Assessing the correlation between Body Mass Index (BMI) and Blood Pressure (BP) of commercial drivers; a case of Madina lorry station

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***Abstract*: The ravages caused by blood pressure on humanity are alarming, especially in Ghana, where voluntary medical check-ups are not a priority for many. This study was a cross-sectional survey with the goal of determining the relationship between commercial drivers' Body Mass Index (BMI) and Blood Pressure (BP) at the Madina lorry station. Using the purposive sampling technique, 150 male commercial drivers from the Madina main lorry station were chosen for the study. It emerged from the study that there is positive correlation between BMIs and BP measurements among commercial drivers at Madina lorry station and a statistically significant relationship between age and blood pressure of respondents. The study therefore, recommend that GPRTU could organize weekly programs to engage drivers in some physical activities.**

***Keywords*: Body Mass Index (BMI), Blood Pressure, hypertension.**

I. INTRODUCTION

Hypertension, also known as BP (Blood Pressure) in Ghana, is a persistent increase in blood pressure with readings of 140/90 millimeters of mercury (mmHg) or higher (WHO, 2015). Many people link high blood pressure with persons who are naturally stressed. Hypertension and personality features, on the other hand, have been shown in research to have no relationship. (AHA, 2015). The majority of instances are primary hypertension, which means that the cause of the hypertension is unknown. Age, family history, smoking, alcohol consumption, physical inactivity, and poor dietary habits have all been identified as risk factors for primary hypertension (National Kidney Foundation, 2015, World Heart Federation, 2012c). Hypertension has been associated with an increased risk of driving accidents in various studies (Brookes, 2008). Hypertensive drivers are more likely than healthy drivers to be involved in catastrophic accidents, according to a research by Ashraf (2019). The Ghanaian Times reported on a 40-year-old commercial driver who experienced a stroke and had a blood pressure of 190/120mmhg at the time he was preparing to go to work on February 18, 2015. This could have resulted in a traffic accident if it had happened while he was driving. According to US federal transportation laws, a person with a known hypertension is ineligible to drive a commercial motor vehicle (Electronic Code of Federal Regulations, 2015). This indicates that commercial drivers' blood pressure levels are a source of worry in the United States. A driver with severe hypertension may be more likely than a healthy driver to cause a car collision. In Ghana, however, despite the fact that a road accident occurs every day, the causes have been attributed to substandard roads, driver errors on the road, and a lack of links to driver health and safe driving. Hypertension issues can be avoided by being aware of your blood pressure level, controlling it, and adopting good lifestyle habits (Mayo Clinic Staff, 2015).

Statement of Problem

The growing rate of hypertension and its consequences is linked to so many factors including lifestyle practices and obesity. As a result, creating awareness of risk factors of hypertension is crucial. A healthy body weight can all help to prevent and treat hypertension. Hypertension causes morbidity and death, wreaking havoc on human resources and the health-care system. Body Mass Index (BMI) and age have been identified as one of the causes of hypertension. Hypertension has been established as a factor in the cause of road accidents in certain industrialized countries, a condition that may not be different in Ghana among business drivers. Until now, little attention has been paid to commercial drivers' understanding of hypertension and risk factors in Ghana, prompting a healthy body weight to curb hypertension among drivers.

Objective

1. Determine the body mass indices of respondents.
2. Assess the relationship between age and blood pressure of respondents
3. Assess the relationship between Body Mass index and Blood pressure.

II. LITERATURE

High blood pressure is one of the common diseases secretly killing many people globally. This condition is as a result of continuous tension in blood vessels that impairs circulation. The systolic pressure is generally the higher value of the two - diastolic and pulmonary – pressures (AHA, 2015). For the past 6 decades, a lot of epidemiological research has been conducted in Ghana (Heckel et al., 2009, Bosu, 2010, Duah et al., 2013 and Kirubel et al., 2014), most of which have indicated that Ghana is not an exception to the burden of hypertension faced globally. The Ghana Health Service identified a drastic upswing in the number of new cases of high blood pressure in outpatient departments in the public health sector between 1988 and 2007 (Ghana Health Service, 2008). In 2006, statistics from

