

Coping Profiles Associated with Barriers to Self-Management in Adolescent Diabetes

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Introduction

Pediatric Type 1 diabetes affects one in every 400-500 children making it one of the most widespread childhood chronic illnesses (NIDDK, 2003). Individuals with type 1 diabetes need to plan for and complete many daily tasks including taking insulin up to five times a day and determining the appropriate dose of that insulin in relation to diet and exercise. Previous research has shown that adolescents have a difficult time coping with the physical, emotional, and social demands of self-management of type 1 diabetes, and that more than half do not adequately complete self-management tasks teenager (Kyngas, et al. 2000). Problem solving and coping skills training have been shown to enhance adolescent self-efficacy and competence, improve completion of self-management tasks, and improve diabetes outcomes (Graue, et al. 2004). The purpose of this study was to see if unique coping profiles emerged for the type of barrier identified by the adolescent and if these coping profiles differed from the general coping profile of the entire sample.

Methods

Sample – Type 1 adolescent diabetic patients were recruited from the Eskind Diabetes Clinics. The eligibility criteria restricted the sample to adolescents between 13 and 17 who had been diagnosed with Type 1 Diabetes for more than 6 months. Participants were either approached in clinic and recruited or filled out an interest card in the waiting area of the clinic and were contacted to set up a recruitment appointment at their home.

Design – The data presented here are part of a larger survey used within a randomized trial of a diabetes self-management intervention. At the time of recruitment, adolescents completed a survey on the Internet that assesses diabetes self-management practices, barrier identification, problem solving skills, and coping strategies.

Measures – Self-management barriers were elicited by asking about the last time the participant remembered not taking care of diabetes when they should have, and the main thing that caused them not to take care of diabetes. Participants could choose one of 5 barrier types: People, Situation, Feeling, Thought, or Diabetes literacy/knowledge. Coping with the barrier was then measured using 13 subcategories of the Brief COPE inventory scale developed by Carver (Carver, 1997).

Analyses

Data from surveys was analyzed using SPSS (v16). Descriptive statistics and graphical analyses were used to examine the overall reported coping style effectiveness the coping profiles by type of self-management barrier.

Results

At the time of analyses, 25 adolescents had been recruited and filled out an assessment survey. Table 1 shows descriptive statistics for the sample and the reported self-management barriers.

Graph 1 shows coping styles across all types of barriers. Patterns of coping effectiveness indicate an overall trend that adolescents thought active, planning, positive reframing, acceptance, religion, emotional support, and instrumental support were all helpful coping strategies to use when dealing with barriers to self-management.

Graph 2 shows effectiveness of coping styles for situation barriers. This pattern was similar to the overall pattern seen in graph 1. Denial was perceived as a less effective coping strategy for situations compared to feeling barriers and overall.

Graph 3 shows coping styles for feeling barriers. This pattern was similar to the overall pattern seen in graph 1. However, behavioral disengagement, venting, and religion were perceived as more effective here than for other barrier types.

Table 1. Sample Descriptive Statistics (N=25)

Variable	Mean or Percent (SD)
Age (years)	15.32 (1.63)
Gender (Male)	64 %
Time since Dx (years)	7.02 (3.83)

