

A background image of the Chicago skyline, featuring the Willis Tower and other skyscrapers, with Lake Michigan in the foreground and a blue sky with white clouds.

Pilsen Eye Study: Understanding the Perceived Barriers and Benefits of the Treatment of Presbyopia in an inner city Hispanic Community

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Presenter Disclosures

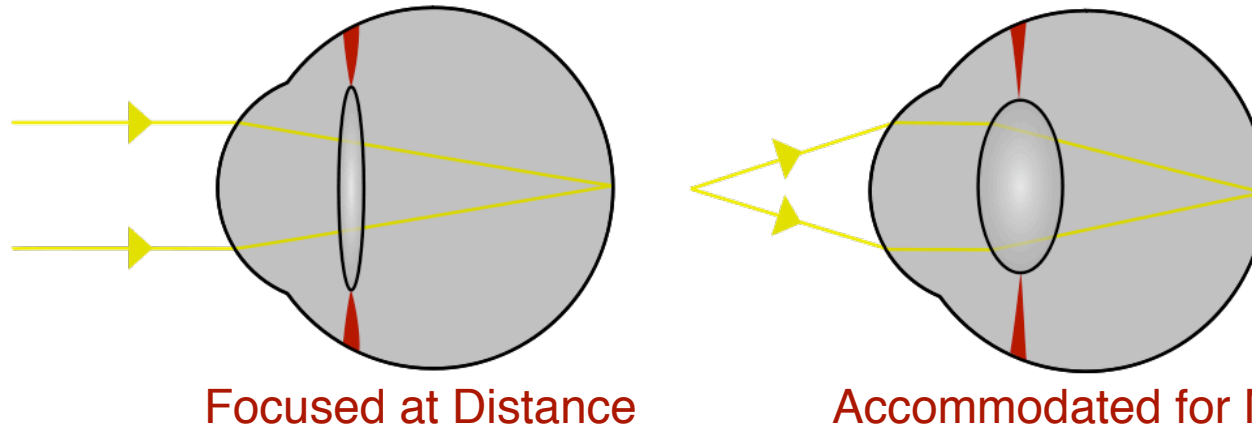
Thomas Wubben

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

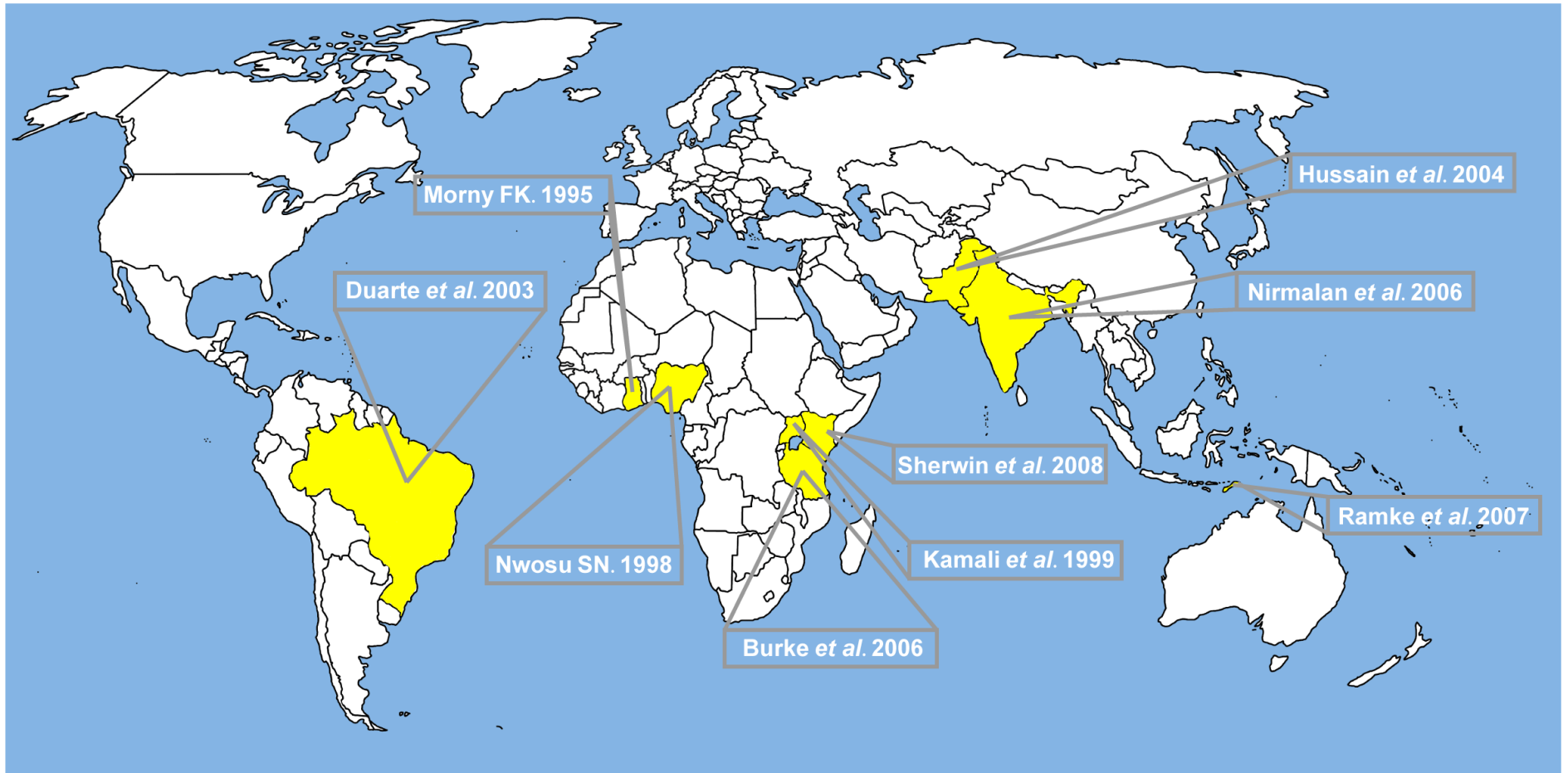
Presbyopia

- Diminished ability of the eye to focus on near objects

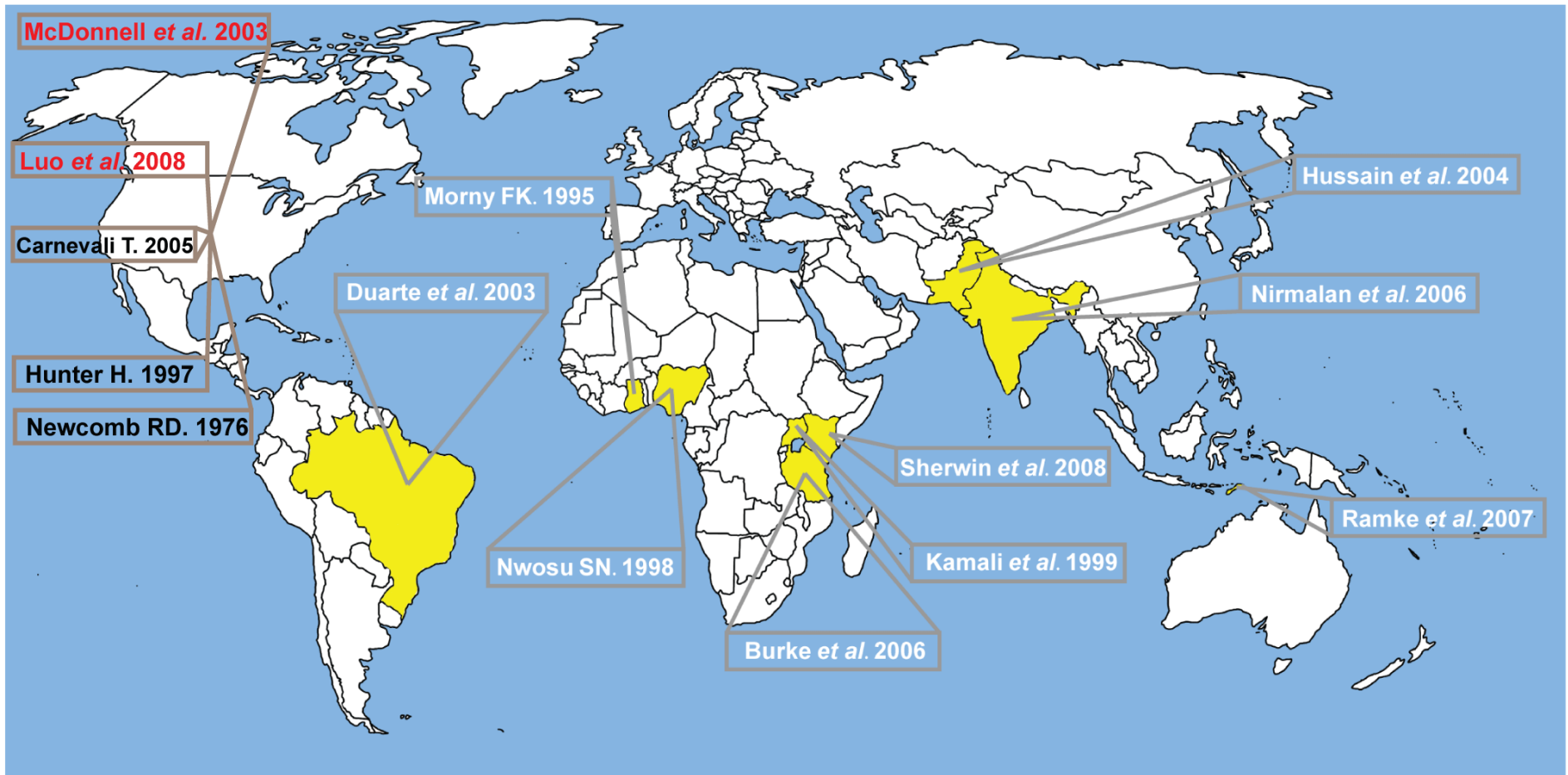


