variables comprising the Distortion variable group.

External help and weight change. To determine whether factors external to the current interventions might provide alternative explanations of observed differential change in body image among experimental and control groups, receipt of any additional (non-study) help for body image concerns between pretest and posttest was assessed. Also assessed were self-reported weight changes for pre- to posttest.

Six subjects (two from each of the CR, CRH and NTC groups) reported receiving external help. Twenty-two subjects reported weight change of 2.27 kg (5 lb.) or greater (self-reported weight change was measured in non-metric units and converted to the rounded SI equivalent). Of these, seven were from the CR group, 11 were from the CRH group, and 4 were from the NTC group. This difference in reported occurrence of weight change was not significant,  $\chi^2$  (2, N=85)=2.81,  $p > .05$ . With one exception, reported weight changes were in the direction of weight loss from pretest to posttest. Because the occurrence of substantial weight change or receipt of additional help did not significantly differ among experimental and control groups, these factors were not considered further as alternative explanations of observed differential change in body image.

## DISCUSSION

This chapter begins with a discussion of evidence in support of the multidimensional nature of weight-related body image. Next, key conclusions regarding the impact of the treatment programs on satisfaction, attention/importance and perceptual aspects of body image, and on subjects' psychosocial adjustment are articulated. Following some additional conclusions regarding the relative efficacy of the CR and CRH treatments, the study's theoretical implications and its limitations are discussed. Finally, suggestions for how the program might be improved and possible directions for future research are offered.

### Dimensionality of Weight-Related Body Image

Although the multifaceted nature of weight-related body image has been emphasized recently in the literature (Cash & Brown, in press; Keeton et al., 1987; McCrea et al., 1982), there is a paucity of empirical evidence substantiating this dimensionality. The current study is among the first to provide such empirical evidence. The results of this study support the existence of distinct perceptual, cognitive and affective aspects of the larger body image construct. These findings have important implications. To date, the lion's share of body image interventions have focused on single indices of body image. Although body image is a construct

with diverse referents in the literature, investigators have rarely incorporated multiple components of body image in their studies. Evidence that weight-related body image is multidimensional indicates the oversimplification that could result from this approach.

Interventions aimed at enhancing women's body image have typically been evaluated exclusively in terms of changes in subjects' satisfaction with their bodies. This focus on the appearance-evaluative aspect of body image stems in part from evidence that body image satisfaction is linked to important aspects of psychosocial functioning, including self-esteem and depression-proneness (e.g., Berscheid et al., 1973; Cash, 1985; Franzoi & Herzog, 1986; Noles et al., 1985). Yet some authors (Noles, 1983; Winstead & Cash, 1984) have argued that other aspects of body image may be equally important determinants of psychosocial functioning. In particular, it has been suggested that the amount of attention and importance a woman assigns to physical appearance may act as an "intensifier" of her body evaluation. Among individuals with equally negative body evaluations, those whose appearance is of greater importance to them will experience greater distress (Winstead & Cash, 1984). If this analysis is correct, interventions for women experiencing negative body image should not be evaluated exclusively on the basis

of changes in subjects' body satisfaction. Decreases in the importance subjects assign to appearance would be an equally important criterion of treatment success.

The possible role of cognitive focus on appearance as an "intensifier" (Winstead and Cash, 1984) of women's appearance evaluation remains speculative. It is beyond the scope of the current study to fully address the relationships among the components of body image and their differential impact on psychosocial functioning. Nevertheless, empirical confirmation of distinct cognitive, affective and perceptual aspects of body image suggests the need to explore these issues further, and indicates the oversimplification that could result if body image is considered a global construct.

#### Effects of Treatment Programs

Since a variety of body image measures were utilized in the study, it is possible to examine the treatments' impact on body image quite specifically through an analysis of the changes occurring on the different measures. In order to put these specific changes in perspective, however, it is important to determine how subjects viewed their bodies prior to the treatment. An inspection of Table 1 reveals that prior to treatment, subjects on the average were somewhat dissatisfied both with their overall appearance and

with their weight-related appearance. On the average, subjects' satisfaction with both global and weight-related aspects of appearance was nearly one standard deviation below published normative values for women (Franzoi & Shields, 1984; Winstead & Cash, 1984). Subjects' attitudes toward their weight-related appearance are made more meaningful by examination of their Body Mass Index scores. As shown in Table 1, the average Body Mass Index value for the overall sample was 21.80. Overweight subjects had an average BMI of 23.41; whereas the average value for not overweight subjects was 20.22, with a substantial number of individuals scoring less than 20. BMI scores below 20 are associated with risk to health in some individuals, while scores between 20 and 25 are considered optimal from a health standpoint (Canadian Guidelines, 1988). Although the use of the Body Mass Index with subjects under 20 years makes the validity of the published interpretive guidelines questionable (Canadian Guidelines, 1988), these figures nevertheless suggest that a marked dissatisfaction with body weight was present among women who were not clinically overweight and in many cases, weighed less than desirable from a health standpoint.

In terms of their cognitive focus on appearance, Table 1 indicates that prior to treatment, subjects assigned a greater degree of attention and importance to appearance

than normative groups (Miller et al., 1981; Winstead & Cash, 1984). BSRQ AI scores indicate an "obsessional" level of concern with physical appearance (Butters, 1985).

Finally, Table 1 indicates a tendency for subjects to slightly overestimate the width of their hips and waist at pretest. Shoulder width, on the other hand, tended to be underestimated. This pattern is consistent with previous findings that both eating disordered and normal women tend to underestimate shoulder width using the IMM as well as other indices of body perception (Gleghorn et al., 1986).

Taken together, these findings indicate that at pretest, subjects exhibited an appreciable body image disturbance in terms of both their satisfaction with their bodies and their attentional focus on appearance. Perceptual distortion of body dimensions, on the other hand, was not clearly disturbed for the current sample prior to treatment. With subjects' initial view of their bodies in mind, the following section will turn to an evaluation of the efficacy of the interventions in enhancing various aspects of body image.

Effects of programs on body image satisfaction. The CR and CRH programs produced increases in body image satisfaction both in absolute terms and relative to the NTC group. On both global and weight-specific measures of this

affective, evaluative dimension of body image, treated subjects made significant improvements, whereas control subjects made no change. Specifically, relative to their own pretreatment levels, the treated subjects showed significantly higher scores at posttest on the global appearance evaluation measure (BSRQ AE) and on the measure of satisfaction with weight-related appearance (BES WC). At posttest, subjects who had received the CR or CRH treatment were, on the average, neutral to somewhat satisfied with their physical appearance in general. Although treated subjects also experienced gains in satisfaction with weight-related aspects of their appearance, at posttest they were still somewhat dissatisfied with this aspect of their bodies.

As previously discussed, several studies in the past attempted to improve appearance evaluation through a variety of methods. However, some of these studies (Hutchinson, 1982; Ryan & Roughan, 1984) did not employ a control condition. Although these studies did report improvements in appearance evaluation, it cannot be concluded that these were the result of the treatment involved. Alternatively, the improvements observed may have resulted from "spontaneous remissions", exposure to assessment procedures, therapeutic factors accruing from the environment, or statistical regression. By randomly assigning subjects to

groups and by employing a control group, the differential improvements in body image satisfaction observed among the treatment group and control group subjects in present study are not attributable to these alternative factors. They can more confidently be attributed to the treatments themselves.

There was also differential improvement in the evaluative aspect of body image between the two weight groups used in the current study. Overweight subjects tended to experience greater gains in satisfaction than did their Not Overweight peers. However, Overweight subjects had significantly lower initial scores than Not Overweight subjects on both global and weight-specific measures of body image satisfaction. It is therefore unclear whether differential change by weight status reflects the influence of subjects' weight per se or is a statistical artifact due to differences in initial score.

Differential change in body image across weight status groups may have been due to differences in degree of overweight or underweight. Given societal norms regarding attractiveness, it is somewhat more "reasonable" for a heavier person to be dissatisfied with her appearance, than for a thin person. One could argue that the thin person who is dissatisfied may be more extreme in her standards. It is possible that thin subjects with a poor body image are more

rigid in their thinking, and their body image is harder to change compared to overweight individuals who (more realistically) see themselves as not conforming to societal ideal body types. This interpretation would suggest that Not Overweight subjects were more entrenched in their body image dissatisfaction, and hence, more resistant to intervention.

Alternatively, differential change between weight groups may have been due to differences in the initial level of satisfaction. Inspection of Table 9 reveals that Overweight subjects on the average were initially dissatisfied with their overall appearance. Not Overweight subjects, on the other hand, were on the average neither clearly satisfied nor clearly dissatisfied with their overall appearance at pretest. These findings suggest that prior to treatment, Not Overweight subjects were already functioning reasonably well in terms of their body image satisfaction. If this evaluative aspect of body image was not problematic for subjects in the Not Overweight condition, it is understandable that significant change in their level of satisfaction did not occur. Improvements for Not Overweight subjects may have been limited by a ceiling effect.

Crucial to the argument that it is weight status rather than initial level of satisfaction which explains observed differences between Overweight and Not Overweight subjects is the demonstration that subjects from the two weight groups who have initially equivalent levels of satisfaction show different amounts of change. The fact that weight status was confounded with initial satisfaction prevents a clear conclusion on this matter based on this study. In order to address this question, future research using different weight groups should match subjects for initial scores on body image outcome measures.

Finally, it is important to note that the Group x Weight Status interaction approached significance. Examination of means (Tables 10 and 11) reveals a trend in which treated Overweight subjects had greater gains than treated Not Overweight subjects, whereas there appears to be negligible difference in the amount of improvement between Overweight and Not Overweight subjects in the no treatment control condition. This suggests that the greater improvements experienced by overweight subjects were associated with the treatment per se, as opposed to non-treatment specific factors such as attention effects or regression to the mean.

Effects of programs on body image importance. At pretest, scores on the BSRQ AI and BCQ PU indicated that subjects paid more attention to their appearance and placed more importance on it than normative groups (Miller et al., 1981; Winstead and Cash, 1984). Pre- to posttest improvement in this cognitive aspect of body image was greater for subjects in both CR and CRH groups compared to control subjects. As a result of treatment, subjects significantly reduced the importance and attentional focus they placed on their appearance. Control subjects made no such change. While it was expected that this differential shift toward a lesser emphasis on appearance would be reflected in both BSRQ AI and BCQ PU, this latter shift, in fact, did not occur. There were no differential decreases among treatment and control groups in attention paid to appearance as measured by the BCQ PU. A possible explanation for this discrepancy between instruments is that the BCQ PU is a less sensitive measure of importance and attention assigned to appearance than is the BSRQ AI. This possibility is consistent with the fact that subjects' scores on these two measures were only moderately intercorrelated, and with the smaller number of items in the BCQ PU.

In contrast to the findings discussed above for the evaluative aspect of body image, both weight groups assigned

initially equivalent levels of importance to appearance. These findings suggest that although heavier women are likely to be less satisfied with their appearance, degree of overweight is unrelated to the amount of importance and attention women place on appearance.

Effects of programs on body image perceptual distortion. The single aspect of weight-related body image that was not differentially affected by the treatment was body size estimation accuracy. Although there was no differential change among treatment and control groups, pre- to posttest change on this perceptual aspect of body image was significant for all three groups. The fact that both treated and untreated subjects modified their estimations of body widths suggests that observed changes in this aspect of body image were due to non-treatment-specific factors associated with participation in the study.

The lack of differential change among treatment and control groups on this perceptual aspect of body image may have been the result of a number of factors. First, inspection of the means (Table 1) shows that this is the area in which subjects demonstrated the least body image disturbance prior to treatment. This finding is understandable in light of previous research. Although there is evidence of perceptual distortion among eating

disordered groups, reports regarding perceptual distortion of body dimensions among normal or weight-dissatisfied women are inconsistent (Cash & Green, 1986; Gleghorn et al., 1987). Taken together with the current results, these findings suggest that there is little basis to assume the presence of visual perceptual distortions among non-eating disordered women. As a result of the subjects' high level of functioning along the perceptual distortion dimension at pretest, a ceiling effect may have prevented significant changes.

In addition, accurate estimation of body size was not a focus of treatment. The programs did not involve any treatment components which specifically attempted to change subjects' body size estimations. Any differential change in subjects' body perception would be viewed most reasonably as being the result of generalization of effects. That such generalization did not occur is made more understandable through the examination of some findings obtained in previous studies involving college women (Butters, 1985; Green and Cash, 1984). Using BPI scores derived from another perceptual measure, the Body Image Detection Device (Ruff and Barrios, 1986) these investigators found perceptual size estimates to be virtually uncorrelated with cognitive and affective measures of body image. In the present study, the perceptual aspect of body image was

examined by means of the IMM. Low correlations were obtained between the IMM BPI's and the BSRQ AI (a measure of cognitive focus on appearance),  $r_s = .07$  to  $.18$ , and between the IMM BPI's and the BSRQ AE (an evaluative measure),  $r_s = -.01$  to  $-.08$ . These findings suggest that among nonclinical college student populations, the perceptual aspects of body image may be independent of cognitive and affective aspects. Such a conclusion would be consistent with the position that body image is not a unidimensional construct, but a variety of constructs loosely packaged under one label. Changing women's body perceptions may require interventions different from those that are effective in changing other aspects of body image.

Yet another possible explanation of the body perception results is suggested by the fact that subjects in both CRH and NTC groups overestimated their waist size to a greater extent at second testing as compared with initial testing (Table 16). There are several possible explanations for this unexpected finding. First, it is possible that this is due to the method being unreliable. Although Gleghorn and his colleagues (1987) report two-to -three minute temporal stability coefficients on the IMM BPI ranging from 0.72 to 0.92, the 7-week test-retest correlations for subjects in this study ranged from only .19 (waist) to .44 (hip).<sup>6</sup> The low correlations obtained indicate poor reliability for the

IMM in the current study. An alternative explanation for the lack of differential change in the Distortion variable group is thus that the measure used was not sufficiently reliable to accurately register changes in this aspect of body image.

A second, related explanation of the pre- to posttest increases in overestimation of waist size has to do with the time of year when the different assessments took place (Butters, 1985). The first assessment was conducted in February when subjects were wearing much bulkier clothing than in April and May when the later assessments took place. As a result, it is possible that slimmer waist measurements could have been taken by the experimenter in the later months when subjects were wearing lighter clothing. This would have resulted in greater overestimation of waist dimensions in comparison to earlier scores.

In sum, the programs did not appear to have any effect

---

<sup>6</sup>In assessing the test-retest reliability of the IMM, it is important to note that the BPI is made up of two components: 1) the measurement of subjects' body size estimations, and 2) the measurement of subjects' actual body widths. The BPI index is the estimate divided by the actual width multiplied by 100. In assessing test-retest

on the body perceptions of subjects. This is the only major aspect of body image on which the treatment did not have a differential impact. However, the findings discussed above raise questions regarding the reliability of the IMM in the present study. As a result, conclusions from the present study involving the IMM must be regarded with caution.

Effects of the programs on psychosocial variables. The extent to which the treatment programs produced changes in psychosocial adjustment has to do with how much the treatment effects generalized to other areas of the subjects' functioning. The programs were not clearly effective in bringing about changes in the subjects' levels of depression, self-esteem, and social self-esteem. Although pre- to posttest improvement on the psychosocial variable group was significant for both treatment groups, it was also significant for the no-treatment control group. The absence of differential change among treatment and control groups suggests that observed change in psychosocial variables was is not attributable to treatment per se, but

---

reliability of this measure, it was considered inappropriate to compute correlations on the BPI index, as the numerator of the BPI formula (i.e., subjects' estimations of their body width) might reasonably have changed across assessment times due to the impact of the intervention, or, alternatively, due to testing effects. Accordingly,

is due to non-treatment-specific factors associated with participation in the study.

In the present study, the correlations between appearance evaluation and psychosocial variables varied in absolute value from .35 to .53. Correlations between the cognitive focus of body image and psychosocial variables ranged in absolute value from .02 to .19; correlations between perceptual distortion and psychosocial variables, from .00 to .09. Previous studies employing different measures of body image have reported similar correlations (Butters, 1985). The low to moderate level of the correlations indicates that while there is a relationship between body image and psychosocial functioning, the two constructs are clearly not interchangeable. Thus, the fact that a treatment aimed at improving body image did not have an impact on selected aspects of psychosocial functioning is understandable. The most obvious explanation for the absence of differences in psychosocial adjustment between those who received the programs and those who did not is that there are limitations to the impact of the program.

