


INTERNATIONAL CONFERENCE OF THE COLLEGE OF OPTOMETRISTS  
INNOVATIONS IN OPTIC  
ACCOMMODATION IN THE EYE


Univ. San P...




# CLINICA REMENTERIA

NEW TRENDS IN CONTROLLING THE PROGRESSION OF MYOPIA (SESION 8)  
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IN 2010, 28% OF WORLD POPULATION HAD MYOPIA



## CLINICA REMENTERIA



Region	Prevalence (%)
North America	35%
South America	23%
Europe	29%
Africa	8%
Asia	29%
Oceania	27%
East Asia	47%
South East Asia	39%

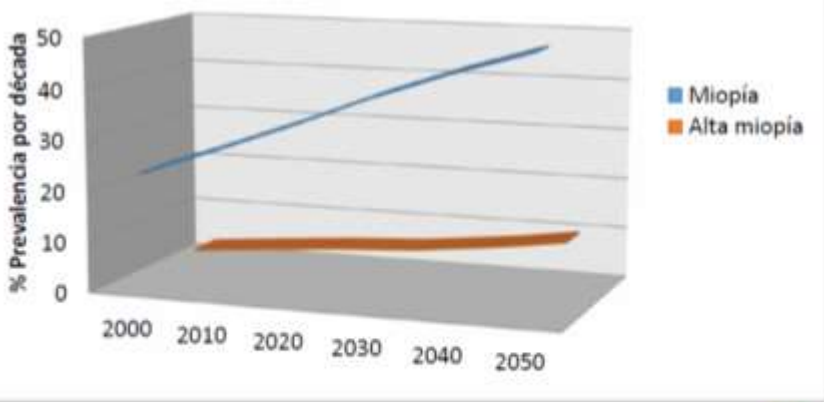
1. Holden BA, Frisbie TR, Wilson DA, Jong M, Naidoo KS, Sankararaj P, Wong TY, Naduvilath TJ, Resnikoff S. Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050. *Ophthalmology*. May 2016 Volume 123, Issue 5, Pages 1036-1042.

**IN 2050, 50% OF WORLD POPULATION WILL HAVE MYOPIA**




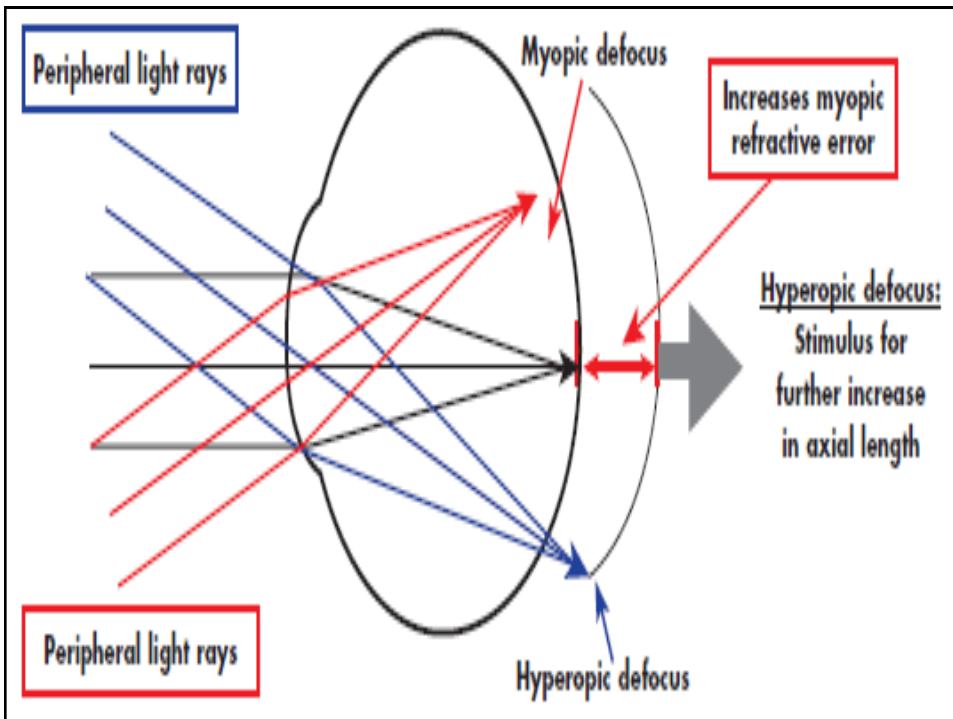
1. Holden BA, Fricke TR, Wilson DA, Jong M, Naidoo KS, Santhandaram P, Wong TY, Naduvilath TJ, Resnikoff S. Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050. *Ophthalmology*, May 2016 Volume 123, Issue 5, Pages 1036-1042.

