DEVELOPMENTAL SKILLS TRAINING (DST) FOR PEDIATRIC AND ADULT OBESITY TREATMENT

L. M. Mellin and D. M. Krupp

Departments of Family and Community Medicine and Pediatrics, University of California, San Francisco

DST — A New Paradigm

DST proposes a new paradigm for the prevention and treatment of pediatric and adult obesity. In this model, obesity is not identified as the treatment problem, but as a symptom of an underlying insufficiency of developmental skills compared to the individual need for these skills based on genetic and environmental factors. This skill insufficiency results in a lower capacity to regulate the allostatic response to both internal and external stressors and impedes psychological development. Over time, this increases the allostatic load and contributes to a broad spectrum of changes that promote obesity, to its refractory and intractable nature, as well as to other psychosocial, behavioral and health problems.

The goal of DST is to enhance the developmental skills of obese patients to produce and maintain changes in a broad spectrum of health-related factors including obesity without: 1) treatment dependency, and 2) behavioral substitution (e.g., overexercise, smoking, substance abuse or eating disorders).

The Limbic System and the Allostatic Response

The limbic system processes stressors from the external environment and the internal milieu. When the total perceived stress is greater than the individual’s capacity to process it, an allostatic response is initiated which influences stress hormones and neurotransmitters in ways that alter psychological, behavioral and physiological parameters that influence the development and exacerbation of obesity and other psychological, social and behavioral problems.

DST is a comprehensive, transdisciplinary program that equips patients with the two most fundamental developmental skills, self-nurturing and effective limit-setting, that are associated with weight and territorial and other psychological, social and behavioral outcomes.

Training and Program Information

Health professionals who have completed specialized training provide DST to children and adults. It may be conducted individually, in small groups or larger community settings. The format involves materials (workbooks and audio instructions) that may be used in both in-person and distance learning conditions. The Shapedown Program is the application of DST for children and adolescents and The Solution Method is its application for adults. Pediatric programs are conducted in 10-week sessions and material costs are $16 per month. Adult programs are conducted from one to 18 months and material costs are $33 per month.

Pediatric Outcomes

The effectiveness of the adolescent obesity intervention SHAPEDOWN was evaluated for 15 months through a randomized experimental design study. Test group (n = 37) participating in the intervention were compared with a no treatment control group (n = 26). Participation in the group application of the program (14 weekly, 90 minutes sessions and two parent sessions) was associated with significant improvement in relative weight (actual weight/height/national normative weight) (p < .0001), weight-related behavior (Habit Inventory), self-esteem (Rosenberg’s Self-Esteem Scale), depression (Rosenberg’s Depressive Affect Scale) and knowledge of weight management concepts (SHAPEDOWN Knowledge Test) at post-treatment (3 months) and at 1-year follow-up (15 months). Change in relative weight for the test group was -9.0 kg +/- 14.9% compared to -0.10 kg +/- 13.2% for the control group. At month 15 of the study period, weight change in the test group compared with controls was -5.15 kg.

Adult Outcomes

