

NOCTURNAL TRAVEL IN NIGERIA, ISSUES AND CONSEQUENCES

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Abstract

This study sought to identify the issues and consequences of nocturnal travel in Nigeria. A questionnaire was designed to obtain information on the truth and consequences of nocturnal travel using Lagos state as a case study. Data gathered from instrument were collected and analyzed using chi-square. It was observed that the major consequence of nocturnal travel is armed robber's attack. The results showed that there was no significant difference between the responses of the participants on the term "nocturnal travel has no consequence on the accident occurrence". The results also showed that there was significant difference between the responses of the participants on the term "nocturnal travel has no consequence on the accident occurrence". Based on the result of this study, it was recommended that the Road Safety Corps in the country should work more effectively in order to stop nocturnal travel, for the benefit of the road users and operators as well; and that the government should repair and rehabilitate all the dilapidated roads in the country which had virtually become death-traps.

Keywords: Nocturnal travel, Road Safety Corps, Transport, Bandits, Business men.

Introduction

The concept of night travelling known as nocturnal travel came into existence from the pillar on which all economic activities strongly stands “transportation”. Transport is the movement or conveyance of people, goods, ideas and information from one place to another. It is a very important system in a society, since not all areas are equally endowed or gifted by nature; hence there is need for interaction through transport. It is very important that passengers and goods get to their destinations safely and without damage. Safe arrival is the product of the transport industry, just as the product of a tailor is a well-fitting dress or suit, for example.

Adeniji (1985) defined transport as a measure of relationship between areas. Adeniji (1985) also stated that it is the essential element in the function of a society which influences the creation of essential economic activities, such as production of goods and services, residences, leisure and social facilities.

Onakomaiya (1980) defined transport as the movement of people, goods and facilities. Transport influences the quality of life in the society, as there is hardly any aspect of development which does not involve transport. The pivotal role of transport in the socio economic and political development of nations all over the world is well recognized. Transport has been likened to the human circulatory system, whose healthy functioning is a necessary condition for the sustenance of life (Ndikom, 2006). The movement of these goods has relatively affected supply and demand factors, with regard to the economic value of such goods. In like manner, people might not be relatively important or needful at their place of origin, but with movement or change of environment, in search of some economic empowerment, their services might be needed at some other places, this means that the act of moving has attracted economic value and relative importance, as the society benefits from their services at the end of the day (Ndikom, 2006). Transport represents one of the most important human activities worldwide. One of the inescapable basic needs of modern societies is transport which many scholars

have identified as the arteries and lifelines through which national economic systems function. It is in this respect that the 1993 National transport policy identifies “transport as one of the key elements in Nigeria’s social and economic development” adding that the transport sector, which comprises distinct modes and activities as well as numerous interrelations with other sectors of the economy, is extremely complex, (FMT, 1993). This complexity of the transport sector is further accentuated when viewed in the context of a rapidly growing (in population) and urbanizing country as Nigeria.

Nocturnal travel is a journey made or done in the night when visibility is not alright. Having critically examined the concept of nocturnal travel, there are diverse set of problems associated with such a transportation operational mode. However, some of this problem includes;

- Armed robber attack.
- Sudden accident as a result of dosing of drivers.
- Development of mechanical fault by motor vehicle which exposes the passengers to confusion.
- Inflation of transportation fare.
- Forgetfulness of the materials used as indicator during breakdown which will result to accident for other vehicles plying the road.
- Raping (for females).

Purpose of the Study

The general objective of this research is to investigate the truth and consequences of nocturnal travel in Nigeria. The specific objectives of this study are:

- i. to investigate the reality of the term night travelling.
- ii. to investigate the consequences or negative effect of night travel.
- iii. to investigate the reasons behind the adoption of night operational mode of transportation service by passengers.

Three research questions were generated as follow.

- i. Is night operation of transportation service a reality?
- ii. What are the negative effects of night travelling?
- iii. Why do passengers adopt the use of night operational mode of transportation system?

Research Hypotheses

H0: There is no significant difference among the responses of the participants on the term “nocturnal travel has no consequence on the accident occurrence”.

