Abstracts 1st June – 1st September 2016

Title: Development and validation of the Screen for Early Eating Disorder Signs (SEEDS) in persons with type 1 diabetes.

Source: PubMed

Free Access? No

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Abstract

This study's objective was to develop and validate an instrument to identify those at risk of developing an eating disorder (ED) in persons with type 1 diabetes. The Screen for Early Eating Disorder Signs (SEEDS) instrument was developed using a multi-phase process including focus groups, cognitive interviews, and mailed questionnaires. Factor analysis revealed 20 items across three factors (Body Image, Feelings, Quality of Life) demonstrating strong psychometric properties. Scoring guidelines and interpretation are provided. SEEDS is a brief (20-item; 2-5 minutes to complete), self-administered, screen designed for use in clinical practice or research to identify or confirm suspicions of ED risk and does not include weight-control behavior items.

Journal Identifier: Eat Disord. 2016 May-Jun;24(3):271-88. doi: 10.1080/10640266.2015.1090866.

Title: UTILITY OF PSYCHOLOGICAL SCREENING OF YOUNG ADULTS WITH TYPE 1 DIABETES TRANSITIONING TO ADULT PROVIDERS.

Source: PubMed

Free Article: No

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Abstract

OBJECTIVE:

Screening for depression, diabetes-distress and disordered eating in youth with type 1 diabetes (T1D) is recommended, as these comorbidities contribute to poor glycemic control. No consensus exists on which measures are optimal and most previous studies have used non-disease specific measures. We examined the utility of screening for these disorders using two disease-specific and one general measure at the time of transition from pediatric to adult care.

METHODS:

Forty-three Young Adults (YA) from a T1D transition clinic completed the Patient Health Questionnaire, the Diabetes Distress Scale, and the Diabetes Eating Problem Survey-Revised. Chart review determined if clinicians noted similar symptoms during the year prior to transition. Metabolic data were also recorded.

RESULTS:

Chart review identified 5 patients with depressive symptoms and 8 patients with diabetes-distress. Screening identified 2 additional patients with depressive symptoms and 1 additional patient with diabetes-distress. Of those noted to have symptomatic depression or diabetes-distress on chart review, several subsequently screened negative on transition. Disordered eating was not detected by chart review, but 23.5% screened positive on transition. While depression, diabetes-distress, and disordered eating positively correlated with HbA1c ($r=0.31$, $p=0.05$; $r=0.40$, $p=0.009$; $r=0.63$, $p<0.001$; respectively), disordered eating accounted for the majority of observed variance ($dF=1$; $F=18.6$; $p=0.000$). Even though HbA1c was higher in patients with vs. without disordered eating ($p<0.001$), BMI did not differ between the two groups ($p=0.51$).

CONCLUSIONS:

In YA with T1D, formal screening provides an opportunity to detect psychological problems, which, when treated, may help optimize metabolic control during the transition process.

Journal Identifier: Endocr Pract. 2016 Jun 13. [Epub ahead of print]

Title: Psychological barriers to optimal insulin therapy: more concerns in adolescent females than males.

Source: Pubmed

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Abstract

OBJECTIVE:

The aim of this study is to investigate psychological barriers (illness perceptions, insulin beliefs, and coping strategies) to optimal insulin therapy among adolescents with type 1 diabetes (T1D), with a specific focus on gender differences and mode of treatment (insulin pump vs pen).

METHODS:

A total of 105 males and females (12-20 years) participated in this study. The Brief Illness Perception Questionnaire, the Beliefs about Medicines Questionnaire, and the Adolescent Coping Orientation for Problem Experiences were completed. Additionally, diabetes clinical data were collected by the Norwegian Childhood Diabetes Registry.

RESULTS:

Females had significantly more negative illness perceptions than males on all dimensions ($p<0.05$), with moderate-to-large effect sizes. Regarding insulin beliefs, females scored significantly higher than males on insulin concern ($p<0.001$), indicating more concerns about insulin. There were no significant gender differences on perceptions of insulin necessity. Finally, females scored significantly higher on the coping strategies being social and solving family problems ($p<0.01$), indicating more positive coping among females than males for these subscales. In terms of treatment mode, the only statistically significant difference in the psychological aspects was for the illness perception treatment control, with patients using insulin pen reporting more negative perceptions on this dimension than patients using insulin pump.

CONCLUSIONS:

Addressing psychological aspects may be a clinically important supplement to standard somatic T1D care. The consistent finding of gender differences across the psychological measures implies that a tailored treatment approach for males and females with T1D may be warranted.

