

Quality of life in Keratoconus patients after correction with Rose K lenses

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Background

- Keratoconus has an impact on quality of life which may be disproportionate to the amount of visual loss
–CLEK study*
- Recent development in RGP lens designs – ‘Rose K family of lenses for different types of cones in Keratoconus’
- The reported benefits of this lens are
 - better visual acuity
 - increased comfort for Keratoconus patients*



*Zadnik K, Barr JT, Edrington TB, et al. Baseline findings in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Invest Ophthalmol Vis Sci* 1998;39:2537–2546

*New Zealand lens system may offer practitioners a better way to fit keratoconic patients. Primary Care Optometry News, June 1997. Available at <http://www.slackinc.com/eye/pcon/199706/Zealand.asp> Accessed May 15, 200

Aim & Objectives



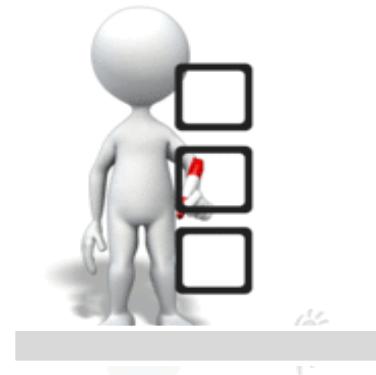
Aim:

