"STRESS OF BUS DRIVERS – A REVIEW ON LITERATURE"

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Abstract
Stress is a collective phenomenon that essentially manifests itself in human as a result of pressure emanating from several experiences or challenging situation. Bus drivers always need to show concern for passengers in spite of the fact that they must be concentrating on bus driving. This is because this job is part of public service industry. The physical and psychological health of the bus driver is a factor in the driving performance. Any impairment could lead to undesirable consequences for the passengers. Hence, the survey was conducted on review of literature on stress and of bus drivers.
The earlier studies however, demonstrated a greater understanding that specific stressors result in certain physical (cardiovascular disease, gastrointestinal disorders, musculoskeletal problems, fatigue), psychological (depression, anxiety, post-traumatic stress disorder) and behavioural outcomes (substance abuse). Bus driver ill health will have consequences for organizational performance in terms of employee absence, labour turnover and accidents. Over the last few decades, the heightening of other work stressors such as traffic, and violence from passengers has compounded the situation for bus drivers.
The present study is undertaken to know the stress among the bus drivers. In this regard an attempt has been made to identify the major reason for stress for drivers, to identify the stress causing factors, to identify the effect of stress on physical and psychological health and factors effecting performance of bus drivers
Key words: Stress, Performance, Bus Driver, Physical, Psychological, absence, labour turnover

INTRODUCTION

Stress has become the 21 century buzz word, from the high pervading corporate organization to the bassinets of teaching infants' nurseries we find this word liberally used. Stress is part of modern life. Various events in life cause stress, starting with the birth of a child and enduring with the death of a dear one. Urbanization, industrialization and the increase scale of operations in society are some of the reasons for rising stress. It is an inevitable consequence of socio-economic complexity and to some extent, its stimulant as well. People experience stress as they can no longer have complete control over that happen in their lives. The telephone goes out of order, power is shut down, water supply is disrupted, children perform poorly at school etc, we feel frustrated and then stressed.

ORIGIN OF STRESS

The word stress is derived from the Latin word "stringere" which meant literally to draw tight and was used in the 17th century to describe hardship, strain, adversity or affliction. These root words refer to the internal feelings of constriction many feel under stress. During the late 18th century, stress denoted "force, pressure, strain or strong effort, referring primarily to an individual or to an individual organs or mental powers. The term stress was first employed in a biological context by the endocrinologist Hans Selye in the 1930s. He later broadened and popularized the concept to include inappropriate physiological response to

any demand. In his usage stress refers to a condition and the stressor to the stimulus causing it. It covers a wide range of phenomenon from mild irritation to drastic dysfunction that may cause severe health breakdown. But a stressor make stress to one person may not be a stressor for another person. It depends in the coping skill and personality of the person.

STRESS AMONG BUS DRIVERS:

Bus drivers operate various types of buses to transport students, commuters or tourists between locations. Drivers typically work without direct supervision and are fully responsible for the safety and satisfaction of their passengers. Bus drivers follow precise schedules and must adjust their driving according to traffic and weather condition in order to arrive at each stop at the designated time. Bus drivers must do their best to avoid accidents and may be responsible for maintaining orderliness among passengers. They may also be required to keep records of their commute time and report mechanical issues, delays or other dilemmas, Transit and intercity bus driver duties may also include collection fares and guiding passengers in their travels.

