NCC ‘GET CONNECTED 2026’
Organization Section: NCC/ BCLA
Poster Abstracts
Monday 9 March 2026, Netherlands, Veldhoven, NH De Koningshof, Baroniezaal

Clinical performance comparison of two daily disposable myopia management contact lenses: stepped anti-myopia vs. dual-focus

Mark Bullimore, Jesús Carballo Álvarez, Mónica Velasco De la Fuente, Elena Durán Prieto, Anne Razquín García, Mercedes Burgos Martínez, Sergio Diaz Gómez
Affiliation: University of Houston College of Optometry

Purpose: To compare the clinical performance of two daily-wear soft contact lenses with myopia management designs: a novel Stepped Anti-Myopia (SAM) and Dual-Focus.
Method: A prospective, randomized, double-masked, crossover, bilateral study with 40 children (9-16 years). The SAM design features a stepped increase in positive power, with a central zone of +1.00 D and a peripheral zone reaching +1.50D, in a silicone hydrogel (Toufilcon B,Dk=91), with a biomimetic copolymer coating. The Dual-Focus is an established hydrogel lens (Omafilcon A, Dk=25). Each lens pair was worn for 15 days. Assessment included photopic high- and low-contrast visual acuity (HCVA, LCVA), a 10-point rating of visual satisfaction, dysphotopsia, comfort, comfort with digital devices, and lens handling, and the CLDEQ-8 dry eye questionnaire. Wearers and parents were also surveyed on preferences. Statistical analysis was performed using an ANOVA general linear model.
Results: Binocular HCVA (–0.06 and –0.03 logMAR) and LCVA (+0.10 and +0.11 logMAR) were excellent with both lenses. Visual satisfaction (9.23±0.58 vs. 8.63±0.63; $p<0.01$) and comfort with digital devices (9.05±0.56 vs. 8.80±0.56; $p<0.01$) were both higher for SAM. Ghosting was lower with SAM at distance (1.08±0.27 vs. 2.63±1.42; $p<0.01$) and near (1.13±0.40 vs. 2.33±1.28; $p<0.01$). CLDEQ-8 scores were better for SAM (0.74±1.39 vs. 2.28±1.91; $p<0.01$). Overall, 80% of participants preferred SAM lenses.
Conclusions: While all metrics were excellent with both lenses, the SAM lenses demonstrated significant advantages over Dual-Focus lenses in visual performance, dry eye symptoms and patient preference. Ghosting and visual satisfaction scores suggest that SAM design lenses may offer a better visual experience for children and adolescents undergoing myopia management.

This research received funding from: *Supported by mark’ennovy and Euclid Vision Group*