Compare the Vision related Quality of Life (QoL
in Keratoconus patients when they are shifted
from their habitual correction to Rose K lenses

- ✓ 25-item National Eye Institute- Visual Function Questionnaire (NEI – VFQ 25)
- ✓ objective measure of visual function
- ✓ self-reported assessment of comfort and vision
- ✓ patients preference and choice of correction

Methodology

- Prospective non-randomized study with convenient sampling method
- Initial visit
- Dispensing Visit
- Outcome visit (after 1 month of Rose K lens wear)



Statistical Analysis

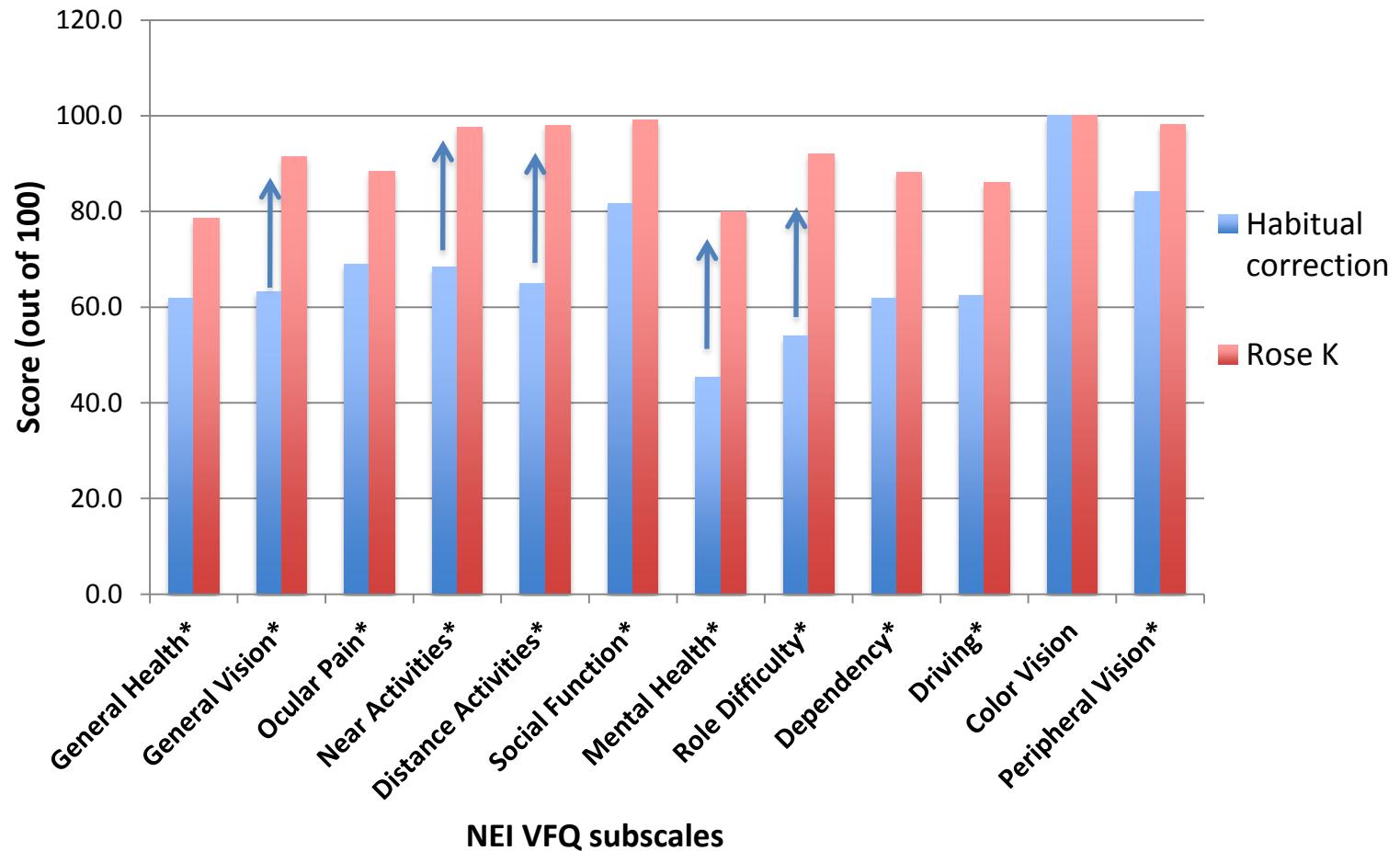
- Data were collected and statistical analyses were performed using SPSS
- Data were checked for normality and analyzed:
 - to determine whether the differences exist or not between baseline and outcome QoL
 - to compare the difference in performance between Spectacle and RGP wearer later corrected with Rose K lens
- A p value of ≤ 0.05 is considered significant

