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A Study on the Prevalence of Hypertension and its Risk Factors among Auto-rickshaw drivers of selected areas of Nellore city, Andhra Pradesh.

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ABSTRACT

Back ground: In India auto-rickshaws are main mode of transport in urban and semi-urban areas. Drivers are exposed to harmful environment such as pollutant gases, continuous noise and whole body vibration as well as harmful lifestyle such as irregularity of intake of meals, bad posture while driving and stressful occupational pressures due to their working conditions. **Objectives:** To study the prevalence of hypertension among auto-rickshaw drivers at Nellore city. To study the association of the risk factors with hypertension among auto-rickshaw drivers. **Materials and Methods:** A cross-sectional study was done for a period of two months on 135 auto-rickshaw drivers at the auto-rickshaw stand near Narayana Medical College, Nellore (D), Andhra Pradesh. Data was collected using pre-designed, pre-tested, semi structured questionnaire. **Statistical Analysis:** Data collected is entered in MS Excel, and appropriate statistical analysis is done using SPSS Version 23. **Results:** Prevalence of hypertension among the auto-rickshaw drivers is 43%. Among the study subjects 40.7% were smokers; while 24% of the subjects were chewing tobacco and 52% were alcoholics. **Conclusion:** Prevalence of hypertension among auto-rickshaw was very high; they need regular health check-ups and appropriate treatment is recommended.

Key Words: Prevalence, Risk factors on auto-rickshaw drivers, Hypertension.

INTRODUCTION

In India auto-rickshaws are main mode of transport in urban and semi-urban areas. Drivers are exposed to harmful environment such as pollutant gases, continuous noise and whole body vibration as well as harmful lifestyle such as irregularity of intake of meals, bad posture while driving and stressful occupational pressures due to their working conditions¹. Due to the above said reasons they are likely to develop problems of vision, hearing, gastro-intestinal and life-style disorders like Hypertension, Diabetes, Coronary Vascular Diseases, etc². This study was taken up as there are very few studies showcasing the problems faced by auto-rickshaw drivers.

Objectives:

1. To study the prevalence of hypertension among auto-rickshaw drivers of Nellore city.
2. To study the socio-demographic and risk factor profile of the above said population.

MATERIAL AND METHODS

After approval by Institutional Ethics Committee a cross-sectional study was done for a period of two months on 135 auto-rickshaw drivers at randomly selected auto-rickshaw stands of Nellore City, Andhra Pradesh. After

obtaining informed consent, data was collected using pre-designed, pre-tested, semi structured questionnaire with details about their demographic features, habits, diet, physical activity etc., Anthropometric measurements like height, weight, waist and hip circumference were measured. Blood pressure measurements were made twice at 5 minute intervals and the average of the two was taken as their blood pressure.

Statistical Analysis:

Data collected was entered in MS Excel, and analyzed using SPSS version 23.0. Mean, standard deviation were calculated for continuous data. Frequencies and percentages for categorical data.

RESULTS

Prevalence of hypertension among the auto-rickshaw drivers of Nellore city was found to be 43%. 74% of the 135 study subjects were in the 31-50 years age group. 80% of them were Hindus, 50% belonged to backward class followed by 26% schedule caste. 94% of the subjects were married and 83.7% belonged to nuclear families. (Table: 1) Only 17% of the study subjects had more than high school education. (Fig: 1) and 51% of them were from Upper Middle class (Fig: 2). 72% of the

135 study subjects had own vehicles and almost 81% were working full-time. (Table: 2).

Among the study subjects 40.7% were smokers among whom 49% were smoking for more than 15 years and 27% of them smoked greater 10 cigarettes/day. 24% of the subjects were chewing tobacco and 52% were alcoholics among whom 28.6% were consuming alcohol for more than 15 years (Table: 3)

Table 1: showing the socio-demographic profile of study subjects

Variable	Frequency	Percentage
Age		
21-30 yrs	18	13.3
31-40 yrs	51	37.8
41-50 yrs	49	36.3
51-60 yrs	13	9.6
>60 yrs	4	3
Total	135	100
Religion		
Hindu	108	80
Muslim	9	6.7
Christian	18	13.3
Total	135	100
Caste group		
General	27	20
OBC	67	49.6
SC	35	25.9
ST	6	4.4
Total	135	100
Marital status		
Single	8	5.9
Married	127	94.1
Total	135	100
Type of family		
Nuclear	113	83.7
Joint	22	16.3
Total	135	100

Fig 1: Pie diagram showing the education of study subjects

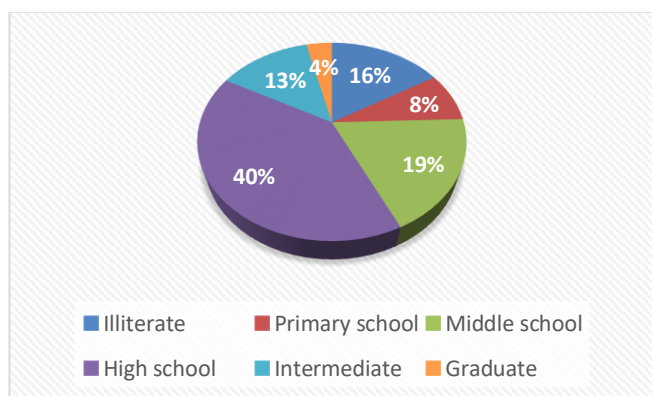


Table2: showing the job profile of study subjects

Variable	Frequency	Percentage
Vehicle		
Own	98	72.6
Rented	37	27.4
Total	135	100
Working pattern		
Full time	109	80.7
Part time	26	19.3
Total	135	100