---

test-retest reliability was ascertained in the present study using only the denominator of the BPI formula. Correlations between pretest and posttest values of subjects actual body widths were computed for each of shoulders, waist and hips.

A program whose focus is on enhancing women's body image may not be broad enough in scope to produce improvements in specific aspects of psychosocial functioning. It is also possible that insufficient time was allowed for generalization to occur. Long-term follow-up is necessary to ascertain whether enhancement of body image may, over greater periods of time, lead to improved affect and self-esteem and greater confidence and comfort in interpersonal contexts.

Effects of the programs on generalization variables.

In addition to the body image outcome measures discussed above, three other body image measures that assessed subjects' evaluations of their sexual attractiveness and physical fitness were employed in the present study. Although changes in these aspects of functioning were not hypothesized, these measures were analyzed to assess possible generalization of effects to somatic domains other than those specifically targeted by the intervention. Given the fact that neither the evaluation of one's fitness nor the evaluation of one's sexual attractiveness were foci of the treatment programs, any differential change between treatment group subjects and control group subjects would suggest that the effects of the treatment program, which targeted appearance-related body image, generalized to other body image evaluation domains as well. The degree of

improvement in these aspects of body image did not differ significantly among treatment and control groups. The absence of differential change among treatment and control groups suggests that observed improvements in subjects' self-evaluations of sexual attractiveness and physical fitness are not attributable to the treatments. Instead, improvements in these aspects of body image appear to reflect non-treatment-specific factors associated with participation in the study.

Although treated subjects did not experience greater gains than untreated subjects on this group of measures, differential change did occur between subjects of differing weight status. Overweight subjects experienced significantly greater gains than Not Overweight subjects in their self-evaluation of sexual attractiveness. This pattern of greater gains for Overweight subjects is in keeping with the findings discussed above for the appearance evaluative aspect of body image. However, unlike the pattern described previously for satisfaction variables, Overweight subjects did not differ initially from Not Overweight subjects in terms of their self-evaluation of sexual attractiveness (Table 18). Differential change between weight groups on this aspect of body image can therefore be validly said to reflect a greater responsiveness of heavier individuals to some aspect of participation in the study.

Effects of the programs on appearance-related cognitions. Based upon mean scores on the ABI, prior to treatment those subjects who completed the study subscribed somewhat to presumably dysfunctional beliefs regarding weight-related appearance. As a group, their average response to the ten dysfunctional cognitions constituting the ABI fell between moderate agreement and a neutral stance of neither agreeing nor disagreeing. The CR and CRH programs were successful in changing appearance-related cognitions assessed in the present study. After treatment subjects were less likely to agree with the dysfunctional beliefs comprising the ABI. Change in the ABI score for the CR treatment group was significant not only in absolute terms, but also in relation to the NTC group.

There was also differential improvement in subjects' appearance-related cognitions between the two weight groups used in the study. Overweight subjects tended to experience greater decreases in their endorsement of dysfunctional cognitions than did their Not Overweight peers.

As noted previously, these results closely parallel the differential improvement in body image among treatment groups, and between subjects of differing weight status, as detailed above. In doing so, these results provide evidence consistent with a change in cognitions as the mechanism of

observed change in body image. The fact that changes in ABI scores were correlated with both change in both appearance evaluative and cognitive focus aspects of body image provides further support for a central role of body-related cognitions in body image modification.

The fact that the CR and CRH programs successfully altered subjects' cognitions regarding their appearance and that these programs also resulted in enhanced body image is consistent with the notion that cognitions cause and maintain body image disturbances. However, the design of this study precludes demonstrating a change in cognitions to be the mechanism of body image change. Research is now needed which can demonstrate a possible causal relationship between cognitions and body image evaluations. This would probably be best accomplished through longitudinal research that tracked body-related cognitions and body image over time. Some clinicians who work with body image problems are incorporating cognitive techniques into their treatment strategies, in response to the irrational beliefs or false assumptions individuals with negative body image often seem to have (see Butters, 1985 for a review). It is therefore important that the efficacy of such techniques be subjected to continued controlled evaluation.

Relative efficacy of CR and CRH interventions. An examination of the preceding sections indicates that the results obtained for the CRH program were very similar to those obtained for the CR program. Like the CR program, the hypnotically-augmented treatment resulted in increases in subjects' evaluations of their appearance and decreases in the attention and importance assigned to appearance, both in absolute terms and relative to the control group. Both treatments failed to produce improvements in body perception or in psychosocial functioning, relative to the no treatment control condition. The only different findings were that a) the CR program was significantly more effective than the CRH program at reducing dysfunctional cognitions, and b) the tendency for Overweight subjects to experience greater improvement than Not Overweight subjects was slightly more pronounced in the CR condition. These results suggest that involvement in a program which integrates hypnosis with cognitive restructuring can have beneficial effects on body image, but fail to provide support for the position that hypnosis augments the effectiveness of traditional cognitive restructuring techniques. In sum, the CRH program generally replicated but failed to augment the improvements experienced by CR subjects. Such findings offer important evidence against the conclusion that a CRH program is more effective than CR alone in the treatment of body image disturbances.

A number of authors (e.g., Boutin & Tosi, 1983; Howard & Reardon, 1986; Tosi et al., 1982) have argued that hypnosis is capable of enhancing the effects of traditional cognitive restructuring techniques. Results described in the literature (e.g., Boutin & Tosi, 1983; Howard & Reardon, 1986; Manzella, 1975; Reardon & Tosi, 1977; Tosi et al., 1982; Tosi & Reardon, 1976) suggest that cognitive therapies that utilize hypnotic induction are effective in bringing about improvements in a variety of areas of functioning. However, these studies failed to employ adequate control conditions against which to evaluate the efficacy of the hypnotically-augmented interventions. The current study is the first to compare cognitive restructuring and hypnotically-augmented cognitive restructuring when they are equated on all factors except the presence of the hypnotic state.

Despite the methodological superiority of the current study, any comparisons of the current results with those in the literature must be made cautiously. Differential effectiveness of traditional vs. hypnotically-augmented cognitive techniques may depend on the particular problem treated, and none of the six studies reviewed concerned treatment of body image. In addition, a number of procedural differences in the implementation of the CRH intervention distinguish the current study from others

conducted within this paradigm. Such differences include the use of audiotaped interventions, the absence of a focus on physiological changes, and restriction of the imagery component to a single session of the intervention. Since the current intervention differs from others reported in the literature in several ways, one cannot validly conclude from the current results that the conjoint use of hypnosis is, under all circumstances, incapable of enhancing the effects of traditional cognitive restructuring. Nevertheless, until additional comparative research is conducted which equates treatment groups on all variables except the use of hypnosis, the conclusion in the present investigation that both variations of cognitive restructuring are equally effective is the only one that can be validly made.

Examination of the relative efficacy of traditional and hypnotically-augmented cognitive restructuring in the current study is made more interesting by the fact that, while CR and CRH conditions were equally effective at enhancing subjects' body image, CRH was less effective (indeed, no more effective than the control group) at reducing subjects' endorsement of dysfunctional appearance-related cognitions. One possible explanation for this pattern of results is that changes in body image for hypnotized subjects occurred largely through "non-cognitive" modalities. Although purely speculative, this analysis is

consistent with research indicating that logical and verbal processes such as those involved in cognitive restructuring are processed primarily in the left cerebral hemisphere, whereas interventions such as hypnosis, which involve primarily right cerebral activity, appear to largely bypass these logical and sequential processes (e.g., Davidson, 1978; Ornstein, 1972).

Finally, it is important to note that the failure of hypnosis to enhance the effects of cognitive restructuring cannot be attributed to poor hypnotizability of subjects. The mean HGSHS:A score of the sample at pretest was 7.68, whereas the normative value reported in the literature is 7.39 (Shor & Orne, 1962). This suggests the current sample was at least as readily hypnotized as individuals in the general population. Moreover, because subjects designated Less Susceptible were shown to actually achieve similar trance depth to More Susceptible subjects during the four intervention sessions, the majority of subjects in the study were apparently experiencing above average levels of trance depth during the treatment program. The current experiment therefore constituted a "strong" test of the hypothesized enhancing effects of hypnosis.

Effects of hypnotic susceptibility on outcome. The analysis of short form HGSHS:A scores for CRH subjects

following each session of the intervention indicated that the majority of Less Susceptible subjects did not adhere to their initial susceptibility classification across the course of the study. Because of this, the current study does not provide a good test of the influence of hypnotic susceptibility on the absolute and relative effectiveness of the interventions.

The observed fluctuations in susceptibility for Less Susceptible subjects may have been due to a number of factors. First, it is possible that with practice, subjects in this condition were able to achieve a deeper trance state than during the original testing. However, the possibility that a large proportion of subjects "learned" to be more deeply hypnotized is unlikely given research documenting the stability of hypnotic susceptibility and its resistance to modification through practice (e.g., As, Hilgard & Weitzenhoffer, 1963; Deckert & West, 1963; Hilgard, 1965; Morgan, Johnson & Hilgard, 1974). An alternative possibility is that differences in the induction protocol between the pretest and subsequent inductions accounted for the shift in susceptibility. These differences included the length of induction (45 minutes at pretest vs. 15 in the subsequent inductions); the use of a female voice at pretest vs. a male voice in the subsequent inductions; and group induction at pretest vs. individual induction on subsequent

occasions. A third possible explanation of the unreliability of susceptibility scores involves the use of the full form HGSHS:A at the initial assessment as compared to the short form at subsequent occasions. Correlations between the two forms are not known.

A final factor that may account for the observed shift in susceptibility involves the use of a median split to divide subjects into More and Less Susceptible groups. A large proportion of those Less Susceptible subjects whose classification did not remain stable had initial HGSHS:A scores near the sample median. Fluctuations in susceptibility classification for these subjects may have reflected only the test-retest measurement error inherent in the instrument used, as opposed to a shift in actual property or trait of the individual. Whether alone or in conjunction with the factors described above, the use of a median split to divide subjects into Susceptibility groups likely contributed to the subsequent blurring of Susceptibility categories.

In light of the breakdown of Susceptibility categorizations, interpretation of results involving Susceptibility is unclear. The absence of main or interaction effects of susceptibility in the current study is most obviously attributable to the fact that both

susceptibility groups achieved similar levels of trance during the audiotaped interventions. Even had subjects maintained distinct degrees of trance state, however, there is reason to doubt that susceptibility would have influenced outcome of the programs.

Andersen (1985) argues that certain treatment protocols involving hypnosis may not prove differentially effective in individuals possessing different degrees of hypnotic susceptibility, because they do not tap the individual's full hypnotic potential. Such treatments use hypnosis to primarily to enhance motivation for change. Andersen argues that hypnotic susceptibility may be more important in a program employing hypnotic phenomena accessible primarily to those of high trance capacity (e.g., post-hypnotic suggestion, time distortion, glove anesthesia, age regression). Among protocols that do not rely on such phenomena as the mechanism of therapeutic effects differences in hypnotic susceptibility among subjects should not be associated with marked differences in outcome.

The CRH program in the current study conforms more clearly to Andersen's "motivation enhancement" category. Because of the relatively accessible nature of the hypnotic phenomena involved in the CRH treatment, an absence of Susceptibility effects might be expected even among groups

of subjects with reliably differing trance depths. Future research in which susceptibility categorizations remain stable across the intervention will be required before this can be known with certainty. In order to achieve such stable categorizations, future researchers should select subjects with high and low susceptibility scores, in order to avoid the difficulties associated with the use of a median split.

#### Theoretical and Practical Implications

The results of the present study clearly demonstrate the efficacy of a cognitive treatment program for negative weight-related body image in college women. These results provide important controlled research evidence that the problem of negative weight-related body image can be effectively treated through psychological means. Several previous intervention studies have reported changes in body image. However, few of these studies involved the use of a control group. Thus it is very difficult to know to what to attribute the body image changes observed. Because the design of the present study rules out so many sources of invalidity, one can more confidently attribute the changes in body image to the treatments themselves. As a result, the present study provides clear evidence that it is possible to change body image through psychological means. Moreover, although previous studies have produced

improvements in subjects' global body evaluation, the current study is the first to demonstrate the efficacy of cognitive techniques in enhancing women's attitudes towards their body weight. These are important data because of the evidence presented earlier that negative weight-related body image is a problem that affects a significant minority of women. The development of a short-term treatment that effectively enhances weight-related aspects of women's body image provides clinicians with new tools for helping women feel better about themselves.

The demonstrated efficacy of the cognitive treatment also has important implications for how the problem of body image is conceptualized. The finding that it is possible to significantly change a person's body image through cognitive restructuring techniques is consistent with a cognitive model of body image. This model holds that negative body image is maintained by maladaptive appearance-related cognitions, and that by altering these cognitions, improvement of body image can be effected. The cognitive methods employed in the present study successfully altered cognitions and also enhanced subjects' body image. While the results do not prove the validity of the cognitive model of body image disturbance, such findings are consistent with and offer support for such a model. More comprehensive cognitive assessment needs to be conducted in order to more

fully understand the role of cognitions in negative body image.

#### Limitations of the Study and Directions for Future Research

Although the implications of the current investigation are many, there are also limitations to the conclusions that can be validly drawn. Based on an examination of these limitations it is possible to generate a series of research questions that are logical extensions of the study and which would yield useful data.

One limitation of the current study concerns conclusions regarding the multifaceted nature of body image. Although the results of the current study provide support for the multidimensional nature of weight-related body image, questions regarding the relationship between the different components of body image and their differential impact on psychosocial functioning remain unanswered. This knowledge is essential if interventions are to be directed at the dimensions where disturbance is greatest or has the greatest impact. In particular, future research should examine Winstead and Cash's (1984) contention that the relationship between satisfaction with one's appearance and psychosocial functioning is mediated by the subjective importance assigned to appearance.

A second limitation of the current study involves conclusions regarding the mechanism of observed changes in body image. One objective of this study was to collect data on subjects' weight-related cognitions pre- and post-intervention in order to determine if these changed in a manner consistent with the proposed therapeutic mechanism. However, even the finding that improvements in body image are associated with decreased endorsement of dysfunctional body-related cognitions does not demonstrate a causal role of cognitions in women's body image disturbances. At most, it is consistent with, and provides support for, the cognitive model of body image. Further, longitudinal research will be necessary to gather more conclusive evidence supporting the causal role of cognitions in the etiology of women's body image disturbances. Repeated measures of both cognitions and body image variables in a time series design would be useful in determining the direction of causality between body image and body-related cognitions in future intervention research.

As indicated previously, the initial non-equivalence of the weight status groups poses additional limits to the conclusions that can be made based on this study. Because weight status and initial satisfaction are confounded in the current study, interpretation of any effects involving weight status becomes unclear. Differences in improvement

between overweight and not overweight subjects may be due not to weight level per se, but rather to initial level of body image satisfaction. In future research comparing subjects of different weight status, initial non-equivalence of the groups should be avoided by establishing cutoff scores on body image measures as a requirement for participation. Matching subjects for problem severity would constitute a further safeguard against initial between-group differences on the dependent measures or factors closely associated with the dependent measures.

A third limitation on the conclusions which can be validly drawn from the current study concerns the research operations employed. Cook and Campbell (1979) define construct validity of causes and effects as the validity with which generalizations about higher order constructs can be made from research operations. In the current study, the operationalizations of both cause and effect constructs, as well as the construct representing the proposed mechanism of change, are vulnerable to criticism. These criticisms limit the confidence with which one can generalize conclusions based on the current findings to the higher order constructs of a) cognitive restructuring, b) body-related cognitions, and c) body image.

