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Morbidity Pattern of Commercial Long Distance Bus Drivers in Benin City, Edo State, Nigeria

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Abstract

Introduction: Long distance commercial driving as an occupation exposes drivers to various disease conditions. Commercial driving is a hazardous occupation as long hours are spent driving on risky highways. This study seeks to determine the morbidity pattern among commercial long distance drivers, and factors affecting it.

Materials and methods: A descriptive cross sectional study design was used, and data was collected from 315 commercial long distance drivers from January to October, 2013. Respondents were recruited using systematic random sampling technique. Study instruments included structured interviewer administered questionnaires.

Results: The results showed that all respondents had a normal neurological and abdominal examinations, 9.5% had abnormal fasting blood glucose levels. A third (33.3%) were hypertensive, 29.9% were pre-hypertensive, nearly half (48.3%) were overweight, 12.7% obese, 39.0% had normal BMI obese, majority 87.6% had an abnormal waist-hip ratio. Twenty six (8.3%) said they face stress always and 40.6% stated that they face stress sometimes. Most (80.3%) revealed that their cause of stress were work related, 4.1% were due to home problems and 15.6% both work and homes issues. On diagnosed morbidity pattern and perceived health problems, 31.4% of drivers were currently being treated by a doctor at the time of the study due to illness, 12.4% were diagnosed of hypertension and heart disease, 11.7% diagnosed of peptic ulcer, 9.2% had joint pains (shoulder, elbow, wrist, hip, knee, ankle joints) , 9.2% had URTI, 5.4% impaired vision, 5.1% had diabetes, 5.1% had back pain, 1.6% had a blackout and fainting spells, 0.6% hypoglycaemic event, while 1 (0.3%) had suffered a stroke

On self reported morbidity, about three quarters of the drivers (74.6%) complained of back pain, others in the previous six months were Malaria (66.0%), headache (63.8%), Fever from other causes (52.7%). fatigue (51.7%) , cough (43.5%) , cold and catarrh (42.9%). Other health

problems mentioned were neck pain (41.9%), drunk on alcohol (24.8%), visual problems (26.0%), Hypertension (9.5%), ear ache (8.9%) , pneumonia (7.0%), haemorrhoids (5.7%) , 15 (4.8%) diabetes, penile discharge (9.2%), No respondent reported having seizures, kidney disease, hearing problem and psychiatric illness.

Conclusion:.Common morbidities affecting commercial drivers as diagnosed by a doctor include: hypertension, heart disease, peptic ulcer, joint pains, upper respiratory tract infection (URTI), back pain, diabetes, and impaired vision. Health problems based on their perception were back pain, malaria, headache, fever from other causes, fatigue, cough, cold and catarrh, neck pain, penile discharge, ear ache and visual problems.

Key Words: Morbidity pattern, long distance, commercial drivers

Introduction

Morbidity patterns of drivers reveals the various types of diseases and health conditions that can affect drivers. It demonstrates the occupational health issues surrounding the driving profession and its effects on road traffic management. The goal of assessing and monitoring drivers' fitness to drive and morbidity pattern is to control the human component of the road safety system. Fitness to drive exams include both medical and non-medical assessments of an individual's functions to guarantee that they can drive safely. Blackouts, cardiovascular disease, diabetes, musculoskeletal conditions, neurological conditions such as epilepsy, dementia, and cognitive impairment due to other causes, psychiatric conditions, substance abuse/dependency, and sleep disorders, and vision problems are among the medical conditions that may impair a driver's fitness[1,2,3,4]. The ability to drive assessment includes tests and examinations on visual assessment (visual acuity, visual field), hearing assessment, neurological (cerebrovascular accident), endocrine (diabetes mellitus), cardiovascular (hypertension), musculoskeletal (arthritis, muscle aches), alcohol & drug habit, mental state, and sleepiness scale assessment. Following a fitness evaluation, a driver might be categorized as fit to drive or unfit to drive. A qualified medical practitioner does this evaluation[1, 2] .

