Expat Drivers Health Risk in Saudi Arabia

Name

Class

Date

writingsol.com

Abstract

In the current research study, the relationship between expat drivers and different problems being faced by them in Saudi Arabia, has been measured. The data of total 440 expat drivers has been taken to measure the relationship between expat drivers, obesity, mental illness, hearing loss and high blood pressure. The chi square test has been used to measure the association between expat drivers and high blood pressure, hearing loss, mental illness, and obesity. The results showed that there is a negative relationship of expat drivers with high blood pressure and obesity, while it holds positive relationship between expat drivers, mental illness and hearing loss.

Key Words: Obesity, Mental Illness, Obesity, Hearing loss, High blood pressure, expat drivers

writingsol.com

Expat Drivers Health Risk in Saudi Arabia

Introduction

In modern society, it is common for people to spend a huge amount of time in driving from one place to another. A vast majority of people have adopt driving as their profession, therefore "driving" is considered as an important source to bring financial stability in the lives of many people across the globe. Recently, the focus of research has been shifted to study to effect of driving on health outcomes of drivers.

It has been demonstrated in different researches that long commutation in a car give rise to the situations that compromise the health of individuals (Hatami et al., 2019). At a broader level, the health related issues mainly include the stress caused by the congestion of traffic, finding the appropriate parking space, communicating with other drivers, and safety concerns. All these issues are known as "travel impedance" (Hatami et al., 2019).

In relation to past researches, the major gap identified in the current study is about the inadequacy of health implications. At worldwide level, the driving is considered to be highly ubiquitous, therefore, understanding the implications of health are considered to be inadequate for the future researchers.

Moreover, irrespective of the fact that there are multi-dimensional impacts of health on driving, majority of the current researches have laid increased emphasis on one or small number of health outcomes. The current research makes important contribution to investigate the relationship between driving and the health outcomes and behaviors in the population sample of expat drivers in Saudi Arabia.

writingsol.com

It has been demonstrated in a large number of epidemiological researches that there is an increased risk of cardiovascular diseases among the drivers. It has been indicated by Hattori that in Japanese taxi drivers, the risk of ischemic heart disease is found to be 2.83. An increased risk of stroke has been identified in the professional group of drivers, with a ratio of 148 for women and 130 for men (Kobayashi, 2002).

A close examination between obesity and driving has been carried out in United States and it has been reported that use of driving appears to be lower in the countries that undergo lower obesity levels. A recent research was conducted in Atlanta, Georgia, in which it was reported that spending an additional hour each day in a vehicle can increase the chances of a driver to have obesity by 6% (Frank et al., 2004). In European states, the cross national analysis of obesity showed that rates of obesity were greater in states with greater densities of roadways and more vehicles (Jacobson, King & Yuan, 2011).

Long hours of working, sleep duration and shift work have been reported to be linked with obesity and overweight. Long hours of working, including working for approximately 50 hours a week and working overtime, has been associated with increased total obesity in the body (Lemke, et al., 2015).

Cab drivers are more likely to get occupational mortalities and morbidities such as musculoskeletal disorders, physical assaults and cardiovascular diseases. They also undergo a high level of stress and intense back pain. Drivers have adopted a profession that makes them get exposed to addicted to the tobacco and other habit forming substances, mental illness and physical illness. Their profession is highly distinctive because they take the responsibility for the lives of other people, either the ones who are on the road or the ones who are travelling with them in their vehicles (Rathi, et al., 2019).

writingsol.com

The noise of a car has a significant impact on the ability of a driver to listen properly. The vehicle's noise can impact different groups such as vehicle drivers, heavy traffic roads and dwellers. Different researches have been performed on the effects of noise pollution on the environment. It has been shown by the national research conducted in United States that 18 percent of individual experienced traffic noise on roads and it generally results in hearing loss problems among those individuals.

However, the resulting impacts of the noise pollution on the vehicle's driver specifically heavy vehicles intercity drivers have not been reported. Undergoing high level noise can have different impacts on drivers. Noise is considered as a sound that have unintended effects such as gastrointestinal ulcers, coronary artery diseases, hypertension, sleep disorders, and hearing loss (Pourabdian, 2019).

Research Problem

There are a lot of health problems that are being faced by expat drivers in Saudi Arabia. If the health outcomes of expat drivers remain unexplored, it may cause strain in hospital system.

