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The Helper-Therapy Principle Applied to Weight Management Specialists

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THE HELPER-THERAPY PRINCIPLE APPLIED TO WEIGHT MANAGEMENT SPECIALISTS*

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One hundred twenty applicants to a weight management specialist training program were studied over a 33-month period. Following a nine-month training period, Specialists (N = 29; those leading at least one posttraining weight management group) were compared to Contact Controls (N = 31; persons participating in the weight management program, but not in the helper role) and No Contact Controls (N = 60; those not accepted into the training program and whose only contact with the program was for data collection purposes) in a test of the helper-therapy principle. The major question was, "What are the long-term physical, psychological, and behavioral effects on overweight and formerly overweight individuals involved in helping other persons manage their weight?" Data gathered at 12 and 24 months posttraining revealed few differences between the total group of specialists and persons in the two control groups. However, when the data were analyzed by the amount of commitment to the specialist role, it was found that the Higher Involved Specialists (N = 16; those who led two or more weight management groups in the year posttraining) were significantly more likely to lose additional weight (or maintain earlier weight losses), to be more consistent in their adherence to the eating and activity levels advocated by the program, to feel better about themselves and their bodies, and to maintain their levels of general well-being than control subjects or the Lesser Involved Specialists. These latter individuals (N = 13) were significantly the worse for having gone through specialist training, but not fully carrying out the specialist role.

Short-term weight losses in behaviorally oriented programs have tended to be relatively modest (Abramson, 1973; Jeffrey, Wing, & Stunkard, 1978; Leon, 1976; Stalonas, Johnson, & Christ, 1978; Stunkard, 1975). While follow-up data are frequently lacking (Wilson, Note 1), when such data are presented, they tend to be disappointing (Hall, 1973, Hall & Hall, 1974; Hall, Hall, Hanson, & Borden, 1974; Jeffrey, Wing, & Stunkard, 1978; Stunkard & Penick, 1979). Since most behaviorally oriented programs are time limited, and few people reach desirable weight during the active phase of the program itself, it is important to design strategies that will enable people who have lost a portion of their excess weight to continue losing after they have finished their active program involvement.

Several investigators have attempted to promote continued weight loss after active treatment through the use of booster sessions and/or family involvement (cf. Ashby & Wilson, 1977; Brownell, Heckerman, Westlake, Hayes, & Monti, Note 2; Kingsley & Wilson, 1977), but the effectiveness of these interventions is, at best, short-lived. Since continued contact in the form of booster sessions is of limited value and the results from studies stressing family involvement have been inconsistent, another approach to long-term weight loss involving training obese or formerly obese clients to help others lose weight appeared worthy of exploration.

Durlak (1979) reported that paraprofessional leaders were about as effective as professionals in helping others lose weight. Only in the Levitz and Stunkard (1974) study and only in follow-up did a professionally led group achieve superior results. None of these studies reviewed by Durlak, however, reported on the effect of weight group

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leadership on the leaders themselves. Professional leaders in our Weight Management Program who had once been overweight appeared to be greatly assisted in their own weight management efforts by leading groups and, anecdotally, other professionals involved with weight management reported similar beneficial effects, but this phenomenon had never been systematically evaluated.

In the fall of 1977, the Vanderbilt University Weight Management Program began training a group of overweight persons from the Nashville community to become paraprofessional weight management specialists. Together with efforts to manage their weight, the specialists, in turn, were to help others with weight problems, a practice advocated by Riessman (1965). Extrapolating from Riessman's helper-therapy principle, the expectation was that the act of helping others lose weight would motivate the helper to "practice what he/she preaches"; such behavior, in turn, would lead to continued weight loss or weight loss maintenance on the part of the helper. In addition to benefiting personally from enacting the helper role, it was anticipated that the specialist training program would provide a cadre of paraprofessionals who could effectively deliver services at a lower cost to a greater number of persons than the professionals who did the training.

The present study reports a two-year follow-up evaluation of the first attempt to examine the helper-therapy principle applied to weight management. The data are from the first group of overweight and formerly overweight specialists who entered the training program with the dual purpose of managing their own weight and learning to help others with the same problem. These subjects are compared to persons who applied to the training program but who did not participate as specialists.

