

Are We Missing Disordered Eating Behaviors in the Pediatric Type 1 Diabetes Population?

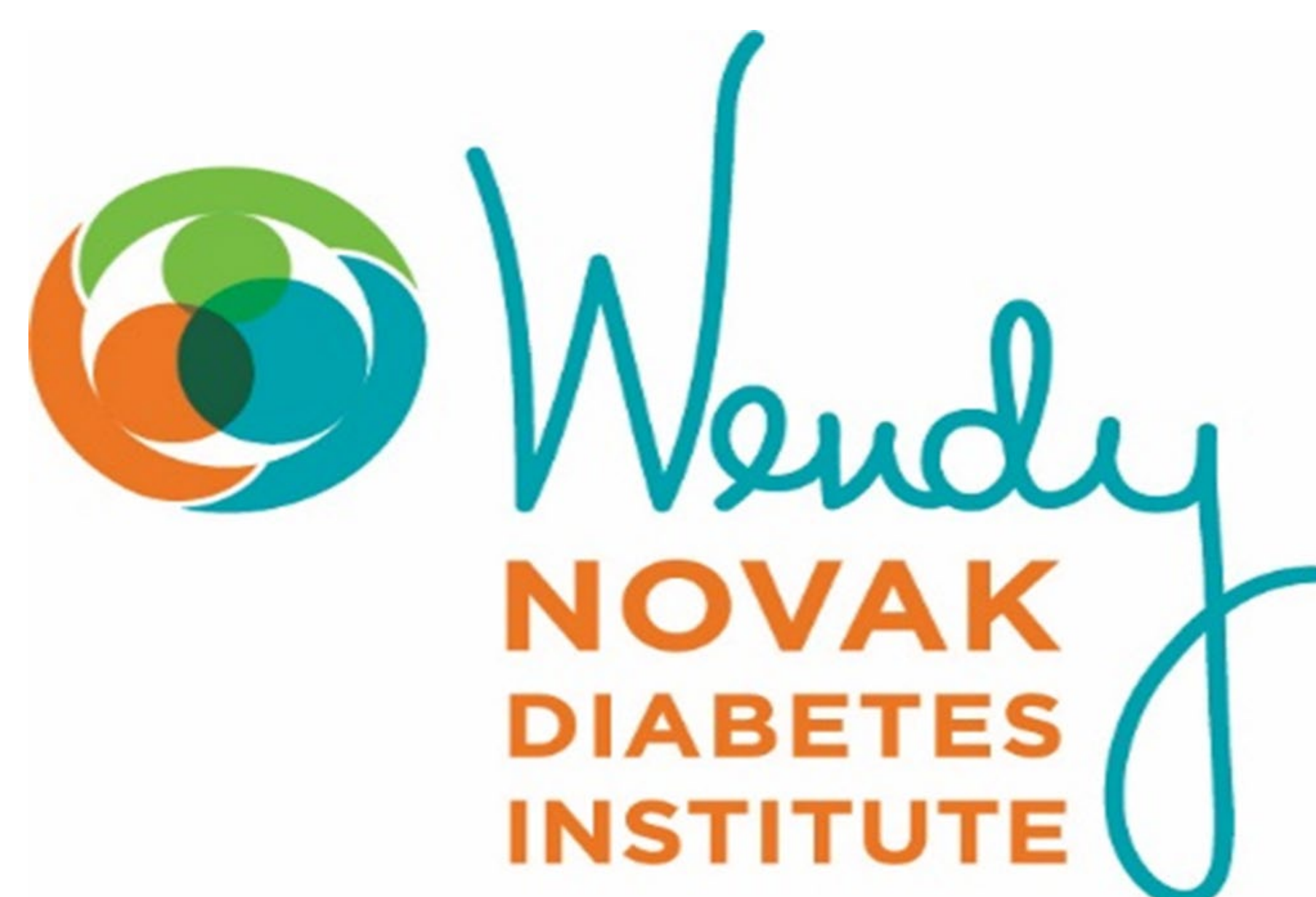
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BACKGROUND

- ▶ **Disordered eating behaviors (DEB)** include a variety of irregular eating behaviors that may or may not warrant a diagnosis of a specific eating disorder
- ▶ **Prevalence of DEB:**
 - ▶ Adolescent females with diabetes are 2.4 times more likely to meet DSM-IV criteria for an eating disorder²
 - ▶ Up to 60% of pediatric patients with type 1 diabetes (T1DM) report insulin restriction³
 - ▶ DKA rate is over 3 times higher in patients with T1DM AND an eating disorder: 112.5 per 1000, compared to rate of DKA in T1DM alone: 30.8 per 1000
- ▶ Withholding insulin in T1DM triples **mortality rate**