Research Objectives

Some of the major objectives of the current study are enlisted down as under:

- To determine the expat drivers and obesity in Saudi Arabia.
- To study the relationship between expat drivers and mental health issues in Saudi Arabia.
- To investigate the relationship between expat drivers and high blood pressure in Saudi Arabia.
- To examine the expat drivers and hearing loss issues in Saudi Arabia.

writingsol.com

Unit of Analysis

In the current research, the unit of analysis will be individuals. It includes expat drivers in the Kingdom of Saudi Arabia.

Literature Review

1. Blood Pressure

The numbers of blood pressure less than 120/80 mm Hg are believed to fall in the normal range. If the blood pressure level of an individual fall in the normal range, he should pay close attention to heart healthy habits such as getting regular exercise and following a balanced diet throughout the day (Heart.org).

In recent researches, the attention of researchers has been diverted to the effect of driving as a health related behavior. It has been shown in numerous researchers that extended commuting in the car trigger conditions that make a compromise over the health of individuals. It generally includes the stress that occur as a result of traffic congestion. (Ding et al., 2014).

In addition, long time commuting substitute time towards the adoption and practice of other behaviors. It may impact the mental health of drivers because drivers find less time to sleep, does not get time to spend with friends or family members, and cannot prepare food (Ding et al., 2014). Lastly, continuously sitting to drive a car is one factor of sedentary behavior, which has been associated with increased risk of chronic diseases (Ding et al., 2014). A cross section study conducted in America found that every single hour spent in a car was related with a 6% rise in the odds of obesity (Ding et al., 2014).

writingsol.com

The nature of taxi drivers at commercial level entails different activities that generally range from long work durations, work pressure, sedentary lifestyle, and unhealthy dietary patterns; thus making them vulnerable to the increased problem of hypertension. Taxi drivers operating at commercial level are highly trusted source for carrying services, products and people from one place to another place. As such, the economy of different states somewhat shows increased dependence on this important group. When these drivers experience the problem of hypertension, the whole population gets significantly impacted.

The health related implications of high blood pressure among taxi drivers is considered to be a major cause of concern. While taking into account the important role that is being played by taxi drivers in society, the hypertension is not only going to affect taxi drivers, but it will equally impact the whole population. A little research has been conducted on the occurrence of hypertension in general population of taxi drivers, hence more insight have to be gained to explore the problem in depth.

Few studies on hypertension experienced by commercial drivers in different states such as Taiwan, Hong Kong, Korea, Brazil, Iran, India and Nigeria have been reported. Gaining a deeper insight into the magnitude of this issue among taxi drivers operating at commercial level is highly essential so that health policy makers remain informed that who have an ability to implement suitable strategies of intervention in developing an appropriate health program that meets the needs of taxi drivers operating at commercial level.

Appropriate epidemiological data is considered to be highly important in developing effective intervention and policies for the health of taxi drivers (Adedokun et al., 2017).

2. Obesity

writingsol.com

Body Mass Index (BMI) is the weight of an individual in kilograms divided by the square of height in meters. An increased BMI provides a reflection for the increased fatness in the body of an individual (Centers for Disease Control and Prevention, n. d).

Obesity is commonly reported in the drivers who continuously sit in the car to perform their duties. The drivers of a commercial motor vehicle are an occupation group with significant disparities of health, majority of which are directly associated with the distinctive features of their profession. By continuously sitting in a car, the drivers often gain unhealthy weight and it has impacted the commercial motor vehicle drivers in a disproportionate manner, as reported by the recent research conducted in United States on long haul health of commercial motor vehicle drivers.

It has been reported in the research that there are approximately 69% of obese drivers, which is quite a high percentage with respect to other population of working adults. Obesity and overweight are associated with different types of co morbidities such as sleep and musculoskeletal disorders, certain cancers and cardio metabolic disease, which eventually results in driving accidents (Lemke, 2015).

It has been suggested in past researches that sleep restriction may be linked to the increase in intake of food. A research has been performed by a researcher in which it has been demonstrated when limitation of sleep to 4 hours causes an increase in ghrelin levels and a decrease in leptin levels. These changes in neuroendocrine often give rise to an increase in the overall appetite of the drivers.

In order to satisfy the high appetite levels, drivers take the benefit of gaining an increased access to high fat, high calorie foods that can be available to them throughout the day at different truck

writingsol.com

stops and fast food outlets along their driving route (Kay & McLaughlin, 2014). Most of the drivers find their food on the different outlets, which eventually leaves an adverse effect on their health.

