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# Treatment of Obesity in Mentally Retarded Persons: The Rehabilitator's Role

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**O**BESITY is a common problem for the mentally retarded and nonretarded populations. Prevalence estimates ranging from 40 to 80 million obese Americans have been reported.<sup>14</sup> The relationship between obesity and cardiovascular disease, diabetes mellitus, and other health related problems is strong.<sup>17</sup> Also, the greater the degree of obesity, the higher the risk of medical problems.<sup>4</sup> In addition to the health problems associated with obesity, the obese mentally retarded person is likely to be the object of increased social prejudice and nonacceptance as a result of being both mentally retarded and obese.<sup>13</sup>

Fortunately, this situation does not need to be an intractable one. Van Itallie<sup>17</sup> cited studies reporting a positive influence for weight reduction on health. Another treatment goal has been enhanced self-esteem.<sup>8</sup> Given these promising outcomes for weight reduction, the field of obesity has witnessed an explosion of diet programs and exercise regimes to promote weight loss. These programs have varied in their initial success but nearly all have failed to produce long-term maintenance of weight loss.<sup>3</sup> The application of behavioral procedures to the problem of obesity has produced more promising results.<sup>1</sup> This approach has also been successfully extended to the mentally retarded population.<sup>6</sup>

This article describes the treatment rationale and procedures for a behavioral self-control package that has been developed for the obese retarded population. Implications of this approach for professionals concerned with rehabilitation efforts for mentally retarded persons will be delineated.

## Treatment for Obese, Retarded Individuals

### Background Rationale

Weight gain occurs when caloric intake exceeds the body's energy needs. If this imbalance between caloric intake and energy output is present over a period of time, obesity may result. Of course, the rate of one's progression towards obesity will depend on the degree of the caloric imbalance (how many excessive calories accumulate) and the individual's unique physical characteristics (such as metabolism rate). At-

tempts to correct this imbalance and related weight problems through diet programs, weight loss groups, and exercise have not produced significant and maintained weight loss.<sup>3</sup> As Stunkard<sup>15</sup> stated, "Most obese persons will not remain in treatment. Of those that remain in treatment, most will not lose weight, and of those who do lose weight, most will regain it." Stunkard's statement accurately reflected the general

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pessimism present in the obesity literature through the 1950's and into the 1960's. However, with the advent of behavioral procedures for treating obesity, the outlook for intervention efforts with the obese population is more optimistic. Behavior modification is more effective than previous methods of treatment for obesity.<sup>16</sup>

Two major findings were generated from the obesity literature of the 1970's. First, weight loss will occur by changing an obese person's specific eating behaviors. Simply controlling caloric intake and increasing energy expenditure is insufficient for teaching a person the new eating pattern necessary to promote long-term maintenance of weight loss. Secondly, adding a self-control component to treatment will enhance the likelihood that the client will maintain the new eating skills once formal treatment is over. Both of these findings have been incorporated into the treatment package for obese retarded individuals to be described. This package has been shown to produce significant and maintained weight loss in mildly retarded adults,<sup>10</sup> moderately retarded persons,<sup>7</sup> adolescents with Down's syndrome, and mildly/moderately retarded children.<sup>11</sup>

## Definition and Measurement

The first step in weight reduction programs is to determine the degree of obesity in the participants. Most authors agree that body weight 20 percent above desirable weight represents an obese condition.<sup>5</sup> We have advocated using these measures for determining the presence of a need for a weight reduction program: 1) *visual inspection*—observing a person's physical condition (for example, overly filled-out face, large belly, and so forth), 2) *height-weight tables*—comparing a client's body weight to established height and weight tables (such as from the Metropolitan Life Insurance Co.), and 3) *skinfold thickness*—measuring the thickness of the triceps skinfold with thumb and forefinger. Generally, when a client has obvious physical signs of a weight problem combined with a current body weight 20 percent above desirable weight, and a tricep skinfold thickness of about 1 inch, a weight loss program is indicated.

## Treatment Program

*Techniques.* The treatment is a multicomponent program that sequentially introduces the retarded participants to a number of new eating techniques over 14-week training and 5-week maintenance periods. Each technique and its sequence is briefly described below and elaborated in greater detail elsewhere.<sup>8</sup>

Weeks 1 and 2—the clients are taught to record their daily weight and food intake. Weeks 3 and 4—a negative emotional response routine is introduced to reduce urges to overeat. Weeks 5 and 6—clients eat in only one area to limit potential cues associated with eating. Weeks 7 and 8—number of helpings each meal are reduced. Weeks 9 and 10—rate of eating (number of spoonfuls/minute) is reduced. Weeks 11 and 12—increased exercise is initiated. Weeks 13 and 14—snacking between meals is discouraged in favor of other activities (such as reading or hiking).