H1: There is a significant difference among the responses of the participants on the term “nocturnal travel has no consequence on the accident occurrence”.

Review of Related Literature

Drowsiness and sleeping at the wheel are now identified as the reasons behind fatal crash and highway accidents caused by occupational drivers. For many years, fatigue has been associated to risk of accidents but the causes of this symptom were unclear. Nocturnal driving is associated to accidents but few reports differentiated fatigue from sleepiness. Sleepiness at the wheel, sleep restriction and nocturnal driving has been incriminated in 20% of traffic accident. Sleep disorders among occupational drivers need to be systematically investigated. Researchers and engineers have long been aware that driving is a difficult and hazardous task, describing the driver as “an outdated human with stone age characteristics and performance who is controlling a fast, heavy machine in an environment packed with unnatural, artificial signs and signals” (Rumar, 1981).

The Concept of Nocturnal Travel

Nighttime driving is associated with a higher probability of crash involvement due to factors such as reduced visibility, fatigue, and higher incidence of alcohol use. Driving statistics reveal that there are 10.4 fatal involvements, 3.5 injury involvements, and 9.1 crash involvements per 100 million miles at night, as opposed to only 2.2

fatal involvements, 1.9 injury involvements, and 5.9 crash involvements during the day. The visibility of road signs also decreases significantly at night, with the problem being more pronounced for older drivers. At night, glare can pose a problem for drivers of all ages. Any system that improves visibility of signs at night and allows drivers greater reaction times will have a tremendous impact on safety at night. Night time acuity has been found to be a problem for the older driver. Even a healthy 20 year old with 20/20 vision will have, in effect, 20/40 vision at night. The visual acuity of an older driver, corrected to 20/20 with glasses, will drop to 20/70 or 20/80 in the dark. Furthermore, when adults reach the age of 60, they require three times as much light on an object to see it clearly as they did at 20 years (Pitts, 1982).

Evans et al., (1985) found that younger drivers were capable of discriminating signs at greater distances than older drivers despite equivalent visual acuity. Contrast sensitivity was found to be more closely related to a driver's ability to discriminate highway signs than visual acuity. The study of the 1990 Nationwide Personal Transportation Survey (NPTS) data, (Massie et.al., 1995), discovered that persons over 74 years of age were 3.8 times as likely to be involved in a fatal crash when compared with drivers of all ages. Furthermore, the same group of drivers was found to be twice as likely to be involved in a crash resulting in injury and twice as likely to be involved in any crash. It has been found that the accidents involving older drivers most frequently involve failure to read signs, yield the right of way, or turn properly (Huston and Janke, 1986; Planek, 1973). Sivak et al. (1981) found that older drivers had a legibility distance only 65 to 77 percent of younger drivers at night. One of the basic driver tasks is to follow the road. In daytime driving, when the visibility of the road in clear weather is unobstructed, this is normally not a problem. However, when driving at night on dark roads with low beams, it is often quite difficult to see the direction the road is taking. Indeed, drivers state that poor road guidance is their main problem in night driving.

Consequently, driver predictions are likely to be more accurate in clear daytime driving than they are in nighttime driving or in bad visibility conditions. In night traffic the available information

sources are seriously reduced both in quantity and in quality, both ahead and along the sides. Rockwell, Ernst and Rulon (1970), showed that in night driving the fixation pattern moves much closer to the vehicle and slightly to the right hand side. Anderson and Nilsson (1978), have shown that the risk of a single-vehicle accident (running off the road) in daytime is independent of the geometric standard of the road (expressed as average sight distance). However, in night driving, the single-vehicle accident risk increases proportionately with the decrease of average geometric sight distance. Detection and recognition of other road users were critical problems in night time driving. Road guidance at night is drastically worse than road guidance during the day. Rain and wet roads further increase the nighttime difficulties. Driving on wet roads at night is one of the most difficult and risky driving situation.