Method

Subjects

The sample for this study consists of all persons who applied to and went through the pre-assessment procedure for the Weight Management Specialist Training Program (WMSTP) in August, 1977, and who participated in at least two of the three posttraining evaluations (i.e., at the end of the training period; 12 months posttraining; and 24 months posttraining). Approximately 170 individuals applied to and were interviewed for the WMSTP; data from 120 of these persons are included in this report.

The 120 subjects were predominantly female (93%), averaged 38.6 years of age (range: 20 to 65 years), had typically completed high school and some college, were mostly married (73%), and reported a median family income of slightly less than $20,000/year. In August of 1977 the subjects weighted an average of 180.6 pounds (range: 114 to 311 pounds) which meant that the average subject was approximately 54 pounds overweight (range: 3 to 174 pounds) according to the charts for "ideal" weight adjusted for sex and height.

Procedures and Design

Selection and pre-assessment. In addition to obtaining height, weight, and weight history information as part of the pre-assessment procedure, applicants were requested to fill out a battery of psychological instruments, including a 25-item version of Coopersmith's (1967) Self-Esteem Inventory (SEI) (found in Robinson and Shaver, 1973), an adaptation of Secord and Jourard's (1953) Body Cathexis Scale[1] (BC), and the first 18 items of DuPuy's (1973) General Well-Being Schedule (GWB).

[1]Copies of our adaptation of the Body Cathexis Scale are available by writing to the investigators.

Based solely on personal interviews, 45 persons were selected to begin training as weight management specialists.[2] The trainees fell into two categories: "primary" and "advanced." The "primary" trainees (N = 24) had no previous contact with the Vanderbilt program, while the "advanced" trainees (N = 21) had all been previously involved in weight loss groups at the University under our leadership. On the average, the "primary" trainees were 61 pounds overweight at the time they were selected; the "advanced" trainees only averaged 40 pounds overweight, having already lost an average of 22.5 pounds under our direction. There was great variability among trainees, especially in the group of "advanced" trainees; some were near their desired weight, while others still had a considerable amount to lose.

The training period. During the specialist training program (approximately 125 hours spread over a nine-month period), the trainees were exposed to the basic principles of the behavioral approach to weight management, together with the principles of sound nutrition and physical fitness.[3] The middle portion of the training period afforded the trainees an opportunity to learn how to lead weight management groups by observing and assisting the professional staff in conducting groups. Later in the training program, most trainees had an opportunity to co-lead groups on their own, with out-of-group supervision by the staff. The trainees were paid a modest stipend of $5 for each group session to offset babysitting and travel costs. Nine of the 45 trainees (20%) dropped out of the training program, mostly because of altered job responsibilities or family relocation. One trainee dropped out because she was not able to participate in the physical fitness training portion of the program.

During the period of time the training was going on, 26 applicants not admitted to the WMSTP chose to enroll in 16-week weight management groups co-led by the professional staff and trainees. These later were considered part of the Contact Control group.

Posttraining assessment. In May, 1978, at the end of the nine-month training period, all of the original applicants to the WMSTP were asked to furnish information about their current weight and to complete the SEI, BC, and GWB inventories. Those persons who had had no contact with the WMP during this period were also asked to furnish information about their weight-managment-related activities during the previous nine-month period. Slightly more than 50% of this latter group furnished the requested data; the response rate was approximately 80% for those selected for the WMSTP or those choosing to enroll in groups co-led by the trainees.

The Follow-Up Period

Involved specialists. Of the 36 persons who completed the Weight Management Specialist Training Program, 29 (13 "primary" and 16 "advanced") led one or more weight management groups in the first year posttraining. Nine specialists were active as group leaders during the second year posttraining.

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[2]Each applicant was interviewed in a small group format by at least two members of the WMSTP staff. After the interviews, independent ratings of the applicants were made on a scale ranging from "1—definitely unacceptable" to "4—definitely acceptable." The major criteria for the ratings were leadership potential and community involvement. The ratings of the two interviewers were averaged and used as the sole basis for accepting an applicant into the program. Those receiving the highest ratings were accepted. Only one person offered acceptance into the WMSTP turned it down.

