Dyspnea assessment: A new self-administered pictorial shortness of breath questionnaire (C-SOBQ) for COPD patient

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**Introduction**
Dyspnea assessment is crucial in effective clinical management of Chronic Obstructive Pulmonary Disease (COPD). C-SOBQ is originated from University of California, San Diego Shortness of Breath Questionnaire (SOBQ). SOBQ was translated into Chinese for clinical use in Hong Kong for years, but the reliability and validity have not been yet established.

**Objectives**
To study the reliability and validity of a self-administered Chinese version Shortness of Breath questionnaire (C-SOBQ) with 21 ADL pictorial rating cards for COPD patients

**Methodology**
Total 119 COPD patients were recruited by convenience sampling from 5 hospitals, 2 respiratory allied health clinics and 2 community self help groups. For test-retest reliability, 22 patients were recruited and assessed by the C-SOBQ followed by re-assessment within one week by the same rater. For criterion related and discriminative validities, 115 patients were recruited and C-SOBQ score was correlated with a set of criterion parameters include age, body mass index (BMI), 6 minute walking distance (6MWD) test, lung function physiological parameter, BODE index, the Modified Medical Research Council Dyspnea Scale (MMRC Dyspnea Scale) and GOLD COPD stage.

**Result**
C-SOBQ has a good test-retest reliability with intraclass correlation coefficient 0.915 (p ≤ 0.05). The C-SOBQ had significant correlation with MMRC Dyspnea Scale, GOLD COPD stage, BODE index, BMI and 6MWD. Multiple linear regression analysis showed that the BODE index, MMRC Dyspnea Scale and 6MWD were valid predictors for C-SOBQ. In discriminative analysis, 50.4% of cases could be correctly grouped to quartiles of BODE index with the C-SOBQ. C-SOBQ is a valid and reliable dyspnea assessment tool for COPD patients in Hong Kong. The self-administered and pictorial enhancement characteristics of C-SOBQ enable clinical application for different cultures and illiterate patients. Up till now, C-SOBQ was used by more than 5 hospitals and 2 respiratory allied health clinics in Hong Kong. The development of Chinese version Shortness of Breath questionnaire (C-SOBQ) can replace the text
version and acts as an effective clinical assessment in Hong Kong.