Barriers to SM Reported

Feeling	40 %
Situation	36 %
Person	8 %
Thought	8 %
Knowledge	8 %

Self-Management Task Affected

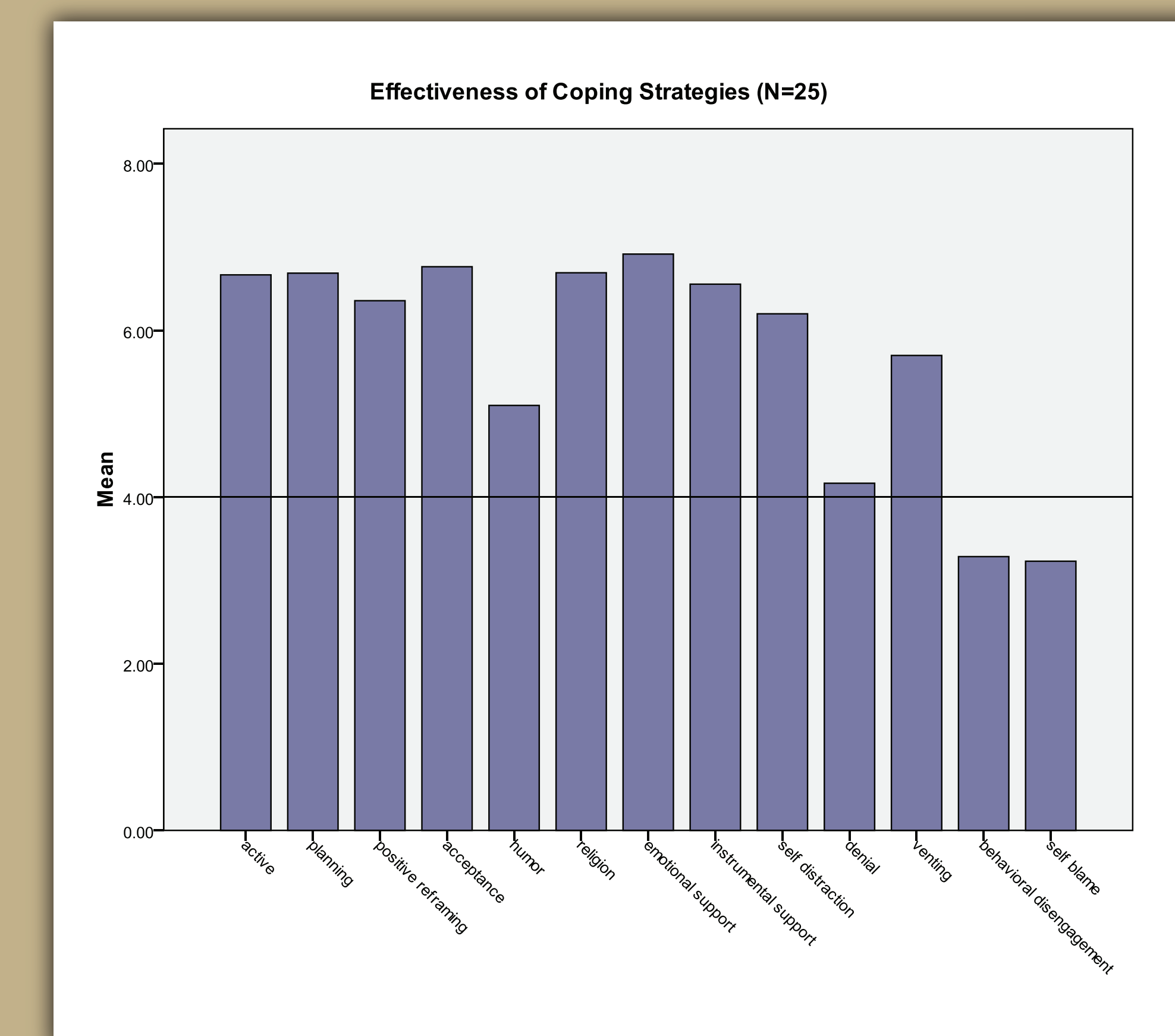
Check blood	48 %
Low/high blood sugar	12 %
Calculating insulin	8 %
Having supplies	8 %
Sick days	8 %
Wearing diabetes bracelet	8 %
Pump site	4 %
Counting carbs	4 %
Food choice / eating	0 %
Keeping Dr. appointment	0 %
Exercising	0 %