Long distance commercial driving as an occupation exposes drivers to various disease conditions. Commercial driving is a hazardous occupation[5,6] as long hours are spent driving on risky highways. Commercial drivers experience weariness, boredom, health issues, traffic accidents, armed robberies, and excessive drinking and drug usage[5,6,7]. The health sector is a key collaborator in this process of assessing fitness and identifying morbidity patterns. Its other responsibilities include strengthening the evidence foundation through human factors research, providing suitable occupational health prevention approaches, pre-hospital and hospital treatment and rehabilitation, advocacy, and contributing to the implementation and assessment of interventions[8, 9]. Aside from human variables, vehicular factors influence the occurrence of RTA and the subsequent morbidity and fatality. These vehicular variables are worldwide assessed through road worthiness certification, which examines many parts of a vehicle that are vital for safety. This test includes a simple visual evaluation, a road test, and computer-based testing[7,10,11,12,13,14].

Common morbidity experienced by commercial driver can include hypertension, heart disease, peptic ulcer, joint pains, upper respiratory tract infection (URTI), back discomfort, diabetes, and

poor vision are common morbidities faced by commercial drivers. Back discomfort, malaria, headache, fever from other reasons, weariness, cough, cold and catarrh, neck pain, penile discharge, ear ache, and sight issues are some of the other ailments. Over 62% of commercial long distance drivers in Nigeria suffer from low back pains, while 37% suffer parasthesias of legs or arms, 23% gluteal pains and 22% have peptic ulcer[15]. These conditions are due to long periods of driving. These morbidities can affect their concentration while driving leading to road traffic crashes and mortality thereafter.

When assessing the medical disorders that are likely to impact driving fitness, health professionals must recognize the difficulties that the driving task provides. This objective is to identify disease conditions and events that are likely to impair driving, particularly on a commercial basis. Given the numerous contributing elements in car accidents, determining the extent to which medical issues have a role is difficult. There is, however, acknowledgement that certain disorders have the potential to cause substantial impairments. These conditions are as follows [1]: Blackouts, cardiovascular illness, diabetes, musculoskeletal ailments, neurological conditions (such as epilepsy, dementia, and cognitive impairment owing to other causes), mental health issues, substance abuse/dependency, sleep disorders, and visual problems are all examples of potential complications. These variables have been scientifically demonstrated to affect a driver's fitness to drive and serve as a pattern for assessing commercial drivers' fitness to drive.

This study identifies the common health problems faced by commercial long distance drivers, thus, findings will serve as a useful tool for the design targeted health plans, programs and actions directed at the health education and enlightenment of this group. These programs can be suited to match their occupational health needs in terms of diseases they are prone to and their methods of prevention. A healthy commercial driver (road user) will impact positively on road safety. This study was done to assess morbidity pattern of commercial long distance drivers, and factors affecting it.

Methodology

Between January and October of 2013, 315 selected commercial long distance drivers in Benin City participated in a descriptive cross-sectional survey. This research was carried out in Benin City, the capital of Edo State. The City is divided into three Local Government Areas: Oredo, Egor, and Ikpoba-Okha. Benin City had a total population of one million, eighty-five thousand, six hundred and seventy-six (1,085,676) in 2006[16,17.] Benin City serves as a transit hub, with four major highways connecting the country's eastern and northern regions, as well as the western and eastern regions[18]. The Lagos-Benin express road connects Benin to the Western part of Nigeria, the Benin-Sapele highway connects Benin to the Niger-Delta region, the Benin-Asaba-Onitsha highway connects Benin to the East, and the Benin-Auchi-Okene highway connects Benin to the Northern parts of Nigeria. Commercial driving is a widespread vocation, and there are numerous commercial road transport companies in the city who transport passengers to various Nigerian states.

A systematic random sampling technique was used in selecting the respondents for this study.

Step 1: A list of registered parks was obtained from the Ministry of Transport, Edo state. All 17 registered parks with a total of 1022 drivers involved in long distance transportation were used for this study.

Step 2: Sampling interval calculation, k = N/n:

Total No of commercial drivers in Benin City (N) = 1022 = 3

Sample Size (n) 305

Step 3:Sampling Frame; A sampling frame consisted of the nominal roll of all drivers (as presented by the management of each park) involved in long distance driving in each of the registered park involved in long distance travels in Benin City.

