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DEMOGRAPHIC AND PSYCHOSOCIAL PREDICTORS OF HYPERTENSION AMONG MIDDLE AGED ADULTS

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ABSTRACT
The study investigated empirically the Demographic and Psychological predictors of hypertension among middle aged adults in Owerri: A total number of 60 patient participants (30 males and 30 females) were used in the study. Their ages ranged from 40 to 60 years, with a mean (X) age of 50 and a standard deviation of 6.28. A pilot study was conducted with 20 patients participants using a newly developed instrument, in General Hospital Owerri, and the reliability of the instrument stood at Cronbach alpha coefficient of .84, which signified that the instrument was reliable for the study. The result of the study indicated the following: a significant relationship between gender and hypertension, a significant relationship between occupation and hypertension, absence of relationship between socio-economic status and hypertension, absence of significant relationship between personality and hypertension and a significant relationship between evasive life experiences and hypertension. Based on these findings, the researchers recommended that people on the middle aged category should be involved in periodic checking of their blood pressure in order to regulate it and take medication when necessary.
Keywords: Demographic and Psychological Predictors, Hypertension, Middle Aged Adults.

INTRODUCTION
Hypertension is a chronically elevated arterial blood pressure above that registered in a resting normal healthy normotensive individual within a specific age group (Suine, 2012). In the normal young adult, Systolic Blood Pressure (SBP) varies between 120mmHg and 140mmHg. It is regarded by the World Health Organization (WHO) that the lower cut off point for mild hypertension is 160mmHg. The diastolic blood pressure reading for the normal adult varies from 80mmHg to 90mmHg. The severity of hypertension is generally determined by the diastolic blood pressure (DBP) reading. A patient is classified as having mild hypertension when his or her (DBP) larger from 90mmHg and 115mmHg. This could also be described as having moderate hypertension. Patients with DBP above 115mmHg are classified as having severe hypertension Oluwatelure (1998).

Patients whose blood pressure (BP) vary between 140/90mmHg, (Akunkagbe & Falase, 1987), such patients particularity those with diastolic blood pressure (DBP) of 90-99mmHg do not yet have fixed hypertension and their blood pressure may be managed with non-pharmacological means particularly if they have no target organ damage (Black 1989). It must be noted that there are damages of cardiovascular and other complications even with mild hypertension and consequently individuals with blood pressure above 140/190 mmHg must seek medical attention.

Recent researchers pointed to the significance of systolic blood pressure (SBP) in the complication arising from hypertension and showed that evaluation of blood pressure should seriously consider this other

parameter of measurement of the diastolic blood pressure (DBP) (London and Levy 1993). In addition to this, as a result of incidences of isolated systolic hypertension, the joint National Committee on detection, evaluation and treatment of high blood pressure between 140 and 199mmHg recommended that the incidence of hypertension should be confirmed in an individual within 2 months for the onward treatment. If systolic blood pressure (SBP) is equal or above 200mmHg,, patients should be referred to the physician to source for care within two weeks. Hypertension is generally classified into two according to their etiology. The first type is referred to as symptomatic or secondary hypertension, secondary hypertension is so called because the disorder is caused by another illness. Consequently, its cause or etiology is known (Akinkugbe and Falase, 1987). It can be caused by surgery or other means. Secondary hypertension accounts for about 10% of all cases of hypertension (Bavison and Neale, 1994). The other type of hypertension is referred to as essential or idiopathic hypertension. This disorder is of unknown cause and accounts for about 85% of all cases of hypertension (Shapiro and Goldstein, 1982).

Essential Hypertension

The case of essential hypertension is of concern to us in the present discussion for some reasons. First, the cause of this disorder is not known (Steptoe,(2013). Consequently attempts to unravel the causes of essential hypertension have not yielded positive results. What physicians and others do is to reduce blood pressure to about 140/90mmHg or 10mmHg below its initial reading. Secondly, the percentage of hypertension subjects suffering from essential hypertension is quite high. This high rate of people suffering of essential hypertension is of concern to medical practitioner and other health workers. Thirdly, patient may not be aware that they are suffering of essential hypertension until the symptoms of its complication has started to be felt. Fourth, the complication associated with essential hypertension can be very fatal, and this may lead to the untimely death in people.