all outpatient departments in public health facilities in Greater Accra indicated that hypertension was the fourth most common disease diagnosed. In 2007, it moved to second position and health professionals reported that more than half of all deaths at major hospitals in Ghana were caused by hypertensive conditions (Modern Ghana, 2007). Also, Quansah (2014) identified hypertension as the number one cause of death in Ghana in the year 2014. Addo et al. (2006) noted that 15.2 % of the respondents from four rural communities in Ghana were hypertensive. Unfortunately, research has shown that many of the Ghanaian population have high blood pressure without awareness of their condition (Cappuccio et al., 2004).

Causes and Risk Factors of Hypertension

The actual causes of hypertension are usually unknown, especially in essential hypertension. According to the publication on Global Brief on Hypertension by WHO (2013), some social determinants such as urbanization, levels of income and education play a role in behavioral risk factors of hypertension**.** The Ghana Health Service has reported that more people are becoming hypertensive in Ghana due to unhealthy lifestyles (Ghana Health Service, 2008). These lifestyles are associated with the living and working conditions of people (WHO, 2013). Ibrahim and Damasceno (2012) in their study confirmed that a change in lifestyle which resulted from urbanization caused an increase in hypertension. More so, certain behavioral risk factors such as alcohol intake, high salt intake, poor fruit and vegetable intake, physical inactivity and stress have been linked with hypertension development (Mills, et al 2020). Govindarajan et al. (2017) classified the risk factors of hypertension into Modifiable and non- modifiable risk factors. The modifiable risk factors include excessive salt consumption, a diet high in saturated fat and trans fats, low intake of fruits and vegetables, low levels of physical activity, smoking, and being overweight or obese. The Non-modifiable risk factors include a family history of hypertension, age over 65 years and underlying disease conditions such as diabetes or kidney disease.

Diet

Sacks (2001) explains diet as a collection of foods specially selected for good health or to prevent diseases. Generally, good eating habits have been associated with healthy life. However, a poor diet has the potential of exposing a person to several diseases. Specifically, frequent consumption of some food items has been linked to either reduce or increase the risk of hypertension (Reddy and Katan., 2007).

Physical Activity and Hypertension

The World Health Organization (WHO) has ranked physical activity as the 4th major factor for global mortality contributing to nearly 6% of deaths. In adults, regular physical activity helps to reduce the development of a lot of non-communicable diseases including hypertension. It also helps the heart to be strong and efficient (WHO, 2O15).

Obesity and Hypertension

Obesity and overweight predispose an individual to so many types of diseases (Re, 2009). The issue of obesity has become a problem in the whole world and its negative effects on health are rapidly accruing. Internationally, obesity is classified as BMI ≥ 30 kg/m2 and BMI ≥ 25.00 kg/m2 is classified as overweight (WHO, 2000). Researchers have linked obesity with hypertension. Maniecka-Bryla et al. (2011), in their study on the working population in Poland found out that about 68% of respondents were overweight and obese and their data correlated with the prevalence of arterial hypertension. Sturm (2002) and (Shibao, 2012) also emphasized a strong relationship between obesity, hypertension and cardiovascular diseases. Nevertheless, there seems to be several mechanisms through which obesity leads to hypertension. Hall (2000), explained that overweight and obesity have effects on the functions of the kidneys causing high blood pressure. Shibao (2012) also explained that hypertension among obese people is linked with endothelial and renal dysfunction to cause high blood pressure. According to Poirier et al. (2006), obesity has to do with enlarged fatty tissue which raises vascular resistance and as a result the heart has to work harder to pump blood to the rest of the body therefore causing high blood pressure.

Effects and Complications of Hypertension

High blood pressure can cause tears in arterial linings which results in atherosclerosis and impeding the smooth flow of blood through the blood vessels to the body organs. Drugs for treating and controlling high blood pressure may also have side effects which are likely to have adverse long term effects on the body (Elliott, 2007).

