

عنوان مقاله:

Binocular dichoptic approaches using video games and movies in treatment of childhood amblyopia

محل انتشار:

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خلاصه مقاله:

There is a growing belief in amblyopia of the role of binocular dysfunction (active suppression) in making a structurally binocular intact system functionally monocular. Therefore, new approaches have focused on binocular training. In dichoptic technique, both eyes are stimulated via contrast balancing between the two eyes. This review will cover the most recent literature on using dichoptic techniques in treatment of childhood amblyopia. Data from twelve research articles which used dichoptic techniques via video games or movies in treatment of unilateral strabismic and/or anisometropic amblyopia in children between 3-14 years old were extracted and compared. Visual acuity (VA) changes in amblyopic eye, changes in stereopsis and suppression were monitored. There were two groups of studies, cohort and randomized control trials. In almost all of the reviewed articles, VA of the amblyopic eye improved although the amount of change was different between studies (range: 0.07-0.24 logMAR). There was not much evidence on the improvement of stereopsis and reduction in suppression. Conclusion: Binocular dichoptic techniques are feasible in treatment of childhood amblyopia, although much more evidence is required to ascertain the optimum duration, the durability and whether it can be as an alternative to patch therapy.

کلمات کلیدی:

amblyopia, dichoptic techniques, binocular training, video games

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