

Psychometric validity of the 22-item Sinonasal Outcome Test.

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Source

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Abstract

OBJECTIVES:

We set out to determine the psychometric validation of a disease-specific health related quality of life instrument for use in chronic rhinosinusitis, the 22 item Sinonasal Outcome Test (SNOT-22), a modification of a pre-existing instrument, the SNOT-20.

DESIGN, SETTING AND PARTICIPANTS:

The National Comparative Audit of Surgery for Nasal Polyposis and Chronic Rhinosinusitis was a prospective cohort study collecting data on 3128 adult patients undergoing sinonasal surgery in 87 NHS hospitals in England and Wales. Data were collected preoperatively and at 3 months after surgery, and analysed to determine validity of the SNOT-22. Test-retest reliability was assessed in a separate cohort of patients in a single centre.

MAIN OUTCOME MEASURES:

The SNOT-22, a derivative of the SNOT-20 was the main outcome measure. Patients were also asked to report whether they felt better, the same or worse following surgery. To evaluate the SNOT-22, the internal consistency, responsiveness, known group differences and validity were analysed.

RESULTS:

Preoperative SNOT-22 scores were completed by 2803 patients. 3-month postoperative SNOT-22 scores were available for 2284 patients of all patients who completed a preoperative form (81.5% response rate). The Cronbach's alpha scores for the SNOT-22 were 0.91 indicating high internal consistency. The test-retest reliability coefficient was 0.93, indicating high reliability of repeated measures. The SNOT-22 was able to discriminate between patients known to suffer with chronic rhinosinusitis and a group of healthy controls ($P < 0.0001$, $t = 85.3$). It was also able to identify statistically significant differences in sub-groups of patients with chronic rhinosinusitis. There was a statistically significant ($P < 0.0001$, $t = 39.94$) decrease in patient reported SNOT-22 scores at 3 months. At 3 months the overall effect size in all patients was 0.81, which is considered large. We found the minimally important difference that is the smallest change in SNOT-22 score that can be detected by a patient, to be 8.9 points.

CONCLUSIONS:

We have found the SNOT-22 to be valid and easy to use. It can be used to facilitate routine clinical practice to highlight the impact of chronic rhinosinusitis on the patient's quality of life, and may also be used to measure the outcome of surgical intervention. The minimally important difference allows us to interpret scores in a clinical context, and may help to improve patient selection for surgery.