3. Hearing Loss

Driving is considered as a profession that expose people to a large number of psychological and physical stressors including safety risks such as accidents, ergonomic issues, oscillation, vibration and noise. Drivers are highly vulnerable to increased noise level because of working with faulty and old vehicles, horning or highly bumpy roads, and interacting with different individuals during the entire shift of their work.

In past, different researches have been carried out in industrial environment with respect to hearing loss caused by a certain occupation. However, only some researches have been carried out to investigate the problem of hearing loss in taxi drivers. It has been shown in a research that a hearing threshold in 22 percent of drivers was greater at frequencies that ranged from 3000 to 6000 Hz and an increase in the value of hearing loss was observed with age ((Beheshti, Chahak & Langari, 2016).

In a research conducted by Berjis et al. (2011) on heavy vehicle drivers, it has been demonstrated that threshold of hearing at 2000 Hz in the left subject's ear was significantly greater than the right ears. In different researches, the occurrence of hearing loss among drivers was found to be 32.6% to 55.4%. (Beheshti, Chahak & Langari, 2016).

4. Mental Illness

In India, the mental health of a taxi driver, which provides a reflection about the entire population of drivers, is considered to be poor. An estimation has been provided by the National

writingsol.com

Mental Health Survey (NHMS) that approximately 150 million Indian driver require care to treat mental illness, and about 10 percent of the drivers experience common mental disorders including risk of suicide, emotional stress, anxiety and depression Rathi et al., 2019).

The cab drivers belong to a group of people who are highly vulnerable to a range of mental and physical diseases. The lifestyle and working conditions of these drivers is deteriorating their health day by day. The schedule of their work is rarely fixed, and they work for longer durations to meet their financial needs. They often skip meals and consume whatever is available and cheap on the road.

A vast majority of the cab drivers do not have sufficient time to exercise, rest aside or sleep and only some of them think about their fitness and health. The bad physical condition of these drivers have a negative impact on their mental condition. Lack of sufficient sleep often results in sleepiness during work time, which eventually diminishes their memory, cognitive functions, psychomotor skills and give rise to mood disorders among drivers.

Apart from the poor physical and psychological conditions, other elements that trigger emotional responses in drivers includes the nature of their stressful work such as no sufficient time for recreation and relaxation, direct association between incentives and hours of work, constant road rage incidents, rude behavior shown by other drivers and customers, congested roads, and tight timelines (Rathi, et al., 2019).

Contrary to a large number of researches conducted on physical condition of bus drivers, there are only some researches that measured the association between psychological health of drivers and the occupational strain. For instance, in a research of 289 bus drivers in United Kingdom, it was found by Feickert & Forrester (1983) that the conflicting urban bus driving demands has

writingsol.com

given rise to increased levels of mental overload, fatigue and tension in taxi as well as bus drivers.

Long distance and urban drivers appears to have high occupational stress level as a result of specific characteristics exhibited by drivers (such as risk taking and aggression), maladaptive strategies of coping, role conflicts and pressure and job overload. Stress has appeared itself in the form of physiological abnormalities (gastrointestinal and cardiovascular disorders, increase in neuroendocrine hormone) and psychological sings such as mental overload, inability to relax and irritability. As an effect, high turnover and absenteeism was experienced among a group of driver (Evans, 2010).

A large number of taxi as well as commercial drivers experience anything from daily verbal abuse from the customers. It often leaves a negative impact on their mind. They also get highly exposed to fractures, lacerations and bruises to the upper body and upper head when they accidently carry a violent passenger with them. Such kind of incidents often give rise to increased psychological illness among taxi drivers over a period of time (including PTSD, depression or stress). As a result of such incident, the sense of well being diminishes among taxi drivers.

Additionally, different researches conducted in other English speaking states, specifically United States and Canada, have reported that taxi drivers who belong to minority or ethnic groups are highly vulnerable to high level of economic exploitation, racial discrimination, violence and threats from customers in comparison to their majority ethnic counterparts such as Americans and Europeans (Evans, 2010).

Methodology

writingsol.com

For the current research, the target population included the expat drivers living in the Kingdom of Saudi Arabia. Expat drivers were considered as the unit of analysis for study. As the data was to be collected from the group of expat drivers, therefore stratified random sampling was used to identify the expat drivers admitted to the hospitals of Saudi Arabia.

Data Collection Methods

The current study adopted a quantitative approach to measure the health related problems in expat drivers in Saudi Arabia. Quantitative research is taken into consideration so that problem can be quantified by producing numerical data that can be converted into usable statistics. It is taken into consideration to quantify the behaviors, opinions, attitudes and other defined constructs. Results are generalized from the larger sample population.

