


Type 1 Diabetes Strengths in Tweens: Similarities and Differences across Clinical and Demographic Groups

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INTRO

- Accurately identifying and supporting youths' unique diabetes strengths may be a way to enhance clinical outcomes
- Study aim: Evaluate if diabetes strengths vary across demographically and clinically diverse youth with type 1 diabetes (T1D)

METHODS

1. Participants: 187 youth ages 9-13 years with T1D
2. Self-report measures: Diabetes Strengths and Resilience (DSTAR); Children's Depression Inventory Short Form (CDI)
3. Other measures: HbA1c; demographics
4. ANOVA or t-test to compare DSTAR total scores across demographic and clinical groups

RESULTS

- Higher DSTAR scores are associated with:
 - CDI scores below clinical cut-off ($T < 65$)
 - In range HbA1c ($< 7.5\%$)
 - Private insurance (vs. public/none)
 - Parents with college degree (vs. less education)
 - Non-Hispanic white race/ethnicity (vs. Hispanic only)
- DSTAR scores did not vary by child gender or # of caregivers in the home

DISCUSSION

- Patterns of diabetes-related strengths differed across backgrounds
- Unclear if DSTAR assesses relevant strengths for all groups
- Additional resilience-related research is needed among under-represented groups

Tweens with T1D who reported more diabetes-related strengths were more likely to have fewer depressive symptoms and in-range glycemic control.

Greater strengths were also associated with having private insurance, higher parent education, and non-Hispanic white race/ethnicity.

Poster available at: <https://tinyurl.com/T1Dstrengths>

TABLES/GRAPHS

Table 1. Key Participant Characteristics

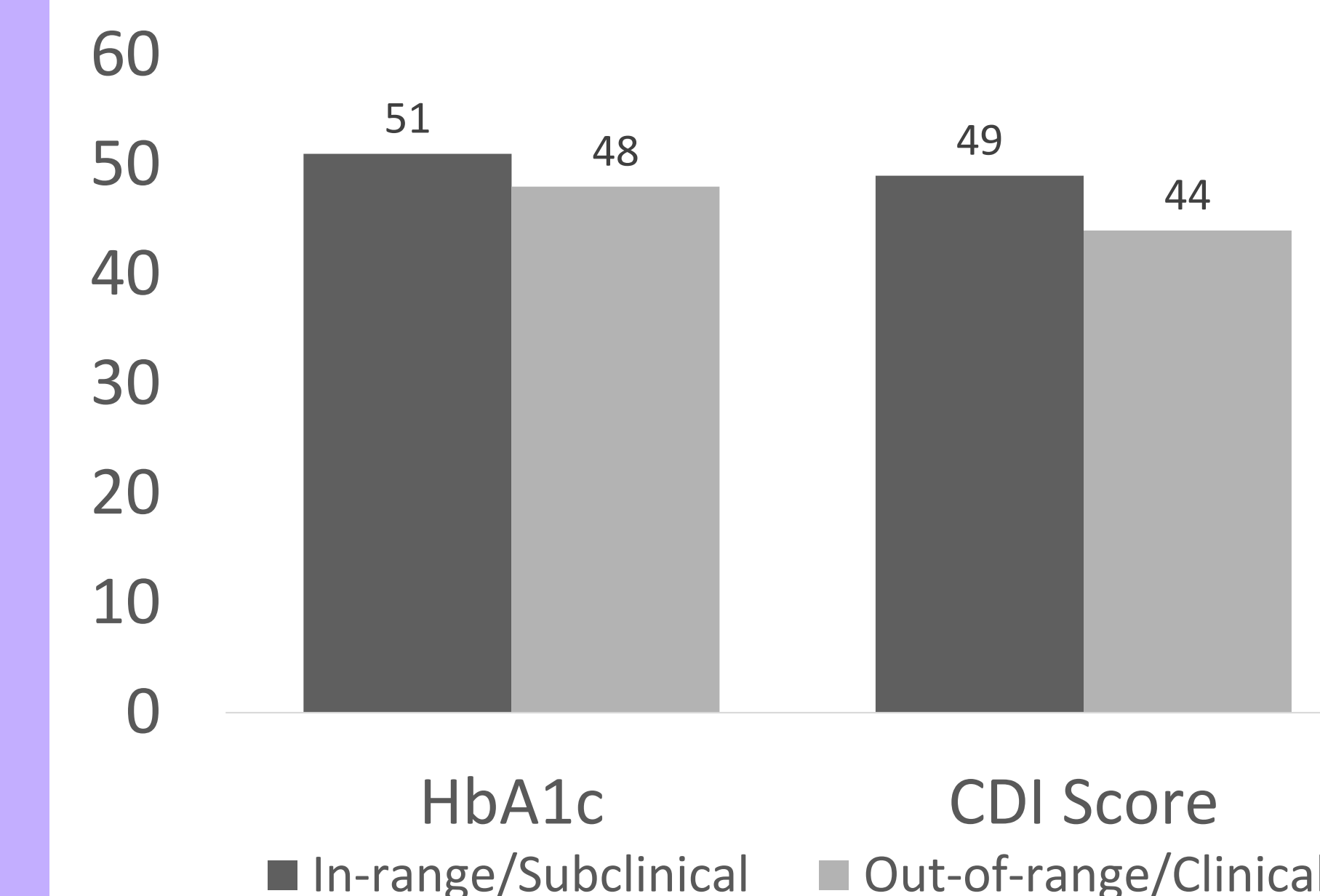
	M(SD) or %
Age, years	11.29 (1.27)
Gender, % female	55%
# of caregivers, % 2+	80%
Insurance, % private	65%
Parent education, % bachelors or above	54%
Race Ethnicity, % Non-Hispanic white	57%
CDI score, % clinical	11%
HbA1c, % in-range ($< 7.5\%$)	27%