Fig 2: showing the socio-economic status of the study subjects

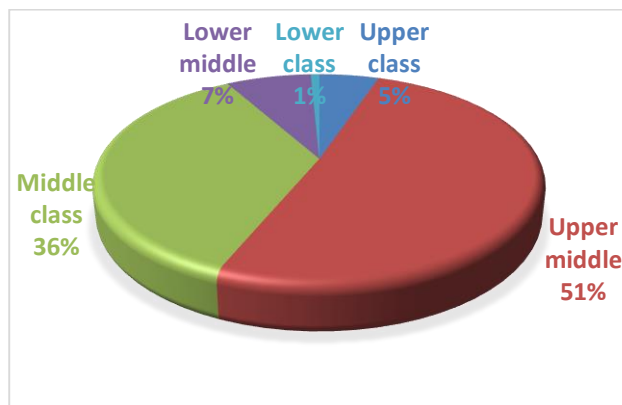
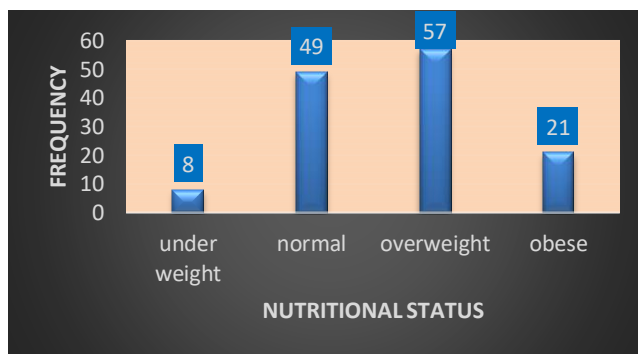


Fig: 3 distribution of study subjects according to their nutritional status



Diet History:

97% of the study subjects were taking mixed diet among whom 25% consumed non-veg. food for 3 days or more. Almost 95% were having the concept of added salt. 40% of the study subjects were consuming fruits only once a week or occasionally. 36% were having fast foods weekly twice. About 90% of the subjects were taking tea/coffee and among them almost 52% were taking 3 or more servings/day. 42% of the subjects were overweight and 15.6% were obese. Only 36% had a normal BMI. (Fig-3). Only 7% had regular physical exercise, among whom 90% were walking. 60% exercised less than 30 minutes/day. Though 99% Of the study subjects were stressed only 4.4% practiced yoga/meditation.

Table 3: showing the distribution of study subjects according to risk factors

Variable	Frequency	Percentage
Smoking		
Yes	55	40.7
No	80	59.3
Total	135	100
Duration of smoking		
<5 yrs	13	23.6
5-10 yrs	12	21.8
11-15 yrs	3	5.5
>15 yrs	27	49.1
Total	55	100
No. of cigarettes/day		
<5	24	43.6
05-Oct	16	29.1
>10	15	27.3
Total	55	100
Tobacco chewing		
Yes	33	24.4
No	102	75.6
Total	135	100
Alcohol		
Yes	70	51.8
No	65	48.2
Total	135	100
Duration of alcohol consumption		
<5 yrs	17	24.3
5-10 yrs	28	40
11-15 yrs	5	7.1
>15 yrs	20	28.6
Total	70	100

DISCUSSION

In this present study, the prevalence of Hypertension among auto -rickshaw drivers is 43%. While a study conducted in the Nagpur city of Maharashtra in 2014 among auto-rickshaw drivers in the age group 20-65 years by S S Chaudhary et al., showed a prevalence of hypertension of 35.14%¹. A study conducted at Davangere city of Karnataka, among auto-rickshaw drivers in the age group of 16-55 years in 2012 by Raghavendraswamy Koppad et al., the prevalence of hypertension was 17%³. A study conducted at Agra city among auto -rickshaw drivers, in the age group of 16-65 years in 2015 by Singh SP et al., the prevalence of hypertension was 30.23%⁴. A study conducted among bus drivers in North Kerala in the age group of 21-60 years in 2008, the prevalence of hypertension was 41.9%⁵. Another study conducted among bus drivers in the age group of 21-60 years in Visakhapatnam, AP, in 2015, by

S. Bhaskara Rao et al., the prevalence of hypertension was 36%⁶.

Conclusion:

Prevalence of Hypertension among the auto-rickshaw drivers was 42% which is high when compared to general population. Risk factor prevalence: 40.7% were smokers among whom 49% were smoking for more than 15 years and 27% of them smoked more than 10 cigarettes/day. 24% of the subjects were chewing tobacco and 52% were alcoholics among whom 28.6% were consuming alcohol for more than 15 years. 99% of the study subjects were experiencing stress. 97% of the study subjects were taking mixed diet among whom 25% consumed non-veg. food for 3 days or more. Almost 95% were having the concept of added salt. 40% of the study subjects were consuming fruits only once a week or occasionally. 42% of the subjects were overweight and 15.6% were obese.

Recommendations:

1. As most of the auto drivers were smokers or alcoholics, they should be educated about the long term complications and motivate them to reduce those habits.
2. They should also be told about the positive effects of physical activity and healthy diet. Importance should be given to consumption of fresh fruits, vegetables and dietary fiber.
3. As 99% of the study subjects were stressed, they should be motivated to practice yoga/ meditation or cultivate any good hobbies.
4. Those who were already on treatment for hypertension should be told the importance of drug compliance and how it would help to control their blood pressure.

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