Step 4: The first unit (driver) was selected using simple random sampling between driver 1 and driver 3 on the sampling frame. Then, using the sampling interval (k) of 3 as calculated above, every third (kth) driver on the list of drivers was recruited from each transport company until the sample size of 305 was achieved. For example, if a driver with serial number 1 was selected using

simple random sampling, the next driver was the driver with serial number 4 (1 + 3 = 4), then 7th , 10th , 13th, 16th, 19th,22nd, 25th driver and so on.

i) Weight measurement: The weights of drivers was measured in Kilogram (kg) using the electronic weighing scale with capacity of 150kg with divisions of 100g.The scale was placed on an even floor with driver standing in the centre, hands by the sides, without shoes and with light clothing. The scale was calibrated to zero reading before each weighing session by the researcher and assistants. A standard and known weight of 5kg was used to standardize the weighing scale[19, 20, 21, 22]

ii) Height measurement: Height was measured in meters (m). The respondents were required to stand barefooted with feet together and toes apart, as tall and straight as possible against the vertical rod with the head in Frankfort horizontal plane position. An improvised headpiece was lowered to rest firmly on the head, with sufficient pressure to compress the hair and the subject was instructed to take a deep breath. Readings were taken with the respondent looking ahead[19, 20, 22].

iii) Calculation of body mass index.
Body mass index (BMI) was calculated for each subject as weight in kilograms / height in meters squared. Using WHO BMI Classification given as: < 18.5 – Underweight; 18.5-24.9 - Healthy/normal weight; 25 – 29.9 - Pre-obese (Overweight); 30 – 34.9 - Obesity Class I; 35 - 39.9 - Obesity Class II; > 40 - Obesity Class III[20,21,22, 23].

iv) Blood pressure

This was done using manual mercury sphygmomanometer blood pressure monitor placed on the arm of the participant. The participant was seated quietly for at least 5 minutes in a chair with their backs supported and their arms bared and supported at heart level. The cuff is inflated until the radial pulse is obliterated, then the area over the brachial artery is auscultated while the cuff is slowly deflated. The first Korotkoff sound signals the systolic blood pressure. The diastolic blood pressure is the point where these sounds disappear. Two or more readings separated by 2 minutes were averaged. If the first two readings differed by more than 5 mm Hg, additional readings was obtained and averaged[23]. A blood pressure of > 170/ 100mmHg was regarded as abnormal and respondent unfit to drive[1, 2, 3, 4]. Blood pressure was graded using the WHO-ISH classification of hypertension[24, 25].

WHO-ISH Classification of Hypertension

Category	Systolic Blood pressure (mmHg)	Diastolic Blood pressure (mmHg)
Optimal	<120	<80
Normal	120-129	80-84
High Normal	130-139	85-89
Grade 1 HT	140-159	90-99
Grade 2 HT	160-179	100-109
Grade 3 HT	>180	>110

v) Waist Circumference

Waist circumference measurements were taken to provide additional information on overweight and obesity. Taking waist circumference measurements was done using a constant tension tape. This measurement was taken at the end of a normal expiration, with the arms relaxed at the sides, under the mid-line of the participant's armpit, at the midpoint between the lower part of the last rib and the top of the hip[19, 20, 22, 23, 26]. A measure of less than or equal to 90 cm for

men and 80 cm for women was considered normal.

vi) Hip Circumference:

This measurement was taken with the arms relaxed at the sides, at the maximum circumference over the buttocks. The measurement was taken over light clothing. For waist hip ratio (WHR) of < 0.9 for men and < 0.8 for women is considered normal[19, 20,23, 25]

vii) Neurological examination/ Locomotor examination

This included assessments of cervical spine rotation, back movement, upper limb and lower limb appearance and joint movement, romberg sign and neck movement. Findings were recorded as normal or abnormal[27].

Cervical spine was examined from behind with the driver sitting. The driver is asked to rotate his neck to the right and then to the left, then flex the neck (look down at the toes) and extend (look up at the ceiling). After which they were asked to incline the neck laterally in both directions (ear towards the shoulder). Abnormalities are noted together with any pain or limitation of movement [28, 29, 30]. The shoulder was stabilized during lateral flexion and rotation.

Back movements (thoracolumbar region) were examined by first observing the posture to observe the normal cervical lordosis, thoracic kyphosis, lumbar lordosis. This was done by asking the driver to stand with his back against the wall. Normally, the occiput, shoulder, buttocks, heels should make contact with the wall. The drivers were asked to flex (touch their toes), extend (lean backwards), lateral flex the thoracolumbar area (slide your hand down the side of your leg on both left and right sides) and laterally rotate the waist (twist at the waist, to both left and right) [28, 29, 30]. The pelvis was stabilized during the lateral rotation.