**IT WILL BE NOT ONLY AND INCREASE IN INCIDENCE BUT IN THE DEGREE OF MYOPIA**



1. Holden BA, Fricke TR, Wilson DA, Jong M, Naidoo KS, Santhandaram P, Wong TY, Naduvilath TJ, Resnikoff S. Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050. *Ophthalmology*, May 2016 Volume 123, Issue 5, Pages 1036-1042.

Product	Company	Design	Replace	Adaptation	Disadvantages	Advantages
Esencia*	Tiedra	Bifocal Progressive + Reverse geometry Optic zone 4,5 mm. Addition in the periphery up to 3D. Reverse geometry for centration	Conventional soft contact lens. Quarterly	Personalized adaptation		Peripheral addition that does not affect optic zone.  Reverse geometry to facilitate centration and addition in the periphery
MiSight*	Cooper Vision	Multifocal Z1: correction for distance Z2: zone of treatment that created a myopic defocussed of 2 diopters in the retina	Conventional soft contact lens. Daily	As a conventional contact lens	Adaptation of a multifocal contact lens in a child	Daily 
Amiopik*	Paune	Bifocal Progressive Optic zone 8 mm Continuous Progressive Addition in the periphery Progressive design up to 2.00D	Soft and rigid contact lens			



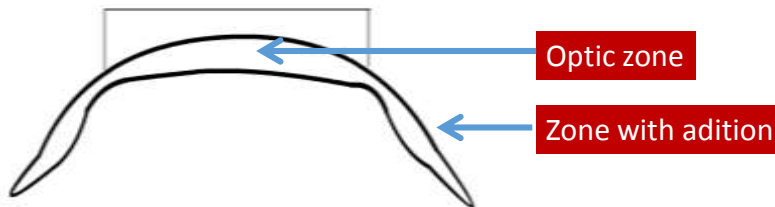
**NEW TRENDS IN CONTROLLING THE PROGRESSION OF MYOPIA**



Clinical study: longitudinal randomised multicenter doubled-masked study

**OBJECTIVES:**

1. To study efficacy and safety of soft lens Esencia® in controlling myopia progresion.
2. Quality of vision, centration, subjective acceptance and effect on ocular tissues.



**NEW TRENDS IN CONTROLLING THE PROGRESSION OF MYOPIA**



Inclusion criteria	Exclusion criteria
7 to 15 years old	Uncontrolled psychiatric or neurological disease
-0,5 D ≤ RX ≤ -5,0 D	Corneal disease
Astigmatism ≤1 D	

Indication for using contact lenses

Indications of Esencia®	Contraindications
Correct and slow the progression of myopia (aphakic and phakic eyes) in healthy eyes with up to 1.5D of astigmatism	Acute or subacute anterior chamber infection of inflammation
Child and teenagers	Active corneal infection
Daily use	Corneal, conjunctival of eyelids diseases, lesions of anomalies .
	Dry eye
	Corneal hyphosthesia
	General disease with ocular implication

NEW TRENDS IN CONTROLLING THE PROGRESSION OF MYOPIA

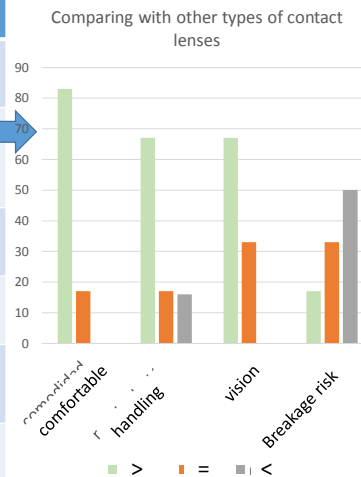


Group	N	Sex	Age (M±SD)	Spherical equivalent (M±SD)
Esencia®	16	7M/9F	11,87 ± 2,06	-2,14 ± 1,37
Aspherica 50	14	4M/10F	12,36 ± 1,50	-2,64 ± 1,06