In the current study, cognitive restructuring was operationalized as involving attempts to modify subject's internal dialogue and specific beliefs (e.g., "If I'm not thin I won't be liked or respected by others"). Attempts to modify subjects' underlying assumptions (e.g., the assumption that it is important to be liked and respected by others) were not incorporated into the cognitive restructuring interventions. In this regard, the current operationalization of cognitive restructuring differs from others discussed in the literature, raising questions about the generalizability of conclusions. Cognitive restructuring in clinical settings often involves attempts to modify underlying assumptions and knowledge structures (cf. Guidano & Liotti, 1983), rather than merely self-statement modification. Thus, the current procedure is not representative of all cognitive restructuring, and is probably considered a relatively "weak" or "superficial" intervention (Beck et al., 1979; Guidano & Liotti, 1983). While it appears reasonable that findings would hold for "stronger" forms of this therapy if they held for a presumably less potent form, empirical confirmation is necessary before such conclusions can be reached.

The inclusion of the Appearance Beliefs Inventory in the current study represents an attempt to determine whether changes in body image were accompanied by changes in

subjects' thinking about appearance. This attempt to find empirical evidence regarding the proposed mechanism of change is an important advance in this body of research. Although the findings of the current investigation are enriched by the inclusion of the ABI, this instrument remains an imperfect attempt to assess body-related cognitions. The ABI may be faulted on a number of counts. First, this assessment method entails an a priori listing of what the experimenter believes to be "typical" dysfunctional aspects of the subjects' cognitive activity in this domain. A more open-ended approach (e.g., having subjects monitor and record cognitions in relevant situations, with the lists then submitted for independent rating of the presence of cognitive errors) might provide a more accurate picture of subjects' appearance-related cognitions. Another issue involved in the assessment of dysfunctional cognitions involves whether subjects should be asked to rate the extent of agreement with each of a number of beliefs (as is the case with the current assessment procedure) vs. the frequency of use of a number of self-statements. The current intervention involves at least in part an attempt to change the frequency of use of actual self-statements, whereas in assessing cognitive change with the ABI, agreement with belief statements is the construct being measured. This again suggests that assessment of the

frequency of use of particular self-statements via self-monitoring is necessary if valid conclusions regarding the intended construct are to be reached. However, the potential reactivity of this measurement approach illustrates the problems involved in developing a better method of assessing cognitions. These considerations suggest that, while there is a great need for a reliable and valid measure of body-related cognitions, some aspects of the ABI require modification. The development of alternative approaches to assessing subjects' body-related cognitions is desirable.

The research operations used to assess the body image construct in the current study are also vulnerable to criticism. Although recognition that body image is multidimensional is a strength of the current study in terms of adequately conceptualizing and operationalizing the dependent variables, the exclusive reliance on self-report data in the current study may have provided a biased picture of the subjects' functioning. In future research, self-report data should be supplemented by unobtrusive behavioral and peer-report indices of body image.

As noted previously, the inclusion of a control group in the design of the present study makes it possible to more confidently attribute the changes in body image to

the treatments themselves. However, a no-treatment control group cannot rule out all sources of potential invalidity. For example, experimental subjects experience not only the treatment but also an expectancy of relief which derives from the knowledge one is being treated. Control subjects presumably do not share this expectancy. Thus, a plausible alternative explanation of differential change between experimental and control groups in the current study is that it derives from these differential expectancies, rather than the presence or absence of the treatment itself.

Accordingly, future studies should attempt to replicate the finding that cognitive restructuring is effective for improving women's weight-related body image, and to address the possibility that any change observed in body image is due to non-specific factors associated with receiving treatment (e.g., the client-therapist relationship, clients' expectancies for change, the provision of a therapeutic rationale) as opposed to factors specific to cognitive restructuring therapy. The use of a placebo control group, in which subjects experience a theoretically inert treatment, would allow examination of the specific effects of the cognitive restructuring treatment above and beyond "nonspecific" effects associated with many forms of psychotherapy.

The use of a college sample drawn from introductory psychology classes poses limits to the external validity of conclusions drawn from the present study. Given the significant rates of negative body image that have been found among college women, the subject sample in this study is probably representative of a sizable proportion of women who are dissatisfied with their body image in the general population. However, the sample used in the present study differs somewhat from the population of women dissatisfied with their appearance in the general population in that it is a younger and more educated group. In addition, because subjects participated in exchange for course credit, both the intrinsic motivation as well as the initial problem severity of the current sample may have been limited, relative to levels expected in samples which self-present for treatment. The generalizability of results to other populations needs to be assessed.

In addition, because the current sample was highly homogeneous with respect to demographic variables such as age, socioeconomic status, level of education and marital status, there was no opportunity in the current study to systematically investigate the ways in which subject variables may interact with treatment. Future research utilizing more heterogeneous and representative samples of women with body image disturbances would allow exploration

of possible moderating variables. Systematic investigation of the influence of subject variables on the outcome of treatment is necessary in order to increase the breadth of individuals to whom statements about the effect of treatment can be generalized.

Finally, caution is needed in the extrapolation of findings to various patient populations. Whereas subjects in the current study were screened to exclude clinically obese and eating disordered individuals from participation, in actual clinical practice, body image problems may be present as a facet of other psychological disorders. Accordingly, one important direction for future research is to consider the utility of cognitive restructuring for negative weight-related body image as a component of a broader therapeutic strategy. For example, dysfunctional beliefs regarding appearance and weight are frequently reported among eating disordered women (e.g., Guidano & Liotti, 1983; Loro, 1984). Although several researchers have incorporated cognitive procedures for altering negative body image into their eating disorder treatment programs (e.g., Garner & Bemis, 1982; Wooley & Kearney-Cooke, 1986), the specific incremental efficacy of these procedures awaits controlled investigation.

A final constraint on the conclusions which can be validly drawn based on the current results involves conclusions regarding the durability of observed changes. Although the CR and CRH programs were successful in improving the appearance-evaluative and attention/importance aspects of subjects' body image, only through the analysis of follow-up data can the durability of these gains be known. Evaluation of follow-up data is necessary to establish that the changes in body image were stable and not dependent on regular reinforcement through the audiotapes. In addition, the stability of changes in appearance-related cognitions following posttest has not been established in the current analyses. Demonstrating that the observed shift to more realistic and adaptive cognitions was maintained at follow-up would again speak to the durability of the changes made as a result of the treatment.

Only one previous body image intervention study involving cognitive restructuring has incorporated a follow-up to assess the durability of changes. Butters (1985) collected follow-up data at 7 weeks. Although the improvements produced by his cognitive-behavioral intervention were maintained at 7 weeks, Butters notes that there were nonsignificant decreases from posttest levels of functioning in many of his body image measures. This slight albeit nonsignificant deterioration at 7 weeks gives cause

for concern regarding further loss of treatment gains with the passage of time. Butters finding's suggest the need for follow-up data collected at longer intervals following posttest assessment.

In recognition of the need to assess the long term durability of changes produced by the interventions, follow-up data for the current study were collected at three months and six months. However, these data were not included in the present analyses. The follow-up data will be analyzed at a later date, in order to assess the maintenance of changes.

Because analyses of the follow-up data are not presented here, conclusions regarding the stability of changes brought about by the intervention cannot be drawn in the current discussion. At this stage in the research the conclusions are limited to showing that cognitive methods are capable of producing change in body image. Demonstrating the durability of these improvements is left to a future paper.

Improving the treatment program. An additional direction for future research concerns investigation of ways to improve the treatment program. Although the current treatments were successful in improving weight-related body image, there are several changes, based on feedback from

subjects as well as more general considerations regarding effective therapy, that might improve the efficacy of the treatment program. In this section it is proposed that a stronger intervention would be more responsive to the needs of individual clients; would involve face-to-face therapeutic contact rather than audiotaped sessions; and would be longer, with a greater focus on maintenance issues. In addition, use of a group format might contribute to a more effective program. These are speculations and their utility needs to be evaluated empirically.

Standardization of the intervention across conditions and across subjects was obtained in the current study by using a highly structured intervention protocol and by the use of audiotaped intervention sessions. While this standardization increases one's confidence in the validity of causal inferences, it likely detracted from the effectiveness of the interventions by reducing the flexibility of the treatment and the responsiveness of the intervention to individual variations in subjects' needs. It is possible that an intervention more tailored to the individual situations of each subject would be even more effective. For example, the experimenter could elicit (in private interviews) situations, cognitions, and issues of particular relevance to the individuals and incorporate these into the intervention.

Toward achieving these goals, a program of longer duration might allow more adequate time to identify subjects' personal beliefs and assumptions and also allow adequate time to develop a personal treatment plan, implement it, and incorporate feedback into the treatment plan. As discussed above, these elements, in making the program more tailored to the needs of the individual client, are likely to provide an even more effective treatment.

In addition to allowing greater personalization of treatment, a longer program would make it possible to pay greater time and attention to maintenance issues. For example, entire sessions could be devoted to stress-innocation and relapse prevention methods with specific strategies tailored to the subjects' particular needs. It is proposed that an increased focus on maintenance would be particularly valuable in achieving more durable improvements.

The nature of the alliance between therapist and client has consistently been identified as the one variable most predictive of positive psychotherapy outcome (e.g., Morgan, Luborsky, Crits-Christophy, Curtis & Solomon, 1982). Given the importance of this human relationship, the use of audiotapes in the current interventions raises serious questions regarding whether the full potential of cognitive

techniques to produce improvement of body image disturbances was tapped in the present study. It is proposed that face-to-face therapeutic contact would contribute to a more effective treatment program.

Finally, several subjects noted in their feedback questionnaires that they thought they would have benefitted from the opportunity to share their experience with others in a group format. The use of a group format would seem to offer some distinct advantages such as normalizing subjects' experience, reducing isolation, modeling of problem-solving cognitions and behaviors, socially influencing compliance with the treatment regimen, providing support, and providing the opportunity for interpersonal feedback. While subjects probably vary in their preference for individual or group format, it is proposed that conducting the treatment program in a group context would be at least as, if not more, effective as individual treatment. Research comparing the efficacy of a cognitive restructuring program administered individually to that of a program administered in a group format would appear to provide useful clinical information. Such a study might also yield information regarding which particular clients do best with which treatment format.

## REFERENCES

- Andersen, M. S. (1985). Hypnotizability as a factor in the hypnotic treatment of obesity. The International Journal of Clinical and Experimental Hypnosis, 23, 150-159.
- Archer, R. P., & Cash, T. F. (in press). Physical attractiveness and maladjustment among psychiatric inpatients. Journal of Social and Clinical Psychology.
- As, A., Hilgard, E. R., & Weitzenhoffer, A. M. (1963). An attempt at experimental modifications of hypnotizability through repeated individual hypnotic experiences. Scandinavian Journal of Psychology, 4, 81-89.
- Askevold, F. (1975). Measuring body image. Psychotherapy and psychosomatics, 26, 71-77.
- Bateson, G. (1972). Steps to an ecology of mind. New York: Ballantyne.
- Beck, A. T. (1967). Depression: Causes and treatment. Philadelphia: University of Pennsylvania Press.
- Beck, A. T. (1976). Cognitive therapy and the emotional disorders. New York: International Universities Press.
- Beck, A. T., & Beamesderfer, A. (1974). Assessment of depression: The depression inventory. Psychological Measurements in Psychopharmacology, 7, 151-169.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). Cognitive therapy of depression. New York: Guilford Press.

- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J. E., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychology, 4, 561-571.
- Beller, A. S. (1977).  
Fat and thin: A natural history of obesity. New York: Farrar, Strauss and Giroux.
- Bergner, M., Remer, P., & Whetsell, C. (1985).  
Transforming women's body image: A feminist counseling approach. Women and Therapy, 4, 25-38.
- Berscheid, E., Walster, E., & Bohrnsted, G. (1973, November). The happy American body: A survey report. Psychology Today, 119-131.
- Birtchnell, S. A., Lacey, J. H., and Harte, A. (1985).  
Body image distortion in bulimia nervosa. British Journal of Psychiatry, 147, 408-412.
- Bohrnsted, G. W. (1977). On measuring body satisfaction.  
Unpublished manuscript, Institute of Social Research, Indiana University, Bloomington, IN.
- Bolocofsky, D. N., Spinler, D., & Coulthard-Morris, L. (1985). Effectiveness of hypnosis as an adjunct to behavioral weight management. Journal of Clinical Psychology, 41, 35-41.
- Bongartz, W. (1985). German norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. The International Journal of Clinical and Experimental Hypnosis, 33, 131-139.

- Boutin, G., & Tosi, D. J. (1983). Modification of irrational ideas and test anxiety through rational stage directed hypnotherapy (RSDH). Journal of Clinical Psychology, 39, 382-391.
- Bruch, H. (1973). Eating disorders. New York: Basic Books.
- Bruch, H. (1975). Obesity and anorexia nervosa: psycho-social aspects. Australian and New Zealand Journal of Psychiatry, 9, 159.
- Bumberry, W., Oliver, J. M., & McClure, J. N. (1987). Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. Journal of Consulting and Clinical Psychology, 46, 150-155.
- Butters, J. W. (1985). The controlled evaluation of a cognitive-behavioral treatment program for body-image dissatisfaction in college women. Unpublished doctoral dissertation, Virginia Consortium for Professional Psychology, Norfolk, VA.
- Butters, J. W., & Cash, T. F. (1987). Cognitive-behavioral treatment of women's body-image dissatisfaction. Journal of Consulting and Clinical Psychology, 55, 889-897.
- Button, E. J., & Whitehouse, A. (1981). Subclinical anorexia nervosa. Psychological Medicine, 11, 509-516.

- Canadian guidelines for healthy weights: Report of an expert group convened by Health Promotion Directorate, Health Services Branch (1988). Ottawa: Minister of National Health and Welfare.
- Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). The quality of American life. New York: Sage.
- Cash, T. F. (1985). Physical appearance and mental health. In A. Kligman & J. A. Graham (Eds.), The psychology of cosmetic treatments (pp. 196-216). New York: Praeger Scientific.
- Cash, T. F., & Brown, T. A. (in press). Body image in anorexia nervosa and bulimia nervosa: A review of the literature.  
Behavior Modification.
- Cash, T. F., Cash, D. W., & Butters, J. W. (1983). "Mirror, mirror on the wall...?:" Contrast effects and self-evaluation of physical attractiveness. Personality and Social Psychology Bulletin, 9, 351-358.
- Cash, T. F., & Green, G. K. (1986). Body weight and body image among college women: Perception, cognition and affect. Journal of Personality Assessment, 50, 290-301.
- Cash, T. F., & Soloway, D. (1975). Self-disclosure correlates of physical attractiveness: An exploratory study. Psychological Reports, 36, 579-586.

- Cash, T. F., & Winstead, B. A. (1983). Body-image and personality. Unpublished research, Old Dominion University, Norfolk, VA.
- Cash, T. F., Winstead, B. A., & Janda, L. H. (1986). The great American shape-up: Body image survey report. Psychology Today, 20(4), 30-37.
- Collins, J. K., McCabe, M. P., Jupp, J. J., & Sutton, J. E. (1983). Body percept change in obese females after weight reduction therapy. Journal of Clinical Psychology, 39, 507-511.
- Crisp, A. H. (1965). Some aspects of the evolution, presentation and follow-up of anorexia nervosa. Proceedings of the Royal Society of Medicine, 58, 814-820.
- Crisp, A. (1984). Psychopathology of anorexia nervosa. In A. J. Stunkard & E. Stellar (Eds.), Eating and its disorders. New York: Raven Press.
- Crisp, A. H., & Kalucy, R. S. (1974). Aspects of the perceptual disorder in anorexia nervosa. British Journal of Medical Psychology, 47, 349-361.
- Davidson, J. R. (1978). Specificity and patterning in biobehavioral systems. American Psychologist, 33, 430-436.
- Davies, E., & Furnham, A. (1986). The dieting and body shape concerns of adolescent females. Journal of Child Psychology and Psychiatry, 27, 417-428.