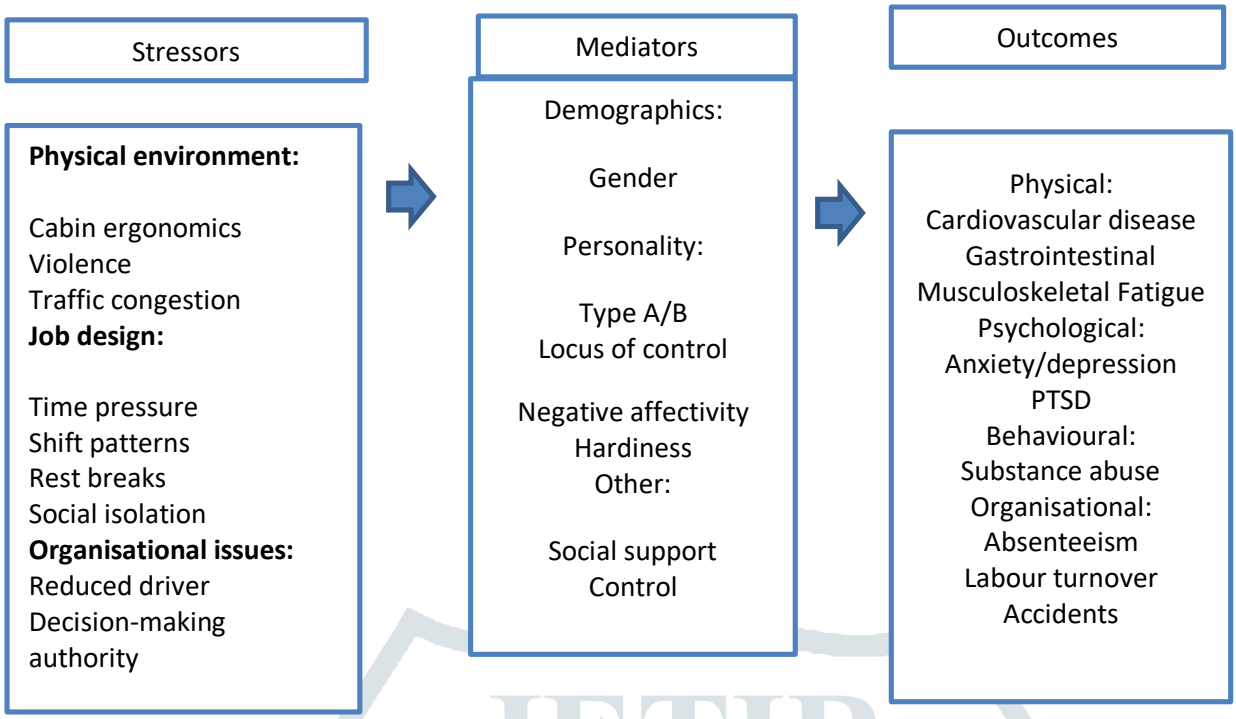
A bus driver is trained to drive a bus, and may work for private clients, common transportation services. Their primary responsibility is to follow an assigned route and pick up passengers along that route. They take these passengers to specified destinations along their route. Their responsibilities include keeping to the operating schedule for their routes, obeying traffic laws and assisting clients with disabilities. They are responsible for basic maintenance, including checking the vehicle's oils. Tires and lights, in addition to keeping the bus clean. Bus Drivers experience stress from many source frequently report tension, mental overload, fatigue, conflicts, superior subordinate relationship and sleeping problem. They also have frequent absence from work for longer duration than workers in other occupations as the physical and psychological factors of bus drivers will have an impact on driving performance.

Stressful jobs are those which have high psychological demands and little decision-making control, in combination with low social support on the job. Bus driving is a classic example of a stressful job. Bus drivers must respond to on multiple demands over which they have little control. The main tasks of a bus driver are to drive safely, keep on schedule, and treat passengers in a professional and courteous manner. Yet two of these tasks are inherently contradictory – maintaining the schedule and serving the public. In order to accomplish one, the other may have to be compromised. Traffic congestion is another stressor which enters this equation.

Stress when driving can felt as a perceived difficulty in meeting driving task demands. Typical causes of stress for drivers are Work over load (inadequate recovery, demands which exceeds physical or mental capability), Time pressure (lateness, push to make up lost time), Social pressure (trying to 'prove' yourself to other. Feeling loss of self-esteem through criticism by peers of others, conflict with others0, Noise- Noise above 86dB(A) can cause annoyance, distraction. Increased fatigue, increased mistakes, especially in demanding tasks and increased accident liability. Temperature when a person feels uncomfortably hot or uncomfortably cold, performance can deteriorate and mistake increase, Get home – This refers to hurry to complete a journey quickly and cease driving.

SYMPTOMS OF STRESS:

Absenteeism, escaping from work responsibilities, arriving late, leaving early, etc., deterioration in work performance, more of error prone work memory loss, etc., cribbing, over- reacting, arguing getting irritated. Anxiety, etc., deteriorating health, more of accidents, etc. improper eating habits (over-eating or under eating), excessive smoking and drinking, sleeplessness, etc.