KEYWORDS:

Adolescent Diabetes; Gender Differences; Psychological Aspects; Treatment Adherence/Compliance

Journal Identifier: BMJ Open Diabetes Res Care. 2016 Jun 23;4(1):e000203. doi: 10.1136/bmjdrc-2016-000203. eCollection 2016

Title: Disturbed eating behaviors in adolescents with type 1 diabetes. How to screen for yellow flags in clinical practice?

Source: PubMed

Free Access? No

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Abstract

BACKGROUND:

Adolescents with type 1 diabetes are at an increased risk of disturbed eating behaviors (DEBs).

OBJECTIVE:

The aims of this study are to (i) explore the prevalence of DEBs and associated 'yellow flags', and (ii) establish concordance between adolescents-parents and adolescents-clinicians with respect to DEBs.

METHODS:

Adolescents (11-16 yr) and parents completed questionnaires. A stepwise approach was used to assess DEBs: only adolescents whose answers raised psychological yellow flags for DEBs completed the Diabetes Eating Problems Scale - Revised and questions from the AHEAD study. Parents and clinicians shared their observations regarding possible DEBs. Kruskal-Wallis tests, post hoc Mann-Whitney U test, and chi-squared tests were utilized to examine clinical yellow flags. Cohen's kappa was used to assess concordance.

RESULTS:

Of 103 adolescents participated (51.5% girls), answers of 47 (46.5%) raised psychological yellow flags, indicating body and weight concerns. A total of 8% scored above cut-off for DEBs. Clinical yellow flags were elevated glycated hemoglobin A1c ($p = 0.004$), older age ($p = 0.034$), dieting frequency ($p = 0.001$), reduced quality of life ($p = 0.007$), less diabetes self-confidence ($p = 0.015$), worsened diabetes management ($p < 0.001$), and body dissatisfaction ($p < 0.001$). Body Mass Index (BMI) z-scores and gender were no yellow flags. Concordance between parents and adolescents was slight ($k = 0.126$ and 0.141), and clinicians and adolescents was fair ($k = 0.332$).

DISCUSSION:

Half of the adolescents reported body and weight concerns, less than 1 in 10 reported DEBs. Screening for yellow flags for DEBs as a part of clinical routine using a stepwise approach and early assistance is recommended to prevent onset or deterioration of DEBs.

KEYWORDS:

DINO study; adolescents; disturbed eating behavior; quality of life; type 1 diabetes

Journal Identifier: Pediatr Diabetes. 2016 Jun 30. doi: 10.1111/pedi.12400. [Epub ahead of print]

Title: Evaluating Substance Use and Insulin Misuse in Adolescents With Type 1 Diabetes.

Source: PubMed

Free Article?

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Abstract

PURPOSE:

Substance use behaviors often emerge during adolescence, and adolescents with type 1 diabetes (T1D) may be at risk for engaging in traditional substance use (eg, alcohol, tobacco, and illicit substances) as well as a unique form of substance use: insulin misuse. The purpose of this exploratory study was to examine substance use and insulin misuse in adolescents with T1D.

METHODS:

Sixty adolescents aged 12 to 20 years with T1D (n = 60) completed surveys on substance use, insulin misuse, and diabetes self-management during a routine diabetes appointment. Demographic measures were summarized by mean (SD) or percentage. Prevalence of substance use and insulin misuse was calculated and stratified by demographic and clinical characteristics. Two-sample t test (continuous variables) and chi-square analysis (categorical variables) determined statistically significant differences.

RESULTS:

The prevalence of ever using substances was 36.7%, and that for ever misusing insulin was 19%. Older participants (17.1 ± 1.8 vs 15.6 ± 1.9 years; P < .01) and those with depression (31.8% vs 7.9%; P = .02) were more likely to use substances. Disordered eating behaviors were the most frequently reported reason for insulin misuse. Self-harm intent was reported by one-third of insulin misusers. Substance use and insulin misuse were not related to glycemic control or diabetes self-management behaviors.

CONCLUSIONS:

The diabetes care team should be aware that substance use and insulin misuse are common in adolescents with T1D. Screening for these risky behaviors is critical in those who are older or have mental health disorders. Effective education, prevention, and treatment strategies targeted at these behaviors are needed to improve the overall health of this population.

Diabetes Educ. 2016 Jul 31. pii: 0145721716659149. [Epub ahead of print]

Glycemic control and variability in association with body mass index and body composition over 18months in youth with type 1 diabetes.

