Clinically Relevant Symptoms of Anxiety and Depression in Low-Vision Community-Living Older Adults

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Objective: *The objective of this study was to examine the association of low vision with clinically relevant symptoms of anxiety and depression among community-living older adults seeking vision rehabilitation services.* **Methods:** *Differences in the prevalence of clinically relevant symptoms of anxiety and depression (assessed with the Hospital Anxiety and Depression Scale) between 148 persons with low vision and a reference sample (n = 5,279), all ≥ 57 years, were compared.* **Results:** *A total of 14.9% of the older persons with vision loss had clinically relevant symptoms of anxiety and 14.2% had clinically relevant symptoms of depression. These percentages were at least as twice as high as in the reference sample.* **Conclusion:** *Vision loss is substantially associated with both symptoms of anxiety and depression. Healthcare professionals may improve their quality of care and the quality of life of their clients as they take such information into account in their intervention work.* (Am J Geriatr Psychiatry 2014; 22:309–313)

Key Words: Low vision, anxiety, depression, aged, community-living

L ow vision is a common age-related condition. The prevalence of age-related vision impairments of adults aged 65 and older based either on self-report data or clinical assessments ranges between 4% and 20%.[1] Low vision is associated with several negative outcomes, including mental health problems. Particularly, symptoms of depression are more common in older persons suffering from vision impairment compared with their non–visually impaired counterparts.[1,2] For example, Horowitz[1] reported in her review that in terms of prevalence, between one-fourth and one-third of all visually impaired older persons report clinically significant depressive symptoms, compared with 8% and 16% of their non–visually impaired peers. In addition, the severity of vision impairment was also found to be related with the level of depressive symptoms.[3]

Although associations between vision loss and symptoms of depression were studied frequently, less is known about symptoms of anxiety among older persons with low vision. Although Augustin and colleagues[3] reported that anxiety was unrelated to vision loss, Evans et al.[2] found marginal differences in the prevalence of symptoms of anxiety between visually impaired older persons (9.3% persons with anxiety) and people with good vision (7.4% persons with anxiety). Other studies included only persons with vision loss and examined either the effects of different types of vision loss, the severity of vision loss, or the effects of treatment (including surgery) on symptoms of anxiety.[4–6]

Only a few studies compared persons with and persons without vision loss, and so far we found no studies that analyzed the prevalence of symptoms of depression, symptoms of anxiety, and a *combination* of both. However, healthcare professionals in general and those working at vision rehabilitation services in particular may improve their quality of care and the quality of life of their clients as they can take into account information about levels of anxiety and depression in their treatment and intervention work as both may affect healthcare and rehabilitation outcomes in a negative way.

The aims of the present study were twofold. First, we wanted to estimate the prevalence of different

levels of symptoms of anxiety and depression among older people with vision loss seeking vision rehabilitation services. Second, we wanted to compare (the combination of) these prevalence scores with those of a reference group of older people from the general population.

METHODS

Low-Vision Study Group

The study group was recruited as part of a randomized controlled trial to evaluate orientation and mobility training by the two main (not-for-profit) organizations for low-vision care in The Netherlands: Bartiméus (www.bartimeus.nl) and Royal Dutch Visio (www.visio.org). Details of the recruitment strategy were published previously.[7] The initial study sample comprised 149 adults $\geq$ 55 years of age who lived independently or in a home for older people, who had applied for low-vision rehabilitation services (either by themselves or referred by other healthcare professionals such as general practitioners or medical specialists), and were screened as potentially qualified for mobility training in the use of an identification cane. The latter was performed during an intake conversation by mobility experts of the rehabilitation center and implies the client has sufficient remaining vision to see large obstacles but may have difficulty recognizing acquaintances. For reasons of comparison with the reference group (persons $\geq$ 57 years of age; see below), we excluded one person aged 55 years, resulting in a study group of 148 persons $\geq$ 57 years. Persons with cognitive impairment were excluded in both study samples.[7,8] Persons in the low-vision sample were excluded if they reported a score of less than 4 on the Abbreviated Mental Test 4.[7] Persons in the reference sample were excluded if they scored 16 or lower on the Mini-Mental State Examination.[8]

The Medical Ethical Committee of Maastricht University/Academic Medical Hospital Maastricht granted approval for conducting this study. Research adhered to the tenets of the Helsinki Declaration.

Measurements

Data were collected by telephone interviews between January 2008 and January 2010. The interviews included questions about sociodemographics (age, gender, educational level, and living arrangements) and the 14-item Hospital Anxiety and Depression Scale (HADS). This scale assesses symptoms of anxiety and depression and was validated in Dutch older persons.[9] The HADS is considered to be well suited for use in populations of community-dwelling older persons, because its questions do not refer to somatic symptoms associated with anxiety and depression.[10] The scale consists of two 7-item subscales for symptoms of anxiety and depression in the past 4 weeks, respectively. Total scores theoretically range from 0 to 21 for each subscale. Cronbach alpha in the present low-vision sample was 0.85 for anxiety and 0.75 for depression. Persons scoring 0 to 7 are considered "normal cases," those scoring 8 to 10 "mild cases," those scoring 11 to 15 "moderate cases," and persons scoring 16 or higher "severe cases."[10] If only moderate and severe cases are considered to be indicative of an anxiety disorder or depression, prevalence scores based on both subscales correspond well with the prevalence scores of anxiety and depression in the general adult population.[11] In the present study we therefore regard the moderate and severe cases as persons suffering from clinically relevant symptoms of anxiety or symptoms of depression.

Statistical Analysis

After computing summary scores for the HADS subscales and the four groups for normal, mild, moderate, and severe cases, we compared the prevalence scores with reference outcomes of the baseline assessment of the Groningen Longitudinal Aging Study.[8,9] Conducted between 1993 and 2001, the Groningen Longitudinal Aging Study is a Dutch population-based prospective follow-up study of determinants of health-related quality of life in persons $\geq$ 57 years of age. For the present study we included baseline data collected, including the HADS from 5,279 persons.[8,9] Differences were tested with χ^2 tests. Data were analyzed with PASW version 17.0 from IBM and GraphPad Prism (GraphPad Software Inc., San Diego, CA).[12]

RESULTS

The age of the 148 older persons in the low-vision group ranged from 57 to 97 years (mean: 77.4;