[3]In addition to input from the professional staff and the manuals develped for use in conjunction with the Vanderbilt Weight Management Program, all of the trainees were furnished with copies of *Nutrition, Weight Control and Exercise* (Katch & McArdel, 1977), *Permanent Weight Control* (Mahoney & Mahoney, 1976), and *The Official YMCA Physical Fitness Handbook* (Meyers, 1975) as reference material.

Contact controls. Those persons who began but dropped out of the WMSTP and those who completed the program but never acted as specialists were combined for analysis purposes with those who were not accepted into the program but chose to enroll in one of the weight management groups run by the program into a "Contact Control" Group (N = 44). The rationale behind this grouping was that all of these individuals received from three to nine months' assistance from the staff in managing their own weight but, during the follow-up period, none of them were involved in helping other persons manage weight. (Seven of the nine specialists in the Contact Control Group were "primary.") If the contact controls did as well as the specialists, there would be no support for the helper-therapy principle.

No-Contact controls. Of the approximately 100 persons who applied to the WMSTP but were not included in the Involved Specialist or Contact Control groupings, about half constitute the No-Contact Control Group; the remainder have failed to furnish sufficient posttraining period data to be included in this study. Any differences at follow-up between the two control groups (Contact versus No-Contact) would reflect on the effectiveness of our weight management program but would not be a test of the helper-therapy principle. Contrasts between Involved Specialists and the No-Contact Controls, on the other hand, would furnish information relevant to the helper-therapy principle but would be a weaker test than the contrast between the Specialists and the Contact Controls.

Follow-up (FU) assessments. In May, 1979 (FU-1) and again in May, 1980 (FU-2) all of the individuals interviewed for the WMSTP were asked to furnish the same information described above in the section labeled "Posttraining assessment." At each of these annual follow-up assessments, data were obtained from 110 to 120 persons, although the same individuals did not necessarily respond each time.

Measures

Weight and weight change. In this report, weight and weight changes are reported in pounds. Change scores were calculated for all weights by subtracting the earlier measure from that obtained later. All of the pre-assessment weights were measured by our staff using a balance beam scale, but most of the later weight data were obtained through subject self-report and, thus, not verified to be accurate.[4]

Behavioral self-reports. A follow-up questionnaire completed by subjects contained a number of questions designed to ascertain what, if anything, they have been doing to manage their weight since the previous assessment. The questions were mostly open-ended and asked about both eating behaviors and physical activity. One question called for subjects to estimate their average daily caloric intake; responses to this question were later coded from "1" (less than 1000 calories/day) to "7" (greater than 2250 calories/day). The remainder of the questions dealing with eating behaviors were combined into one rating from "1" (no application of the behavioral principles emphasized in the weight management program) to "7" (consistent application of behavioral strategies).[5]

A 7-point rating of physical activity was also made from responses to several items on the questionnaire. A rating of "1" signified that the person placed no emphasis on in-

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[4]Studies by Foreyt (Note 3) and Stewart, Brook, and Kane (1980) have shown that self-reported weights correlate highly with but are 2-3 pounds lighter than scale weights for subjects in weight management studies.

[5]The eating behavior ratings were done independently by two members of the research staff blind to the subjects' groupings and the ratings were averaged over raters. The interrater correlation was .85.

creased physical activity; "7" meant the person was fully committed to a regular, ongoing physical activity regime. An additional question ascertained what "special" activities (e.g., walking stairs instead of taking elevators) the person had adopted into her lifestyle.

Results

Training Period

Since the advanced trainees had lost an average of 22.5 pounds prior to beginning paraprofessional training, their weight loss during the nine-month training period must be considered independently from that of the primary trainees. On the average, the primary trainees lost in excess of 16 pounds during the training period while the advanced trainees, as a group, essentially maintained whatever weight losses they had achieved previously. This is in contrast to an average loss of 12.5 pounds for those rejected trainees who enrolled as participants in one of the 16 week groups co-led by the trainees and professional staff or the reported average loss of five pounds for those rejected trainees who had not been in contact with the program at all during this period.[6]

By the end of the training period the group of primary trainees were not statistically different from the group of advanced trainees on weight and psychological measures.