*Instruction.* Each new technique is described, modeled, and practiced by the participants (with feedback) during all three weekly sessions until a mastery criterion level is achieved. Participants keep folders with information concerning new techniques so that people in their natural environment can facilitate generalization of skills learned in the training sessions. This is also fostered through homework assignments.

*Reinforcement.* Participants provide self-delivered reinforcers for adherence to the techniques trained. These reinforcers include positive self-statements ("I'm doing great") and activities (such as going shopping). Weekly weigh-ins are conducted in the group

setting and graphically displayed on a wall chart. Clients receive weekly reinforcers for weight loss (one pound per week, minimum). In one study<sup>9</sup> six adolescents with Down's syndrome earned admittance to a Friday afternoon school activity (such as a dance or movie) for losing a pound. Home weekly reinforcers are also used to promote generalization.

*Maintenance.* Five weeks of maintenance training with two sessions each week are conducted to wean any dependence the participants may have developed during the program and to encourage continued practice of the technique trained. Each maintenance session briefly reviews all techniques and continues the reinforcement program. Usually after the program ends, follow-up calls are made to encourage continued use of the techniques and check progress.

## Implications for Rehabilitation

The overriding goal of the vocational rehabilitation process is to maximize a client's vocational potentialities.<sup>2</sup> Clients burdened with an obese condition may be restricted in this process of achieving their maximum potential as a result of related health and social-emotional problems. With the advent of a behavioral technology for treating the obese retarded population, habilitators now have available relatively simple, low-cost, a well-verified tools for dealing with this significant problem.

A general framework for applying a behavioral approach within a rehabilitation setting (such as a clinic, workshop, hospital) has been previously described by Karan and Gardner,<sup>2</sup> who recommend the implementation of such specific treatment programs as part of the habilitation process. Given this framework, a few pertinent issues remain regarding implementing this self-control package for weight loss in a rehabilitation setting. Within a rehabilitation setting or a reasonable geographic area, a professional needs to be identified as the treatment agent (group leader) for problems of obesity.<sup>5</sup> This person, familiar with the procedures of the weight loss package, could run a pilot training program for a group of 8 to 10 obese retarded clients. If possible, the training sessions should be videotaped, including the leader presentations of each technique and the clients practicing the new skills. These videotapes could be edited or modified for use with future groups at a significant time savings for the group leader. Rotatori and Switzky<sup>12</sup> found that videotaped presentations of the training package was as effective in producing weight loss in moderately retarded high school students as live presentation of the techniques.

To enhance generalization of training, the leader should attempt to use a training room and materials that closely approximate the participants' natural eat-

ing settings (through the physical arrangement of chairs and tables, use of full place settings, and actual foods). Also, close attention must be given to homework assignment performance, technique practice during training sessions, and reports from significant others in the clients' natural environment to ensure the skills are practiced during the sessions, at home, work, and even in unique settings (restaurants, visit to a friend's house). This consideration is important to prevent clients from learning inappropriate discriminations for returning to their old eating habits, like overeating at their grandmother's house.

Another consistent problem with all programs is maintenance of weight loss once treatment has terminated. Several methods are available to combat this reoccurring problem. Throughout the course of the 19-week program, efforts toward moving the clients from reliance on external controls to more self-controlling contingencies should be specifically built into the program. Participants should be encouraged to identify and reinforce their own progress with covert ("I'm looking and feeling better") activity (bike

riding) and tangible reinforcers (buying new clothes at smaller sizes). Significant others such as parents, friends, workshop supervisors, teachers, and others in the client's environment need to continue to praise a client's progress on a very regular basis (daily) once treatment is over, and occasionally (weekly, monthly) provide tangible recognition (for example, a new record or shopping trip) for continued or maintained weight loss.

Follow-up contacts by the group leader can function as powerful reinforcers for client progress or, in some cases, may reveal the need for enrollment in another group.

The treatment program described herein can be easily adapted to rehabilitation settings. The equipment and space demands are minimal. Also, a good share of the required professional time commitments can be reduced by using video and audiotape equipment. It is a cost-effective treatment program that produces significant results maintained over time.

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