METHODOLOGY OF THE STUDY

The study is based on secondary data. In this way different on-line journals were reviewed and data collected from review of literatures, reports, published journals, books and libraries.

REVIEW OF LITERATURE

INDIAN STUDIES

Prabba Lakshmi priya (2015) carried out a study to find out Cardiovascular Risk in Bus Drivers by Using Waist to Height Ratio and WHO/ISH risk Prediction Chart and their clinical characterization of professional bus drivers revealed a moderate a moderate level of cardiovascular risk factors such as obesity. Hypertension and smoking as well as other contributing functional characteristics, such as low-intensity physical activity, long duration in a sitting position and irregular eating habits which lead to excessive weight gain and associated co morbidities.

Sudhir Prabhu et al, (2015) explored in their study that Occupational stress is becoming a universal concern. It is no longer taken as a private problem that should be managed alone. Since it affects all categories of workers, it is currently considered an issue that needs to be tackled by the employer, industry and nation as a whole in order to not face a compromise in manpower and occupational productivity.

Geeta V. Bathija et al, (2014) conducted a study on stress among government city bus drivers in Hubli. Result of the study showed that majority of the bus drivers don't spend sufficient time with their family due to their hectic job schedule which affects their psycho-social behaviour and may contribute largely to the stress they experience. It was seen that major amount of drivers had bad habits like consumption of alcohol and tobacco which may hamper their sense during driving hours and may contribute to the casing of bus passengers' accident. It was seen that significant amount of drivers doesn't enough sleep on average per day which directly contributes to the amount of stress they suffer.

Vijay V. Raghavan, (2010) explained that the effect of flexible work schedule, employee support and training and telecommuting as potential coping resources to relieve stress. Perceived workload, role ambiguity work facilitation and decision latitude are potential stressors of IT professionals. Removing role ambiguity and improving work facilitation reduce work-related stress and allowing employees.

Deshmukh N.H.(2009) In his research found that Stress and life satisfaction among working and non-working women from similar levels of socio economic status of the society resulted that there was no significant difference in physical and family stress among working and non-working women. Role stress was significantly higher among working than non-working women. Life satisfaction was better in working women than non-working women. The stress working level of stress to be identified with the stress which may be society may to analyze the condition.

Murali Raj, (2007) has defined depression is usually related to work and stress these people undergo because of the pressure to perform better, compete with other colleagues and meet tight deadlines. Most of their work is target-oriented and if targets are not met, it can lead to anxiety. Peers are not very supportive as they also competing in the same field. Moreover, insecurity about the job may lead to feelings of expression.

Kamala Balu, (2002) a study conducted on stress management programmers that focus attentions on the assisting employees or help them to reduce job linked stressors. This study is done on the anxiety in the organization with common stress occurring in an work place, so they are trying to reduce the stress on their own in the working premises. The organization has conducted many range on stress sinking programs for the workers slightly interventions to changes has made like change in role of work to the employee it was effectively reducing the stress for a long period and also helpful to the organization to save the health of an workers and reduces the mental stress to the employees

INTERNATIONAL STUDIES

J. P. Despres et al (2008) in their study on "Abdominal obesity" the cholesterol of the 21st century?" They suggested that exposure to the occupation of driving a bus may carry an increased risk coronary heart disease and that drivers who develop signs of cardiovascular illness shoud be transferred to non-driving occupations within the company.

Grace P.Y. SZeto, Peggo Lam (2007) carried out a study on work-related Musculoskeletal Disorders in Urban Bus Drivers of Hong Kong. The study aimed at investigating the relevance and characteristics of WMSD in male and female bus drivers who operate double-deck buses in Hong Kong. Altogether 481 bus drivers (405 Males, 77 females) participated in the study. The study shows generally the male drivers had longer years of work experience but their daily workloads were similar to the females. On the average drivers worked 9-10 h per day, with 5 day on and 1 day off. Neck, back, shoulder and knee/thigh areas had the highest 12-month prevalence rates ranging from 35% to 60%, and about 90% of the discomfort was related to bus-driving. Occupational factors of prolonged sitting and anthropometric mismatch were perceived to be most related to musculoskeletal discomfort. On physical examination, grip strength was significantly related to neck and shoulder discomfort

Landstrom (2006) found that cooling the temperature inside a vehicle by 5-10 degrees for 5-8 minutes resulted in a consistently positive effect on driver alertness. While drivers might be able to achieve similar effects by opening windows, the author suggested vehicle technologies could incorporate a variable cooling system.

