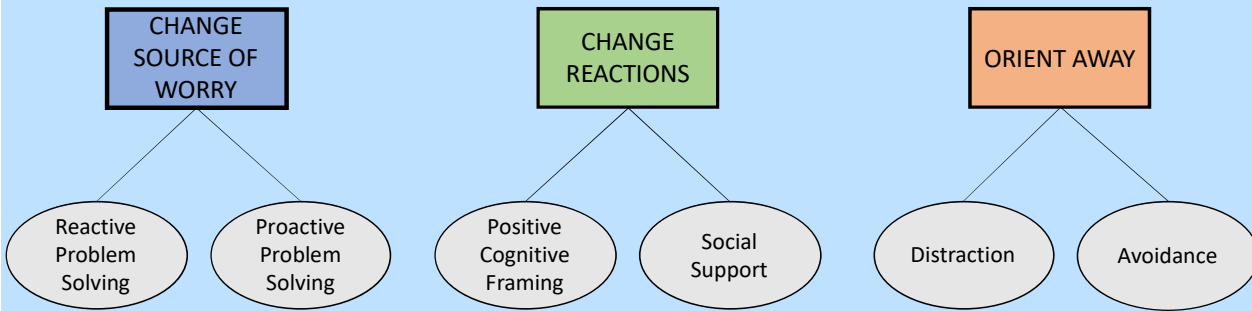


# How Children, Adolescents, and Young Adults with Type 1 Diabetes Cope with Diabetes-Related Worries



**Lindsay Taraban,**  
 Viena T. Cao,  
 Rachel Wasserman,  
 Sahar S. Eshtehardi,  
 Barbara J. Anderson,  
 David G. Marrero,  
 & Marisa E. Hilliard

Young people with type 1 diabetes cope with worries by:  
 changing the *source* of worries,  
 changing *reactions* to worries,  
 and shifting *attention* away from worries



[lindsay.taraban@bcm.edu](mailto:lindsay.taraban@bcm.edu)

**INTRO**

- Youth with type 1 diabetes (T1D) experience wide-ranging worries about diabetes
- Effective coping with diabetes-related stressors has been associated with better health and psychological outcomes
- However, little is known about *specific ways* youth cope with their diabetes-related worries

**METHODS**

- Participants: 23 children, adolescents, and young adults (ages 8-25) with T1D in Texas and Indiana
- Semi-structured qualitative interviews about T1D-related quality of life
- Completed secondary analysis of coping-related content
- Coded interview transcripts and used hybrid thematic analysis to derive central themes

**RESULTS**

- Major themes and subthemes displayed in the figure, and illustrative quotes at far right

**DISCUSSION**

- Major themes align with existing frameworks:
  - E.g., *primary* (change source), *secondary* (change reactions), *disengagement* (orient away) coping (Compas et al. 2012)
- More research is needed into effectiveness of each type of coping
- Youth may benefit from individualized interventions for their diabetes-specific worries

Funded by The Leona M. and Harry B. Helmsley Charitable Trust (2015PG-T1D084, PIs: Hilliard & Anderson) & NIDDK (1K12DK097696, PI: Anderson)

**TABLES AND FIGURES**

Sample Demographics: Mean (SD) or %			
	Child (n = 9)	Teen (n = 7)	Young Adult (n = 7)
Age, Years	11.1 (1.1)	15.3 (1.3)	23.8 (1.0)
Female	44%	42%	43%
<b>Race/Ethnicity</b>			
Non-Hispanic White	44%	29%	86%
African American/Black	22%	43%	14%
Other/more than 1	34%	28%	0%
HbA1c	8.2 (1.4)	9.8 (1.8)	7.4 (.9)
Pump Use	44%	29%	57%

**Change Source of Worry**

**Reactive Problem Solving**  
 "I try to solve the problem. So if I'm low and there's nothing around, then I tell someone, I'm like, 'hey, we need to go get something, like right now.'" (Adolescent, Male)

**Proactive Problem Solving**  
 "I've tried to maintain contact with more people...I'll text my sister and be like, 'Hey I'm running low right now... Call me back in an hour. Make sure I got up.'" (Young Adult, Female)

**Change Reactions to Worry**

**Positive Cognitive Framing**  
 "I think I'm just glad I have the [continuous glucose monitor] because it helps so much, so I remember I have that." (Child, Female)

**Social Support**  
 "I mean if I've had a bad day or a bad week I'll call my parents or my brother and just talk...it's more like me venting as opposed to doing a specific action." (Young Adult, Male)

**Orient Away from Worry**

**Distraction**  
 "I usually do something to get my mind off it." (Adolescent, Male)

**Avoidance**  
 "Just don't think about it. Act like you don't have it." (Adolescent, Male)

Lindsay Taraban MS, Viena T. Cao, Rachel Wasserman PhD, Sahar S. Eshtehardi MS, Barbara J. Anderson PhD, David G. Marrero PhD, Marisa E. Hilliard PhD

**Title:** How Children, Adolescents, and Young Adults with Type 1 Diabetes (T1D) Cope with Diabetes-Related Worries

**Introduction:** Youth with T1D experience wide-ranging worries related to diabetes and are at elevated risk for poor psychological and glycemic outcomes. Effective coping with diabetes-related stress has been associated with higher engagement in T1D self-management, higher health-related quality of life (HRQOL), lower HbA1c, and better social-emotional functioning for children and adolescents. However, the specific ways that youth cope with their diabetes-related worries have not been described. We aimed to characterize strategies children, adolescents, and young adults with T1D use to cope with their diabetes-related worries.

**Methods:** As part of a larger qualitative study on diabetes HRQOL, 21 youth with T1D (age 8-25 years, 48% female, 52% Caucasian) completed semi-structured interviews, including questions about diabetes-related worries and how they cope with those worries. Interviews were audio-recorded and transcribed, then coded using hybrid-thematic analysis to derive central themes.

**Results:** We identified three coping types that aligned with previously established coping style frameworks. (1) *Primary control coping* strategies included efforts to directly change the diabetes-related worry or their reaction to it, such as checking blood glucose levels or talking to parents about T1D. (2) Youth used *secondary control coping* strategies to change their thoughts about a diabetes-related worry, such as using distraction or reframing anxious thoughts about blood glucoses with positive thoughts (e.g., my diabetes devices help). (3) *Disengagement coping* included avoiding diabetes-related worries, such as using wishful thinking about not having T1D.

**Conclusions:** Youth use various diabetes-specific coping strategies that map onto categories previously established in the literature as being adaptive (i.e., primary control coping, secondary control coping) or non-adaptive (i.e., disengagement coping). Better understanding how youth with T1D use specific coping strategies for diabetes-related worries can guide developmentally-tailored interventions for managing the challenges of living with T1D, which may in turn support better glycemic outcomes and HRQOL among this population.