The Causes of Hypertension

There are many factors which may cause a person's blood pressure to become abnormally high, any one or any combination of which may be blamed in a given case. Overeating with resultant obesity is a common causation factor. However heredity and family background may be other predictors of hypertension (Hunt, 2007).

Physical stress, social and business failure is yet another factor in predicting high blood pressure. It is common among city dwellers, where such stress is greatest which exposes them to high blood pressure. The condition may be worsened by the use of tobacco, marijuana, alcohol and other allied substances.

The smoking of a single cigarette may temporarily raise the systolic blood pressure between five and ten points (Abban, 2006). Symptoms of high blood pressure are not often manifested much before the age of thirty five, in spite of the fact that unhygienic habits and other causative factors have been in operation since the earlier years.

Acute infections, such as tonsillitis scarlet, fever and typhoid fever, sometimes lead to kidney disease, which may bring with it high blood pressure. In such cases the increase pressure is a natural compensatory mechanism to maintain a normal filtration rate through the hardened walls, of the small arteries in the kidneys (Sonnenbery, 2006).

Kidney disease of the slowly progressive type is often accompanied by hardening of the arteries, high blood pressure, and enlargement of the heart, sudden attacks of convulsion in pregnant women (eclasmpsia), and other kidney disorders are associated with an increase in blood pressure, Oluwatare (1998).

The signs and symptoms of high blood pressure may vary greatly. Overweight, a ruddy complexion and apparently robust health may be the only outward manifestation of a man fifty or sixty years of age, (Olusenbery, 2005). In such cases, the systolic pressure may be as high as 200 or more and yet the individual may suffer no noticeable discomfort. On the other hand, there may be dizziness, aching or throbbing of the head, ringing in the ears and other disagreeable sensations.

***Low Blood Pressure (Hypotension*)**

In large majority of people with low blood pressure, the condition should not be considered a disease at all. There are normally healthy individuals whose lives will not be shortened by low blood pressure. Actually the life span of individual with low blood pressure can be lengthened and few or no noticeable symptoms are responsible for its cause. Such people should look upon low blood pressure as a blessing rather than a disease, (Engebreston, 1989). In some cases, however low blood pressure is caused by impoverished diet by the presence of some chronic wasting disease or by some other condition that needs treatment on its own account, (Dressler, 1990). Occasionally, low blood pressure is accompanied by a marked felling of weakness and fatigability, which can possible be connected by dietary or other treatments. Headaches, shortness of breath, dizziness, inability to concentrate and digestive disturbances – any or all these may be present, though generally they may result from causes other than hypertension.

Demographic and Psychosocial Predictors

The basic question as to whether or not psychosocial factors play any role in essential hypertension, will appear to be unwarranted particularly now that every disease whether it is communicable or not communicable result not only from physical causes but also psychological causes or demographic and psychosocial factors such as gender, socio-economic status, occupation personality type, evasive life experience and stress.

Most research literature has shown that stress reduces the effectiveness of immune system to combat pathogens that can easily predispose individuals to hypertension (Miller, 1993). Stress also causes emotional upheaval that may destabilize the body's homeostatic balance. In addition the DSM -IV and ICD – 10 recognized the fact that some specific disease are caused by psychological factors particularly stress. One of the diseases is essential hypertension.

There are two groups of researchers involved in a live debate about the part played by the demographic and psychological factors in the etiology and progress of essential hypertension. These groups based their arguments partly on the laboratory experience designed to show that laboratory task such as cold pressure or asthmatic attack lead to transient elevation of blood pressure.