Joints were examined by inspecting for swelling, skin changes, muscle wasting or deformity. Then all range of movement of the joints was tested, the abnormal joint was compared with the normal on the other side. Movement of the joints could be limited by pain, muscle spasm, inflammation, contractures, effusion into joint space, bony out growths. The range of movements for the following joints was tested.

Shoulder joint was tested for abduction, adduction, internal rotation, external rotation, flexion and extension. Elbow joint was tested for flexion and extension only, the forearm for pronation and supination, wrist joint was examined for extension, flexion, radial deviation and ulnar deviation. Drivers were asked to use the tip of each finger on the tip of the thumb. The hip joint was tested by extension, abduction, rotation in knee flexion and rotation in knee extension. The knee joint movement was examined for flexion and extension, while the ankle joint was dorsiflexed and plantar flexed [28, 29, 30].

Romberg sign was elicited by asking drivers to maintain balance while standing with shoes off, feet together side by side, eyes closed and arms by sides, for thirty seconds. If patients fall during the test, they have a problem with proprioception.

Data collection tools were pre-tested among selected commercial long distance drivers operating in Auchi, Estako West Local Government Area of Edo State. The location is about 200km from Benin City. Collected quantitative data was entered and analyzed using Statistical Package for Scientific Solution (SPSS) version 20. Descriptive and inferential analysis was carried out in line with the objectives of the study. Tables, charts, proportions and percentages were used to describe the findings.

Ethical approval was obtained from the ethical committee of the University of Benin Teaching Hospital. Permission was obtained from the Drivers Union, while drivers gave assent for questionnaires to be administered. Individual informed consent was attached to each questionnaire and the respondent gave his or her consent before the questionnaires were filled.

Results

a) Respondents Fasting Blood Sugar and Blood pressure. (Table 1)

Neurologic and abdominal examinations were normal for all respondents. Fasting Blood glucose levels was normal in 285 (90.5%) while 30 (9.5%) had abnormal fasting blood glucose levels.

More than a third of the respondents 116 (36.8%) had a normal blood pressure level, 94 (29.9%)

were pre hypertensive while a third 105 (33.3%) were hypertensive. (Table 1)

b) Respondents Body Mass Index and Waist hip ratio

Nearly half of the respondents 152 (48.3%) were overweight, 123 (39.0%) had normal BMI while 40 (12.7%) were obese. Most of the respondents 276 (87.6%) had an abnormal waist-hip ratio while 39 (12.4%) were normal. (Figure 1)

c**) Respondents work stress and causes of stress**

More than half of the respondents 161 (51.1%) stated that they rarely face stress, 128 (40.6%) claimed that they face stress sometimes while 26 (8.3%) claimed they face stress always. (Table 2)

Most of the respondents 253 (80.3%) revealed that their cause of stress were work related, 13 (4.1%) were due to home problems and 49 (15.6%) both work and homes issues were the cause of stress. (Figure 2)

d) **Respondents morbidity pattern (Diagnosed and perceived health problems) (Table 3)**

Ninety- nine (31.4%) of the respondents revealed that they were being treated by a doctor at the time of the study due to illness, while 216 (68.6%) were not. (Figure 3)

