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Original Research Article

Studies on Hypertension and Associated Risk Factors in Ifakala Community, Nworieubi in Mbaitolu Local Government Area Imo State, Nigeria

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Abstract: Hypertension is a major public health problem and important area of research due to its high prevalence and being major risk factor for cardiovascular diseases and other complications. This study aims to assess the prevalence of hypertension and, investigate the associated risk factors of hypertension among study subjects in Ifakala community in Mbaitolu Local Government Area of Imo State. A descriptive cross sectional study design was used and it was carried out from March to august 2019. The study involves 403 respondents aged from 18 to 90 years. A check list was used to collect data. Data were analyzed using descriptive statistics, Chi-square and binary logistic regression tests at P<0.05**.** The result indicated that the prevalence of hypertension was 42.7% (male: 57.6%, female: 42.4%). The proportion of reported prevalence of hypertension based on age was 10.7% for below 30 years, while 5.5% were for age 60 years and above. The body mass index of the respondents was 5.2%, 52.0%, 29.5% and 13.3% for underweight, normal, overweight and obese, respectively. There is statistical significant relationship between hypertension and alcohol (p<0.05), as well as between hypertension and tobacco consumption (p<0.05). This study revealed moderate prevalence of hypertension. There is need to create more awareness and implement intervention for prevention and early detection of hypertension, especially between 50- 59years and overweight or obese.

Keywords: Hypertension, prevalence, Risk factors.

INTRODUCTION

Hypertension also known as high or raised blood pressure is a major global health challenge due to its high prevalence all around the globe, including one of the most non communicable diseases and most important preventable risk factor for premature death worldwide [1] Around 7.5 million deaths or 12.8% of the total of all annual deaths worldwide occur due to high blood pressure. It is predicted to be increased to 1.56 billion adults with hypertension in 2025 [2]. Hypertension is a chronic medical condition in which the blood pressure (BP) in the arteries is elevated [3]. The higher the pressure in blood vessels the harder the heart has to work in order to pump blood, thus making the heart to work too hard [4]. Hypertension is popularly known as the "silent killer," because it has no specific signs and symptoms in the initial stage [5].

According to the Joint National Committee on prevention, detection and treatment of high blood pressure (JNC7), normal blood pressure is a systolic BP < 120 mmHg and diastolic BP < 80 mm Hg. Hypertension is defined as systolic BP level of ≥140 mmHg and/or diastolic BP level ≥ 90 mmHg.

Hypertension cuts across every social class. Both lower-income groups and higher-income groups may be at increased risk of developing hypertension [6]. The etiology of hypertension is multifactorial. Aside genetic factors, several behavioral and socioeconomic factors can put an individual at risk [4]. Metabolic risk factors like obesity, diabetes and raised blood lipids, can also contribute to the development of hypertension and its complications [7]. Lifestyle modification is very important for the prevention and management of hypertension.

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The prevalence of hypertension is highest in the African Region at 46% of adults aged 25 years and above, while the lowest was found in the American region [3]. High prevalence of hypertension has been reported as the most common non communicable disease in Nigeria [3]. There are several factors predisposing to hypertension. These factors vary from country to country and urban and rural places. Sedentary life style (Alcohol, tobacco consumption etc) and dietary changes act together as a web of risk factors which entangles people in it and leads to several chronic diseases. In order to take effective prevention measures, identification of the risk factors is an essential prerequisite [8]. Hypertension and its complications such as end-organ damage (heart disease, stroke, blindness, and kidney diseases) constitute approximately 25% of emergency medical admissions in urban hospitals in Nigeria. It is the most frequently diagnosed cardiovascular disorder in Nigeria [9].

Although majority of patients with hypertension remain asymptomatic, some people with hypertension (HTN) report headaches, lightheadedness, vertigo, altered vision, or fainting episode [11]. Screening, ideally not only detects hypertension, but also the basis for education and therapy [12]. The Country's (Nigeria) statistics on hypertension are unreliable; "most data are outdated speculation based on mathematical models and surveys that are scanty and unrepresentative with low validity. This makes it necessary to conduct surveys that will generate reliable data that will inform decision-making at the appropriate levels of government. A prevalence rate is an important tool for assessing the magnitude and burden of a health event. The prevalence rate found can also be compared with that of other community-based studies [6].

This study intends to generate information on prevalence of hypertension and their associated risk factors in ifakala community: A village in Mbaitolu Local Government Area (LGA) of Imo State, Nigeria.

