

MAJOR OCULAR COMPLAINTS AMONG COMMERCIAL VEHICLE DRIVERS IN SOUTHERN NIGERIA

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Abstract

This study was carried out to determine the major ocular complaints among commercial vehicle drivers in Southern Nigeria. A hundred commercial vehicle drivers were examined and interviewed. All the drivers were males with a mean age of 42.62 ± 10.34 . The major complaints of the drivers include difficulty in reading prints seen in 23% of the drivers, itching 19%, photophobia 7%, frontal headache 5%, ocular discomfort and difficulty in seeing far objects 3%. Other complaints include cloudy vision, glare

Introduction

Driving is a visually intensive task which requires several sets of abilities which include sensory ability (mainly visual), mental ability, motor ability and compensatory abilities. One needs different kinds of vision to be able to drive safely. Any significant loss of visual function such as visual acuity or visual field will diminish a person's ability to operate a motor vehicle safely on today's congested high-speed roadways. Performance can be measured in 2 general ways. One is by physical measures of driving behavior (e.g. speed, braking, latency, scanning behavior, position in the lane). These measures are accomplished through the use of an instrumented vehicle movement or driver behaviors' directly^{1,2}. A second way of measuring performance is by ratings given by a trained evaluator who

disturbance, sandy sensation, foreign body sensation and dizziness all of which were seen in 2% of the drivers. On examination of the external ocular features, pterygium and cataract were most common features seen in 32% and 10% of the drivers respectively. Regular eye checkup by commercial vehicle drivers to prevent these eye problems and enforcement of visual standards by road safety authorities is advocated.

Keywords: Driving, vision, itching, pterygium, photophobia

rides in the vehicle and uses a standard rating scale³⁻⁶.

Visual sensory abilities, such as measures of spatial resolution, contrast sensitivity and light sensitivity throughout the visual field, are useful for understanding the visibility of objects and events during driving, yet by themselves they are insufficient for understanding the visual complexity of the driving task. The visual demands of driving are intricate. Controlling a vehicle takes place in a visually cluttered environment and involves the simultaneous use of central and peripheral vision and the execution of primary and secondary tasks (both visual and non-visual). As the vehicle moves through the environment, the visual world is rapidly changing. The driver is often uncertain as to where a critical visual event

will occur. These task demands have prompted researchers to examine relationships between driver safety and performance and attentional skills. Many older adults, even when free from dementia, have impairments in their vision causing divided attention under brief target durations, as compared to younger adults⁷. Visual impairments among commercial vehicle drivers cause a reduced visual function including the visual acuity, visual field, color vision and contrast sensitivity; all of which can lead to road accidents. Natural changes in the eye occur as a result of the aging process affecting vision and commercial vehicle drivers are not exempted from this. A study on changes in the aging eye⁸ revealed cataract, glaucoma, macular degeneration, pterygium and retinopathies as the major ocular problems associated with aging. External factors as wind and dust also contribute to ocular problems encountered by drivers. They complain of itching, foreign body sensation, sandy sensation, photophobia etc.

Materials and Methods

This study was a descriptive study carried out on commercial vehicle drivers who operate in Southern Nigeria. Only drivers who gave a written consent were part of this study. Instruments for data collection include a questionnaire form and a pen torch. The drivers were assembled at some selected motor parks and examined. This examination involved taking a profile and filling of the questionnaire. The external examination of the drivers was also performed using the pen torch.

Results

A total of 100 commercial vehicle drivers were examined. All the drivers were males. The ages of the drivers ranged from 21 to 72 with a mean age of 42.62 ± 10.34 . While 33% of the drivers did not have any ocular complaint, 23% complained of difficulty in reading prints and 19% complained of itching. Other complaints of the drivers

include: frontal headache and watery whitish discharge, 5%; cloudy vision, glare disturbance, sandy sensation, foreign body sensation and dizziness, 2%. 3% complained of ocular discomfort and difficulty seeing distant objects; 4% complained of ocular pains and 7% complained of photophobia (Table 1). The external ocular features of the drivers revealed that 32% of the drivers had pterygium; 6% arcus senilis; 10% lens opacity, 3% pinguecula and conjunctival melanosis; 1% conjunctival hyperemia and conjunctival naevus and 48% were normal.

Discussion

Commercial vehicle drivers spend hours on the roads driving and are constantly exposed to wind, dust, debris and varying temperature changes. The continuous accumulation of dust and other atmospheric particles on the eye will cause symptoms of itching, sandy sensation and/or foreign body sensation. These symptoms can be prevented by wearing protective glasses while driving. The drivers however, feel more relaxed driving without protective glasses as most of them admitted that they have spectacles but do not wear them while driving. Difficulty in reading prints was the most common complaint of the drivers and this could be as a result of a refractive error or a pathological condition. Studies^{9,10} have identified refractive errors and cataract as the two major causes of reduced vision among commercial drivers. Mantyjarvi¹¹ reported that cataract reduced the visual acuity and contrast sensitivity of drivers. Long-term exposure to ultraviolet rays of the sun can cause cataracts as well as pterygium. These ocular signs were seen upon external examination of the drivers. Though they do not cause any symptoms, but can cause severe reduction in vision if left unmanaged. Azuamah, *et al.*¹² reported that cataract and pterygium were among the major causes of low vision in Southeast Nigeria. Other ocular features seen among the drivers such as conjunctival naevus and melanosis can also be caused by exposure to ultraviolet rays.

Commercial drivers in Nigeria, most of whom are illiterates are not well informed of the long-term effects of ultraviolet rays and do not take the necessary precautions to avoid any damage to their eyes. Most of the complaints they have are seen to them as minor complaints but they do not know that these minor complaints can become very serious in long run. Eye care practitioners have the responsibility to educate these drivers to adequately protect their eyes and to go for regular eye checkups so as to effectively manage any potential problem while it's still at the early stages. Road safety authorities should also enforce regular eye examination of drivers before issuance or renewal of driving license.

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TABLES

Table 1: Ocular complaints of drivers

Ocular complaints	Frequency	(%)
Frontal headache	5	5.0
Watery whitish discharge	5	5.0
Itching	19	19.0
Difficulty reading prints	23	23.0
Cloudy vision	2	2.0
Glare disturbance	2	2.0
Sandy sensation	2	2.0
FB sensation	2	2.0
Ocular pains	4	4.0
Photophobia	7	7.0
Ocular discomfort	3	3.0
Dizziness	2	2.0
Difficulty seeing distant objects	3	3.0
NIL	33	33.0

Table 2: External ocular features among drivers

External ocular features	Frequency	(%)
Pinguecula	3	3.0
Pterygium	32	32.0
Cataract	10	10.0
Conjunctival hyperemia	1	1.0
Arcus senilis	6	6.0
Conjunctiva melanosis	3	3.0
Conjunctiva naevus	1	1.0
Normal	48	48.0