Research

Knowledge and Attitude of Commercial Drivers in Benin City towards Utilization of Eye Care Services

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Abstract

Background: An excellent vision is crucial in driving and many driving related injuries and fatalities have been associated with visual problems especially for commercial drivers. Visual efficiency plays an important role during driving. This study determined the knowledge and attitude of commercial drivers in Benin towards utilization of eye care services.

Method: This was a cross sectional study conducted among 100 commercial drivers in Benin City metropolis. Data was collected using an interviewer administered questionnaire, among commercial drivers from 3 major parks in Benin City. Data was analyzed using SPSS version 22. Descriptive and inferential statistics was used to analyze the data. Statistical significance was set at $p < 0.05$.

Results: The results revealed that majority of commercial drivers in Benin city had knowledge of which an eye care provider is (60%), as well as knowing the eye care providers closest to them. However, 75% of them do not see it necessary to utilize the eye care services. Results of this study will help eye care professionals to better advise commercial drivers, concerning their eye health.

Conclusion: Findings revealed that commercial drivers had a good knowledge of whom eye care providers are but a poor level of utilization of eye care services that they provide ($P< 0.05$). The factors affecting the poor utilization of eye care services was not statistically significant.

Keywords: knowledge, attitude, commercial drivers, utilization of eye care services

Introduction

The eyes are the organs of vision. An excellent vision is the most important source of information during driving.[1] Some studies have investigated the connection between vision and driving as well as the impact of vision impairment on driving,[2-5] opined that poor visual acuity is strongly associated with Road Traffic Accidents (RTA) amongst Nigerian commercial drivers as opposed to visual field defect, abnormal color vision and stereopsis. A significant proportion of visual impairment was due to uncorrected refractive errors.[6] According to Madden *et al.,* (2002),[7] eye health care is an indispensable factor in a community and its integration into the community reduces the prevalence of oculo-visual problems.

Demographic, personal, social and cultural factors may influence or act as barriers to eye care service utilization.[8] In a study on the access to and utilization of eye care services in Ghana and Nigeria respectively, it was found that access to and utilization of eye care services were grossly inadequate.[9,10] It was concluded that access to and utilization of eye care services in Ghana were grossly inadequate.[9] A significant proportion (75%) of adults in the study area reported poor utilization of eye care services. Blindness was found to be the most important determinant of utilization of eye care services.[10] Visual impairment usually results in poor eye care utilization and poor eye care knowledge. This was evident in a study conducted by Okafor, et al., (2020),[11] which revealed visual impairment in one-tenth of the total participants. This therefore necessitated this study.

Method

Research Design: This is a cross-sectional survey.

Sampling Technique: Random sampling technique was used for this study.

Sampling Area: This was conducted in three major parks (UNIBEN Shuttle Park, Central Park, Ring Road and New Benin park) in Benin City, Edo State.

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Study Population: The participants included only commercial drivers in selected motor parks in Benin City, Edo State.

Sample Size Determination
This was calculated using Fisher's formula for a Cross Sectional study.[18]

$n = Z^2 P(1-P)/d^2$

Where:
n= the desired population size
Z= the standard statistics for a level of confidence interval 95% (1.96)
P= the proportion of the target population based on previous study, which equals 0.05 (Adofo *et al.,* 2011)[6]
q=1-p=1-0.05=0.95
d=0.05/level of statistical significance.
Allowing for 10% non-response,
72.99 x 0.1 = 7.29
Total Sample Size = 72.99 + 7.29 = 80.28.
One hundred (100) commercial drivers were recruited for this study.

Study Duration: This study was carried out for a period of 2 months within the months of September to November in the year 2022.

***Study Materials*:** An interviewer administered questionnaire.

Inclusion Criteria: Commercial drivers in Benin City who gave their consent to participate in this study. Non-commercial drivers and drivers outside the study area were excluded from the study.

Ethical Consideration: Ethical approval was obtained from the Ethical Committee of the Department of Optometry, University of Benin. Informed consent was obtained from the study participants after thorough explanation of the purpose of the study to them. The study was conducted in accordance with the tenets of the declaration of Helsinki.

Method of Data collection: Data collection was done with the assistance of research assistants who were trained on the objectives of the research as well as on the administration of questionnaires. One hundred well-questionnaires were distributed to the commercial drivers in the study area.

Method of Data Analysis: Data collected was analyzed using the statistical package for social sciences (SPSS) version 22.0. Descriptive statistics of variables was presented as frequency distribution, tables and percentages. The level of significance was set at $P< 0.05$.

Results

Table 1. Socio-demographic characteristics of study participants (n = 100)

Age Group	Frequency /%
20-29	17
30-39	35
40-49	20
50-59	19
60 and above	9
Educational Level	
None	12
Primary	33
Secondary	49
Tertiary	6

Table 1: The age of the respondents ranged from 20 to 69 with the mean age of 37 ± 11.40. Majority of the respondents were within the 30-39 age groups. The respondents were all males. Majority of them (33) had the primary level of education, while only six (6) had tertiary education.

