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Patient Reported Outcomes with Orthokeratology Lens Wear

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Disclosures

- Tomiyama: Paragon (C)
 - Johnson: None
 - Richdale: Alcon (R), Vyluma (R), Paragon (C), CooperVision (C), Novartis (C), SightGlass (C), Euclid (C), Johnson & Johnson (C)
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Background

- Orthokeratology lenses are commonly used by:
 - Children to slow the progression of myopia
 - Adults to temporarily correct refractive error
 - However, the patient experience may be affected by issues in the areas of comfort, vision, and lens handling
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Purpose

- To evaluate short- and long-term patient satisfaction with orthokeratology lenses in both children and adult wearers
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Methods

- Adults and children completed the RSS Survey regarding their orthokeratology lenses
- Mann-Whitney U tests were performed to compare overall scores

| | Child (10-17) | Adult (18-39) |
|-----------------------------------|------------------|------------------|
| New (10±2 days) | X | VOTE |
| Existing (>3 years) | LEGO | LEGO |

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Ranked Symptoms Scale (RSS)

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Comfort

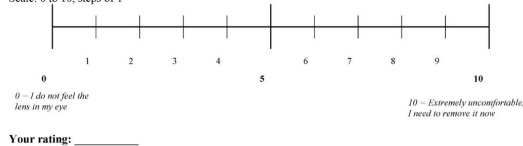
Please indicate the reasons for your rating in order of importance. So the most important would be '1', the next most important '2' and so on. Please give a *maximum* of 3 rankings for any ratings above 0.

| Symptoms / Sensations | Ranking |
|--|---------|
| Burning / Stinging | |
| Dryness | |
| Tearing / Watering of eyes | |
| Itchiness | |
| Burning sensation (eyes felt hot) | |
| Grittiness (feel like sand in eye) | |
| Aware of Lens / Edge | |
| Pain | |
| Tired eyes | |
| Other Eye related reasons – please specify in addition to your ranking | |
| Environmental e.g. airconditioning, computer work, outdoors | |
| Personal health / Psychological e.g. generally not feeling well and eye is also affected | |
| Other reasons - please specify in addition to your ranking | |

NUMERICAL RANKED SYMPTOMS SCALE

Can you rate the discomfort in your eyes with contact lenses?

Scale: 0 to 10, steps of 1



Diec J, Naduvilath T, Tilia D, Papas EB, Lazon de la Jara P. *Contact Lens Anterior Eye*. 2017;40(6):367-381.

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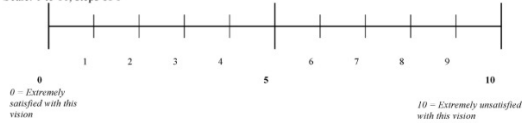
Ranked Symptoms Scale (RSS)

Vision

NUMERICAL RANKED SYMPTOMS SCALE

Can you rate the dissatisfaction with the vision provided by these contact lenses?

Scale: 0 to 10, steps of 1



Your rating: _____

Please indicate the reasons for your rating in order of importance. So the most important would be '1', the next most important '2' and so on. Please give a **maximum** of 3 rankings for any ratings above 0.

| Vision reasons | Ranking |
|--|---------|
| Blurred vision when looking far away e.g. watching TV, driving | |
| Blurred vision when looking close e.g. computer/mobile/books | |
| Ghosting / shadows | |
| Haloed | |
| Unstable vision | |
| Eye strain / headache / tired eyes | |
| Haziness (like looking through cloudy window) | |
| Other Eye related reasons – please specify in addition to your ranking | |
| Environmental e.g. lighting level | |
| Personal health / Psychological | |
| Other reasons – please specify in addition to your ranking | |

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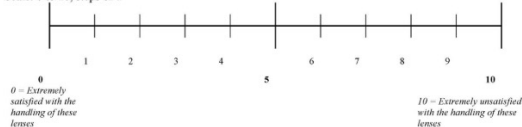
Ranked Symptoms Scale (RSS)

Handling

NUMERICAL RANKED SYMPTOMS SCALE

Can you rate the dissatisfaction with the handling (how easy is it to insert, remove and hold) of these contact lenses?

