

Optometry DistList

Instance 2016: 25

Wednesday, 13 April 2016

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Date: Thursday, 17 March 2016

From: Phani Krishna Athreya (pkathreya@ggn.amity.edu)

Subject: **Reading fluency in school aged children with bilateral astigmatism**

Purpose: To compare oral reading fluency (ORF) in students with no/low astigmatism and moderate/high astigmatism in order to assess the impact of spectacle correction on ORF in moderate and high astigmats.

Methods: Subjects were third- to eighth-grade students from a highly astigmatic population. Refractive error was determined through subjectively refined cycloplegic autorefraction. Data from students with ocular abnormalities, anisometropia, symptomatic binocular vision disorders, or refractive error that did not meet study criteria (no/low [cylinder < 1.00 both eyes, no significant myopia/hyperopia], moderate [cylinder \geq 1.00 D both eyes, mean \geq 1.00 D and < 3.00 D], or high astigmatism group [cylinder \geq 1.00 D both eyes, mean \geq 3.00 D]) were excluded. Oral reading fluency was tested with a modified version of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) Next test of ORF. No/low astigmats were tested without spectacles; astigmats were tested with and without spectacles. Mean ORF was compared in no/low astigmats and astigmats (with and without correction). Improvement in ORF with spectacles was compared between moderate and high astigmats.

Results: The sample included 130 no/low, 67 moderate, and 76 high astigmats. ORF was lower in uncorrected astigmats than in no/low astigmats ($p = 0.011$). ORF did not significantly differ in no/low astigmats and corrected astigmats ($p = 0.10$). ORF significantly improved with spectacle correction in high astigmats ($p = 0.001$; mean

improvement, 6.55 words per minute) but not in moderate astigmats ($p = 0.193$; mean improvement, 1.87 words per minute). Effects of spectacle wear were observed in students who read smaller text stimuli (older grades).

Conclusions: ORF is significantly reduced in students with bilateral astigmatism ($\geq 1.00D$) when uncorrected, but not when best-corrected compared with their non-astigmatic peers. Improvement in ORF with spectacle correction is seen in high astigmats, but not in moderate astigmats. These data support the recommendation for full-time spectacle wear in astigmatic students, particularly those with high astigmatism.

For full article, please visit:

http://journals.lww.com/optvissci/Fulltext/2016/02000/Reading_Fluency_in_School_Aged_Children_with.3.aspx?cid=MR-e|P-HotTopics-Ophthalmology-Ophthalmology-OPX-NoPromo

Date: Saturday, 2 April 2016

From: Deepika Kommanapally (deepikak.opt@gmail.com)

Subject: **Age - and stereovision- dependent eye- hand coordination deficits in children with amblyopia and abnormal binocularity**

Purpose: To examine factors contributing to eye-hand coordination deficits in children with amblyopia and impaired stereovision.

Methods: Participants were 55 anisometric or strabismic children aged 5.0 to 9.25 years with different degrees of amblyopia and abnormal binocularity, along with 28 age-matched visually-normal controls. Pilot data were obtained from four additional patients studied longitudinally at different treatment stages. Movements of the preferred hand were recorded using a 3D motion-capture system while subjects reached to precision grasp objects (two sizes, three locations) under binocular, dominant eye, and amblyopic/non-sighting eye conditions. Kinematic and "error" performance measures were quantified and compared by viewing condition and subject group using ANOVA, stepwise regression, and correlation analyses.

Results: Movements of the younger amblyopes (age 5-6 years; $n = 30$) were much slower, particularly in the final approach to the objects, and contained more spatial errors in reaching ($\sim \times 1.25-1.75$) and grasping ($\sim \times 1.75-2.25$) under all three views ($P < 0.05$) than their age-matched controls ($n = 13$). Amblyopia severity was the main contributor to their slower movements with absent stereovision a secondary factor and the unique determinant of their increased error-rates. Older amblyopes (age 7-9 years; $n = 25$) spent longer contacting the objects before lifting them ($P = 0.015$) compared with their matched controls ($n = 15$), with absence of stereovision still solely related to increases in reach and grasp errors, although these occurred less frequently than in younger patients. Pilot

prospective data supported these findings by showing positive treatment-related associations between improved stereovision and reach-to-grasp performance.

