

00315 **Assessing the Impact of Vision Loss on Quality of Life: Does Acuity Classification Using Binocular or Monocular Vision States Matter?**

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Aims: Although the impact of vision-related quality of life (VRQoL) is optimally assessed using binocular vision, uniocular distance visual acuity (VA) remains the preferred measurement modality in clinic-based and epidemiological studies. This study compared the impact of distance presenting binocular VA (BVA) and uniocular VA (UVA: better and worse eye) on VRQoL.

Methodology: We included 2204 individuals (mean age [SD]: 65.5 [8.9]; 51.5% female) from the Singapore Chinese Eye Study-2 (2015-2017), a population-based cross-sectional study. Habitual UVA and BVA were assessed using a logarithm of the minimum angle of resolution (LogMAR) number chart at a distance of 4 m under standard lighting by trained and certified study optometrists. We assessed three VRQoL domains, namely emotional, mobility and reading, using Rasch-transformed scores of the Impact of Visual Impairment (IVI) questionnaire, with a lower score indicating worse VRQoL. We utilized a cluster sandwich estimator to compare the multivariable adjusted cross-model covariance estimates between BVA and UVA measures with VRQoL.

Result: Poorer (increasing) BVA was independently associated with worse VRQoL (per 2-line increase, 1.8%, 2.6%, and 2.4% decrements for emotional, mobility and reading scores, respectively). While UVA also impacted on VRQoL, it was of a significantly lower magnitude compared to BVA (per line decrease in better-eye UVA: 1.0%, 2%, and 1.4% decrement in emotional, mobility and reading scores, respectively; and per line increase in worse-eye UVA: 1.2%, 1.2% and 1.0% decrement in emotional, mobility and reading scores, respectively; $P < 0.05$ compared to BVA).

Conclusion: Utilizing UVA of the better or worse eye appears to underestimate the impact of vision loss on several VRQoL indices, compared to BVA. Our findings suggest that BVA, and not UVA, may offer a more realistic assessment of the impact of vision loss on QoL domains, especially when evaluating patient-reported outcomes of eye diseases and associated treatment modalities.