Source: PubMed

Free Article: No

Author information

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Abstract

AIMS:

The impact of adiposity on glycemic control in type 1 diabetes patients has important implications for preventing complications. This study examined associations of glycemic outcomes with body mass index (BMI, kg/m^2) and body composition in youth with type 1 diabetes.

METHODS:

This is a secondary analysis of an 18-month randomized controlled dietary intervention trial (N=136, baseline age=12.3±2.5y, HbA1c=8.1±1.0% (65±11mmol/mol)). Measured height and weight every 3months were abstracted from medical records. Body composition was assessed by dual energy X-ray absorptiometry (DXA) at baseline, 12 and 18months. Glycated hemoglobin (HbA1c) and glycemic variability assessed by masked 3-day continuous blood glucose monitoring (CGM) were obtained every 3months. 1,5-Anhydroglucitol (1,5-AG) was assessed every 6months. Adjusted random effects models for repeated measures estimated associations of time-varying BMI and body composition with time-varying glycemic outcomes.

RESULTS:

There was no treatment effect on glycemic outcomes. HbA1c was not associated with BMI or body composition indicators. 1,5-AG was inversely associated with BMI and adiposity indicators (%fat, trunk fat mass and trunk %fat), adjusting for developmental covariates. Adiposity indicators were positively associated with %glucose >180mg/dL and >126mg/dL when adjusting for developmental covariates, and %glucose >126mg/dL when additionally adjusting for diabetes-related covariates. Fewer consistent relationships were observed for 3-day mean glucose and %glucose <70.2mg/dL. BMI and body composition variables were not associated with standard deviation of glycemic values or mean amplitude of glycemic excursions.

CONCLUSIONS:

The role of greater BMI and adiposity in diabetes management in youth with type 1 diabetes may relate specifically to increased hyperglycemic excursions.

KEYWORDS:

1,5-Anhydroglucitol; Adolescent; Body composition; Body mass index; Diabetes mellitus, type 1; Hemoglobin A glycosylated

Journal Referece: Diabetes Res Clin Pract. 2016 Aug 6;120:97-103. doi: 10.1016/j.diabres.2016.07.028. [Epub ahead of print]

Title: I Should but I Can't: Controlled Motivation and Self-Efficacy Are Related to Disordered Eating Behaviors in Adolescents With Type 1 Diabetes.

Source: PubMed

Free Article?

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Abstract

PURPOSE:

Among adolescents with type 1 diabetes, disordered eating behaviors (DEBs) are more prevalent and have more serious health implications than in adolescents without diabetes, necessitating identification of modifiable correlates of DEB in this population. This study hypothesized that (1) autonomous motivation and (2) controlled motivation for healthy eating (i.e., eating healthfully because it is important to oneself vs. important to others, respectively) are associated with DEB among adolescents with type 1 diabetes. The third hypothesis was that baseline healthy eating self-efficacy moderates these associations.

METHODS:

Adolescents with type 1 diabetes (n = 90; 13-16 years) participating in a behavioral nutrition intervention efficacy trial reported DEB, controlled and autonomous motivation, and self-efficacy at baseline, 6, 12, and 18 months. Linear-mixed models estimated associations of controlled and autonomous motivation with DEB, adjusting for treatment group, body mass index, socioeconomic status, age, and gender. Separate models investigated the interaction of self-efficacy with each motivation type.

RESULTS:

Controlled motivation was positively associated with DEB (B = 2.18 ± .33, p < .001); the association was stronger for those with lower self-efficacy (B = 3.33 ± .55, p < .001) than those with higher self-efficacy (B = 1.36 ± .36, p < .001). Autonomous motivation was not associated with DEB (B = -.70 ± .43, p = .11).

CONCLUSIONS:

Findings identify controlled motivation for healthy eating as a novel correlate of DEB among adolescents with type 1 diabetes and show that self-efficacy can modify this association. Motivation and self-efficacy for healthy eating represent potential intervention targets to reduce DEB in adolescents with type 1 diabetes.

KEYWORDS:

Autonomous motivation; Controlled motivation; Disordered eating behaviors; Insulin restriction; Self-determination theory; Self-efficacy; Type 1 diabetes

Journal Reference: J Adolesc Health. 2016 Aug 23. pii: S1054-139X(16)30142-2. doi: 10.1016/j.jadohealth.2016.06.008. [Epub ahead of print]