These tasks of hypertension are stress generating. It is believed by researchers on psychosocial precursors of essential hypertension which was based on these laboratory experiments; that when an individual is subjected to continuous stress, his blood pressure may subsequently be raised. The raised blood pressure may not come down and consequently hypertension may ensue. Opponent of this view pointed out that laboratory tasks are not like the real life situation, and therefore extrapolating from the laboratory situation to real life situation is therefore questionable. Laboratory results can therefore not account for hypertension.

Some other researchers believe that psychosocial factors are implicated in the etiology of essential hypertension. Such researchers as Dressler, Dos Santos and Viteri, (1987), pointed out that people who are predisposed to develop essential hypertension, are more likely to be affected by psychosocial factors. Examples of such people are those with family history of essential hypertension. These authors hypothesized in their research that fitness generating laboratory tasks can significantly predict the future development of essential hypertension, (Menkees, Matthews, Landbery, Nead, Quish, Lead, Thomas and Pearson, 1989).

Hypertension and Middle Adulthood

The health and psychological problems in relation to health status of the aging person is of great concern in our society today. As individuals' approaches the age of 40 and above, they moved into their middle adulthood. From this time on, a variety of pathological problems may set in. In early adulthood, there is a positive development of the person's structural status. There is then, elevated status in beauty and strength. Beginning from the age of 40years, there is a slight decline in the structural composition, resulting in the

decline of physical appearance, strength and balance. Depending on individual differences, however, the decline is hardly noticed at the beginning of the middle adulthood. But as the time goes on, the decline becomes clear and glaring. In the middle adulthood, appearance significantly depends on care; the appearance is fine and still attractive and likeable. When there is inadequate care in the middle adulthood, appearance starts to change towards negative direction. The hair starts to turn grey and perhaps the surface skin starts to become dry and inelastic. In the course of time, within the period of mid adulthood, wrinkles appear on the human face. People that are fat may become over weight, obesity may set in for fat people who lack the control techniques of regulating their calories. Some individuals may start to develop hypertension, atherosclerosis, arthritis or diabetes.

Definition of Key Study Variables

Gender: The psychological experience or being male of female. The study wants to find out if there are gender differences in predisposition of hypertension among middle age adults. There are few literatures backing gender differences on development of high blood pressure. But few previous researchers had proposed that men are more predisposed to hypertension than women.

Occupation: It means the economic trade of each participant. Most patients have various occupation or trade as a means of livelihood.

Socio-Economic Status: It means the social economic strata in which the participants belong to. The present study will ascertain whether differences in socio-economic status will actually predict the predisposition of people to high blood pressure (hypertension).

Personality Type: A personality characteristics that appears to be important in influencing the health consequence of stress has been termed the type (A) personality while the reverse is type (B) personality.

Evasive Life Experience: Psychological significant events that occur in a person's life. Major life events create stress because they required adjustment and coping. Interestingly, major events in our lives are often stressful whether they are positive or negative. Common negative life events that create stress for us include such things as business failure, lost of employment, automobile crash and the lost of a loved one.

Objective of the Study

Hypertension has become a great medical problem in our society which has claimed number of lives among middle age adults in our various communities. Hypertension has been linked to some psychosocial factors and the literature has implicated stress in great measures as responsible for hypertension but the present study will ascertain if demographic variables such as gender, occupation and socio-economic status will predict hypertension among middle age adults in our society. The study will also ascertain if psychosocial factors such as personality, evasive life experience can predict hypertension among the middle aged adults in our society. In other words do demographic and psychosocial factors predict essential hypertension among middle aged adults?

To answer the above question the following hypotheses were tested;

1. Gender will significantly predict hypertension among patients.
2. Occupational differences will significantly predict hypertension among patients.
3. Socio-economic status will significantly predict hypertension among patients.
4. Personality types will significantly predict hypertension among patients.
5. Evasive life experiences will significantly predict hypertension among patients.

