Title: Validity of the visual simplified respiratory questionnaire (VSRQ) in pulmonary rehabilitation

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Body: Introduction Evaluating health-related quality of life (HRQL) in pulmonary rehabilitation (PR) is important. The St George's Respiratory Questionnaire (SGRQ) is a disease-specific measure often used as a reference test in clinical trials. However, its lengths of completion limits its routine used. The Hospital Anxiety and Depression Scale (HAD) focused only on psychological distress. The VSRQ is a new tool designed to assess HRQL in patients with COPD (Perez T, et al. Int J Chron Obstruct Pulmon Dis. 2009). The aim of this study was to assess the clinical interest of this test in the evaluation of patients HRQL in PR. Methods We enrolled 138 consecutive patients with chronic lung diseases who underwent a PR in a monocenter, prospective study (CEPRO 2011-036). The global score of the VSRQ (scored from 0 to 80 with 8 questions), SGRQ (scored from 0 to 100 with 8 parts) and HAD (scored from 0 to 42 with 7 questions for anxiety evaluation and 7 for the depression) were measured at the beginning and the end of a six week outpatient PR. HRQL improvement was measured by the increase of the VSRQ score and the decrease of the SGRQ and HAD scores. Results The VSRQ correlated with the SGRQ (r=-0.49, p=0.01) and the HAD (r=-0.47, p=0.01). After PR, there was a significant improvement of the VSRQ (46 vs 39, p<0.001), SGRQ (38.3 vs 42.3, p=0.019) and HAD (14 vs 15.1, NS). The VSRQ increase correlated with the SGRQ decrease (r=-0.39, p=0.01). Conclusions The VSRQ score correlates with the SGRQ and HAD scores. Our data demonstrate the clinical interest of this simplified test to evaluate the HRQL in PR.