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## Common work related health problems of auto rickshaw drivers in India - Causes and strategies

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### Abstract

Health is one of the major indicators which reflecting the excellence of life and therefore it has been rightly said "Health is Wealth". Good health is an essential requirement for the enjoyment of every aspect of life. Share auto drivers are exposed to a number of health problems as a direct result of the posture adopted in driving. A diet high in fats and carbohydrates and low in fresh fruit, salads and fiber will add to the level of poor health. Auto rickshaw drivers are not properly concern their health due to bushy schedule on their work. The driving posture also causes problems for the digestive system and the incidence of smoking and drinking can also create health problems of auto drivers. Thus study aims to describe the occupational health problems of the auto rickshaw drivers in the study area.

**Keywords:** Transport, auto drivers, health problems

### Introduction

Auto rickshaws are a common means of public transportation in many countries in the world. It is a motorized version of the traditional pulled rickshaw or cycle rickshaw. Share autos are a preferred mode of transportation for short distances in Madurai: a city that is home to large number of migrants. The auto and share-auto drivers spend most of their time during working hours in roadway and/or in bus stands while the taxi drivers park their cars to wait for passengers mainly in taxi/bus stands or stops. Therefore, these drivers are at high risk to be affected by some risk factors. The majorities of drivers remain unaware of the health effects of noise and polluted air this is the main causes of the occupational hazards of auto and other drivers. Auto drivers have a lifestyle that is not conducive to good health. In addition to their exposure to noise and air pollution the job does not provide the same opportunities for social contact as many other jobs, and shift work, unsocial hours etc can disrupt both home life and social activity. Sitting in the driving position exerts considerable forces on the spine and can cause a number of problems with the musculoskeletal system in particular back pains, headaches, stress, and general stiffness. The driving posture also causes problems for the digestive system. The incidence of smoking and drinking can also create health problems and most surveys of the health of drivers that form the basis of this review have gone to considerable lengths to "control" for this aspect of lifestyle. Thus study aims to identify the common health risk factors and also with preventing occupational diseases on auto drivers in the study area.

### Review of literature

Raghavendraswamy Koppad and *et al* (2012) <sup>[1]</sup> studied the "Magnitude of and risk factors of Cardio-vascular diseases (CVDs) among auto rickshaw drivers" The study results indicated that high proportion behavioral and anthropometric risk factors of cardiovascular diseases in auto rickshaw drivers. It is clear that around 173<sup>rd</sup> of the auto rickshaw drivers are having behavioral risk factors like smoking tobacco, smokeless tobacco, alcohol use and overall sedentary activities near 50% of the study subjects are having generalized obesity and more than 173<sup>rd</sup> having central obesity this may be because of more sedentariness during there working hours, less of physical activities during leisure time and lack of awareness about hazards of obesity.

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Karen Belkic and *et al* (1994)<sup>[3]</sup> in their study “Mechanisms of cardiac risk among professional drivers” indicated that professional drivers have excess cardiac risk that is not fully explained by standard risk factors. They found that both the systolic and diastolic blood pressures were significantly higher among the bus drivers immediately preceding the driving shift, during most of the driving shift, and just after it than among the referents at matched times. During nonwork hours, the blood pressure of these two groups did not differ significantly. Increased heart rate has been consistently reported during professional and amateur driving by healthy subjects and cardiac patients. On the other hand a significant correlation was found, for workdays only, for the number of ventricular extra systoles with smoking, coffee intake, and lack of sleep. Aerobic flying and sea piloting have also been found to evoke ventricular arrhythmias in apparently healthy subjects.

Deborah and *et al* (2010)<sup>[2]</sup> in their study “Low Back Pain Among Professional Bus Drivers” tried to find the prevalence of Low Back Pain (LBP) among Israeli professional urban bus drivers, and evaluate the association between Low Back Pain in drivers and work-related psychosocial and risk factors. Professional drivers have been found to be at high risk for developing low back pain. They found that work-related ergonomic and psychosocial factors showed a significant association with Low Back Pain in Israeli professional urban bus drivers.