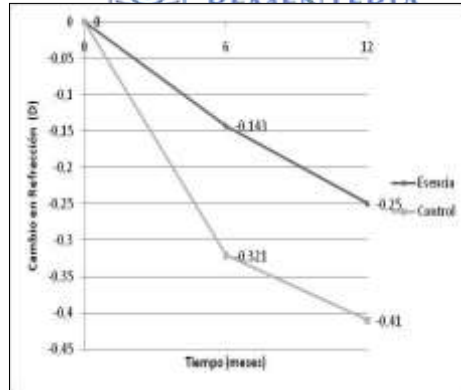
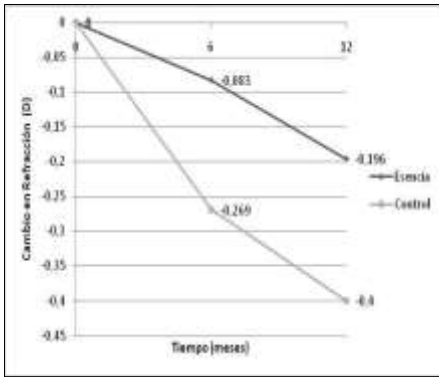
NEW TRENDS IN CONTROLLING THE PROGRESSION OF MYOPIA



Have you ever used contact lenses before the study?	NO	86%
	SI	14%
Is there any family history of myopia?	NO	0%
	SI	100%
How many diopters?	Moderate myopia	29%
	Hygh myopia	71%



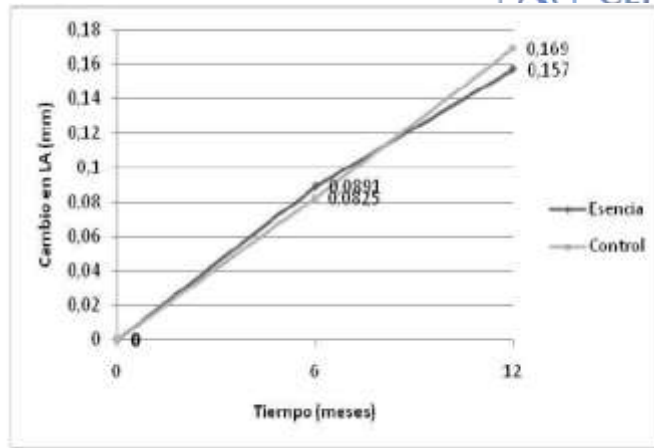
RESULTS: MYOPIA PROGRESSION



Rx without cycloplegic	Rx 6 m	Rx 12 m
Esencia®	-0,08 ± 0,20	-0,20 ± 0,51 ↑
Control	-0,27 ± 0,28 ↑	-0,40 ± 0,53 ↑

Cycloplegic refraction	Cycloplegic refraction 6 m	Cycloplegic refraction 12 m
Esencia®	-0,14 ± 0,26 ↑	-0,25 ± 0,46 ↑
Control	-0,32 ± 0,31 ↑	-0,41 ± 0,42 ↑

RESULTS: AXIAL LENGTH

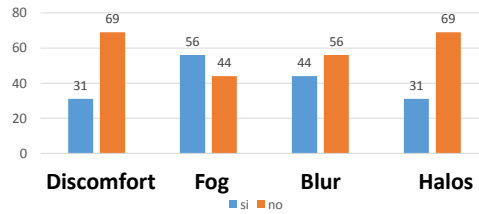


ALX	6 m	12 m
Esencia	0,09±0,04	0,16±0,13
Control	0,08±0,09	0,17±0,12

RESULTS: QUESTIONNAIRES

Do you combined the use of contact lenses and glasses?	0% Only glasses 14% Only contact lenses 86% Glasses + contact lenses
How many hours a day?	100% more than 8 hours a day
How many days a week?	14% Five days a week 86% Seven days a week
Do you use contact lenses...	0% only for school? 0% only for leisure? 100% for school and leisure?

