OBJECTIVES: To explore how participants evaluate and complete the choice tasks in discrete-choice experiments (DCEs), with special attention to the impact of educational level and health literacy. METHODS: Two existing DCE questionnaires on rotavirus vaccination and prostate cancer screening served as a case for the current study. In total, 70 participants were sampled based on educational level (55 per case study) through structured interviews, participants completed five choice tasks aloud. Interviewers monitored how participants read the choice tasks, how they interpreted the included risk attributes and what decision strategy they used to make their decision and used trading between attributes more often as a decision strategy. RESULTS: The majority of the participants read all the attributes within each choice task. Nearly all participants chose the scenario with the optimal attribute values (monotonicity axiom). In accordance with the continuity axiom, most participants mentioned three or more attributes when interpreting their decisions. Overall, higher educated participants more often included three or more attributes when motivating their decision and used trading between attributes more often as a decision strategy. CONCLUSIONS: The major findings were that participants complete a DCE according to the guidelines. However, the assumptions did not hold for a subset of lower educated and less literate participants. Based on participants’ age, educational level and health literacy additional measures should be undertaken to enhance participants’ understanding of the attributes, the attribute levels and the choice tasks in a DCE.

PM140 THE MEASUREMENT OF UTILITIES IN ASTHMA PATIENTS: A PRELIMINARY STUDY
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OBJECTIVES: To assess the feasibility of a computer-based Standard Gamble (SG) visual prop whilst measuring utilities of different asthma health states at the same time.

METHODS: Twenty adult asthma patients literate in either Malay or English language were conveniently sampled from a public hospital in Penang, Malaysia. They were interviewed by two trained interviewers using a bilingual script. Each patient was requested to value the given health states using Visual Analogue Scale (VAS). There were three asthma health states (H1, H2, H3) and three chronic health states (T1-T3) for 3 months, and two anchor states (healthy and dead). During the SG exercise, the visual prop was fully operated by the interviewers. The probability of being in a worse state was changed in a ‘ping-pong’ fashion until the indifference point was reached.

RESULTS: All patients understood the SG exercise and rated similar utilities than in the other version. Results of the DCE did not significantly differ between the questionnaire version that started with DCE and the version that started with SG (VAS). Two patients provided logical inconsistency data in SG. The preferences by SG were more equally and were, except for one, all considered important. Forcing respondents on the relative importance of attributes whereas in the RSE attributes were rated independently underlies a selection bias. The mean utilities for C1 (SD 0.47) and C2 (SD 0.38) were significantly lower in the questionnaire version that started with DCE (P = 0.06). MOS D1 and ADIS Anxiety and Depression scores. RESULTS: Qualitative data from 36 patients with COPD and 10 age-matched controls informed an initial list of 22 items. The cross-sectional study included 203 COPD patients (GOLD: Stage II: 41% III: 25% IV: 7%; male: 63%, mean age: 65 years; 65% non-COPD. 12 items were removed during hierarchical methods and a further two following Rasch analysis. The final MSSI contains 8 sleep-related items that are specific to COPD patients: breathlessness, chest tightness, cough, sputum production, and 4 sleep-related items: sleep disturbance, daytime drowsiness (Cronbach’s alpha 0.87), test-retest reliability (intra-class correlation coefficient 0.77) and validity. Total MSSI scores significantly correlated with the SG (r = 0.64), MRC Dyspnoea scale (r = 0.46), FACT-G (P = 0.63); MOS problems index 2 (P = 0.62); MOS Sleep adequacy (r = 0.60); MOS Sleep disturbance (r = 0.53); HADS anxiety (r = 0.54) and depression (r = 0.48). There was good overall fit to the Rasch model (Chi-squared: 29.2 df: 16 p = 0.03) and distribution of item scores.

CONCLUSIONS: The MSSI is a reliable, valid, uni-dimensional self-reported outcome measure of sleep and night-time symptoms for people with COPD. It is simple and quick to use making it suitable for research and practice. Further work is needed to determine the minimal clinical important difference and cross cultural validity.