- Deckert, G. H., & West, L. J. (1963). The problem of hypnotizability: A review. The International Journal of Clinical and Experimental Hypnosis, 11, 205-235.
- Derogatis, L. R. (1977). SCL-90: Administration, scoring and procedures manual for the revised version. Baltimore, MD: John Hopkins University School of Medicine.
- Dworkin, S. H., & Kerr, B. A. (1987). Comparison of interventions for women experiencing body image problems. Journal of Counseling Psychology, 34, 136-140.
- Dwyer, J. T., Feldman, J. I., & Mayer, J. (1967). Adolescent dieters: Who are they? American Journal of Clinical Nutrition, 20, 1045-1056.
- Dwyer, J. T., & Mayer, J. M. (1970). Potential dieters: Who are they? -- attitudes toward body weight and dieting. Journal of the American Dietetic Association, 56, 511-514.
- Dykens, E. M., & Gerrard, M. (1986). Psychological Profiles of Purging Bulimics, Repeat Dieters, and Controls. Journal of Consulting and Clinical Psychology, 54, 283-288.
- Ellis, A. (1962). Reason and emotion in psychotherapy. Secaucus, NJ: The Citadel Press.
- Ellis, A. (1977). The basic clinical theory of rational-emotive therapy. In A. Ellis and R. Grieger

- (Eds.), Handbook of rational-emotive therapy. New York: Springer.
- Emmelkamp, P. M. G., Kuipers, A. C. M., & Eggeraat, J. B. (1978). Cognitive modification versus prolonged exposure in vivo: A comparison with agoraphobics as subjects. Behavior Research and Therapy, 16, 33-41.
- Eschenroeder, C. (1982). How rational is rational-emotive therapy? A critical appraisal of its theoretical foundations and therapeutic methods. Cognitive Therapy and Research, 6, 381-392.
- Fallon, A. E., & Rozin, P. (1985). Sex differences in perceptions of desirable body size. Journal of Abnormal Psychology, 94, 102-105.
- Feeling fat in a thin society: 33,000 women tell how they feel about their bodies. (1984, February). Glamour, 198-201, 251-252.
- Fitts, W. (1965). Tennessee Self-Concept Scale. Nashville, TN: Councilor Recordings and Tests.
- Franzoi, S. L., & Herzog, M. E. (1986). The body esteem scale: A convergent and discriminant validity study. Journal of Personality Assessment, 50, 24-31.
- Franzoi, S. L., & Shields, S. A. (1984). The body esteem scale: Multidimensional structure and sex differences in a college population. Journal of Personality Assessment, 48, 173-178.

- Fries, H. (1977). Studies on secondary amenorrhea, anorectic behavior and body image perception: Importance for the early recognition of anorexia nervosa. In R. Vigersky (Ed.), Anorexia nervosa (pp. 163-176). New York: Raven.
- Garfinkel, P. E., & Garner, D. M. (1982). Anorexia nervosa: A multidimensional perspective. New York: Bruner Mazel.
- Garner, D. M., & Bemis, K. M. (1982). A cognitive-behavioral approach to anorexia nervosa. Cognitive Therapy and Research, 6, 123-150.
- Garner, D. M., & Garfinkel, P. E. (1981). Body image in anorexia nervosa: Measurement, theory and clinical implication. International Journal of Psychiatry in Medicine, 11, 263-284.
- Garner, D. M., & Garfinkel, P. E. (1983). Anorexia nervosa: A multidimensional perspective. New York: Bruner Mazel.
- Garner, D. M., Garfinkel, P. E., Stancer, H. C., & Moldofsky, H. (1976). Body image disturbances in anorexia nervosa and obesity. Psychosomatic Medicine, 38, 227-336.
- Garner, D. M., Olmsted, M. P., & Garfinkel, P. E. (1983). Does anorexia nervosa exist on a continuum? Subgroups of weight-preoccupied women and their relationship to anorexia nervosa. International Journal of Eating Disorders, 2, 11-20.

- Garner, D. M., Olmsted, M. P., Polivy, J., & Garfinkel, P. E. (1984). Comparison between weight-preoccupied women and anorexia nervosa. Psychosomatic Medicine, 46, 255-266.
- Gilbert, L. A. (1980). Feminist therapy. In A. Brodsky & R. Hare Mustin (Eds.), Women and psychotherapy. New York: Guilford Press.
- Gleghorn, A. A., Penner, L. A., Powers, P. S., & Schulman, R. (1987). The psychometric properties of several measures of body image. Journal of Psychopathology and Behavioral Assessment, 9, 203-218.
- Glucksman, M. L., & Hirsch, J. (1969). The response of obese patients to weight reduction: III. The perception of body size. Psychosomatic Medicine, 31, 1-7.
- Gray, S. H. (1977). Social aspects of body image: Perception of normalcy of weight and affect of college undergraduates. Perceptual and Motor Skills, 45, 1035-1040.
- Green, G. K., & Cash, T. F. (1984, April). Body weight, weight stability, and body image: Perception, affect and cognition. Paper presented at meeting of the Virginia Psychological Association, Richmond, VA.
- Guidano, V. F., & Liotti, G. (1983). Cognitive processes and emotional disorders: A structural approach to psychotherapy. New York: Guildford.

- Hammen, C. L. (1980). Depression in college students: Beyond the Beck Depression Inventory. Journal of Consulting and Clinical Psychology, 48, 126-128.
- Hathaway, S., & McKinley, J. (1966). The Minnesota Multiphasic Personality Inventory. New York: Psychological Corporation.
- Heatherton, T., Polivy, J., Pliner, P., & Herman, C. P. (1986). Self-esteem, body weight and dieting status. Unpublished manuscript.
- Helmreich, R., & Stapp, J. (1974). Short forms of the Texas Social Behavior Inventory (TSBI): An objective measure of self-esteem. Bulletin of the Psychonomic Society, 4, 473-475.
- Herman, C. P., & Polivy, J. (1980). Restrained eating. In A. Stunkard (Ed.), Obesity (pp. 208-225). Philadelphia, PA: W. B. Saunders.
- Hilgard, E. R. (1965). Hypnotic Susceptibility. New York: Harcourt, Brace and World.
- Howard, W. L., & Reardon, J. P. (1986). Changes in the self concept and athletic performance of weight lifters through a cognitive-hypnotic approach: an empirical study. American Journal of Clinical Hypnosis, 28, 248-257.
- Huenemann, R. L., Shapiro, L. R., Hampton, M. C., & Mitchell, B. W. (1966). A longitudinal study of gross

- body composition and body conformation and their associations with food and activity in a teenage population: Views of teenage subjects on body conformation, food, and activity. American Journal of Clinical Nutrition, 18, 325-338.
- Hutchinson, M. G. (1982). Transforming your body image: Your body, friend or foe? Women and Therapy, 1, 59-67.
- Jakobovits, C., Halstead, P., Kelley, L., Roe, D. A., & Young, C. M. (1977). Eating habits and nutrient intakes of college women over a thirty-year period. Journal of the American Dietetic Association, 71, 405-411.
- Katzman, M., & Wolchik, S. (1984). Bulimia and binge eating in college women: A comparison of personality and behavioral characteristics. Journal of Consulting and Clinical Psychology, 52, 423-428.
- Keeton, P., Cash, T. F., & Lewis, R. J. (1987). The multidimensional assessment of body image among college students Paper presented at the Southeastern Psychological Convention, Atlanta, GA.
- Lerner, R. M., Karabenick, S. A., & Stuart, J. L. (1973). Relations among physical attractiveness, body attitudes, and self-concept in male and female college students. Journal of Psychology, 85, 119-129.
- Loro, A. D. (1984). Binge eating: A cognitive-behavioral treatment program. In R. C. Hawkins, W. J. Fremouw, & P.

- F. Clement (Eds.), The binge-purge syndrome: Diagnosis, treatment and research. (pp. 183-210). New York: Springer.
- Marlatt, G. A., & Gordon, J. r. (Eds.) (1985). Relapse prevention: Maintenance strategies in the treatment of addictive behaviors. New York: Guilford Press.
- Marzella, A. N. (1975). The effects of rational stage directed therapy upon the reduction of selected variables of psychological stress: A comparative study. Unpublished doctoral dissertation, The Ohio State University.
- Matthews, W. J., Kirsch, I., & Mosher, D. (1985). Double hypnotic induction: An empirical test. Journal of Abnormal Psychology, 94, 92-95.
- Maultsby, M. (1984). Rational behavior therapy. Englewood Cliffs, N. J.: Prentice-Hall.
- McCrea, C. W., Summerfield, A. B., & Rosen, B. (1982). Body image: A selective review of existing measurement techniques. British Journal of Medical Psychology, 55, 225-233.
- Meichenbaum, D. (1977). Cognitive-behavior modification: An integrative approach. New York: Plenum Press.
- Meichenbaum, D. (1985). Stress inoculation training. New York: Pergamon Press.

- Metropolitan Life Insurance Company (1983). Metropolitan Height and Weight Tables for Men and Women. New York: Author. Metro
- Miller, T. M., Coffman, J. G., & Linke, R. A. (1980). Survey on body image, weight, and diet of college students. Journal of the American Dietetic Association, 77, 561-566.
- Miller, L. C., Murphy, R., & Buss, A. H. (1981). Consciousness of body: Private and public. Journal of Personality and Social Psychology, 41, 397-406.
- Mintz, L. B., & Betz, N. E. (1986). Sex differences in the nature, realism, and correlates of body image. Sex Roles, 15, 185-195.
- Morgan, A. H., Johnson, D. L., & Hilgard, E. R. (1974). The stability of hypnotic susceptibility: A longitudinal study. The International Journal of Clinical and Experimental Hypnosis, 22, 249-257.
- Morgan, A. H., MacDonald, H., & Hilgard, E. R. (1974). EEG alpha: Lateral assymetry related to task, and hypnotizability. Psychobiology, 11, 275-282.
- Morgan, R., Luborsky, L., Crits-Christophy, P., Curtis, H., & Solomon, J. (1982). Predicting the outcome of psychotherapy by the Penn Helping Alliance Rating Method. Archives of General Psychiatry, 39, 401-402.

- Mott, T. (1982). The role of hypnosis in psychotherapy. The American Journal of Clinical Hypnosis, 24, 241-248.
- Nisbett, R. E. (1972). Hunger, obesity and the ventromedial hypothalamus. Psychology Review, 79, 433-453.
- Noles, S. W. (1983). Body image and depression in a college sample. Unpublished doctoral dissertation, Virginia Consortium for Professional Psychology, Old Dominion University, Norfolk, VA.
- Noles, S. W., Cash, T. F., & Winstead, B. A. (1985). Body image, physical attractiveness, and depression. Journal of Consulting and Clinical Psychology, 53, 88-94.
- Nylander, I. (1971). The feeling of being fat and dieting in a school population. Acta Socio-Medica Scandinavica, 1, 17-26.
- Olmsted, M. P., & Garner, D. M. (1986). The significance of self-induced vomiting as a weight control method among non-clinical samples. International Journal of Eating Disorders, 5, 683-700.
- Orbach, S. (1978). Fat is a feminist issue. London: Paddington Press.
- Ornstein, R. E. (1972). The psychology of consciousness. San Francisco: Freeman.
- Polivy, J., Garner, D. M., & Garfinkel, P. E. (1981, May). Thinness and social behavior. Paper presented at the Ontario Symposium in Personality and Social Psychology, Toronto, Ontario, Canada.

- Polivy, J., Garner, D. M., & Garfinkel, P. E. (1986). Causes and consequences of the current preference for thin female physiques. In C.P. Herman, M. P. Zanna, & E. T. Higgins (Eds.), Physical Appearance, stigma, and social behavior: The Third Ontario Symposium in Personality and Social Psychology (pp. 89-112). Hillsdale, NJ: Erlbaum.
- Polivy, J., & Herman, C. P. (1983). Breaking the diet habit. New York: Basic Books.
- Polivy, J., & Herman, C. P. (1987). Diagnosis and treatment of normal eating. Journal of Consulting and Clinical Psychology, 55, 635-644.
- Polivy, J., Herman, C. P., Olmsted, M. P., & Jazwinski, C. M. (1984). Restraint and binge eating. In C. Hawkins, W. Fremouw, & P. Clement (Eds.), The binge-purge syndrome (pp. 104-121). New York: Springer.
- Polivy, J., & Peter, C. H. (1985). Dieting and binging: A causal analysis. American Psychologist, 40, 193-201.
- Rachman, S. J., & Wilson, G. T. (1980). The effects of psychological therapy. New York: Pergamon Press.
- Reardon, J., & Tosi, D. (1977). The effects of rational stage directed imagery on the self-concept and reduction of psychological stress in adolescent delinquent females. Journal of Consulting Psychology, 35, 332-337.

- Rehyer, J. (1977). Clinical and experimental hypnosis: Implications for theory and methodology. In W. E. Edmonston (Ed.), Conceptual and investigative approaches to hypnosis and hypnotic phenomena. New York: New York Academy of Sciences.
- Rodin, J., Silberstein, L. R., & Striegel-Moore, R. H. (1985). Women and weight: A normative discontent. In T. B. Sonderegger (Ed.), Nebraska Symposium on Motivation: Vol. 32. Psychology and gender (pp. 267-307). Lincoln: University of Nebraska Press.
- Rosen, G. M., & Ross, A. O. (1968). Relationship of body image to self-concept. Journal of Consulting and Clinical Psychology, 32, 100.
- Rosen, J. C., & Gross, J. (1987). Prevalence of weight reducing and weight gaining in adolescent girls and boys. Health Psychology, 6, 131-147.
- Rosen, J. C., Gross, J., & Vara, L. (1987). Psychological Adjustment of Adolescents Attempting to Lose or Gain Weight. Journal of Consulting and Clinical Psychology, 55, 742-747.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
- Ruff, G. S., & Barrios, B. A. (1986). Realistic assessment of body image. Behavioral Assessment, 8, 237-251.

- Ryan, B., & Roughan, P. (1984). Women and weight: A treatment programme for both normal and overweight women preoccupied by eating and related issues. Australian Journal of Family Therapy, 54, 267-274.
- Schonbruch, S. S., & Schell, R. E. (1967). Judgments of body appearance by fat and skinny male college students. Perceptual and Motor Skills, 24, 999-1002.
- Secord, P., & Jourard, S. (1953). The appraisal of body-cathexis: Body cathexis and the self. Journal of Consulting Psychology, 17, 343-347.
- Selvini-Palazzoli, M. (1978). Self-starvation: From individuation to family therapy in the treatment of anorexia nervosa. New York: Aronson.
- Sheehan, P. W., & McConkey, K. M. (1979). Australian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 27, 294-304.
- Shontz, F. C. (1974). Body image and its disorders. International Journal of Psychiatry in Medicine, 5, 461-472.
- Shor, R. E., & Orne, E. C. (1962). Harvard Group Scale of Hypnotic Susceptibility, Form A. Palo Alto, CA: Consulting Psychologists Press.
- Silber, E., & Tippett, J. S. (1965). Self-esteem: Clinical assessment and measurement validation. Psychological Reports, 16, 1017-1071.

- Slade, P. D., & Russell, G. F. M. (1973). Awareness of body dimension in anorexia nervosa: Cross-sectional and longitudinal studies. Psychological Medicine, 3, 188-199.
- Striegel-Moore, R. H., Silberstein, L. R., & Rodin, J. (1986). Toward an understanding of risk factors for bulimia. American Psychologist, 41, 246-263.
- Stunkard, A. J., & Penick, S. B. (1979). Behavioral modification in the treatment of obesity: the problem of maintaining weight loss. Archives of General Psychiatry, 36.
- Tosi, D. J., Howard, L., & Gwynne, P. H. (1982). The treatment of anxiety neurosis through rational stage directed hypnotherapy: A cognitive experiential perspective. Psychotherapy: Theory, research and Practice, 19, 95-101.
- Tosi, D. J., & Reardon, J. P. (1976). The treatment of guilt through rational stage directed therapy. Rational Living, 2, 8-12.
- Tucker, L. A. (1981). Internal Structure, Factor Satisfaction and Reliability of the Body Cathexis Scale. Perceptual and Motor Skills, 53, 891-896.
- Weitzenhoffer, A. M. (1962). The estimation of hypnotic susceptibility in a group situation. American Journal of Clinical Hypnosis, 5, 115-126.