Daniel O Odebiyi and *et al* (2007)<sup>[4]</sup> in their study “The Prevalence of Low Back Pain in Commercial Motor Drivers and Private Automobile Drivers” intends to determine and compare the prevalence of Low Back Pain (LBP) in Commercial Motor Drivers (CMD) and Private Automobile Drivers (PAD). Low back pain was a major problem among the respondents; but was experienced more among CMD. The higher prevalence of Low back pain in Commercial Motor Drivers was attributed to the length of time spent sitting when driving.

Lyons J. (2002)<sup>[5]</sup> in his study “Factors Contributing to Low Back Pain among Professional Drivers” had conducted a review of current literature and possible ergonomic controls on the factors contributing to low back pain among professional drivers. He suggested that professional drivers are at an increased risk for low back pain and injury due to a variety of factors such as whole body vibration, prolonged sitting, awkward postures, lifting and carrying, and psychosocial issues.

## **Health Problems of Auto Rickshaw Drivers:**

### **I. Common health risk factors**

#### **Smoking**

Smoking substantially increases the risk of cardiovascular disease, is attributable to about 30 percent of all cancer deaths and is the leading cause of chronic lung disease.

#### **Obesity**

Obesity is a risk factor for many diseases such as stroke, cardiovascular disease, hypertension and diabetes. It also exacerbates problems with conditions such as arthritis or back pain.

#### **Hypertension (High Blood Pressure)**

High blood pressure increases an individual’s risk of heart disease, renal failure and stroke. Excess body weight correlates closely with increased blood pressure. Drivers

now need to have a blood pressure of 140/90 mm Hg or below in order to maintain their CDL license. If a driver has high blood pressure and/or is being medicated for it, he or she will need to be recertified more frequently.

### **Alcohol and Drug Abuse**

Alcohol and other drugs contribute to unintentional injury (such as motor vehicle accidents), suicide and other violent deaths. Alcohol is also a factor in a high percentage of chronic diseases.

### **Stress**

Stress can cause numerous mental and physical problems including immune system dysfunction, which can lead to types of arthritis, cancer and other diseases. Home life and social contacts are a powerful source of support for those experiencing stress. Absence of this support compounds the problem, making drivers even more susceptible to stress-related health issues.

### **Fatigue**

Driver fatigue is an especially important safety concern to commercial motor carriers and other drivers (Share-auto, Auto, Bus, etc.). High mileage, stressful driving conditions and other factors make fatigue a far greater concern to commercial motor vehicle drivers than that of the non-commercial drivers.

### **Sleep Apnea**

Sleep Apnea is a condition that restricts upper airway breathing and can cause sleep disorders that can impact a driver’s performance. This can cause a driver to experience daytime drowsiness and affect their reaction time and judgment in the same way as being intoxicated. An increase in age and body mass index (BMI) has been found to be the main causes of such disorders. Share-auto drivers diagnosed with sleep disorders should be temporarily disqualified until the condition is either ruled out or successfully treated.

### **Poor Eating Habits**

A good diet is one of the most important influences in an individual’s health, one of the greatest in need of change, yet one of the most difficult to change –particularly for drivers who are forced to eat most of their meals on the road. A diet high in fats and carbohydrates and low in fresh fruits, salads and fibres can create or add to health problems.

### **Physical Inactivity**

Physical inactivity increases the risk of many physiological diseases, including heart disease, high blood pressure, osteoporosis, diabetes, and breast and colon cancer, as well as the risk of psychological illnesses such as depression, anxiety and stress.

## **II. Occupational Health Diseases among Auto drivers**

Occupation and health interact with one another. The work environment and the nature of job contribute significantly in the causation of diseases. Professional driving is associated with long hours in a single body posture, under exposure to vibration, vehicle exhaust, and noise. Furthermore, the work is performed in an environment that demands constant vigilance. There are, however, many specific diseases for which significantly increased risks of mortality and morbidity have been reported.

### **Blood pressure**

High blood pressure, also called hypertension, is dangerous because it makes the heart work harder to pump blood out to the body and contributes to hardening of the arteries, or atherosclerosis, to stroke, kidney disease, and to the development of heart failure.

If a person has high blood pressure it means that the walls of the arteries are receiving too much pressure repeatedly - the pressure needs to be chronically elevated for a diagnosis of hypertension to be confirmed.

