

DIMS Spectacles: Is it an Effective Approach to Slow Myopia Progression in Turkish Children? -A Retrospective Study

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Objective: Myopia, a common refractive error, is considered an epidemic with increasing prevalence rates worldwide. Its associated ocular complications pose significant risks to visual health. This retrospective study aimed to assess the efficacy of a myopia control spectacle lens (DIMS) in slowing the progression of myopia in a population of Turkish children compared to single vision lenses (SVL).

Methods: This study was a retrospective analysis of individuals aged 6–18 years with progressing myopia but no ocular pathology. Clinical records of patients using DIMS (Hoya® MiyoSmart®) spectacles and SVLs were reviewed. Baseline characteristics, including age, sex, spherical equivalent (SE), and axial length (AL), were analyzed. The key outcome variables, cycloplegic autorefractive spherical equivalent refraction (SE) and axial length (AL), were measured at baseline and six months. Changes in SE and AL at 12 months were assessed.

Results: The study comprised 68 eyes of 34 patients. There were no significant differences between the groups for baseline parameters except for gender. The patients included in the study consisted of 26.5% females and 73.5% males. At six months, a significant difference was observed in SE change between the groups ($p:0.01$). Similarly, a significant difference in AL change was found between the groups at six months ($p:0.01$). After six months, the percentage reduction in myopia progression (relative to the control group) was 84% for SE and 54% for AL in the DIMS group.

Conclusion: In a Turkish population, DIMS spectacles are effective at reducing myopia progression and axial elongation when compared to SVLs.