- Whitehouse, A. M., Freeman, C. L., & Annandale, A. (1986).  
Body size estimation in bulimia. British Journal of  
Psychiatry, 149, 98-103.
- Willmuth, M. E. (1987). Treatment of obesity: A  
socio-political perspective. Women and Therapy, 5,  
27-37.
- Winstead, B. A., & Cash, T. F. (1984). Reliability and  
validity of the BSRQ: A new measure of body image.  
Paper presented at the Southeastern Psychological  
Association Convention, New Orleans.
- Wooley, S. C. (1987). Psychological and social aspects of  
obesity. In A. E. Bender & L. J. Brookes (Eds.), Body  
weight control: The physiology, clinical treatment and  
prevention of obesity (pp. 177-185). New York:  
Livingstone.
- Wooley, S. C., & Kearney-Cooke, A. (1986). Intensive  
treatment of body image disturbance. In K. D. Brownell &  
J. P. Foreyt (Eds.), Handbook of eating disorders (pp.  
476-502). New York: Basic Books.
- Zajonc, R. B. (1980). Feeling and thinking; preferences  
need no inferences. American Psychologist, 35, 151-175.

## APPENDIX A

Body-Self Relations Questionnaire

The following pages contain a series of statements that involve how people might think or feel. You will be asked to indicate the extent to which each statement pertains to you personally.

Your answers to the items in the questionnaire are anonymous, so please do not write your name on any of the materials. In order to complete the questionnaire you should read each statement carefully and decide how you feel about it as it pertains to you personally. Each item has a scale, marked with the letters A, B, C, D and E, with A indicating "definitely disagree" and E indicating "definitely agree", and the other letters, points in between. For each item, circle the letter which best describes how much you agree or disagree with that statement.

A	B	C	D	E
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

Example: I am usually in a good mood. A B C D E

You would circle A if you definitely disagree with this statement; circle B if you mostly disagree; circle C if you neither agree nor disagree; circle D if you mostly agree; and circle E if you definitely agree with the statement.

There are no "right" or "wrong" answers. Give the answer that is most accurate for you. Remember your responses are anonymous, so please be completely honest. Please give a response to all of the items. Now turn the page and begin.

1. I am not at all photogenic. A B C D E
2. I feel that my weight is just right. A B C D E
3. It is important for me to be good-looking. A B C D E
4. I readily notice any blemish on my face. A B C D E
5. Members of the opposite sex think I am physically attractive. A B C D E
6. If I want to make an impression on someone I can use my physical appearance to do it. A B C D E
7. My looks are advantageous to me. A B C D E
8. I think my body is sexually appealing. A B C D E
9. I am very aware of my best and worst body parts. A B C D E
10. Before going out in public I always take notice of how I look. A B C D E
11. I really don't care how others react to my physical appearance. A B C D E
12. I check my appearance in a mirror whenever I can. A B C D E
13. I like my looks just the way they are. A B C D E
14. I am constantly worried about being or becoming too fat. A B C D E

15. It is important to me that I always look good. A B C D E
16. Most people would consider me good-looking. A B C D E
17. I like the way I look without my clothes. A B C D E
18. How I look is an important part of who I am. A B C D E
19. My physical appearance is less important than my physical capabilities. A B C D E
20. I am very conscious of even small changes in my body weight. A B C D E
21. Few people would think that I have a sexy body. A B C D E
22. I always like to look my best. A B C D E
23. I am self-conscious if my grooming isn't right. A B C D E
24. Others think my physique is good. A B C D E
25. My facial features are pleasing to me. A B C D E
26. I like the way clothes fit me. A B C D E
27. I am very aware of flaws in my physical appearance. A B C D E
28. Because of my looks people don't take me seriously. A B C D E

29. I am not concerned about what members of the opposite sex think of my physical appearance. A B C D E
30. From the standpoint of their looks, I would like to change some parts of my body. A B C D E
31. I dislike my physique. A B C D E
32. It makes no difference to me what people think about my appearance. A B C D E
33. I am very aware of what others think about my physical appearance. A B C D E
34. Often I feel that I am hopelessly trapped in a body I don't want. A B C D E
35. I feel that I am physically unattractive. A B C D E
36. The size and shape of my body are not important to me. A B C D E
37. Looking my best gives me great pleasure. A B C D E
38. I never think about my appearance. A B C D E

## APPENDIX B

Body Esteem Scale

Each of the following items names some part or aspect of your body. Following each item is a scale, marked with the numbers 1, 2, 3, 4, and 5, with 1 indicating that you "have strong negative feelings" about that part or aspect of your body, 5 indicating that you "have strong positive feelings" about that part or aspect of your body, and the other numbers, points in between. Here is the scale:

1. Have strong negative feelings
2. Have moderate negative feelings
3. Have no feeling one way or the other
4. Have moderate positive feelings
5. Have strong positive feelings

For each item, circle the number which best describes how you feel about that part or aspect of your body.

SA	1. nose	1	2	3	4	5
SA	2. lips	1	2	3	4	5
WC	3. appetite	1	2	3	4	5
WC	4. waist	1	2	3	4	5
PC	5. physical stamina	1	2	3	4	5
WC	6. thighs	1	2	3	4	5

SA	7. face	1	2	3	4	5
PC	8. biceps	1	2	3	4	5
WC	9. legs	1	2	3	4	5
SA	10. chest or breasts	1	2	3	4	5
SA	11. appearance of eyes	1	2	3	4	5
WC	12. buttocks	1	2	3	4	5
PC	13. reflexes	1	2	3	4	5
PC	14. health	1	2	3	4	5
WC	15. hips	1	2	3	4	5
SA	16. sex drive	1	2	3	4	5
PC	17. physical coordination	1	2	3	4	5
WC	18. stomach	1	2	3	4	5
SA	19. ears	1	2	3	4	5
PC	20. agility	1	2	3	4	5
WC.	21. weight	1	2	3	4	5
SA	22. cheeks/cheekbones	1	2	3	4	5
PC	23. physical condition	1	2	3	4	5
SA	24. sex activities	1	2	3	4	5

PC	25. energy level	1	2	3	4	5
WC	26. figure or physique	1	2	3	4	5
SA	27. chin	1	2	3	4	5
WC	28. body build	1	2	3	4	5
PC	29. muscular strength	1	2	3	4	5
SA	30. body scent	1	2	3	4	5
SA	31. body hair	1	2	3	4	5
SA	32. sex organs	1	2	3	4	5

SA=Sexual Attractiveness

WC=Weight Concern

PC=Physical Condition

## APPENDIX C

Body Consciousness Questionnaire

The Body Consciousness Questionnaire asks you to describe the way you think and feel about various aspects of your body. Each item has a scale, marked with the numbers 0, 1, 2, 3, and 4, with 0 indicating "extremely uncharacteristic" and 4 indicating "extremely characteristic", and the other numbers, points in between.

For each item, circle the number which best describes how characteristic the item is of you.

0	1	2	3	4
Extremely	Not very	Slightly	Fairly	Extremely
uncharacteristic				characteristic
of me				of me

---

Pr 1. I am sensitive to internal bodily tensions.

0 1 2 3 4

Pu 2. I am very aware of my best and worst facial features.

0 1 2 3 4

Pr 3. I know immediately when my mouth or throat gets dry.

0 1 2 3 4

Pu 4. I like to make sure that my hair looks right.

0 1 2 3 4

Pu 5. I think a lot about my body build

0 1 2 3 4

Pr 6. I can often feel my heart beating

0 1 2 3 4

BC 7. I'm light on my feet compared to most people.

0 1 2 3 4

Pr 8. I'm very aware of changes in my body temperature.

0 1 2 3 4

Pu 9. When with others, I want my hands to be clean and look nice.

0 1 2 3 4

BC 10. I'm capable of moving very quickly.

0 1 2 3 4

Pu 11. I'm concerned about my posture.

0 1 2 3 4

BC 12. For my size, I'm pretty strong.

0 1 2 3 4

Pu 13. It's important for me that my skin looks nice ... for example, has no blemishes.

0 1 2 3 4

Pr 14. I am quick to sense the hunger contractions of my  
stomach.

0 1 2 3 4

BC 15. I'm better coordinated than most people.

0 1 2 3 4

Pr=Private Body Consciousness

Pu=Public Body Consciousness

BC=Body Competence

## APPENDIX D

Appearance Beliefs Inventory

People differ in physical appearance. They exist in different sizes and shapes. That individuals differ in their physical appearance is a fact of life. The purpose of this questionnaire is to learn more about what these differences mean to you.

On the following page are statements about various aspects of physical appearance. We simply ask that you read each statement and decide to what extent you agree or disagree with the statement. Circle the letter that most closely corresponds to your personal belief about that item:

Circle A if you Definitely Disagree with the statement

Circle B if you Mostly Disagree with the statement

Circle C if you Neither Disagree nor Agree with the statement

Circle D if you Mostly Agree with the statement

Circle E if you Definitely Agree with the statement

There are no right or wrong answers here, only your candid personal beliefs and opinions. So please be completely honest. Your answers are confidential. Do not answer based on what you

think "sounds good or bad"; just answer on the basis of what you really think.

A	B	C	D	E
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

1. If there are women around who are thinner than I,  
then I don't feel attractive. A B C D E
2. If I gain a few pounds, I feel much less attractive.  
A B C D E
3. If I'm not beautiful, then I must be unattractive.  
A B C D E
4. If there is one flaw in my appearance, then I don't  
feel attractive.  
A B C D E
5. How I feel about myself is usually related to how I feel  
about my weight. A B C D E
6. My appearance is very important to me.  
A B C D E
7. If I were very thin, my life would be a lot better.  
A B C D E

...please turn page

8. If I'm unattractive, then I probably won't be happy and successful in my life.  
A B C D E
9. I don't feel attractive unless I am at a certain "ideal" weight. A B C D E
10. If I gain a few pounds, I feel I am a lot less attractive to others. A B C D E

## APPENDIX E

Beck Depression Inventory

This questionnaire contains a number of statements. The statements are arranged in a series of groups, numbered from Group 1 to Group 21. Your task is to read each group of statements carefully, and pick out the one statement in that group which best describes the way you feel today, that is, right now. Make sure you read the entire group of statements below a number before you decide which of the statements best describes the way you feel. When you have decided which statement best describes the way you feel, circle the letter corresponding to that statement. Please be sure to circle only one letter (that is, pick only one statement) from each group. If you feel that more than one statement in a group fit the way you feel, then circle the statement that is lower down the list.

1.

- a. I do not feel sad.
- b. I feel blue or sad.
- c. I am blue or sad all the time and can't snap out of it.
- d. I am so sad or unhappy that it is quite painful.
- e. I am so sad or unhappy that I can't stand it.

2.

- a. I am not particularly pessimistic or discouraged about the future.
- b. I feel discouraged about the future.
- c. I feel I have nothing to look forward to.
- d. I feel that I won't ever get over my troubles.
- e. I feel that the future is hopeless and things cannot improve.

3.

- a. I do not feel like a failure.
- b. I feel I have failed more than the average person.
- c. I feel I have accomplished very little that is worthwhile or that means anything.
- d. As I look back on my life all I can see is a lot of failures.
- e. I feel I am a complete failure as a person.

4.

- a. I am not particularly dissatisfied.
- b. I feel bored most of the time.
- c. I don't enjoy things the way I used to.
- d. I don't get satisfaction out of anything anymore.
- e. I am dissatisfied with everything.

5.

- a. I don't feel particularly guilty.
- b. I feel bad or unworthy a good part of the time.
- c. I feel quite guilty.
- d. I feel bad or unworthy practically all the time.
- e. I feel as though I am very bad or worthless.

6.

- a. I don't feel I am being punished.
- b. I have a feeling that something bad may happen to me.
- c. I feel I am being punished or will be punished.
- d. I feel I deserve to be punished.
- e. I want to be punished.

7.

- a. I don't feel disappointed in myself.
- b. I am disappointed in myself.
- c. I don't like myself.
- d. I am disgusted with myself.
- e. I hate myself.

8.

- a. I don't feel I am any worse than anybody else.
- b. I am critical of myself for any weaknesses or mistakes.
- c. I blame myself for my faults.
- d. I blame myself for everything bad that happens.

9.

- a. I don't have any thoughts of harming myself.
- b. I have thoughts of harming myself but I would not carry them out.
- c. I feel I would be better off dead.
- d. I feel my family would be better off if I were dead.
- e. I have definite plans about committing suicide.
- f. I would kill myself if I could.

10.

- a. I don't cry any more than usual.
- b. I cry more now than I used to.
- c. I cry all the time now. I can't stop it.
- d. I used to be able to cry but now I can't cry even though I want to.

11.

- a. I am no more irritated now than I ever am.
- b. I get annoyed or irritated more easily than I used to.
- c. I feel irritated all the time.
- d. I don't get irritated at all at the things that used to irritate me.

12.

- a. I have not lost interest in other people.
- b. I am less interested in other people now than I used to be.
- c. I have lost most of my interest in other people and have little feeling for them.
- d. I have lost all my interest in other people and don't care about them at all.

13.

- a. I make decisions about as well as ever.
- b. I try to put off making decisions.
- c. I have great difficulty in making decisions.
- d. I can't make decisions at all anymore.

14.

- a. I don't feel that I look any worse than I used to.
- b. I am worried that I am looking old or unattractive.
- c. I feel that there are permanent changes in my appearance and they make me look unattractive.
- d. I feel that I am ugly or repulsive looking.

15.

- a. I can work about as well as before.
- b. It takes extra effort to get started at doing something.
- c. I don't work as well as I used to.
- d. I have to push myself very hard to do anything.
- e. I can't do any work at all.

16.

- a. I can sleep as well as usual.
- b. I wake up more tired in the morning than I used to.
- c. I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
- d. I wake up early every day can't get more than 5 hours sleep.

17.

- a. I don't get any more tired than usual.
- b. I get tired more easily than I used to.
- c. I get tired from doing anything.
- d. I get too tired to do anything.

18.

- a. My appetite is no worse than usual.
- b. My appetite is not as good as it used to be.
- c. My appetite is much worse now.
- d. I have no appetite at all any more.

19.

- a. I haven't lost much weight, if any, lately
- b. I have lost more than 5 pounds.
- c. I have lost more than 10 pounds.
- d. I have lost more than 15 pounds.

20.

- a. I am no more concerned about my health than usual.
- b. I am concerned about aches and pains or upset stomach or constipation.
- c. I am so concerned with how I feel or what I feel that it's hard to think of much else.
- d. I am completely absorbed in what I feel.

21.

- a. I have not noticed any recent change in my interest in sex.
- b. I am less interested in sex than I used to be.
- c. I am much less interested in sex now.
- d. I have lost interest in sex completely.

## APPENDIX F

Rosenberg Self-Esteem Scale

On the following page are a number of statements that deal with the way you feel about yourself. Please read each statement and decide to what extent you agree or disagree with the statement. Circle the letter that most closely corresponds to your personal belief about that item:

Circle A if you Strongly Disagree with the statement.

Circle B if you Moderately Disagree with the statement.

Circle C if you Moderately Agree with the statement.

Circle D if you Strongly Agree with the statement.

Your answers are anonymous, so please be completely honest. Do not answer based on what you think "sounds good or bad"; just answer on the basis of what you really think. Remember, the response scale goes from A for Strong Disagreement to D for Strong Agreement with the statement. As a reminder, the scale is printed at the top of the page.

A	B	C	D
Stongly	Moderately	Moderately	Strongly
Disagree	Disagree	Agree	Agree

---

1. I feel that I'm a person of worth, at least on an equal plane with others. A B C D
2. I feel that I have a number of good qualities. A B C D
3. All in all, I am inclined to feel that I am a failure. A B C D
4. I am able to do things as well as most other people. A B C D
5. I feel I do not have much to be proud of. A B C D
6. I take a positive attitude toward myself. A B C D
7. On the whole, I am satisfied with myself. A B C D
8. I wish I could have more respect for myself. A B C D
9. I certainly feel useless at times. A B C D
10. At times I think I am no good at all. A B C D

## APPENDIX G

Texas Social Behavior Inventory (Form A)

The Social Behavior Inventory asks you to describe your reactions and feelings when you are around other people. Each item has a scale, marked with the letters A,B,C,D, and E, with A indicating "not at all characteristic of me," and E "very characteristic of me," and the other letters, points in between.