MATERIALS AND METHODS

Study Area

The study was conducted in Ifeakala community, Mbaitolu Local Government in Imo State, Nigeria. Ifakala is an autonomous community in Nwaorieubi local government area Imo State Nigeria. Its boundaries are East (Afara), West (Umuoha), North (Orodo) and South (Ubomiri).Major occupation of the community is farming, trading, civil jobs and palm wine tapping. The community runs both orthodox and traditional medicine. The social amenities of this community are Schools, churches, markets and Industries. It has a total population of 29,773 according to the 2019 projected population from the national population commission.

Study design

A descriptive cross-sectional study was utilized for this study and it was carried out from March 2019 to August 2019.

Population

The study populations were adults (both sexes) aged 18 years and above.

Sample size selection and technique

Sample size is 403 which were calculated using Taro yamens formula for descriptive cross sectional studies. This is illustrated below:

Formula n = N
1 + N (e)2

Where N = Number of Population;
n = Sample size;
e = Level of precision at 0 .05.

The study participants were selected by cluster sampling technique. The survey was executed in two steps. Step one captured sociodemographic characteristics. The Step 2 captured physical measurements, that is; height in meters (m), weight (kg), and BP measurements were recorded in this stage. Hypertension was defined as Systolic blood pressure (SBP) ≥140 mmHg and/or Diastolic blood pressure (DBP) ≥90 mmHg [3].

Body mass index (BMI) was calculated using weight in kilogram (kg) divided by square of height in meters (m) i.e.

BMI	Classification
<18.5	Underweight
18.5-24.9	Normal weight
25.0-29.9	Overweight
30.0-40 and above	Obesity

The BMI was classified using WHO classification of BMI [1]. For the alcohol consumption, the participants were grouped into four: none drinking, light drinking (>5g/day), moderate drinking (<30g/day) and heavy drinking (>30g/day) respectively.

Informed consent and Ethical clearance

Permission to conduct the study was obtained from community leaders, whereas individual Informed consent was obtained from the subjects who volunteered to participate in the study. Confidentiality of information was maintained throughout the study and Identified hypertensive subjects were referred to the nearby clinic for treatment.

Instrument and method of data collection

Data were collected through on the spot clinical laboratory assessment and examination using

sphygmomanometer (Blood pressure measuring device), weighing scale, height scale.

DATA ANALYSIS

Data collected were edited and coded. Descriptive statistics such as frequency tables were used for data summarization. Inferential statistics was carried out using Chi-square. The Chi square test was used to analyze the data on sociodemographic characteristics and associated risk factors. A total of 415 respondents participated in this study. Only 403 (152 male and 251 female) had analyzable data, the remaining ones (12) could not be analyzed due to incomplete data.

RESULT

Table-1: Sociodemographic characteristics of study participants

Variables	Category	Frequency	Percent (%)
Age Group	Below 30	43	10.7
	30-39	92	22.8
	40-49	84	20.8
	50-59	162	40.2
	60 and above	22	5. 5
Gender	Male	152	37.7
	Female	251	62.3
Marital Status	Single	73	18.1
	Married	292	72.5
	Widowed	34	8.4
	Divorce/Separated	4	1.0
Level of Education	Non-formal Education	2	0.5
	Primary Education	9	2.2
	Secondary Education	116	28.8
	Tertiary Education	276	68.5

Age distribution of the participants showed that 162(40.2%) in the 50 - 59 year's age-group are highest in the distribution, while the lowest proportion in the age distribution showed 22 (5.5). Primary, secondary and tertiary education was found in 0.5%, 2.2%, 28.8% and 68.4%, respectively). More than half 292 (72.4%) of the participants are married, 73 (18.1%) are single, 8.4% are widowed while 4 (1.0%) are divorced and they had normal weight (70.3%).

Table-2: Prevalence of hypertension

Response	Frequency	Percent (%)
Yes	172	42.7
No	231	57.3
Total	403	100

Table 2 revealed that 172 (42.7%), of the participants had hypertension.

Table-3: Prevalence of hypertension based on gender

Responses	Prevalence of hypertension YES (%)	NO (%)	TOTAL
Male	99 (57.6)	43 (18.6)	142
Female	73 (42.4)	188 (81.4)	261
Total	172 (100)	231(100)	403

X^2= 65.4; P<0.05

Table 3, revealed that out of a total of 142 and 261 in the study population 99 (57.6%) and73 (42.4) for both male and females respectively have hypertension. Also statistical analysis revealed that there is significant relationship between gender and development of hypertension.