METHODS

- ▶ Site: Urban outpatient pediatric endocrinology clinic
- ▶ Study Design: 5-question screening tool for disordered eating (m-SCOFF) and PHQ-9
- ▶ Population: Adolescents and young adults ages 10-29 years, screened over 3-month time period
- ▶ Data collection included: demographics, most recent HgbA1c, BMI, screening tools
- ▶ Statistical analysis included gap analysis of patients who screened positive for DEB and screened negative for depression



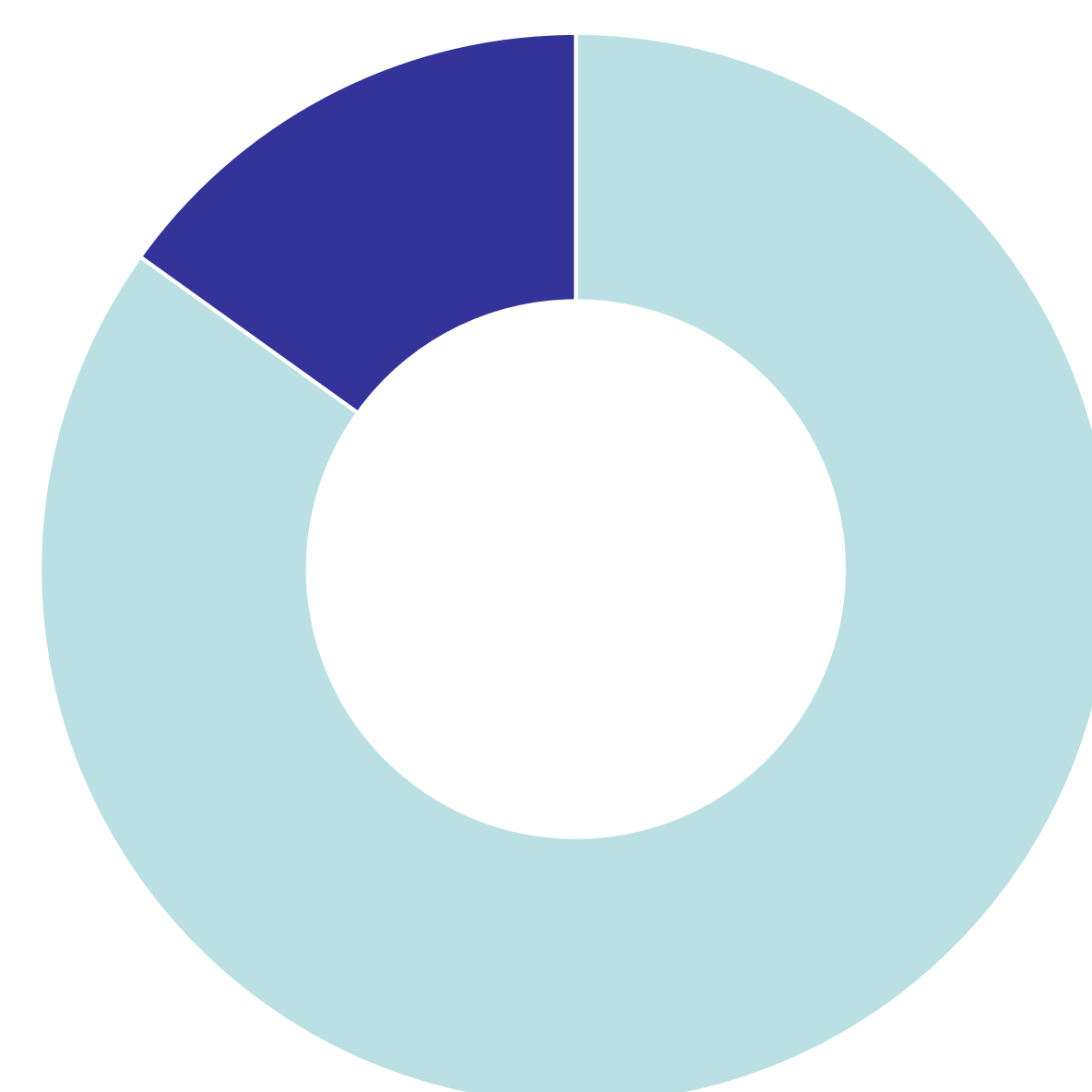
DEMOGRAPHICS AND DATA

Patient Demographics	
Average Age	15.7 years
% Female	50.6%
Average A1c	8.6%
Average A1c for those who screened positive for DEB	9.3%
Average BMI	24.6 kg/m ²
Average BMI for those who screened positive for DEB	26.5 kg/m ²