The data was collected from hospital by lean company. The profession of the sample taken for the current study showed that all of them were drivers. The blood pressure of each participant was obtained from the hospital. Moreover, the hospital also provided BMI of each participant, which was used to identify that whether a driver was obese or not. The hospital administration provided the data of total 369 drivers and 70 house drivers.

The hearing loss data was also provided to check the acuity of hearing loss in both right and left ear. The data for mental illness of each patient was also provided by hospital, which mainly included status for the appearance of mental illness, speech, behavior, cognition, orientation, memory, concentration, mood, thoughts and other problems related to mental illness in the drivers.

Respondent profile

writingsol.com

The behavioral or demographic profile of the respondents showed that majority of the respondents were selected with different nationalities such as Indian, Pakistani, Egyptian and Sri Lankan. The age of the participants was not disclosed by the hospital. The sample size was sufficiently large and the respondents selected to take participation in the study were having complete representation of target population.

The profile of drivers has been provided as under:

Obesity	BMI level varying between 16 to 33
Nationality	Pakistani
	Indian
	Egyptian
	Sri Lankan
Profession	Driver
BP Criteria	Normal
	Elevated
Hearing Loss	Left Hearing Acuity
	Right Hearing Acuity
Mental Illness	Appearance
	Speech
	Behavior
	Cognition
	Orientation
	Memory

writingsol.com

Concentration
Mood

Table: Showing the demographic profile of drivers undertaken for study

It has been shown in the above table that BMI measure of the drivers was taken from the hospital to analyze that whether they are suffering from obesity or not. The value of the BMI ranged from 16 to 33. Moreover, the data was collected about the drivers with different nationalities. These mainly included drivers from Pakistan, India, Sri Lanka and Egypt.

The profession of all the people for whom the data was collected, was driver. The blood pressure criteria was developed and it was estimated that a normal blood pressure of a common person ranges from 80 to 120. Hence, the BP criteria of drivers was measured on the basis of two different conditions: either as normal or elevated. The mental health issues were measured on the basis of appearance, speech, behavior, cognition, orientation, memory, concentration, mood, and thoughts. The hearing loss was checked for left hearing acuity and right hearing acuity.

Descriptive Statistics

The current section of the report has been divided into two different sections. In the first section, the statistics about the demographic variables of participants has been provided. It provided detail information about the frequencies of different constructs such as marital status, gender, nationality and profession.

In later part of the report, the Chi Square test has been applied to measure the relationship between expat drivers, obesity, high blood pressure, hearing loss and mental illness. The chi

writingsol.com

square test is basically a process in which the relationship between two categorical variables is tested in a certain population.

Statistics

		V5	V3	V6	Dependent Y
	Valid	440	440	440	440
	Missing	0	0	0	0

In the above table, V5 represents the marital status of the participants, V3 provides the distribution of gender while V6 has been used to measure the frequency of data in relation to the nationality of the participants. Dependent Y is a construct used to represent the profession of each participation who took participation in the current study.

V5

		Frequency	Percent	Valid Percent	Cumulative Percent
	MaritalStatus	1	.2	.2	.2
	married	259	58.9	58.9	59.1
	unmarried	180	40.9	40.9	100.0
	Total	440	100.0	100.0	

In the above table V5, the frequency for marital status of participants has been shown in detail. It clearly demonstrates that data of total 440 drivers was used to measure the relationship between

expat drivers and high blood pressure, obesity, hearing loss and mental illness. The above statistics have been provided to represent the demographic variable of marital status. It shows that data of 259 married drivers and 180 unmarried drivers was used to conduct the relationship between expat drivers, obesity, high blood pressure, hearing loss and mental illness.

V3

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	1	.2	.2	.2
male	439	99.8	99.8	100.0
Total	440	100.0	100.0	

The above table provides the statistics for the demographic variable of gender. It has been shown that data of male participants was used to analyze the results of current research study. The frequency distribution table does not show data for any of the female driver.