Results

- Total subjects: 19
- Males: 13 (68%)
- Mean age: 27 years (\pm 12.14)
- Mean of steep keratometric reading of the steep eye was 59.53 D (\pm 9.33) and flat eye was 53.27 (\pm 6.76)
- 95% subjects were either students or employed



NEI VFQ - 25: Habitual correction Vs Rose K



* p < 0.05

Visual Function



Variables	Habitual Correction		Rose K	
	Mean	SD	Mean	SD
Visual Acuity (logMAR)				
Steep eye	0.597	0.37	0.0758	0.095
Flat eye	0.438	0.39	0.0713	0.107
Contrast Sensitivity (Log)				
Steep eye	1.5	0.901	2.1	0
Flat eye	2.09	0.03	2.1	0

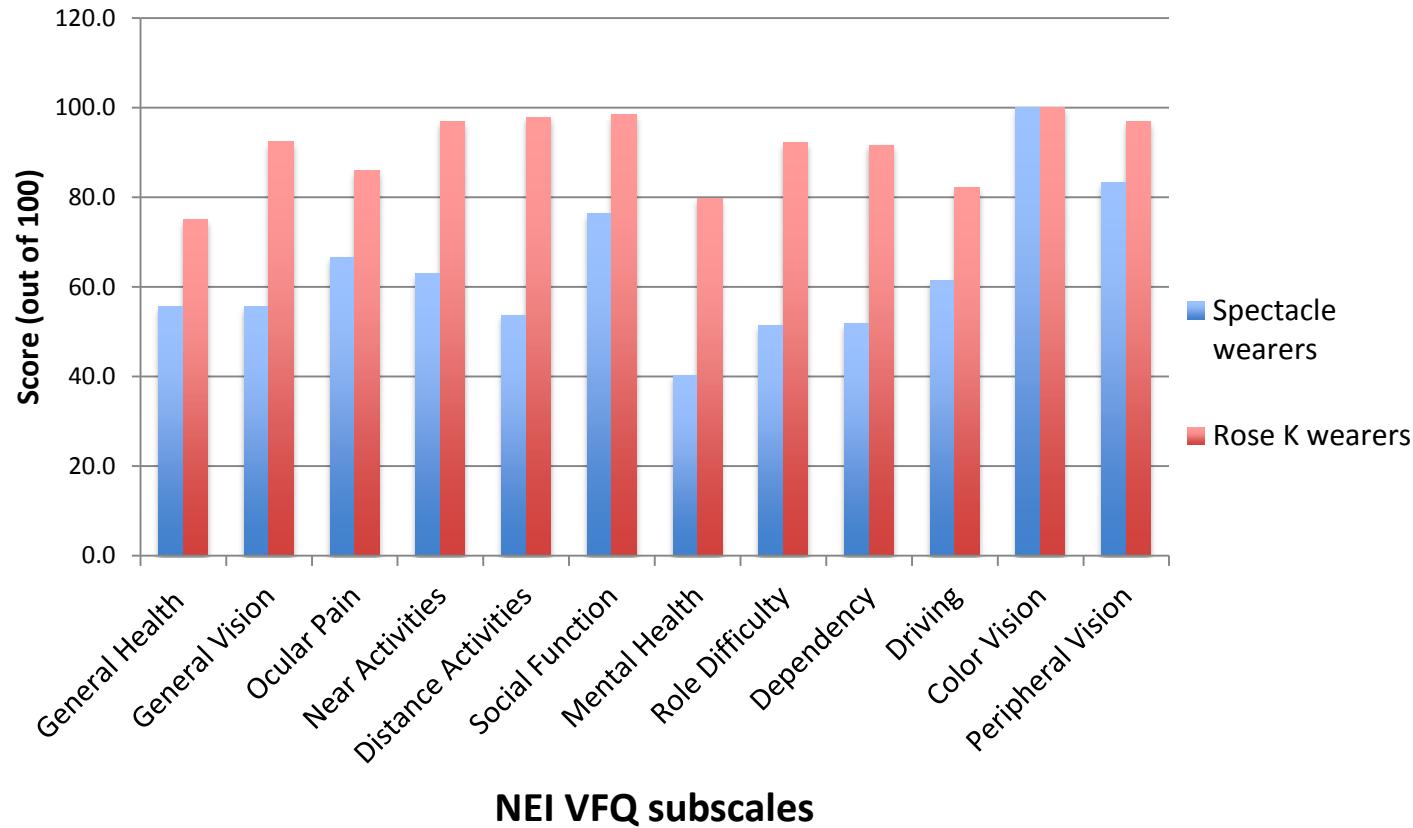
Visual function with habitual correction and Rose K lens for steep and flat eye.