For each item, circle the letter which best describes how characteristic the item is of you.

A	B	C	D	E
Not at all	Not very	Slightly	Fairly	Very Much
characteristic				characteristic
of me				of me

---

1. I am not likely to speak to people until they speak to me.

A                      B                      C                      D                      E

2. I would describe myself as very self-confident.

A                      B                      C                      D                      E

3. I feel very confident of my appearance.

A                      B                      C                      D                      E

4. I am a good mixer.

A                      B                      C                      D                      E

5. When in a group of people, I have trouble thinking of the right things to say.

A                      B                      C                      D                      E

6. When in a group of people, I usually do what the others want rather than make suggestions.

A                      B                      C                      D                      E

7. When I am in disagreement with other people, my opinion usually prevails.

A                      B                      C                      D                      E

8. Other people look up to me.

A                      B                      C                      D                      E

9. I would describe myself as one who attempts to master situations.

A                      B                      C                      D                      E

10. I enjoy social gatherings just to be with people.

A                      B                      C                      D                      E

11. I make a point of looking other people in the eye.

A                      B                      C                      D                      E

12. I cannot seem to get others to notice me.

A                      B                      C                      D                      E

13. I would rather not have very much responsibility for other people.

A                      B                      C                      D                      E

14. I feel comfortable being approached by someone in a position of authority.

A                      B                      C                      D                      E

15. I would describe myself as indecisive.

A                    B                    C                    D                    E

16. I have no doubts about my social competence.

A                    B                    C                    D                    E

Form B

1. I would describe myself as socially unskilled.

A                      B                      C                      D                      E

2. I frequently find it difficult to defend my point of view when confronted with the opinions of others.

A                      B                      C                      D                      E

3. I would be willing to describe myself as a pretty "strong" personality.

A                      B                      C                      D                      E

4. When I work on a committee I like to take charge of things.

A                      B                      C                      D                      E

5. I usually expect to succeed at the things I do.

A                      B                      C                      D                      E

6. I feel comfortable approaching someone in a position of authority.

A                      B                      C                      D                      E

7. I enjoy being around other people, and seek out social encounters frequently.

A                      B                      C                      D                      E

8. I feel confident of my social behavior.

A                      B                      C                      D                      E

9. I feel I can confidently approach and deal with anyone I meet.

A                      B                      C                      D                      E

10. I would describe myself as happy.

A                      B                      C                      D                      E

11. I enjoy being in front of large audiences.

A                      B                      C                      D                      E

12. When I meet a stranger, I often think that she is better than I am.

A                      B                      C                      D                      E

13. It is hard for me to start a conversation with strangers.

A                      B                      C                      D                      E

14. People seem naturally to turn to me when decisions have to be made.

A                      B                      C                      D                      E

15. I feel secure in social situations.

A                      B                      C                      D                      E

16. I like to exert my influence over other people.

A                      B                      C                      D                      E

## APPENDIX H

Pretest Subject Information Questionnaire

Please fill out the following information. All information is to remain anonymous, so please respond honestly and do not put your name anywhere on the form.

1. What is your current weight (in pounds)? \_\_\_\_\_
2. What is your height (in feet and inches)? \_\_\_\_\_
3. What is your age (in years)? \_\_\_\_\_
4. What is your marital status? Married \_\_\_\_\_ Not married \_\_\_\_\_
5. What is the highest level of education that you have completed?
  - high school \_\_\_\_\_
  - some university (list number of years completed) \_\_\_\_\_
  - university degree \_\_\_\_\_
6. What is your parents' combined yearly income?
  - \_\_\_\_\_ less than \$10 000
  - \_\_\_\_\_ \$10 000 - \$20 000      \_\_\_\_\_ \$20 000 - \$30 000
  - \_\_\_\_\_ \$30 000 - \$40 000      \_\_\_\_\_ \$40 000 - \$50 000
  - \_\_\_\_\_ \$50 000 +

Posttest Subject Information Questionnaire

Please provide the following information. All information is to remain anonymous, so please answer honestly and do not put your name anywhere on the form.

1. a) Is your current weight different from what it was at the first assessment (in mid-November)? Yes, my weight has increased since then \_\_\_\_\_ Yes, my weight has decreased since then \_\_\_\_\_ No, my weight is unchanged since then \_\_\_\_\_

b) If you answered Yes to part a) above, how much has your weight changed since the first assessment (in pounds)?

\_\_\_\_\_

2. Have you sought any treatment or help from friends (other than this program) for your concern about weight since the beginning of the program in early October? Yes \_\_\_\_\_ No \_\_\_\_\_





## APPENDIX J

Outline of Audiotape for Session #1

I. Introduction of narrator

II. Extent of weight-related body image problems.

You are not alone in feeling dissatisfaction with your weight. Recent survey found that 3/4 of women responding were not happy with their weight/wanted to be thinner.

III. What causes these problems?

A. Society overemphasizes how women look to exclusion of most else. Messages conveyed that must be thin to be considered good looking, be accepted, get job, make friends. Forces of society influenced us as children, continue throughout lives.

B. Personal experiences influence body image. At puberty, physical changes can lead to self-consciousness, excessive worrying. May have been teased as a child.

C. The influence of the media. TV, magazines suggest must be thin to be beautiful, must be beautiful to be happy. These messages stronger for women. Women internalize these messages, evaluate self and bodies accordingly. Lead to negative feelings, dissatisfaction with particular body parts and overall appearance.

#### IV. Effects on Personal Happiness

Body image is important ingredient in self-esteem. If you are dissatisfied with your weight and body shape, it can make you feel depressed and bad about yourself. Can make you feel less confident in various situations because worried about your appearance. Also can lead to weight concerns occupying a lot of your thoughts and energy -- less of these left for other, more productive activities.

#### V. Can a negative body image be changed?

These conditioning processes can be turned around. You can create new feelings, new experiences to develop a more positive, satisfying body image. Program will help you to adopt more realistic and productive view of your body and self. It will help you to move away from allowing society to determine with what you should be satisfied and to determine how you want to feel about your body.

#### VI. Introduce Use of Hypnosis (Tape A: CRH Condition) or Motivation (Tape B: CR Condition)

Tape A. (CRH Condition): In this program we are going to show you how you can start to feel better about your weight and about yourself. We believe this type of program may be especially effective when presented to a person while she is in a hypnotized state. Therefore, the next few minutes of the

tape will be used for do a hypnotic induction, similar to the one you experienced at the assessment session. The state of hypnosis cannot be used to "force" you to do anything, or make any changes in you against your will. It is simply a state in which we believe you will be able to more easily learn the skills we will show you, if you wish to do so.

Tape B. (CR Condition): In this program we are going to show you how you can start to feel better about your weight and about yourself. We believe this type of program may be especially effective when presented to a person while she is in a highly motivated state. So, for the next few minutes of the tape, I am going to lead you through some motivation exercises before continuing. In this state of increased motivation, we believe you will be able to more easily learn the skills we will show you, if you wish to do so.

VI. Hypnotic Induction (Tape A:CRH Condition) or Motivational Discussion (Tape B: CR Condition).

Tape A. (CRH Condition): Hypnotic Induction involving shortened version of procedure in HGSHS:A.

Tape B. (CR Condition): You should to spend time now to think about your personal reasons why you would like to change your feelings about your body, be less concerned about your weight. Some possible reasons: preoccupation with weight

detracts from other activities, decreases time and energy for productive, creative activity and thought. Preoccupation with weight can impoverishes one's life -- may desire a shift in focus away from weight and onto other aspects of living. Feeling fat can make one feel bad about oneself and unable to enjoy social situations. Can make one feel depressed. Reasons you want to stop worrying so much about your weight may be some of these, or may have your own personal reasons. Thinking about your reasons will help you be motivated enough to get the best results from this program. It may also help to remember that women's body image problems stem from their socialization. Women are taught that a woman's worth is equated with her physical attractiveness, where attractiveness is culturally defined as requiring thinness. Equation of a woman's worth with her appearance is culturally derived, does a great deal of damage to women, and does not have to be accepted. You don't have to buy into this way of thinking about yourself, if it is causing you so much unhappiness. If you are motivated to change, you can use the techniques I will show you to stop being dissatisfied and preoccupied with your weight.

#### VIII. The Role of Cognitions in Emotional Distress

A. It is often our perception or interpretation of situations rather than the situations themselves that determine their impact on how we function. In fact, evidence to suggest

that our cognitive interpretation of events actually come before our emotional reactions to them.

B. Example: Receiving letter from Revenue Canada. Emotional reaction probably based on interpretation of the event -- what you think letter might contain. Tax rebate or request for audit. Reaction will depend on which you expect it to be.

#### IX. Introduction to Cognitive Therapy

A. Cognitive Therapy or Cognitive Restructuring involves changing problematic patterns of thought. Refers to set of techniques to help person explore and alter the self-defeating reasoning or thinking behind their personal distress.

B. Epictetus: People not disturbed by things, but rather views they take of them.

C. Ellis: Probably first to assert that needlessly restrict ourselves by holding on to certain self-defeating philosophies of life that perpetuate unpleasant emotions. Ellis maintains that it's possible to learn to reappraise our thinking, to challenge it, to change it, and to choose more rational, productive attitudes.

D. Beck: Specific emotions are most often associated with specific related interpretations of an experience, e.g.,

anxious when anticipate negative event, euphoric when perceive value gained.

E. The concept of an internal dialogue. We all talk to ourselves with conversations involving statements about ourselves. These internal dialogues are often automatic, may occur without being aware of it. What is said in these internal dialogues has powerful impact on how people feel.

#### X. The A-B-C Model

A = Antecedent events, B = Beliefs or cognitions, C = Emotional Consequences. B determines emotional responses to antecedent events. It's here that people often have problems. May engage in thinking that is not productive -- makes them feel bad, when other way of thinking about same situation could have made them feel much better.

#### XI. Cognitive Therapy for Dissatisfaction with Weight

Example: Two female identical twins looking at selves in mirror. One feels lousy about self after looking in mirror, while other feels confident and positive. What happened? Internal dialogue of first twin: " I look so homely, so ugly, nobody will ever like me if I don't lose 10 lbs." This led to feelings of dejection and a desire to hide. Internal dialogue of second twin: " I look nice today. I might look even better if I lost a few pounds, but the world isn't going to come to an

end if I don't. I can still look good anyway." Led to feeling good about self.

#### XII. Plan for Remainder of Session

Psychologists have identified some of the types of thinking that lead to people feeling negative about their bodies. I'm going to describe the types of nonproductive thinking and give you some examples of each. As I do this, try to determine the extent to which each of these ways of thinking applies to you.

#### XIII. Description of Self-Defeating Cognitive Patterns Concerning Weight-Related Appearance

A. The Unreal Ideal. Example: Whenever Amy looks at herself in mirror, she feels bad about appearance. Examining her internal dialogue reveals that she evaluates her appearance against a particular standard, i.e., an ideal of perfect feminine beauty, like the models seen in beauty magazines and on TV. Ideal of tall, slender female. But Amy does not match this idealized version. She focuses on her perceived shortcomings criticizing herself for not matching up to her ideal. She feels dissatisfied because she compares self against unrealistically high standard of beauty. The belief is "I'm too fat. I don't live up to this standard". There is a second aspect to this belief, that other people also share this same

narrow standard of beauty. The assumption that "if I feel unattractive, if I don't like some aspect of my appearance, then others agree with that. Others see me exactly as I see myself" Only one type of figure, that of a high-fashion model, is found to be attractive and desirable by others. "Other people will judge me unattractive because I don't match the standard of beauty. I need to have the figure of a model for people to find me really attractive" How much do you feel you use the "Unreal Ideal" in evaluating your body?

B. Unfair to Compare. Example: Ann sometimes feels good about her looks, but when she's with others she considers very attractive, she has negative feelings about own appearance. She often notices how people look and, especially if they're attractive in some way, compares her looks to theirs. Internal dialogue: "I hate trying on clothes in a store. There's always some pretty salesperson or good-looking customer that makes me look dumpy and plain." Or "I felt awful about myself at university today. There were so many good-looking women there and I looked lousy by comparison." Person believes they should compare themselves with others who are more attractive than they. How much do you feel you use the "Unfair to Compare" way of thinking?

C. The Blind Mind. Example: Sandy feels dissatisfied with her looks. She knows she's not really unattractive, but

there's one aspect of her appearance that she believes dominates and ruins her looks. In her case, it's her hips and thighs which she thinks are too big. When she looks in a mirror or just thinks about her appearance, her thoughts gravitate to her hips and thighs. If you were to ask Sandy about other aspects of her appearance, she would say, "They're OK I guess, but really it's my hips and thighs that I hate. They make me feel like an elephant." The Blind Mind involves focusing almost exclusively on disliked features and exaggerating their importance. It's as if one part of the body were under a magnifying glass. It's hard to think about yourself without focusing on this one disliked aspect. At the same time, you may ignore other parts of your body -- since you feel OK about them, there's no point thinking about them. In other words, the person has a blind spot or tunnel vision, ignoring features that are not felt to be problematic and focusing on the "problem" parts.

D. The Blame Game. Often people who have negative feelings about their weight incorrectly assume that their appearance is responsible for certain dissatisfactions in their lives, or that improved appearance will be responsible for some anticipated event. Example: Tannis is lonely and wants to get involved in a close relationship with a guy. This has been going on for some time. As time goes by and nothing happens, Tannis feels it is the fault of her appearance. Internal

dialogue: "If only I could get my weight down to what it was last year. I was so attractive then and lots of guys were interested in me. I know if I could only get my figure back in shape again I'd be asked out a lot and guys who saw me would want to get to know me." Here Tannis is blaming her failure to get involved in a relationship with a man to her weight. She also feels that if she could achieve some magical ideal weight and shape, her social life would take off. How much do you engage in this type of thinking?

XIV. Awakening Instructions to Remove Subjects from Hypnotic State (Tape A: CRH condition) or Instructions to Normalize Motivational State (Tape B: CR Condition).

XV. Conclusions and Homework Assignment

A. In this session we have discussed how negative feelings about your appearance and weight can be very destructive to your personal happiness. We have also shown how the way how feel about a situation often depends on the way you interpret it. The beliefs you have and things you say to yourself about a situation can make you react with positive or negative emotions. Some types of thinking and beliefs about your weight can make you feel depressed and bad about yourself. We gave examples of a) believing that bad things or good things -- in your social life, for example -- will happen to you as a function of your weight, b) believing that if you don't have

the figure of a model, you are not attractive, and that other people judge you by this same narrow standard of beauty, c) believing that if one part of your body is heavier than you'd like, it ruins your appearance and everybody notices that one part to the exclusion of all else and d) feeling that if there are other, slimmer or more attractive women around you, you are less attractive by comparison and feel bad about your looks. These ways of thinking can make you feel bad about your looks and your weight. As you listened to the descriptions, you may have recognized some thought patterns typical of yourself. Or you may have other beliefs or thoughts about your weight that lead you to feel unhappy and bad about yourself. The purpose of this program is to enable you to become more and more aware of the types of beliefs you have about weight that make you feel bad about yourself, and then to learn to change these beliefs to others that will make you feel better about yourself. This will help you be at peace with your body instead of at war with it.

In order to be successful in this program, you must be an active participant in the sessions and homework assignments. The more work you put into it, the more you stand to gain. Be sure and sign out each tape on schedule and do the homework assignments. Bring the completed homework with you when you come to sign out the next tape. We won't ask you to hand it in, it's yours to keep, but we just want to take a quick check to see that you did the exercises.

It is also important that you attend the assessment sessions when they are scheduled. These will enable us to evaluate your progress and will help us to learn more about the effectiveness of the program.

Homework assignment: For the homework assignment, there are three things that you should do before signing out the next tape. I will go over the homework instructions with you now, but they are also written out for you in the materials provided with the tape, so don't worry if you can't remember all the instructions.

This week's homework is designed to help you become aware of the types of things you are saying to yourself about your weight that lead to feeling depressed, and having negative feelings about yourself. We will focus on becoming aware of the types of things you say to yourself and how they make you feel this week, and next week we will be ready to start learning how to change those self-defeating thoughts and beliefs into more positive ones.

