Investigating the Role of Interoception in Pediatric Type 1 Diabetes Management: A Rationale and Study Design

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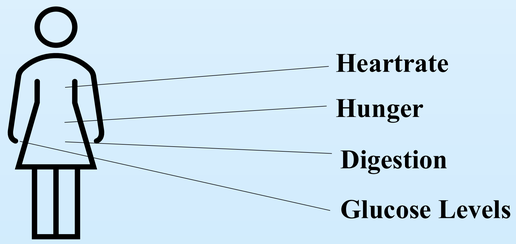
Problem Statement

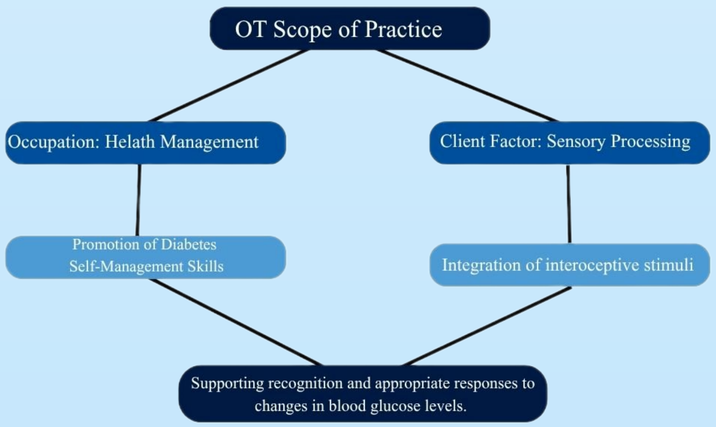
Upon diagnosis, children with type 1 diabetes (T1D) must learn to recognize internal body signals associated with changes in glucose levels, while also continuing with typical development. This ability to recognize and react to how the body is feeling, known as interoception, has been linked to diabetes management skills in adults; however, limited research has been done on this relationship in pediatric populations. This gap limits our understanding of how interventions focused on interoceptive awareness could support independent diabetes management skills in pediatric T1D patients.

Background & Clinical Need

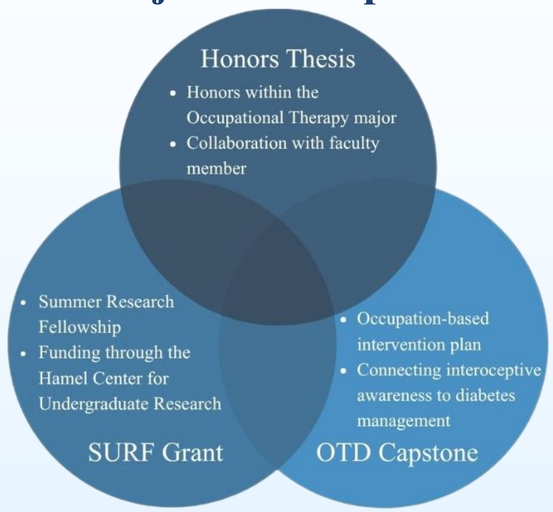
- For patients with T1D, delayed recognition of diabetes related symptoms can increase the risk of adverse health outcomes[1,4].
- Interoceptive awareness enables individuals to recognize and interpret internal bodily signals[2]. Emerging evidence suggests that reduced interoceptive awareness is associated with impaired recognition of hypoglycemia in adults with T2D[3].
- Current research surrounding OT's involvement in pediatric T1D care largely explores how families can support the child. The relationship between interoceptive awareness and diabetes management is unexplored in pediatric populations.



OT Relevance



Project Development

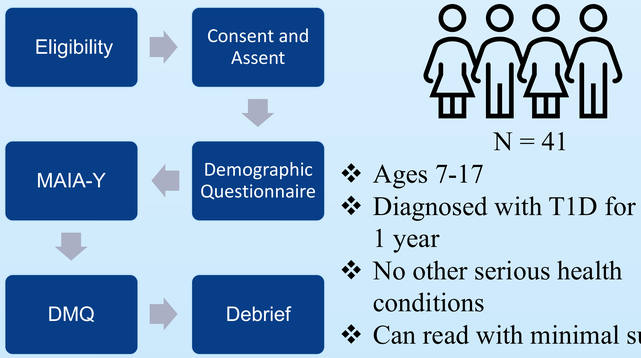


Study Question & Design

What is the relationship between interoceptive awareness and the quality of diabetes-self management skills in children and adolescents with type 1 diabetes?

Design: Cross-sectional, correlational, exploratory

Participants & Procedures



N = 41

- Ages 7-17
- Diagnosed with T1D for at least 1 year
- No other serious health conditions
- Can read with minimal support

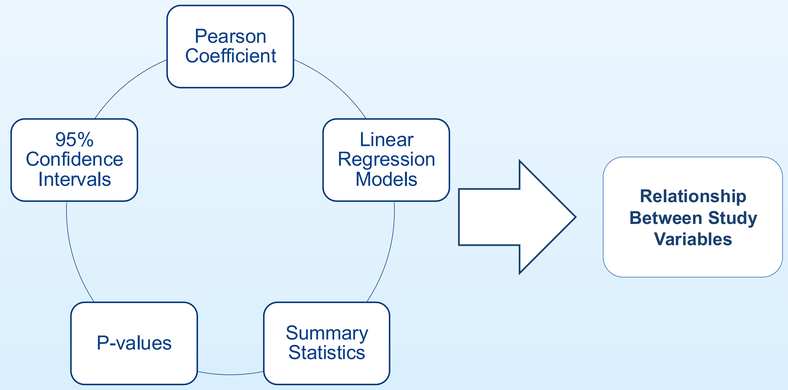
Measures

MAIA-Y
Measures Interoceptive Awareness in Youth

DMQ
Measures Diabetes Management Skills

Data Collection & Planned Analysis

- This study was open for data collection from July through September of 2026. Participants were able to complete the surveys at their own pace during this time.
- The MAIA-Y and DMQ were used to collected data about each participant's interoceptive awareness and diabetes self-management skills. In total, participants answered 46 questions.
- Data analysis for this project has begun and is scheduled to be finished by February of 2027.
- Data will be analyzed by generating descriptive summary statistics for study variables such as demographics and clinical characteristics.



Next Steps

References

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2.Clark, E., Brown, T., & Yu, M.-L. (2023). *Interoception and its application to paediatric occupational therapy: A scoping review*. Australian Occupational Therapy Journal.
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4.Shmerling, R.H. (2015, January 8). People with type 1 diabetes are living longer. *Harvard Health Blog*. https://www.health.harvard.edu/blog/people-type-1-diabetes-living-longer-201501087611

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