Portland State University

PDXScholar

Dissertations and Theses

Dissertations and Theses

1971

An interactional approach to weight reduction

Carole T. Gygi

Portland State University

Follow this and additional works at: https://pdxscholar.library.pdx.edu/open_access_etds

Part of the [Applied Behavior Analysis Commons](#), [Experimental Analysis of Behavior Commons](#), and the [Health Psychology Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Gygi, Carole T., "An interactional approach to weight reduction" (1971). *Dissertations and Theses*. Paper 1402.

<https://doi.org/10.15760/etd.1401>

This Thesis is brought to you for free and open access. It has been accepted for inclusion in Dissertations and Theses by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

**AN ABSTRACT OF THE THESIS OF Carola T. Gygi for the Master of Science
in Psychology presented May 26, 1971.**

Title: An Interactional Approach to Weight Reduction.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

Cord B. Sangstake, Ph.D., Chairman

Horrie Waitman, Ph.D.

Robert E. Jones, Ph.D.

George Sanlow, Ph.D., M.D.

Robert F. Fowlowski, Ph.D.

A treatment program was designed to enable subjects to lose weight through the use of self-confrontation as described in Sanlow (1969), and the use of the General Relationship Improvement of the Human Development Institute (HDI), Berlin and Wyckoff (1964).

Self-confrontation is a programmed rehearsal of a specific problem by one person alone, for a five-minute period. The rehearsal, or self-confrontation is to be as vivid as possible, intellectually, emotionally, visually and physically.

The General Relationship Improvement Program is a 10-week text, worked in pairs, which is aimed at better intrapsychic and interpersonal communication and understanding.

Four matched groups were used in the study. Group I, N=10, used nutritional information. Group II: N=8, used the HDI program. Group III: N=9, used the self-confrontation technique. Group IV: N=12, used a combination of the self-confrontation technique and the HDI program. The mean weight losses were as follows: Group I: 1.25 lb. Group II: 2.75 lb. Group III: 10.89 lb. Group IV: 5.91 lb. Approximately 6 hours of experimenter time were spent in actual contact with the subjects. Only 2 weights were recorded by her, the first and the final. The other weights were self-recorded. The study was designed to continue for 12 weeks.

AN INTERACTIONAL APPROACH TO WEIGHT REDUCTION

by
CAROLE T. GYGI

**A thesis submitted in partial fulfillment of the
requirements for the degree of**

**MASTER OF SCIENCE
in
PSYCHOLOGY**

**Portland State University
1971**

TO THE OFFICE OF GRADUATE STUDIES:

The members of the Committee approve the thesis of
Carole T. Gyi presented May 26, 1971.

[REDACTED]
Cord E. Sangstake, Ph.D.
Chairman

[REDACTED]
Morris Weisman, Ph.D.

[REDACTED]
Robert E. Jones, Ph.D.

[REDACTED]
George Saslow, Ph.D., M.D.

[REDACTED]
Robert F. Powlojaki, Ph.D.

APPROVED:

[REDACTED]
Robert E. Jones, Ph.D., Chairman,
Department of Psychology

[REDACTED]
David T. Clark, Ph.D.,
Dean of Graduate Studies

May 26, 1971

ACKNOWLEDGEMENTS

In the writing of this thesis many people have been of inestimable help to me. First, I would like to thank Doctor George Saslow of the University of Oregon Medical School for lending me the HDI texts. Without his ideas and inspiration this thesis would never have been thought of, much less completed. As my teacher and my friend, his never-failing encouragement and model of excellence have become creeds for my own life.

My thesis chairman, Doctor C. B. Sengstake was not only critical and helpful, he also laughed when I cried. Doctor M. Weitman's outstanding ability in experimental design has, I believe, made this thesis a study with human beings of which we can both be proud. Doctor R. E. Jones not only helped me as a member of my committee, but as head of my department has given me untold opportunities to experiment and grow.

I would like to thank my friend and colleague, Mrs. Janet Lahti. She did the pilot work with me and the research with me. Her continuing interest in the problem of obesity gave an enthusiastic boost to this effort.

I would also like to thank Mrs. Joyce Lindhe, who typed and edited the manuscript. Through the years she has done many things for me, some of which she's unaware.

TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENTS	111
LIST OF TABLES	v
CHAPTER	
I INTRODUCTION	2
Review of Literature	2
II METHOD	6
Subjects	6
Treatment Groups	6
Procedure	11
III RESULTS	12
IV DISCUSSION	18
V CONCLUSIONS	23
REFERENCES	25
APPENDIX	28

LIST OF TABLES

TABLE	PAGE
I Description of Subjects	10
II Pre-Test and Post-Test Weights for Ss	12
III Weight Loss for 10-Week Period	13
IV Analysis of Variance, Summary Table	14
V Newman-Kuels Summary Table	16
VI Proposed Schedule for Teaching Methods	19
VII Actual Procedure for Teaching Methods	19

INTERACTIONAL APPROACH TO WEIGHT REDUCTION

CHAPTER I

INTRODUCTION

Obesity has long been recognized as one of mankind's major health hazards. Many investigators have attempted to describe, understand and treat obesity. Attempts to deal with and change the undesirable behavior of overeating have been, for the most part, highly unsuccessful. In general the results of weight reduction programs are unimpressive and even minor weight losses tend not to last.

Obesity is a result of two things: overeating and insufficient activity. Many ideas have been posited to try to explain obesity. Such things as: depression (Simon, 1963); anxiety (Caufman and Pauley, 1961); and other personality problems. Inactivity is seen by some as a major factor in obesity (Bloom and Erdix, 1967, and Mayer, 1955). A defect in the organism's perceptual imagery mechanism, which results in distorted body image is thought by some to play a part in the development and continuance of obesity (Gygi, 1968, Glucksman and Hirsch, 1968, & Stunkard and Mandelson, 1961). It appears that in obese patients concomitants of food deprivation, e.g., gastric motility, are not related to eating behavior to the degree that they are in people of

normal weight (Schacter, 1961). On the other hand external cues, such as smell and taste, affect eating behavior of obese patients more than they affect the eating behavior of normal patients.

Obese people tend to see themselves as obese even after significant amounts of weight have been lost. People who are obese from childhood seem to have a fixed body image size that is not easily changed. In people who are extremely obese the need seems not to be the need to overeat but rather the need to be overweight (Kurland, 1967).

Emotional symptoms and even mental breakdowns have been reported during periods of weight reduction (Bruch, 1958, & Stunkard & McLaren-Hume, 1969). The roots of the problem of overeating are obviously complex and diverse, dependent upon the genetic, psychological, sociological, cultural, economic and physiological characteristics of the person.

Obesity looms as an intractable, disabling, mental and physical health problem. Stunkard (1958) says: "Most people who are obese will not stay in treatment. Of those who do stay in treatment most will not lose weight. Of those who do lose weight most will regain it."

In a more promising vein, Saslow (1969) has described a technique he called "self-confrontation," that has been used by one of his patients to lose weight. The technique apparently enabled the patient to lose weight and to maintain the weight loss for a significant period of time.

As described by Saslow self-confrontation (SC) is a programmed rehearsal of a personal problem, by one person alone, for a five-minute

period. The rehearsal, or self-presentation is to be as vivid as possible, intellectually, emotionally, visually, and physically. In effect self-confrontation amounts to taking a planned time-out, where one can experience troubling feelings without the opportunity to act on these feelings. During this time-out the person can become skillful in sorting out various feelings and at the same time can become accustomed to the feelings. This seems to result in an alteration of the feelings, and related attitudes, sensations, and thoughts.

An example of self-confrontation is as follows:

"I'd become weary fighting the good fat-fight so I decided to experiment with the self-encounter technique taught me by Dr. Saslow. I secured a diet which was supposed to result in a 10-pound weight loss in 10 days. At this time I weighed 140 pounds. My plan was as follows: whenever I felt hungry I would go into my room and remain there for 5 minutes. During this time I would experience the hunger feelings. This I did for a day or so. Then I discovered that the hunger feelings seemed to be every place in my whole body--except for a hole in the very center of my stomach--analogous to the eye of a hurricane. This great empty space seemed to me not to be a hunger feeling, but rather nothingness. Anyway, after experiencing the hunger feelings I found out that if I forced all the air out of my lungs and contracted the stomach muscles, the hole seemed to disappear and the hunger feeling seemed somehow safely contained where it should be. I added this to my 5 minutes. I would also imagine how I would feel if I were to go to the kitchen and try to satisfy the feelings. I would consciously call to mind the awful, after, too-full feelings and the feelings of impending fatness that I had known so many failing times before. Then if it were time to eat I would, if not--I would go about my business--unhungry. . ." (Saslow, 1969).

The idea looked interesting and promising. A treatment program was designed to enable subjects to lose weight through the use of the self-confrontation technique. Pilot work with the technique indicated that

an important variable as to whether or not the subjects could use the self-confrontation technique, could be simulated and tested through the addition of the General Relationship Improvement Program of the Human Development Institute.

