

Balancing Books and Blood Glucose: School Stressors and Type 1 Diabetes Management

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Background

- School nurses play a vital role in supporting the well-being and academic success of students, especially those with complex, chronic conditions like type 1 diabetes (T1D).¹
- Adolescents with T1D have intensive daily management routines that can interfere with learning, including checking blood glucose and administering insulin.²
- T1D self-care often results in increased anxiety and stress, impacting academic performance.²
- Positive school experiences are correlated with increased resilience and positive development in adolescents.³

Purpose

This study examined the relationship between academic stressors and diabetes management in adolescents with T1D to inform school nursing practice.

Methods

- We conducted secondary data analysis of qualitative interviews from 2 studies examining the effects of mindfulness on diabetes-related anxiety.
- Inclusion criteria: adolescents between 12-19 years old, who had lived with T1D for > 6 months, were willing to participate in an audio-recorded interview.
- Quotes from the interviews were systematically reviewed and coded into themes and subthemes using Braun and Clarke's thematic analysis. Analysis of interview quotes yielded 4 themes and 5 subthemes.

Results

Themes and Subthemes

Barriers to Managing Diabetes in the School Setting

- *Missing out on learning to manage their diabetes.*
- *Changes to autonomy and independence in different school settings.*
- *Ignoring diabetes management in the school setting for normalcy.*

Diabetes and Stress due to School

- *Bidirectional relationship between school stressors and blood glucose.*
- *Diabetes is a compounding stressor to school stressors..*

Negative Psychosocial Implications of Having Diabetes in the School Setting Among Peers

Difficulty Maintaining a Balance Among Diabetes Management, School, and Extracurricular Activities

"... a lot of being high is all about stress. If you're stressed out [about school], your numbers will not be good."

"Sometimes it's just a little awkward when I need to eat in the middle of class or pull out some weird technology that they might not know about."

"So last year, I was in the middle of my final history exam, and my Omnipod malfunctioned. I was super high during the test, and I actually had to stop in the middle of the test to come home since my blood sugar was so high."

"I was trying to like get back into gymnastics trying to manage all the like tests and things that I had missed from being out [because I was sick] and I was feeling really frustrated because I was like taking so much insulin and trying to like change all my settings and adjust so many things."

"I really like, hated, like being like, oh, like everybody in the class, like heads turns to you. And you're like, oh, sorry. Like my buzzer is beeping, I always used to find that super awkward."

"Also, it's still stressful to just have it at school, have diabetes, while in school. You're in the middle of a class. You're not on your phone. You don't know your numbers. Then all of a sudden, your alarm goes off that you're super high, and now you have to go to the nurse's office and miss school. It just repeats like that."

Discussion

- Findings highlight the multifaceted challenges faced by students with diabetes in managing their condition within the school setting.
- The academic environment presents various barriers and added stressors that increase disease related anxiety symptoms and create difficulties managing diabetes.
- Management was a disruption to learning and was associated with negative psychosocial implications.
- Barriers to effective management often result in missed learning content and heightened stress.
- Results suggest the need for further research on methods to reduce the prevalence of diabetes related anxiety symptoms within the school setting.



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