Using contact lenses, have you ever feel...?

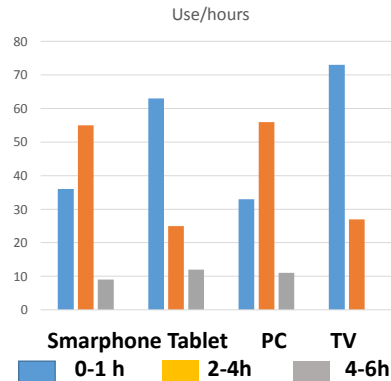
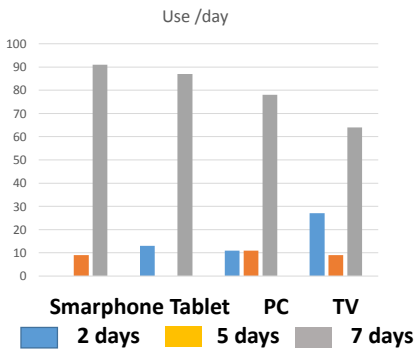


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RESULTS: QUESTIONNAIRES

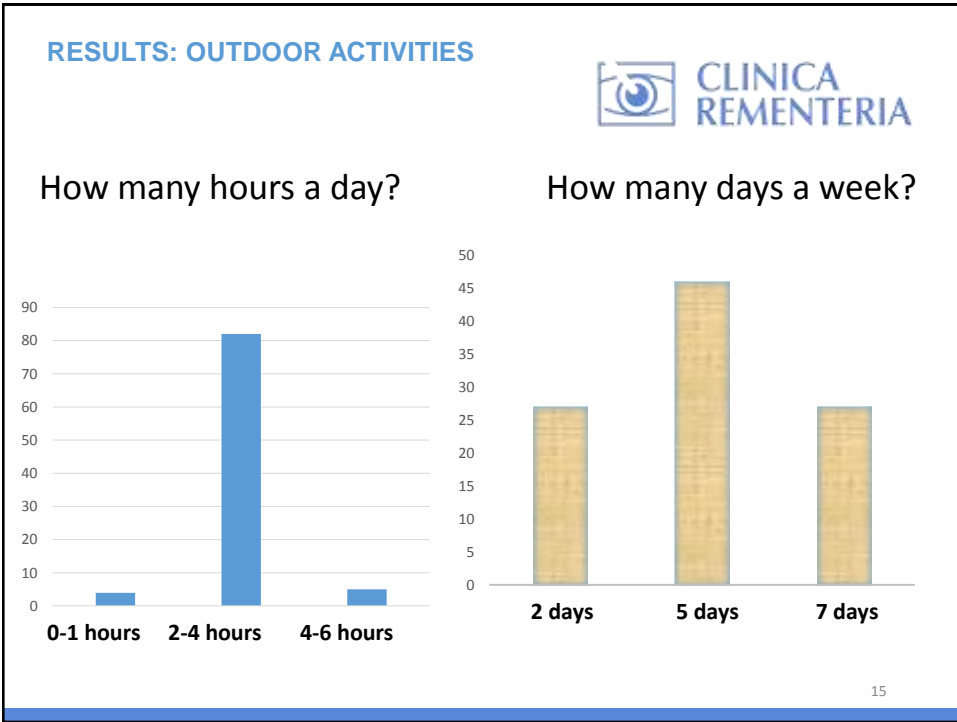


Which one of these technologies do you usually use?




	Use CL (%)	Don't use CL (%)
Smartphone	91	9
Tablet	100	0
PC	78	22
Television	82	18

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### RESULTS: QUESTIONNAIRES



	Esencia®	Control
More than 8 hours/day	83%	100%
Use of CL 7 days a week	83%	100%
Up to 4 hours in outdoor activities	83 %	75%
Up to 4 hours using technology	33%	75%
Satisfied	75%	70%
Some discomfort	25%	58%
Follow-up	100%	100%