PM143 PSYCHOMETRIC EVALUATION OF THE PATIENT’S KNEE IMPACT QUESTIONNAIRE (PKIP) QUESTIONNAIRE FOR THE ASSESSMENT OF PRIMARY TOTAL KNEE ARTHROPLASTY
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OBJECTIVES: The objective of this study was to evaluate the psychometric properties of a new patient-reported measure of knee impact functional performance associated with physical activities prior to and following primary total knee arthroplasty (TKA).

METHODS: Patient’s Knee Impact Performance questionnaire (PKIP) was developed to assess factors that lead to patient dissatisfaction and describe unmet needs in knee functional performance.

RESULTS: The psychometric analysis sample (n=764) was based on a multicenter, prospective, noncomparative longitudinal study of patients with primary osteoarthritis undergoing TKA at 22 international sites. The PKIP and additional patient-reported outcomes and clinical measures were collected prospectively, postoperatively at less than 1 year, at a minimum of 1 year, and at 2 years.

CONCLUSIONS: The PKIP structure and its reliability, construct validity, discriminatory ability, and responsiveness were assessed. RESULTS: Based on inter-item correlations, factor analyses, and results of previous qualitative research, the PKIP was scored as four subscales (Stability, Confidence, Satisfaction, and Activity Modification) and on an 11-point Likert scale. The Overall PKIP score correlated with the internal consistency: alpha = 0.78 at minimum year; test-retest: intraclass correlation coefficient = 0.77). Correlations between the PKIP and other available measures provided evidence of construct validity. For example, the PKIP correlated 0.19 and 0.50 with the American Knee Society Score preoperatively and at less than 1 year, respectively, and correlated 0.69 and 0.77, with the Knee Injury and Osteoarthritis Outcome Score (KOOS) subscales. In addition, a larger proportion of patients with better or worse knee functioning as defined by clinician-rated measures; hypothesis tests were in the predicted direction and mostly statistically significant. The effect size for the Overall PKIP score was 2.38, indicating that the PKIP was highly responsive. CONCLUSIONS: The reliability, validity and responsiveness of the PKIP support its use in patients undergoing primary TKA.

PM144 VALIDITY AND RESPONSIVENESS OF THE BRISTOL RHEUMATOID ARTHRITIS FATIGUE MULTIDIMENSIONAL QUESTIONNAIRE (BRAF-MDQ) IN A RANDOMIZED CONTROLLED CLINICAL TRIAL
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OBJECTIVES: To evaluate the validity of the BRAF-MDQ in a new group of patients in a clinical trial setting, to confirm its internal factor (domain) structure and to document its sensitivity to change. METHODS: Paired data from a randomized controlled trial (NCT01242488) in patients with moderate to severe RA were collected at baseline (BL), WK10 and WK12. Spearman’s correlation coefficients, Bland-Altman plots and confirmatory factor analysis tested construct validity, reproducibility and internal factor structure of the BRAF-MDQ. Responsiveness was assessed using changes from BL to WK12 of a validated quality of life (QoL) measure from BL to BRAF-MDQ.

RESULTS: There were 219 patients (mean age: 55.5 years; disease duration: 12.6 years; BL DAS28: 5.77). The proportion of missing item answers was very low (0–3%). BRAF-MDQ scores correlated with patient global, pain and HAQ at BL (r = 0.49, 0.46 and 0.58) and at WK12 (r = 0.63, 0.65 and 0.64). Changes in the Physical and Living domains were more closely related to changes in patient and physician global scores and DAS scores than did changes in Cognition and Emotional domains. Responsiveness was high (effect size = 2.70), all components of BRAF-MDQ and the internal consistency (Bland-Altman limits of agreement), as was internal consistency (Cronbach’s: 0.97 for total scores; 0.82 for each domain at BL). The Bluffer comparative fit index (CFI: 0.92) indicated that the established structure within the BRAF-MDQ accounts well for data variation. Effect sizes for BRAF-MDQ in clinical responders at WK12 were very high.