Structure of a new specific questionnaire measuring Glaucoma Treatment Satisfaction: The Glausat

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BACKGROUND

Glaucoma is a pathology with an estimated prevalence of 2% in general population, 3% in people older than 50 years and 5% for those above 70 years old1,2. This figure rises to an estimate of 900,000 people only in Spain, a number which is expected to increase in the future, given the ageing rate of our population.

Available glaucoma treatments allow intraocular pressure control, but a strict compliance is needed to ensure effectiveness. Unfortunately, undesired medication side-effects, as eye reddening or tearing, and patient’s mobility restrictions are quite frequent, along with usual problems for treatment adherence and persistency.

Satisfaction with medication gives a theoretical framework for studying patients’ opinions, expectations and feelings towards their treatment, aspects which are though be related with treatment compliance and treatment preference.

A new questionnaire for measuring glaucoma treatment satisfaction is being developed and psychometric properties are reported.

RESULTS

The questionnaire was reduced to a final version composed by 22 items organized in the original 7 dimensions (Table 2), accounting for 79.8% of variance. Item score distributions tend to be perceptibly skewed with a some items close to present a ceiling (floor) effect. Negative wordings were scarce understood and tend to segregate from their theoretical dimension. Dimensions were well formed and matched with construct theoretical assumptions.

RESULTS (Cont.)

Table 3. Correlations between dimensions.

RESULTS

Materials and methods

Patients

In the present study, 3 different samples where used. An initial sample of 15 chronic patients with glaucoma above 60 years old for the focus groups considers discussion. A pilot sample of 19 patients was used to assess the candidate questionnaire comprehensibility and wording. A sample of 194 patients was used for item reduction and psychometric assessment. All samples were recruited in Madrid, Barcelona and Zaragoza by 3 specialized clinicians. The psychometric sample was designed attending to subjects/item and items/dimension ratios and was oversampled to gather above 100 patients. Three age strata were defined below 65 years (30%), 65-75 years (40%) and above 75 years (30%). All patients were older than 18 years old, understood and spoken Spanish, were diagnosed of glaucoma, and gave their informed consent to participate in the study.

Procedure

Attributes of patient satisfaction with treatment were extracted from 3 focus groups held with chronic patients with glaucoma, literature review, and specialized practitioners delving. An initial version composed by 65 items was reviewed by an expert panel, and was conceptually reduced to a candidate version composed by 38 items arranged in 7 dimensions: beliefs and expectations towards treatment (5 items), treatment convenience (5 items), treatment efficacy (4 items), unfavorable treatment effects (7 items), impact on Health Related Quality of Life - HRQoL - (7 items), medical care (5 items), and general satisfaction (5 items). Items were both in affirmative and negative expression and were presented in 5 Likert scales (Strongly Agree vs Strongly Disagree, and None vs A Lot).

Item reduction and dimensionality assessment was carried out using exploratory factor analysis (principal components with varimax and promax rotations) and reliability assessment (Cronbach’s alpha, item-trait statistics and intra-class correlation). Kaiser-Guttmann’s K1 rule, Cattell’s scree test, percentage of accounted variance and structure comprehensibility were used as criteria for dimension selection.

No concurrent validity measures were gathered in this phase of the study. A new sample is being gathered to assess validity and predictive compliance properties.

Significant differences are found between some dimensions in their mean scores. The dimension of satisfaction with medical care presents significantly lower levels than any other dimension (p<0.001), which differs from medical care (p=0.001), convenience (p=0.012), and efficacy (p=0.040).

CONCLUSION

The Glausat questionnaire shows good reliability and structural validity properties. The 7 dimensions proposed arestable and well defined in a 22 item form. Results support that the questionnaire can be used to compute an overall meaningful score. Further validity evidences should be collected. Special attention should be paid to non responses in this kind of elder population.

REFERENCES


OBJECTIVE

To develop a new questionnaire able to measure Treatment Satisfaction of Glaucoma, and to clarify the underlying dimensions of this construct. Item reduction and factorial validity are discussed.

RESULTS (Cont.)

The reduced version presents an overall Cronbach’s alpha of 0.722 (one-dimensional assumption), and dimensional alphas ranging from 0.773 to 0.926 (Table 1).

Table 1. Dimension size and reliability.

Table 2. Pattern matrix, oblique rotation.

Table 3. Correlations between dimensions.

Table 4. Mean score in Glausat dimensions. Presented CIs are not adjusted for multiple comparisons.