12 Months Posttraining

The crucial test of the helper-therapy principle entailed examining the differences between Involved Specialists and the two control groups during this first posttraining year in which the specialists were busy helping others manage weight. Analyses of variance for weight change and changes on the psychological inventories at FU-1 compared to posttraining showed no significant differences among groups. All three groups of subjects gained, on the average, from 3 to 5 pounds over this 12-month period, accompanied by a lowering of body cathexis, self-esteem, and general well-being. Behavioral differences among groups, however, were found for physical activity ratings ($F = 3.9$; df $= 2/109$; $p < .03$) and the eating behaviors rating scale ($F = 3.9$; df $= 2/116$; $p < .001$). A priori contrasts showed that the Involved Specialists were rated superior to both control groups combined and to each control group separately ($p < .05$). Significant differences were not found among groups on the daily caloric intake scale.

During the first 12 months posttraining, 16 of the specialists led two or more groups while 13 were only involved in the specialist role for a period of 12 weeks (i.e., one group). An internal analysis, splitting specialists by their degree of involvement in helping others, produced findings more in accord with the helper-therapy principle. Weight gain, for exmple, at FU-1 was significantly lower for the "Higher Involved" Specialists ($\bar{X} = 1.4$ pounds) than for the "Lesser Involved" specialists ($\bar{X} = 8.8$ pounds; $t = 2.4$; df $= 24$; $p < .03$).[7] Also, the previously discovered behavioral superiority of the Involved Specialists compared to the control groups was due primarily to the Higher Involved Specialists who were rated significantly higher than the control subjects on both the

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[6]Most untreated samples of overweight individuals over a nine-month period should either show no average weight loss or an average weight gain. The fact that this cohort of No Contact Control subjects reported an average weight loss probably means that they were an unrepresentative sample of the total group of No Contact Controls. Those with moderate success at managing their own weight were probably more willing to furnish follow-up data than individuals who had gained weight during this time.

[7]Seven out of 16 Higher Involved Specialists and six out of 13 Lesser Involved Specialists were "primary"; i.e., new to the Vanderbilt program in August, 1977. Thus, the differences between these groups could not be explained by previous contact with the program.

eating behaviors ($t = 3.18; p < .01$) and physical activity ($t = 2.92; p < .01$) rating scales. The Lesser Involved Specialists did not differ from the controls on either rating scale. Changes on the psychological inventories, however, did not differ significantly according to degree of specialist involvement.

TABLE 1

Weight Changes from Posttreatment to FU-2 by Groups

Group	*N*	Mean Weight Change in Pounds	Standard Deviation
Higher Involved Specialists	16	−2.17	12.51
No Contact Controls	49	+4.15	15.36
Contact Controls	24	+7.63	10.92
Lesser Involved Specialists	13	+17.38	20.94

$F_{(3, 86)} = 3.96; p < .01$

24 Months Posttraining

FU-2 results were similar to those found earlier at FU-1. Weight change during the year for the total group of specialists did not differ significantly from data obtained from subjects in the control groups. Those specialists who were still involved in leading weight management groups during this second posttraining yer (N = 9) essentially maintained their weight over this period ($\bar{X} = 0.4$ pounds gained) but so did the remainder of the specialists ($\bar{X} = 0.3$ pounds gained). Examining FU-2 weight data by degree of specialist involvement during the *first* year posttraining, however, did reveal between group differences. Changes in weight for the entire 24-month posttraining period are presented in Table 1 which shows that only the Higher Involved Specialists (as defined by involvement in the first 12 months posttraining) had a group average weight *loss* over the two years. Both of the control groups regained weight, but the group with the largest gain was the Lesser Involved Specialists.

Behaviorally, those specialists still involved during this later time period were rated higher than those who were no longer involved (eating behavior, $p < .01$; physical activity, $p < .05$).