Pilot work done by the experimenter indicated that self-confrontation as a weight reduction program was very successful for some people. Background information on these successful self-confrontation users indicated that they had had some kind of prior group experience, e.g., group therapy, TOPS (Take Off Pounds Sensibly group), and psychotherapy. It was decided to simulate a therapy situation by using the HDI (Berlin & Wyckoff, 1964).

The General Relationship Improvement Program (HDI) is a ten-session programmed text, which is worked in pairs, and is aimed at better intrapsychic and interpersonal communication and understanding.

The purpose of the study is to test whether or not self-confrontation might be a useful tool in weight reduction. The treatment program was designed to enable subjects to lose weight through the use of self-confrontation, and the use of the Human Development Institute Program (HDI).

It was hypothesized that a group using the self-confrontation technique in combination with the General Relationship Improvement Program, would achieve the greatest weight loss. The group using only the self-confrontation technique would be next in terms of weight loss (second). The group using only the Human Development Institute program would be third in terms of weight loss. The group using only nutritional

information would lose the least amount of weight during the course of the study.

Many modes of treatment have been employed and most have failed. Treatment programs range from "low calorie products and exercise salons, to Yoga and hypnosis" (Erickson, 1950). Other treatments include "dietary instruction (Young, Moore, Berresford, Einset & Waldner, 1955), appetite depressants and other drugs (Silverstone & Solomon, 1965), general medical advice (Stunkard, 1958), psychoanalysis and other forms of psychotherapy (Bruch, 1957), group discussion of physical and emotional factors (Harmon, Purkonen & Rasmussen, 1958), aversion-relief therapy (Thorpe, Schmidt, Brown & Castell, 1964), recording all eating (Ferster, Nurnberger & Levitt, 1962, Stollak, 1966), self-control (Ferster et al., 1962, Wolpe, 1958), operant conditioning with shock (Meyer & Crisp, 1964), and aversive counter-conditioning with nausea (Cautela, 1966)", Harris (1969).

For the most part studies reported in the literature are either inadequately controlled or not controlled at all. According to Harris (1969), most reported studies fall into two general groups: case histories of techniques which proved successful with one or with a very few patients; and survey studies of patients in a medical setting. Most treatment programs report a general lack of success in effecting short-term weight loss (five pounds or more in a three-month period), and even less success in effecting any long-term weight reduction (ten pounds or more which lasts more than one year).

CHAPTER II

METHOD

Subjects:

The subjects were people who answered an advertisement in a college newspaper and in a mid-week section of a local newspaper. The advertisement asked for people who wanted to try a new approach to weight reduction, who were 45 years of age or under, and who wanted to lose at least 20 pounds. A list was compiled of people who came in to sign up and who filled out an initial questionnaire. The questionnaire is included as Appendix A. These people were sent a notice by mail which instructed them to come in for initial weighing and for assignment to a treatment group. Eighty-eight people appeared at the designated time and place. Fifty-four people reported to their treatment group to be instructed on the procedure they would follow. Thirty-nine people became the final subjects, considered in the statistical analysis of the study.

Treatment groups:

The group using only nutritional information (I) met with the experimenter. They were told that some theorists believe that the only thing necessary to enable a person to lose weight is to make them more aware of nutritional facts and to check on them periodically. This group was told that they would be testing this idea. The experimenter

reminded them of the importance of being weighed every week.

The group using the HDI (II) met with the experimenter. They were given an HDI text to examine. They were told that this programmed text was aimed at making them more aware of their feelings, both physiological and psychological. They were told that they would be working in pairs and that hopefully the program would help them to understand and be able to sort out different kinds of feelings--especially hunger feelings. They were also told that in addition to this, it should help them express their feelings with more ease. The experimenter expressed the hope that this would reduce frustration eating. The subjects were assigned partners and were also assigned a room and a time to work the program. That room was available to them for the rest of the study on the same day and at the same time. They were reminded of the importance of being weighed each week at the same time of day. They were informed that they could make their weighing coincide with their working time if they wanted it. Most of them did. The one group using just the HDI was included in the study in order to see whether or not this kind of program would be a successful aid to weight reduction without the addition of self-confrontation.

The group using self-confrontation (III) was given a reprint sheet from the work done by Saslow (1969) (Appendix B). This reprint sheet was an example of self-confrontation. The experimenter allowed time for the people to read this reprint sheet. She then played a short segment of a tape recording made during the pilot study. The

tape was that of a woman who had successfully employed the self-confrontation technique as a means of reducing her weight. The experimenter then answered questions. The subjects were instructed to use this technique at least three times a day and/or whenever they felt hungry. They were reminded of the importance of being weighed each week at the same time of day.

