

Perceptual Learning with Hand-Eye Coordination as an Effective Tool for Managing Amblyopia: A Prospective Study

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Abstract : Introduction: Amblyopia is a serious condition resulting in monocular impairment of vision. Although traditional treatment improves vision, we attempted the results of perceptual learning in this study. Methods: The prospective cohort study included all patients with amblyopia who were subjected to perceptual learning. The presenting data on vision, stereopsis, and contrast sensitivity were documented in a pretested online format, and the pre- and post-treatment information was compared using descriptive, cross-tabulation, and comparative methods on SPSS 22. Results: The cohort consisted of 47 patients (23 females and 24 males) with a mean age of 14.11 ± 7.13 years. A significant improvement was detected in visual acuity after the PL sessions, and the median follow-up period was 17 days. Stereopsis improved significantly in all age groups. Conclusion: PL with hand-eye coordination is an effective method for managing amblyopia. This approach can improve vision in all age groups.

Keywords : amblyopia, perceptual learning, hand-eye coordination, visual acuity, stereopsis, contrast sensitivity, ophthalmology

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