

JOB SATISFACTION AND PSYCHOLOGICAL HEALTH OF LONG DISTANCE DRIVERS IN BENIN CITY

¹OFILI, A.N., *²TOBIN, E.K., ¹ILOMBU, M.A., ¹IGBINOSUN, E.O., ¹INIOMOR, I.
¹Department of Community Health, University of Benin Teaching Hospital, Benin, Edo state, Nigeria. ²Institute of Lassa fever research and control, Irrua specialist teaching hospital, Irrua, Edo state, Nigeria

Correspondence: ekatobin@yahoo.com

ABSTRACT

This cross-sectional analytical study was designed to assess the level of and factors affecting job satisfaction and psychological health among long distance drivers in Benin City, Edo, Nigeria. A 21-item Job satisfaction questionnaire and the Golberg's General Health Questionnaire (GHQ 28) were used for data collection from 168 consenting drivers. Data was analysed with SPSS version 15. Results showed that an appreciable number of drivers were satisfied with their job (85%). Factors linked with satisfaction included flexibility of periods designated as resting hours (91.6%), company administration and management (84.6%), self-perception of being valued by the company (79.7%), and remuneration (74.1%). Sources of dissatisfaction included lack of training on the job (82%) and frequent harassment by law enforcement officers (77%). Psychological morbidity was rare. Overall, the drivers showed high level satisfaction towards their job, though there were areas of dissatisfaction that need to be addressed in the interest and safety of passengers and other road users.

Keywords: Drivers, Health, Job Satisfaction, Long distance, Psychological

18th June, 2013

Accepted: 17th October, 2013

Published: 31st October, 2013

INTRODUCTION

Job satisfaction refers to the perception health workers have regarding various aspects of their work (Caers et al., 2008; Toh et al., 2012; Van Ham et al., 2006). Job satisfaction influences people's attitude towards their jobs and various aspects of their jobs (Spector, 1997). Satisfied employees are assets to a company, as they are not only productive-minded towards achieving company's targets and goals, but are also committed and creative in nature (Islam et al., 2012).

Descriptively, job satisfaction has five facets: a) The work itself (b) Quality of supervision (c) Relationships with co-workers (d) Promotion opportunities (e) Pay (e) perceived equity (Rose, 1994; Werner, 2001).

Sayyadi and Sarvtamin (2011) defined quality of work life with eight concepts: (1) adequate and fair compensation, (2) safe and healthy working conditions, (3) immediate opportunity to use and develop human capacities, (4) opportunity for continued growth and security, (5) social integration in the work organization, (6) constitutionalism in the work organization, (7) work and total life space and (8) social relevance of work life. Other influences on satisfaction documented include the management

style and culture, employee involvement, empowerment and autonomous work groups (Nadeem, 2008).

The consequences of job satisfaction include better performance and a reduction in withdrawal and counter-productive behaviours (Morrison, 2008). Since job satisfaction involves employees' affect or emotions, it influences an organisations' well-being with regard to job productivity, employee turnover, absenteeism and life satisfaction (Mowday et al., 1979; Sempene et al., 2002). Motivated employees are crucial to an organisation's success and therefore, understanding people in their jobs and what motivates them could be a driving force in strengthening organisational commitment. On the contrary, low job satisfaction has a negative effect on any organization (Nadeem, 2010; Inkson, 1978). A causal relationship between job satisfaction and performance has been documented (Ivancevich, 1979; Judge et al., 1978).

Bus driving is an occupation characterized by both high and conflicting demands (Carrere et al., 1991; Machin and Nancey, 2008). The manner in which bus drivers cope with the demands of their job can exert a strong influence on their mental health and well-being. These demands include work related

stressors like workload, long working hours, traumatic events, lack of sleep, and lack of shift in their jobs (Carrere et al., 1991; Machin and Nancey, 2008; Meijam and Kompier, 1998). Like many other passenger transport industries, the safety of travellers and other road users is of prime importance (Ram, 2013). Bus drivers must successfully balance the competing demands of safety, customer-focused service and company operating regulations. The physical and psychological health of the bus driver is a critical factor in driving performance. Any impairment can have dire consequences for the passenger and company (Park et al., 2011).

Repeated and prolonged problems like frequent vehicle break downs, inability to meet daily sales, random demands by their employers, job insecurities, exposure to various forms of risk situations on the road, and lack of protection, are all predictors of probable accident involvement as reported in a study carried out in southwestern Nigeria among 350 commercial road transport workers (Rose, 1994). Unsatisfied drivers experience higher somatization, obsessive-compulsive traits, interpersonal sensitivity, depression, anxiety, anger/hostility and paranoid ideas (Issever et al., 2001).