Treatment and Management of Hypertension

The leading risk factor for cardiovascular disease has been identified as hypertension. Pharmacological and non-pharmacological methods can both be used to control hypertension. Therefore, everyone involved in the fight against hypertension wants everyone to have a normal blood pressure level. (Mahmood, Shah, Khan, Nawaz, Rashid, Baqar, & Kamran, 2019).

Pharmacological Treatment

WHO (2021), recommends starting of pharmacological antihypertensive treatment of individuals with a confirmed diagnosis of hypertension and systolic blood pressure of ≥140 mmHg or diastolic blood pressure of ≥90 mmHg .

Non -Pharmacological Treatment

This treatment strategy is based on lifestyle modification such as reduced salt intake, regular exercise at least 30 minutes aerobic exercise daily, moderate consumption of alcohol among those who drink alcohol, low intakes of saturated fats and oils, daily consumption of fruits and vegetables and reduction of weight among obese and overweight patients. In some cases non-pharmacological treatment is combined with pharmacological treatment for effective results.

Prevention of Hypertension

Preventing hypertension poses a great challenge to both developing and developed countries. Despite this challenge, it can still be managed cheaply and easily at the individual level. The major issue is to cultivate a healthy lifestyle and dietary habits. This recommendation is especially relevant to the hypertensive and those with increased risk of the disease. Diets rich in potassium, magnesium, fruits and vegetables, low sodium are effective in managing hypertension. Physical activity and moderate or no alcohol intake, no smoking and proper weight management just like the non-pharmacological treatment strategy for those with hypertension are the appropriate ways to live without primary hypertension among the populace (Whelton et al., 2002).

Commercial Drivers and Risk of Hypertension

Studies have found prevalence of high blood pressure among commercial drivers. For instance, commercial drivers in Denmark were found to be at an increased risk of stroke, attributed to high blood pressure and stress (Tüchsen et al., 2006). Similarly, in a survey 24 among Irish taxi drivers, it was reported that 74% of the respondents were hypertensive (Mooney, 2006). Most commercial drivers in Ghana work for private car owners and therefore their conditions of service are determined by the individual owners. There are usually no formal terms of service, so a driver could be hired today, and be sacked tomorrow and the car given to another person the following day. Because of this and many other factors, commercial drivers are forced to work very hard to meet their daily sales for their car owners. Most of them work throughout the day as long as there are passengers. They start work at dawn and close at night. The stress and pressure involved in the work influence the dietary habits of the drivers (Abban, 2013). In her study on risk factors of cardiovascular diseases among long distance drivers at Cape Coast in Ghana, Abban (2013) discovered that skipping of meals, snacking and late night eating were common among drivers.

Food Frequency Questionnaire (FFQ)

The FFQ is the most common dietary instrument used to assess diet in relation to health in large epidemiological studies (Hutchinson, 2011). The questionnaire is usually in two sections. One section indicates a list of food items and the other provides the frequency of consumption categories. The frequency of consumption categories often used include daily, weekly, fortnightly, monthly, occasionally and never or in a specific number of times in a day, a week and in a month depending on the objectives of the research. Respondents are required to indicate the frequency of their consumption of the listed foods. The FFQ compared to other dietary instruments is simple and can be used for dietary data collection among a large number of people and involves less respondent burden. However, respondents 25 may over report foods they know to be healthy and under report unhealthy foods. It can also be used to assess the habitual intakes of different foods by an individual. However, it could be difficult to compute absolute nutrient intakes from the FFQ data (Wrieden et al., 2003).

Anthropometry

According to McGraw-Hill (2002), anthropometry is the size of a person's physical parameters. Therefore, it is about the measurement of body dimensions. Anthropometric indices including Body Mass Index and Waist Circumference are associated with significant health consequences. Anthropometry indices are not difficult to measure and somewhat inexpensive (Jaap et al., 2001). Anthropometric data can be used to assess the nutritional status as well as to determine the risk of diseases among adult populations (NHANES, 2007). Anthropometric measurements used in this study included weight and height measurements.

