

CASE REPORT

Interplay Between Chronic Illness and Mental Health: A Case Report on Adolescent Depression, Self-Harm, and Diabetes Management

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ABSTRACT

Adolescents with chronic illnesses, such as Type II diabetes, face significant emotional and psychological challenges. The burden of disease management, coupled with family dysfunction, can contribute to depression, anxiety, and maladaptive coping behaviours, including self-harm. This case report aims to highlight the psychological impact of chronic illness on adolescent mental health and emphasize the need for an integrated care approach. This report discusses NQQ, a 14-year-old girl with Type II diabetes who developed severe depression and engaged in self-harm through insulin misuse. Psychological assessments revealed extremely elevated levels of anxiety, depression, and emotional dysregulation, exacerbated by family conflict and lack of emotional support. The case highlights the bidirectional relationship between chronic illness and mental health, where poor glycemic control worsens psychological distress, and vice versa. Family dysfunction further compounds emotional difficulties, increasing the risk of self-harm. An integrated, multidisciplinary approach—including psychological therapy, family counselling, and structured medical care—is essential to improve adherence to treatment and overall well-being in adolescents managing chronic illness.

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INTRODUCTION

Chronic illnesses expose millions of children and adolescents to ongoing stress, increasing the risk of emotional and behavioural issues while affecting treatment adherence. Conditions like diabetes, cancer, and chronic pain place significant physical and psychological demands on youth and their families. This prolonged stress can lead to emotional difficulties and reduced compliance with medical care.

Adolescence is a critical period for developing autonomy and identity, which can be especially challenging for youth with chronic conditions like type 1 diabetes (T1D). The demands of disease management, combined with the psychosocial stressors of adolescence, can impact mental health and reduce adherence to self-care.

Adolescents with T1D face increased risks of depression, anxiety, and self-harm. A meta-analysis reports suicidal ideation at 15.4% and attempts at 3.5% in this group—rates similar to peers without diabetes (1). The burden of managing T1D and concerns about long-term health can contribute to psychological distress. The relationship between T1D and mental health is bidirectional: poor glycemic control is linked to depression, which can further impair diabetes management. Additionally, insulin access may serve as a means for self-harm or suicide attempts among adolescents.

Understanding self-harm and suicidal ideation in adolescents with diabetes is vital for healthcare providers. Early identification and integrated care can reduce these risks by addressing both physical and psychological needs. This report aims to inform professionals about the mental health challenges linked to chronic illness, particularly Type II diabetes, and highlights the need for holistic, multidisciplinary care. Emphasis is placed on early intervention to address maladaptive coping and support overall adolescent well-being.

CASE REPORT

NQQ is a 14-year-old Malay girl, diagnosed with Type II diabetes at age 9. She lives in a conflict-ridden home with an emotionally distant father and an overworked mother, contributing to her feelings of hopelessness. Since her diagnosis, she has exhibited symptoms of depression, including social withdrawal, loss of interest in activities, and declining school performance. Developmentally, she met early milestones within normal limits but showing emotional and behavioural difficulties in late childhood which worsened after her diabetes diagnosis. Her self-harm behaviours have escalated from cutting to insulin overdosing, often triggered by family stress.

Psychological assessments reveal severe emotional distress, internalizing symptoms, cognitive difficulties, and high self-harm risk. Table I presents a summary of NQQ’s psychological assessment results across the three validated tools: the Beck Youth Inventory-2 (BYI-2), the Youth Self-Report (YSR), and the Revised Children’s Anxiety and Depression Scale (RCADS-47). These findings highlight the interplay between her chronic illness, family dysfunction, and emotional instability, offering a comprehensive view of her maladaptive coping.

Across all assessments, depression and anxiety were the most prominent symptoms. NQQ’s severe emotional distress affects her daily functioning, with withdrawn behaviour and somatic complaints like fatigue and headaches suggesting internalized struggles. Her Type II diabetes likely contributes to emotional dysregulation, as chronic illness often heightens anxiety and depression due to the ongoing medical burden and fear of complications.

A key concern in NQQ’s assessment is her poor self-concept and high emotional dysregulation, both major risk factors for self-harm. Her insulin misuse indicates impulsivity and a desire to control emotional and physical pain, consistent with the evidence that adolescents with chronic illnesses are more prone to self-harm due to the

psychological burden of illness. Distorted thinking, including self-blame and suicidal ideation, further elevates her fatality risk. YSR results show severe social problems and withdrawal, indicating her interactions may be limited or superficial. Seeing friends infrequently and low self-ratings in academics suggest how emotional distress undermines her social connection and school performance, while thought and attention problems further point to cognitive challenges exacerbating frustration.

A critical contributing factor to NQQ’s distress is her dysfunctional family environment, marked by frequent parental conflict and emotional neglect, predominantly from her father. Her mother takes on full household responsibility, adding stress for all. Family dysfunction has been consistently linked to adolescent depression, anxiety, and self-harm behaviours. For NQQ, this likely worsens the psychological burden of her chronic illness and reinforces her negative self-image. Her insulin misuse may reflect a cry for help or an attempt to regain control. NQQ’s assessments disclose severe emotional distress, poor coping, and high self-harm risk. Her chronic illness, low self-concept, and unstable home life require urgent, integrated intervention to ensure her safety and support her recovery.

