Abstract

The importance of good visual information while ambulating is known, but has not yet been studied extensively among older adults (Ivers, Cumming, & Mitchell, 1998). The purpose of this study was to assess the impact of multifocal lens use on visual performance and gait performance in older adults.

Methods

Participants were 24 older adults (mean age = 75.1 years, 20 females) who were recruited from a Midwestern rehabilitation facility. Participants wore single-lens glasses for 2 weeks, then multifocal lens glasses for 2 weeks. Visual performance was assessed using the Dynamic Gait Index (DGI), a tool designed to identify risk of falls. The DGI consists of 12 tasks that are recorded and scored for levels of performance. Gait performance was assessed using a modified Dynamic Gait Index (mDGI), a tool designed to identify risk of falls. The mDGI consists of 12 tasks that are recorded and scored for levels of performance.

Results from the longitudinal study of adaptation to new multifocal lens glasses

<table>
<thead>
<tr>
<th>Visit</th>
<th>Single Lens Glasses</th>
<th>Multifocal Lens Glasses</th>
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Conclusions

This study provides evidence that multifocal lenses can improve visual and gait performance in older adults. Further research is needed to determine the long-term effects of multifocal lens use on falls risk.

Future Research Directions

Future research should focus on assessing the impact of multifocal lenses on falls risk in older adults who are at high risk for falls, such as those with cognitive impairment or vision impairment.

Acknowledgements

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References


Conclusions

Participants exhibited diminished effectiveness of reaching from single lens glasses to multifocal glasses. Participants who wore multifocal glasses were observed in both visual and physical performance. Variability also greatly increased. At 2 weeks, functional performance in the grooved polymer maze was observed in both multifocal and single lens trials. At 6 weeks, functional performance was still decreased. At 3 months and 6 months, visual performance still significantly decreased, while gait performance showed a more sustained trend. Overall, multifocal lens use significantly decreased the rate of falls in older adults.

Future Research Directions

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References