V6

		Frequency	Percent	Valid Percent	Cumulative Percent
Egyptian	125	28.4	28.4	28.4
Ghanaian	1	.2	.2	28.6
Indian	233	53.0	53.0	81.6
Nationality	1	.2	.2	81.8
Nepalese	5	1.1	1.1	83.0

	Pakistani	66	15.0	15.0	98.0
	Sri Lankan	8	1.8	1.8	99.8
	Ugandan	1	.2	.2	100.0
	Total	440	100.0	100.0	

In above table V6, the frequency distribution for the demographic variable of nationality has been provided in detail. It shows that data for people of different nationalities was taken into consideration. The researcher used data of 125 Egyptian drivers, 1 Ghanaian driver, 233 Indian drivers, 5 Nepalese drivers, 66 Pakistani drivers, 8 Sri Lankan drivers and 1 Ugandan driver with percentage values 28.4, 0.2, 53.0, 0.2, 1.1, 15.0, 1.8, and 0.2 respectively.

Dependent Y

		Frequency	Percent	Valid Percent	Cumulative Percent
	Driver	369	83.9	83.9	83.9
	House Driver	70	15.9	15.9	99.8
	Profession	1	.2	.2	100.0
	Total	440	100.0	100.0	

In the above table “Dependent Y”, the frequency distribution has been shown for profession of the participants. It showed that data shows that a total of 369 participants were drivers, while rest of the 70 participants were house drivers.

Chi Square Analysis

In this section of the report, chi square statistics has been provided for the four major variables such as obesity, high blood pressure (i.e. systolic and diastolic blood pressure), mental illness and hearing (left hearing acuity and right hearing acuity).

Systolic Blood pressure

In this section, the statistics have been provided to measure the relationship between expat drivers in Saudi Arabia and systolic blood pressure.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	30.989[a]	22	.096
Likelihood Ratio	26.739	22	.221
N of Valid Cases	437		

In the above table, the asymptotic significance level between expat driver and systolic blood pressure has been recorded as 0.096. It shows that there is an insignificant relationship between two variables and systolic blood pressure of the expat driver does not increase even in tough driving routines in Saudi Arabia. The results obtained for systolic blood pressure are not consistent with previous research studies in which it has been reported that frequent driving often increases systolic blood pressure of expat drivers.

Diastolic Blood Pressure

In this section, the statistics have been provided to measure the relationship between expat drivers in Saudi Arabia and diastolic blood pressure.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.164[a]	14	.820
Likelihood Ratio	10.862	14	.697
N of Valid Cases	437		

The relationship between two variables is considered to be significant when the significance value is less than 0.05. In the above table, the significance level of diastolic blood pressure and expat drivers has been recorded to be 0.82, which is high than 0.05. Hence, it can be stated that expat drivers do not experience high diastolic blood pressure with heavy or frequent driving routines in Saudi Arabia. The results obtained in current research are inconsistent with respect to previous research studies.

Obesity

In this part, the relationship between the factor of obesity has been measured in relation to expat drivers in Saudi Arabia.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	301.709[a]	298	.429
Likelihood Ratio	282.438	298	.733
N of Valid Cases	437		

In the above table, there is an insignificant relationship between expat drivers and obesity. The significance level of two variables has been recorded to be 0.429, which is greater than a normal significance level of 0.05. Hence, it can be stated that driving for a longer time span does not cause obesity among expat drivers in Saudi Arabia. The results obtained above (to measure the relationship between two variables) are not consistent with results of research studies conducted in past.

Hearing Loss

In this section of the report, the left and right hearing acuity of drivers has been measured in case of expat drivers in Saudi Arabia.

Left and Right Hearing Acuity

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)

writingsol.com

Pearson Chi-Square	440.000[a]	2	.000
Likelihood Ratio	14.171	2	.001
N of Valid Cases	440		

In the above table, the relationship between expat drivers and left/right hearing acuity has been presented. The results of chi square shows that both variables are highly significant with the significance value of 0.000. It shows that expat drivers in Saudi Arabia are at high risk of developing left and right hearing acuity if they engage in driving activity on frequent basis in Saudi Arabia. The results of current research study are consistent with results obtained in previous research studies.

Mental Illness

In this section, the mental illness of expat drivers has been measured with respect to appearance, thoughts, mood, concentration, memory, orientation, cognition, behavior and speech.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	440.768[a]	4	.000
Likelihood Ratio	15.568	4	.004
N of Valid Cases	440		

writingsol.com

The above table shows that there is a significant relationship between mental illnesses. The significance value of the two variables, i.e. expat drivers in Saudi Arabia and mental illness is considered to be highly significant with a significance level of 0.000. It shows that expat drivers who engage in frequent driving activities in Saudi Arabia often experience mental illness in appearance, speech, behavior, cognition, orientation, memory, concentration, moods and thoughts. The results obtained in the current research study are being supported by the results of past research studies.