Table-4: Age-specific distribution of hypertension Prevalence of hypertension

Age Bracket	YES (%)	NO (%)	TOTAL
Below 30 years	8 (4.7)	35 (15.2)	43
30-39 years	27(15.7)	65 (28.1)	92
40-49 years	23 (13.4)	61 (26.4)	84
50-59 years	111 (64.5)	51 (22.1)	162
60 and above	3 (1.7)	19 (8.2)	22
Total	172 (100)	231(100)	403

X^2_{cal} 76.71; P<0.05

Table 4 shows the prevalence of hypertension across age-groups of participants. Respondents in 50-59 years had the highest prevalence 111 (64.5%), while those in 60 and above year's age-group had the lowest prevalence 3 (1.7%). Others below30 years, 30-39 years and 40-49 years had 8(4.7%), 27(15.7) and 23(13.4) respectively. There is also a significant relationship between age brackets and prevalence of hypertension.

Table-5: Prevalence of hypertension based on distribution of body mass index. Prevalence of hypertension

BMI(Body Mass Index)	Yes (%)	N0 (%)	T0tal
Obese	69 (40.1)	39 (16.9)	108
Overweight	71 (41.3)	69 (29.9)	140
Underweight	3 (1.7)	30 (12.9)	33
Normal	29 (16.9)	93 (40.3)	122
Total	172 (100)	231 (100)	403

$X^2_{cal;}$ P<0.05

Table 5 shows the distribution of (Body mass index) BMI categorization into four categories. Underweight, normal, overweight, and obese were recorded in 1.7%, 16.9%, 41.3%, and 40.1%, respectively. There is a significant relationship between Hypertension and body mass index.

Table-6: Hypertension based on pattern of alcohol consumption. Prevalence of hypertension

Pattern of alcohol consumption	Yes (%)	No(%)
Heavy	55 (32.00	15 (6.5)
Moderate	45 (26.2)	91 (39.4)
Light	41 (23.8)	98 (42.4)
Never	31 (18.0)	27 (11.7)
Total l	172 (100)	231(100)

X^2_{cal} 39.7; P<0.05

Table 6 shows the pattern of alcohol consumption and hypertension. Heavy drinker had the highest prevalence of 55 (32.0%), others such as moderate and light drinkers have 45(26.2%), 41(23.8%) and 31 (18.0%), respectively. Pattern of Alcohol consumption was statistically associated with hypertension.

Table-7: Prevalence hypertension based on tobacco consumption, Prevalence of Hypertension

Tobacco consumption	YES (%)	NO (%)	TOTAL
Yes	137 (79.7)	131 (56.7)	268
No	35 (20.3)	100 (43.3)	135
Total	172(100)	231 (100)	403

P<0.05

The data above revealed that out of the 172 that had hypertension, 137 (79.7%) consumes tobacco while 35(20.3%) does not consume any form of tobacco. This may be as a result of low literacy in the rural community. There is statistical relationship between alcohol consumption and development of hypertension.

DISCUSSION

This study examined the prevalence of hypertension among the residence of Ifakala community in Nwaorieubi local Government Area, Imo State Nigeria.

There were more female participants. This agrees with the sex distribution of participants in a survey of hypertension among residents of Ajegunle community, a popular slum in Lagos State, Nigeria: 34.2% (male) and 65.8% (female) [13].

Prevalence of hypertension

In this study, the overall prevalence of hypertension was (42.7%).This is actually something to worry about as there are many complications that come with it such as stroke and cardiac failure. It was the same with that found in 95 geographical clusters in Mozambique [14] and very similar to 32.8% found in three communities in Enugu North LGA of Enugu State, Nigeria [6].

The prevalence estimated in the present study was much higher than that estimated by Nellore (22.3%) and Bihar (37.95%) [15]. The difference of prevalence observed between the present study and other studies with respect to hypertension could be due to social and cultural differences, dietary and lifestyle factors, and also the age span as well as the research methodology used.

Compared to recent community-based hypertension studies in Nigeria, the overall prevalence of hypertension in this study was higher than 18.3% found in Kegbara-Dere; a rural community in the Niger-Delta Region of Nigeria [16], and 23.6% found among the inhabitants of three rural communities in Akwa-Ibom and Cross-River States [17]. The overall prevalence of hypertension was however higher than the rates found in a study conducted in owerri city about 6years ago: This wide margin further confirmed the upsurge of hypertension in communities across the community and Nigeria at large [21].