M-SCOFF Screening Tool Questionnaire		Number of Positive Responses	% of Positive responses with question (+) alone	% of Positive responses with this and another (+)
1.	Do you make yourself sick because you feel uncomfortably full?	21	39%	39%
2.	Do you worry you have lost control of how much you eat?	74	50%	39%
3.	Have you lost more than 14 pounds in a 3-month period?	39	52%	29%
4.	Do you believe yourself to be fat when others say you are too thin?	57	43%	40%
5.	Do you take less insulin than you should?	43	61%	27%

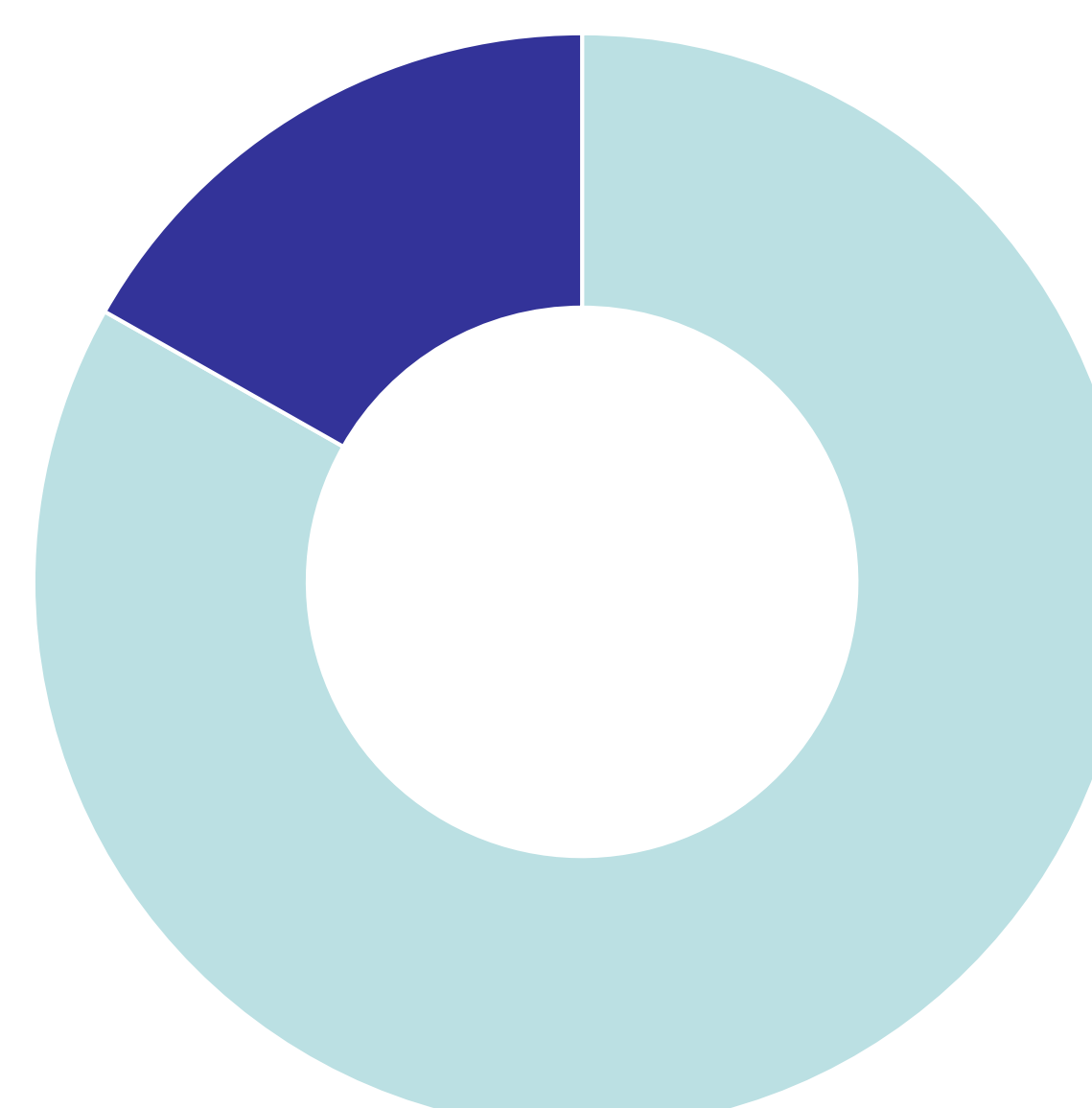
RESULTS

Positive depression screen



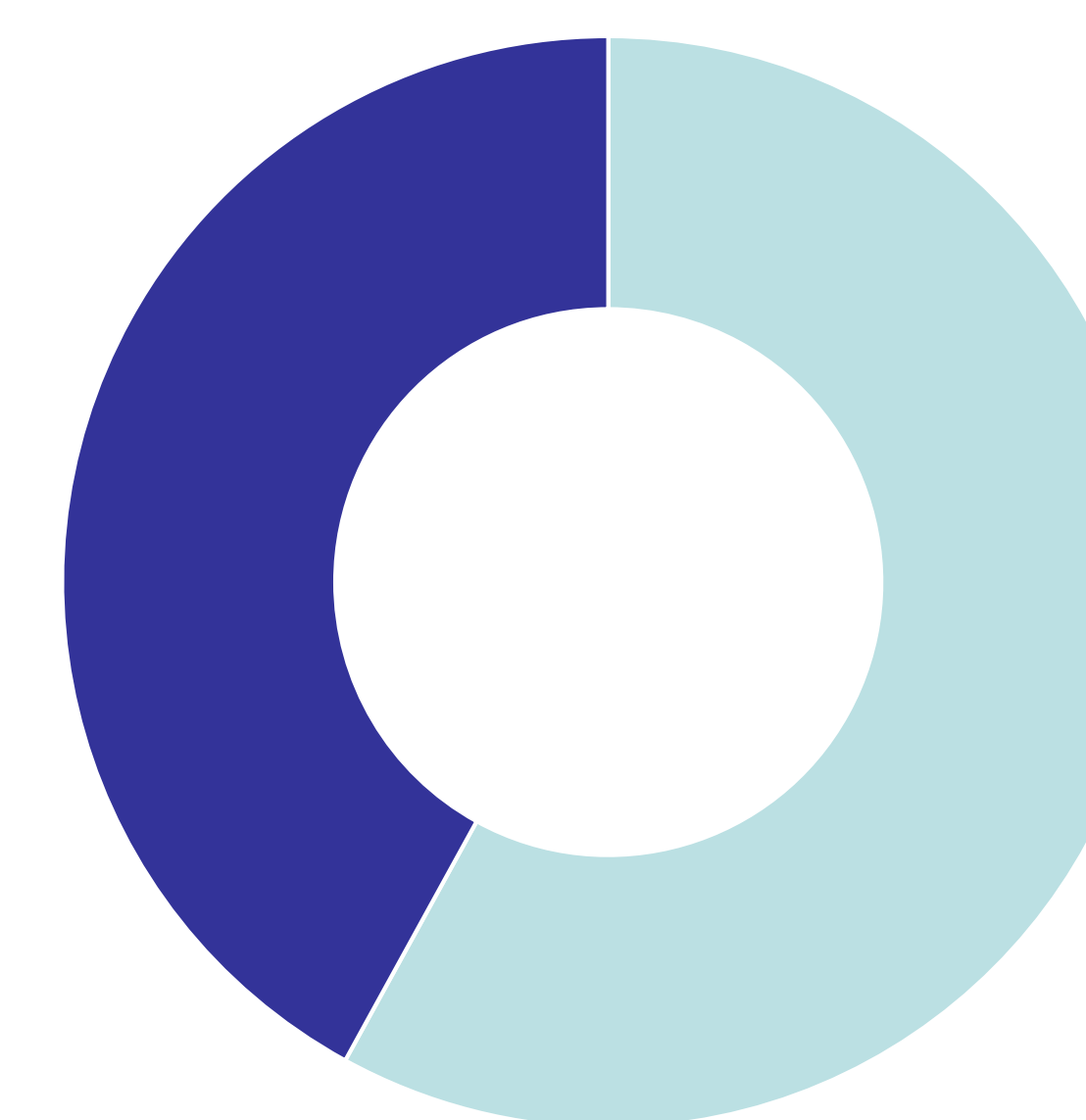
15.1% of patients screened positive on PHQ-9

Positive DEB screen



16.8% of patients screened positive on m-SCOFF

Positive depression + DEB screens



Of the patients screening positive on m-SCOFF, 42% also screened positive on PHQ-9

- ▶ 770 patients screened for disordered eating behaviors (DEB) over the course of 3 months
- ▶ Patients concurrently screened for depression
- ▶ 6.4% screened positive for DEB and depression
- ▶ Of those who screened positive for DEB, 42% of those screened positive for depression
- ▶ **Solely screening for depression would have missed 58% of those with DEB**

CONCLUSIONS

- ▶ BMI was higher in those screening positive for DEB (**26.5 kg/m² vs. 24.6 kg/m²**), p <0.05
- ▶ The average HgbA1c was higher in those screening positive for DEB (**9.3% vs. 8.6%**), p >0.05
- ▶ Although similar percentages of patients screened positive for depression (15.1%) and DEB (16.8%), only 6.4% had positive screening for both
- ▶ Screening for solely for depression would have missed **58%** of those who screened positive for DEB
- ▶ **Next Steps:** plan for more in-depth assessment of patients who screen positive for DEB with Diabetes Eating Problems Survey-Revised (DEPS-R) for further evaluation of DEB to allow for accurate diagnosis and appropriate treatment

REFERENCES

Acknowledgement to Ryan Dyess, MD

For list of references, please see separate Works Cited.