

Hypnotherapy in Weight Loss Treatment

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This study investigated the effects of hypnosis as a treatment for weight loss among women. The sample consisted of 60 women between the ages of 20 and 65 who were at least 20% overweight and were not in any other treatment program. Six client variables (suggestibility, self-concept, quality of family origin, age of obesity onset, education level, and socioeconomic status) and one process variable (multi-modal imagery) were analyzed in relation to the dependent variable (weight loss). Two experimental groups, hypnosis plus audiotapes (Hy-T) and hypnosis without audiotapes (Hy), and the control group (Cont) were investigated for weight loss immediately after treatment and again after a 6-month follow-up. The primary hypothesis that hypnosis is an effective treatment for weight loss was confirmed, but the seven concomitant variables and the use of audiotapes were not significant contributors to weight loss.

Although hypnosis has for many years been suggested as a treatment modality for weight loss, there is little rigorous experimental research that clearly substantiates this view. The literature dealing with hypnosis for weight reduction consists primarily of anecdotal reports and studies of selected cases. Mott and Roberts (1979) indicated that although there is evidence that hypnosis may have a role in weight loss treatment, well-designed research studies are needed to establish the extent of its usefulness. Very few articles provide follow-up reports, and potentially critical predictor variables such as age of obesity onset, suggestibility, self-concept, and socioeconomic status are yet to be adequately studied.

Winkelstein (1959) used group hypnosis incorporating suggestions about diet and about special problems manifested by individuals. The average weight loss was 27 lb after 4 months, but no additional information was noted. Wollman (1962) used a group hypnotherapy program without controls and asked the subjects to imagine, as a motivational factor, a desired body image but provided no client characteristics or long-term follow-up data.

Hanley (1967) found that initial weight loss tends to be superficial, and at a point of relapse, deeper issues often emerge that require specific therapy. Wick, Sigman, and Kline (1971) reported a two-phase program in which they used the techniques of Cheek and LeCron (1968) to uncover any unresolved issues underlying the weight problem. In the second phase, they used

a re-education approach in which they incorporated suggestions for deprivation feelings.

Kroger (1970) utilized a variety of hypnotic techniques, including autohypnosis training, that his subjects were to use 8 or 10 times a day. Aja (1977) also reported the use of auxiliary autohypnosis as an adjunct to therapy. Fromm and Shor (1979) and Udolf (1981) speculated on the use of audiotapes as a form of auxiliary autohypnosis, but there have been no specific assessments of the usefulness of autohypnosis with or without audiotapes for hypnosis-based weight loss programs.

The issue of suggestibility was assessed in previous research by Deyoub (1979) and Wadden and Flaxman (1981) who used the Barber Suggestibility Scale and found no significant relationship between suggestibility and weight loss. A related issue is that of imagery absorption. Hilgard (1979) and Tellegen and Atkinson (1974) suggested that greater absorption in imagery activities may have a significant relationship to outcome in hypnotherapy, and this finding warrants assessment.

None of the studies reviewed on hypnosis for weight loss considers the age of onset as a potentially important variable. Rothman and Becker (1970) reported cases of weight gain in children following the death of a parent, hospitalization of the mother, parental divorce, desertion by the father, the child's hospitalization, and attendance at boarding school. Bruch (1973) considered weight gain from developmental and reactive perspectives. She proposed that developmental weight problems begin in early childhood and are a response to dysfunctional family relations, which often result in the child developing a sense of rejection and a distorted body image. Reactive weight gain, on the other hand, is viewed by Bruch as occurring primarily in adults in response to stressful circumstances such as relationship or work issues. Wolman (1982) points out that overweight children tend to develop a negative body image and a poor self-concept. He also indicates that many overweight adults have a low self-concept arising from a combination of childhood experiences and contemporary social expectations that leads to the choice of a self-punitive eating pattern.

The principle purpose of this study was to investigate the

The authors wish to acknowledge DuFay Der for providing consultation and supervision on the development and use of the hypnotic techniques, Soeng Soo Lee for serving as the statistical consultant to the study, and Larry Cochran and Richard Young for providing constructive critiques. The authors are also indebted to dieticians Elsie Deross and Jennifer Okroj for their on-site assistance. This study was completed, by the first author, in partial fulfillment of requirements leading to a doctoral degree at the University of British Columbia at Vancouver.

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effectiveness of hypnotherapy for weight loss. We hypothesized that the two experimental groups would reveal significantly greater weight loss immediately after treatment and after a 6-month follow-up than the control group, and that the experimental group using audiotapes would show significantly greater weight loss than the group not using audiotapes.

A secondary objective of this study was to identify client characteristics that contribute to variability in weight loss. Data from the following client variables were recorded and analyzed: suggestibility, self-concept, quality of family origin, age of obesity onset, education level, and socioeconomic status.

In testing the efficacy of hypnosis as a treatment for weight loss, care was exercised to establish minimum treatment conditions. With the increasing evidence on nonspecific treatment factors such as expectancy, motivation, and therapist characteristics, it has become evident that some therapeutic outcomes may be attributable to these factors rather than to specific treatment components (Kazdin, 1979). In order to maximize treatment fidelity, the present study sought to control for these factors as much as possible.