The Concept of Accident in Relation to Nocturnal Travel
In 1995, a study by the National Transportation Safety Board on fatal accidents in professional trucks drivers showed that the mean duration of sleep among drivers was below 6hours of sleep in the last 24hours before the accident. Sleepiness at the wheel increased the risk of causing a traffic accident by 8.2 fold. Sleeping less than 5hours in the 24hours before the accident and driving between 2a.m. and 5 a.m. were also significant risk factors for accidents. Shift work, multiple jobs or extensive duration of work is associated with sleep related accidents. The passenger vehicle occupant fatality rate at nighttime is about three times higher than the daytime rate. In 2005, among the fatally injured passenger vehicle occupants, the proportion of unrestrained occupants was much higher during nighttime than daytime. Also during nighttime, among passenger vehicle occupants killed in crashes, alcohol involvement, speeding, and single vehicle crash fatalities were higher, compared to daytime. Out of the 43,443 people who died on the Nation's highways in 2005, nearly 73 percent were occupants of passenger vehicles. Traffic Safety Administration's Fatality Analysis Reporting System (FARS), which annually collects crash statistics from 50 States. This research note looks at the various patterns among passenger vehicle occupant fatalities based on time of day.

Research has found that using lap/shoulder seat belts reduces the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate to critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate to critical injury by 65 percent. In Nigeria almost half (49%) of passenger vehicle occupant fatalities occur during nighttime. This, coupled with the fact that approximately 25 percent of travel occurs during hours of darkness, the fatality rate per vehicle mile of travel is about three times higher at night than during the day. Among the 31,415 passenger vehicle occupants killed in 2005, 15,878 people (nearly 51%) were killed in crashes during daytime, 15,294 people (nearly 49%) were killed in crashes during night time, and the rest (less than 1 percent) were killed in crashes at unknown times. In contrast the proportion of unrestrained fatally injured passenger vehicle occupants during daytime crashes was just under 50 percent (47%). There are much higher (3.3 times) alcohol involvement in crashes during nighttime due to the fact that most people may be returning from a party.

Classification of Daytime and Nighttime

Daytime: 6 a.m. to 5:59 p.m.

Nighttime: 6 p.m. to 5:59 a.m.

The reason for higher fatality rates at night could be due to both lower seat belt use and other major factors in nighttime crashes, (such as higher alcohol involvement, high speed rate, fatigue and so on), drivers during nighttime travel tend to take more risks. However, it is very important to use seat belts while riding in vehicles no matter what time of the day, since seat belts are one of the best defenses against injury for vehicle occupants in crashes.

Dangers of Driving at Night

Nighttime driving only accounts for 25% of all driving and there is usually significantly less traffic during these hours. However, driving at night is more of a challenge than many people think. It is also more dangerous:

- Traffic death rates are three times greater at night than during the day
- 55% of all driving fatalities occur after dark
- 62% of pedestrian fatalities occur at night

Despite these figures, many of us are not aware of the unique hazards or special precautions associated with night driving.

Why is Night Driving So Dangerous?

There are several factors that increase the risk of a traffic accident at night:

- **Poor visibility:** Visibility is obviously much more limited during night driving. We become completely dependent on artificial sources of light to guide us. Headlights allow us to see a small portion of the road ahead, but our vision is not as sharp. Darkness also makes it more difficult to gauge distances and movement.
- **Fatigue:** Exhaustion dulls the concentration of drivers and slows their reaction time. Drivers are least likely to be alert between 3:00 AM and 7:00 AM. Fatigue is also likely to set in at a driver's normal bedtime.
- **Alcohol:** Despite aggressive anti-drinking and driving programs, alcohol remains a significant factor in nighttime crashes. More fatal crashes take place on weekend nights than at any other time of the week because most people get drunk in parties attended.

Driver Fatigue and Drowsiness in Nocturnal Driving

The term “drowsiness” is used here to refer to the state of reduced alertness, usually accompanied by performance and psycho physiological changes, that may result in loss of alertness or being “asleep at the wheel”.

The term “driver fatigue” is also widely used to describe this condition, especially on Police Accident Reports and in accident data files especially at night.

