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Study on Health Status of the Workers in the Transport Sector

Edirisinghe B L
MD scholar in Swasthavritta, Post graduate Institute of Indigenous Medicine, Sri Lanka

Matarage N P
Community Medical Officer –In charge (Maharaga AGA Division)

Kulathunga W M S S K
Senior lecturer, Grade 1, Institute of Indigenous Medicine, **Sri Lanka**
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Abstract

A Bus depot is a transport system's operating base. It provides parking accommodation, servicing and maintenance facilities for buses and administrative function and facilities for the staff. Operators may have their own facilities in very basic level. The principal operational tasks that carried by the depot are allocating buses and crews to each duty, Dispatching buses according to schedule and processing cash paid in by conductors or drivers. The objective of the study was to define health status of the staff of the Bus depot at Maharagama. This was descriptive cross- sectional study carried out in depot staff at Maharagama. All study samples has done the screening tests such as BP, Random Blood Sugar, Body mass index, urine trace identification of Non communicable diseases and Astavidapriksha. Sample size for the study was 54. Response rate was 100%. Results were calculate by using SPSS 16 version presenting descriptive statistics such as mean, standard deviation and frequencies. The ages of the study participants ranged from 29 to 56 years, with mean age of 42.36 + 6.76 years. 97.5% of them were single, 2.5% of them were female and they were working as office staff. Majority of the respondents were bus drivers representing 58.2 %(71) of the sample. Nearly one fourth of the respondents were healthy not any victim of Non communicable diseases presenting 30% (36). There was a significant differences among the nutritional status and Non- communicable diseases of the respondents' following the X2 (1, N=120) = 0.422, p = 0.031. It shows that there was a relationship between nutritional status and Non- communicable diseases of the workers at the Bus depot which is p value less than 0.05.

Key words: Drivers, Health status, Non communicable diseases.

1. Introduction

A Bus depot is a transport system's operating base. It provides parking accommodation, servicing and maintenance facilities for buses and administrative function and facilities for

the staff. Operators may have their own facilities in very basic level. The principal operational tasks that carried by the depot are allocating buses and crews to each duty, Dispatching buses according to schedule and processing cash paid in by conductors or drivers. In a depot very hardworking duties are doing by bus drivers, conductors and mechanic who are repairing buses. Due to the busiest daily routine they neglect to pay attention on their health. The health condition of public transport drivers is one of the factors playing a role in assuring safety of passengers (Zuzanna Szubert at el, 2005). According to WHO, Nutritional status of an individual is the condition of the body as a result of the intake, absorption and use of nutrition? Study has shown that the Nutrition is a fundamental pillar of human life, health, and development across the entire lifespan (WHO, FAO, 1992). WHO has shown that from the earliest stages of fetal development, at birth, through infancy, childhood, adolescence, and into adulthood and old age, proper food and good nutrition are essential for survival, physical growth, mental development, performance of the productivity and well-being (WHO, 2000). Studies from developed countries reported obesity epidemic, which is one of the major reasons for non-communicable diseases (NCD. Alliance report 2012–2013). Over nutrition also has become a serious public health problem in the world. From 1975 t0 2016, the world wide prevalence of obesity has nearly tripled. According to WHO, in 2016, more than one third of adults were overweight (39%) and were obese 13%. Some older studies conducted to assess the nutritional status among male adult workers in developing countries showed that underweight was prevalent and low overweight and obesity were present (M. D. Hossain at el, 2015). Researches have shown that if there is increase in occupational stress it affects nutritional status and it will create health problems (Ronnenbeg, A.G at el, 2000). Many studies have indicated that interrelation between nutritional status and occupational stress (Medhi, G.K. at el, 2006) Studies have proved that bus drivers were suffered from cardiovascular diseases including hypertension, gastrointestinal diseases including peptic ulcers and muscular skeletal problems including back and neck pain. The assessment of pathologies occurring in this occupational group is essential from the prevention point of view.

2. Objectives

The aim of the study was to identify the health status of the staff of the Bus depot at Maharagama.