The group using the combination of self-confrontation and the HDI program (IV) were given the combined instructions of groups II and III. The experimenter expressed the idea that the HDI program should make them more aware of their internal feeling states and that the self-confrontation technique should help them deal more effectively with at least one of these feeling states--hunger. Groups II and IV were told that changes in their working time could be made by calling the experimenter.

During the course of the study the experimenter made three phone calls to each subject. These calls were made in an effort to maintain the membership in each group at ten.

Due to the nature of the experiment a large attrition rate was anticipated by the experimenter. An effort was made to maintain an N in each treatment group of at least 10. The initial group assignments based on the first questionnaire were as follows: Group I, 23; Group II, 20; Group III, 21; and Group IV, 24.

In the group using only nutritional information (I) only 5 people appeared on any kind of regular basis to be weighed. These were considered to be the contact control group. These people were motivated

enough to come in and record weekly weights. The rest of the people in the nutrition group were automatically assigned a no-contact control status which meant there was no contact with the program except the initial weight and the final weight.

In the group using the HDI (II) many people indicated early in the study that it was difficult for them to see any relationship between the programmed work and weight reduction. In this group 8 people officially began the program and 8 continued to work the program until spring vacation (6 weeks). After vacation only 4 people (2 pairs) completed the entire 10-week course. The people who dropped out spoke with the experimenter. They indicated that they felt it was a waste of their time to work the program. The experimenter agreed that it didn't seem to be very effective for them. She asked for their continued support in the form of being weighed each week, which they agreed to do.

In the group using self-confrontation (III) nine people consistently appeared to be weighed. One superobese (more than 20% over chart weight) subject promised to come but never did. Two phone calls were made to her in an effort to keep her in the study. She did not respond and was not included in the final statistical analysis of the data.

In group IV (combination of II and III) 18 people began the program and 14 finished. This was the only group which managed to keep super-obese people throughout the 12 weeks of the study.

The four groups were matched on age, sex, prior psychotherapy experience, and weight loss goals. Whether the subjects were students or

non-students was not a factor in assigning them to a group.

A description of the final subjects appears in Table 1.

TABLE I
DESCRIPTION OF SUBJECTS

Men		Women	
n = 9		n = 30	
Total n = 39			
		Men	Women
		Over 25 Yrs. of Age	Under 25 Yrs. of Age
		Over 25 Yrs. of Age	Under 25 Yrs. of Age
Weight	More than 30 lbs.	0	2
Loss	Less than 30 lbs.	6	1
Goals			
	Psychotherapy	2	2
	No psychotherapy	4	1

These were people who were taught the various procedures, who continued in the program for at least 6 weeks and for whom a final weight was recorded.

The first meeting was a nutritional meeting which all subjects were asked to attend. A qualified nutritionist gave a lecture on the importance of an adequate diet even though it was aimed at losing weight. She passed out information sheets such as calorie charts, height and weight charts, and then answered any questions. At the conclusion of the lecture the experimenter read aloud the group assignments and handed people an instruction sheet on which was contained time, place, and date of individual treatment group meetings. By this time the subjects had had an initial weight recorded and had been tentatively assigned to a treatment group. The experimenter did not take roll at this meeting.

At all four individual treatment group meetings where the technique to be used was explained, the procedure was as follows: the experimenter introduced herself. She explained that the study was for a Master's Thesis. She gave the following brief instructions: the only way to lose weight is to eat less food than the body needs. Each person is to put himself on a diet which will enable him to lose weight. Each person must come in every week, on the same day, at the same time to be weighed. The subjects were told that the experimenter's office would be open, they were to weigh themselves, record their weight on a pad of paper left there for that purpose and then put it into a box marked "for weights." The experimenter personally supervised only two weights, the initial one and the final one.

The experimenter wore a white coat during the times she had contact with the subjects. The program was designed to continue for 12 weeks.

CHAPTER III

RESULTS

The pre- and post-treatment weights of individual experimental and control Ss are reported in Tables II and III. As may be seen in Table II,

TABLE II
PRE-TEST AND POST-TEST WEIGHTS FOR Ss

Pre I	Post	Pre II	Post	Pre III	Post	Pre IV	Post
135	135	***155	155	165	157	218	206
201	206*	188	172	182	167	***150	150
195	193*	155	155	220	194	***247	244
160	147	***160	160	152	146	165	157
229	224	162	158	165	155	189	194
131**	130	148	150	190	187	168	156
148	148	160	159	217	210	199	180
154	159*	169	166	182	170	156	150
151	155*	-	-	181	170	231	220
***235	230*	-	-			209	206
						133	134