DISCUSSION

This case illustrates the complex link between chronic illness and adolescent mental health. For NQQ, the burden of managing Type II diabetes, combined with family dysfunction and limited support, has contributed to severe depression and anxiety. Adolescence is a critical period for identity development, but chronic illness can disrupt this process, increasing stress and emotional distress. In NQQ’s case, these pressures have led to maladaptive coping, including dangerous self-harm through insulin misuse.

Developmental and Psychological Impact

The exploration of autonomy during adolescence typically involves navigating shifting relationships with parents and peers. However, for adolescents with chronic

Table I: Psychological Assessment Results and Interpretation of NQQ’s Emotional and Behavioural Functioning

Assessment Tool	Scales Measured	Interpretation
Beck Youth Inventory II	Depression Anxiety Anger Self-concept Disruptive Behaviour	NQQ exhibits severe emotional distress, with extremely high levels of depression, anxiety, and anger. Her self-concept is significantly impaired, which may contribute to her self-harm behaviours.
Youth Self-Report (YSR)	Internalizing Externalizing Total Problems	NQQ presents with severe internalizing symptoms, including depression, anxiety, and withdrawal, alongside behavioural and cognitive difficulties. Despite her distress, her competence in activities and social life remains within the normal range, suggesting some preserved functional abilities.
Revised Children’s Anxiety and Depression Scale (RCADS-47)	Separation anxiety Generalized anxiety Panic disorder Social phobia Obsessive-compulsive disorder Major depressive disorder Total anxiety Total anxiety & depression	NQQ demonstrates severe anxiety and depression across multiple domains, with extremely high levels of distress in all assessed areas.

BYI-II: Beck Youth Inventory- Second Edition; YSR: Youth Self-Report; RCADS-47: Revised Children’s Anxiety and Depression Scale (47-item version)
All assessments indicate clinical-level distress. Scores used were interpreted based on standardized norms for each instrument. No data were sourced or reproduced from other publications.

illnesses, this process can be disrupted due to their ongoing dependence on caregivers and limitations in social engagement. Such disruptions hinder the formation of a stable self-identity, contributing to psychological distress and emotional dysregulation (2). Adolescents with chronic illnesses may experience heightened stress related to their medical condition, leading to overwhelmed coping mechanisms and increased vulnerability to self-harming behaviours. In NQQ's case, her chronic illness, coupled with family dysfunction, has exacerbated her emotional turmoil, pushing her towards self-harm as an unhealthy coping mechanism.

Family Dysfunction as Contributing Factor

Family dynamics significantly impact adolescent mental health, particularly for those managing chronic illnesses. NQQ's home, marked by parental conflicts and an emotionally distant father, likely exacerbates her psychological distress. Family dysfunction is strongly associated with impaired psychosocial functioning, leading to lower life satisfaction and increased mental health issues. Emotionally unsupportive environments and lack of paternal involvement are associated with poor emotional regulation and higher self-harm risk (3). For NQQ, limited support at home further weakens her ability to manage both her medical and emotional challenges.

The Bidirectional Relationship Between Chronic Illness and Mental Health

The relationship between chronic illness and mental health is bidirectional. Adolescents with conditions like diabetes have higher risks of depression and anxiety, while poor mental health can also negatively affect their disease management. Studies indicate that adolescents with depression may struggle with adherence to their diabetes regimen, leading to poorer glycemic control and worsened physical health outcomes (4). Addressing only the physical aspects of a chronic illness, without considering the psychological impact, risks overlooking critical factors that influence overall health and quality of life. Integrated care models—addressing both medical and psychological needs—are essential for improving treatment adherence, emotional well-being, and long-term outcomes for adolescents like NQQ. Managing chronic illness during adolescence requires a holistic approach, with psychological support to build healthy coping strategies. Recognizing this bidirectional link between physical and mental health is key to effective care.

Management and Recommendation

Addressing NQQ's complex needs requires a comprehensive, multidisciplinary approach that prioritizes safety, psychological well-being, and family support. Immediate measures include crisis planning and close monitoring of insulin administration to prevent misuse, alongside evidence-based psychological interventions such as Dialectical Behavioural Therapy, which supports emotion regulation and healthy coping in the context of depression, anxiety, and self-harm behaviours

(5). Holistic care is best delivered through collaboration among endocrinologists, clinical psychologists, and school counsellors, complemented by family involvement and psychoeducation to improve communication, reduce stigma, enhance treatment adherence, and support sustained recovery through regular monitoring.

CONCLUSION

This case highlights the complex interaction between chronic illness, adolescent development, and mental health, emphasizing the urgent need for integrated care. Adolescents with chronic illnesses, like Type II diabetes, often face emotional distress and self-harm risks, especially when heightened by family dysfunction. NQQ's severe depression and insulin misuse reflect the harmful cycle between poor glycemic control and psychological distress. Addressing her needs requires a multidisciplinary approach, including medical treatment, Dialectical Behavioural Therapy (DBT), and family counselling. These interventions can improve coping, reduce self-harm risk, and strengthen family support. Ongoing monitoring and psychoeducation will further support her recovery. NQQ's case illustrates the importance of holistic, collaborative care in managing adolescence with chronic illnesses. Integrating mental health support to improve adherence, resilience, and overall well-being.

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