This study confirms local report of high prevalence of hypertension in some communities across Nigeria. However, prevalence of hypertension in this study was slightly lower than 46.0%; the estimated prevalence of hypertension for WHO African Region [1].

Prevalence of hypertension based on gender

In the study, the distribution of hypertension differs among gender. More males (57.6%) had hypertension compared to females (42.4%). This was consistent with the findings in several community-based studies: Survey of hypertension among residents of a rural community in South-East Nigeria, where it was (50.2%) male and (44.8%) female [17]; a survey of hypertension in a rural community in Eastern Nigeria: Male (49.3%), female (42.3%) [14]; in a survey of hypertension amongst herdsmen living in Tibet, China: Male (66.1%), female (48.3%) [4] Contrary to the finding, prevalence of hypertension was higher among females (79.6%) compared to males (74.4%) in a survey of hypertension in an older adult population in South Africa [18].

However, result reveals that men exhibit higher prevalence of hypertension than their female counterparts. Also there was a significant relationship between gender and prevalence of hypertension. One of the possible explanations for this gender disparity in hypertension prevalence could be partially due to biological sex difference and partially due to behavioral risk factors like smoking, alcohol consumption, or BMI. We speculate that absentia from alcohol and smoking might be few of those protective factors against hypertension in women. Other than that, women are more interested in health care services utilization and also more frequently report their poor health and therefore they are more likely to have better health [19]. Age was however not significant with hypertension in a survey conducted in a rural community in Eastern [22].

Prevalence of hypertension based on age brackets

Age was found to be an important risk factor for hypertension. As the age was advancing so did the prevalence of hypertension among both sexes. Similar findings were reported by few other studies also where advancing age was positively related to hypertension [2I].

In this study, the findings revealed that prevalence of hypertension increased with age. Prevalence increased from 1.7% in 60 and above year's age to 64.5% in the 50-59 year age-group. In this study also, age is significantly associated with hypertension. This correlates with the findings in most recent community-based studies conducted in Ibadan, Enugu and south region of Nigeria [32]. This was consistent with the result of a survey on the prevalence of hypertension and associated risk factors among bank workers in Owerri, Imo State Nigeria [22]: and a survey of hypertension among adult residents of Ajegunle community, Lagos State, Nigeria [13].

With increasing age, the aorta and arteries walls will be stiffened and this contributes to the high prevalence of hypertension in older age groups [23].

Hypertension and associated risk factors

In the present study, risk factors of cardiovascular disease found among participants in Ifakala community were alcohol consumption, obesity, and tobacco consumption. Alcohol consumption rate among the participants of the study are similarly high among the general population in eastern Nigeria as observed by chukwuonye [20].

This study revealed a statistical significant relationship between hypertension and alcohol consumption. It is found that those in the highest alcohol intake category (more than 30g drinkers/week) were twice to have hypertension than moderate and non-drinkers. It is not surprising that the prevalence of hypertension is more among the heavy alcohol drinkers, this is attributed to the fact that in the community just as in many parts of the state, alcohol beverages is a common features of many social gatherings. It is also believed that alcohol drink should be consumed first thing in the morning in order to be agile and active all day long. Nevertheless, this finding is consistent with an earlier study on Italian wine drinkers coming from different cultural background showed an association with higher risk of death from all causes and cardiovascular disease [25]. As per WHO report, alcohol consumption was the third largest risk factor in the developed countries and tobacco use being the second major cause of death worldwide [3].

Also it is reported [26] that heavy alcohol consumption carries adverse health and social consequences due to its intoxicating and addictive property and as a result of this, light and moderate consumer can easily drift and become a heavy alcohol consumer.

This study indicated a significant difference between tobacco use and hypertension. Hypertension

was more prevalent in tobacco users as compared to nonusers. But there are other studies with contradictory findings conducted in Bihar [15] and also reported that tobacco smoking increases diastolic blood pressure (DBP). Studies indicated that elevated nicotine mediated an increase of sympathetic nervous system activities and release of epinephrine, norepinephrine and vasopressin hormones [27]. A cohort study conducted in Sweden women found that there is a change in blood pressure of current tobacco consumers and their blood pressure was higher than in nontobacco consumers [28].