However, Stem et al., (1994), Tepas and Paley (1992), and others have correctly pointed out that drowsiness is distinct from physical fatigue and that “drowsiness” rather than “fatigue” should be the principal concern in relation to driving. Another important distinction is that between “alertness” and “attention”. Driver alertness is presumed to be necessary but not sufficient for an appropriate focus on external events i.e., attention or vigilance. Thus, drivers may be alert (i.e., awake) but still inattentive. In the context of driving, “inattentive” means that a driver has failed to perceive a visible crash threat due to “mind wandering,” distraction (internal or external to the vehicle), or “improper lookout” i.e., “looked but didn’t see” (Treat, et al, 1979). The driver information processing error of inattention is widely regarded to be the most frequent principal causal factor in traffic crashes, greatly surpassing loss of alertness (Treat et al, 1979). The present distinction between “alertness” and attention” is consistent with past research in this area (Davies and Tune, 1969, Najm et al, 1994).

The Role of Sleep as it Affects Nocturnal Driving

“Sleep is a normal, easily reversible, recurrent, and spontaneous state of decreased and less efficient responsiveness to external stimulations”, (Goetz, 1991). Research has shown that a number of basic states of sleep exist. These states are known as waking, REM (rapid eye movement), and NREM (non-rapid eye movement). REM sleep and NREM sleep are controlled by a separate group of brain cells, or neurons, located in the brain stem. The brain stem is the hindmost part of the brain that regulates basic survival functions (Pollak, 1996). Specifically, the control of NREM sleep likely resides in widely ranging circuits from the area around the solitary track in the medulla, through the dorsal raphe, and in the basal forebrain area (Hauri, 1992). The responsible groups of brain cells or neurons (all located in the brain stem area) communicate with each other with chemical messengers known as serotonin and nor epinephrine (Pollak, 1996).

NREM is further characterized as having four distinctive stages. Human’s progress through these stages in a predetermined order or rhythm. Stage 1 of NREM can be thought of as the boundary between

wakefulness and sleep, while stage 2 is the first (lightest) bonfire level of sleep. Stages 3 and 4 represent the most remote levels of responsiveness. A person in stage 4 sleep is very hard to arouse by any outside stimuli (Coren, 1996). Specific stages of sleep have been defined through the “presence of certain electroencephalograms (EEG) patterns that occur during specific behavior sleep periods that is affecting drivers especially during the rush and peak hours “ (Hauri, 1992). The typical sleep pattern is represented by the following model: Conscious—NREM Stage 1, 2, 3, 4, 3, 2, REM, NREM 2, 3, 4, 3, 2, REM, etc., (Hauri, 1992). The pattern takes approximately 70 to 90 minutes to be completed and is repeated throughout the night (Goetz, 1991). Dreaming occurs in REM, and it is the easiest state of sleep from which to be aroused. Most sleep studies are performed in stage 2 (NREM) sleep because we spend 50 percent of our time in light sleep. Stage 2 sleeps is determined by a mixed voltage pattern of EEG, “Stage 2 combines spindles and K complexes with a stage 1 background” (Hauri, 1992). Sleep spindles are naturally occurring and are the brain’s electrical sleep signature. They are further defined as spindle-shaped bursts of 11.5- to 15.5-Hz waves lasting 0.5 to 1.5 seconds. K-complexes or sharp biphasic waves lasting 0.5 seconds also occur naturally or can be induced by external stimulation.

Sleep is normally defined as a state in which there is a limited amount of alpha rhythm. Alpha rhythm, or conscious state, is an EEG rhythm with a frequency of 8 to 13 Hz in human adults. Although this rhythm is blocked when the eyes are open, it is very discernible when a person is conscious with their eyes closed. Alpha intrusions are considered brief superimpositions of EEG alpha activity (arousals) during a stage of sleep (Pegram, 1997). Drug abuse can cause an inordinate amount of sleep spindles or alpha intrusions during NREM sleep (Russell Laney, 1996).