Scale: 0 to 10, steps of 1



Your rating: _____

Please indicate the reasons for your rating in order of importance. So the most important would be '1', the next most important '2' and so on. Please give a **maximum** of 3 rankings for any ratings above 0.

| Handling reasons | Ranking |
|--|---------|
| Too thin | |
| Slippery | |
| Opening Of lens packaging | |
| Unsure if lens is inside out | |
| Time taken | |
| Sticks to fingers – doesn't want to go on eye | |
| Lens falls over | |
| Sticks to eye, hard to remove | |
| Other reasons – please specify in addition to your ranking | |

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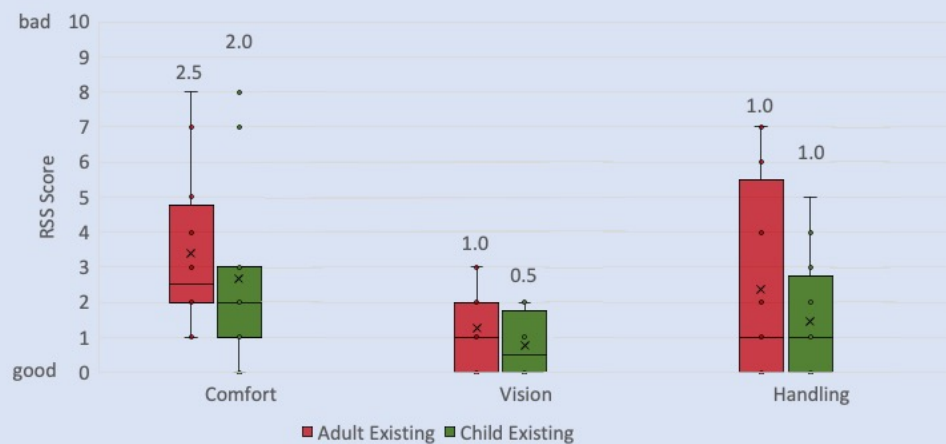
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Subject Cohorts

| | Child | Adult |
|-----------------|--|--|
| New | X | VOTE Age: 26.2 ± 5.0 years Wear: 10.1 ± 1.8 days |
| Existing | LEGO Age: 13.6 ± 2.0 years Wear: 5.3 ± 2.5 years | LEGO Age: 21.1 ± 2.7 years Wear: 7.9 ± 3.5 years |

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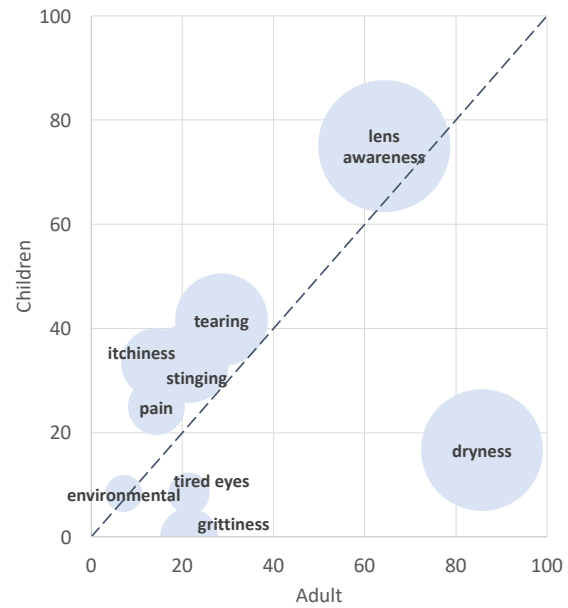
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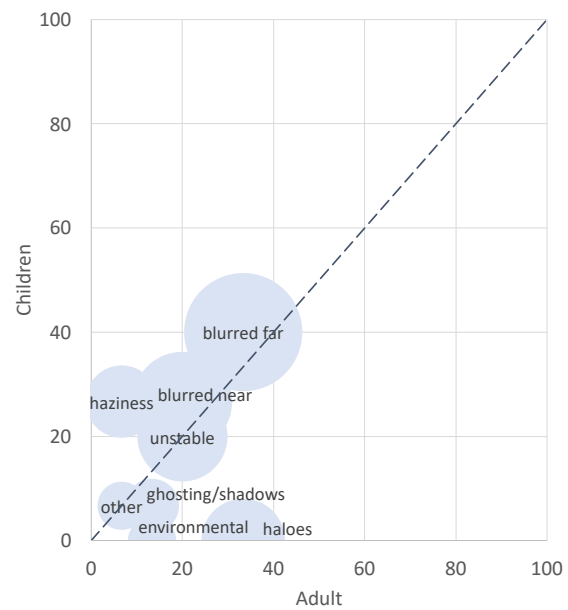
Comfort Symptoms in Existing Wearers



