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### Prevalence of depressive and anxiety symptoms in youth with type 1 diabetes: A systematic review and meta-analysis

**Background:** There is a complex interaction between psychosocial factors and type 1 diabetes (T1D) resulting in compromised diabetes management and suboptimal glycemic control. Individuals with T1D are at increased risk of developing depression and anxiety. Screening for psychosocial risk factors from diagnosis of T1D has been recommended. International standard is integrated care by a multidisciplinary team.

Aim: Aim of this study was to perform a systematic review and meta-analysis to update the evidence base in this area.

**Methods:** We searched EMBASE, MEDLINE, The Cochrane Library, and PsycINFO in April 2014 with an update in May 2015. When possible, data were pooled to estimate summary effects.

**Results:** Our searches identified 14 publications investigating the correlation of anxiety and depression with T1D in children and adolescents. Using the children's depression inventory, the pooled prevalence of depressive symptoms were 30.04% and 95% CI [16.33; 43.74]. There were correlations between symptom levels and glycemic control as well as three-way interactions between HbA1c, blood glucose monitoring frequency or diabetes-specific stress and depression. Symptoms of anxiety were reported for up to 32% of patients. A negative impact on glycemic control was demonstrated.

**Conclusions:** Our analyses confirmed a high prevalence of symptoms of depression and anxiety in youth with T1D that potentially compromise diabetes management and glycemic control. In our opinion, these findings support recommendations for early screening for psychological comorbidity and regular psychosocial assessment from diagnosis. Future prospective studies are warranted to further explore the interaction of symptoms of depression and anxiety with T1D and develop evidence-based treatment models.

#### **Biography**

Barbara Buchberger is the Head of the Research Unit Health Technology Assessment and Systematic Reviews at the Alfried Krupp von Bohlen u. Halbach Foundation. She is an Endowed Chair of Medicine Management University of Duisburg-Essen, Germany. She completed her Graduation from the Technical University of Berlin and the Berlin University of the Arts.

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