There are a number of factors that influence the quality of a person’s sleep. Age tends to limit the number of hours and, consequently, the completed sleep cycles or patterns humans enjoy. The average senior adult sleeps six hours a day while an infant sleeps fourteen hours (Howard, 1994). Many drugs (i.e., phenobarbital, sec barbital, and so on) reduce the amount of time

spent in REM sleep while other drugs (i.e., barbiturates, amphetamines, and narcotics) have been shown to produce withdrawal symptoms characterized by high percentages of REM sleep (Goetz, 1991). Periods of alpha intrusions are commonly observed in NREM sleep of drug abusers (Russell Laney, 1996). The data clearly supports the position that drugs can have a dramatic effect on sleep apnea. Night terrors, narcolepsy, hypersomnia, somniloquy (sleep talking), somnambulism (sleepwalking), enuresis (bed wetting), bruxism (tooth grinding), and snoring are all disorders that affect the quality and patterns of sleep. Considerable attention is given to these sleep barriers in current physical as well as mental therapy plans (Goetz, 1991). Drivers tend to sleep while driving at night due to the rigorous activities of the day. Sleep is the major causes of accident most especially when driving at night.

Method

The research design adopted in this work is descriptive survey. This is because it is mostly used to seek opinions of individuals as regard a problem under study in which the respondent will be providing the needed responses as a solution to the problem under study. The population of the study was all available drivers and passengers in four motor parks in Lagos State Ojota, Agric, Ketu, and Ikorodu. Twenty-five 25 participants were selected in each location through the use of random sampling techniques. This means that 100 participants were selected for this study. This research adopted the use of frequency count and percentage for the analysis of bio data and responses of the respondents. Furthermore, inferential statistics, chi-square method of data analysis was used to test whether to reject or not to reject the null hypothesis.

Presentation of Results and Discussion of Findings

The presentation is in two major sections: Section A of the questionnaire deals with bio-data while section B of the questionnaire was used in testing formulated hypothesis. The respondents' responses were subjected to statistical analysis using the chi-square. A total number of one hundred (100) questionnaires,

each having fifteen items were printed and administered by the researcher.

Analysis on Demographic Data

Table 1: Inter State park

Parameter	Group	N	%
Inter-State Motor Park	Ojota	25	25
	Ketu	25	25
	Ikorodu	25	25
	Agric	25	25
Sex	Male	42	42
	Female	58	58
Status	Passengers	75	75
	Drivers	25	25

Table 1 shows that equal respondents were taken from each of the inter-state motor park. But by gender there were more female than male. Also, there were more passengers in the sample than the drivers. This was to obtain more credible information on road accident.

Issues on Night Travelling

Table 2: Issues on Night Travelling

Issues on Night Travelling	SA	A	double-sided	D	SD
Night travelling is a reality	60	30	02	04	04
Night travelling is enjoyable	30	20	03	30	12
It is safe to travel at night	20	20	05	40	15
People prefer travelling at night	20	30	07	13	30
Night travelling is exposed to accident	20	20	01	03	04

Robbery occur frequently at night	62	12	02	11	13
Night travelling is very dangerous	50	20	04	16	10
Transport fare is reduced at night	10	05	02	50	33
There is free flow of traffic at night	50	21	04	16	09
Some travel at night to cover up their movements	26	18	06	26	24
Some prefer night travelling because they are busy during the day	15	07	00	50	25
Atmosphere is cool and silent at night	33	19	02	20	26

1. The above result shows that most of the respondents (60 percent of the respondents) strongly agreed, 30 percent agreed, 2 percent undecided, 4 percent disagreed, and while 4 percent strongly disagreed. Therefore 90% affirm that night travelling in a reality.
2. On comfort 30 percent of the respondents strongly agreed, 20 percent agreed, 3 percent undecided, 30 percent disagreed, and while 17 percent strongly disagreed on comfortability. Therefore there is equal division on issue of comfort.
3. On matter of safety 20 percent of the respondents strongly agreed, 20 percent agreed, 5percent of the respondents ticked undecided, 40 percent disagreed while 15% of the respondents strongly disagreed on safety. Again, there was equal division.
4. On preference 20 percent were strongly in support 30 percent support (agreed), 7 percent were unable to decide (undecided), 13 percent rejected and 30 percent strongly (rejected) the idea of preference. Again, participants were evenly divided on this issue.
5. On vulnerability to accident 70percent of the respondents strongly agreed, 20 percent agreed, one percent undecided, 7 percent disagreed, while 2 percent strongly disagreed. Therefore participants were unanimous on this matter of vulnerability to accident during night travelling.