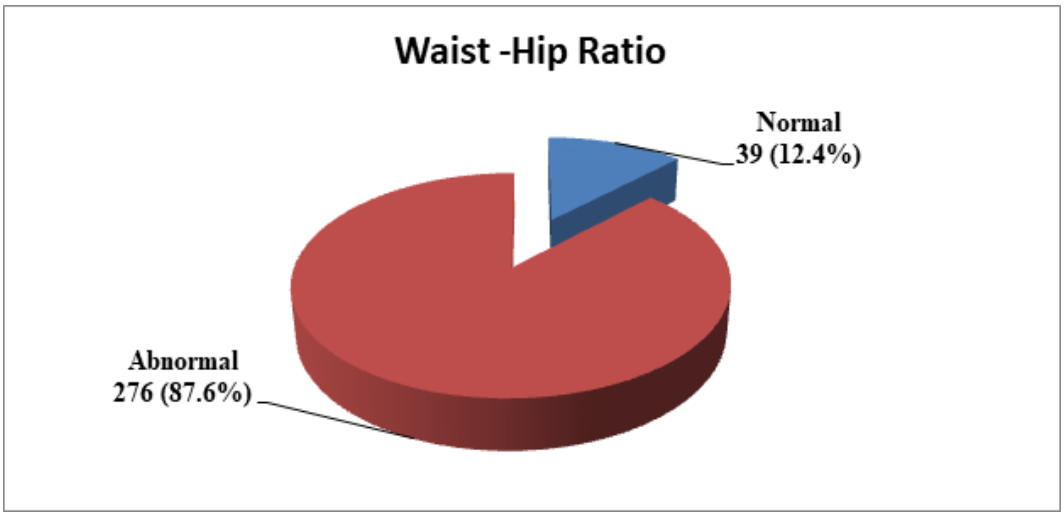
Thirty nine (12.4%) respondents revealed that they were told by the doctor that they had hypertension and heart disease, 37 (11.7%) reported having peptic ulcer. Twenty nine (9.2%) were diagnosed of joint pains (shoulder, elbow, wrist, hip, knee, ankle joints) , 22 (9.2%) diagnosed of URTI, 17 (5.4%) impaired vision, 16 (5.1%) diabetes and back pain. others were 5 (1.6%) blackout and fainting spells 2 (0.6%) hypoglycaemic event, while 1 (0.3%) had suffered a stroke

About three quarters of the drivers 235 (74.6%) complained of back pain, almost two thirds of the drivers 208 (66.0%) stated that they had Malaria in the previous six months, 201 (63.8%) stated that they had headache, 166 (52.7%) stated fever from other causes, 163 (51.7%) fatigue, 137 (43.5%) mentioned cough, 135 (42.9%) mentioned cold and catarrh. Other health problems mentioned were neck pain 132 (41.9%), drunk on alcohol 78 (24.8%), visual problems 82 (26.0%), Hypertension 30 (9.5%), 28 (8.9%) ear ache, 22 (7.0%) pneumonia, 18 (5.7%) haemorrhoids, diabetes 15 (4.8%), penile discharge 29 (9.2%), No respondent reported having seizures, kidney disease, hearing problem and psychiatric illness.

Table 1: Respondents' Body Mass Index (BMI) and blood pressure classification

Variable	Frequency (n = 315)	Percent
BMI class		
Normal	123	39.0
Overweight	152	48.3
Obesity class I	22	7.0
Obesity class II	17	5.4
Obesity class III	1	0.3
Blood pressure class		
Normal	116	36.8
Pre hypertension	94	29.9
Hypertension class I	58	18.4
Hypertension class II	29	9.2
Hypertension class III**	18	5.7
Total	315	100.0

**** Unfit to drive**

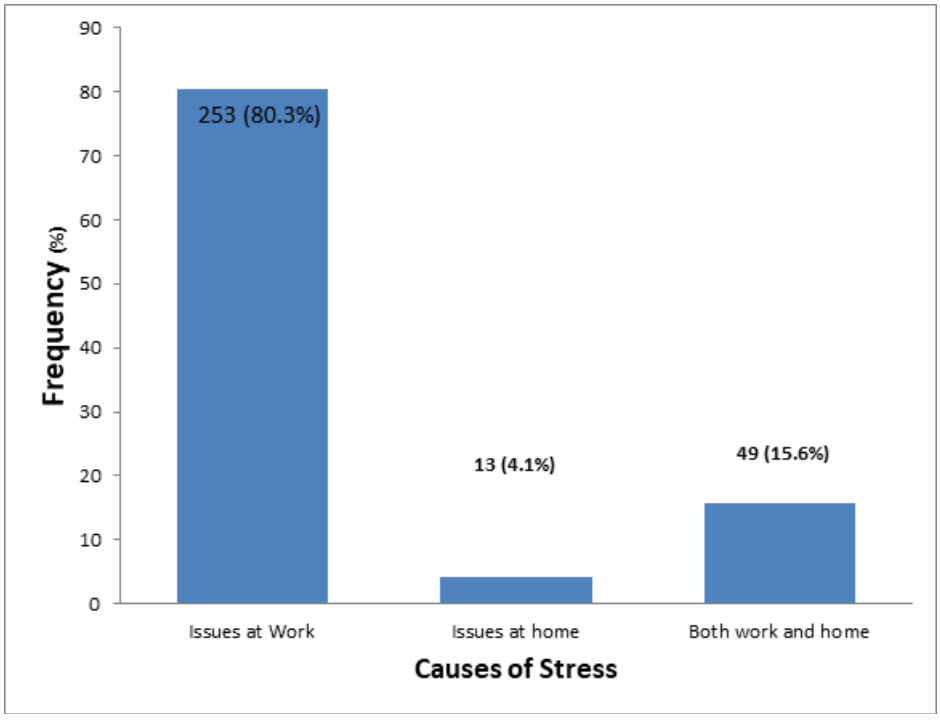


(n = 315)