3. Methodology

This was descriptive cross- sectional study carried out in depot staff at Maharagama. All study samples has done the screening tests such as BP, Random Blood Sugar, Body mass index, urine trace identification of Non communicable diseases and Astavidapriksha. Sample size for the study was 54. Response rate was 100%. Results were calculate by using SPSS 16 version presenting descriptive statistics such as mean, standard deviation and frequencies.

Done screening test in following areas

- Astavida pariksha
- Blood pressure

- Pulse rate
- Body Mass index
- Random Blood Sugar
- Urine trace
- Identification of Non communicable diseases
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4. Results

A total number of the participants for the screening program were 120. The ages of the study participants ranged from 29 to 56 years, with mean age of 42.36 ± 6.76 years. 97.5% of them were single, 2.5% of them were female and they were working as office staff. Majority of the respondents were bus drivers representing 58.2 %(71) of the sample. 93.4% (114) of them were married. 98.4% of them were Sinhalese and Buddhist. Table 1 shows that the demographic characteristics of the working categories of the working staff.

Table 1: Socio- demographic characteristics of the respondents

Socio- demographic characteristics		N (%)
Sex	Male	117 (97.5%)
	Female	3 (2.5%)
Marital status		
	Married	114 (95%)
	Unmarried	6 (5%)
Buddhist		120 (100%)
Race	Sinhalese	120(100%)
Occupation		
	Driver	71 (58.2%)
	Conductor	34 (27.9%)
	Mechanic	8(6.6%)
	Officer	7 (5.7%)

Health Status of the respondents According to Ashtavida pariksha

Majority of the respondents were having normal pulse rate presenting (117.6) 98% and 2% of them were having tachycardia. They were taking allopathic medicine for that condition and also they were bus drivers. 97.5% of the respondents were having normal frequency of urination. Most of the respondents were having normal urine presenting 110 (91.7%). 82.8% (101) of the respondents were had normal mala pravrthi. 19% of them were suffered from constipation due to intake of less water. 87.7% (107) having normal sounds of the heart. 13% (10.7) were having abnormal sounds of the heart.100% (120) were had normal vision. When investigation of the tongue 85.2% (104) of the respondents were having nirama condition and 14.8% (16) were had sama condition.

According to their akruthi pariksha, 98.4% (118) of them were had normal akruthi. 0.8% were had vikruthi deha which is congenital. Table 2 shows the result of Ashtavida pariksha of the respondents. Table 2 shows the Astavidha parikasha of the respondents.

Table 2; Astavidha parikasha of the respondents.

Type of pariksha	N (%)
Nadi(Pulse)	
Normal	117 (97.5%)
Trachycardia	3 (2.5%)
Bradicardia	0
Muthra (Urine)	
Normal	112 (93.3%)
Poly uria	8 (6.7%)
Mala (Stoo)	
Normal	101 (84.2%)
Constipation	19 (15.8%)
Jihva(Tongue)	
Normal	104(86.7%)
Coated	16 (13,.3%)
Druk (Eyes)	
Normal	120 (100%)
Sparsha (Touch)	
Normal	110 (91.7%)
Pain	10 (8.3%)
Sabdha (Sound)	
No Crepitation	107 (89.2%)
Crepitation	13 (10.8%)
Akruthi (Body structure)	
Normal	118 (98.3%)
Abnormal	2 (1.7%)

In sparsha pareeksha 10 (8.3%) were had sparsha asakyatha due to sandhi shulatha. Specially those who were with constipation all those suffer from joint pains. According to Akruthi pariksha, 118 (98.4%) of the respondents were having normal akruthi in their body structure but 2 (1.6%) of them had abnormalities.

Outcome of the vaykrutha pariksha (Investigations) of the respondents.

Table 3 shows the investigation outcome of the respondents.

Table 3: Investigation outcome of the respondents

Type of Investigation	N (%)
Random blood sugar	
Normal	104 (86.7%)
High	16 (13.7)
Blood pressure	
Normal	105 (87.5)
High	8 (6.7%)
Low	7 (5.8%)
Urine albumin trace	
Normal	110 (91.7%)
trace	20 (8.3)

Majority of the respondents' random blood sugar were normal presenting 85.2% (104). 86.1% (105) of the respondents were had normal blood pressure. According to the urine albumin test outcome, almost all the respondents were not trace in 91.7% (110) .respondents.

