The development of the Screening of Visual Complaints questionnaire for patients with neurodegenerative disorders: Evaluation of psychometric properties
Huijinga, Famke; Heutink, Joost; Haan, de, Gera; Lijn, van der, Iris; Feen, van der, Fleur; Vrijling, Anne; Melis-Dankers, Bart; Vries, de, Stefanie; Tucha, Oliver; Koerts, Janneke

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Publication date:
2019

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Copyright
Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Download date: 03-09-2020
The Development of the Screening of Visual Complaints Questionnaire for Patients with Neurodegenerative Disorders: Evaluation of Psychometric Properties

F. Huizinga\textsuperscript{a}, J. Heutink\textsuperscript{a,b}, G. A. de Haan\textsuperscript{a,b}, I. van der Lijn\textsuperscript{a,b}, F. E. van der Feen\textsuperscript{a,b}, A. C. L. Vrijling\textsuperscript{b}, B. J. M. Melis-Dankers\textsuperscript{b}, S. M. de Vries\textsuperscript{a,b}, O. Tucha\textsuperscript{a}, J. Koerts\textsuperscript{a}

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= 0.85) and test-retest reliability (ICC=0.82)

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.

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)

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

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.

Contact:
Famke Huizinga
f.huizinga@rug.nl

\textsuperscript{a} University of Groningen, Clinical and Developmental Neuropsychology, Groningen, The Netherlands
\textsuperscript{b} Royal Dutch Visio, Huizen, The Netherlands


Figure 1. Factor structure of the SVC
Figure 2. Scatterplots of correlations of convergent validity (A-E) and divergent validity (F-F)