In this study, body mass index (BMI) categorization into four groups showed that 1.7%, 16.9%, 41.3%, and 40.1% were underweight, normal, overweight and obese, respectively. Numerous studies had established the association between BMI and hypertension [29]. BMI is one of the most accurate ways to determine when extra body weight translates into health risks [30].

CONCLUSION AND RECOMMENDATION

From the results of this study, the people of this area are vulnerable to several chronic diseases and other unbearable health consequences. Specifically men are at more risk of being hypertensive than female. Increasing age is proved to be an independent risk factor for hypertension. Programs needed to improve the surveillance systems and implementation of community based screening programs for early detection of hypertension is also needed. Interventions like weight management, increased fruits and vegetables consumption, and reduction in tobacco and alcohol use are required and recommended. There is also need for a public health strategy that includes primary prevention through changes in the lifestyles of the general population, such as weight reduction, restriction of alcohol consumption and restriction in saturated fat and dietary sodium would result in a lower prevalence of hypertension. If nothing is done to reverse this ugly trend and style of living, hypertension will soon become an epidemic in the country coupled with epidemic of communicable diseases still plaguing us.

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REFERENCE

- World Health Organization. (2013). World Health Day 2013: Silent Killer, Global Public Health Crisis. WHO Campaigns; 2013 [Last accessed on 2013 Jan 19]
- Lim, S.S., Vos, T., Flaxman, A.D., Danaei, G., Shibuya, K., & Adair-Rohani, H. (2010). A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: A systematic analysis for the global burden of disease study. Lancet.
- World Health Organization. (2011). Global Status Report on Non-Communicable Diseases 2010. Geneva, Switzerland.
- Erem, C., Hacihasanoglu, A., Kocak, M., Deger, O., & Topbas, M. (2009). Prevalence of prehypertension and hypertension and associated risk factors among Turkish adults: Trabzon Hypertension Study. *Journal of public health*, *31*(1), 47-58.
- Marshall, I. J., Wolfe, C. D., & McKevitt, C. (2012). Lay perspectives on hypertension and drug adherence: systematic review of qualitative research. *Bmj*, *345*.
- Ulasi, I. I., Ijoma, C. K., & Onodugo, O. D. (2010). A community-based study of hypertension and cardio-metabolic syndrome in semi-urban and rural communities in Nigeria. *BMC health services research*, *10*(1), 1-6.
- Mendis, C. (2010). "Global status report on non communicable diseases 2010," Tech. Rep., World Health Organisation. http://www.who.int/nmh/publications/ncd_report2010/en/.
- Kumar, M. R., Shankar, R., & Singh, S. (2016). Hypertension among the adults in rural Varanasi: a cross sectional study on prevalence and health seeking behaviour. *Indian Journal of Preventive & Social Medicine*, *47*(1-2), 6-6.
- Ajayi, I. O., Sowemimo, I. O., Akpa, O. M., & Ossai, N. E. (2016). Prevalence of hypertension and associated factors among residents of Ibadan-North Local Government Area of Nigeria. *Nigerian Journal of Cardiology*, *13*(1), 67.
- Gao, Y., Chen, G., Tian, H., Lin, L., Lu, J., Weng, J., ... & China National Diabetes and Metabolic Disorders Study Group. (2013). Prevalence of hypertension in China: a cross-sectional study. *PloS one*, *8*(6), e65938.
- Mishra, C. P., & Kumar, S. (2011). Risk factors of hypertension in a rural area of Varanasi. *Indian J Prev Soc Med*, *42*(1), 101-11.
- Daniel, O. J., Adejumo, O. A., Adejumo, E. N., Owolabi, R. S., & Braimoh, R. W. (2013). Prevalence of hypertension among urban slum dwellers in Lagos, Nigeria. *Journal of Urban Health*, *90*(6), 1016-1025.
- Kishore, J., Gupta, N., Kohli, C., & Kumar, N. (2016). Prevalence of hypertension and determination of its risk factors in rural Delhi. *International journal of hypertension*, *2016*.
- Singh, R., Sinha, R. K., Mani, C., Singh, R., & Pal, R. (2011). Burden and vulnerability of

hypertension in a rural population of Patna, Bihar, India. *South East Asia Journal of Public Health*, *1*(1), 53-58.