Carlos Alberto de Assis Viegasl et al (2006) undertook a study on Prevalence of risk factors for o obstructive sleep apnea syndrome in interstate bus drivers in Brazil. This study involved 262 professional interstate bus drivers employed by a Brazilian company 68% of the studied sample was above the ideal, of which 34% showed neck circumference = 42 cm. During the work, drivers reported using tobacco (27%), cola (55%), alcohol (65%) and coffee (88%) of motorists had more than ten points on the Sleepiness Scale of Epworth. There were also 36% of snorers, 5% reported respiratory arrest during sleep, 12% had a sensation of suffocation, 29% had restless sleep and 48% reported feeling sleep while driving. 42% of drivers were already involved in traffic accidents and in 7.6% of cases the accident was due to excessive sleepiness. Those with more than ten points on the Epworth Sleepiness Scale presented compromised concentrated attention level and the greater the circumference of the neck and the hypersomolence, the less diffuse attention.

Van den Gerg and Landstrom (2006) in his research found that sleepiness while driving was strongly correlated with lower sleep hours and lower sleep quality before work. Age, type of work, or work experience did not influence sleepiness in the investigated group in any systematic way. Common measures against sleepiness included more sleeping hours before work, better working hours, naps during work, listening to the radio, conversation and lowering the cabin temperature.

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Sleepiness Scale presented compromised concentrated attention level and the greater the circumference of the neck and the hypersomolence, the less diffuse attention.

Z ZakladuEpidemiologiSrodowiskowej (2005) examined a study by taking sample of 940 drivers (including 788 men and 152 women) employed in a municipal transportation enterprise during the years 1996-2000. Bus (30%) and tram (22%) drivers as well as transport service workers (48%), aged over 45 years. But under the retirement age, were eligible for the study. The analysis of temporary work disability a five-year period was based on sickness absence, sickness absence rate and the average duration of sickness absence. The analysis revelated tha t diseases of the circulatory system form the major group of pathologies responsible for total sickness absence among bus drivers (43%), tram drivers (27%) and transport service workers (27%). These disease are also a leading cause of earlier retirement. They mostly include ischemic heart disease in bus driver and hypertension in tram drivers. Cancers (pleura, kidney and eye) were responsible for 9% of sickness absence in the group of male tram drivers, whereas endocrine, nutritional and metabolic diseases and immunity disorders (diabetes, disorders of thyroid gland) in 16% of female tram drivers. Diseases of the musculoskeletal system were major causes of sickness absence among female tram drivers (24%), whereas malignant and benign neoplasms of breast and uterine myoma in 24% off female transport service workers. The results of the analysis are in agreement with the literature findings and provide explicit evidence that employment in the municipal transport system is the risk factor responsible for the development of serious diseases such as musculoskeletal disorders and neoplasms. Bearing this in mind, this occupational group (bus and tram drivers) should be covered by specially designed prevention at and outside workplace.

Gilliam E. Hardyet et al., (2003) analysed a study on Psychological distress among the drivers particularly depression was found to predict absence, with higher levels of distress predicting a greater number of days and number of times absent. Job satisfaction and psychological distress independently predicted levels of absence. The psychological distress – absence relationship was not moderated by demographic variables.

C.Bigert, P. Gustavsson, J. Hallqvist et al., (2003) in their study on "Myocardial infarction among professional drivers Epidemiology", concluded that Professional drivers are at an increased risk of myocardial infarction but the underlying causes for this increased risk are uncertain.