Weight

Electronic weighing scales or beam balance scales could be used for taking weight measurements. The weight of the subject is taken preferably an hour before or two hours after meals. The subject is asked to stand in the middle of the weighing scale looking straight ahead, standing unassisted, relaxed but still. The subject is asked to remove shoes and heavy clothes prior to weighing and the weight is recorded to the nearest 0.1 kilogram (Gibson, 2005)

Height

The stadiometer is the instrument generally used in taking height measurements (Best and Shepherd, 2020). The subject is required to wear minimal clothing so as to get a clear posture. The subject is supposed to stand straight, with knees straight, feet together and shoulder blades in touch with the vertical surface of the stadiometer and take in deep breath before measurement (Lee and Nieman, 2003). The recording of height is done to the nearest millimeter.

Body Mass Index (BMI)

The most used indicator to determine nutritional status of individuals or groups in both clinical practice and epidemiology is the Body Mass Index (BMI). BMI refers to the ratio between current weight and current height (BMI = kg/m2) (Hammond, 2000). BMI is calculated by dividing weight (kg) by height (m2). BMI categorizes individuals as underweight (<18.5 kg/m2), normal weight (18.50 to 24.99 kg/m2), overweight (25.00 to 29.99 kg/m2) and obese (≥ 30.00 kg/m2) (WHO, 2000). The BMI values are most accurate in measuring degrees of obesity and are less useful for assessing non-obese body fatness (Smolin and Grosvenor, 2008).

III. METHODOLOGY

This study was a cross-sectional survey with the goal of determining the relationship between commercial drivers' BMI and Blood Pressure at the Madina lorry station. The study investigated commercial drivers' awareness of their blood pressure status and causes of hypertension, as well as some of their lifestyle practices such as physical activity, smoking,

alcohol consumption, and dietary patterns, as well as their BMIs and the relationship between age and blood pressure. Using the purposive sampling technique, 150 male commercial drivers from the Madina main lorry station were chosen for the study. The data was collected using a structured questionnaire, a food frequency questionnaire (FFQ), blood pressure measures, and anthropometry. To develop frequency and percentage distributions, data from the structured questionnaire and the FFQ were analyzed using SPSS 21.0. The respondents' average blood pressure readings were calculated, as well as their BMIs, using Microsoft Excel. The Global Physical Activity Questionnaire Analysis guide was used to evaluate the data collected to assess physical activity levels. A linear regression analysis was used to find the predictive capability of BMI on systolic and diastolic blood pressure and binary logistics regression was performed to investigate the relationship between body mass index (BMI) and blood pressure status of the respondents.

IV. RESULTS AND DISCUSSION

Respondents' Knowledge of Risk Factors of Hypertension

Table 1. Commercial Drivers' Knowledge on Factors That Could Cause Hypertension

Risk Factors that can Cause Hypertension	Yes		No	
	Yes.	%	No.	%
Excess Fat	60	40.0	90	60.0
Stress	57	38.0	93	62.0
Smoking	54	36.0	96	64.0
Low Physical Activity	52	34.7	98	65.3
Excess Weight	50	33.3	100	66.7
Excess Alcohol	47	31.3	103	68.7
High Salt	45	30.0	105	70.0
Diabetes	44	29.3	106	70.7
Being Aggressive	42	28.0	108	72.0

The major risk factors mentioned by respondents that could cause hypertension were excess fat (40%), stress (38%), smoking (36%), low physical activity (35%) and excess weight (33%). Other factors mentioned were excess alcohol, high salt, diabetes and being aggressive. Even though some respondents were able to identify some factors that caused hypertension, over 60% were ignorant of many of the factors which cause hypertension. As presented earlier (Table 7), 90% of the respondents had formal education. However, this did not reflect on respondent's knowledge of the factors that caused hypertension. There is therefore the need to intensify education on hypertension as it is very deadly.

