Table 2: The demographic characteristics of participants.

Cross-Validation of the Turkish Version of the 28-Item Impact of Vision Impairment Profile (IVI) test.

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INTRODUCTION

Low vision is defined as the chronic visual impairment that deteriorates daily life and is not possible to be corrected by ordinary spectacles or contact lenses [3]. The Impact of Vision Impairment (IVI) Questionnaire has been developed and validated at Centre for Eye Research Australia (CERA) which involves three vision-specific subscales including: 'reading and accessing information', 'mobility and independence' and 'emotional well-being' and measures the impact of vision impairment on vision-related quality of life (VRQoL) [1-3]. The questionnaire involves 28 items with 3-4 response options of Likert scaling, ranging from *not at all* to *alot*, also have the *don't do this for other reasons* response option for the item 1-15. CERA recommends that Rasch analysis is conducted on the raw IVI responses thus we used the Rasch-scaled 28-item version of the IVI defined by Lamoureux et al [3].

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AIM

In this study our aim was to determine the validity, reliability, and measurement characteristics of the Turkish-version of the IVI questionnaire in a set of Turkish patients with various retinal diseases. We hasve also determined the impact of retinitis pigmentosa (RP), age related macular degeneration (ARMD) and diabetic macular edema (DME) on the questionnaire on VRQoL in Turkish patients

METHOD

Patients with no limitations to respond and affected by a chronic eye disease including retinitis pigmentosa (RP), age related macular degeneration (ARMD) and diabetic macular edema which cause low vision were enrolled. The Turkish version of the IVI test was administered to all participants. The linguistic translation followed the international guidelines of forward and backward translation. 256 subjects who had a Snellen visual acuity of 6/12 or worse in the eye with best corrected visual acuity (BCVA) completed the Turkish version of the IVI-28 item. Psychometric evaluation of the Turkish IVI test involved the assessment of internal consistency, test– retest reliability, convergent and known-groups validity.

RESULTS

The mean (±SD) age of the participants was 53.67 ± 17.22 years. There were 256 patients with one of the following conditions: 105 RP (41 %), 77 ARMD (30 %), 74 DME (29 %). Patients with lower visual acuity (VA) had lower index scores than those with higher VA ($p = 0.001$), which showed a sufficient responsiveness. The demographic characteristics of the patients were given in Table 1. The total scores of IVI items for the different vision defects groups are all listed in Table 2. Lower values indicate lower visual ability and suggest that the subject is more disabled. The analysis on each subscale score among the three vision defects subgroups revealed no significant differences in the scores of either "mobility and independence", "emotional well being" or "reading and accessing information" between groups. But the scores of all three groups were significantly lower than the controls (Table 2) ($p<0.05$)

	RP	ARMD	DME	Control
Number	105	77	74	30
Age (Years)	35.7 (18-49)	67.3 (58-88)	62.7 (54-78)	32.4 (28-46)
Gender (F/M)	46/59	33/44	34/40	15/15
Visual Acuity *	0.22±0.17	0.18±0.16	0.25±0.18	0.99±0.02

Table 1: The demographic characteristics of participants.

	RP	ARMD	DME	Control	*p* value
Reading and accessing information	13.65±7.63	14.4±10.0	19.4±9.4	30.0	<0.05*
Mobility and independence	8.23±4.16	10.1±5.5	13.31±5.57	18.0	<0.05*
Emotional well-being	16.14±9.27	19.53±9.56	22.36±9.37	36.0	<0.05*

Table 2: Subscale scores for the normal controls and three patient groups.

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CONCLUSIONS

Statistical analysis showed that Turkish version of the IVI-28 item is a valid and reliable instrument to measure vision-related quality of life (VRQoL) in patients with low vision.

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