Issever et al (2002) Conducted a study on Turkish bus drivers found that for the psychological health outcomes typically associated with stress are depression and anxiety for the general population,. These states along with paranoid ideation (feelings of suspicion and a sense of being persecuted) and psychoticism have been found to be related to lower pain among the drivers.

P. D. Wang & R. S. Lin,(2001) articulated a research on "Coronary heart disease risk factors in urban bus drivers," Suggested that exposure to occupation of driving a bus may carry an increased risk of CHD and that drivers who develop signs of cardiovascular illness should be transferred to non-driving occupations within the company.

Vedantham, K. & Brunet(2001) This study found that in a sample of physically assaulted bus drivers, PTSD and mild depression were likely to develop more than for non-assaulted bus drivers. Despite the small sample size of 22 assaulted drivers (typical of studies on victims of assault), they found that 23% developed PSTD as a result. This, they point out, is a percentage rate similar to people drawn from populations experiencing natural disasters, civilian disasters and hospitalised trauma victims. It has also been established that traumatic exposure leading to PTSD is linked to greater health problems (back problems, gastrointestinal disease, chronic bronchitis, inter alia) than for people who have not been exposed to trauma, to people who have been exposed to trauma but do not go on to develop PTSD.

Wang and Lin (2001) carried out a study on bus drivers taking 1761 male bus drivers, 536 male skilled workers from same company concluded that bus drivers have a higher prevalence of CHD risk in the form of higher blood pressure, IHD, and elevated serum cholesterol and triglyceride levels among the drivers.

Vedantham et all (2001) undertook a study on 342 bus drivers in Canada considering 3 groups (A) non-exposed (B) exposed, non PTSD (C) lifetime PTSD Group C had significantly more health problems than the other 2 groups, (gastrointestinal disease, back problems, migraine/ headaches, confusion spells, weakness/dizziness, hot/cold flashes and chronic bronchitis) Group C also had a higher percentage of those who had used medications in the past month, visited health specialists in the past year, and described their own health as average or poor.

Kompier et al (2000) explained considering the literature to date surrounding occupational stress in bus drivers "there is a remarkable distinction between the impressive number of studies that demonstrate adverse health effects of the bus drivers occupation and the small amount of documented prevention and intervention projects in bus companies".

MA, Ragland DR, Fisher JM (1998) This study consistently report that bus drivers have higher rates of mortality, morbidity, and absence due to illness when compared to employees from a wide range of other occupational groups. Increased disease rates have been found for drivers regardless of the use of different research methodologies, measurement techniques and comparison groups.

Winkleby et al (1998) conducted a consistent study and reported that bus drivers have higher rates of mortality, morbidity, and absence due to illness when compared to employees from a wide range of other occupational groups, Increased disease rates have been found for drivers regardless of the use of different research methodologies, measurement.

American Psychiatric Association, (1994) carried out a study on obnoxious behaviour, fare evading, or even physical assault. Longer-term psychological distress in the form of post-traumatic stress disorder (PTSD) may be a rare symptom for bus drivers, but nevertheless an insidious one. PTSD is an anxiety disorder comprised of intense fear, helplessness accompanied by nightmares, flashback, irritability and startled responses that persist beyond a month from onset.

Hedberg G et al (1993) This studies Risk indicators related to the work environment evaluated among male professional drivers in Sweden showed that significantly more drivers than controls had a work situation characterized by high demands, low decision making abilities, low social support at work, and shift work. It also showed that significantly more drivers than controls were sedentary in their leisure time, smokers, overweight, and consumed a significantly higher proportion of milk fat per day

Kritensen (1991) in a study has reported that naturally, physical and psychological health status is one key predictor of absenteeism. As mentioned, the potentially noxious nature of bus drivers can have health effects that may account for the higher than average work absence figures in the bus industry

Duffy &MeGoldrick (1991) studied violent transgressions, which could elicit such symptoms, against bus drivers in the UK, are a cause for concern. Indeed the highest reported stressor in a study of British bus drivers was the risk of physical assault from passengers.

Kompier (1990) reported on a survey that German bus drivers are often forced to withdraw from the profession aged 50, usually with less than 20 years of bus driving experience. Furthermore, only 5% of drivers usually pass the frequent medical assessments, to eventually retire at the age of 63. Dutch research reports only 11% of drivers leave at official retirement age.