Time Since Barrier Encountered

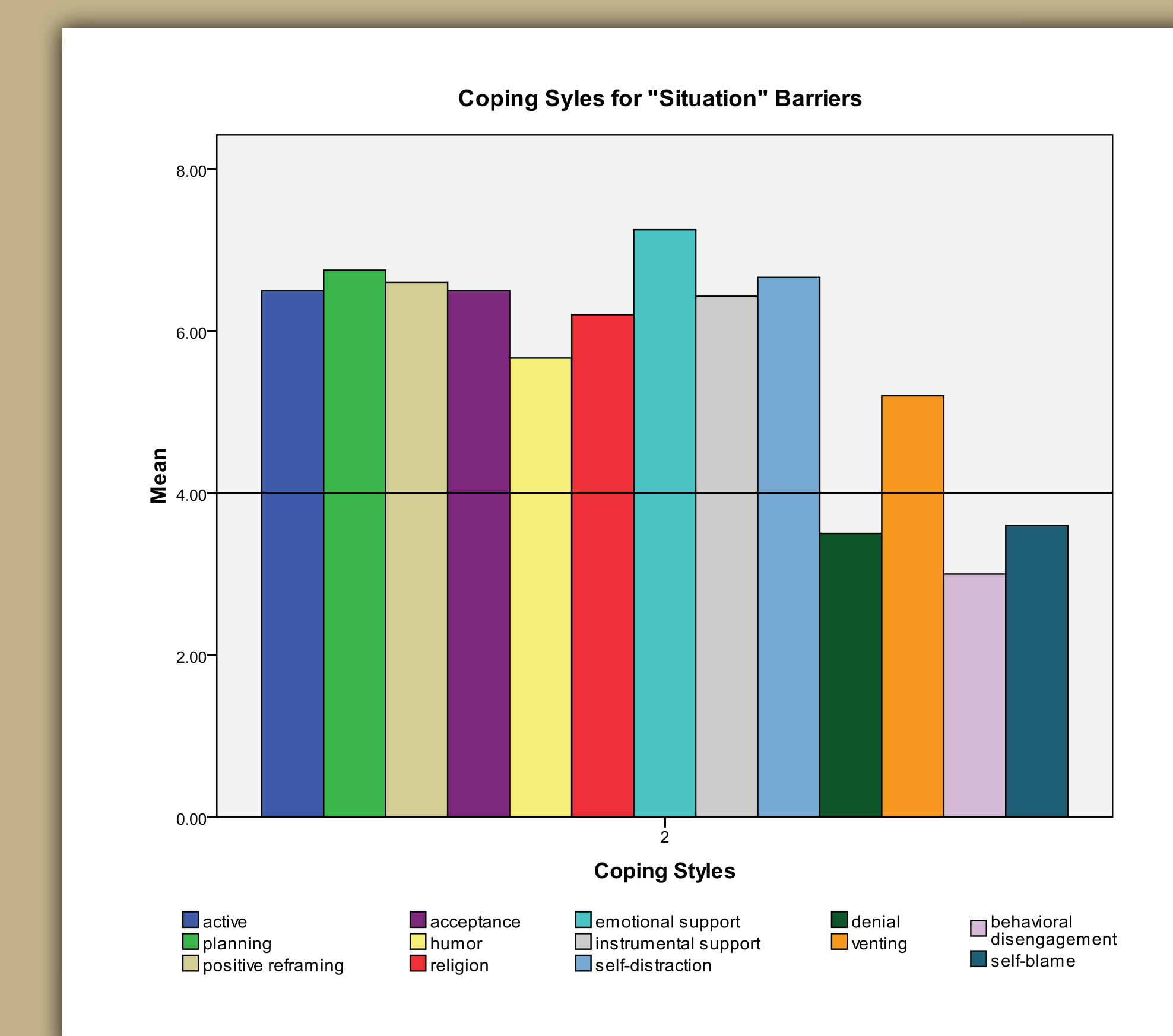
Within day	8 %
Within last week	16 %
1-2 weeks	20 %
2-4 weeks	24 %
More than 1 month	32 %

