adherence/persistence and eight were able to improve the blood glucose levels of patients (double counting in three cases); five had no effect at all. Four dimensions of the methodological quality of AI programs were identified: 1) measurement of adherence/persistence/clinical outcomes, 2) measurement of N/A/NP causes, 3) use of effective elements, and 4) feasibility of program evaluation. The authors defined 5 detailed methodological requirements per dimension and, based on this, developed a corresponding scoring model (MIN Score 0, MAX score 20). All 19 AI programs were evaluated in the scoring model (average score 8.05); • Score <5: 3 AI programs showed glucose level improvement; • Score 5-9: 8 lifestyle inter- view improvement in both adherence and/or blood glucose levels; • Score ≥9: 8 all-improved adherence and/or blood glucose levels. CONCLUSIONS: The scoring model provides a starting point for the methodical evaluation of AI. However, further development and testing of both the methodology and content is needed for medical indica- tions other than diabetes type 2.

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The scoring model provides a starting point for the methodical evaluation of AI. However, further development and testing of both the methodology and content is needed for medical indications other than diabetes type 2.

THE 8-ITEM MORISKY MEDICATION ADHERENCE SCALE MMAS: TRANSLATION AND VALIDATION STUDY OF THE MALAYSIAN VERSION

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OBJECTIVES: To translate the MMAS into the Malaysian language, and to examine the psychometric properties of the Malaysian version of the MMAS among patients with type 2 diabetes, including its validity and reliability. METHODS: After obtaining permission, a standard “forward-backward” translation procedure was used to create the Malaysian version of the MMAS from the original English version. A convenience sample of 233 outpatients with type 2 diabetes was identified between May and Sep- tember 2008. The MMAS was collected from the patients in the Penang General Hospital, Penang, Malaysia. Instruments consisted of the Malaysian version of MMAS, the Malaysian version of the old four-item Morisky scale and a sociodemographic questionnaire. Medical records were reviewed for hemoglobin A1C (HbA1C) levels and other clinical data. Reliability was tested for internal consistency using Cronbach’s α coefficient. Validity was confirmed using convergent and known group variation. RESULTS: Employing the recommended scoring method, the mean ± SD of MMAS scores was 6.13 ± 1.72. Moderate internal consistency was found, (Cronbach’s α = 0.675), the test–retest reliability value by using Spearman’s ρ correlation was 0.884 (P < 0.001), a positive correlation between the eight- and four-item MMAS was found (ρ = 0.792; P < 0.01). For known group validity, a significant relationship between MMAS categories and HbA1C categories (r2 = 0.206); P = 0.001) was found. The MMAS sensitivity and specificity, with positive and negative predictive values were 77.61%, 42.91%, 46.84% and 76.36%, respectively. CONCLUSIONS: The MMAS can be used for medication adherence measurement in diabetes. The findings of this validation study indicate that the Malaysian version of the MMAS is a reliable and valid measure of medication adherence which can now be used in clinical practice.

FACTORS INFLUENCING VALUATION OF- AND WILLINGNESS TO PARTICIPATE IN- A LIFESTYLE INTERVENTION: AN EXPLORATORY CONJOINT ANALYSIS WITH DIABETES TYPE 2 PATIENTS

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OBJECTIVES: The last decade several studies have proven that lifestyle interventions can be effective for people with or at risk for diabetes. Because effectiveness of preven- tive interventions is affected by non-participation (adherence), it is important to understand factors influencing people’s willingness to participate in a lifestyle interven- tion. Therefore, the aims of this exploratory analysis is to examine which factors of a lifestyle program influence its valuation and willingness to participate. METHODS: We used conjoint analysis to empirically examine associations between the factors that influence participants’ valuation of an intervention and participants’ willingness to participate in a lifestyle intervention. For this purpose participants received a questionnaire with four hypothetical lifestyle interventions. They were asked to value the hypothetical scenarios with a grade from “1” to “10” and furthermore they were asked if they would be willing to participate in these hypothetical programs. Linear and logistic regression techniques were used for the analyses. RESULTS: The factors “group activity,” “counselling,” and “receiving money” were positively associated with the scores of the valuation of the programmes. Logistic regression analysis showed that money was the only factor that was independently associated with respondents’ willingness to participate in a lifestyle interven- tion. Subgroup analysis showed that receiving an amount of money was not associated with willingness to participate, but having to pay is negatively associated with participation in the lifestyle intervention. CONCLUSIONS: It appeared that only financial disincentives were independently associated with willingness to participate in a lifestyle interven- tion. Our conjoint analysis results suggest that financial incentives, in the form of bonuses, cannot be used to encourage people to participate in lifestyle interventions. Financial incentives, in the form of payments might however discourage participation, regardless of the content of the program.

