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The Development of the Screening of Visual Complaints Questionnaire for Patients with Neurodegenerative Disorders: Evaluation of Psychometric Properties

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**Background**
Approximately 75% of patients with Parkinson’s disease (PD), 33% of patients with multiple sclerosis (MS) and 50% of early dementia patients tend to suffer from visual problems\textsuperscript{1-3}. Nevertheless, visual complaints are little recognized in clinical care and there is a lack of clinical instruments that can be used to assess visual complaints. A 21-item Screening of Visual Complaints (SVC) questionnaire was developed to assess visual complaints in patients with PD, MS or early dementia.

**Results**
- Exploratory and confirmatory factor analyses resulted in a three-factor structure (Figure 1):
  - Altered visual perception (R\textsuperscript{2}=28.6%)  
  - Reduced visual perception (R\textsuperscript{2}=7.7%)  
  - Ocular discomfort (R\textsuperscript{2}=6.8%)  
- Sufficient convergent and divergent validity (Figure 2)
- High internal consistency (Cronbach’s alpha\textsuperscript{a}= 0.85) and test-retest reliability (ICC=0.82)

**Methods**
1,461 healthy Dutch participants (18-95 years) were assessed with:
- Screening of Visual Complaints questionnaire (SVC)
- Cerebral Visual Disorders questionnaire (CVS)
- National Eye Institute Visual Function Questionnaire–25 (VFQ-25)
- Behavior Rating Inventory of Executive Function-A (BRIEF-A)
- Depression Anxiety Stress Scale-21 (DASS-21)
- Questionnaire for Experiences of Attention Deficits (FEDA)
- Structured Inventory for Malingered Symptomatology (SIMS)

**Analyses:**
- Exploratory (subsample 1; n=730) and confirmatory factor analyses (subsample 2; n=731) to evaluate the factor structure of the SVC
- Correlation analyses to assess convergent and divergent validity
- Reliability analyses to evaluate internal consistency and test-retest reliability

**Discussion**
The SVC can be used to screen for the degree of visual complaints and to define change over time in case of repeated assessments. Subscale scores can support a more detailed evaluation and might guide further assessment of visual functioning. The SVC needs further validation in clinical groups of patients with PD, MS or early dementia.

**Conclusion**
The SVC is a valid and reliable tool for the assessment of subjective visual complaints in a community-sample and appears promising for use in clinical practice of patients with PD, MS or early dementia.

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