Conclusions: Strategies that children with amblyopia and abnormal binocularity use for reach-to-precision grasping change with age, from emphasis on visual feedback during the "in-flight" approach at ages 5 to 6 years to more reliance on tactile/kinesthetic feedback from object contact at ages 7 to 9 years. However, recovery of binocularity confers increasing benefits for eye-hand coordination speed and accuracy with age, and is a better predictor of these fundamental performance measures than the degree of visual acuity loss.

For full article, please visit: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4160093/>

Date: Thursday, 7 April 2016

From Sony Singh (sony.singh@indiavisioninstitute.org)

Subject: **Retinal implant for retinitis pigmentosa gets green light**

A new sub-retinal electronic implant available in Europe should spark the interest of retinitis pigmentosa (RP) patients.

The Alpha AMS, developed by German company Retina Implant AG, has received its CE mark, allowing it to be marketed in Europe for patients with severe sight loss from RP.

The microchip, which has 1600 pixels, detects light entering the eye. The system allows the patient to utilise their eye movements to view the world around them. It then transfers the received light signals to the remaining optic nerve cells in the RP patient's eye to send the information to the brain, which is then interpreted as sight.

The device was developed by German university researchers, and has been tested in clinical trials at the University of Oxford. University of Oxford ophthalmologist, Professor Robert MacLaren, found that both patients receiving the implant experienced some restoration of functional vision. The Alpha AMS is wirelessly powered and is expected to last several years in the eye.

Retina Implant AG chief executive, Dr Walter-Gerhard Wrobel, told *OT* that the implant cost €95,000 (£76,000), including training for the patient by engineers. "Hospital care adds another €20,000-30,000 (£16,000-£24,000).

For full article, please visit:

<https://www.aop.org.uk/ot/science-and-vision/technology/2016/04/06/retinal-implant-for-retinitis-pigmentosa-gets-green-light>

Date: Monday, 11 April 2016

From: Jayanta bhattacharjee (bjayanta@rediffmail.com)

Subject: **Kolkata Optometry Conference (KOC 2016)**

The Kolkata Optometry Conference (KOC 2016) and Optical Trade Fair (Optician India 2016) is a unique initiative, held for the first time in the Eastern part of India on 16th and 17th of April 2016 at Science City Auditorium & Milanmela Exhibition ground, Kolkata.

More than 600 delegates including students, professionals and educators in Optometry from India and neighbouring countries, including Bangladesh, Nepal, and Bhutan are expected to attend the conference. The theme of the conference is "Current Optometry scenario, its up-gradation and future need". The conference schedule includes talks on several interesting topics and contributions from prominent speakers, educators and research scholars in eye care. The discussions will focus on innovations in eye care, as well as personalized and comprehensive eye care service delivery by Optometrists. The conference also includes workshops with hands-on sessions.

This program is accredited with 10 credit points by Optometry Council of India.

Please visit the KOC website www.koc2016.in for further details regarding the scientific programme

Date: Monday, 11 April 2016

From: Sandhya Shekar (sandhya.shekar@indiavisioninstitute.org)

Subject: **Indian drivers blind behind the wheel?**

With driving tests in India not factoring in visual acuity, poor eyesight could be a major culprit in road accidents.

India has a driving problem that its motorists have long been blind to. Eighty per cent of road accidents are termed "fault of the driver", according to a 2013 analysis by the Union Ministry of Road Transport and Highways. Other factors such as a malfunctioning vehicle, bad roads and the fault of pedestrians together made up no more than seven per cent.

Nearly 2,00,000 people are killed in road accidents in India, according to the World Health Organization, the second highest globally behind China. While driver culpability is a key cause in other parts of the world too, fine-grained analyses have held poor vision to be a major culprit.