Bartone, P.T. (1989) discovered that strenuous working conditions and irregular working schedules of bus drivers were related to reported levels of gastrointestinal complaints. They further add that meal hour irregularity and poor eating habits mediated the observed relationship between irregular work schedules and complaints. Another contributory mechanism may be the prolonged seated posture relaxing the abdominal muscles which when combined with curvature of the spine, is counterproductive to digestion and breathing.

Netterstrom B, Laursen P (1981) conducted comparative study of bus drivers to other occupations regarding possibility of having the have also cardiovascular diseases because of stress. This study indicated that cardiovascular diseases affect professional drivers more often than many other occupational groups.

Miller J.C. & Mackie R.R. (1980) examined a study on shift work involves drivers contending with continually rotating patterns of early and late shift. Spit-shifts, a combination of a morning and afternoon/evening shift with a long break in-between are common. Bus drivers on irregular shifts tend to show greater subjective fatigue and physiological stress than drivers on regular shift patterns partly due body clock changes.

FINDINGS

The results of the showed that majority of the bus drivers don't spend sufficient time with their family due to their hectic job schedule which affects their psycho-social behaviour and may contribute largely to the stress they experience. It was seen that major amount of drivers had bad habits like consumption of alcohol and tobacco which hamper their sense during driving hours and may contribute in the physical & psychological health problems.

It was seen that significant amount of drivers didn't get enough sleep on average per day which directly contributes to the amount of stress they suffer from back problems, gastrointestinal disease, depression, anxiety, musculoskeletal disorders, Abdominal obesity, cardio vascular risk, headache.

CONCLUSION

To conclude, stress is like electric power. It can make a bulb light up and provide brilliant illumination. However, if the voltage is higher than what the bulb light up and provide brilliant illumination. Individuals have to effectively occur when stress is properly channelized resulting in the feeling of challenge, high satisfaction in job, creativity, effectiveness, better adjustment to work and life. The major objective of this article is to identify the stress causing factors & to identify the effects of stress on physical, psychological

health and performance of drivers. Studies on stress especially those on drivers, even though varying in nature are fairly similar with respect to their findings. The factors causing status alcohol consumption or other substance abuse and associated health problems owing to fatigue, tension and lack of sleep. Very few studies have been conducted to identify the stress causing factors & its effect on bus drivers. Hence present study was taken to identify the stress levels in drivers from this study it can be concluded that timely work, proper sleep, spending sufficient time with the family can reduce the risk of stress among the bus drivers. Implementation of stress prevention programs at workplace is the need of the hour. There are largely dependent on proper planning and communication between the employees and the employer. The organizational staff (management) should employer means to ensure that the drivers to manage their work stress effectively so that the occupational productivity, but more importantly the workers' health is not compromised.

REFERENCES

Bartone, P. T. (1989). ***Predictors of stress-related illness in city bus drivers***. Journal of Occupational Medicine, 31, 657–663.

Carlos Alberto de Assis Viegas & Haroldo Willuweit de Oliveira ***Prevalence of risk factors for obstructive sleep apnea syndrome in interstate bus drivers**** J. bras. pneumol. vol.32 no.2 São Paulo Mar./Apr. 2006 Print version ISSN 1806-3713

Deshmukh N.H.(2009) ***A study of Personality, Neuroticism and Creativity among adolescents. - Indian Psychological Review,*** 2009,doi: 10.18203/2320-6012.ijrms20151155

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

Grace P. Y. Szeto · Peggo Lam 2007 ***Work-related Musculoskeletal Disorders in Urban Bus Drivers of Hong Kong*** Article in Journal of Occupational Rehabilitation · July 2007

Issever, H., Onen, L., Sabuncu, H. H., & Altunkaynak, O. (2002). ***Personality characteristics, psychological symptoms and anxiety levels of drivers in charge of urban transportation in Istanbul.*** Occupational Medicine, 52, 297–303.

J. P. Després, B. J. Arsenault, M. Côté, A. Cartier, and I. Lemieux***, "Abdominalobesity: the cholesterol of the 21st century?"*** The Canadian Journal of Cardiology vol. 24, pp. 7D–12D, 2008.