* = No contact controls

** = Left town after 8 weeks

*** = Final weight received by phone

TABLE III

WEIGHT LOSS FOR 10-WEEK PERIOD

Group I	Group II	Group III	Group IV
Nutrition	HDI	Self-conf.	Comb. II + III
0	0	8	12
+5	16	15	0
2	0	26	3
13	0	6	8
5	4	10	+5
1	+2	3	12
0	1	7	19
+5	3	12	6
+4	-	11	11
5	-	-	3
-	-	-	+1
-	-	-	3
Mean Weight Loss			
1.20	2.75	10.89	5.91

N = 39

33 of 39 Ss lost some weight and group III (self confrontation) was the only group in which all subjects lost weight.

An analysis of variance (Edwards, 1950), using pre- and post-treatment weights was done on the weight lost data for the four groups. The summary of the analysis of variance is shown in Table IV.

TABLE IV
ANALYSIS OF VARIANCE
SUMMARY TABLE

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Treatment	7429	3	2476	1.384
Error	62602	35	1789	
Trials	534	1	534	27.52***
Treatment x Trial	252	3	84	4.33**
Error	679	35	19.5	

** P .01

*** P .001

The overall treatment effect was not a significant source of variance which is not surprising. The groups were matched on the basis of weight loss goals at the beginning of the experiment and this resulted in a partial matching of groups on weights.

The trial effect (i.e., the difference between pre- and post-weights) was a significant source of variance $F(1,35) = 27.52$ indicating a substantial weight loss over time for all Ss on the average. Furthermore, the treatment by trial term indicated statistically reliable interaction between the two main effects. With this analysis of variance the interaction term would be a test of the experimental hypothesis that there were indeed differences between the groups over time as a function of the different treatments used for each group.

A Newman-Keuls test for comparison among treatments means was done using weight changes as the dependent variable. The results of the Newman-Keuls test are presented in Table V and indicate that treatment condition III, that is self-confrontation, differed from the control and HDI groups but did not differ from group IV. No other comparisons yielded statistically reliable differences. These data in conjunction with the analysis of variance indicate that self-confrontation as a

TABLE V

NEWMAN-KEULS SUMMARY TABLE

Treatments	1	2	4	3
Final Means	-1.2	-2.75	-5.9166	-10.55*
1 -1.2		-1.55	-4.7166	- 9.355
2 -2.75			-3.166	- 7.8055
4 -5.9166			-	- 4.6388
3 -10.55				-

*Significant at the .05 level

treatment, resulted in significant weight loss for both groups using it. The utility of self-confrontation seems to have been reduced by combining the HDI schedule with it as in group IV. There is no clear-cut explanation for this finding.

The dropout rate of the study was as follows: Eighty-eight (88) people appeared to have their initial weights recorded. Fifty-four (54) reported to their initial group assignment to be instructed on the procedure they would follow. This is a loss of 39%. Of the 54 people who received initial procedural instruction, 39 people became final subjects considered in the statistical analysis of the study. This procedure resulted in a 28% loss after the first meeting. Stunkard (1959c)

reported that approximately 39% of people in weight reduction programs do not return after one visit.

In the final questionnaire there was no evidence of experimenter effect having been a significant factor in the weight loss of the subjects. In an open-ended question which asked for "comments about the study, for example--the technique, the experimenter, etc." only two questionnaires mentioned the experimenter. These two questionnaires were returned late, after the experimenter contacted the subjects and asked for their return. All other final questionnaires were answered at the final weight recording session. If the weight was taken by phone, the experimenter recorded the information at that same time. All subjects who answered the questionnaire expressed satisfaction with the program.

CHAPTER IV

DISCUSSION

The present study was based on the idea that obesity may depend in part on an unawareness or confusion of internal feeling states which then interact with the environment in such a way that a pattern of overeating is the result. It was hypothesized that if a person could be made more aware of feeling states, and be given an alternative of dealing with these feelings rather than eating, weight control might then be possible. This idea is given support by Schachter (1967) who gives evidence that people misinterpret many different kinds of feelings as hunger feelings. It is also supported by Bruch (1961) who observed that her obese patients literally did not know when they were physiologically hungry.