Unfortunately, there has been little attention given to the health and wellbeing of this group of workers in Edo state. Any intervention aimed at improving job satisfaction and psychological health of drivers can only be possible when there is sufficient data on the issue. This study therefore, was designed to investigate the level of job satisfaction, psychological health and associated factors of commercial bus drivers in Nigeria with a view to proffering measures that may improve their health and wellbeing.

METHODS

Study Area: A descriptive cross sectional study was carried out in April 2011 in Egor, an urban local government area, and one of eighteen in Edo state. With headquarters at Uselu, it is bounded in the North by Isihor in Ovia North East and in the South by Oredo local government area (LGA). It is divided into 10 administrative wards and considered to be 90% urban and 10% rural.

The major tribe is Bini. The people are mainly petty traders and small business owners. Privately owned transport companies, often operated as family-run businesses from motor parks within the LGA, maintain passenger buses that ply within and outside the state. This thriving business often times

employs a manager, and several drivers, security men, accountants and few administrative staff.

Study population: Study population comprised inter-state drivers operational within the local government area.

Inclusion criteria: Inter-state drivers who have actively worked for a period of one year preceding the study, and were present at the time of conduct of the study, were recruited for this study.

Exclusion criteria: Drivers that have worked for a period of less than one year and those who were not fulltime drivers were excluded in this study.

Ethical Consideration: Written permission was sought and obtained from the management of the transport firms. The respondents were informed of the objectives of the study, and told that participation was voluntary before written informed consent was obtained. They were assured of anonymity and confidentiality.

Sample Size: A minimum sample size of 183 was calculated using the appropriate formula for a descriptive study, with prevalence taken as 13 % being the proportion of British bus drivers without psycho-neurotic illness in an earlier study (John et al., 2006).

A cluster sampling method was used to select respondents for the study. A list of all the registered inter-state transport companies in the local government area was obtained from their union head quarters. Preliminary survey identified the number of drivers per company as 50. Three stations were sufficient to yield the sample size. A random sampling was then used to select 3 stations out of the 8 stations in the list. Using a station as a cluster, all workers who met the inclusion criteria in the selected stations were interviewed.

Data Collection: Data were collected using two tools: an interviewer administered structured English language questionnaire designed by the researchers with questions adapted from a job satisfaction survey used in an earlier study (Lumley et al., 2011) and the Goldberg's General Health Questionnaire (GHQ 28). The former questionnaire was divided into two sections (A and B). Section A sought information on the socio-demographic characteristics of the respondents and section B included 21 questions that assessed job satisfaction within the context of 9 parameters. These included: a) Pay and promotion potential –

satisfied with salary, satisfaction with monetary and non-monetary fringe benefit, satisfaction with promotion opportunities, recognition and rewards for good; b) work relationships - satisfaction with immediate supervision, satisfaction with co-workers, satisfaction with communication within the organization; c) general working conditions - satisfaction with operating policies and procedures, satisfaction with type of work done, d) use of skills and abilities - satisfaction with training opportunities, satisfaction with tools and resources for work (Lumley et al., 2011). Responses to the questions were designed in a Likert manner, ranging from “strongly agree” to “strongly disagree”. Likert-Scale response questions were assigned a value of one to five, based on the value circled for each question. The total scores were graded and interpreted as a total score between ‘21 – 63’ as satisfied, and 64 – 105 dissatisfied.

Psychological health was measured using the GHQ 28. This contained 28 questions, with responses in a Likert type scale. Overall GHQ score was obtained using 0-0-1-1 scoring system. Summated scores of 4 and above indicate an increased likelihood of psychological ill health.

Data Analysis: Data was analysed using SPSS version 15 (SPSS Inc, Chicago IL 60606-6412). Descriptive data were represented as tables, and charts, continuous data as mean and standard deviations. Chi-square test was used to examine statistical associations between variables with level of significance set as $p < 0.05$.

RESULT

One hundred and sixty-eight drivers participated in the survey giving a response rate of 92.0%. All were males with a mean age was 39.0 ± 6.94 years. The majority (121; 72.0%) were married and Christianity was the predominant religion (154; 91.8%), while a larger proportion had completed secondary level education (112; 67.0%). The majority, 63 (60.8%) were of Bini ethnic group. Mean number of years of experience at driving was 12.0 ± 4.42 years, and mean number of hours at work was 8.05 ± 1.86 hours.