Kamala Balu, (2002) ***A Study on Stress Management and Coping Strategies With Reference to IT Companies.*** Journal of Information Technology and Economic Development 2(2), 30-48, October 2011 30

Kompier, M. A. J., Aust, B., van den Berg, A.-M., & Siegrist, J. (2000). ***Stress prevention in bus drivers:*** Evaluation of 13 natural experiments. Journal of Occupational Health Psychology, 5, 11–31
.

Kompier, M. A. J., Mulders, H., Meijman, T., Boersma, M., Groen, G., & Bullinga, R. (1990). ***Absence behaviour, turnover and disability: A study among city bus drivers in the Netherlands.*** Work & Stress, 4, 83–89.

Kristensen, T. S. (1991). ***Sickness absence and work strain among Danish slaughterhouse workers: An analysis of absence from work regarded as coping behaviour. Social Science & Medicine***, 32, 15–27.

Landstrom, U. 2006. ***The effects of climate on wakefulness and fatigue***. International Journal of Vehicle Design 42, no. 1–2: 2–7.

Miller, J. C., & Mackie, R. R. (1980). ***Effects of irregular schedules and physical work on commercial driver fatigue and performance*** (HUMAN FACTORS RESEARCH, INC.) NEW YORK : ACADEMIC PRESS, 1980, **Publication Date:** 1980

Murali Raj, (2007) ***Gene expression profiling of metastatic brain cancer*** .August 2007 Volume 18 Issue 2, Print ISSN: 1021-335X, Online ISSN:1791-2431

Netterström B, Laursen P. ***Incidence and prevalence of ischaemic heart disease among urban busdrivers*** in Copenhagen. Scand J Soc Med 1981;9:75–9.

P. D. Wang and R. S. Lin, ***"Coronary heart disease risk factors in urban bus drivers," Public Health,*** vol. 115, no. 4, pp. 261–264, 2001.

Prabba Lakshmi Priya (2015) "***A Study to Find Out Cardiovascular Risk in Bus Drivers by Using Waist to Height Ratio and WHO/ISH Risk Prediction Chart".*** International Journal of Innovative Research in Science, Engineering and Technology (An ISO 3297: 2007 Certified Organization) Vol. 4, Issue 6, June 2015, The Oxford College of Physiotherapy, Hongasand

Prabba Lakshmi Priya (2015) "***A Study to Find Out Cardiovascular Risk in Bus Drivers by Using Waist to Height Ratio and WHO/ISH Risk Prediction Chart".*** International Journal of Innovative Research in Science, Engineering and Technology (An ISO 3297: 2007 Certified Organization) Vol. 4, Issue 6, June 2015, The Oxford College of Physiotherapy, Hongasand

Sudhir Prabhu, Kiran Shetty, Delma D'Cunha, Davin Karkada (2015**) *Study of prevalence of work related stress and co-morbidities and its effect on work performance in KSRTC workers of Dakshina Kannada district, Karnataka,*** IndiaInt J Res Med Sci. 2015; 3(11): 3161-3166

Van den Berg, J., and Landström, U. 2006. ***Symptoms of sleepiness while driving and their relationship to prior sleep, work and individual characteristics***. Transportation Research Part F: Traffic Psychology and Behaviour 9, no. 3: 207–26.

Vedantham, K., Brunet, A., Boyer, R., Weiss, D. S., Metzler, T. J., & Marmar, C. R. (2001). ***Posttraumatic stress disorder, trauma exposure, and the current health of Canadian bus drivers.*** Canadian Journal of Psychiatry, 46, 149–155.

Vedantham, K., Brunet, A., Boyer, R., Weiss, D. S., Metzler, T. J., & Marmar, C. R. (2001). ***Posttraumatic stress disorder, trauma exposure, and the current health of Canadian bus drivers.*** Canadian Journal of Psychiatry, 46, 149–155.

Winkleby MA, Ragland DR, Fisher JM, Syme SL. ***Excess risk of sickness and disease in bus drivers: a review and synthesis of epidemiological studies.*** Int J Epidemiol 1988;17(2):255-62.