The results of the study are in accordance with predictions made in the hypothesis with one reversal. One surprising observation was that for moderately obese people, on a short-term weight reduction program, self-confrontation appears to be more effective by itself than it is in combination with the HDI program. The explanation for this is not readily apparent. Perhaps the deviation from the original experimental design, Tables 6 and 7, which resulted in group IV (self-confrontation plus the HDI) being taught two complicated ideas and techniques in one hour rather than in two separate hours as originally planned may have resulted in overload. The subjects in this group were most unwilling to spend any

TABLE VI

PROPOSED SCHEDULE FOR TEACHING METHODS

Week	Group I	Group II	Group III	Group IV
1	Weigh Nutrition	Weigh Nutrition	Weigh Nutrition	Weigh Nutrition
	Weigh Method	Weigh HDI	Weigh*	Weigh HDI
2	Weigh	Weigh	Weigh SC	Weigh SC
3	Study continues			

* E. met with Ss and explained that in order for the experiment to be standardized they must wait until the next week to be taught the method they would be using.

TABLE VII

ACTUAL PROCEDURE FOR TEACHING METHODS

Week	Group I	Group II	Group III	Group IV
1	Weigh Nutrition	Weigh Nutrition	Weigh Nutrition	Weigh Nutrition
	Weigh Method	Weigh HDI	Weigh Time Held	Weigh HDI SC
2	Weigh	Weigh	Weigh SC	Weigh
3	Study continues			

plus the HDI) being taught two complicated ideas and techniques in one hour rather than in two separate hours as originally planned may have resulted in overload. The subjects in this group were most unwilling to spend any more meeting time to be taught techniques. The experimenter decided that rather than risk losing any more subjects she would teach both these procedures (one intra-personal and the other inter-personal) in a one-hour period. An alternative to the explanation that the subjects might have been given more than they could handle in too short a time, is that of interference. Since the HDI doesn't work for weight reduction, perhaps reliance on it was a hindrance rather than a help.

The nutrition meeting held during the first week apparently resulted in many of the subjects dropping the program. After the first group meeting with group I, it was apparent that many of the subjects who had initially signed up for the program had not appeared for the treatment group meeting. The experimenter then made a phone call to all subjects in all groups reminding them of their group assignments and also the time and place of the group meetings. Many of the subjects indicated that they were simply not interested because they felt that it was more of the same old stuff: weight control through meetings and diet. The experimenter explained that the initial procedure and the nutritional information were necessary parts of any responsible weight reduction program. She stressed that the techniques to be used had nothing to do with diet and that each person would be working pretty much on his own and at his own pace. She invited everybody's participation.

When the experimenter explained the procedure that group I (nutrition) would be using, many of the people present commented, "Well, we are the controls." The experimenter did not respond. Group assignment was on a random basis with one exception. A 54-year old woman was included in the study by mistake. She was automatically assigned to the control group with the idea that she not be considered in the final data. The experimenter decided to include her in the statistical analysis as she was one of the control group who appeared every week to be weighed. She was the control subject who lost the most weight.

Although the experimenter was available every Monday for consultation, only three subjects appeared to ask questions. One subject volunteered a diet which he had found very useful. Extreme efforts were made to keep experimenter effects at a minimum in order that the results be as little contaminated as possible. This non-involvement on the part of the experimenter may be part of the explanation for loss of subjects in the initial phases of the study. Experimenter contact with the subjects was minimal: three phone calls and five structured group exposures. The instructions given to all groups were standardised.

The study is interesting from the standpoint of the investment of experimenter time. Approximately six hours of experimenter time were invested in actual time spent with the subjects. This is in comparison with time investments such as two weekly meetings of subjects with experimenter over a period of 2½ months for the study done by Harris (1969), which resulted in an average weight loss of 8 pounds. Stuart

(1967) met with patients over a period of 12 months an average of 21 therapeutic sessions for an average weight loss of 30 to 45 pounds. These weight losses in comparison with a weight loss of 10.89 in ten weeks in group III of the present study indicate that this technique can be taught and made part of the subject's repertoire with very little contact with a therapist or experimenter.

Work (since this study) has been done at the University of Oregon Medical School in which a combination of self-confrontation with a behavior modification approach (utilizing operant and respondent conditioning techniques) appears to have been successful with two superobese persons (Molde, 1970).

CHAPTER V

CONCLUSIONS

Self-confrontation is an effective tool for short-term weight loss by moderately obese people. The HDI appears to be of no use by itself, and combination of the HDI and self-confrontation seems less effective than self-confrontation alone. In this particular study this could be the result of either overload or interference; or a halo effect may have operated. The 8a may have felt that since the HDI was of no use, the whole program was useless.

The best criterion for the effectiveness of any weight reduction program is, of course, long-term weight control. There is no information at present as to whether or not these subjects have maintained their losses or have continued to lose even more weight. Only follow-up can tell us this. Part of the success of this program may have been due to the fact that the idea was new, was different, and was being tested mainly by college students, or by people motivated enough to answer an advertisement in a newspaper and then go through elaborate and time-consuming questionnaires and meetings in order to try a new approach to weight reduction.