One hundred and thirteen (67.3%) respondents felt their take-home pay was adequate, 100 (51.7%) were satisfied with other fringe benefits afforded by their job, 87 (51.7%) were satisfied with promotion opportunities granted them within their corporations. A perception of being valued by the

company was expressed by 125 (74.4%). One hundred and sixty two (96.4%) felt their input contributed substantially to the success of the company.

One hundred and thirty four (79.7%) claimed to receive adequate support from their immediate supervisors, 135 (80.3%) maintained good relationship with co-workers. One hundred and thirty (77.4%) felt satisfied with the manner the company was managed. One hundred and thirty two (78.6%) respondents expressed satisfaction that their vehicles were in good shape, 111 (66.0%) respondents were not satisfied with the adequacy or availability of any form of training from their organisation, and frequent harassment from law enforcement officials was an area of dissatisfaction expressed by 130 (77.4%).

One hundred and forty five (86.3%) respondents were satisfied with their ability to find time to rest while at work, 138 (82.1%) did not feel burdened by the demands of the job, and, 141 (83.9%) were satisfied with their ability to cope with family commitments in spite of work demands. Thirty five (13.7%) maintained that their job had affected their feeding pattern.

In all, 143 (85.0%) respondents expressed overall satisfaction with their current jobs, while 25 (15%) did not feel satisfied with their jobs. One hundred and sixty six (99%) respondents had a GHQ score less than 4 and therefore had no risk of having a psychological disorder, while 2 (1%) had GHQ scores of 4 or above and were at increased likelihood of having a psychological disorder. There was no association between job satisfaction and psychological health ($p = 0.28$).

DISCUSSION

The mean age of drivers in this study is similar to what was found among drivers in two separate studies in Australia (Mayhew and Quinlan, 2000; Williamson and Sadural, 2001), and New Zealand (Mackie, 2008). The implication of this is that workplace issues that relates to older workers need to be addressed; including diminishing vision, hearing difficulties and reduced physical flexibility (Mackie, 2008). These challenges have a way of initiating reduced job satisfaction. Furthermore, the ability to adapt to working conditions that disrupt circadian rhythms – such as driving in the night and sleeping in the day - diminishes with age (Mayhew and Quinlan, 2000).

Table 1: Socio-demographics characteristics of respondents

| Variable | FREQUENCY (%) n=168 |
|-------------------------------------------|--------------------------|
| Age | |
| 23-32 | 23 (13.7) |
| 33 – 42 | 97 (57.7) |
| 43 – 52 | 44 (26.2) |
| 53- 62 | 4 (2.4) |
| Mean age | 39.0 ± 6.94 years |
| Marital Status | |
| Single | 47(22%) |
| Married | 121(72%) |
| Ethnicity | |
| Bini | 63 (60.6%) |
| Etsako | 24 (23.1%) |
| Esan | 8 (7.7%) |
| Yoruba | 9 (8.7%) |
| Religion | |
| Christianity | 154 (91.8%) |
| Islam | 14 (8.3%) |
| Level of education | |
| Primary | 56 (33.3) |
| Secondary | 112 (67.0) |
| License status | |
| Yes | 154 (91.8) |
| No | 14 (8.3) |
| Driving experience (years) | |
| 4-9 | 57 (34.0) |
| 10 – 15 | 83 (49.4) |
| 16 – 21 | 22 (13.1) |
| 22 – 27 | 4 (2.4) |
| 28 – 33 | 2 (1.2) |
| Mean number of years of experience | 12.0 ± 4.42 years |
| Hours spent working | |
| 6-9 | 137 (81.5%) |
| 10-13 | 29 (17.3%) |
| 14-17 | 2 (1.2%) |
| Mean number of hours spent at work | 8.05 ± 1.86 hours |

The finding that a large proportion of respondents expressed satisfaction with their jobs, is similar to what was observed in India, where 74% of 83 bus drivers and conductors were satisfied with their jobs (Ram, 2013). One other survey on 542 freight drivers in Eastern United states in 2005, found that 87.5% of the drivers were satisfied with their jobs (Buxton et al., 2009). On the contrary, a study among truck drivers in the United States of America, found that 60% of the drivers were not satisfied with their jobs (Johnson et al., 2011).