- Presbyopia is a universal part of the human experience of aging
- Near visual acuity required for many daily activities
- Common and easy to treat
- Many communities lack basic eye care

Presbyopia in the Developing World

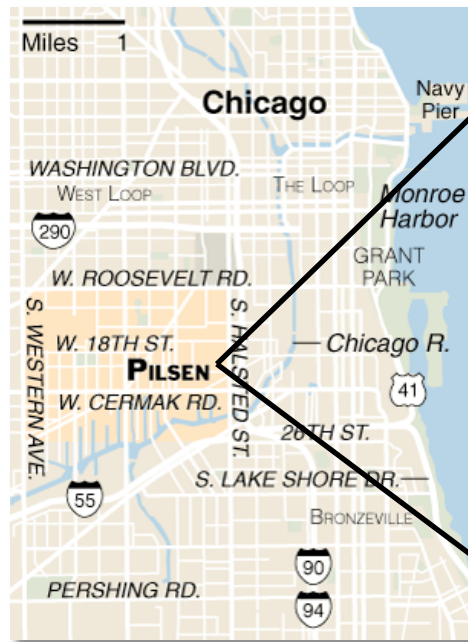


Presbyopia in the Developing World



Current Study

- First study to examine the impact of presbyopia on a resource-poor population in USA



- Simple and cost-effective intervention to RAPIDLY dispense reading glasses to achieve the best-corrected binocular near visual acuity
- Survey the perceived barriers and benefits to obtaining access to vision care and specifically, the treatment of presbyopia
- Educate patients about presbyopia and access to vision care

Methods

- Patients ≥ 40 yo without anatomical visual impairment or blindness
- Near visual acuity exams conducted at 40 cm binocularly
- Patients furnished with reading glasses between +1.00 and +3.50 D
- No detailed ophthalmic exam or refraction
- Functional definition of presbyopia
- Survey - verbal informed consent
- Protocols approved by UIC IRB



Patient Population Demographics

Table 1. Demographic and Near Visual Acuity Data for Entire Patient Population

Mean Age:

55 ± 9 yrs

Sex:

Male 44 %

Female 56 %

Employment status:

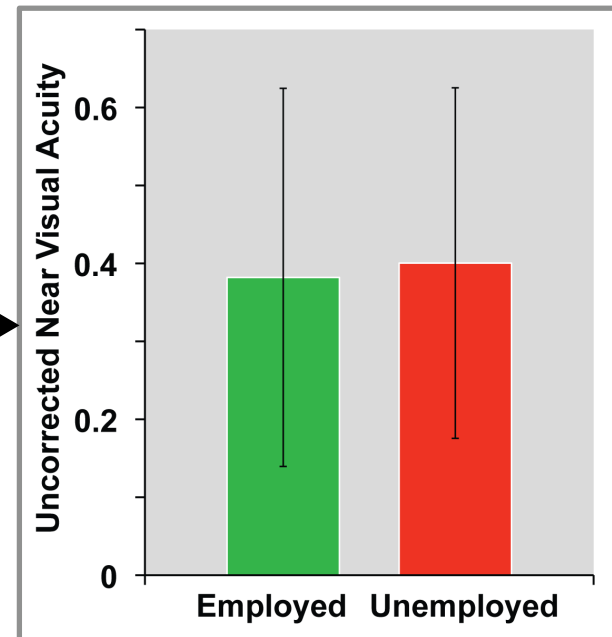
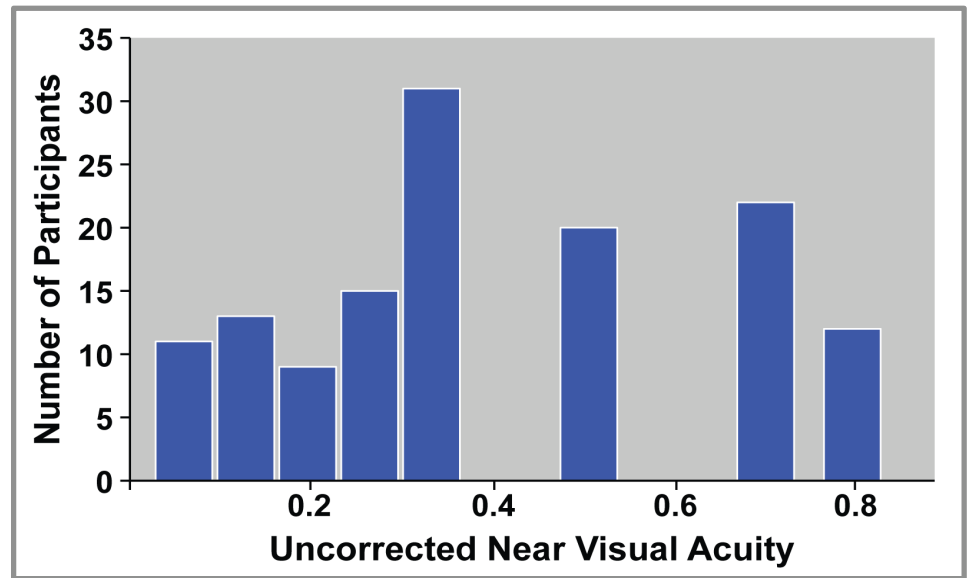
Employed 29%

Unemployed 71%

Uncorrected Near VA:

Mean 0.39 ± 0.23

Median 0.33



Familiarity with Eye Care and Spectacles

Survey Responses on Perceived Barriers and Benefits to Obtaining Access to Eye Care by Presbyopia Participants

Have you been examined by an eye doctor in the past?

Yes	67.7%
No	32.3%

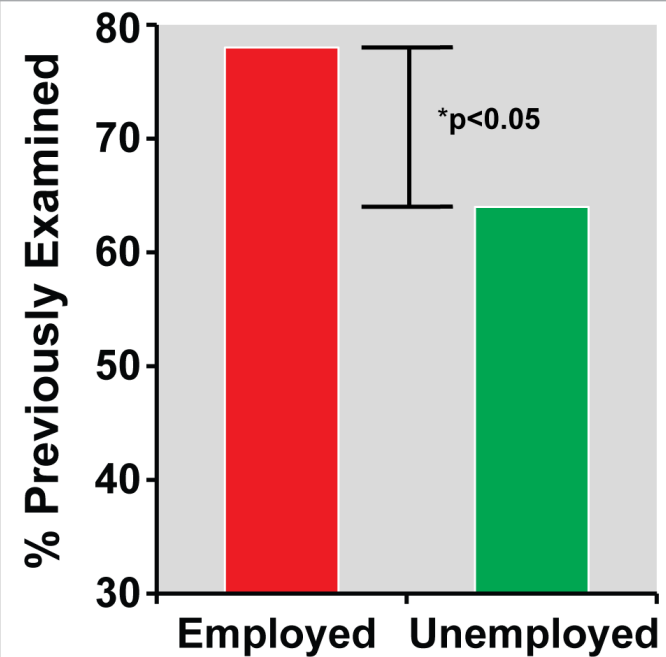
Have you had reading glasses before?

Yes	60.2%
No	39.8%

If yes, how were they obtained?

