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AWARENESS ABOUT VISUAL PROBLEMS AMONGST TRUCK AND BUS DRIVERS OF NAGPUR CITY

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HOW TO CITE THIS ARTICLE:

Vikas Mahatme, Pallavi Alsi, Yogesh Jibhakate. "Awareness about Visual Problems amongst Truck and Bus Drivers of Nagpur City". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 74, December 29; Page: 15476-15481, DOI: 10.14260/jemds/2014/4088

ABSTRACT: The study was conducted in Nagpur city. 200 drivers including 115 truck drivers and 85 bus drivers participated in this study. This was a cross sectional, non-comparative type of study. A simple questionnaire was administered that recorded drivers' general information; whether visual assessment was done prior to receiving license; and enquired about their age; the approximate number of years of holding driving license; the questions about awareness about common eye problems like cataract, glaucoma, retinal problems, injuries etc; source of information; awareness about the need of routine eye checkup. The drivers were divided in 4 groups depending on their age. The study showed that only 8.5% drivers had eye checkup prior to receiving license. This indicates that no importance is given to visual assessment by licensing authority. 81% were of the opinion that eye checkup is necessary after the age of 40 years. 76% had never visited an eye specialist. The major sources of information about eye diseases and eye care included friends (60%), newspaper (36%), Family members (35.5%), and TV (34.5%). Poor knowledge about ocular health coupled with poor availability and use of healthcare services might be a possible reason for negligence of visual problems in this group. Considerable effort is required to improve awareness of eye disorders and transform this awareness into actual utilization of services.

KEYWORDS: Awareness, Heavy vehicle drivers, Vision, Visual problems, truck drivers, bus drivers, road safety.

INTRODUCTION: Good Vision is one of the most essential parameters of safe driving. Poor vision may become the cause of major road accidents. This study aimed at finding out awareness about importance of good vision and visual problems in Truck and Bus drivers as this profession remains somewhat neglected as far as Eye Care is concerned. Studies in drivers are relatively small in scale. In European Union as well as in most other countries, there are legal standards for the visual functions of drivers. Relatively little attention is paid to the prevalence of visual problems in driving population in India. The objective of this study is to provide recommendations for forming guidelines to the licensing authorities about the heavy vehicle drivers.

METHODS: This was a cross sectional, non-comparative type of study. 200 truck and bus drivers participated in this study.

Inclusion Criteria: Truck and Bus Drivers who were willing to participate.

Exclusion Criteria: Non-public transport and small vehicle drivers were excluded from the study.

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The study was conducted at Mahatma Eye Bank Eye Hospital, Nagpur, Maharashtra; India, between Feb 2009 and March 2010 after approval from the ethical committee. Initially a pilot study was conducted on 100 drivers to decide about the sample size. Based on the prevalence of visual impairment amongst them, the required sample size was 170. We studied 200 drivers including 115 truck drivers and 85 bus drivers. Drivers were selected randomly on voluntary basis. Four groups – A, B, C, and D were formed according to their age. A simple questionnaire in local language was administered that recorded drivers' general information, age, approximate number of years of holding the license, the approximate timing of their last eye sight test, whether vision was tested before seeking license, importance of periodic eye checkup, knowledge about common eye problems like cataract, glaucoma, corneal problems, the source of information etc. The results were tabulated and evaluated.

RESULTS: 200 truck and bus drivers were studied. Study subjects were classified into four groups according to their age as follows.

- Group A – less than or equal to 25 years.
- Group B – 26 to 40 years.
- Group C – 41 to 55 years.
- Group D – more than 55 years.

Table 1: Shows Age distribution of the study subjects.

Age in years	N=200	Percentage
Less than or equal to 25 years	17	8.5
26 to 40 years	67	33.5
41 to 55 years	93	46.5
Over 55 years	23	11.5

Table 1: AGE DISTRIBUTION OF THE STUDY SUBJECTS

Group A had 17 drivers, group B 67, Group C had maximum that is 93 and Group D had 23 drivers.

Table 2: Shows driving experience of the drivers according to age groups.

Driving Experience	Group A N=17	Group B N=67	Group C N=93	Group D N=23	Total number of Drivers N=200
Less than 10 years	17	35	07	00	59
10 – 20 years	00	28	31	04	63
21 – 30 years	00	04	52	03	59
31 – 40 years	00	00	03	14	17
More than 40 years	00	00	00	02	02

Table 2: DRIVING EXPERIENCE OF DRIVERS ACCORDING TO AGE GROUPS

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29.5% drivers in survey had driving experience of less than 10 years, 31.5% had 10 – 20 years of driving experience, 29.5% were having 21 to 30 years of driving experience whereas only 1 % had over 40 years of driving experience.

Table 3: Shows frequency of eye checkup among these drivers.