Remuneration for work done has been documented to be a significant source of job satisfaction (Parvin and Kabir, 2011; Richard et al., 1994). About 35% of the respondents were not satisfied with their pay, as was similarly reported among 225 drivers in New Zealand by Mackie (2008), where 32% of the drivers expressed dissatisfaction with their pay. Inadequate pay was also mentioned as a dissatisfier among 140 long distance truck drivers in United states (Johnson et al., 2011). Though a small proportion, it may be necessary for owners of transport companies to encourage their drivers by running cooperatives or other forms of loan facility to enable them meet up with

responsibilities. Trainings in financial management are also not out of place.

The finding that a large proportion complained of assault at the hands of law enforcement officers has also been documented in a study among 376 male bus drivers working for a major transport firm in the UK (Ram, 2013), and a study carried out among drivers in Zimbabwe (Muzvidziwa, 2012). Such harassment may come in from of illegal extortions, demand for bribe, request for illegal tariffs. This particular stressor is a common finding in the commercial transport industry, and carries the risk of resulting in post traumatic stress disorder in the drivers on the long term. Other forms of assault have been reported in other studies. A comparative study of 22 bus drivers in Britain who suffered assault related to fare disputes (10 cases), unprovoked episodes (5 cases), boarding/alighting incidents (4 cases), hooliganism(2 cases), and robbery (1 case) showed that at initial assessment the assaulted group, compared to the controls showed a significant increase in psychiatric impairment and distress (as measured by the GHQ-30 and IES respectively), with 23% of assault victims developing post-traumatic stress disorder as defined by DSM-III-R (Fischer and Jacoby, 1992). Assault at the hands of law enforcement officers might be reduced if managers make every effort to ensure that documents required by law for the vehicle and their drivers are obtained as soon as previous ones expire. Formal lodgment of complaints with higher authorities in the force might also be beneficial.

Another source of dissatisfaction was the absence of training expressed by a large number of drivers. This is contrary to the findings of a study among 23 female long haul drivers in Western Kentucky, where they were satisfied with on-the-job trainings received (American Society of Safety Engineers, 2000). This may be a reflection of the unwillingness of management of the companies to spend money on their workers, especially when they do not see the need for such trainings, but may also be due to the general lack of training opportunities for this sector. Periodic refresher trainings on defensive driving and interpretation of road signs should be organised in collaboration with organisations involved in the transport section such as Federal Road Safety Corps and Rotary International. These trainings may be conducted either by individual companies or collectively, as a group of companies. Trainings may also be organised on stress reduction techniques, physical exercise, self-defence techniques, health issues and other legal matters.

Literature has it that duty periods and shifts that last long have the potential to cause an individual to take a longer time to respond to simple tasks. For more complicated perceptual-motor skills, responses become mistimed (that is, the right action occurs at the wrong moment) (Johnson et al., 2010; Lisper and Eriksson, 1980). The finding that many drivers were satisfied with the length of periods allotted to rest is complementary, and should be encouraged. The few that have their feeding habits altered by the job need to be given attention, with the reason being that missed meal breaks fuel feelings of fatigue, and deficient food intake further impairs driving performance (Lisper and Eriksson, 1980). Sleep deprivation and disruption in the circadian rhythm promote tiredness, and lead to micro-sleep (a period of a few seconds sleep) on the job. This phenomenon coupled with degraded signal discrimination means that accidents can occur due to the detection failure of critical signals (Tse et al., 2006). There is need to address the small proportion that complained of insufficient rest period. Fixed work schedules rather than the usual rotating shift patterns that may change from week to week, will go a long way to minimise fatigue (Evans, 1994), and will also help to establish regular meal times, discouraging meal skipping, and reducing fatigue.

A cordial relationship between drivers and their subordinates and superiors was noted in this study. Similar findings were documented in a study among drivers in India (Arjum, 2013). Good relationship is essential to maintain communication lines open and creating an enabling environment for team work. To further strengthen relationships, management can undertake periodic satisfaction/attitude surveys, covering all employees that will identify gaps in relationship or communication that need to be addressed (Ram, 2013). Maintaining equity in dealing with workers may also be useful.

Though improvements in vehicle design have made significant steps in decreasing physical load and hence lessening musculoskeletal problems that drivers face in their job (e.g., seats with air suspension that reduce whole-body vibrations, automatic gears, and power-assisted steering), risk could be further reduced by ensuring that vehicles are maintained regularly, and the number of stop-overs along the journey be increased to allow drivers stretch their limbs outside of the driver's cabin (Tse et al., 2006)

The study found a very low proportion of drivers at risk of psychological disorder, contrary to an earlier study carried out in Britain, where 13% of 376

British bus drivers had mental well-being comparable with psycho-neurotic outpatients (Duffy and McGoldrick, 1990).