Purchased	91.3%
Shared or borrowed	2.5%
Previous Mission	2.5%
Other	3.7%

Utilization of Eye Care by Employment Status



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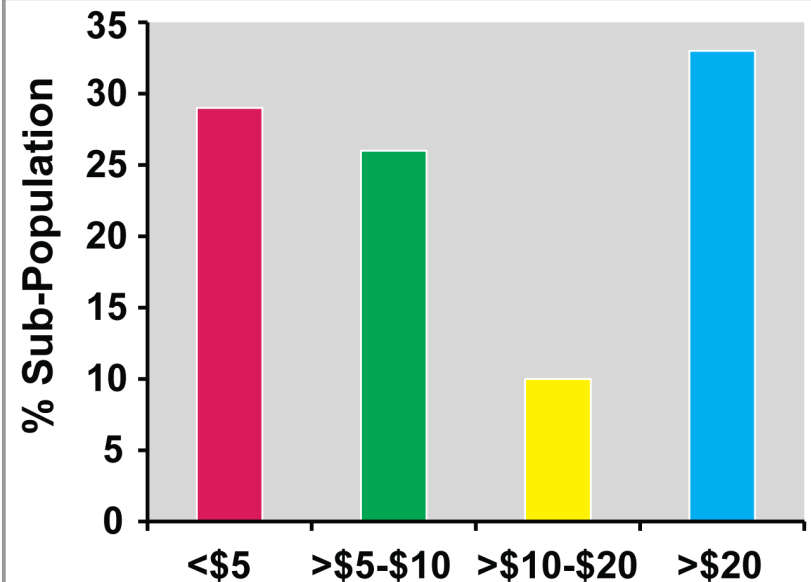
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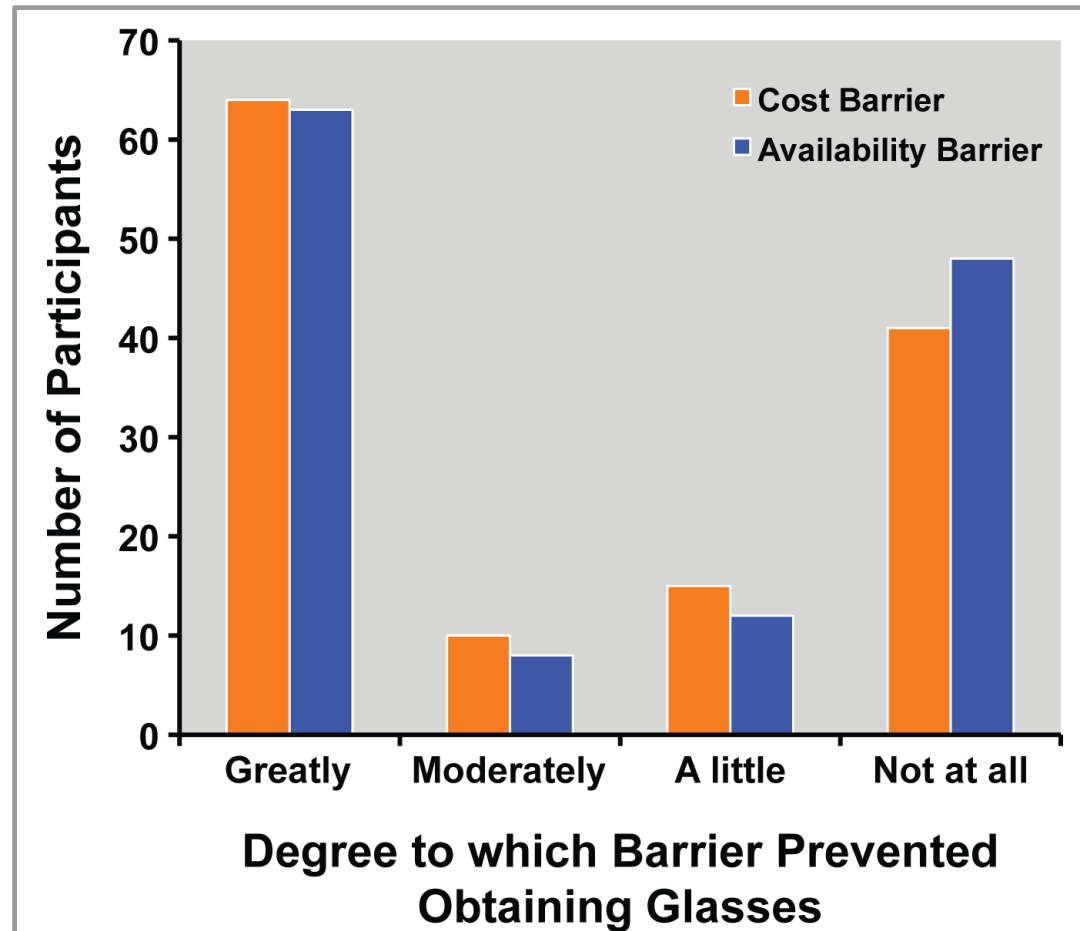
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Cost of Prior Reading Glasses