Self-confrontation appears to be of little or no use by itself for superobese people. The work done subsequently at the University of Oregon Medical School, however, suggests that such self-confrontation

may be part of an effective treatment program for weight control for the superobese person. Further research is worthwhile in terms of follow-up on the present study and to determine whether or not the self-confrontation procedure may be useful in combination with behavior modification techniques as a weight reduction tool for superobese people.

REFERENCES

- Berlin, J. T. & Wyckoff, L. B., General Relationship Improvement Program. Human Development Institute, Inc., 1964.
- Bloom, W. L., & Erdix, Inactivity as a Major Factor in Adult Obesity, Metabolism, 1967, 16, 679-684.
- Bruch, H., The Importance of Overweight. New York, Norton, 1957.
- Bruch, H., Psychiatric Quarterly, 35, 458, 1961.
- Bruch, H., Psychological Aspects of Obesity, Borden Review Nutritional Research, 19, 4, (July-August) 1958.
- Cauffman, W. J. & Pauley, W. G., Obesity and Emotional Status, Pennsylvania Medical Journal, 1961, 64, 505-507.
- Cautela, J. R., Treatment of Compulsive Behavior by Covert Sensitization. Psychological Record, 1966, 16, 33-41.
- Edwards, Allen L., Experimental Design in Psychological Research, Rinehart & Co., Inc., New York, 228-232, 1950.
- Erickson, M. A., The Utilization of Patient Behavior in the Hypnotherapy of Obesity: Three Case Reports. American Journal of Clinical Hypnosis, 1950, 3, 112-116.
- Farster, C. B., Nurnberger, J. I., & Levitt, E. B. The Control of Eating, Journal of Mathematics, January 1962, 1, No. 1, 87-109.
- Glucksman, M. L. & Hirsch, J., The Response of Obese Patients to Weight Reduction: A clinical evaluation of Behavior. Psychosomatic Medicine, 30, No. 1, 1968.
- Gygi, Carole, Distorted Body Image a Correlation of Retarded Language, unpublished paper, 1968.
- Harmon, A. R., Furkonen, R. A. & Rasmussen, L. P., Obesity: A physical and emotional problem. Nursing Outlook, 1958, 6, 452-456.
- Harris, M. D., Self-Directed Program for Weight Control., Journal of Abnormal Psychology, 1969, 74, No. 2, 263-270.

Kurland, H. D., Extreme Obesity: A psycho-physiological disorder. Psychosomatic Medicine, 8, March-April 1967.

Mayer, J., Exercise Does Keep the Weight Down. Atlantic Monthly, 1955, 196, 63-66.

Mayer, V., & Crisp, A. H., Aversion Therapy in Two Cases of Obesity. Behavior Research and Therapy, 1964, 2, 143-147.

Molde, D. A., Behavior Modification in Weight Reduction. Speech presented at the University of Oregon Medical School, Portland, Oregon, June, 1970.

Saslow, G., Expanding Staff Repertoires of Treatment Behavior. Paper presented at the University of Wisconsin, 1969.

Schachter, S., Obesity as a Cognitive Error. Speech presented at Stanford Medical School, February 14, 1967.

Schachter, S., Obesity and Eating. Science, 161, August 1968, 751-756.

Silverstone, J. T. & Solomon, T., The Long Term Management of Obesity in General Practice. British Journal of Clinical Practice, 1965, 19, 395-398.

Simon, R. I., Obesity as a Depressive Equivalent. American Medical Association Journal, 1963, 183, 208-210.

Stuart, R. B., Behavioral Control of Overeating. Behavior Research Therapy, 5, 1967, 357-365.

Stunkard, A. J., & Mendelson, Attitudes Towards a Perception of Obesity by Obese Ss. Nutritional Review, 27, 173-175, June 1969.

Stunkard, A. J., Environment and Obesity: Recent advances in our understanding of regulation of food intake in man. Federation Proceedings, 27, No. 6, November-December 1968.

Stunkard, A. J., The Management of Obesity. New York State Journal of Medicine, 1958, 58, 79087.

Stunkard, A. J. & McLaren-Hume, M., Result of Treatment of Obesity. Archives of Internal Medicine, 103, 79-85, January 1959.

Thorpe, J. G., Schmidt, E., Brown, P. T. & Castell, D., Aversion Relief Therapy: A new method for general application. Behavior Research and Therapy, 1964, 2, 71-82.

Wolpe, J., Psychotherapy by Reciprocal Inhibition. Stanford: Stanford University Press, 1958.

