THE EFFECT OF WEIGHT CHANGES ON HEALTH-RELATED QUALITY OF LIFE AND WORK IMPAIRMENT IN PATIENTS WITH TYPE 2 DIABETES
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OBJECTIVES: To investigate whether patients with type-2 Diabetes Mellitus (T2DM) who gained 25% of their bodyweight over the course of one year experienced changes in health-related quality of life (HRQoL) and work impairment relative to those who lost 25% of their bodyweight. METHODS: Data were taken from the 2006 and 2007 National Health & Wellness Survey, an annual, cross-sectional, Internet survey of US adults. Two patient sub-samples with T2DM whose 2006–2007 weight gain or loss was 25% of their bodyweight (n = 300) were compared to those whose weight loss was 25% of their bodyweight (n = 330) on levels of HRQoL (assessed with the SF-8 and SF-12 for 2006 and 2007, respectively) and levels of work impairment (assessed with the Work Productivity and Activity Impairment Questionnaire (WPAI)) in a panel of multiple regressions, controlling for demographics, volitional weight loss (whether or not respondents were taking steps to lose weight), and comorbidities. RESULTS: It was shown that weight gain was associated with significantly lower levels of the SF-12 Physical Component Summary (mean score (M) = 41.5, p < 0.01). Among obese respondents, this effect was amplified (M = 37.6 vs. M = 40.6, p < 0.01). No significant differences were found between T2DM patients who gained 25% of their weight and those who lost 25% of their weight on Mental Component Summary (M = 48.6 vs. M = 47.7, p = 0.3), absenteeism (mean impairment (M) = 4.6% vs. M = 1.2%, p = 0.32; presenteeism (M = 18.9% vs. M = 14.3%, p = 0.26), total work impairment (M = 20.1% vs. M = 16.6%, p = 0.46), or activity impairment (M = 33.8% vs. M = 31.4%, p = 0.22), though most effects were in the expected direction. CONCLUSIONS: T2DM patients who gained weight, especially for obese individuals, reported significantly lower levels of HRQoL relative to those who lost weight. Treatments that avoid weight gain and/or promote weight loss could have a beneficial impact beyond HbA1c for T2DM patients.

DEVELOPMENT OF A VALUATION FUNCTION FOR A DIABETES-SPECIFIC PREFERENCE-BASED MEASURE OF HEALTH BASED ON THE MULTI-ATTRIBUTE UTILITY THEORY
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OBJECTIVES: The Diabetes Utility Index (DUI) is a brief, self-administered diabetes-specific PBMS. We describe the development of the valuation function for the DUI and report its validity. METHODS: MAUT identified 20 of 768 DUI health states (anchor states, single-attribute level states, and marker states) for which preferences were then elicited via Visual Analog Scale and Standard Gamble (SG) tasks during assessments, controllable for demographics, volitional weight loss (whether or not respondents were taking steps to lose weight), and comorbidities. It was shown that weight gain was associated with significantly lower levels of the SF-12 Physical Component Summary (mean score (M) = 41.5, p < 0.01). Among obese respondents, this effect was amplified (M = 37.6 vs. M = 40.6, p < 0.01). No significant differences were found between T2DM patients who gained 25% of their weight and those who lost 25% of their weight on Mental Component Summary (M = 48.6 vs. M = 47.7, p = 0.3), absenteeism (mean impairment (M) = 4.6% vs. M = 1.2%, p = 0.32; presenteeism (M = 18.9% vs. M = 14.3%, p = 0.26), total work impairment (M = 20.1% vs. M = 16.6%, p = 0.46), or activity impairment (M = 33.8% vs. M = 31.4%, p = 0.22), though most effects were in the expected direction. CONCLUSIONS: T2DM patients who gained weight, especially for obese individuals, reported significantly lower levels of HRQoL relative to those who lost weight. Treatments that avoid weight gain and/or promote weight loss could have a beneficial impact beyond HbA1c for T2DM patients.

THE IMPACT OF FREQUENCY AND SEVERITY OF SELF-REPORTED HYPOGLYCEMIA ON QUALITY OF LIFE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS TREATED WITH ORAL ANTI-HYPERGLYCEMIC AGENTS
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OBJECTIVES: Hypoglycemia is a side-effect of treatment with oral anti-hyperglycemic agents (OADs), especially sulfonylureas (SU). This study assessed the impact of self-reported hypoglycemia on health-related quality of life (HRQoL) among patients with type-2 diabetes mellitus (T2DM), treated with OAHAs. METHODS: A cross-sectional, internet-based study was conducted among 2008 participants from the US National Health and Wellness Survey 2007. Patients with self-reported T2DM treated with OAHAs only were included. For each level of self-reported hypoglycemic severity (mild, moderate, severe), frequency (1 to 2 episodes, 3 to 6 episodes, or > than once per month) data for six months prior to survey were collected. Very severe hypoglycemia (medical assistance required) was recorded as either one episode or >= to two episodes. Utilty was measured using the EQ-3D, and fear of hypoglycemia using the Work Fear Scale of the Hypoglycemia Questionnaire II (WFH-Q2). RESULTS: Mean age was 58 (5111 years), 43% were female, and 72.2% reported HbA1c goal attainment (<7%). The proportion of patients on SU monotherapy, SU combination therapy, and other treatment regimens were 10.7%, 39.7%, and 49.6%, respectively. Hypoglycemic episodes were bodyweight of 4% patients (45.6% mild, 37.4% moderate, 13.2% severe and 3.8% very severe). After adjusting for age, gender, weight gain, microvascular and macrovascular complications, the utility scores decreased by increasing severity and frequency of hypoglycemic episodes (with reference = no hypoglycemia), (-0.003) with T2DM who 0.013 did not manage their bodyweight (n = 330) on levels of HRQoL (assessed with the SF-8 and SF-12 for 2006 and 2007, respectively) and levels of work impairment (assessed with the Work Productivity and Activity Impairment Questionnaire (WPAI)) in a panel of multiple regressions, controlling for demographics, volitional weight loss (whether or not respondents were taking steps to lose weight), and comorbidities. RESULTS: It was shown that weight gain was associated with significantly lower levels of the SF-12 Physical Component Summary (mean score (M) = 41.5, p < 0.01). Among obese respondents, this effect was amplified (M = 37.6 vs. M = 40.6, p < 0.01). No significant differences were found between T2DM patients who gained 25% of their weight and those who lost 25% of their weight on Mental Component Summary (M = 48.6 vs. M = 47.7, p = 0.3), absenteeism (mean impairment (M) = 4.6% vs. M = 1.2%, p = 0.32; presenteeism (M = 18.9% vs. M = 14.3%, p = 0.26), total work impairment (M = 20.1% vs. M = 16.6%, p = 0.46), or activity impairment (M = 33.8% vs. M = 31.4%, p = 0.22), though most effects were in the expected direction. CONCLUSIONS: T2DM patients who gained weight, especially for obese individuals, reported significantly lower levels of HRQoL relative to those who lost weight. Treatments that avoid weight gain and/or promote weight loss could have a beneficial impact beyond HbA1c for T2DM patients.