RESEARCH METHODOLOGY

Sampling and Sampling Procedure

A total of sixty patients aged 40 to 60 with a mean (X) age of 50 and a standard deviation (SD) of 6.28 were drawn from the population of outpatients, in the Outpatient Department (OPD) of the Specialist Hospital, Umuguma, Owerri, Imo State, Nigeria. The patients that were selected for this study were hypertensive patients who have been attending this hospital and receiving medication for the past six (6) months. The researcher used a self developed instrument for the study. The instrument was developed by the researcher after a focused group discussion (FGD) was conducted in conjunction with medical and clinical psychology experts in some tertiary and specialized hospitals in Imo State. The instrument covered both the demographic and psychosocial variables of the study. The main body of the instrument contains 14 items, which tend to predict hypertension among the middle aged adults. The content and face validity was used to validate the questionnaire through the help of Medical and Clinical Psychology experts. A pilot study was conducted with 20 patients' participant in the same hospital and the reliability of the instrument stood at Cronbach alpha coefficient of .84, which signified that the instrument was quite reliable.

The procedure involved adequate rapport with the management of the general hospital, which involved detailed personal introduction and the purpose of my visit to the hospital. On getting the consent of the hospital management, the researcher was saddled with task of familiarizing himself with the patients in the outpatients department (OPD) of the Specialist hospital. Through the familiarization techniques the researcher was able to detect patients who were in the hospital as a result of incessant high blood pressure (hypertension). After creating rapport with the patients and with the assistance of the students nurses the researchers was able to administer the instrument to the patients. Some patients who cannot read or write were assisted by the researcher and the student nurses by reading the items in instrument and asking the patients to give their responses to it, and they responded accordingly. The patient participants used in the study responded positively to the items in the instrument. The administration of the instrument lasted for one week in the specialist hospital.

Design/Statistics

The researcher adopted a correlational design in the study. The demographic variables of the study are gender, occupation and socio economic status and psychosocial variables are personality and evasive life experiences. The dependent variable is the hypertension among the middle aged adults. Considering the multiple independent variables of the study against one dependent variable, multiple regression analysis and F-test was employed to test the hypotheses of the study.

RESULTS

The above result showed that gender can significantly predict hypertension among patients studied. Gender contributed 21% ($R^2 = 0.21$, $F = 10.5$, $P < .001$). Occupational differences significantly contributed 15% ($R^2 = 0.15$, $F = 11.5$, $P < .001$) to the prediction of hypertension. Socio-economic status insignificantly contributed 13% ($R^2 = 0.13$, $F = 1.8$, $P > 0.01$) to the prediction of hypertension. Personality (type A & B) insignificantly contributed 19% ($R^2 = 0.19$, $F = 1.6$, $P > .001$) to prediction of hypothesis. Evasive life experience significantly contributed 30% ($R^2 = 0.30$, $F = 12.5$, $P < .001$) to the prediction of hypertension.

Table 1: Mean Results of Demographic and Psychosocial Predictors of Hypertension among Middle Aged Adults

Participants Variables	Mean (X)	Standard Deviation (SD)	Distribution of Samples based on Variables	Number
Gender				60
Male	30.25	11.41	33	
Female	25.21	8.41	27	
Occupation				
Civil servant	12.17	7.30	32	-
businessmen & women	14.16	8.14	28	
Socio-Economic Status				
High	16.15	7.20	20	-
Medium	15.13	7.13	20	
Low	14.50	6.12	20	
Personality				
Type A	20.16	6.70	34	-
Type B	19.19	6.66	26	
Evasive Life Experience				
Business failure	28.18	5.16	30	-
Lost of loved ones	27.25	6.17	30	
Total	**19.85**	**7.12**	60	**60**

Table 1 above showed the mean (X) scores and standard deviation scores of independent variable against the dependent variable in other of stated hypotheses.