### **Causes of Blood Pressure**

- Being overweight
- Not exercising enough
- Eating an unhealthy diet
- consuming excess salt
- Drinking alcohol
- Smoking
- Sleepapnea
- Stress

### **Prevention of Blood Pressure**

- Maintain normal body weight for adults (e.g. body mass index 20–25 kg/m<sup>2</sup>)
- Reduce dietary sodium intake to <100 mmol/ day (<6 g of sodium chloride or <2.4 g of sodium per day)
- Engage in regular aerobic physical activity such as brisk walking (=30 min per day, most days of the week)
- Limit alcohol consumption to no more than 3 units/day in men and no more than 2 units/day in women
- Consume a diet rich in fruit and vegetables (e.g. at least five portions per day)

### **Back pain**

The human back is composed of a complex structure of muscles, ligaments, tendons, disks and bones - the segments of our spine are cushioned with cartilage-like pads. Problems with any of these components can lead to back pain.

### **Causes of back pain**

- Bending awkwardly or for long periods
- Lifting, carrying, pushing or pulling heavy objects
- Slouching in chairs
- Twisting awkwardly
- Overstretching
- Driving or sitting in a hunched position or for long periods without taking a break
- Overusing the muscles – for example, during sport or repetitive movements

### **Prevention of Back pain**

- Maintain regular Exercise.
- Build muscle strength and flexibility.
- Maintain a healthy weight.
- Stand smart, Maintain a neutral pelvic position.(Good posture can reduce the stress on back muscles)
- Sit smart, choose a seat with good lower back support. (Change your position frequently, at least every half-hour)
- Lift smart, Avoid heavy lifting.(Find a lifting partner if the object is heavy or awkward)

### **Cardiovascular diseases**

Cardiovascular diseases include illnesses that involve the blood vessels (veins, arteries and capillaries) or the heart, or both - diseases that affect the cardiovascular system.

### **Causes of Cardiovascular diseases**

- Heart defects you're born with (congenital heart defects)
- Coronary artery disease
- High blood pressure
- Diabetes
- Smoking
- Excessive use of alcohol or caffeine
- Drug abuse
- Stress
- Some over-the-counter medications, prescription medications, dietary supplements and herbal remedies
- Valvular heart disease

### **Prevention of Cardiovascular diseases:**

- Don't smoke
- Manage your blood sugar
- Get your blood pressure under control
- Lower your cholesterol
- Know your family history
- Stay active
- Lose weight
- Eat healthy

### **Head ache**

Headache is a broad term that encompasses many different things. Headaches are pains that occur in any region of the head; they can occur on both sides the head or be isolated to a certain location.

### **Causes of Head ache**

- Alcohol, particularly red wine
- Certain foods, such as processed meats that contain nitrates
- Changes in sleep or lack of sleep
- Poor posture
- Skipped meals
- Stress
- Dehydration — not drinking enough water
- Hormonal changes

### **Prevention of Head ache**

- All foods you eat
- All beverages you drink
- Medicines you take
- Right time wake up and go to bed
- All exercise and any other physical activities you undertake
- Maintain stress reduce activities
- Abstain from alcohol and drug use

### **Stomach pain**

Abdominal pain is pain that you feel anywhere between your chest and groin. This is often referred to as the stomach region or belly.

### **Causes of Stomach pain**

- Indigestion

- Constipation
- Stomach virus
- Food poisoning
- Food allergies
- Gas
- Lactose intolerance
- Ulcers
- Gallstones
- Kidney stones
- Endometriosis
- Crohn's disease
- Urinary tract infection
- Gastroesophageal reflux disease (GERD)
- Appendicitis

#### **Prevention of Stomach pain**

- Eat small meals more frequently.
- Make sure that your meals are well-balanced and high in fiber.
- Drink plenty of water each day.
- Medicines you take
- Exercise regularly.
- Limit foods that produce gas
- Abstain from alcohol and drug use

#### **Musculoskeletal Disorders**

Musculoskeletal Disorders or MSDs are injuries and disorders that affect the human body's movement or musculoskeletal system (i.e. muscles, tendons, ligaments, nerves, discs, blood vessels, etc.). Common MSDs include: Carpal Tunnel Syndrome. Tendonitis. Muscle / Tendon strain.

