The hidden epidemic: how type 2 diabetes is impacting the mental health of adolescents

Olga Maria Gladosz

Type 2 diabetes has become increasingly prevalent among adolescents over the past two decades. While the physical complications of the condition are widely recognised, its psychological consequences are often overlooked. Adolescents diagnosed with type 2 diabetes face a double burden – the biological challenges of insulin resistance and weight management, alongside the mental strain of stigma, body-image concerns and long-term health anxiety. Evidence shows elevated rates of depression, anxiety and disordered eating in this population, while sub-optimal glycaemic control is associated with worsening mental health. This article explores the hidden epidemic of psychological distress in young people with type 2 diabetes, and examines the bidirectional relationship between mental health and metabolic control. Practical strategies for healthcare professionals, educators and families are discussed, with an emphasis on early identification, psychosocial support and integrated models of care.

The rise of type 2 diabetes in adolescents has become a global concern, transforming what was once considered an adult-onset disease into a growing issue in younger populations. The condition is strongly linked to obesity, sedentary lifestyles and environmental factors; however, its implications extend far beyond physical health. Whilst the biological complications of type 2 diabetes are well documented, the psychological burden carried by adolescents is frequently overlooked and sometimes even ignored. As a result, many young people face a double challenge: managing the clinical demands of their illness whilst coping with stigma, body image concerns and uncertainty about their future (Xie et al, 2022).

Adolescence is a critical stage for identity formation, independence and social belonging. A chronic condition such as type 2 diabetes can undermine confidence, increase vulnerability to depression and anxiety, and reduce treatment engagement. This article examines the hidden epidemic of psychological distress in adolescents with type 2 diabetes, highlights the bidirectional relationship between metabolic control and mental health, and considers practical strategies for improving outcomes (Jaser et al, 2025).

Rising prevalence and early-onset challenges

The incidence of type 2 diabetes in adolescents has risen significantly, particularly in low- and middle-income countries relative to high-income settings. Early-onset type 2 diabetes has become a global health problem, with adolescents experiencing faster disease progression than adults (Xie et al, 2022). Type 2 diabetes develops gradually in adults, whereas adolescents experience faster metabolic deterioration and earlier complications. Young people often face the combined clinical challenges of diabetes and the psychological strain of managing a chronic condition during a critical developmental stage.

Citation: Gladosz OM (2026) The hidden epidemic: how type 2 diabetes is impacting the mental health of adolescents. *Journal of Diabetes Nursing* [Early view publication]

Article points

1. Adolescents with type 2 diabetes face both physical demands and emotional challenges that significantly affect their daily life.
2. Early onset accelerates complications and increases vulnerability to depression and treatment disengagement.
3. Emotional distress undermines diabetes management, while poor control increases psychological suffering, trapping adolescents into a damaging cycle.
4. Stigma fosters shame and isolation, silencing adolescents and discouraging honest engagement with care.
5. Care models often neglect emotional well-being despite evidence that integrated psychological support transforms both health and resilience.

Key words

- Adolescents
- Disordered eating behaviours
- Mental health
- Type 2 diabetes

Author

Olga Gladosz, Paediatric Diabetes Clinical Nurse Specialist, Royal Free London Hospital.

"Weight-related stigma and negative body image become powerful drivers of harmful behaviours, such as restrictive dieting or binge eating."

Younger age at diagnosis is associated with higher rates of depression and less favourable outcomes (Jaser et al, 2025). This may reflect the challenges adolescents face in adapting to strict treatment regimens and constant medical monitoring at a stage of life when autonomy, independence and peer acceptance are central.

The rise in early-onset type 2 diabetes is increasingly recognised as both a biomedical challenge and a mental health concern needing greater attention. In practice, this requires paediatric diabetes services to introduce structured mental health assessments into the care pathway from the point of diagnosis. Scheduled appointments with a psychologist and the use of peer-support groups can reduce early disengagement.

In addition, the lifetime exposure to treatment increases the risk of burnout, with adolescents gradually disengaging from self-management. Compared with adults, they need to navigate far more years of illness, stigma and uncertainty about future health. The rise in adolescent type 2 diabetes is not simply a shift in epidemiology, but a significant public health issue that combines metabolic risk with psychosocial vulnerability. Recognition of this is essential if health systems are to provide effective and compassionate care.