Method

Subjects

The subjects were 60 females between the ages of 20 and 65 who were at least 20% above ideal weight according to Metropolitan Life (1960) actuarial data. They were without medical problems contraindicating weight loss and were not enrolled in any other weight loss programs. The subjects were secured through the use of a newspaper advertisement that listed the aforementioned criteria for participation.

Treatment

The treatment program was conducted by Gordon Cochrane, who had obtained extensive formal training in the practice of hypnosis and was supervised in this study by an experienced hypnotherapist. The content, time, induction procedures, and imagery activities were established in script form prior to initiating the treatment, and these were adhered to in detail. Two experienced dietitians assisted with data collection and logistics during the treatment program.

The rationale of the hypnotic treatment was explained to treatment groups at the outset. Group inductions were used with a combination of direct and indirect suggestions for dissociation and deepening (Kline, Coleman, & Wick, 1976). Each subject was also inducted individually to accommodate unique response patterns (Coupar & Kennedy, 1980). The scripted treatment program consisted of three basic components. Group hypnosis was used to present specific therapeutic stories and metaphors designed for ego enhancement, motivation, and decision making (Hartland, 1971). Individual hypnosis (Cheek & LeCron, 1968) was used to facilitate the identification of unconscious weight-related issues. Group hypnosis was again used for specific weight loss and maintenance suggestions following the uncovering activities (Kline et al., 1976).

Instrumentation

The Barber Suggestibility Scale (BSS) was administered to each subject prior to treatment using standard procedures (Barber, 1969). The BSS is significantly correlated with the Stanford Susceptibility Scale, Form A, at .62 and .78 for objective and subjective portions, respectively (Ruch, Morgan, & Hilgard, 1974).

Each subject also completed the Tennessee Self Concept Scale (TSCS)

(Fitts, 1964) prior to treatment. This scale consists of 10 self-description items. A Total Positive Self Concept score is derived from these items and reflects the overall level of self-esteem. Test-retest reliability coefficients with a 2-week interval between testings average in the high .80s.

The Family History of Distress Scale (FAM), a subtest from the Marital Satisfaction Inventory (Snyder, 1975), was also administered to each subject prior to treatment. The scale is based on the premise that elevated scores indicate either unresolved conflicts stemming from the family of origin or the absence of adequate parental models. These conditions could contribute to current relationship difficulties and emotional problems. Snyder (1975) reports a test-retest reliability coefficient of .94 for the FAM with an interval of 6 weeks between testings.

The Representational Systems Inventory (RSI) was developed by Cochrane as a means of measuring the subjects' degree of absorption in imagery activities selected from the treatment program. The inventory consists of 30 Likert-type items that purport to measure the degree of imagery absorption experienced by the subject in three selected activities from the hypnotherapy programs. Item content is organized around visual, auditory, and kinesthetic experiences. The minimum score is 40 and the maximum score is 120; higher scores represent greater imagery absorption. A test-retest reliability coefficient of .92 was obtained by the author with a 4-week interval between tests. Whereas the RSI has content validity, it is not yet possible to establish the construct validity that is established over time and based on many studies. The RSI was administered to each subject in the two experimental groups immediately following the 4-week treatment program. The control group did not participate in the imagery activities of the treatment program and therefore could not respond to the treatment-specific questions of the RSI.¹

The data on age of obesity onset, education, and economic status were obtained on an intake form prior to treatment.

Procedure

The subjects were randomly assigned to three groups: hypnosis treatment utilizing audiotapes (Hy-T), hypnosis treatment without audiotapes (Hy), and wait-listed control group (Cont). Prior to treatment, the subjects presented a medical clearance. Each subject was weighed on the same scale, without shoes, wearing indoor clothing. The pretests were completed and intake forms were collected at this time. The data from the RSI were obtained from the two experimental groups following the treatment program.

Subjects in the two experimental groups then met with the therapist for a total of 24 hr (two 3-hr group sessions per week for 4 weeks). At the end of the treatment period, the experimental and control group subjects were weighed. Prepared audiotapes were given to the Hy-T subjects. The tapes were 15 min long, and the subjects were instructed to use the tapes daily, if possible, and to record the frequency of tape use until the follow-up meeting. There was no contact with the members of the three groups until the designated 6-month follow-up date when tape usage by Hy-T was recorded and when all subjects were weighed. Adjunctive therapies were not provided during the follow-up period to any of the groups.

Results

A summary of means and standard deviations for initial weight and posttreatment weight loss is provided in Table 1. It

¹ A more detailed description of this study, including the treatment script and the RSI, is available from University Micro Films, 300 North Zeeb Road, Ann Arbor, Michigan 48106, or from Gordon Cochrane, 2095 W. 45th Avenue, Vancouver, British Columbia, Canada V6M 2H8.