Rating of Respondents' Knowledge of Causes of Hypertension

Table 2. Rating of Respondents Knowledge of Risk Factors of Hypertension

Rating	No.	%
Good (7 – 9)	47	31.3
Fair (5 – 6)	6	4.0
Poor (< 5)	97	64.7
Total	**150**	**100**

The rating of respondents' knowledge of risk factors of hypertension was classified based on the number of correctly answered knowledge-related questions. Overall, close to one third (31.3%) of the respondents had good knowledge whereas the rest (64.7%) had poor knowledge of the causes of hypertension. This result differs from the findings of a study by Onyekwere *et al.*, (2013) in that of the 432 adults in Owerri, Nigeria who took part in their study, 80% had good knowledge of the causes of hypertension. This could be because about 60% of the respondents had had tertiary education. In this present study, the highest level of education attained by most of the respondents was Middle school or JHS level (73%). Therefore, low level of awareness might be attributed to the low level of education of the respondents.

Anthropometric Measurements of Respondents

Mean Weights, Heights and BMIs of Respondents

The means and standard deviations for weights, heights and BMIs of respondents are presented in table 3.

Table 3. Mean Weights, Heights and BMIs of Respondents

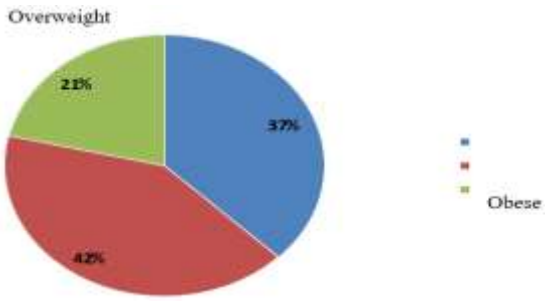
Measurements	Mean	± SD	Minimum	Maximum
Weight (kg)	79.3	17.44	50.0	135.0
Height (m)	1.71	0.06	1.40	1.85
BMI (kg/m^2)	27.04	5.27	18.81	45.11

The mean BMI of the sample was 27.04 ± 5.27 kg/m^2. The heights of respondents ranged between 1.40 m and 1.85 m while their weights were between 50.0 kg to 135.0 kg. The mean BMI of respondents fell into the category of overweight which is not the best. According to Re (2009), overweight and obesity predispose an individual to so many forms of diseases. Hall (2000) clarified that overweight and obesity have effects on the functions of the kidneys causing high blood pressure.

Classification of BMI of Respondents

As presented in Fig. 1, 63 % were overweight or obese. The study sample had high levels of overweight and obesity which is dangerous to their health. This finding is in line with the findings from a study on obesity among commercial truck drivers at the University Of Kentucky, USA, where it was found that overweight and obesity were high among the drivers with 93.3% of the respondents being overweight or obese. Nevertheless, obesity has been identified as a risk factor for most diseases including hypertension. In Kashan, the same trend was found among professional bus and truck drivers (Saberi *et al.*, 2009). Also other studies in Ghana like Kainyah and Owusu (2000) found a high prevalence of overweight and obesity among commercial minibus (trotro) drivers. The high rate of overweight and obesity is probably due to late night eating and low levels of physical activity and also because most of the respondents patronized food from fast food joints which are often high in saturated fat (Guthrie *et al.*, 2002). Therefore, drivers must be encouraged to do more exercise to burn more calories to maintain healthy body weights.

Figure 1. Classification of Respondents' BMI Normal



4.7.3 Classification of BMIs of Respondents by Age

Table 4 shows the classification of respondents' BMIs by age. There was a statistically significant relationship between age and BMIs of respondents. The chi-square value (34.623) with p-value of 0.00 indicated that age and BMI were dependent on each other. This implies that BMI increased with age. Respondents should therefore be encouraged to gain healthy weights as they grow older to avoid being at risk of hypertension.

Table 4. Classification of BMIs by Age

Age range (years)	BMI Categories					
	Normal		Overweight		Obese	
	No.	%	No.	%	No.	%
26 – 30	5	8.9	0	0.0	4	12.5
31 – 35	7	12.5	15	24.2	3	9.4
36 – 40	23	41.1	8	12.9	12	37.5
41 – 45	13	23.2	18	29.0	9	28.1
46 – 50	6	10.7	12	19.4	2	6.3
50 – 55	0	0.0	5	8.1	0	0.0
56 – 60	0	0.0	2	3.2	2	6.3
Above 60	2	3.6	2	3.2	0	0.0
Total	**56**	**100**	**62**	**100**	**32**	**100**