Figure 1: Waist – Hip ratio of commercial long distance drivers

Table 2: Respondents' perceived frequency of occurrence of stress

Perceived occurrence of stress	Frequency	Percent
Rarely	161	51.1
Sometimes	128	40.6
Always	26	8.3
Total	315	100.0



(n = 315)

Figure 2: Perceived causes of stress in commercial long distance drivers

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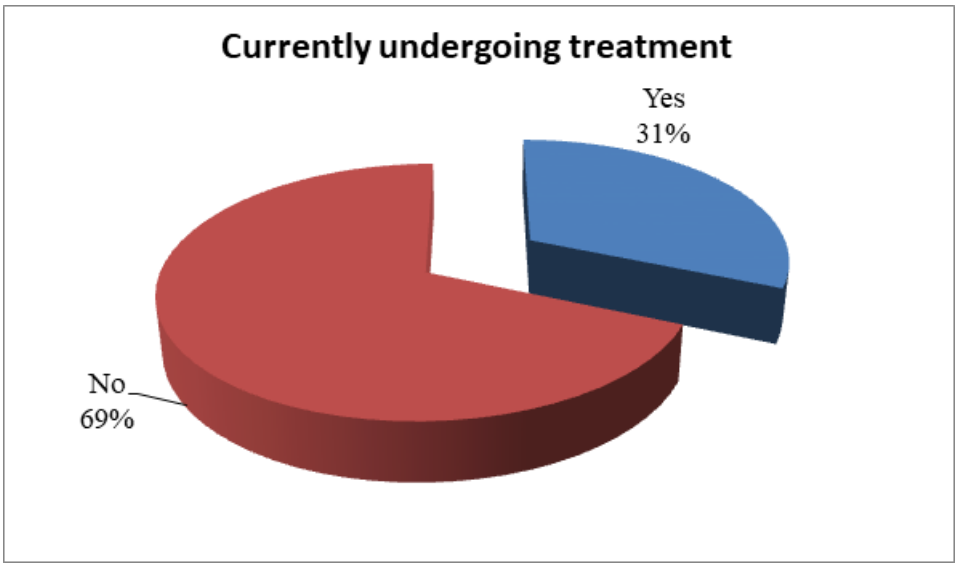

(n = 315)

Figure 4: Commercial long distance drivers currently undergoing doctor's treatment

Table 3: Respondents morbidity pattern (Diagnosed and perceived health problems)

Medical History	Frequency (n = 315)	Percent
Diagnosed health problems*		
Hypertension	39	12.4
Heart disease	39	12.4
Peptic Ulcer	37	11.7
Joint pains (shoulder, elbow,wrist,hip,knee, ankle)	29	9.2
Upper respiratory Tract Infection	22	7.0
Impaired vision	17	5.4
Diabetes	16	5.1
Back pain	16	5.1
Dizziness, vertigo	15	4.8
Blackouts/fainting	5	1.6
Colour blindness	4	1.3
Head injury, spinal injury	3	1.0
Heart failure	3	1.0
Hypoglycaemic event	2	0.6
Stroke	1	0.3
Drivers perceived health problems*		
Back Pain	235	74.6
Malaria	208	66.0
Headache	201	63.8
Fever (other than malaria)	166	52.7
Fatigue	163	51.7
Cough	137	43.5
Cold and catarrh	135	42.9
Neck pain	132	41.9
Vision problems	82	26.0
Drunk (on alcohol)	78	24.8
Hypertension	30	9.5
Penile discharge	29	9.2
Ear ache	28	8.9