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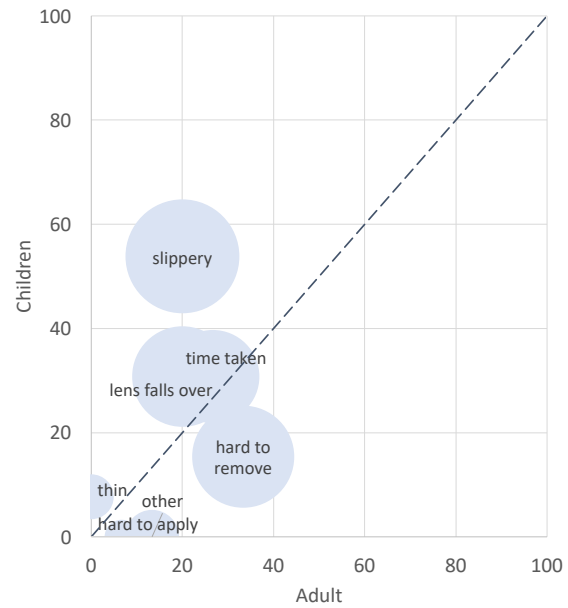
Vision Symptoms in Existing Wearers



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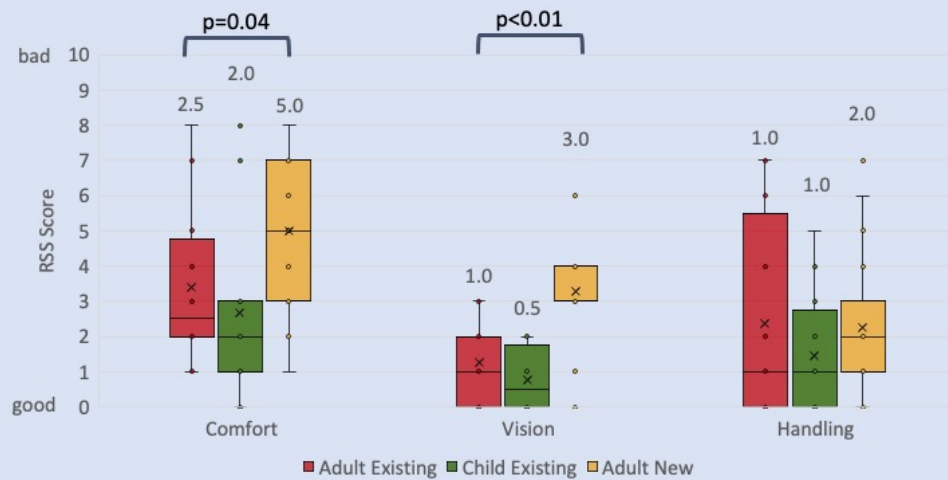
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Handling Symptoms in Existing Wearers