Depression, anxiety and distress

Depression and anxiety are significantly more likely to be experienced by adolescents with type 2 diabetes than their peers, yet these conditions frequently remain under-recognised in clinical practice (Jaser et al, 2025). Poor psychological health is strongly associated with reduced treatment adherence, difficulties with glycaemic control and less favourable long-term outcomes.

Diabetes-related distress, which differs from clinical depression, describes the emotional strain of constant glucose monitoring, dietary restrictions and fear of future complications. Many young people describe feeling overwhelmed and discouraged by the daily demands of their condition (Spajic et al, 2025). Their distress is associated with social withdrawal, lower motivation and reduced engagement with care.

Whilst depression and distress are distinct, their combined effects can be particularly damaging in a younger population navigating identity formation, peer acceptance and increasing independence. This makes them more vulnerable to emotional difficulties. For this reason, routine screening for both depression and diabetes-related distress should be prioritised in adolescent diabetes care.

Validated tools, such as the PAID (Problem Areas in Diabetes) scale and the DDS-17 (Diabetes Distress Scale) can be incorporated into routine clinical appointments or consultations with a diabetes psychologist to identify challenges associated with living with diabetes and assess diabetes-related distress (American Diabetes Association, 2021). Embedding these measures in standard practice enables clinicians and other professionals involved in care to intervene before emotional distress adversely affects glycaemic outcomes.

Disordered eating behaviours and body image

Disordered eating behaviours (DEBs) are increasingly recognised in adolescents with type 2 diabetes; however, they remain under-reported and under-treated. Mateo et al (2023) found that adolescents with type 2 diabetes who expressed dissatisfaction with their body image were more likely to report DEBs than those satisfied with their appearance. Weight-related stigma and negative body image become powerful drivers of harmful behaviours, such as restrictive dieting or binge eating.

Nip et al (2019) found that DEBs in young people with diabetes were associated with significantly weaker psychosocial outcomes, including higher levels of depression and anxiety. Whilst these patterns are not exclusive to adolescents with type 2 diabetes, the presence of a chronic illness increases the risk. DEBs should, therefore, be recognised as part of the broader psychological burden of diabetes, rather than as separate or secondary concerns. Clinicians can address this by collaborating with dietitians and psychologists to deliver body-positive interventions that challenge weight-centred narratives. For example, shifting consultations towards health-focused goals rather than weight reduction can help reduce stigma and support healthier coping mechanisms in adolescents at risk of DEBs.

Adolescents are at a developmental stage

in which appearance, peer acceptance and independence carry particular importance. As a result, the constant medical focus on diet and body weight can worsen existing insecurities. Compared with adults, young people are more exposed to peer and social pressures, particularly through social media, which often idealises unrealistic body standards. Addressing DEBs requires sensitivity, open dialogue and a shift away from weight-centred language that risks reinforcing stigma (Dickinson et al, 2017).

Bidirectional relationship between mental health and glycaemic control

The relationship between glycaemic control and mental health in adolescents with type 2 diabetes is bidirectional. Sub-optimal psychological well-being can make it harder to follow treatment, attend appointments and maintain healthy routines. Depression and anxiety are strongly associated with higher HbA_{1c} levels and greater risk of complications (Paudel et al, 2023). Consequently, mental health should be recognised as a direct determinant of metabolic outcomes, rather than a secondary concern.

Adolescents frequently feel overwhelmed by constant monitoring, dietary restrictions and the uncertainty of long-term complications (Spajic et al, 2025). Persistent hyperglycaemia contributes to fatigue, irritability and reduced concentration, which in turn affects self-esteem and daily functioning. The clinical and emotional consequences of diabetes reinforce one another, creating a cycle that is difficult to break without targeted support. Disrupting this loop requires integrated models of care in which paediatric endocrinologists, diabetes nurses and mental health professionals collaborate in multidisciplinary team consultations.

Some adolescents maintain good glycaemic control yet continue to experience distress, often owing to stigma, family conflict or concerns about body image. For this reason, focusing exclusively on blood glucose targets risks overlooking the wider psychosocial realities of living with type 2 diabetes. Integrated care that addresses both medical and psychological needs is, therefore, essential for achieving sustainable outcome improvements.