Pneumonia	22	7.0
Haemorrhoids	18	5.7
Diabetes	15	4.8
Hearing problems	13	4.1

Multiple response*

Discussion

Neurological and abdominal examinations were normal for all respondents. This comprised evaluations of cervical spine rotation, back movement, upper and lower limb appearance and joint movement, romberg sign, and neck movement. The results were classified as normal or abnormal[1]. This is a positive finding as drivers are expected to have proper hand eye coordination, muscular movements, mental stability and coordination to be able to navigate through long distances. A third (33.3%) of the drivers were hypertensive and 30% were pre-hypertensive. This shows that over two thirds of the drivers should be on treatment for hypertension in other to avoid the irreversible complications of elevated blood pressure. The stress of the job, targeted distances and challenges on the road could be risk factors enabling hypertension in this category of workers. Commercial drivers have a higher risk of developing hypertension that exceeds the risk reported in other professions. Long-term studies reveal that people with high blood pressure have an increased risk of cerebral, cardiac, and renal problems. If unchecked, hypertension progresses and necessitates regular monitoring. Thus, occupational health strategies should be in place to manage the blood pressure and prevent the development of high blood pressure among drivers.

Nearly half of the respondents (48.3%) were overweight and 12.7% were obese. This is similar to a study done in the Haifa and Ashdod port of Israel [15] among 640 drivers. Obesity is a risk for sleep disorders, including sleep apnea, heart disease and unfitness to drive. This presents a huge health challenge for the drivers and to keep fit for the job. Also, findings from this study will be relevant for the human resource and health department of the transport company. They should adopt life style changes to loose weight and stay healthy and fit to drive. Most of the respondents (87.6%) had an abnormal waist-hip ratio, this increases their risk towards a cardiovascular disorder. Work stress is a common part of the driving profession, 40.6% stated that they face stress sometimes and 8.3% face stress always. This is one of the biggest challenges of driving as drivers are expected to make certain trips and spend specific hours on the road. This stress is work related for over 80.3% of the workers, a few (4.1%) were due to home problems and 15.6% both work and homes issues were the cause of stress. Stress management is key component of occupational health services as jobs are well timed to reflect shifts, time off, breaks and recreational activities to ease off stress and ensure good health among the workforce.

A third (31.4%) of the commercial drivers were being treated by a doctor as at the time of the study were being treated by a doctor at the time of the study due to illness, this is an outward sign of good health seeking behaviour among the drivers especially as there are available hospital services within the area. Similarly, it can also be a tell tale sign of exposure to occupational hazards in the driving occupation. Drivers gradually develop different morbidity and complications.

Twelve percent (12.4%) were diagnosed with hypertension, another 12.4% had heart disease, 11.7% were diagnosed with peptic ulcer , 9.2% diagnosed of URTI, 5.1% had back pain, 1.6% blackout, 1.65 had fainting spells, 0.6% hypoglycaemic event, and 0.3% had suffered a stroke.These were diagnosed ailments, much lower proportions were found in a cross-sectional study [31] involving 150 urban bus drivers employed by a transport company in Tehran, Iran, heart disease was reported in 1.1%, hypertension in 10.9%, psychological disorder in 2.3%, Chronic Obstructive Pulmonary Disease (COPD) in 2.9%, diabetes in 1.1%, endocrine disease (including thyroid problems) in 1.1%, and chronic renal failure in 1.7%[31] . This plethora of health conditions can be found among commercial drivers. Thus, public health initiatives to detect early these conditions and promptly treat them

should be established. The findings that 5.1% were diagnosed with diabetes mellitus is slightly lower than that gotten by the actual measurement using the Fasting blood Sugar kit where 9.5% had abnormal fasting blood glucose levels. This maybe due to the fact that some drivers may be unwilling to reveal their health problems.

Still on diagnosed health conditions, 9.2% of drivers were diagnosed of joint pains (shoulder, elbow, wrist, hip, knee, ankle joints), 0.3% had stroke, 5.4% impaired vision, 12.4% heart disease. Slightly higher proportions were found in Australia[32] , by Australian National University, involving a random sample of 323 drivers. This study revealed that 15% had joint pain, 10% had stroke, 18% had eye conditions, 15% had arthritis and 22% had heart condition[32]. This Australian study was done among the elderly drivers, thus there is a possibility that chronic debilitating conditions like stroke, heart disease, arthritis[19] will be more prevalent.