Table 1
Summary of Means and Standard Deviations of Weight Variables

Group	n	Initial weight		One-month weight loss		Six-month weight loss	
		M	SD	M	SD	M	SD
Hy-T	17	215.99	34.19	-6.53	1.05	-17.82	2.73
Hy	17	184.76	29.23	-8.00	0.97	-17.12	2.54
Cont	20	175.79	40.13	1.50	0.95	-0.50	2.45

Note. Hy-T = hypnosis treatment plus audiotapes; Hy = hypnosis treatment alone; Cont = control group.

is evident from a comparison of the means that weight loss after 1 month and again after 6 months was similar in both treatment groups but did not occur in the control group.

The three groups were statistically compared for weight loss at 1 and 6 months by an analysis of covariance, using the initial weight as a covariate.

The adjusted mean weight losses of both experimental groups (Hy-T and Hy) were greater than that of the control group, $t(44) = 7.53$ and 6.26 , $p < .01$, for 1-month and 6-month weight loss, respectively. The two experimental groups Hy-T and Hy were not significantly different from one another.

This finding indicates that in this study hypnosis was an effective treatment for weight loss. The lack of significance between Hy-T and Hy indicates that the use of audiotapes did not have a statistically significant influence on weight loss. The mean audiotape usage, obtained from recorded usage by the Hy-T subjects during the 6-month follow-up, was 45.65 times. Because no adjunctive therapies were provided during the follow-up period, the findings support the primary hypothesis that direct participation in the hypnotherapy program was the important factor in the weight loss efforts of both groups. A summary of means and standard deviations for seven variables from the three groups is provided in Table 2.

Pearson correlation coefficients were calculated for 6-month weight loss and six independent variables. None of the independent variables contributed significantly to variability in weight loss at 6 months with correlation coefficients ranging from $-.13$ to $.11$. Correlation coefficients were also calculated for 6-month weight loss and the RSI (Hy-T = $-.111$ and Hy = $.182$). These

results indicate that imagery absorption as measured by the RSI did not contribute significantly to weight loss.

A multiple regression analysis was also conducted, first with each of the three groups and the applicable independent variables and then with the combined groups and the independent variables. Forced entry of the data resulted in $R^2 = .25$ for Hy-T, $R^2 = .39$ for Hy, $R^2 = .68$ for control, and $R^2 = .04$ for the combined groups. These results indicate that intergroup differences may have effected overall variance, but being in one treatment group or the other appears to have been the determining factor in weight loss.

Discussion

As hypothesized, the findings indicate that subjects in the Hy-T and Hy groups lost significantly more weight than subjects in the control group. This result provides support for the use of hypnotherapy as a treatment for obesity. No statistically significant differences were found in amount of weight lost by subjects in the Hy-T and Hy groups. Tape-recorded suggestions did not provide the reinforcement or motivational component that Fromm (1979) had considered possible. It seems that active participation in the hypnotherapy program, and not auxiliary tape use, can be credited with the weight loss results that were achieved.

Whereas statistical analysis did not support the hypothesis that there would be a significant difference in weight loss between subjects who scored higher and those who scored lower on the RSI, there was a trend toward greater weight loss with

Table 2
Summary of Means and Standard Deviations of Seven Variables by Three Groups

Independent variables	Hy-T		Hy		Control	
	M	SD	M	SD	M	SD
BSS	14.79	7.80	11.71	7.24	16.39	5.32
FAM	44.29	12.55	51.06	11.41	48.55	12.81
AGE	1.65	0.58	1.69	0.58	1.50	0.52
TSCS	321.99	38.60	325.47	34.26	355.99	39.54
ECON STAT	34.41	14.58	33.53	14.38	26.50	8.72
EDUC	13.76	0.21	13.00	0.16	13.38	0.22
RSI	92.71	19.60	90.76	22.08	—	—

Note. Hy-T = hypnosis treatment plus audiotapes; Hy = hypnosis treatment alone; BSS = Barber Suggestibility Scale; FAM = Family History of Distress Scale; AGE = age of obesity onset; TSCS = Tennessee Self Concept Scale; ECON STAT = economic status; EDUC = education level; RSI = Representational Systems Inventory.

higher RSI scores. Such a trend may indicate that refinement of the instrument and further study of the absorption variable is warranted (Hilgard, 1979).

Suggestibility, as measured by the BSS, was not a significant predictor of weight loss. This result supports the findings of Deyoub (1980) and Wadden and Flaxman (1981), despite a trend toward greater weight loss with higher suggestibility scores.

The FAM results indicate that family of origin is not a significant predictor of weight loss. It appears that measures of the quality of family relationships need to be supplemented by measures of how well family issues have been resolved. Many of the subjects who lost weight reported current unresolved issues such as marital discord, loneliness, or job dissatisfaction that seemed to result in sessions of overeating.

Education level, socioeconomic status, and age of obesity onset were not significantly related to outcome in this study. It would appear that age of obesity onset would be more predictive if considered in relation to the circumstances accompanying onset. A number of subjects in this study reported weight gain following childhood hospitalization, parental divorce, leaving home for post-secondary education, and similar life events.

The results of this study provide empirical support for the view that hypnotherapy is a useful treatment for weight loss (Mott & Roberts, 1979), but further research is needed to identify the most effective hypnosis programs as well as the client characteristics that are responsive to these programs.

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Received January 10, 1985

Revision received September 4, 1985 ■