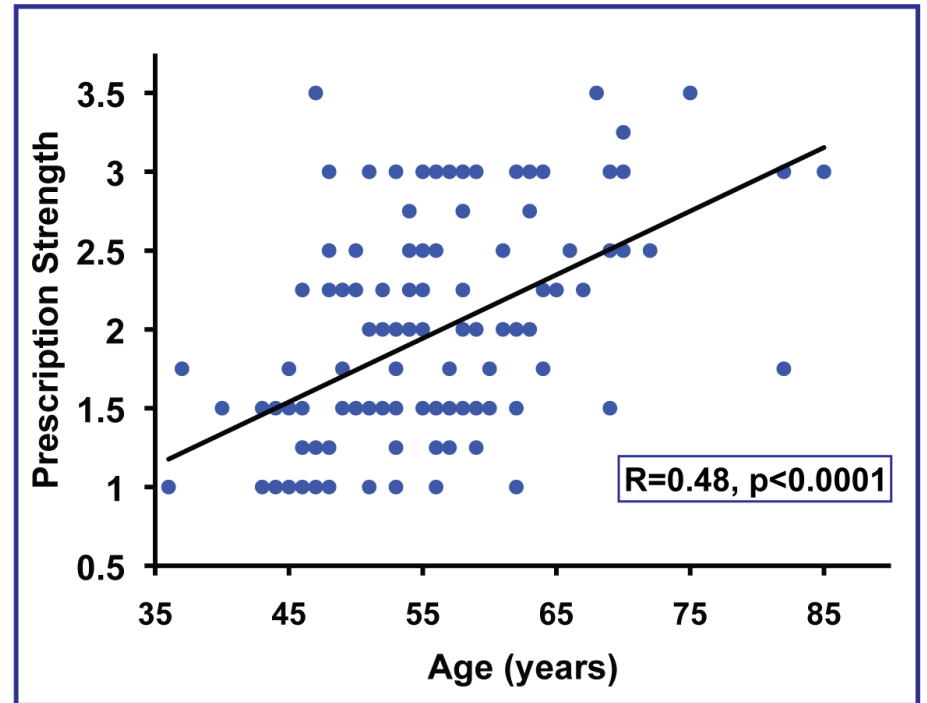
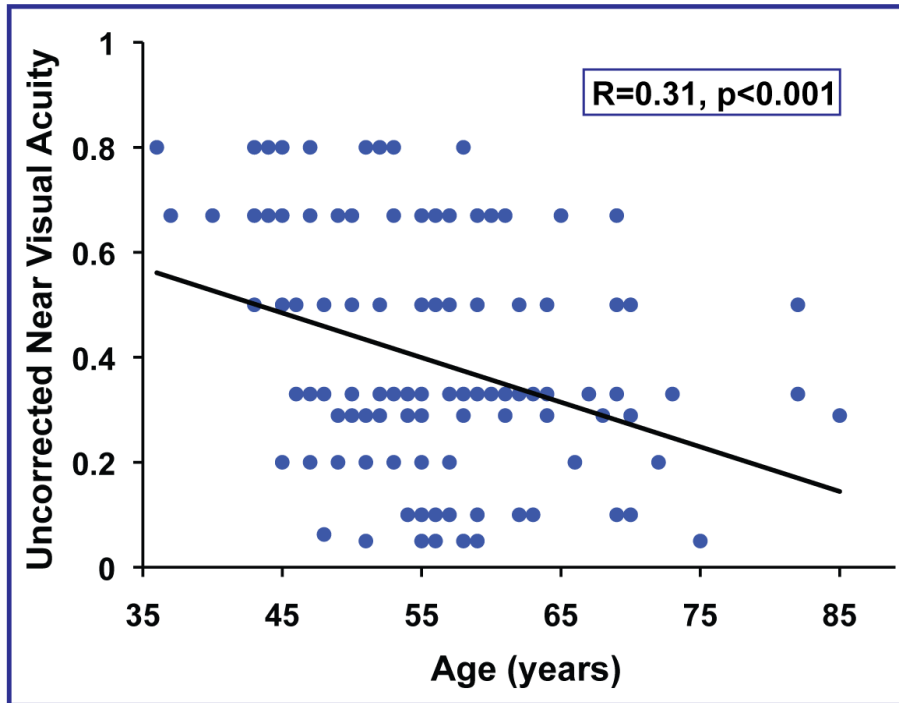
Barriers to the Treatment of Presbyopia



