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RELATIONSHIP OF OBESITY WITH BLOOD PRESSURE OF SHOPKEEPERS



Vivek Kumar Singh

Assistant Professor, Department of Physical Education, Rajiv Gandhi University,
Doimukh, Arunachal Pradesh

ABSTRACT:

Objective of this study was to find out the relationship of various obesity measures with blood pressure of shopkeepers. For this purpose fifty shopkeepers of 30-50 years from Varanasi were selected purposely. BMI, WC and WHR were selected as measures of obesity and also predictor variables for this study while blood pressure was chosen as criterion variables. Standard and reliable measures were used to measure the variables and to obtain the data. To achieve the objectives of present study and to test the hypothesis descriptive statistics, Pearson product moment correlation, multiple correlation and linear regression was used at 0.05 level of significance. Results revealed that BMI and WC are significantly correlated with BP, while joint correlation of predictor variables is .646. On basis of findings it is concluded WC is most influenced measure in relation to blood pressure in most cases. Finally on basis of obtained result it can be conclude that obesity can be a cause of elevated blood pressure in



Vivek Kumar Singh

relation to shopkeepers of Varanasi.

KEY WORDS:

WHR, Linear regression.

Abbreviation: WC-Waist Circumference, WHR- Waist Hip Ratio and BMI- Body Mass Index.

INTRODUCTION: Obesity can occur at any age. It is one of the most deterrent health hazards in the world, affecting more than 30% of the global population. Obesity is perhaps the most prevalent form of malnutrition in modern world, both among adult and children. It is significantly correlated with various diseases, which are responsible for increased morbidity and mortality. Obesity is defined either by increased waist circumference (WC), waist-height ratio (WHtR), conicity index (CI) waist-hip ratio (WHR) and/or body mass index (BMI). As individuals consume more quantities of high-energy food and have less physical activity, the number of overweight and obese individuals



increase. Obesity has a detrimental effect on blood pressure and increases cardiovascular events.

According to World Health Report 2002, cardiovascular diseases (CVDs) will be the largest cause of death and disability by 2020 in India. In 2020 AD, 2.6 million Indians are predicted to die due to coronary heart disease which constitutes 54.1 % of all CVD deaths. Nearly half of these deaths are likely to occur in young and middle aged individuals (30-69 years). Currently Indians experience CVD deaths at least a decade earlier than their counterparts in countries with established market economies (EME). The Global Burden of Disease (GBD) study estimates that 52% of CVD deaths occur below the age of 70 years in India as compared to 23% in EME, resulting in a profound adverse impact on its economy. The contributing factors for the growing burden of CVDs are increasing prevalence of cardiovascular risk factors especially hypertension, dyslipidemia, diabetes, overweight or obesity, physical inactivity and tobacco use.

Subjects of this study (sedentary shop keepers), who's task and life style are entirely different to other professionals excepted one thing, that each deals with their customers in different ways in their professional life in different manner, which may cause frustrating and cause to several health related complication.

OBJECTIVES OF THE STUDY:

- 1.To find out the status of shopkeepers in relation to obesity and blood pressure.
- 2.To find out the relationship of obesity with blood pressure to shopkeepers.

METHODOLOGY:

Fifty shopkeepers were selected as subjects from different areas of Varanasi for the present study. Subjects were selected by non-probability sampling method. For the purpose of this study, subjects were selected by convenience and availability of the subjects who were classified as per economic conditions and selected purposely. Subjects were also selected as per their availability in concern area like from: markets of Varanasi i. e. Lanka, Sundarpur and Chitaipur. For this study body mass index, waist circumference and waist-hip ratio were selected as predictors while blood pressure was selected as criterion variable. To measure the selected predictor and criterion variable standard equipment and measures were used. Data were collected from shopkeepers by door to door measurement at their provided time and destination by application of predetermined instruments. Subjects were priorly instructed about their measurements for obesity will be taken before the breakfast while Blood Pressure will be taken at same time for three times. Several trails have been done for accurate measurement prior to measurement of subjects. Descriptive statistics was used to characterize shopkeepers in relation to their blood pressure and obesity, product moment and multiple correlation method was used to find out the correlation, regression equation was used to predict blood pressure on the basis of obesity.

FINDINGS OF THE STUDY:

Table - 1
Descriptive Statistics of Varanasi Shopkeepers in Relation to BP, BMI, WC and WHR

Variables	N	Mean	SD	Range	Min	Max	Skewnes
HEIGHT	50	1.691	.0727	.32	1.51	1.83	-.339
WEIGHT	50	76.486	10.492	50.70	46.80	97.50	-.442
BMI	50	26.629	2.302	12.13	18.05	30.18	-.558
WC	50	91.258	6.151	39.30	69.70	109.00	-.354
HC	50	97.336	6.320	37.70	79.00	116.70	.202
WHR	50	.938	.032	.17	.87	1.04	.831
SYSTOLIC BP	50	134.520	10.234	40.00	110.00	150.00	-.235
DIASTOLIC BP	50	88.640	7.408	32.00	78.00	110.00	.866
AVERAGE BP	50	103.934	8.038	33.33	90.00	123.33	.430