The role of stigma, peer and family environment

Stigma plays a central role in shaping the experiences of adolescents with type 2 diabetes. Unlike type 1 diabetes, which is seen as unavoidable, type 2 diabetes is frequently portrayed as being the result of unhealthy lifestyle choices. Adolescents often describe feeling judged or blamed for their diagnosis, which fuels shame, secrecy and disengagement from care (Subramani et al, 2025). Such stigma undermines self-esteem and can worsen both treatment adherence and psychological well-being.

Negative attitudes and misconceptions about diabetes are common among young people, often leading to exclusion or teasing (Khalafalla et al , 2024). However, supportive peers provide encouragement, normalise treatment routines and reduce feelings of isolation. Peer influence should, therefore, be recognised as a powerful factor in shaping engagement and resilience.

Family relationships are equally significant. Whilst supportive families promote autonomy, confidence and better treatment engagement, overly controlling or critical behaviours often heighten anxiety and conflict. Adolescents are more dependent on family involvement than adults, making home dynamics particularly important. Interventions should look beyond medical management and consider the wider relational context. Practical examples include structured family therapy sessions designed to reduce conflict and promote autonomy, alongside school-based peer-support programmes that normalise treatment routines and reduce feelings of isolation. These interventions help counteract the stigma and relational pressures that frequently challenge adherence (de Wit et al, 2022; NICE, 2023).

Gaps in care and the need for integrated models

Despite growing evidence of the psychological burden of type 2 diabetes in adolescents, mental health support is not consistently integrated into routine care. Many clinics still prioritise biomedical outcomes, whilst psychological well-being is addressed only when a crisis appears. Psychosocial issues are often under-recognised despite being strongly associated with long-term treatment adherence (Jaser et al, 2025). Consequently,

Read more online

Psychological care of children, adolescents and young adults with diabetes: ISPAD Clinical Practice Consensus Guidelines

ISPAD's clinical recommendations for children, adolescents and young adults with diabetes.

Journal of Diabetes Nursing (2023) **27**: JDN271

Read here

"Commissioning pathways that fund psychology input as a routine element of diabetes care reduce fragmentation of services and provide more consistent access to emotional support."

opportunities for early intervention are missed, leaving young people to cope without the support they require.

Where integrated models have been trialled, the results are promising. Combining routine screening for depression and anxiety with structured psychosocial interventions improves both mental health outcomes and glycaemic control (de Wit et al, 2022). This suggests that multidisciplinary approaches involving psychologists, dietitians, nurses, and doctors working collaboratively represent a more effective model of care. Nevertheless, these models remain limited to pilot studies or specialist centres, meaning most adolescents do not benefit from them.

The challenge is partly structural. Services often lack trained staff, and funding systems continue to prioritise physical over psychological health. This often leads adolescents to move between multiple providers, with each following diabetes service unlikely to address the wider picture. Closing this gap involves recognising that psychological care is not an optional extra but an important component of diabetes management. Clinically, this could be integrated by including mental health professionals within paediatric diabetes clinics, creating true multidisciplinary teams. Commissioning pathways that fund psychology input as a routine element of diabetes care reduce fragmentation of services and provide more consistent access to emotional support (NICE, 2023).

Strategies for prevention and intervention

Preventing psychological complications in adolescents with type 2 diabetes involves early, consistent and proactive approaches. Routine screening for depression, anxiety and diabetes-related distress should form part of standard care, rather than being introduced only when problems escalate. Adolescents report unmet needs for emotional support, which frequently leaves them feeling isolated and misunderstood (Spajic et al, 2025). Screening needs to be paired with genuine access to counselling and peer support, rather than superficial assessment.

Structured psychoeducation programmes and digital health tools improve engagement, particularly among young people who are reluctant to seek face-to-face support (De Wit et al, 2022). The use of apps, online counselling and school-based initiatives offer opportunities to reach adolescents in environments where they feel more comfortable. Nevertheless, these approaches must be carefully designed to avoid reinforcing stigma or oversimplifying the complexity of diabetes care.