The first exercise I would like you to try is called a Mirror Awareness Exercise. All you have to do is find some private time to stand in front of a mirror (full length if possible) and try to notice if you have any "automatic" reactions to your appearance -- are there particular body parts you automatically focus on, do you find yourself thinking

something negative about your appearance? If so, jot down the things that come automatically into your mind when you are confronted with your reflection, on the Mirror Awareness Exercise form, in the space provided. We will talk more about what you may have learned from doing this exercise next week.

The second exercise involves filling out the form labelled Cognitive Scenario Worksheet. This form reviews the four types of unproductive thinking about weight and appearance that we went over today. It also provides space for you to indicate how much each of those ways of thinking applies to you. When filling out this form, try to think back to some typical situations where you feel unhappy about your weight or shape, and think about whether or not you use any of the ways of thinking we described in those situations. Take your time doing this exercise, because it will be more meaningful and helpful if you can "personalize" the things we discuss on the tape by relating them to your own life and experiences. If you take time to think about the situations where you feel the worst about your weight and yourself, or worry about your weight the most, and find out just what things go on in your head at those times, you will be on the road to making the best possible use of this program by tailoring it to your individual needs and goals.

The third exercise I'd like you to do this week involves the form titled "Three Column Worksheet". Fill out this form throughout the week. Whenever you find yourself having negative feelings about the way you look and your weight, jot down the situation and the type of feelings you had. Then examine the thoughts you were having when you started to feel bad. Write down the thoughts on the appropriate space on the form. It's best if you carry this form with you during the day -- in a purse or clipboard, maybe -- so that you can stop and identify the preceding thoughts whenever you find yourself having bad feelings about your weight. If you wait till the end of the day, it might be harder to remember just what you were thinking at the time.

Again, the instructions are also provided in written form in the package given out with the tape. If possible, you might want to do the Mirror Exercise and the Cognitive Scenarios Worksheet right after the tape ends, so it will be one less thing to remember to do this week. Do the Three Column Worksheet throughout the week, and bring the rewind cassette and the completed homework assignments back together.

## MIRROR AWARENESS EXERCISE

Find some private time to look at yourself in a mirror (preferably a full-length mirror). Notice if you "automatically" focus on certain parts of your body, or say things to yourself. In the space below, jot down the "automatic reactions" you had. Be sure to note any thoughts that came into your mind about your appearance, your figure or shape. Then hang on to this sheet and bring it with you when you come to sign out the next tape. The researchers will just briefly check to that the form was filled out, but you won't be asked to hand the form in. This information is for you, to help you become more aware of the way you think about your weight and yourself. Later in the program, you will use this information to help you feel better about your weight.

## COGNITIVE SCENARIOS WORKSHEET

This worksheet starts with a brief description of some typical ways of thinking about weight and appearance that can lead to feeling bad. These descriptions are basically just a summary of the longer descriptions and examples that were provided on the tape. Please read through the descriptions carefully, and then go to the third page, where there is space to indicate how much each of these ways of thinking seems to apply to you and your particular situation. Remember to hang on to this form and bring it with you when you come to sign out the next tape. Again, this information is for you, to help you get a clearer understanding of what you need to work on. The researchers will just do a brief check to make sure the form has been completed.

1. The Unreal Ideal refers to the use of a societal ideal as a standard of acceptable appearance. Feelings of dissatisfaction or being flawed occur as a result of comparing oneself against this unrealistically high standard of perfection for weight and body shape. A related error in thinking occurs when you incorrectly assume that other people judge you as equally harshly as you judge yourself, that they use these same unrealistic standards when deciding if everyday acquaintances

are attractive or not. In other words, you assume that other people have the same perception of your looks (and of whether you are too heavy) as you have -- which is not necessarily true.

2. Unfair to Compare refers to a similar type of faulty, self-defeating thinking, except here one compares oneself with people encountered in everyday situations. Typically the comparison is very biased -- one compares one's appearance only with people seen as having those characteristics one would like to have -- people seen as thinner in general, or having a particular feature you are unhappy with in yourself -- thinner thighs, a flatter stomach, smaller hips, and so forth. People who think this way are prone to spend a lot of time noticing others they regard as possessing the characteristic they desire; in contrast, seldom do they pay attention to persons against whom they would favorably compare (for example, noticing that there are lots of people around who look "worse" than they do.)

3. The Blind Mind refers to a very distorted and lopsided way of thinking about one's appearance. It is like having a "magnifying glass" in which the importance of certain physical features is exaggerated. The features exaggerated are the ones

the person is most displeased with. The person focuses excessive attention on them and thinks about them as if these attributes were the only ones they had. These may be so over-emphasized that the person lets them "spill over" and taint feelings about other aspects of appearance or self. In addition, the person may have a "blind spot" to positive features.

4. The Blame Game consists of blaming some unwanted event on the way you look. This is often very subtle and may consist of thinking more negatively about your appearance in some uncomfortable social situation (e.g., when you are in a group of people you don't know very well) or after some social disappointment (e.g., someone you like isn't friendly or shows someone else more attention than you). In such situations, people naturally try to understand why things happen as they do. Yet persons who are displeased with their weight and shape may incorrectly assume that it was this that was responsible for what happened. In addition, people may anticipate future success in social and other areas of life if only they can attain the weight and body shape they wish for.

...please turn page

Now that you have read about the four self-defeating patterns of thinking, think about situations where you feel bad about your looks. Try to identify the kinds of thoughts you usually have about yourself, your weight and the shape of your body at such times. Do these thoughts fit any of the four patterns described? When you have decided this, go through the rest of this sheet and mark off how much each of the four patterns seems to apply to you as an individual.

Scenario	Cognitive Pattern	How well does each fit you?
#1	The Unreal Ideal	<input type="checkbox"/> yes, that's definitely me <input type="checkbox"/> maybe or sometimes <input type="checkbox"/> no, definitely not me
#2	Unfair to Compare	<input type="checkbox"/> yes, that's definitely me <input type="checkbox"/> maybe or sometimes <input type="checkbox"/> no, definitely not me
#3	The Blind Mind	<input type="checkbox"/> yes, that's definitely me <input type="checkbox"/> maybe or sometimes <input type="checkbox"/> no, definitely not me
#4	The Blame Game	<input type="checkbox"/> yes, that's

definitely me

\_\_\_ maybe or sometimes

\_\_\_ no, definitely not me

## THE THREE COLUMN WORKSHEET

The worksheet on the next page is a way of helping you become aware of the kinds of thoughts you have in those situations that give you the most trouble with respect to your body image. Use it during the following week. Try to keep it on hand, so that if a situation comes up where you start feeling bad about your weight, or start feeling bad about yourself because of your weight, you can jot it down. Try to do it as soon as possible, so that you can think back and identify what you were thinking or saying to yourself right before you started to feel bad. Please hang on to the form and bring it with you when you come to sign out the next tape, so that the researchers will know that you completed the assignment. You will not be asked to hand the form in; it is yours to keep, to help you keep in mind what sorts of things you need to work on the most.





## APPENDIX K

Outline of Audiotape for Session 2

## I. Introduce Idea of "Automatic Thoughts"

You may wonder why I asked you to monitor and record the thoughts you had while looking at yourself in the mirror. Let me explain why these thoughts are important. Many people have spontaneous thoughts while looking at their bodies or thinking about their appearance. These thoughts occur so spontaneously that we call them automatic thoughts. Sometimes they're so automatic that it takes extra concentration to even realize that you've had them. The reason why these automatic thoughts are so important is that they can make it hard to stop feeling bad about your appearance. Some people, while looking at themselves in the mirror may think "Boy I look awful" or "My legs are so fat." And negative automatic thoughts such as these can interfere with feeling good about your appearance. That's why I'll be asking you to continue to monitor and become more aware of your automatic thoughts. Then you will be more prepared to overcome them. Now, we will move on to discuss the actual things you will have to learn to do to stop having the thoughts that are giving you problems.

## II. Principles for Reframing Self-Defeating Cognitions

A. Recall the A-B-C that we talked about last time. That stood for antecedent situation -- beliefs or interpretation of the situation -- emotional consequences. Now, in addition to the A-B-C that we talked about last time, we need to add a D for Disputing the self-defeating cognitions or automatic thoughts that have led to your negative emotional experience.

B. First, you'll need to identify your own personal self-defeating thoughts, and note what situations are most likely to generate these problematic thoughts. You have already begun to work on this with the homework assignments from last week. A third thing you'll need to do is to develop and rehearse a number of ways to begin to rethink yourself out of this situation and out of your negative emotions. In other words, to personally argue with yourself and to put these arguments into practice in the internal dialogues of your daily life. You'll be replacing old faulty ways of thinking with new corrective ways of thinking.

C. You're not going to change overnight, but gradually you'll notice you're becoming more successful at changing how and what you think about your appearance. And as a result, you'll begin to feel differently and more positively about your body image.

### III. The Stop-Look-Listen Technique

A. Whenever you have a negative feeling about your appearance, three words should pop into your mind: STOP-LOOK-LISTEN.

B. STOP -- a big red sign should flash into your mind that puts everything that's been going on, on hold.

C. LOOK -- There are several things you should then look at. Basically, the ABCs of your negative emotional experience. What's going on? What's the A, the B, and the C? In other words, given what you were feeling, what were you probably telling yourself? What particular self-defeating thoughts were you having?

D. LISTEN -- to a more reasonable, rational, realistic point of view. Begin a new internal dialogue, begin to use some of the new counterarguments you'll develop. Spend a minute or two listening to your better judgement. You might talk to yourself as you would to a best friend who had just said the same self-defeating statement to herself. Changing the way you think will take time and practice.

#### IV. Plan for Remainder of Session

The self-defeating cognitions we went over last session will be reviewed. Then we'll go over a number of counterarguments that you can use at point D. If you have recognized some of these self-defeating statements as

pertaining to you, you can try using the counterarguments we will suggest the next time you find yourself thinking these kinds of thoughts. Maybe you can come up with some counterarguments of your own, too. Maybe you have identified some self-defeating ways of thinking that were not covered on the tape. In this case, listen to the way we come up with counterarguments, and use it as an example of the type of thing you can come up with for your own personal self-defeating thought patterns. Remember, the examples given are just to get you started. It's important that you identify your own personal self-defeating thoughts and beliefs and then find ways of reframing them that work for you.

V. Common Cognitive Errors that Lead to Dissatisfaction with Weight and Body Shape, and Some Examples of Counterarguments and Other Means of Corrective Thinking

A. The Unreal Ideal refers to the use of a societal ideal as a standard of acceptable appearance. Feelings of dissatisfaction occur as a result of comparing oneself against this unrealistically high standard of perfection. There may also be an assumption that other people share this standard when they judge you, and therefore they find you wanting too.

Self-defeating thoughts include: "I'm too fat and therefore not attractive." "I don't look like a model and therefore I'm too fat".

Counterarguments here essentially challenge this comparison against some arbitrary and unrealistically perfect standard of appearance. Instead of saying "I should be thinner", correct the thought by saying "It might be nice if I lost a few pounds, but I'm pretty good the way I am and I refuse to criticise myself for not looking like some fashion model." Other counterarguments include:

"I don't have to have a perfect looking body to have an attractive appearance"

"Nobody (but me) is expecting me to look different. Nobody's complaining about me but me."

"Just because I think I look fat doesn't mean other people think so. Not everybody has these super-thin standards of beauty. In fact, I can probably think of some people I consider attractive that aren't any thinner than me."

"I refuse to continue to buy into this societal ideal of feminine beauty; it's sexist and I refuse to treat myself in a sexist way."

B. Unfair to Compare refers to comparing oneself to people encountered in everyday situations who are seen as more attractive than oneself. Persons who think this way spend a lot of time noticing others they regard as looking like they wish they did; in contrast, they rarely pay attention to people who look "worse" than they do.

Self-defeating thoughts associated with the unfair comparisons usually consist of thoughts that one is less attractive or fatter than some person. Another key thought is "I wish I were as thin as she is" or "She makes me feel so fat".

The first step to creating counterarguments and corrective thinking for the "unfair to compare" is to realize what you are doing -- that you just compared yourself in some respect with another individual and ended up feeling negatively about your appearance as a result. Then corrective thoughts might be:

"Just because I think I am less attractive than that person does not mean that I am bad looking. There are plenty of other people who are worse off than I am."

"If I'm going to compare, then let's be fair: Who am I more attractive than? Also, let me think of something about me (a special skill, talent, or personality trait) that makes me compare quite well with other people."

C. The Blind Mind refers to magnification of the importance of certain physical characteristics, particularly those very ones the person is displeased with. The person focuses excessive attention on them and doesn't notice their positive features.

Self-defeating thoughts here are the sometimes subtle preoccupations with unsatisfying features that lead you to ignore other features you are more satisfied with. The best clue to a "blind mind" in your thinking is whether you automatically zero in on the less satisfying features when you look at your reflection in a mirror or when you think about your appearance in your mind.

Corrective thinking here involves applying the "equal time" principle by agreeing with yourself to spend an equal amount of time on those unspoken positive aspects of your appearance every time you catch yourself mentally picking on the disliked aspects of your appearance. You might say to yourself:

"I may not be crazy about my (weight, thighs, or whatever) but there's sure a lot more to me than that. Other people see me for more than the flaw I keep criticizing myself for."

And finding yourself criticizing yourself in front of the mirror, "There, I caught myself again -- picking on myself. I'm going to stop, walk away from this mirror, and come back to it only if I promise to apologize to myself, and say something nice to myself."

D. The Blame Game consists of blaming your appearance for problems in your life, and expecting changes in appearance to be responsible for changes in other areas of your life.

The self-defeating thoughts here are reflected in these examples:

"If it weren't for the way I look, my life would be better (I'd have a boyfriend, or I'd have more friends, or I'd have a better job, etc.)"

"If only I were thinner, I'd be attractive, or would be able to be happy, or would have someone who could love me" (or some other 'dream come true' otherwise thought to be impossible).

Counterarguments can take several forms. Basically, you need to stop and realise that blaming appearance for events that bother you usually involves jumping to conclusions. And if you pause to consider the facts the only evidence you have to blame your appearance are your own feelings about your appearance, and that's biased evidence. The following sequence of corrective thinking is what you need to begin to set yourself straight:

"Just because I'm feeling unattractive doesn't mean that I am unattractive or that others think I am. Now, what real evidence do I have that my appearance is to blame for this?"

For example, if you blame your lack of a boyfriend on not being thin enough, you might say to yourself, "That doesn't really make sense, 'though, because I can think of some other

people who aren't that thin and have attractive boyfriends. I don't think all guys really care that much about whether you're super-thin."

#### Homework Assignment for Session Two

For this week's homework, you are going to start working on changing the way you think about your appearance. This is the first step toward feeling more positive about your looks. Changing the way you think about your body and yourself is a lot like learning to look at familiar things with a new pair of eyeglasses. And just like with new glasses, it takes a little time to get used to them. Learning to think about your body differently will take some initial effort that will pay dividends quickly.

The work involved is to take some time, as soon as possible, to come up with three counterarguments to some of the self-defeating thoughts you are prone to commit. These should be listed on the form titled "Counterarguments Form". You can do this at a time when you're not actually experiencing negative feelings about your body, and have them ready as an "arsenal" to use when negative feelings crop up.

A second part to the homework involves using the form titled Four Column Worksheet whenever you notice yourself feeling dissatisfied with your appearance. Start writing down

the feeling, then describe the event and then work on identifying the self-defeating thought. Remember, the self-defeating thought may not be immediately apparent. Once you've identified the self-defeating thought (which may involve one of the four categories of self-defeating thoughts that we've talked about this session and last session, or may be different), try to come up with a counterargument to this thought. Thinking about the types of counterarguments covered in this session and the ones you listed on your counterarguments form may help get you started. It may also be helpful to think about what you would say to a friend if they had that particular self-defeating thought.

These instructions are also provided in written form with the package you received with this tape. We have also included a sheet called "Basic Steps for Detecting and Correcting Self-Defeating Thinking", to help you develop your counterarguments. Please remember to hang on to your completed homework, and bring it with you when you sign out the next tape, so that it can be checked for completion.

