General Life and Diabetes-Related Stressors in Early Adolescents With Type 1 Diabetes

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ABSTRACT

Introduction: To examine general and diabetes-related stressors in early adolescents with type 1 diabetes (T1D).

Method: Data were from 205 participants (58% female; 33% minority; 11-14 years) enrolled in a clinical trial. Teens identified their top 3 stressors and responded to open-ended questions. A content analysis method was used to identify themes across stressor categories.

Results: Eight-two percent of teens reported that school was a top stressor, followed by social life (49%) and diabetes (48%). We identified 5 themes of general life stressors (fitting in, having friends, balancing competing demands, living with family, and feeling pressure to do well) and 3 themes of diabetes-specific stressors (just having diabetes, dealing with emotions, and managing diabetes).

Discussion: Though teens with T1D experienced stressors specific to T1D, they perceived stress related to normal adolescent growth and development more frequently. Teens with T1D may need psychosocial support that holistically addresses both typical developmental and diabetes-related stressors. J Pediatr Health Care. (2016) *30*, 133-142.

KEY WORDS

Stress, type 1 diabetes, adolescents

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Type 1 diabetes (T1D) is one of the most common chronic pediatric illnesses. This autoimmune disorder is diagnosed in more than 15,000 children per year in the United States and requires extensive self-management with active involvement of both the adolescent and his or her family in diabetes self-management (Centers for Disease Control and Prevention [CDC], 2014). Diabetes self-management is complex and demanding, requiring frequent blood glucose monitoring, carbohydrate counting, administration of insulin, and treatment of events of hypo- and hyperglycemia. Self-management is necessary to prevent short and long-term complications such as seizures, nephropathy, diabetic ketoacidosis, neuropathy, and retinopathy (Guo, Whittemore, & He, 2011; Campbell et al., 2014). Self-management often requires frequent blood glucose monitoring and insulin injections or the use of pump therapy (both of which require frequent adjustment depending on food intake and physical activity). Diabetes self-management is intensive, constant, complex, and visible, contributing to feelings of stress and social awkwardness in adolescents.

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Adolescence is a developmental and transitional time when youth experience physical, cognitive, and psychosocial changes. Physically, adolescents are going through puberty. Cognitively, they are developing advanced reasoning skills. Psychosocially, adolescents are establishing autonomy, developing self-conceptions, and becoming more involved with their peer groups (Stang & Story, 2005; Steinberg & Morris, 2001). Having a chronic health condition during adolescence can add additional stressors related to self-management with the potential for impact on both the chronic health condition and developmental tasks. These multiple developmental tasks may be stressful to adolescents and may be sources of general life stressors (Compas, Jaser, Dunn, & Rodriguez, 2012; Suris, Michaud, & Viner, 2004). Indeed, several research studies have examined the issues that adolescents encounter while balancing chronic health condition stressors and negotiating the developmental challenges of adolescence. This is particularly evident in the literature relating to asthma (Chen, Fisher, Bacharier, & Strunk, 2003), cystic fibrosis (Christian & D'Auria, 1997), cancer (Decker, 2007), and congenital heart disease (Karsdorp, Everaerd, Kindt, & Mulder, 2007), yet less is known regarding T1D-related stressors during adolescence, which is a critical developmental stage when diabetes self-management skills are learned and lifelong behavioral habits are formed (Bandura, 2004; Schilling, Grey, & Knafl, 2002).

Among adolescents with T1D, the combination of general life stressors related to adolescent growth and development and diabetes-specific stressors can contribute to physiological and psychological sequelae. Exposure to multiple general life and diabetes-specific stressors places high demands on adolescents with T1D, which may result in adverse health outcomes, such as a decline in metabolic control (Palta, Shen, Allen, Klein, & D'Alessio, 1996) or psychosocial challenges, such as depressive symptoms (Kovacs, Obrosky, Goldston, & Drash, 1997). Because multiple types of stressors exist, there has been recent discussion of the importance of classifying and identifying diabetes-specific stressors versus general stressors in order to better understand the phenomena and develop tailored interventions (Fisher et al., 2007).

There is a paucity of literature in which general life and diabetes-specific stressors are examined simultaneously, and previous studies have been primarily qualitative with small sample sizes (Davidson, Penney, Muler, & Grey, 2004; Hema et al., 2009; Huus & Enskär, 2007). Further research is needed to describe how general life and diabetes-specific stressors may overlap and intersect with one another in the context of adolescence. Each type of stressor may have different implications for framing clinical discussions, creating management plans, and assessing outcomes (Hermanns, Kulzer, Krichbaum, Kubiak, & Haak, 2006). Understanding the adolescent perspective of general life and diabetes-specific stressors from a mixed methods perspective may help inform clinical discussions and the development of interventions targeting stress in adolescents with T1D because it can help us gain a more complete and comprehensive understanding of this issue.

Therefore, the purpose of this study was to examine general life and diabetes-specific stressors from the perspective of early adolescents (ages 11 to 14 years) with T1D. We also examined differences in demographic and clinical characteristics of adolescents who perceived high diabetes-specific stress compared with adolescents who perceived high general stressors.

METHODS

Design

We used cross-sectional secondary data analysis with descriptive and content analysis approaches to examine qualitative data from a multisite randomized clinical trial. The randomized clinical trial compared the efficacy of two Internet psycho-educational programs for early adolescents with T1D: TEENCOPE, an Internet coping skills training program, and Managing