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A pilot study on exploring relationships between Chronic Obstructive Pulmonary Disease Assessment Test (CAT) and physical health status.
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Introduction
Existing psychometric assessment tools for chronic obstructive pulmonary disease (COPD) provide supplementary information to the result of spirometry. Their clinical uses were limited, possibly due to their complexity. CAT is a newly developed questionnaire to assess the health status of COPD patients. It is short (8 items) and simple (6 point Likert scale) self administered questionnaire. CAT had been validated and translated into Chinese.

Objectives
To find out the correlation between the CAT score and physical health status of COPD patients.

Methodology
A pilot cross-sectional study was conducted from August to December 2013 in Nursing and Allied Health Clinic -respiratory clinics, Kowloon Central Cluster. Patients with spirometry results with forced expiratory volume in 1 second (FEV1)/forced vital capacity (FVC) < 70% will be invited to complete the CAT. Statistical analysis was performed by using SPSS upon normality assumptions. FEV1 predicted value, The Modified Medical Research Council Dyspnea Scale (MMRC), airflow limitation which classified into 4 levels according to Global Initiative for COPD based on FEV1% predicted value were collected. Association between the CAT score and parameters were tested using Pearson correlations and Spearman correlation accordingly.

Result
During the study, 126 patients completed the CAT and the compliance was 100%. Most patients were male (n=114, 90.5%), the mean age is 69.1+ 9.45, most patients were smokers or ex-smokers (n=119, 94.4%). Mean CAT score was 11+8.44, mean FEV1% predicted value is 62.69+25.31, mean FEV1/FVC= 58.39+8.89, distribution of MMRC score (0: n=27, 21.4%; 1: n=61, 48.4%; 2: n=30, 23.8%; 3: n=8, 6.3%; 4:n=0,

0%), distribution of airflow limitation (Mild: n=32, 25.4%; Moderate: n=52, 41.3%; Severe: n=34, 27.0%; Very severe: n=8, 6.3%) There was a weak negative correlation between CAT score and FEV1/FVC (r= -0.399, p<0.01) and FEV1% predicted (r= -0.42, p<0.01). There was also a weak positive correlation between CAT score and MMRC (r=0.451, p<0.01) and airflow limitation (r=0.405, p<0.01). It was suggestive that CAT can provide complimentary information to spirometry results. High compliance rate suggested CAT was easy to use. Further study would be needed to examine the strength of the correlations.