

Original Article

Psychometric properties of the national eye institute refractive error correction quality-of-life questionnaire among Iranian patients

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Background and Aim: To evaluate the psychometric properties of the national Eye Institute refractive error correction quality of life questionnaire (NEI-RQL-42) among Iranian patients with refractive errors.

Materials and Methods: Two samples of patients ($n_1 = 296$, $n_2 = 95$) were consecutively selected from the eye clinic of the Boo-Ali Hospital, Qazvin. A forward-backward procedure was conducted to translate and cross-culturally adapt the Iranian version of the NEI-RQL-42. A homogeneity, stability, and reliability test was conducted for the first sample after a two-week interval. Convergent validity was computed using the correlation between the NEI-RQL-42 subscale scores, National Eye Institute-Visual Functioning Questionnaire (NEI-VFQ-25), and the Short Form-36 (SF-36). Furthermore, Known-group analysis was performed, to determine the discriminant validity between the subgroups of patients with hyperopia, emmetropia, and myopia. Responsiveness to clinical change was tested by administering NEI-RQL-42 on the second sample that was scheduled for surgery.

Results: Homogeneity was satisfactory with the Cronbach's alpha coefficients ranging between 0.70 and 0.92. The 13 subscales of the NEI-RQL-42 showed a considerable stability in intra-class-correlation (ICC) ranging between 0.70 and 0.89. Positive correlation coefficients were found among all subscales of the NEI-RQL-42 and the other quality-of-life instruments (NEI-VFQ-25 and SF-36). The NEI-VFQ-25 displayed excellent discriminant validity to differentiate the subgroups of patients, and was found to be responsive to change after the surgical correction at three months.

Conclusions: The Iranian version of the NEI-RQL-42 is a valid and reliable instrument to assess refractive error correction quality-of-life in Iranian patients. Moreover this questionnaire can be used to evaluate the effectiveness of interventions in patients with refractive errors.

Keywords: Methodology, NEI-RQL-42, quality of life, refractive error, validity