Prevention does not only relate to services, but also to culture. Adolescents are more vulnerable to stigma, peer pressure and family conflict than adults. Effective prevention is increasingly understood to require positive, non-judgemental language, positive reinforcement and collaboration between health professionals, families and schools. Interventions that normalise mental health support, promote autonomy and encourage resilience are essential, if outcomes are to improve for young adults. These include psychoeducation programmes delivered within schools to improve health literacy, peer-mentoring schemes that provide role models for younger adolescents and digital health platforms offering discreet access to counselling and support (de Wit et al, 2022).

Conclusion

Type 2 diabetes in adolescents is a more than just a clinical challenge; living with this complex condition can have profound psychological consequences. The biological complications of insulin resistance and sub-optimal glycaemic control are widely acknowledged, but the mental health impact remains less consistently addressed. Depression, anxiety, disordered eating and diabetes-related distress are common, and these difficulties frequently undermine treatment engagement. Physical and psychological health should be seen as inseparable, each influencing the other in ways that determine long-term outcomes.

Services continue to focus narrowly on biomedical markers, leaving many adolescents without adequate psychological support. Integrated care models, stigma reduction and routine screening for emotional difficulties are, therefore, crucial. In addition, families, schools and peer networks should be engaged in supporting resilience and independence. Addressing this hidden epidemic is increasingly understood to require collaboration across systems and a recognition that improving adolescent well-being is as vital as controlling blood glucose. ■

American Diabetes Association (2021) *ADA Mental Health Toolkit Questionnaires*. Available at: https://bit.ly/4tVaMbJ (accessed 25.05.26)

de Wit M, Gajewska KA, Goethals ER et al (2022) ISPAD Clinical Practice Consensus Guidelines 2022: Psychological care of children, adolescents and young adults with diabetes. *Pediatr Diabetes* **23**: 1373–89

Dickinson JK, Guzman SJ, Maryniuk MD et al (2017) The use of language in diabetes care and education. *Diabetes Care* **40**: 1790–9

Jaser SS, Roddy MKK, Beam AB (2025) Psychosocial and behavioural health among youth and adults with diabetes. In: Lawrence JM, Casagrande SS, Herman WH (eds). *Diabetes in America* (3rd edition). National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, USA. Available at: https://www.ncbi.nlm.nih.gov/books/NBK612770/ (accessed 26.05.26)

Khalafalla HE, Albasheer O, Alfaifi BAH et al (2024) Diabetes-related social stigma among university students in Saudi Arabia: a cross-sectional study. *Medicine (Baltimore)* **103**: e36863

Mateo K, Greenberg B, Valenzuela J (2024) Disordered eating behaviours and eating disorders in youth with type 2 diabetes: a systematic review. *Diabetes Spectr* **37**: 342–9

NICE (2023) *Diabetes (type 1 and type 2) in children and young people: diagnosis and management* (NG18). NICE, London. Available at: https://www.nice.org.uk/guidance/ng18 (accessed 26.05.26)

Nip ASY, Reboussin BA, Dabelea D et al (2019) Disordered eating behaviors in youth and young adults with type 1 or type 2 diabetes receiving insulin therapy: The SEARCH for Diabetes in Youth Study. *Diabetes Care* **42**: 859–66

Paudel S, Khanal SP, Gautam S et al (2023) Anxiety and depression among people with type 2 diabetes visiting diabetes clinics of Pokhara Metropolitan, Nepal: a cross-sectional study. *BMJ Open* **13**: e064490

Spajic D, Curran J, Luu Y et al (2025) Diabetes distress and unmet support needs hinder optimal care for adolescents with type 2 diabetes: a mixed methods study. *Pediatr Diabetes* **2025**: 5574666

Subramani G, Peña AS, Oxlad M (2025) "I don't want to feel judged": A qualitative study of adolescents' experiences of living with type 2 diabetes. *Can J Diabetes* **49**: 271–8

Xie, J, Wang, M, Long, Z et al (2022) Global burden of type 2 diabetes in adolescents and young adults, 1990–2019: Systematic analysis of the Global Burden of Disease Study 2019. *BMJ* **379**: e072385

"Effective prevention of psychological complications is increasingly understood to require positive, non-judgemental language, positive reinforcement and collaboration between health professionals, families and schools."