6. On robbery at night journeys 62 percent of the respondents strongly agreed, 12 percent agreed, 2 percent undecided, 11 percent disagreed, while 13 percent strongly disagreed. More than 70% noted that robbery and accident frequently occur during night journey.
7. On hazard 50 percent were strongly in support of 20 percent support 4 percent were unable to decide 16 percent rejected 10 percent strongly rejected. On the whole 70% said night traveling is dangerous.
8. On cheap fare 10 percent were strongly in support of 5 percent agreed 2 percent were unable to decide 50 percent rejected 33 percent strongly disagree. Therefore people do not travel in the night because of cheap fare. Indeed fare is not cheaper in the night than in the day.
9. On free flow 50 percent were strongly in support of 21 percent support 4 percent were unable to decide 16 percent rejected 9 percent strongly rejected. Participants were more in agreement that there is free flow of traffic in the night than in the day.
10. On secrecy 26 percent of the respondents strongly agreed, 18 percent agreed with 6 percent of the respondents ticked undecided and 26 percent of the respondents disagreed with the view. Here participants were also evenly divided on this issue.
11. On busy schedule of duty 15 percent of the respondents strongly agreed, 7 percent of the respondents agreed on one ticked undecided 50 percent of the respondents disagreed while 28 percent of the respondents strongly disagreed. Hence, busy scheduled may not explain travelling in the night.
12. On cool atmosphere 33 percent of the respondents strongly agreed, 19 percent of the respondents agreed, 2 percent of the respondents ticked undecided, 20 percent of the respondents disagreed while 26 percent of the respondents strongly disagreed. On this issue, participants were almost evenly divided.

Hypothesis 1: There is no significant difference among the participants on the term “nocturnal travel has no relationship on the accident occurrence”.

Table 3(a): Responses based on location

Response	Agric	Ojota	Ketu	Ikorodu	Total
SA	18	20	19	11	68
A	5	3	3	5	16
SD	2	1	3	0	6
D	0	0	0	0	0
Total	28	26	26	20	100

Table 3(b): Chi-square of responses

Location	O	E	O-E	(O-E) ²	(O-E) ² E
AGRIC	28	25	3	9	0.36
OJOTA	26	25	1	1	0.04
KETU	26	25	1	1	0.04
IKORODU	20	25	-5	25	1
TOTAL	100	100		36	1.44

The value of at 0.05 alpha and df 3 = 7.815

Decision

The calculated chi-square value of 7.815 is greater than the table 1.44. Hence, the null hypothesis (Ho) is rejected, i.e. there is a significant differences the responses of the participants on the view that nocturnal travel has no relationship on accident occurrence” and the alternative hypothesis (Hi) is accepted i.e. there is significant differences between the responses of the participants on the term “nocturnal travel has no consequence on the accident occurrence”.

Summary of the Findings

1. Night travelling is prevalent in Nigeria, particularly by commercial transporters.
2. Night travelling is not all that enjoyable
3. Night travelling is not safer than day travelling
4. Night travelling is highly exposed to accident
5. Robbery occurs more in the night travelling than day travelling.
6. Night travelling is not cheaper than day travelling.
7. There is a high positive relationship between night travelling and occurrence of accident

Recommendations

Based on the findings of the result of the study, the following recommendations are made.

- 1) The people of the country should reduce nocturnal travel in the country.
- 2) The Road Safety Corps in the country should work more effectively in order to stop nocturnal travel, for the benefit of the users and operators as well.
- 3) The government should repair and rehabilitate all the dilapidated roads in the country which had virtually become death-traps.
- 4) The government should deploy enough security operatives, including well-armed mobile police men, soldiers, and Federal Road Safety Commission (FRSC) personnel to man the highways at night, to check the activities of highway robbers.
- 5) Public enlightenment should be made for people to know the dangers involved in night travelling.
- 6) Night travel should be made safer and the Federal government should properly equip the FRSC to enable it effect safety on the roads at night.
- 7) Drivers are to make frequent stops for light snacks and exercise. If they are too tired to drive, they should get some rest before proceeding.

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