Conclusion

Commercial inter-state drivers in Egor local government area of Edo state generally felt satisfied with their jobs. Harassment by law enforcement officers and lack of training opportunities were expressed as areas of dissatisfaction. Owners of commercial transport lines should work with their parent body and other trade unions to address identified areas to enhance the job satisfaction of their staff.

ACKNOWLEDGEMENT

The authors are grateful to the management and staff of the transport firms for their participation in the study. The authors also express their gratitude to the research assistants.

REFERENCES

American Society of Safety Engineers. (2000). Stress factors experienced by female commercial drivers in the transportation. Electronic Library of Construction Occupational Safety and Health. [Cited 29 August, 2013]. Available from at www.elcosh.org.

Arjun, A.H. (2013). A study of job satisfaction and job stress among bus drivers of public transport department with reference to Pune municipal corporation. *Zenith Int J. Multidisciplinary Res.*; 3(4): 225-234.

Buxton, O.M., Quintiliani, L.M., Yang, M.H., Ebbeling, C.B., Stoddard, A.M., Pereira, L.K. and Sorensen G. (2009). Association of sleep adequacy with more healthful food choices and positive workplace expenses among motor freight workers. *Am. J. Public Health*; 99 (3): S636-S643.

Caers, R., Du Bois, C., Jegers, M., De Gieter, S., De Cooman, R. and Pepermans, R. (2008). Measuring community nurses' job satisfaction: literature review. *J. Adv. Nurs.*; 62: 521-9.

Carrere, S., Evans, G.W., Palsare, M.N. and Rivas, M. (1991). Job stress and occupational stress among public transit operators. *J. Occupational Psychology*; 64: 305-16.

Duffy, C.A. and McGoldrick, A.E. (1990). Stress and the bus driver in the UK transport industry. *Work and Stress*; 4, 17-27.

Evans, G.W. (1994). Working on the hot seat: Urban bus operators. *Accident Analysis and Prevention*. 26, 181-193.

Fisher, N. and Jacoby, R. (1992). Psychiatric morbidity in bus crews following violent assault: a follow-up study. *Psychological Med.*; 22: 685-693.

Inkson, J.H. (1978). Self-esteem as a moderator of the relationship between job performance and job satisfaction. *J. Applied Psychology*; 63 (2), 243-247.

Islam, R., Rasul, T. and Ullah, G.M. (2012). Analysis of the factors that affect job satisfaction: a case study on private companies' employees of Bangladesh. *European J. Business and management*; 4(4): 335-46.

Issever, H., Onen, L., Sabuncu, H. and Altunkaynak, O. (2001). Personality of characteristics, psychological signs and anxiety levels of drivers who are in charge of inner city transportation. *T. Klin. J. Psychiatry*; 1; 2.

Ivancevich, J.M. (1979). High and low task stimulation jobs: A causal analysis of performance-satisfaction relationships. *Academy of Management J.*; 22 (2): 206-222.

John, L.M., Flin, R. and Mean, K. (2006). Bus driver well-being review: 50 years of research. *Transportation Res.*; 9: 89-114.

Johnson, J.C., Bristow, D., McClure, D.J. and Schneider, K.C. (2010). Long distance truck drivers discuss their occupation. *J. Transportation Law Logistics Policy*; 77 (1):55-75.

Johnson, J.C., Bristow, D.N., McClure J.D. and Schneider, K.C. (2011). Determinants of job satisfaction among long distance truck drivers: an interview study in the United States. *Intern. J. Manag.*; 28 (2): 203-216.

Judge, T.A., Bono, J.E., Erez, A. and Locke, E.A. (1978). Core self-evaluations and job and life satisfaction: The role of self-concordance and goal attainment. *J. Appl. Psychology*; 63 (2): 243-247.

Lisper, H.O. and Eriksson, B. (1980). Effects of the length of a rest break and food intake on subsidiary reaction-time performance in an 8-hour driving task. *J. Appl. Psychology*; 65, 117-122.

Lumley, E.J., Coetzee, M., Tladinyane, R. and Ferreira, N. (2011). Exploring the job satisfaction and organizational commitment of employees in the information technology environment. *Southern African Business Rev.*; 15 (1): 100-118.