Frequency of eye checkup	Group A N=17	Group B N=67	Group C N=93	Group D N=23	Total number of Drivers N=200
Never	11	53	76	12	152
Single visit	6	10	11	7	34
More than 1 visit	0	4	06	4	14
Regular	0	0	0	0	0
Table 3: FREQUENCY OF EYE CHECK UP					

76% drivers had never visited a specialist for eye care in their lifetime while 17% had single visit. None of them went for a regular checkup. These facts are quite alarming.

When asked to list common eye disorders the drivers enlisted certain diseases. Table 4 shows the details.

	Group A N=17	Group B N=67	Group C N=93	Group D N=23	Total number of Drivers N=200
Refractive error	15	61	89	21	186
Corneal lesions	02	05	03	02	12
Cataract	5	31	57	15	108
Glaucoma	2	09	13	03	27
Retinal and macular lesions	00	03	08	04	15
Table 4: DISEASES ENLISTED BY THE DRIVERS					

Majority of the drivers (93%) knew about the refractive error and cataract (54%).

Table 5: Shows the source of information from where these drivers received information about eye diseases.

Source of Information	Total N=200
Newspaper	72 (36%)
TV	69 (34.5%)
Friends	120 (60%)
Family members	71 (35.5%)
Others	09 (4.5%)
Table 5: SOURCE OF INFORMATION ABOUT EYE DISORDERS	

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Friends topped the list of source of information, followed by newspapers, family members and TV.

Table 6: Depicts the fact about how many underwent an eye checkup before getting the license.

	Group A N=17	Group B N=67	Group C N=93	Group D N=23	Total number of Drivers N=200
Eye checkup done	4 (23.53%)	9 (13.43%)	0	4 (18.18%)	17 (8.5%)
Eye checkup not done	13 (76.47%)	58 (86.57%)	93 (100%)	19 (82.60%)	183 (91.5%)
Table 6: EYE CHECKUP BEFORE GETTING LICENSE					

Only 8.5% had undergone eye checkup prior to getting license – this is a serious matter of concern.

Table 7: Highlights the awareness about routine eye checkup after the age of 40.

Routine Eye check necessary after the age of 40 years	162 (81%)
Routine Eye checkup is not necessary after the age of 40 years	38 (19%)
Table 7: NECESSITY OF EYE CHECKUP AFTER 40 YEARS OF AGE	

It is encouraging to know that 81% were aware of the need of routine eye checkup after the age of 40.

DISCUSSION: This study was undertaken to assess the awareness of visual problems and importance of eye checkup amongst 200 truck and bus drivers. It was found that all the drivers held a valid driving license but only 17 (8.5%) had undergone eye checkup prior to getting license. 152 (76%) had never visited an eye specialist in their lifetime while 34 (17%) had paid just a single visit to eye specialist. None of them had a regular eye checkup. This indicates apathy of drivers towards visual health. RTO should form legal standard norms for mandatory eye checkup before issuing or renewing license. According to study conducted in Nigeria¹ on visual functions of commercial drivers in relation to road accidents, poor visual acuity is strongly associated with road traffic accidents. In their study 84.5% did not have their eyes tested at first licensing and 92.7% did not have testing at least once during renewals. In the UK, the DVLA – Driver and Vehicle Licensing Authority has laid down the mandatory minimum level for driving and driving with uncorrected defective eyesight is an offence.² According to International Council of Ophthalmology³ the visual examination and proper treatment should be mandatory to them and should be permitted to drive only if vision improved after treatment.

186 (93%) drivers in the study group had heard about refractive error and all of them knew that spectacles can solve the problem. 108 (54%) had heard about cataract and 85 (42.5%) knew that

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surgery is the only treatment for cataract. In a population based epidemiological study conducted in Andhra Pradesh, India, 73.1% subjects were aware of cataract and 82.8% were aware that treatment for cataract was surgery.⁴ In our study, 13.5% knew about glaucoma, out of this 44.44% knew that vision loss cannot be restored. KAP survey published in 2005⁵ showed that 90% of all adults heard of glaucoma and can cause permanent vision loss. Only 7.5% of these drivers had heard about retinal and macular lesions. 6% of them knew what corneal lesions mean. This level of ignorance was quite expected. It was interesting to know that most of them (81%) opined that routine eye checkup is necessary after the age of 40 years. However 76% of the respondents had never visited an eye specialist whereas 17% had just a single visit and no one had gone for regular eye checkup. Media is still lacking as a major source of information in spreading awareness as most of the drivers got information from friends (60%).

CONCLUSION: Diminished vision or visual problems in drivers is a serious issue not only for the drivers themselves but it also puts the life of several civilians at stake. It is dangerous to drive with visual problems. The results of the present study call for the need of some legal measures as well as spreading awareness about the importance of vision among drivers. Optimum use of media is required for this. The importance of regular eye testing should be imbibed into the minds of drivers. Also, the licensing authority has to take stringent steps in making eye checkup mandatory before issuing or renewing the driving license.

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Date of Submission: 06/12/2014.
Date of Peer Review: 08/12/2014.
Date of Acceptance: 18/12/2014.
Date of Publishing: 26/12/2014.