Discussion

Summary of Findings

The results of the current study shows that systolic blood pressure has a negative relationship with expat drivers. The significance level between two variables has been recorded to be 0.096. Similarly, the insignificant relationship was found to be present between diastolic blood pressure and expat driver with a significance value of 0.820. The results of this study refutes the previous studies in which a positive relationship has been observed between expat drivers and high systolic and diastolic blood pressure among drivers. Similarly, the relationship between expat drivers and obesity holds negative, which refutes the results of the research studies conducted in past.

In contrast to high blood pressure and obesity, the positive relationship between expat drivers and hearing loss is found to be present. This result supports the results of past research studies. Similarly, there is a positive association between expat drivers and mental illness, which supports the results of past research studies.

Managerial Implications

writingsol.com

The managerial implications of the current research study suggests that government of Saudi Arabia should develop healthcare policies to ensure that expat drivers in Saudi Arabia should get free regular checkups. It will help country in reducing the mental health patients and hearing loss issues among expat drivers, which would eventually reduce the accidents in the country.

Limitations

The major limitation of current research study is that it does not conducted interviews with expat drivers to gain an insight into their practical experiences with issues such as mental health problems, high systolic or diastolic blood pressure, obesity and hearing loss.

Recommendation for Future Research

In future, the researchers should conduct the research survey to obtain the direct responses from the expat drivers. Moreover, the interviews can also be conducted to obtain knowledge about the relationship between expat drivers and the problems being faced by them.

writingsol.com

References

Adedokun, A. O., Ter, G. D., Owolabi, E. O., & Adeniyi, V. O. (2017). Driving to Better Health: Screening for Hypertension and Associated Factors Among Commercial Taxi Drivers in Buffalo City Metropolitan Municipality, South Africa. The Open Public Health Journal, 10 (1): 303-312.

Beheshti, M. H., Chahk, F., & Langari, A. (2016). Assessment of hearing loss among taxi and agency drivers in a city in northern Iran in 2011. JOHE, 4 (2): 70-75.

Berjis N, Soheilipoor S, Poorabdian S, Akbari S. (2011). Evaluating the Relative Frequency or Hearing Loss on Heavy Vehicles Derivers. Journal of Isfahan Medical School, 28 (120): 1-6.

Defining Adult Overweight and Obesity. (n. d). Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/obesity/adult/defining.html

Ding, D., Gebel, K., Phongsavan, P., Bauman, A. E., & Merom, D. (2014). Driving: A Road to Unhealthy Lifestyles and Poor Health Outcomes. PLOS One, 9 (6).

Evans, E. R. (2010). Job-related factors that predict the psychological health and well-being of urban taxi drivers. Australian Catholic University.

Feickert, D., & Forrester, K. (1983, May). Stress factors in urban public transport. Paper presented at the Conference on Working Environment in Urban Public Transport, Stockholm, Sweden.

Frank, L. D. (2004). Obesity relationships with community design, physical activity, and time spent in cars. Am J Prev Med, 27 (2): 87-96.

writingsol.com

Hatami, A., Vosoughi, S., Hosseini, A., & Ebrahimi, H. (2019). Effect of Co-Driver on Job Content and Depression of Truck Drivers. Safety Health Work, 10 (1): 75–79.

Jacobson, S. H., King, D. M., & Yuan, R. (2011). A note on the relationship between obesity and driving. Transport Policy.

Kay, G. G., & McLaughlin, D. (2014). Relationship Between Obesity and Driving. Curr Obes Rep.

Kobayashi, F. (2002). Blood Pressure and Heart Rate Vairbaility in Taxi Drivers on Long Duty Schedules. Journal of Occupational Health, (44): 214-220.

Lemke, M. K., Hege, A., Perko, M., Sonmez, S., & Apostolopoulos, Y. (2015). Work patterns, sleeping hours and excess weight in commercial drivers. Occupational Medicine, 65 (7): 725–731.

Pourabdian, S., Yazdanirad, S. Lotfi, S., Golshiri, P., & Mahaki, B. (2019). Prevalence hearing loss of truck and bus drivers in a cross-sectional study of 65533 subjects. Environmental Health and Preventive Medicine, 24 (78).

Rathi, A., Kumar, V., Singh, A., & Lal, P. (2019). A cross-sectional study of prevalence of depression, anxiety and stress among professional cab drivers in New Delhi. Indian J Occup Environ Med, (23): 48-53.

Understanding Blood Pressure Readings. Heart. Org. Retrieved from https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings

writingsol.com

writingsol.com