Machin, M.A. and Nancey, P.H. (2008). The role of workload and driver coping, styles in predicting bus drivers' need for recovery, positive and negative affect and physical symptoms. *Anxiety, Stress and Coping*; 21 (4): 359-375.

Mackie, H. (2008). Log transport safety council. The health and fitness of log truck drivers. An evaluation of the industry and recommendations for action. [Cited 2013 August 23]. Available from: <http://www.ternz.co.nz/Publications/The%20Health%20.pdf>

Mayhew, C. and Quinlan, M. (2000). Occupational health and safety amongst 300 long distance truck drivers: results of an interview based survey. [Cited 23 August, 2013]. Available at: www.maa.nsw.gov.au

Meijman, T.F. and Kompier, M.A.J. (1998). Busy business: How urban bus drivers cope with time pressure, passengers, and traffic safety. *J. Occup. Health Psychology*; 3(2), 109-121.

Morrison, R. (2008). Negative relationships in the workplace: Associations with organizational commitment, cohesion, job satisfaction and intention turnover. *J. Management Organization*; 14: 330-344.

Mowday, R., Steers, R. and Porter, L. (1979). The measurement of organizational commitment. *J. Vocational Behav.*; 14: 224-247.

Muzvidziwa, R.F. (2012). Work engagement among bus drivers in Zimbabwe – the role of employee wellbeing, job demands and resources. Masters thesis submitted to the School of Applied Human Sciences University of KwaZulu-Natal. [Cited 12 August, 2013]. Available at: https://abstracts.congrex.com/scripts/.../abstract_p2.asp?...Id

Nadeem, M. (2010). Role of training in determining the employee corporate behavior with respect to organization productivity: Developing and proposing a conceptual model. *Inter. J. Business Management*; 5(12): 206.

Park, J., Kim, J. and Waller, S.T. (2011). Job satisfaction and service quality of bus drivers in Korea. *Asian Transport Studies*; 1(3): 250-261.

Parvin, M.M. and Kabir, M.M.N. (2011). Factors affecting employee job satisfaction of pharmaceutical sector. *Australian J. Business Management Res.*; 9: 113-123.

Ram, P. (2013). Relationship between job satisfaction and job performance in the public sector. A case study from India. *Inter. J. Academic Res. Economics Management Sci.*; 2(2).

Richard, D.M., LeMay, A.S., Taylor, G.S. and Turner, B.G. (1994). An Investigation of the Determinants of Extrinsic Job Satisfaction Among Drivers. *Inter. J. Logistics Management*; 5(2): 95-106.

Rose, M. (1994). Job satisfaction, job skills, and personal skills. In: Penn R., Editor. Skill and occupational change. Oxford: Oxford University Press.

Sayyadi, S., and Sarvtamin, H.T. (2011). Organizational commitment in educational departments. *Interdisciplinary J. Contemporary Res. Business*; 3(2): 1326-1337.

Sempene, M., Rieger, H. and Roodt, G. (2002). Job satisfaction in relation to organizational culture. *South Afr. J. Industrial Psychology*; 28(2): 23-30.

Spector, P. (1997). Job Satisfaction: Application, Assessment, Causes and Consequences. California: Sage.

Toh, S.G., Ang, E. and Devi, M.K. (2012). Systematic review on the relationship between the nursing shortage and job satisfaction, stress and burnout levels among nurses in oncology/haematology settings. *Int. J. Evid. Based Health Care*; 10: 126-41.

Tse, J.L.M., Flin, R. and Mearns, K. (2006). Bus driver well being review: 50 years of research. *Transportation Research*; 9 :89-114.

Van Ham, I., Verhoeven, A.A., Groenier, K.H., Groothoff, J.W. and De Haan, J. (2006). Job satisfaction among general practitioners: a systematic literature review. *Eur. J. Gen. Pract.*; 12: 174-180.

Werner, A. (2001). Motivation in human resources management. Cape Town: Oxford University Press.

Williamsom, A. and Sadural, S. (2001). Driver fatigue: a survey of long distance heavy vehicle drivers in Australia. Information paper /CR 198. [Cited 24th August, 2013]. Available at: <http://www.ntc.gov.au/filemedia/Reports/DriverfatigueASurveyLongDistance.pdf>

AUTHOR(S) CONTRIBUTION

All the authors (Ofili, A.N., Tobin, E.K., Ilombu, M.A., Igbinosun, E.O., Iniomor, I.) contributed to the study. They were involved in the conception, design, data collection, analysis and interpretation of data, and final drafting of this article. All authors gave final approval of the version to be published.