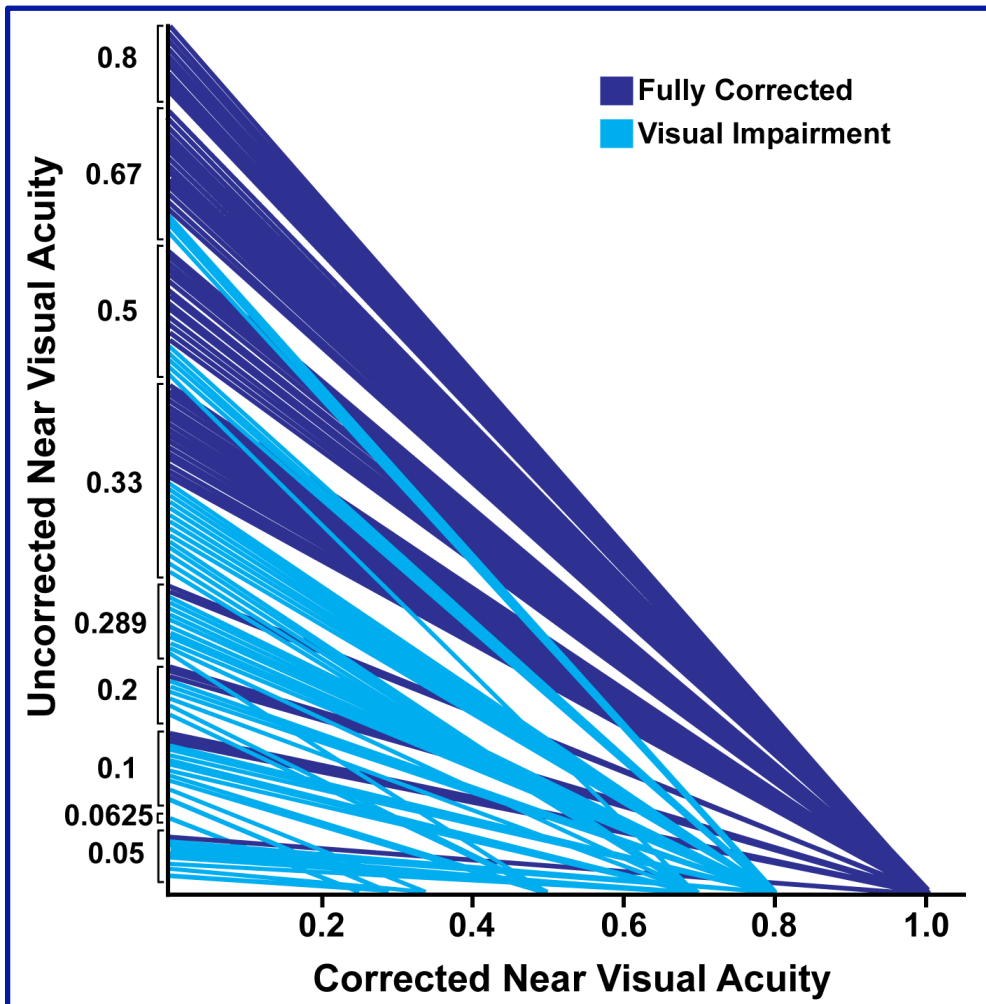
Barriers to the Treatment of Presbyopia



Progressive Nature of Presbyopia



Impact of Reading Glasses



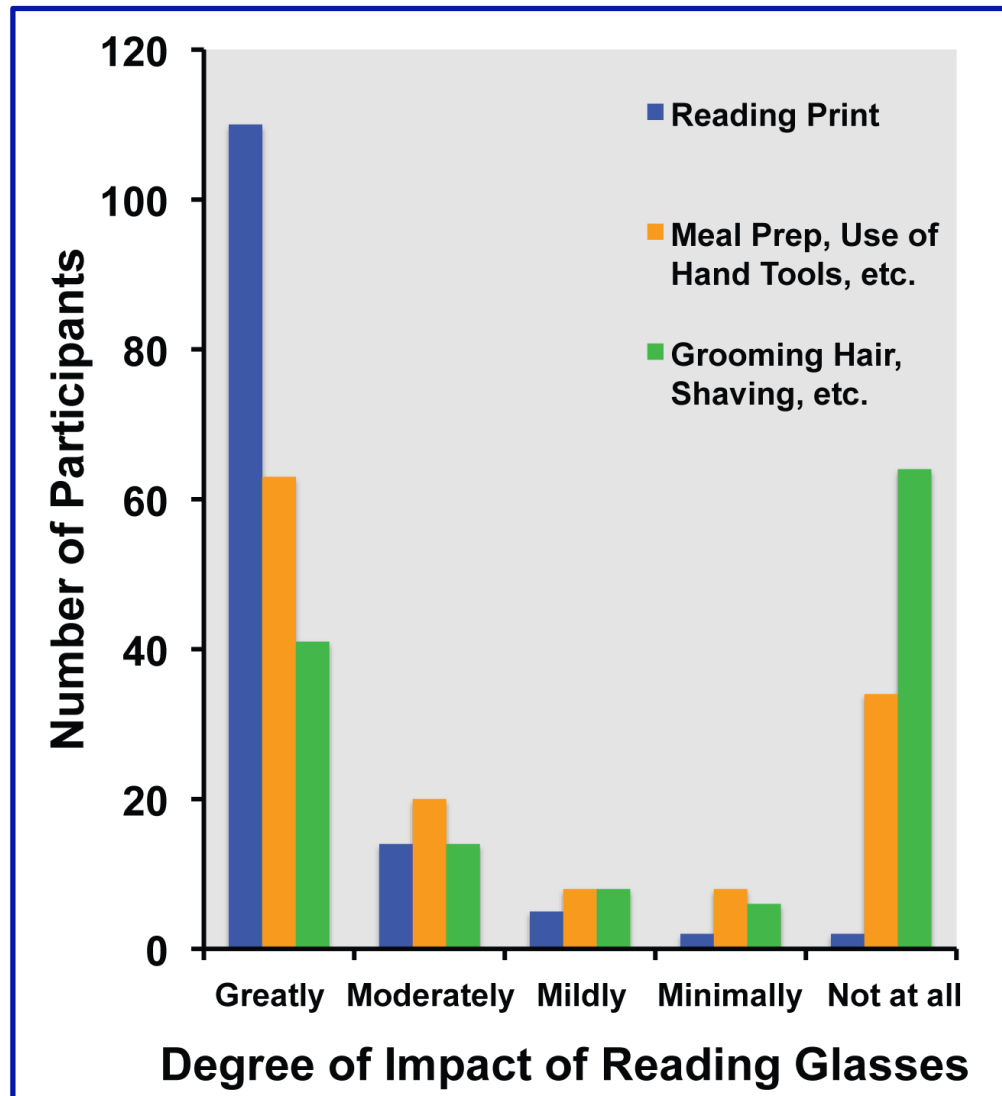
Reading glasses improved near visual acuity 261% on average!

80% of the population corrected to 20/25 or better

53% were able to be fully corrected to 20/20 near

Employment status had no impact on ability of readers to improve near vision

The Challenges of Presbyopia



Study Limitations

- Neither an ophthalmic exam or refraction was performed
 - Limited resources and time
 - Individuals may have other refractive errors in addition to presbyopia
- Limited sample size
 - Study not powered to perform multivariate analysis
- Responder Bias
 - Survey participants knew they would be receiving reading glasses
 - Reading glasses were dispensed before being asked to participate
- Results may not apply to all such communities
 - Not a population-based study

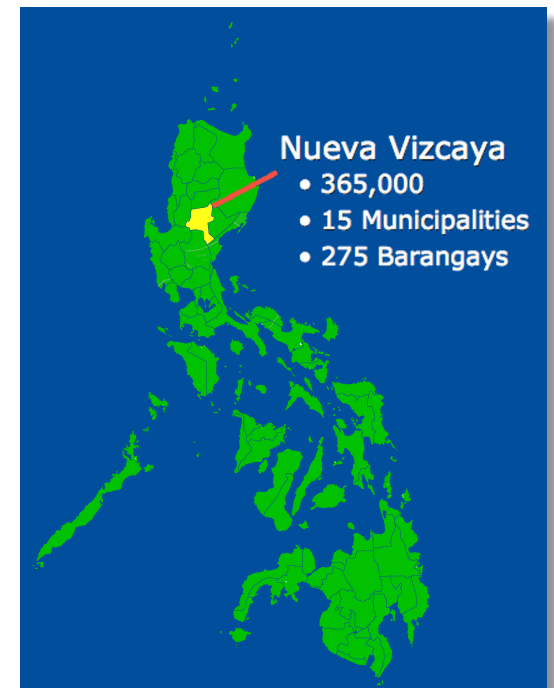
Conclusions

- Simple and cost-effective intervention
 - Reading glasses at <\$1 USD per pair
 - Minimal time, resources, and personnel
 - Many people received care that would have not otherwise.
- Barriers and Benefits
 - Bimodal distribution of responses concerning *cost & availability* as barriers
 - Improved ability to read was cited as most important benefit
- Eye Health Education
 - Target both patients and physicians
 - Encourage utilization of vision care services by individuals at high risk



Pilsen vs. Nueva Vizcaya

- Similar study focused on a rural population in the province of Nueva Vizcaya in the Philippine Islands
- >1200 people received reading glasses
 - intervention had similar impact on near visual acuity
 - employment differences were not addressed
- *Cost* was perceived to be a greater barrier than *availability*
- Spectacles perceived to impact tasks other than just reading
- Eye Health Education and a Sustainable Program to improve near vision is necessary in developing countries



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