Health status of the respondents

Table 3 shows the investigation outcome of the respondents.

Type of the diseases	N (%)
No NCD	36 (30%)
Diabetic	45 (37.5%)
Hyperlipidemia	3 (2.5%)
Hypertension	4 (3.33%)
Diabetic, Hypertension	1(0.83)
Diabetic, Cholesterol, Hypertension	1 (0.83)
Sandhi roga (Joint pains)	14(11.7%)
Gastritis	15 (12.5%)
Cattah	1(0.83%)
Total	120 (100%)

Considering the health status of the respondents nearly one fourth of the respondents were healthy not any victim of Non communicable diseases presenting 30% (36). There was only who is suffered from diabetic, hyperlipidemia and Hypertension. But most of them were suffered from Diabetic mellitus which was 37.5% (45) of the sample. According to their Body mass index it has calculated the nutritional status of the respondents. Table 4 shows the Nutritional status of the respondents.

Table 4: Nutritional Status of the respondents

Nutritional status	N (%)
Low weight	2 (1.67)
Normal weight	64 (53.33)
Over weight	54 (45%)
Total	120 (100%)

More than half of the respondents were normal weight which was 53.33% (64) but 45% of them were overweight.

Comparing the Relationship between nutritional status and the Non-communicable diseases of the respondents.

Table 5 shows that the relationship between nutritional status and the non-communicable diseases of the respondents.

Nutritional status	Non communicable Diseases								
	No NCD	Diabetic	Hyperlipidemia	Hypertension	Diabetic, Hypertension	Diabetic, Cholesterol, Hypertension	Sandhiroga	Gastritis	Other
Low weight	0	1(0.83%)	0	0	0	0	1 (o.83%)	0	0
Normal weight	20 (16.7)	19 (15.8%)	0	3(2.5%)	1(o.83%)	0	9 (7.5%)	11 (9.16%)	1(o.83%)
Over weight	16 (13.3%)	25(20.8%)	3(2.5%)	1(o.83%)	0	1(o.83%)	4(3.33%)	4(3.33%)	0
Total	36 (30%)	45(37.5%)	3(2.5%)	4(3.33%)	1(o.83%)	1(o.83%)	14 (11.7%)	15(12.5%)	1(o.83%)

There was a significant differences among the nutritional status and Non- communicable diseases of the respondents' following the X^2 (1, N=120) = 0.422, p = 0.031. It shows that there was a relationship between nutritional status and Non- communicable diseases of the workers at the Bus depot which is p value less than 0.05.

5. Discussion

Present study proved that the more than half of the staffs were victims of the Non-communicable diseases. Similar study done by the Wang at el, 2001 has showed the pattern of that risk of Coronary heart diseases morbidity and mortality for bus drivers (Wang, P. D., & Lin, R. S.at el, 2001). Also study done by Winkleby et al, 1988 found out 42% of the Russian bus drivers had hypertension with positive relationship between hypertension and length of services (Winkleby, M. A. at el 1988). Present study showed that the 11.4% of the respondents were with shandhi roga (joint pains) .Similar study also proved that that employment in the municipal transport system is the risk factor responsible for the development of serious diseases such as musculoskeletal disorders and neoplasms (Suzanna szubert at el 2005). In the present study more than half of the respondents were drivers and also 45% of the respondents were overweight. 75% of them were taking their meals from out door. This combination has proved by showing that Smoking and systolic blood pressure rates were similar between the drivers and the control group, however drivers were more obese (Hedberg, Jacobsson, at el, 1993). Obesity as a CHD risk factor has been implicated along with driver's irregular eating habits, low levels of physical activity at work and at leisure, smoking and even poor social networking (Hedberg, G. E at el, 1993).

6. Challenges

Workers who were working as bus drivers, conductors and mechanics were faced more health challenges in their working setup. Mainly meals of their today life have to take from outdoor due to the long distance travel and the roaster system.

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