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BIBLIOGRAPHY

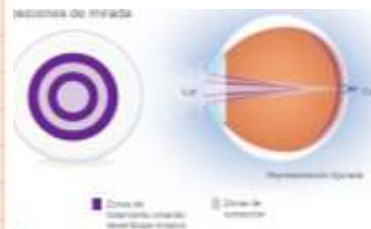


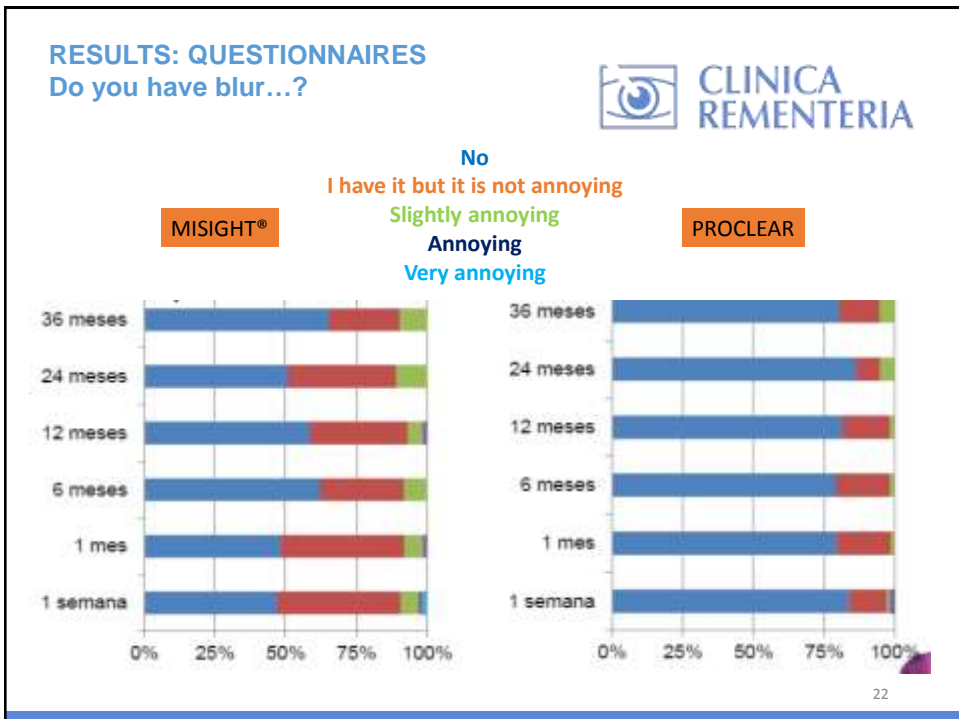
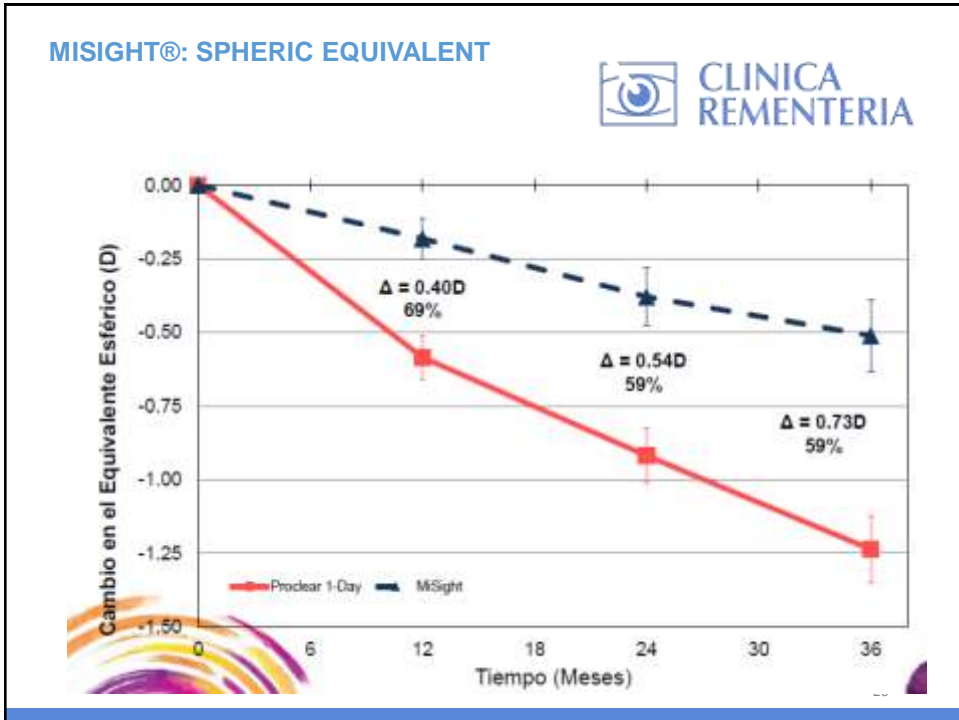
Author	Period (months)	Design	Population Age and Country	Interventions and Sample Size	Objective Refraction Increase per Year (D/year)	Axial Length Increase per Year (mm/year)
<b>Bifocal / Multifocal Soft Contact Lens</b>						
<b>Preliminar Data Esencia® 2017</b>	12	Randomised, masked	7-14. Spain	BSCL vs SVSCL (c). N= 25	BFSCCL -0.34 ± 0.36 SVSCL -0.40 ± 0.40	BFSCCL 0.16 ± 0.10 SVSCL 0.19 ± 0.10
<b>Aller, 2016</b>	12	Randomised	8-18. EEUU	BFSCCL vs SVSCL (d). N=78	BFSCCL -0.22 ± 0.34 SVSCL -0.79 ± 0.43	BFSCCL 0.05 ± 0.14 SVSCL 0.24 ± 0.17
<b>Lam, 2014</b>	24	Randomised, masked	8-13. China	BFSCCL vs SVSCL (c). N=96	BFSCCL -0.30 SVSCL -0.40	BFSCCL 0.13 SVSCL 0.18
<b>Walline, 2013</b>	24	No-Randomised	8-11. EEUU	MFSCCL vs SVSCL (d). N=40	MFSCCL -0.26 SVSCL -0.52	MFSCCL 0.15 SVSCL 0.26
<b>Anstice, 2011</b>	20	Randomised, single-masked	11-14. Australia	BFSCCL vs SVSCL. N=40	BFSCCL -0.44 ± 0.33 SVSCL -0.69 ± 0.38	BFSCCL 0.11 ± 0.09 SVSCL 0.22 ± 0.10
