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Life-course influence of childhood behaviour problems on diabetes in midlife: Results from 1958 British birth cohort study

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Statement of the Problem: Childhood behaviour problems are known to be associated with certain adult diseases. However, the role of childhood behaviour problems in type 2 diabetes is not well understood. This study assessed whether childhood behaviour problems influence the risk of type 2 diabetes in midlife using the 1958 British birth cohort data.

Methodology & Theoretical Orientation: Individuals born in 1958 in the UK were followed up from birth throughout childhood until adulthood. Data on childhood behaviour was collected at age 7, 11 and 16 years. At age 45 years, 8252 blood samples were collected and Glycated haemoglobin (HbA1C) measured. type 2 diabetes was derived if HbA1c \geq 6% or self-reported type 2 diabetes at 42 years. Odds ratios (ORs) and 95% confidence intervals (CIs) were estimated to assess childhood behaviour problems in relation to type 2 diabetes using logistic regression, with adjustment for social class in childhood and adulthood, family history of diabetes, birth weight, gestational age, body mass index (BMI), smoking habit, alcohol consumption and exercise.

Findings: Childhood behaviour problems at 16 years are associated with increased risk of type 2 diabetes in midlife (OR 1.65 95% CI 1.19, 2.30). Those with persistent childhood behaviour problems had more than double the risk of type 2 diabetes in mid-adult life (OR 2.19, 95% CI 1.20 4.01), in particular, boys with persistent childhood behaviour problems (OR 2.51 95% CI 1.23, 5.14).

Conclusion & Significance: Childhood behaviour problems are associated with increased risk of type 2 diabetes in midlife. Interventions of behavior problems in children may be an effective way to reduce future risk of diabetes.