Discussion

The Helper-Therapy Principle

The inescapable conclusion to be drawn from this two-year follow-up of paraprofessionals trained as weight management specialists is that the helper-therapy principle only applies to weight loss or weight loss maintainance when a certain condition has been met; namely, "high" involvement. It took a certain degree of commitment—operationalized in this study by leading at least two weight management groups in the first posttraining year—to set into motion the complex chain of events which led to the relatively modest physical and psychological effects discovered in this investigation. Specialists leading two or more groups in the year following training had an average net weight loss during the 24 months following training. Conversely, specialists involved in the leadership of only one group gained or regained an average of over 17 pounds during the same period of time. These Lesser Involved Specialists and subjects in

both control groups gained back an average amount of weight proportional to the amount they had lost during, or prior to, the nine-month training period.

Behavioral data obtained by self-reports at follow-up partially replicated the weight loss (or outcome) data, but with one very important difference. The Lesser Involved Specialists received lower behavioral ratings than those specialists with more involvement, but higher ratings than subjects in the control groups. It was as if these Lesser Involved Specialists were initially trying to make some feeble or half-hearted attempts at managing their weight by inconsistently applying the principles they had learned and were prepared to teach. But, in order to succeed at weight management, half-hearted attempts are not nearly enough.

There is no apparent explanation why those specialists who remained involved as group leaders into the second year posttraining, and who were judged as behaving in a more appropriate manner than other subjects, did no better in losing weight during this time period than specialists who were no longer leading groups. It is possible that there is some optimal amount of involvement, beyond which there are few additional benefits. This study was not designed to answer the question, "How much involvement as a weight management specialist is necessary to facilitate long-term weight maintenance?" That question is probably unanswerable, since it is virtually next to impossible to design an experimental investigation randomly assigning specialists to various levels of "involvement."

We had relatively little control over which specialists chose to lead groups. We tried to make helping opportunities equally available to all of the specialists over the entire two-year period of this study, but their own interests and life circumstances dictated who led a group and who did not. We do know that a number of the specialists who did not continue with the program after their initial leadership experience were dissatisfied with their weight loss efforts and did not see themselves as appropriate role models for the program. Undoubtedly, specialists who did not experience the immediate benefits of the specialist role were the ones who did not volunteer to lead additional groups, thus consigning themselves to the category of "lesser involved specialists." Perhaps they were expecting too much from themselves or the program and gave up too easily when the results were not forthcoming. There is no way to rule out the alternative explanation that some unknown "motivational" factor was responsible for a person being both highly involved as a specialist and successful in weight management.

Indirect Benefits

Findings presented in this paper suggesting that merely being trained as a paraprofessional weight management specialist is not sufficient to assure the physical and psychological benefits predicted by the helper-therapy principle, however, are only one side of the coin. The training program had other, more indirect, benefits. For instance, many of the specialists reported significant positive changes in eating and activity patterns of family members and friends. Hundreds of people enrolled in community- and university-based treatment programs during the two-year posttraining period and were helped in managing their weight by the nearly 30 specialists who led groups (see Pleas, Daby, Katahn, & Wallston, Note 4). Furthermore, these services were delivered at a far lower cost than comparable assistance available from health professionals. Finally, the weight management and group leadership skills acquired by the specialists are not particularly restricted to weight management; properly mobilized, the specialists can be

utilized to deliver other health care services, especially those involving application of behavioral principles.

A Cautionary Note

The time we took to train this first cadre of weight management specialists—125 hours over a nine month period—may not have been really necessary. We now know we can do the training in a much shorter time period, approximately 24 hours over a 2-3 week period, providing that we do not concurrently have to help the trainees lose weight. But we also know that the specialists have been very reluctant to strike out on their own and become independent entrepreneurs. With very few exceptions, the specialists who have continued to lead groups do so under the auspices of our university-based program. We have not been successful in encouraging the specialists to set up a community-based network of paraprofessionals in which we, as professionals, would play only an advising role.

Many specialists applied to the program imbued with a spirit of volunteerism. The notion of helping oneself by helping others held great intrinsic appeal. There has been, however, as much burnout among these paraprofessionals as one sees with most helping professionals. The cost-effectiveness of this approach toward solving the problem of long-term weight maintenance can be challenged, as can the cost-effectiveness of this method of producing a cadre of trained paraprofessionals. Further work must be done on the crucial question of how to prevent burnout by capitalizing on the motivations that optimize commitment to the helper role.

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