Vision tests

Since the 1920s, there are statistics showing that drivers with visual acuity problems are twice as likely to be involved in a crash, than those with normal vision. Those with protanopia, or red-green colour blindness, have been issued a restricted driving licence in Australia since 1994. Depth perception — to judge the speed of incoming vehicles — and glare recovery, a measure of how quickly drivers can resume control of their vehicles when suddenly blinded by the lights of an incoming vehicle, are all known to be play a key role in road safety. Then there are impairments such as a weak central field of vision or obstructed peripheral vision that have been found to be responsible for higher accident rates and fatalities by several multi-location international studies.

On the back of such evidence, the United Kingdom, Australia, Sweden and the United States all include detailed vision tests for granting a driving licence. However India, with an average of 300 road accident deaths a day, has no equivalent of a vision test as part of the driving test requirements.

Empirical evidence

To check if deficient vision could explain, to an extent, road accident fatalities in India, Mr. Verma and his colleagues tested the visual acuity of 387 Indian drivers across various organisations, age groups and driving experience. The participants volunteered for the study. Nearly two-thirds of those tested were commercial drivers of heavy vehicles and drivers of private buses. The rest were licensed drivers of private vehicles, as well as some in the process of applying for a beginner's licence. The previous driving history of the sample drivers was also collated and all the drivers were then tested on a vision screener — a machine that is frequently used in many driving schools around the world to test for visual acuity, colour vision, night vision, depth perception, contrast sensitivity, glare recovery, peripheral vision and vertical field of vision.

Worryingly, Mr. Verma's report on the study in the March issue of the peer-reviewed journal Current Science found that more than half of the entire sample (52 per cent) failed in at least one of the vision parameters tested; 81 per cent of those tested with at least one visual disability turned out to have a past record of an accident and 60 per cent of commercial bus drivers failed the minimum vision requirements for driving. A major limitation of the study was that the tests were restricted to drivers from Karnataka, but Mr. Verma is confident that the rest of the country would not fare substantially better.

For full article, please visit: <http://www.thehindu.com/opinion/op-ed/driving-tests-poor-eyesight-could-be-a-major-culprit-in-road-accidents-in-india/article8455677.ece>

From: Dinesh C Fernandes (dinesh.fernandes@indiavisioninstitute.org)

Subject: **In conversation with Vinod Daniel – Video Series**

Watch the 'In conversation with Vinod Daniel' video series on IVI YouTube page www.youtube.com/indiavisioninstitute

In conversation with Vinod Daniel - Episode 26 (Mr Arun Arora)

Vinod Daniel in conversation with Nandita Das (Walk in the Dark - Mumbai)

In conversation with Vinod Daniel - Episode 25 (Dr R Krishna Kumar)

In conversation with Vinod Daniel - Episode 24 (Dr Taraprasad Das)

From: Sunny Mannava (mannavas@operationeyesight.com)

Subject: **Optometrist (Job opening)**

Candidates with a Bachelor's degree in Optometry may apply for the position of Optometrist. Preference will be given to candidates with

- Considerable experience working in hospitals
- Good clinical skills.

Remuneration is negotiable and as per the current industry.

- Number of Vacancies: 1
- Institute: Udayagiri Lions Eye Hospital
- Place: Latur, Maharashtra

Interested candidates are requested to forward their resume to Dr. Lakhotia at lakhotiarn@gmail.com

Subject: **Program Assistant (Job Opening)**

India Vision Institute (IVI) is hiring candidates holding a Diploma in Optometry for the position of Program Assistants.

Roles and responsibilities:

- Primarily responsible for conducting Vision Screening programs (Locally and Nationally)
- Assistance with other IVI programs, as required

Requirement: Diploma in Optometry from a reputed institution with 1-2 years' experience in conducting vision screening program

Location: IVI Office in Chennai

Interested candidates can mail their current CV to Ms Sandhya Shekar at: sandhya.shekar@indiavisioninstitute.org, Contact Number: 08754473472

Subject: Optometrists on contract basis

India Vision Institute (IVI) is compiling a database of Optometrists available to be hired on contract basis for vision screening programs across India. They will be contacted based on the location and date of the program. There is provision for standard remuneration for those taking part in the screening.

If you wish to be part of the database, please send your current CV along with a brief description of vision screening activities you would have conducted to Ms Sandhya Shekar at: sandhya.shekar@indiavisioninstitute.org or call at 08754473472. You can also request further details, if required.

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