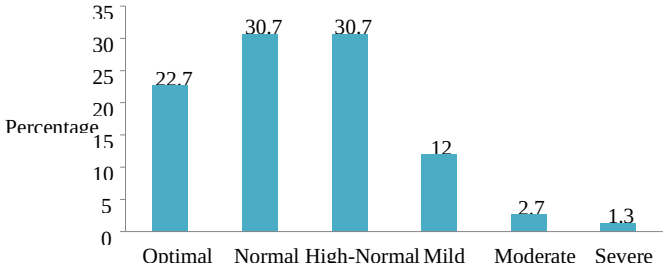
$x^2 = 34.623$ df = 14 p = 0.00

Blood Pressure Measurements

The systolic blood pressure of respondents was between 104 mmHg and 213 mmHg with a mean value of 132.3 ± 16.7 mmHg. The diastolic blood pressure ranged from 53 mmHg to 106 mmHg with a mean value of 72.2 ± 11.6 mmHg.

Classification of Blood Pressure

Figure 2. Classification of Respondents' Blood Pressure



BP Classification

Even though 53.4% of the respondents had optimal to normal blood pressure, about 16% of the respondents had mild to severe high blood pressure and close to a third (31%) had high-normal blood pressure which indicates pre-hypertensive status. It has earlier on been pointed out that only 4% said they were hypertensive, therefore it appears that 12% had high blood pressure and also a third were likely to be hypertensive without being aware. The prevalence of hypertension among the respondents in this study could be linked to the high rates of overweight and obesity (63%), low eating frequency and mostly eating vended foods. Nevertheless, the prevalence of hypertension among the study sample is low compared to 43% found by Lakshman *et al.* (2014) among Occupational Bus Drivers in North Kerala, South India, 74% found by Mooney (2006) among Irish taxi drivers and 35% found among Commercial Bus Drivers in Sokoto, Sokoto State, Nigeria (Erhiano *et al.* 2015) .

Classification of Blood Pressure of Respondents by Age

Table 5 shows the classification of respondents' blood pressure by age. Literature indicates that the risk of developing hypertension rises simultaneously with age therefore the BP of respondents were classified by age as shown in Table 5.

Table 5. Classification of Blood Pressure by Age

Blood Pressure Categories	Age (years)			
	< 50		> 50	
	No.	%	No.	%
Optimal	34	24.8	0	0.0
Normal	46	33.6	0	0.0
High-normal	42	30.7	4	30.8
Mild	11	8.0	7	53.8
Moderate	2	1.5	2	15.4
Severe	2	1.5	0	0.0
Total	**137**	**100**	**13**	**100**

$\chi^2 = 37.185$ df = 5 p = 0.00

There was a statistically significant relationship between age and blood pressure of respondents. The chi-square value (37.185) with p-value of 0.00 showed that age and blood pressure were dependent on each other. This implies that blood pressure increased with increasing age. All respondents aged above 50 years had high-normal to moderate hypertension. People aged above 50 years should therefore monitor their blood pressure regularly to avoid any heart attack which may eventually lead to death. In the study by Erhiano *et al.* (2015) in Nigeria, most of the drivers were between the ages of 40 and 59 years. Since age is one of the risk factors of hypertension, the relatively low prevalence rate of hypertension among this study sample, compared with the higher prevalence rate among the Nigerian drivers, could partially be attributed to age. This is because, about three quarters of the respondents in this study were comparatively younger (30-45years) than the respondents in the Nigerian study (40-59years). It is therefore important that

the risk of developing hypertension should be addressed earlier before age advances.

Relationship between BMI and Blood Pressure of Commercial Drivers of Madina Lorry Station.

Research objective three sought to find out the ability of BMI to predict blood pressure among participants. To achieve this, first, a linear regression was performed to find the predictive capability of BMI on systolic blood pressure and diastolic blood pressure. Second, a logistics regression was performed to investigate the relationship between body mass index (BMI) and blood pressure status of commercial drivers studied.