## COUNTERARGUMENTS SHEET

Take some time to come up with three counterarguments to some of the self-defeating thoughts you are prone to commit. You can do this at a time when you're not actually experiencing negative feelings about your body, and have them ready as an "arsenal" to use when negative feelings crop up. List the counterarguments on the following page, and bring the page with you when you come to sign out your next tape.

SELF-DEFEATING THOUGHT	COUNTERARGUMENT
------------------------	-----------------

---

1.

1.

2.

3.

2.

1.

2.

3.

3.

1.

2.

3.

## FOUR COLUMN WORKSHEET

Use the following page throughout the coming week, whenever you notice yourself feeling dissatisfied with your appearance. Start by writing down the feeling, then describe the event and then work on identifying the self-defeating thought. Remember, the self-defeating thought may not be immediately apparent. Once you've identified the self-defeating thought (which may involve one of the four categories of self-defeating thoughts that we've talked about this session and last session, or may be different), try to come up with a counterargument to this thought. Thinking about the counterarguments you listed on your Counterarguments Form may help get you started. It may also be helpful to think about what you would say to a friend if they had that particular self-defeating thought. Remember to hang on to the form and bring it with you when you come to sign out the next tape.



BASIC STEPS FOR DETECTING AND CORRECTING SELF-DEFEATING  
THINKING

The procedure is not complicated but requires that you make a continued and determined effort. You will need to identify your own personal self-defeating thoughts and beliefs, note in what situations they are most likely to occur, develop and rehearse a number of ways for you personally to argue yourself out of the errors when they do occur, and put them into practice in the internal dialogues of your daily life. You won't notice change suddenly overnight, but gradually you will notice that you are becoming very successful at changing how and what you think about your appearance. And of course as a result you will begin to feel differently, more positively about your body.

Whenever you have some negative feeling about your appearance, the following three words should immediately enter your mind: STOP... LOOK... LISTEN!

Stop -- like a big red stop sign enters your mind.

Look -- at the basic A-B-Cs of your negative emotional experience and ask several specific questions about what is going on here. First, what is happening in this situation? In

other words, what is the A or Antecedent event that "triggered" your emotional reaction? Second, what is the C or emotional Consequences? In other words, what exactly am I feeling right now? Third, ask what you are Believing, thinking or assuming about the situation that is producing the negative feelings. In other words, given what you are feeling, what were you probably saying to yourself?

Listen -- to a more reasonable point of view. Begin to talk to yourself with a new internal dialogue. Use the counterarguments and corrective style of thinking that you have developed. Spend at least a full minute or two listening to this better judgment. You might talk to yourself just as you would to a good friend who had said the same self-defeating things about herself. Of course thinking good can be difficult when you are feeling bad. But if you challenge yourself and force yourself to work at it, those negative feelings will diminish and with time so will the automatic negative thoughts that produce those feelings.

One final note: monitoring what you think and providing alternative counterarguments may feel artificial at first, and you may not initially believe wholeheartedly the counterarguments. That's OK. The key is that whenever you feel negative about your appearance, there is an underlying self-defeating thought that, if corrected, can result in your

feeling more accepting of your body. Feelings about appearance are not etched in stone, but rather can be changed by altering the way you view your body.

## APPENDIX L

Outline of Audiotape for Session 3

## I. Introduction to Imagery

A. The first step to making changes in actual behavior is often being able to visualize yourself acting in the new way. If you "practice in your mind", it makes it easier to make the transition to real-life behavior. For example, people who anticipate having to deal with a difficult situation often rehearse their behavior over and over. When the time comes, the behavior has been rehearsed and you have seen yourself doing it in your "mind's eye" -- so you know you can do it.

B. This applies to changing the way you think about your body. If you imagine yourself thinking and feeling the way you want to, it will help it happen in real life. The more vividly you imagine yourself successfully using the new way of thinking, the more confident you will be of your abilities. And when you visualize yourself thinking in this newer, more positive way, you will also find that, in your imaginary scene you feel good about yourself -- that you successfully avoided negative feelings about your weight. This taste of the "rewards" for forcing yourself to think in a new way will make you realize how worthwhile it is.

## II. Guided Imagery Exercise

A. Before we do this imagery, you need to think of a situation where you often feel bad about your weight and shape. Pick one now, and keep it in mind. It may be one of the situations you identified in the homework from last week. It should be a situation for which you have identified the self-defeating things you say to yourself before you start to feel bad about your weight and the way you look.

I'd also like you to think of what you'd like to feel like -- what is your "emotional goal" for that situation? And what kinds of thinking have you identified that would help you feel that way? Think about the counterarguments that you have developed over the past week. Take a few minutes now to decide on the changes in thoughts and emotions that you would like to achieve for that situation.

B. Now we'll start the imagery exercise. If your eyes are not closed, please close them now. I'd like you to visualize the scene, the situation you have identified that usually results in your feeling bad about your weight. In your imagination, fill in all the details of the scene. Where are you, what are you doing, who else is there, what is going on? You should see it all very clearly now, it's as if you were right there. Now you are starting to say those self-defeating things to yourself -- can you see yourself thinking your usual pattern of thoughts? The thoughts are getting more and more

intense now. You start to have negative feelings about your weight and the shape of your body. You feel bad about the way you look and wish you were different. You feel so dissatisfied, depressed, perhaps you feel disgusted with yourself. Notice exactly how you feel. Now the feeling becomes more and more intense. Now you really see how bad you feel, how miserable you can get when you talk to yourself in this self-defeating way.

OK, now I'd like you to stop visualizing that scene. Keep your eyes closed and just relax for a minute. Think about a pleasant scene, perhaps on a beach, or in the forest or on a mountain. Just clear your mind.

Now I'm going to ask you to visualize your situation again. Fill in all the details of the setting, where you are, who else is there, what is going on. This is a situation where you usually start saying self-defeating things to yourself almost automatically, but this time it is different. This time you stop yourself firmly from saying those self-defeating things. This time you use an alternative thought, one of the counterarguments you have developed for this very situation. You see yourself saying your counterargument to yourself, calmly and clearly. You see yourself really meaning and believing what you say. It feels so much better this way. Now you are OK. You're not getting all upset or depressed this

time. You feel strong. You are in control. You are starting to feel really good about yourself, proud of yourself for not letting yourself get into negative thoughts, and not letting yourself feel bad. Doesn't it feel so much better when you use these positive thoughts? And you see, it wasn't so hard -- you did it, and you can do it again.

### III. Homework Assignment

For this weeks homework, you are going to practice doing an imagery experience similar to the one we just did, except that you will only have to do the second half. In other words, you will only imagine yourself successfully using your new counterarguements and feeling good as a result. Before you do the imagery exercise, choose a situation in which you usually have negative feelings about your weight. Think of some of the counterarguments and positive thoughts you have developed to help you avoid negative feelings in that situation. Once you have these things clearly in your mind, you should find a quiet spot to sit or lie down with your eyes closed, and visualize yourself in the situation. Fill in all the details of the scene. But instead of saying self-defeating things to yourself, like you usually do, visualize yourself using your counterarguments, and saying them to yourself in a calm, firm way. See yourself really meaning them. And then visualize yourself feeling good about yourself. Notice how you don't

have those bad feelings about your weight like you usually get. Notice how proud you feel of yourself for using the more positive statements instead of the old habitual ones.

The directions for doing this assignment are provided with the package you received with this tape. I would like you to try this type of imagery three times in the next week. There is also a log which you are to complete, indicating the date, time and subject matter of each of the three imagery experiences you did. You can use a different situation for each of the three imagery experiences, or if there is one particular situation that is especially difficult for you, you may wish to visualize yourself handling it successfully all three times you do the exercise. At any rate, please remember to hang onto your Imagery Log and bring it with you when you come to sign out the next tape.

## IMAGERY ASSIGNMENT

For this assignment, you are to imagine yourself successfully using your new counterarguments in situations where you usually feel bad about your weight, and you are to visualize and experience how much better you feel as a result of using the more positive thoughts. Before you begin, choose a situation in which you usually have negative feelings about your weight. Think of some of the counterarguments and positive thoughts you have developed to help you avoid negative feelings in that situation. Once you have these things clearly in your mind, you should find a quiet spot to sit or lie down with your eyes closed, and visualize yourself in the situation. Fill in all the details of the scene. But instead of saying self-defeating things to yourself, visualize yourself using your counterarguments, and saying them to yourself in a calm, firm way. See yourself really meaning them. And then visualize yourself feeling good about yourself. Notice how you don't have those bad feelings about your weight like you usually get. Notice how proud you feel of yourself for using the more positive statements instead of the old habitual ones.

You should try doing this imagery exercise three times this week. Each time you do it, fill out the date, time and subject matter of your imagery experience on the form titled "Imagery Log". You can use the same situation for each of the three times you do the imagery exercise, or use a different

situation for each -- it's up to you. Either way, please be sure to hang on to the Imagery Log, and bring it with you when you come to pick up the next tape.

## IMAGERY LOG

Date Description of Imagery Sequence

---

Situation #1 (describe)

Counterarguments used

Feelings experienced

Situation #2 (describe)

Counterarguments used

Feelings experienced

Situation #3

Counterarguments used

Feelings experienced

## APPENDIX M

Outline of Audiotape for Session 4

## I. Introduction

You've put a lot of time and effort into the program and we hope the experience has been a positive one for you. In about a week, we'll be asking you to complete some more assessments. These are very important since they'll enable us to evaluate how effective the program has been for you. At that time you will also have an opportunity to give your feedback on the program.

## II. Focus of this Session

End of any program is usually a time to review, and discuss how you might apply what you've learned after the program ends. That's what we'll be doing on this tape.

## III. Review of Program

The Cognitive Approach -- You learned to examine the ways you think about your body and how these can cause you to feel negative about your weight and body shape. You learned about such cognitive errors as "Unfair to Compare", "The Unreal Ideal", "The Blind Mind", and "The Blame Game". And more importantly, you learned methods of changing the way you think so that you can feel more positive about your appearance. You

learned to "Stop, Look, and Listen" in order to think in more positive ways. You have worked hard over these last few weeks and we hope that you've benefitted from your efforts.

#### IV. Strategies for When the Program is Over

A. In order to continue to progress, you must continue to be active. Continuing to improve your body image will take continued time and effort.

B. It's time to use the skills learned in this program when you're feeling anxious, depressed, or disgusted with your appearance. Whenever you feel this way, that's when it's time to examine your thinking and modify it as necessary. And believe me, you will have such feelings in the future. Everyone does. And how you end up feeling will have to do with how active you are in applying the skills you've learned.

C. If you know you are going to be facing a situation that typically makes you feel bad about your appearance, prepare yourself. By now you may have already identified the kinds of situations that make you feel particularly bad about your appearance. If not, you should keep thinking about this. It is important information that you can use to your advantage. Whenever you are about to enter a high-risk situation for negative body feelings, try the following: 1) PREPARE. Think about what might happen that would result in you feeling bad

about your weight and body shape. Decide what skills you will use to combat these feelings. In other words, develop a battle plan. 2) CONFRONT. Actively put yourself into the situation. Don't try to avoid it. Only by facing these situations directly can you truly be in control of your body image. 3) COPE. Silently talk yourself through the difficult situation, repeating rational counterarguments to yourself. Use your skills to make it through, not necessarily to feel great. 4) Reward yourself. Regardless of whether you were able to feel good about your appearance in the situation or you were simply able to make it through this difficult situation, you should reward yourself for your efforts. This will help you to keep working at it and, besides, you deserve it. You're taking risks and actively trying to improve yourself. For that you deserve a reward. Take time out and do something nice for yourself.

D. Figure out ways to "neutralize" people whose comments lead you down the path of negative thinking about your body. Sometimes other people (spouse, friend, parent) say somethings that lead you to feel negative about your appearance, e.g., your mother keeps telling you to lose weight. Try to "neutralize" this person's comments. Let them know how their comments affect you and assertively let them know that while you may appreciate their intentions (if you do), their comments have a negative effect on you and you'd like them to stop. You

may have to tell some people repeatedly. It may become clear that their criticisms are a reflection of their problems, not yours. But regardless, let them know how you feel. It will help you to feel that you are actively standing up for your new-found beliefs and that's something to be proud of.

E. Expect that there will be times when you will not feel positive about your appearance. You have learned some valuable skills that will help you exert more control over how you feel about your appearance. But even so, everyone feels dissatisfied with their appearance some of the time. To expect to feel great about your body all of the time is an unrealistic expectation. Keep in mind that if you feel critical about your appearance it does not mean that you have failed or that the program has failed. It means this: you are a human being like everyone else who feels good some of the time and not so good other times.

#### V. Feeling in Control of Your Body Image.

I mentioned a moment ago that you have asserted some control over how you feel about your appearance. I think this is a point worth emphasizing. We talked early on about how society dictates what the standards of beauty are and how this has so much to do with how women feel about their appearance. One of the guiding philosophies of this program has been the belief that it is best for women to be in control of their own

body image. Research has shown that a feeling of being in control of one's life is very important to feeling good about oneself. I think it is very important that you keep in mind after the program has ended that by using the skills learned in this program, you are taking control over an important area of your life, your body image.

Finally, I'd like to remind you that it is extremely important that you come in for the final two assessments: one is about a week away and the other is 6 weeks after that. This is important because it is a chance for us to find out which aspects of the program were useful to you. It provides us with feedback. If you have a problem with the dates and times scheduled for the last two assessments, please inform us when you return this tape and we'll make an alternative arrangement for you.

Before closing, we'd like to thank you for your participation in this program. We hope you have benefitted from your involvement. Please keep the handout provided with this tape as a guide to maintaining the benefits you have gained.

## TROUBLE-SHOOTING HINTS

1. Use your counterarguing skills whenever you feel dissatisfied with your weight and appearance.
2. If entering a situation that is high-risk for body-image dissatisfaction:
  - a) Prepare to deal with it using your counterarguing skills.
  - b) Confront the situation. Don't avoid it.
  - c) Cope with it using your skills.
  - d) Reward yourself for your efforts.
3. Figure out ways to "neutralize" people whose comments lead you down the path of self-defeating thinking about your appearance.
4. Don't expect perfection. Everyone feels less than great about their appearance sometimes.

Remember: Treat your body like it's your best friend! Don't ridicule it or criticize it! See its good points. Your body belongs to you -- enjoy it!

## Appendix N

Feedback to Participants

Thank you for your participation in this experiment. This handout is to let you know more about the study and the questions it was designed to investigate. Later in the year, further feedback about the results of the study will be available.

This study was designed to evaluate the effectiveness of a program for helping women improve their body image, especially their feelings about their weight. Research shows that a significant proportion of young women today are preoccupied to some extent with their weight. They may feel fat, or wish they weighed less. These concerns may sometimes contribute to excessive dieting and other weight loss attempts. There is also evidence that such weight-related concerns may be associated with depression and poor self-esteem.

For this study, participants included both individuals who have severe weight concerns, as well as individuals with relatively few weight concerns.

The goal of the program was to help participants be more accepting of their body shape and of themselves. The way this was done was through the technique of "cognitive restructuring". This means that by changing the things you say

to yourself (internal dialogue), you can change the feelings you have about your body. One group of subjects in this study listened to tapes that taught them how to use cognitive restructuring to change their thoughts and feelings about their body image.

In addition, we wanted to see whether the use of hypnosis, in conjunction with cognitive restructuring, could make the program even more effective. For this reason, another group of subjects in this study listened to tapes that taught them cognitive restructuring while they were in a hypnotized state.

A third group of subjects did not listen to any tapes at all.

The three groups were compared to see which changed most over the course of the study. Changes were assessed both in terms of body image and also in terms of self-esteem and depression.

A summary of the results of the study will be posted beside room P417 of the Duff Roblin Building in the spring semester.

For those participants who may wish to continue to work on their body image, there are several sources of information or help available including the University Counselling Centre (Phone: 474-8592), and the Women's Health Clinic Weight Preoccupation Support Group (Phone: 947-1517).

If you have any further questions or concerns about your participation in this study, you may reach the experimenter, Naomi Berger at 269-1681.

\*THANK YOU FOR YOUR PARTICIPATION\*