Table - 2
Relationship of Selected Independent Variables (BMI, WC and WHR) with Dependent Variable (BP) in Relation to Shopkeepers

Independent Variable	Criterion Variable	Correlation Coefficient
BMI	BP	.397*
WC		.625*
WHR		.134

'r' 0.05(48) = .273

The above table revealed that BMI and WC has significant relation with BP, hence calculated 'r' for BMI to BP and WC to BP subsequently .397 and .625 are greater than tabulated value of 'r' .273 at 0.05(48) in relation to shop keepers of Varanasi. Table also indicates the insignificant relation exist between WHR to BP, where obtained 'r' .134 < .273 tabulate 'r' at 0.05(48.).

Table - 3
Regression Model

R	R Square	Adjusted R Square	Std. Error of the Estimate
.646	.417	.379	6.335
Predictors: WHR, BMI, WC			
BP = 44.884 - .795 (BMI) + 1.084 (WC) - 19.923 (WHR)			

This regression model revealed that selected predictor variables have significant relation with BP where R represents the total correlation between all the predictor variables and the criterion variable. Thus the obtained multiple correlation value was found significant 0.646 > 0.273 at 0.05(46).

R2 represent the total amount of variance accounted for in the criterion variable (BP) by the predictor variables. Thus, the amount of variance is 41.7 %.

Adjusted R2 is a reduced value for R square which represent the actual variance in criterion variables due to predictors. Therefore the actual variance is 37.9 % in BP of shop keepers of Varanasi.

CONCLUSION:

- + Shop keepers are more prone to be obese and also have greater tendency to being suffered from

High Blood Pressure.

- + Body Mass Index and Waist Circumference are significantly correlated with Blood Pressure while Waist Hip Ratio is insignificant in relation to shopkeepers of Varanasi.
- + Joint contribution of Body Mass Index, Waist Circumference and Waist Hip Ratio is 37.9% in elevation of Blood Pressure in relation to shopkeepers of Varanasi.

DISCUSSION:

From obtained result it can be said that Waist Circumference was most influenced measure in relation to Blood Pressure in most cases. Finally on basis of obtained result it can be conclude that obesity can be a cause of elevated Blood Pressure in relation to shopkeepers of Varanasi. According to results the found obesity was centralized obesity in compare to overall adiposity. As it was also revealed by Beck in his study that strong influence of Body Mass Index and Waist Circumference on the Blood Pressure levels. These two indexes are thus characterized as important predictors, whose screening may help prevent the consequences, such as the higher risk of obesity and hypertension. While Kaur told that in his study men showed progressive rise in systolic hypertension beyond fifth decade of life. Bivariate analysis showed significant relationship of hypertension with age, sedentary occupation, body mass index (Body Mass Index), diet, ischemic heart disease, and smoking. As it is well known fact that the work nature of shopkeepers is sedentary type and their working duration with sedentary task is prolonged in nature I think not naturally it is demand of their work. Increasing competition forced them to work for longer period in stressed condition and to deal with different type of customers in unfavorable condition along with these circumstances taking food may cause disturbance in metabolism process which lead to disturbance in digestive process and these conditions may lead to accumulation of adipose tissue in central region.

REFERENCES:

1. Beck, C. C., Lopes, A. S. & Pitanga, F. J. (2011). Anthropometric indicators as predictors of high blood pressure in adolescents. *Arq Bras Cardiol*, 96(2), 126-133.
2. Betinaet. al (2005). Waist Circumference and Body Mass Index as Predictors of Health Care Costs. Retrive from PubMed.
3. Bijlani, R. L. (2004). *Understanding Medical Physiology: A Text Book for Medical Students.*, New Delhi: Jaypee Brothers, 3rd Edition.
4. Bose, K., Ghosh, A., Roy, S., et al. (2003). Blood pressure and waist circumference: an empirical study of the effects of waist circumference on blood pressure among Bengalee male jute mill workers of Belur, West Bengal, India. *AnthropolAppl Human Sci*, 22(4), 169-73.
5. Cyril, A., Keele & Neil, E. (1971). *Samson Wright's applied physiology*. London: Oxford University Press.
6. Fahey, T. D., Insel, P. M. & Roth, W. T. (1994). *Fit and Well*. California: Mayfield Publishing Company.
7. Johnson, B. L. & Nelson, J. K. (1988). *Practical measurements for evaluation in physical education*. India: Surjeet Publications.
8. Kaur, S. S., Tandon, H. & Srinivasan, K. (2003). Waist circumference correlates better with body mass index than waist-to-hip ratio in Asian Indians. *The National Medical Journal of India*, 16(4).
9. Nath, S. (1993). *Anthropometry the measurement of body size, shape and form*. Delhi: Friends Publications.
10. Verma, J. P. (2000). *Sports Statistics*. Gwalior: Venus Publications.

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