Relationship between diastolic and systolic BP and BMI

The linear regression model showed a statistically significant positive relationship (r=.21, p=.011) between BMI and systolic BP: F (1, 149) =6.636, p=.011) (See Table 7).

Table 7: Anova for systolic BP and BMI

Model		Sum of Squares	df	Mean Squ/are	F	Sig.
1	Regression	1786.097	1	1786.097	6.636	.011
	Residual	39835.237	148	269.157		
	Total	41621.333	149			
a. Dependent Variable: Systolic BP mmHg1						
b. Predictors: (Constant), BMI						

The result implies that an increase in BMI results in an increase in drivers' systolic BP. Specifically an observation of the coefficients (B=0.656) shows that a unit increase in BMI will result in an overall increase of 0.656 in systolic Bp. The regression equation could therefore be expreseed as: $BP_{systloic}$ = 0.656BMI + 114.584.

A similar analysis (Table 8) shows a positive significant relationship (r=.22, p=.006) exist between diastolic BP (M=76.83, SD=12.02) and BMI: F(1, 149)=7.67, p<.001). Also, a unit increase in BMI predicted 0.506 increase in systolic BP. The regression equation is expressed as:

$BP_{diastolic}$ = 0.506 BMI + 63.15.

Table 8: Anova showing Relationship between BMI and Diastolic BP

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1061.221	1	1061.221	7.671	.006[b]
	Residual	20473.890	148	138.337		
	Total	21535.110	149			
a. Dependent Variable: Diastolic BP mmHg1						
b. Predictors: (Constant), BMI						

The logistics regression was performed to investigate the ability of BMI to predict high BP status of Commercial Drivers of Madina Lorry Station. The binary logistic regression model was estimated using the maximum likelihood estimation (MLE) procedure. The overall model was statistically significant: model x^2 (1, 149) = 28.618 with a p-value of .006. There was an indication that the full model (55.3%) was a better predictor than the model with the intercept alone (53.3%), and it was statistically reliable in distinguishing between commercial drivers having high blood pressure and those without the condition of High BP. There is, therefore, a statistically significant positive relationship between BMI and High BP status among the Commercial Drivers of Madina Lorry station. This implies that the model fit the data well at a statistically acceptable level. Consequently, the model was able to predict correctly 40.0 % of those who have the condition of high BP (YES) and 68.8% of those who did not have the condition of high BP (No). Overall, 53.3 % of all cases (Yes, No) were correctly predicted. It was revealed from the binary logistic model that the independent variable (BMI) entered was statistically significant at p<0.01 level (Table 9) That is the coefficient of BMI (β=.098, p=.001) was significant in predicting the likelihood of a commercial driver of Madina lorry station with the condition of High BP.

It was found that the overall model fit (X^2 = 8.358, df=1, N=150, p=.004) was good for predicting high BP among the respondents. The overall percentage correct for this model was 55.3%.

Table 9: Binary logistic regression results of BMI predicting ability of BP status (n=150)

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	BMI	.098	.036	7.584	1	.006	1.103
	Constant	-2.778	.970	8.198	1	.004	.062
a. Variable(s) entered on step 1: BMI.							

These findings are in line with the findings of several other studies (Brown *et al.*, 2000; Tesfaye *et al.*, 2007; Dua *et al.*, 2014; and Wang *et al.*, 2015). It is therefore important for people to maintain healthy body weights to prevent the risk of hypertension. However, even though overweight and obesity was high in this study, there was a fairly low prevalence of hypertension. This could be attributed to a number of factors including the fact that more than half of the respondents (51.3%) were below 45 years who have lesser risk than those above.

V. CONCLUSION

Based on the findings of the study, it can be concluded that there is a statistically significant positive correlation between BMI and systolic BP, diastolic BP and high Bp status among commercial drivers at Madina lorry station. Furthermore, there was a statistically significant relationship between age and blood pressure of respondents.

VI. RECOMMENDATION

It was found that, close to two-thirds (63%) of respondents were overweight or obese probably as a result of low of

physical activity levels. GPRTU could organize weekly programs to engage drivers in some physical activities.

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