

Coping Skills Training in a Telephone Health Coaching Program for Youth at Risk for Type 2 Diabetes

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ABSTRACT

Introduction: The purpose of this article is to describe components of a health coaching intervention based on coping skills training delivered via telephone. This intervention was provided to urban adolescents at risk for type 2 diabetes mellitus (T2DM), reinforcing a school-based curriculum designed to promote a healthy lifestyle and prevent T2DM.

Method: Health coaching via telephone was provided to at-risk urban youth enrolled in a study of an intervention to reduce risk for T2DM. Vignettes are used to describe the use of several coping skills in this high-risk youth population.

Results: A variety of vignettes illustrate how telephone health coaching reinforced lifestyle changes in students by incorporating coping skills training.

Discussion: Given the benefits and the challenges of the telephone health coaching intervention, several suggestions for others who plan to use a similar method are described. *J Pediatr Health Care.* (2011) 25, 153-161.

KEY WORDS

Coping skills, health education, vulnerable populations

Once rare, the incidence and prevalence of type 2 diabetes mellitus (T2DM) is increasing among adolescents, and in particular, among ethnic minority groups (American Diabetes Association, 2000; Bloomgarden, 2004; Singh, Shaw, & Zimmet, 2004). The epidemics of obesity and diabetes co-exist as health burdens in our society; thus, the term “diabesity” was coined (Astrup & Finer, 2000; Shafrir, 1996). Although this term was used in reference to the escalation of these health conditions in adults, there is now an increasing prevalence of both of these conditions in youth. Among adolescents aged 12 to 19 years, the prevalence of

obesity has tripled in the past several decades, increasing from 5% in 1980 to 17.6% in 2006 (Ogden, Carroll, & Flegal, 2008). Sedentary lifestyles combined with increased caloric intake have contributed to this problem in youth (Gordon-Larsen, 2001).

Evidence exists that overweight status in children is related to impaired glucose tolerance, a precursor of diabetes. A study by Weiss and colleagues (2005), for example, noted that impaired glucose tolerance (IGT) eventually developed in 10% of children (ages 4 to 18 years) who were overweight with a normal glucose tolerance test. T2DM developed in 24% of those who initially were classified as having IGT during an 18- to 24-month period, while 30% continued to exhibit IGT and 45% reverted to normal glucose tolerance (Weiss et al., 2005). The majority of the study's participants in whom T2DM later developed were African American girls who had gained a significant amount of weight, contributing to an increased body mass index (BMI). Those who maintained their weight and BMI reverted to normal glucose tolerance, suggesting that there are opportunities for prevention of T2DM (Weiss et al., 2005).

Increased insulin levels and insulin resistance also have been reported in overweight and obese youth, indicating the need for early intervention to prevent progression to T2DM (Conwell, Trost, Brown, & Batch, 2004; Uwaifo et al., 2002). Insulin resistance, a component of metabolic syndrome, also is associated with the presence of early cardiovascular disease (Chen, Srinivasan, Elkasabany, & Berenson, 1999). Diabetes is a component of the metabolic syndrome and is also a significant cardiovascular risk factor (Goran, Ball, & Cruz, 2003; Klein et al., 2004). In two landmark studies, the Diabetes Prevention Program and the Finnish Diabetes Prevention Study, a low-fat diet, increased physical activity of 150 minutes a week, and a modest weight loss of 5% to 7% of body weight decreased the onset of T2DM in adults (Knowler et al., 2002; Tuomilehto, Lindstrom, & Eriksson, 2001). Although conducted with adults, these studies suggest that early intervention may prevent the progression to T2DM and may decrease cardiovascular risk factors, but there is a need for more research with youth at risk for T2DM.

HEALTH COACHING AND COPING SKILLS TRAINING

The lifestyle changes needed to cope with and manage obesity and prevent T2DM require ongoing support

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and follow-up until changes are internalized. Health coaching may be an effective way to support such lifestyle changes and improve health outcomes in overweight youth (Saelens et al., 2002). Based on Bandura's framework (1986), health coaching interventions attempt to achieve behavior change by improving self-efficacy through modeling and reinforcing new behaviors. Health coaching is a patient-centered process that consists of setting goals, identifying obstacles, and mobilizing existing supports. In pilot work, health coaching conducted over the telephone, in combination with a multi-component behavioral weight control intervention for adolescents, has shown promise as an effective way to reduce BMI levels and increase healthy behaviors in some youth (Alm et al., 2008; Saelens et al., 2002). However, there is scant literature on health coaching related to the prevention of T2DM in youth. These findings suggest that telephone health coaching may reinforce nutrition and physical activity education, in accordance with recent recommendations for obese youth (e.g., Spear et al., 2007), resulting in improved healthy lifestyle outcomes (Grey et al., 2004).

Originally developed with adults, training in interpersonal and coping skills has been shown to be important in helping individuals carry out personal health behaviors (Grey, Boland, Davidson, Li, & Tamborlane, 2000). Coping skills training (CST) focuses on retraining non-constructive coping styles into more productive behaviors. The major skills involved are social problem solving, communication skills, stress reduction, cognitive behavior modification, and conflict resolution (Davidson, Penney, Muller, & Grey, 2004). In this article, we describe components of a health coaching intervention provided to overweight adolescents, with the goal of promoting a healthy lifestyle for the prevention of T2DM. A variety of vignettes illustrates how health coaching reinforced lifestyle changes in students by incorporating coping skills.

THE CURRENT STUDY

The health coaching intervention was provided as part of a study of a multi-faceted school-based intervention (nutrition and physical activity education, including information about risk factors for developing T2DM, coping skills training, and health coaching) to prevent T2DM in youth who were at high risk (BMI >85th percentile and family history of diabetes). Participants were recruited from six inner-city middle schools. The purpose of the study was to determine the efficacy of this educational program compared with a similar program that had the addition of coping skills training and telephone health coaching. Results from the study have been published elsewhere (Grey et al., 2009). CST was designed to increase the youth's sense of competence and mastery by teaching constructive coping skills. The specific coping skills addressed were: social problem solving, communication skills (including social skills training and

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