<b>Sankaridurg, 2011</b>	12	No-Randomised	7-14. China	BFSCCL vs SVSCL. N= 82	BFSCCL -0.54 ± 0.37 SVSCL -0.84 ± 0.47	BFSCCL 0.24 ± 0.17 SVSCL 0.39 ± 0.19
<b>Orthokeratology</b>						
<b>Charm, 2013</b>	24	Randomised	8-11. China	OK vs Spectacles (SVL). N= 28	OK -0.065 SVL -0.50	OK -0.10 SVL -0.26
<b>Hiraoka, 2012</b>	60	No-Randomised	8-12. Japan	OK vs SVL. N=43	OK -0.24 SVL -0.64	OK 0.19 ± 0.13 SVL 0.38 ± 0.20
<b>Santodomingo-Rubido, 2012</b>	24	No-Randomised	6-12. Spain	OK vs SVL. N= 61.	OK N/A SVL -0.62	OK 0.22 SVL 0.37
<b>Cho, 2012</b>	24	Randomised, Single-masked	6-10. China	OK vs SVL. N= 78	N/A	OK 0.20 ± 0.15 SVL 0.37 ± 0.16

MISIGHT® 1 DAY



	PC1D	MiSight
Edad	10.1 ± 1.4	10.1 ± 1.3
Género	37M / 37F	38M / 32F
Etnia		
Blancos	54%	56%
Asiáticos del Este	24%	23%
Asiáticos del Sur	9%	7%
Otros	5%	3%
Mestizos	7%	11%
SERE Cicloplégico	-2.19 ± 0.81D	-2.02 ± 0.77D
Longitud Axial	24.5 ± 0.70 mm	24.4 ± 0.66 mm





## CONCLUSIONS



Group	Spheric equivalent	Axial length	Spherical equivalent (M±SD)
Esencia® (2 years; n=30))	-39%	(0.01 mm)	0.16D
Misight® (3 years; n=144)	-59%	-52% (0.32 mm)	0.73D

Soft contact lenses are a new and effective method to slow myopia progression in childhood.