Table 2. Group Differences in Strengths

Variable (groups)	t/F value	sig
Gender (m; f)	0.13	0.90
# of caregivers (1; 2+)	-1.05	0.30
Insurance type (Private; Public or none)	-2.98	$< 0.01^{**}$
Parent education (bachelors and higher; below bachelors)	-2.21	0.03*
Race Ethnicity (Non-Hispanic White; Black; Hispanic)	5.21	$< 0.01^{**}$
DSTAR Means	White	49.89**
	Hispanic	46.21**
	Black	47.41
CDI score (clinical; subclinical)	4.29	$< 0.01^{**}$
HbA1c ($< 7.5\%$; $\geq 7.5\%$)	3.30	$< 0.01^{**}$

* $p < .05$, ** $p < .01$.

Figure 1. Clinical Differences in DSTAR Scores



Study funded by the National Institutes of Health K12DK097696 (PI: Anderson)



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Introduction: Type 1 diabetes (T1D) management is demanding and optimal glycemic outcomes are difficult to achieve. Research on protective factors that help youth succeed despite challenges is increasing. The Diabetes Strengths and Resilience (DSTAR) measure was validated for preadolescents, but it is not known whether self-reported strengths are consistent or vary across demographically and clinically diverse youth.

Methods: Participants were 187 youth ages 9-13 years with T1D. They completed validated self-report measures: the DSTAR and the Children's Depression Inventory Short Form (CDI). The DSTAR has two subscales, Diabetes-Related Confidence and Help with Diabetes Management. Glycemic control (HbA1c) was obtained via medical record review. Demographic variables included child gender, child race/ethnicity, number of caregivers in the home, insurance type, and highest parental education. Independent samples t-tests were run to compare DSTAR total and subscale scores across demographic groups and clinical variable categories (e.g., CDI cutoffs, HbA1c targets).

Results: There were differences in self-reported DSTAR scores based on clinical variables: youth with either subclinical CDI scores or in-range HbA1c reported more strengths than youth with elevated CDI scores or above-target HbA1c. For demographic differences, DSTAR scores did not vary based on child gender or caregivers in the home. Youth with private insurance, parental education of bachelor's degree or higher, or who identified as non-Hispanic white reported more strengths than youth with public/no insurance, lower parental education, or racial/ethnic minorities.

Conclusions: Patterns of diabetes-related strengths may differ across pre-adolescents with T1D from different backgrounds. It is also possible that DSTAR does not fully assess relevant strengths for youth with more social disadvantage, calling for additional resilience-related research among under-represented groups. Accurately identifying strengths among all subsets of youth with T1D may inform clinicians' recommendations, and supporting youths' unique strengths may be a way to enhance clinical outcomes, including glycemic control and depressive symptoms.