



Comparison of Subjective with Objective Measure of Amplitude of

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Abstract

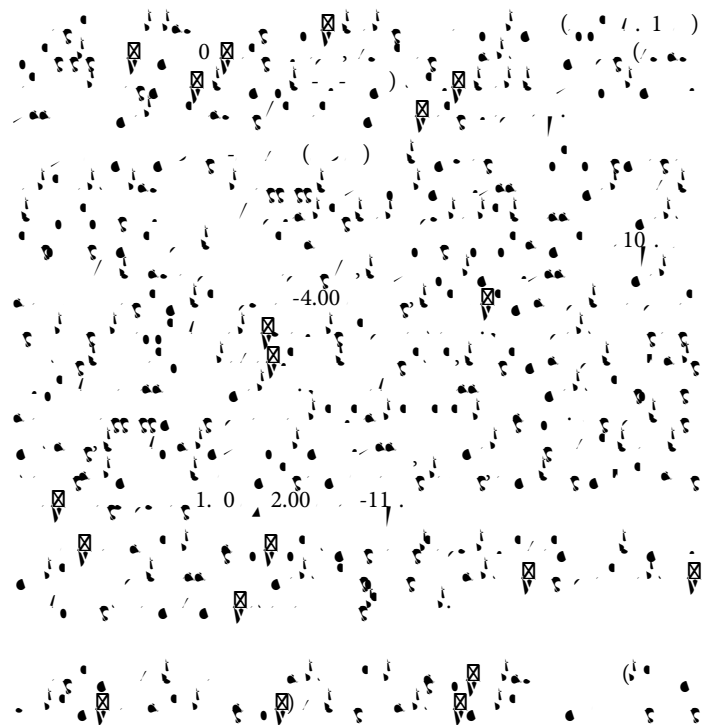
Aim: To analyze the comparison of subjective with objective measure of amplitude of accommodation with age matched hofstetter's formula.

Purpose: Dynamic retinoscopy is an objective technique for assessing maximum accommodative responsivity. The present study examined the reliability of this procedure when measuring the amplitude of accommodation.

Methods: The amplitude of accommodation was measured in 57 subjects between 17 and 22 years of age using Dynamic Retinoscopy and a subjective method, Modified Pull Away. The repeatability between the methods were determined using the mean difference.

Results: Dynamic Retinoscopy showed the lowest mean value of Amplitude of Accommodation (average=7.71 D) whereas the mean value for Modified Pull Away was 9.80 D. Average for Dynamic Retinoscopy-Modified Pull Away was 2.10 D.

Conclusion: The Dynamic Retinoscopy technique provides a more veridical measurement of the Amplitude of Accommodation because it avoids the over-estimation resulting from the depth-of-feld. Moreover, the Dynamic



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Hypothesis

Null hypothesis: $\mu_1 = \mu_2$

Alternate hypothesis: $\mu_1 \neq \mu_2$

Results

$(-0.0, 0)$ $(-1.0, 0)$ $(-0.0, 0)$ $(-1.0, 0)$ $(-0.0, 0)$ $(-1.0, 0)$

References

1. Grosvenor T (2006) *Primary care of optometry*. (5th edn). England, Butterworth Heinemann, UK.
2. AK Khurana (2015) *Anatomy and physiology of eye*. (2nd edn). Delhi, CBS Publishers and Distributors, India.
3. Gunter K, Noorden V (1996) *Binocular vision and ocular motility*. (5th edn). Missouri, Mosby, USA.
4. León AA, Medrano SM, Rosenfeld M (2012) A comparison of the reliability of dynamic retinoscopy and subjective measurements of amplitude of accommodation. *Ophthalmic Physiol Opt* 32: 133–141.
5. Duane A (1908) An attempt to determine the normal range of accommodation at various ages, being a revision of Donder's experiments. *Trans Am Ophthalmol Soc* 11: 634–641.
6. Rabbetts RB (1998) *Accommodation and near vision. The inadequate- stimulus myopias*. (3rd edn). England, Butterworth Heinemann, UK.
7. Sun FC, Stark L, Nguyen A, Wong J, Lakshminarayanan V, et al. (1988) Changes in accommodation with age: Static and dynamic. *Am J Optom Physiol Opt* 65: 492–498.
8. Wold JE, Hu A, Chen S, Glasser A (2003) Subjective and objective measurement of human accommodative amplitude. *J Cataract Refract Surg* 29: 1878–1888.
9. Hamasaki D, Ong J, Marg E (1956) The amplitude of accommodation in presbyopia. *Am J Optom Arch Am Acad Optom* 33: 3–14.
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