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**Introduction**

- Dry eye is a multifactorial disease of the ocular surface, meibomian, and lacrimal glandular system that results in decreased stability and quality of the tear film, accompanied by visual disturbance and symptoms of discomfort.  
- There are a number of dry eye questionnaires that assess patient symptoms, either as a tool to screen for dry eye disease or to grade disease severity in clinical settings. However, the assessment of symptoms is purely subjective and cannot be compared to a physical reference.
- The Standard Patient Evaluation of Eye Dryness (SPEED) questionnaire has been recently developed by Korb et al. to assess symptoms and to monitor changes.

**Purpose**

- To evaluate the performance of the SPEED questionnaire by assessing its dimensionality, repeatability, validity, and by comparing it to four existing dry eye questionnaires.

**Methods**

- A total of 50 subjects, 30 symptomatic and 20 asymptomatic, as determined using the Ocular Surface Disease Index (OSDI) were enrolled. All subjects completed 5 different dry eye questionnaires (SPEED, OSDI, DEQ, McMonnies, and SeSiD) in a random order on two separate visits. Clinical measurements were obtained during the initial, screening visit (see Figure 1).
- Concordance correlation coefficient (CCC) was used to determine repeatability. Principal Component, Factor and Rasch analyses were used to determine dimensionality, and the comparison of SPEED scores to dry eye diagnosis defined by the OSDI (primarily using receiver operator characteristic (ROC) curve analysis) was used to determine validity.

**Results**

- The mean age of the subjects was 47.16 years (median 52 years, ranging from 20 to 86 years).
- There was a statistically significant difference (p < 0.05) between the symptomatic and asymptomatic groups for all questionnaires at each visit (Table 1). The SPEED questionnaire scores between visit CCC was 0.923 (upper and lower 95% CI 0.868 to 0.955).
- There was a statistically significant difference (p < 0.05) between symptomatic and asymptomatic groups in corneal staining, meibomian gland score (MGS), and meibomian gland yielding liquid secretions score (MGYLS) (Table 2).

**Conclusions**

- These results indicate that the SPEED questionnaire is a valid and repeatable instrument for measurement of dry eye symptoms. The correlation of the SPEED score with clinical measures of meibomian gland function suggests potential additional clinical value for the diagnosis and/or management of meibomian gland dysfunction.

**References**


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