About three quarters of the drivers (74.6%) complained of back pain, almost two thirds of the drivers (66.0%) stated that they had Malaria in the previous six months, 63.8% stated that they had headache, 52.7% stated fever from other causes, 51.7% had fatigue, 43.5% mentioned cough, 42.9% mentioned cold and catarrh. Other health problems mentioned were neck pain (41.9%), drunk on alcohol (24.8%), visual problems (26.0%), Hypertension (9.5%), (8.9%) ear ache, (7.0%) pneumonia, (5.7%) haemorrhoids, diabetes (4.8%), penile discharge (9.2%), No respondent reported having seizures, kidney disease, hearing problem and psychiatric illness. These were self reported complaints. This finding is similar to a study done in Israel [15] where hypertension (7.4%), constipation (9.4%), gastritis/peptic ulcer (23.4%), paresthesias of legs or arms (35.6%), lower back pain (62.7%), gluteal pain (21.5%), and hemorrhoids (19.7%) were the health problems[15] . Much lower values were found in a study done in Accra, [33] Ho , Kumasi, Sunyani, Takoradi, and Tamale, 50% of the drivers complained about waist pains from hours of sitting and driving on rough roads. Backache (6.0%), bodily pain (15.0%), general body weakness (3.0%), elbow problem (1.0%), fever (7.0%), headache (11.0%), stomach problem (7.0%), stress (5.0%). The frequency of occurrence of other health problems like bodily pains and headaches were reported to be high. The problem of bodily pains could be attributed to long hours of driving in the sun, especially in traffic, whereas, stomach problems can be attributed to poor eating habits[33]. The study done in Accra explored the commonest complaints as expressed by the drivers, but failed to clearly review morbidities like hypertension, diabetes mellitus, cataract, and other conditions that may affect the health of drivers.

Conclusion

All respondents had a normal neurological and abdominal examinations, 9.5% had abnormal fasting blood glucose levels. A third (33.3%) were hypertensive, 29.9% were pre-hypertensive, nearly half (48.3%) were overweight, 12.7% obese, 39.0% had normal BMI obese, majority 87.6% had an abnormal waist-hip ratio.

Twenty six (8.3%) said they face stress always and 40.6% stated that they face stress sometimes. Most (80.3%) revealed that their cause of stress were work related, 4.1% were due to home problems and 15.6% both work and homes issues.

On diagnosed morbidity pattern and perceived health problems, 31.4% of drivers were currently being treated by a doctor at the time of the study due to illness, 12.4% were diagnosed of hypertension and heart disease, 11.7% diagnosed of peptic ulcer, 9.2% had joint pains (shoulder, elbow, wrist, hip, knee, ankle joints) , 9.2% had URTI, 5.4% impaired vision, 5.1% had diabetes, 5.1% had back pain, 1.6% had a blackout and fainting spells, 0.6% hypoglycaemic event, while 1 (0.3%) had suffered a stroke

On self reported morbidity, about three quarters of the drivers (74.6%) complained of back pain, others in the previous six months were Malaria (66.0%), headache (63.8%), Fever from other causes (52.7%). fatigue (51.7%) , cough (43.5%) , cold and catarrh (42.9%). Other health problems mentioned were neck pain (41.9%), drunk on alcohol (24.8%), visual problems (26.0%), Hypertension (9.5%), ear ache (8.9%) , pneumonia (7.0%), haemorrhoids (5.7%) , 15 (4.8%) diabetes, penile discharge (9.2%), No respondent reported having seizures, kidney disease, hearing problem and psychiatric illness.

Recommendations

The drivers union/ Transport companies should organize weight loss programs for their drivers and ensure healthy eating as most are obese and had abnormal waist - hip ration. Management of transport companies should introduce day off, breaks, shift duties for the drivers to reduce stress and give them more time for rest, visit to family and recreation.

There is need for regular periodic medical examination for all drivers to monitor their health conditions and prevent morbidities and mortality. Screening and treatment should cover prevention and control of hypertension, heart disease, peptic ulcer, joint pains, body pains, impaired vision, diabetes mellitus, stroke, and other health conditions.

There should be health education on prevention and control of malaria, headaches and fevers in order to avoid absence from work and loss of productivity.

The establishment of occupational health services in the transport companies will help sustain these services and create a health system for the drivers. This can be in collaboration with government hospital or private hospitals to deliver comprehensive health care services.

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