Table 2: Distribution of participants based on eye complaints within the past 5years (n = 100)

Variable	Frequency	Percent (%)
Eye Complaints		
Yes	45	45.0
No	55	55.0
Visitation to eye clinic for complaint		
Yes	60	60.0
No	40	40.0
Availability of eye care professional		
Yes	60	60.0
No	40	40.0
Knowledge on closest eye care center		
Yes	80	80.0
No	20	20.0
Knowledge on systemic diseases and alcohol on eyes		
Yes	80	80.0
No	20	20.0
Knowledge on routine eye examination that can detect systemic diseases		
Yes	75	75.0
No	25	25.0
Knowledge of eye condition or diseases		

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Variable	Frequency	Percent (%)
Yes	80	80.0
No	20	20.0
Utilization of eye care service		
Yes	25	25.0
No	75	75.0

Table 2 shows the distribution of participants based on eye complaints within the past 5years. The result revealed that 45% of the participants had eye complaints while 55% had no complaint with their eyes. Majority of the participants that had eye complaint visited an eye clinic (60%), have an eye care provider in their area (60%), had knowledge of closest eye care center (80%). The result also revealed that majority of the participants had prior knowledge on systemic diseases and alcohol affecting the eyes (80%) as well as had knowledge of routine eye examination that can detect systemic diseases (75%) and prior knowledge of eye conditions (80%) while only few uses eye care service (25%).

Table 3: Multiple Regression showing the factors affecting eye care utilization among commercial drivers

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.823	.456		1.806	.075
Age of participants	.007	.003	.188	2.155	.034*
Gender of participants	-.603	.118	-.456	-5.125	.000*
Visitation to eye clinic for the past 5years	.306	.087	.366	3.538	.001*
Routine eye examination that can detect systemic diseases	.163	.076	.175	2.147	.035*
Routine checkup prevents avoidable blindness and low vision	.209	.077	.209	2.705	.008*
Did you use glasses	-.003	.086	-.003	-.034	.973
Stigmatization by other drivers, when going for an eye test	-.021	.105	-.016	-.200	.842
Closest eye care center	.314	.074	.314	4.254	.000*
Eye care provider the participants know	-.013	.052	-.018	-.260	.796

Dependent Variable: Eye Care Utilization, Significant at 5%, $R^2 = 0.68$

Table 3 shows the factors affecting eye care utilization among commercial drivers using multiple regression model ($r^2 = 0.68$). This explains that 68% of the factors significantly affected eye care utilization among the commercial drivers

Discussion

The knowledge about eye care providers among the drivers sampled revealed that majority of the drivers knew who an eye care provider is (60%), while 40% had no idea. This indicates that they had visited or had plans to visiting an eye care provider resulting from an eye condition/problem. This is similar to the study by Adewole *et al.* (2021)[12] on the requirement for driving and perceived barriers to accessing eye care services. They found that majority of the participants under evaluation knew who an eye care provider was, while few did not. This study revealed knowledge of most participants concerning eye care centre closest to them (80%). This implies that the commercial drivers can easily have access to eye care center in case they have an eye condition, which is a privilege for them. This is in line with a similar study by where they emphasized on the need to have access to eye care services in order to detect early diseases affecting the eyes for appropriate treatment.[13]

Investigations on the Knowledge of untreated eye conditions from this study revealed that majority of the participants had knowledge of untreated eye leading to reduced vision (80%), while few of the participants had no knowledge of untreated eye leading to vision loss (20%). This implies that commercial drivers in Benin had prior knowledge of the effect of untreated eye conditions, and the effect of environmental factors like smoking and dusty environment on the eyes. This result conforms to a study[14] on Perception of risk and eye screening behavior among residents of Ahokobi, Ghana. They emphasized that participants had knowledge of untreated eyes leading to eye diseases such as glaucoma, cataract etc.

The Knowledge of routine eye check from this study revealed that majority of the participants had knowledge that a routine check could prevent blindness and vision loss in the long run (75%). This result agrees with a study on eye care practices among commercial Drivers in a developing country.[15] The result from their findings revealed that 75.8% of the commercial drivers had clear knowledge on eye care practices which includes routine checkup.

The utilization of eye care services revealed that majority of the participants do not use eye care service (75%), and the few participants that use eye care service had used it for less than a year (80%). This indicates that the drivers do not really see the need of using an eye care service. This could be due to ignorance, illiteracy, or poverty among the drivers. This result conforms to the study of Adepoju (2019),[16] where he stated that visitation for eye treatment has been neglected because of close relationship with poverty, illiteracy, and lesser access to eye care service.

In its entirety, findings from this study indicates that eye care utilization are influenced by visitation to eye clinic for the past 5 years, routine eye examination that can detect systemic diseases there by preventing avoidable blindness and proximity to eye care center. There exists a significant relationship with utilization of eye care services ($P < 0.05$). This result is in line with a on barriers to uptake of eye care services amongst commercial truck-driver in North India.[17] Their results showed that the factors influencing drivers from using eye care services are the driver's age, access to eye care service, closeness to eye care center, and illiteracy.

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Limitations of the study: The low level of literacy among some of the commercial drivers was a limitation in responding to the questionnaires.

Significance of the study: This study accessed the level of awareness of commercial drivers towards the utilization of eye care services which could form a framework for policies towards eye care delivery services amongst commercial drivers.

Conclusion

This study revealed that commercial drivers had a good knowledge of whom eye care providers are but a poor level of utilization of eye care services that they provide ($p< 0.05$). The factors affecting the poor utilization of eye care services was not statistically significant.

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