#### **Causes of Musculoskeletal Disorders**

- Poor overall health habits
- Poor rest and recovery
- Poor nutrition, fitness and hydration
- Direct mechanical pressure on body tissue
- Vibrations work environment
- Poor posture
- Repetitive movements
- Manual handling,
- Awkward movements
- Forceful hand applications

#### **Prevention of Musculoskeletal Disorders**

- Avoid manual handling of heavy objects
- Reduce mass of objects or numbers of handlings per day
- Reduce repetition frequency
- Repeated change between activation and relaxation of muscles
- Maintain regular exercise
- Reduction of negative social factors
- Avoid vibration work environment
- Eat healthy foods

#### **Chronic Ailment diseases**

A chronic condition is a human health condition or disease that is persistent or otherwise long-lasting in its effects or a disease that comes with time. The term chronic is often applied when the course of the disease lasts for more than

three months. Common chronic diseases include arthritis, asthma, cancer, COPD, diabetes and viral diseases such as hepatitis C and HIV/AIDS.

#### **Causes of Chronic Ailment diseases**

- Drinking too much alcohol
- Lack of exercise (physical inactivity)
- Unhealthy diet
- Tobacco use
- Poor nutrition fitness and hydration
- Changes in sleep or lack of sleep
- Excess physical activity
- High blood pressure

#### **Prevention of Chronic Ailment diseases**

- Avoid Tobacco Use
- Maintain a Healthy Weight
- Maintain Daily Physical Activity and Limit Television Watching
- Eat a Healthy Diet
- Raise awareness for chronic non communicable diseases
- Promote development and implementation of national policy & strategy
- Encourage the dissemination of scientific knowledge, experiences and best practices
- Abstain from alcohol and drug use

#### **Psychological distress**

Psychological distress is a general term that is used to describe unpleasant feelings or emotions that impact your level of functioning. Learn about the causes of psychological distress, the symptoms, and more.

#### **Causes of Psychological distress**

- Reactions and support from family, friends, and/or professionals
- Individual's personal history hearing about violence to or sudden death of someone close
- physical assault, including rape, incest, molestation, domestic abuse
- Serious bodily Stress
- Cancer and other medical illness
- Divorce
- Heavy job stress
- Adverse social experiences
- Adverse work experiences
- Mental illness

#### **Prevention of Psychological distress**

- Treating comorbid psychiatric illness
- Enhancing problem-solving coping
- Facilitating mourning and grieving
- Reducing stress
- Enhancing the positive appraisal of uncertainty
- Increasing personal control
- Increasing social support
- Educating patients, families, and others

#### **Cancer**

Cancer is not one disease, but a large group of almost 100 diseases. Its two main characteristics are uncontrolled

growth of the cells in the human body and the ability of these cells to migrate from the original site and spread to distant sites. If the spread is not controlled, cancer can result in death.

#### **Causes of cancer**

- Tobacco use (22% of cancer deaths)
- Obesity (10% of cancer deaths)
- Lack of physical activity
- Poor diet
- Drinking alcohol
- Sun and UV Exposure
- Radiation Exposure
- Environmental pollutants

#### **Prevention of Cancer**

- Eat a healthy diet
- Maintain a healthy weight and be physically active
- Protect yourself from the sun
- Get immunized
- Avoid risky behaviors (ex: sharing needles, blades)
- Get regular medical care
- Don't use too much of alcohol and drugs
- Don't use tobacco

#### **Conclusion**

The autos are one of the most important means of transport in major cities in India, especially in Tamil Nadu. The majorities of drivers remain unaware of the health effects of noise and polluted air this is the main causes of the occupational hazards of auto and other drivers. Mostly auto rickshaw drivers affected worst on their health because of their workload and stress. So, majority of drivers used some bad habits to relieving their stress, its adversely affected auto driver's health. Health issues have become the biggest and most important issues in the informal sectors like auto. The driving posture also causes problems for the digestive system. The incidence of smoking and drinking can also create health problems and most surveys of the health of drivers that form the basis of this review have gone to considerable lengths to "control" for this aspect of lifestyle. So, it is suggested that the government tries to seek out information on how to improve health status, awareness and wellness of the auto drivers.

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