Discussion

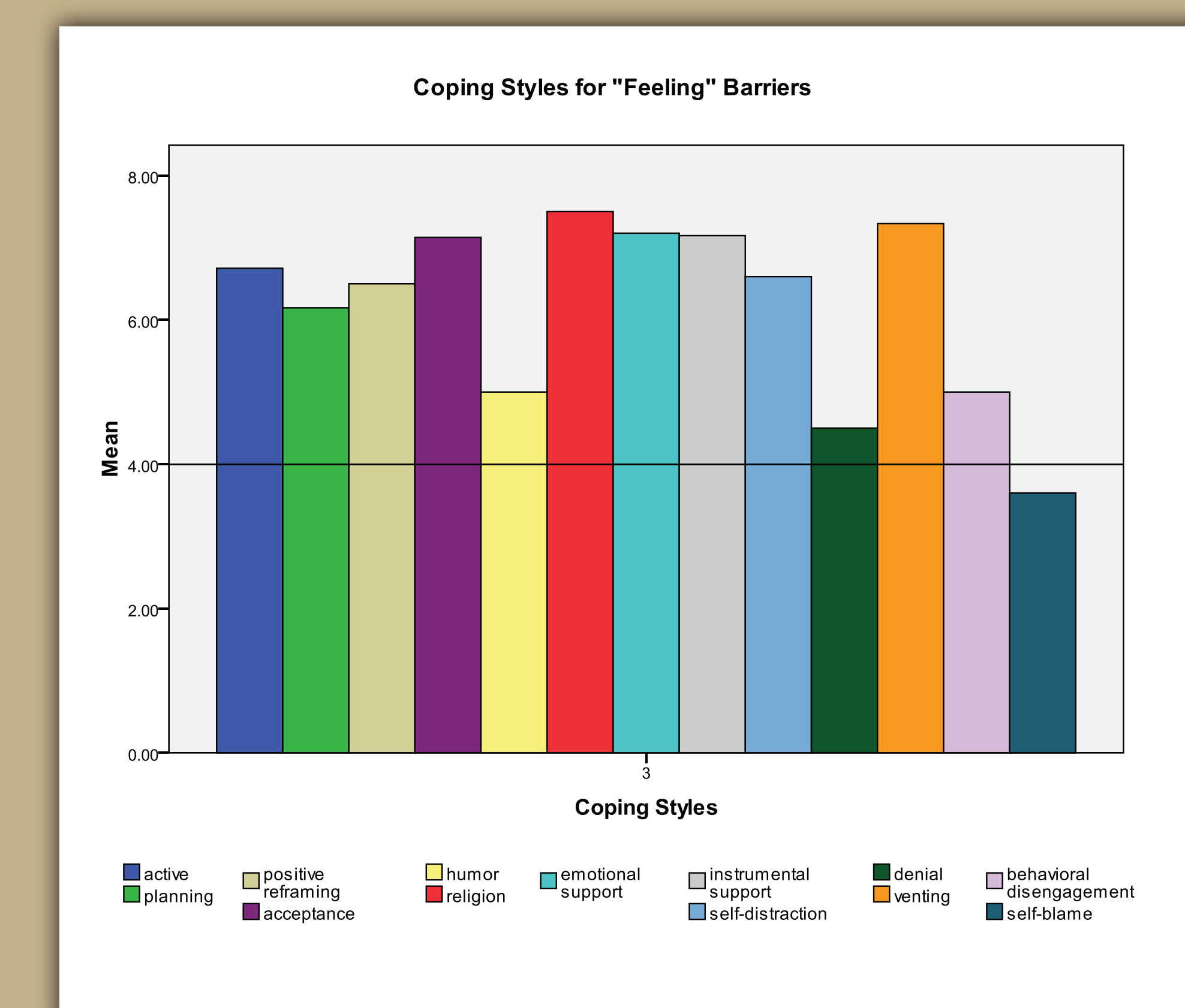
The study is limited by a small sample and limited characterization of the actual barrier encountered. The results indicate that adolescents believe a number of different strategies are helpful in coping with barriers to diabetes self-management. Overall, humor, denial, behavioral disengagement, and self-blame were considered the least effective strategies. Adolescents tended to use more adaptive coping strategies such as positive reframing, acceptance, and emotional support.



Graph 1. Coping styles across all types of barriers



Graph 2. Effectiveness of coping styles for situation barriers



Graph 3. Coping styles for feeling barriers