Vision and Comfort



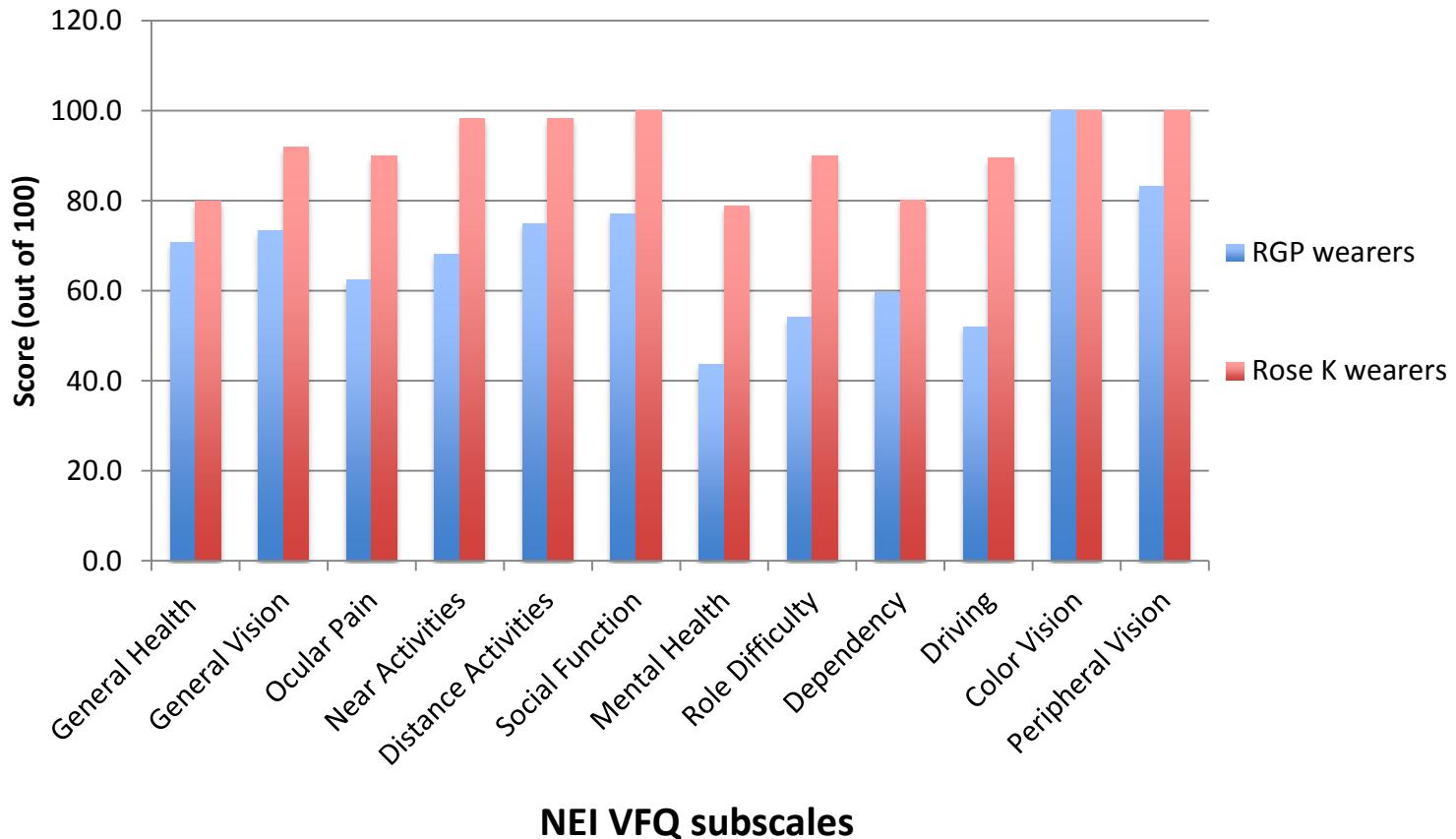
Self-reported assessment of vision and comfort with habitual correction and Rose K.

Spectacles wearers to Rose K



- Subjective comfort did not improve

RGP wearers to Rose K



- Subjective Vision did not show significant difference

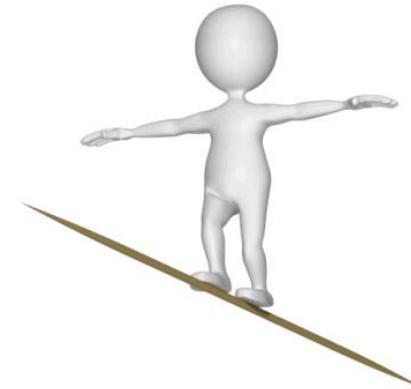
Rose K study Comparison



- The mean overall score of NEI-VFQ 25 at the outcome of this study was 91.50 (\pm 7.42) as compared to the 'Visual Performance and Comfort with the Rose K Lens for Keratoconus' study, which was 87.42 (\pm 13.19).
- In our study, 17 (89%) subjects chose Rose K lenses over the habitual correction as compared to 15 (87%) subjects from the reference study.

Limitations

- Limited sample size
- Convenient sampling from one practice center
- Non blinded



Conclusion

- Rose K lenses improved patient's overall quality of life in moderate and advance cases of keratoconus
- Subjects reported that Rose K lenses are more comfortable and provide better vision
- Out of the total subjects, 17 (89%) of them chose Rose K lenses over their habitual correction in spite of their comparatively higher cost



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Thank You
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