

Modified Edmonton Symptom Assessment System Including Constipation and Sleep: Validation in Outpatients with Cancer

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Objectives. Our aim was to validate the numerical rating scale (NRS) versions of ESAS and ESAS-r, with two additional symptoms of constipation and sleep (CS), and to assess patient preference for either version. **Methods.** Outpatients with advanced cancer ($N=202$) completed three assessments during a single clinic visit: ESAS-CS, and an added time window of “past 24 hours”; ESAS-r-CS, with a time window of “now” and symptom definitions; and the Memorial Symptom Assessment Scale (MSAS). Internal consistency was calculated using Cronbach’s alpha. Paired t -tests compared ESAS-CS and ESAS-r-CS scores; these were correlated with MSAS using Spearman correlation coefficients. Test-retest reliability at 24 hours was assessed in 26 patients. **Results.** ESAS-CS and ESAS-r-CS total scores correlated well with total MSAS (Spearman’s rho: 0.62 and 0.64, respectively). Correlation of individual symptoms with MSAS symptoms ranged from 0.54-0.80 for ESAS-CS, and 0.52-0.74 for ESAS-r-CS. Although participants preferred the ESAS-r-CS format (42.8% vs. 18.6%) because of greater clarity and understandability, the “past 24 hours” time window (52.8%) was favored over “now” (21.3%). Shortness of breath and nausea correlated better for the “past 24 hours” time window (0.8 and 0.72 vs. 0.74 and 0.64 in ESAS-r-CS, respectively). The 24-hour test-retest of the ESAS-CS demonstrated acceptable reliability (ICC=0.69).

Conclusion. The ESAS-CS and ESAS-r-CS NRS versions are valid and reliable for measuring symptoms in this population of outpatients with advanced cancer. Although the ESAS-r-CS was preferred, patients favored the 24-hour time window of the ESAS-CS, which also may best characterize fluctuating symptoms.

Strengths:

- Outpatient sample with balanced “male to female ratio” and diverse cancer diagnoses
- Large sample size ($n=202$) for overall analysis
- Inclusion of patient perspectives
- Use of well-validated measure for comparison (MSAS)

Weaknesses:

- Recruitment from single tertiary cancer centre (ambulatory outpatients)
- Highly educated and higher functioning sample
- Limited generalizability to inpatients, more advanced disease, poorer performance status
- Small sample size for test-retest reliability ($n=26$)

Relevance to Palliative Care:

Patients’ preferences for the ESAS-r-CS (due to ease of understanding and availability of definitions) provide additional support for the use of the ESAS-r in place of the ESAS. The “24 hour” (rather than “now”) time frame may be more appropriate for an outpatient setting, for patients with more stable symptoms. Further research is warranted.