Young, C. M., Management of the Obese Patient. Journal of the American Medical Association, 186, No. 10, 1963, 903-904.

Young, C. M., Moore, H. B., Berresford, K., Einset, B. McK., & Waldner, B. G., The Problem of the Obese Patient. Journal of the American Dietetic Association, 1955, 31, 1111-1115.

APPENDIX A

ORIGINAL QUESTIONNAIRE

Name _____ Age _____ Sex _____

Address _____ Phone _____

Present weight _____ Desired weight _____

At what age did you become overweight _____

Have you had medical care for obesity _____

Explain briefly

Have you ever had: Group therapy _____ psychotherapy _____ Other _____

Explain

Are other members of your family obese?

Explain

Is your basic body build: small _____ medium _____ large _____

Comments:

YOU WILL BE NOTIFIED AS TO TIME AND PLACE OF FIRST MEETING.

APPENDIX B

EXCERPT FROM "EXPANDING STAFF REPERTOIRES OF TREATMENT BEHAVIOR." PAPER PRESENTED AT THE UNIVERSITY OF WISCONSIN, 1969.

"I've always been fat. From childhood till 19 years of age, fatness, diets, and misery were my way of life. When I was 19 I weighed 165 pounds. At 20, after a ton of Dexidrine and 25,000 gallons of black coffee, I weighed a shaky 130; from fat activity girl to slim sexpot success story. But—I had a fat soul. From that day until 4 months ago (13 years) my appearance has consisted of a manic-depressive kind of syndrome of fat-thin, ugly-pretty, blonde-brunette, etc.

I'd become infinitely weary of fighting the good fat-fight, so I decided to experiment with the self-encounter technique, taught me by Doctor Saslow, in a creative clash with fatness and fat feelings. (Here I include such things as hungry though full, misery eating, too tight clothes, and dark dismay at my appearance.)

I secured a diet which was supposed to result in a ten-pound weight loss in 10 days. At this time I weighed 140 pounds. My plan was as follows: whenever I felt hungry I would go into my room and remain there for five minutes. During this time I would experience the hunger feelings. My plan was to first focus on the feelings, and then intellectually examine the feelings. This I did for a day or so. Then I discovered

that the hunger feelings seemed to be every place in my whole body—except for a hole in the very center of my stomach—analogue to the eye of a hurricane. This great empty space seemed to me not to be hunger—but rather nothingness. Anyway, after experiencing the hunger feelings I found that if I forced all the air out of my lungs and contracted the stomach muscles, the hole seemed to disappear and the hunger feelings seemed somehow contained safely where they belonged. I added this to my five minutes. I would also imagine how I would feel if I were to go to the kitchen and try to satisfy the feelings. I would consciously call to mind the awful, after too-full feelings, and the feeling of impending fatness that I had known so many failing times before.

Then, if it were time to eat I would, if not—I would go about my business—unhungry. I followed the diet and the plan for ten days. I lost 8 pounds without being uncomfortably hungry, and without diet pills.

Weighing a tenuous 132 on my scales (which underweigh 3 pounds), I decided to see if I could get down to 128. This I did with not too much trouble. I wanted to stay there—so I decided to try to stabilize my weight and my body image, using this encounter technique.

Here I digress to say that I've never known what to expect from my body or from my appearance. At best I felt temporary—at worst FAT. In a group process workshop I asked one of the people to tell me what I looked like. She made a list of descriptive words. I recited this list to myself, and also used the other 2 parts of my plan for five minutes three times a day from then till now.

I have stayed at 128 for 2½ months with little or no effort. Interestingly enough--no one has commented on the weight loss, or noticed a drastic appearance change. Friends still recognize me every time they meet me. (Sometimes I wonder if I've lost the weight--I tell you I weigh 128 on my good underweight scales!). I have gone out to dinner and have eaten everything I have wanted without having the night ruined by my fear of getting fat again. I am comfortable with my eating habits, and feel quite easy with my appearance. I even think I'm beginning to recognize myself in the mirror. Even more important to me, I feel as though I am really beginning to break out of that cement-jacket which made me feel everywhere fat, and nowhere permanent. I'm not totally out--but more hopeful than ever before. Every meal is not a threat to my self image at least.

I'm reporting, not concluding, and the 12 pounds are gone."

APPENDIX C

FINAL QUESTIONNAIRE

1. Did you use the 5 minute technique taught you?

Yes

No

2. If you did use it, how often: (circle one)

Daily

Weekly

Other

1 - 5

1 - 5

5 - 10

5 - 10

more than 10

more than 10

3. Comments about the study, for example - the technique, the experimenter, etc.