- Onwuchekwa, A. C., Mezie-Okoye, M. M., & Babatunde, S. (2012). Prevalence of hypertension in Kegbara-Dere, a rural community in the Niger Delta region, Nigeria. *Ethnicity & disease*, *22*(3), 340-346.
- Andy, J. J., Peters, E. J., Ekrikpo, U. E., Akpan, N. A., Unadike, B. C., & Ekott, J. U. (2012). Prevalence and correlates of hypertension among the Ibibio/Annangs, Efiks and Obolos: a cross sectional community survey in rural South-South Nigeria. *Ethnicity & disease*, *22*(3), 335-339.
- Peltzer, K., & Phaswana-Mafuya, N. (2013). Hypertension and associated factors in older adults in South Africa. *South African Journal of Diabetes and Vascular Disease*, *10*(2), 54-58.
- Reddy, S. S., & Prabhu, G. R. (2005). Prevalence and risk factors of hypertension in adults in an Urban Slum, Tirupati, AP. *Indian Journal of community medicine*, *30*(3), 84.
- Diwe, K. C., Enwere, O. O., Uwakwe, K. A., Duru, C. B., & Chineke, H. N. (2015). Prevalence and awareness of hypertension and associated risk factors among bank workers in Owerri, Nigeria. *International Journal of Medicine and Biomedical Research*, *4*(3), 142-148.
- Ogah, O. S., Madukwe, O. O., Chukwuonye, I. I., Onyeonoro, U. U., Ukegbu, A. U., Akhimien, M. O., ... & Okpechi, I. G. (2013). Prevalence and determinants of hypertension in Abia State Nigeria: Results from the Abia State non-communicable diseases and cardiovascular risk factors survey. *Ethnicity & disease*, *23*(2), 161-167.
- Dorobantu, M., Darabont, R. O., Badila, E., & Ghiorghe, S. (2010). Prevalence, awareness, treatment, and control of hypertension in Romania: results of the SEPHAR Study. *International Journal of Hypertension*, *2010*.
- Akinlua, J. T., Meakin, R., Umar, A. M., & Freemantle, N. (2015). Current prevalence pattern of hypertension in Nigeria: A systematic review. *PloS one*, *10*(10), e0140021.
- Lawrence, J., Beilin., & Puddey., B. (2006). Alcohol and hypertension.schoolof medicine and pharmacology. *University of western Australia*, *47*; 1035-1038.n
- Ibekwe, R.U. (2015). Modifiable risk factors of hypertension and socio-demographic profile in oghara delta state: Prevalence and correlates. Department of community medicine, delta state university teaching hospital, delta state, Nigeria.
- Chobanian, G. L. Bakris, H. R. Black. (2003). "Seventh report of the Joint National Committee on prevention, detection, evaluation, and treatment of high blood pressure,"Hypertension, 42.
- Jee, S. H., Foong, A. W., Hur, N. W., & Samet, J. M. (2010). Smoking and risk for diabetes incidence and mortality in Korean men and women. *Diabetes care*, *33*(12), 2567-2572.
- Ulasi, I. I., Ijoma, C. K., & Onodugo, O. D. (2010). A community-based study of hypertension and cardio-metabolic syndrome in semi-urban and rural communities in Nigeria. *BMC health services research*, *10*(1), 1-6.
- Prabakaran, J., Vijayalakshmi, N., & VenkataRao, E. (2013). Prevalence of hypertension among urban adult population (25-64 years) of Nellore, India. *Int J Res Dev Health*, *1*(2), 42-9.
- Ahmed, A., Rahman, M., Hasan, R., Shima, S. A., Faruquee, M. H., Islam, T., & Haque, S. E. (2014). Hypertension and associated risk factors in some selected rural areas of Bangladesh. *International journal of research in medical sciences*, *2*(3), 925.
- Abebe, S. M., Berhane, Y., Worku, A., & Getachew, A. (2015). Prevalence and associated factors of hypertension: a crossectional community based study in Northwest Ethiopia. *PLOS one*, *10*(4), e0125210.
- Fisher, N. D., & Williams, G. H. (2005). Hypertensive vascular disease. U: Kasper DL, Braunwald E, Fauci AS, i sur. Harrison's Principles of Internal Medicine, 16th, str. 1463–81.
- Onwubere, B. J. C., Ejim, E. C., Okafor, C. I., Emehel, A., Mbah, A. U., Onyia, U., & Mendis, S. (2011). Pattern of blood pressure indices among the residents of a rural community in South East Nigeria. *International journal of hypertension*, *2011*.
- Priya, M., & Mishra, C. (2016). Prevalence of hypertension in an area of urban Varanasi, India and its association with selected demographic factors. *International Journal of Community Medicine and Public Health*, *3*(6), 1600.

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