HEALTH RELATED QUALITY OF LIFE (HRQOL) AND EQ-SD UTILITIES IN A TYPE 2 DIABETES (T2D) POPULATION: RESULTS FROM A SWEDISH SURVEY

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OBJECTIVES: To present HRQOL data from a previously presented survey on T2D patients in Stockholm, Sweden. METHODS: A postal survey including EQ-SD was distributed to 1000 members of the Stockholm Diabetic Patient Association and 1000 patients from five primary health care centers. Patients were randomly selected, >18 years, having a diabetes diagnosis. Analysis of variance was used to test the statistical hypothesis that patients within each subgroup had equal mean utility. RESULTS: Response rate was 65% (1319/2000 questionnaires). T2D diągnoδe was reported for 961 respondents of which 885 completed the EQ-SD questionnaire. Mean age 69 years, 48.3 % female, BMI 28.4 kg/m2, mean duration of T2D 11.3 years. Overall, the mean (SD) utility was 0.765 (0.260) and the current health status reported on the VAS scale was 0.727 (0.18). Patients without any hypoglycemic episode the previous month had a utility of 0.799 while those with 1, 2 or >5 episodes reported 0.774, 0.687 and 0.635, respectively. More than one hypoglycemic episode resulted in significantly lower utility compared to none or only one episode (P < 0.0001). The utility of obese patients, 0.704, was lower than for patients of normal weight, 0.806, or overweight, 0.790 (P < 0.0001). The utility of patients not considering themselves responsible for the management of their T2D was significantly lower, 0.689, compared to patients taking a limited, 0.774, or full, 0.759, responsibility (P = 0.0005). Patients considering themselves having insufficient knowledge to cope with their T2D reported a lower utility, 0.689, compared to patients with sufficient knowledge, 0.789 (P < 0.001). Male respondents had a higher utility, 0.796, compared to females, 0.713 (P < 0.0002). CONCLUSIONS: Experience of hypoglycemic episodes, obesity, gender, patients’ perception of personal responsibility and perceived knowledge about type 2 diabetes has significant impact on health related quality of life in patients with type 2 diabetes.

UTILITY VALUES FOR DIABETES COMPLICATIONS

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OBJECTIVES: Cost-utility analysis in diabetes requires utility estimates for diabetic complications. Models frequently rely on UKPDS data. UK requirements for prefer- ence elicitation have changed since UKPDS publication. We conducted a systematic review of the literature to identify utility values for diabetes complications suitable for use in Health Technology Assessment (HTA). METHODS: A systematic search of online databases was conducted using key words relating to diabetes, major complica- tions, utility assessment and quality of life. Reference lists of identified citations were reviewed. Studies reporting utility single-index measures in patients with any of 33 pre-specified diabetes related states were included: states considered were diabetic complications and adverse events associated with anti-diabetic therapies (AAs). Papers were qualitatively assessed: criteria included relevancy of studied population to Type 1 or Type 2 diabetes, sample size, methodological quality and consistency with current UK HTA guidelines. Comorbidity is common in diabetes: methodology papers adding combination of utility values were identified in a structured search and reviewed. RESULTS: The search returned 3024 hits, 169 articles were reviewed and 32 publications were identified as suitable for review. Utility or disutility values suit- able for UK HTA were obtained for 23 diabetes states. For 10 complications, including insulin, renal disease and some neuro complications, no utility value was identified. UK HTA criteria. There is no consensus in the literature on how utility measures should be combined in patients with more than one complication. CONCLUSIONS: We identified a set of utility values suitable for economic analyses for HTA in diabetes. To further inform UK HTA, additional research should create robust utility values for diabetic renal disease, and evaluate the empirical accuracy of alternative methods of combining utility values in patients with multiple complications.

MEASUREMENT OF HRQOL USING EQ-SD IN TYPE 2 DIABETES MELLITUS PATIENTS TREATED WITH ORAL ANTI-DIABETIC DRUGS IN CHINA

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OBJECTIVES: The study is to measure the health-related quality of life (HRQOL) in type 2 diabetes mellitus patients (T2DM) with oral anti-diabetic drugs (OADs) therapy using the Chinese version of EQ-SD, and examine their health status. METHODS: The survey was a cross-sectional study and conducted at 75 hospitals in nine cities in China. There were 9577 T2DM patients administered with OADs therapy completed the questionnaires. The survey period was from December 3rd, 2008 to July 31st, 2009. Patients evaluated their health status using five dimensions (SD) and a visual analog scale (VAS). Descriptive statistics was used to describe patients’ demographic charac- teristics, duration of the disease, the frequency of SD responses and VAS score. STATA 9.2 was used for the analyses. RESULTS: The mean age of patients (SD) was 59.5 ± 12.7 years, 51.1% were male. The mean body mass index (SD) was 24.3 ± 3.4 kg/m². The mean duration of disease (SD) was 7.9 ± 6.3 years. For the five dimensions...