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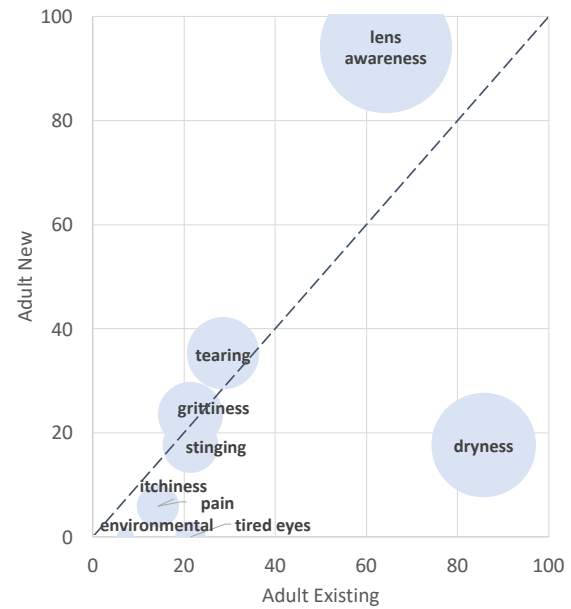
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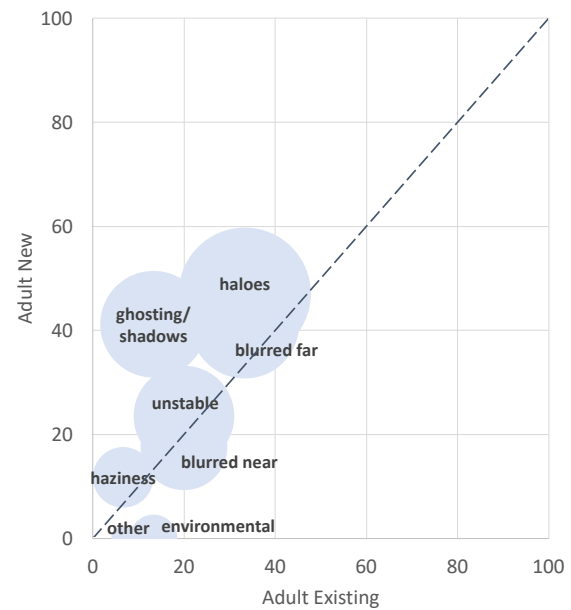
Comfort Symptoms in Adults



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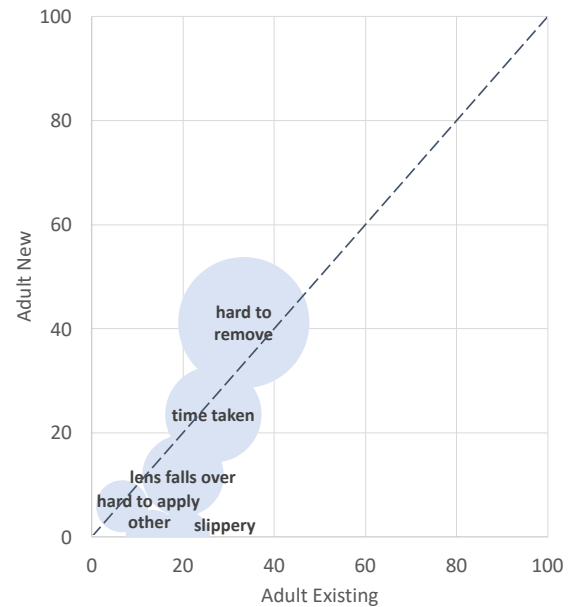
Vision Symptoms in Adults



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Handling Symptoms in Adults



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Conclusions

- Long-term patient acceptance can be achieved with orthokeratology lenses in both adults and children
- Adults may be more critical in their analysis of comfort, vision, and handling
- Initial differences may exist in comfort and vision amongst adult orthokeratology wearers

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