Table 2: Multiple Regression Analysis and F-test of Demographic and Psychosocial Predictors of Hypertension among Middle Aged Adults

Model	Adjusted R^2	Adjusted Multiple R^2	F	P
Multiple predictors of self-reported hypertension.			4.6	.001
Conduct		0.025		
Gender (male & female).	0.20		10.5	.001
Occupation, (civil servant and businessmen).	0.15		11.5	.001
Socio-economic status,(high, medium & low)	0.13		1.8	NS
Personality (type A & B).	0.19		1.6	NS
Life experience (business failure and lost of dear one.	0.30		12.5	.001

DISCUSSION

The result of this study indicated that there is significant relationship between gender and hypertension. This showed that gender differences predicted the development of hypertension. Based on the mean score of the patients, the male middle aged adults develop hypertension more than female middle aged adults. The reason behind this fact is that men are usually exposed to severe stress on daily basis trying to provide

for their immediate family and extended family needs in our society. Hence they have little or no time to take adequate rest, and this accumulated tension can lead to high blood pressure (hypertension).

There is significant relationship between occupation and hypertension. This showed that occupation predicted the development of hypertension. Based on the mean scores of the patients, the middle aged adults who are business men and women develop hypertension more than middle aged adults who are civil servants. The reason behind these findings is that business men and women are usually at the risk of business failure than the civil servants. When they have business failure, there is tendency for them to develop high blood pressure (hypertension). There is insignificant relationship between socio-economic status and hypertension. This showed that socio-economic status did not predict the development of hypertension. Based on the mean score of the patients, the middle aged adults from high socio-economic status developed high blood pressure more than those from medium socio-economic status and those from low socio-economic status, while middle aged adult from medium socio-economic status developed hypertension more than those from low socio-economic status. The reason behind these findings is that people from high socio-economic status who have several business engagements may be usually apprehensive in trying to find good family successors that will be in charge of their business empire. If their children or wards are not doing well, they may develop severe life despair, which may lead to high blood pressure (hypertension) in our society. This is the reason why most wealthy people in our society develop cardiovascular disorders which may cause cardiac arrest, heart failure and other heart related illnesses. There is insignificant relationship between personality types and hypertension. Therefore personality types (type A & B) did not predict hypertension. But the mean score indicated that middle aged adults with type (A) personality slightly developed hypertension more than those with type (B) personality. This finding partially supported a land mark study of heart problem by Friedman and Rosenman (1974), which classified people into two categories type (A) personalities (those who run a high risk of heart attack) and type B personalities (those who are unlikely to have a heart attack). Friedman and Roseman then did an 8 year follow-up, finding more than twice the rate of heart disease in type A's than in Type B's (Rosenman, Brand, Jerkin's, Friedman, Straus, Wurum, 1975). Type (A) people are hard-driving, ambitious, highly competitive, achievement oriented and hard striving. Type (A) people believe that with enough effort they can overcome any obstacle, and they "push" themselves accordingly. Perhaps the most telltale sign of a type (A) personality are time urgent, and usually exhibit chronic anger and hostility. Type A's seemed to chafe at normal pace of events. They hurry from one activity to another, racing the clock in self-imposed urgency. As they do, they feel a constant sense of frustration, feeling of anger and hostility. These personality traits are strongly related to increase risk of heart attack (Denollet, 1993).

The result finally indicated significant relationship between evasive life experiences and hypertension. This showed that evasive life experiences predicted hypertension. But the mean difference indicated that middle aged adults who had business failures developed hypertension more than those who lost their loved ones. The reason behind these findings is that business failure can make a man or woman to have long years of anxiety and depression than the death of a loved one. This partly supports the saying that a jobless man is as well as a dead man. If these bottled up tension are not arrested in time; it may lead to high blood pressure (hypertension).

Epidemiological studies have shown consistently that essential hypertension is more prevalent in cities as compared to rural or non industrialized environments, Oshuntokun, (1998). This claim is probably because of business activity going on in the cities with its attendance risk of success or failure among people. Other researcher had pointed out that the above assertion may not be completely correct, since hypertension also exists with similar intensity in rural environment (Omoluabi; 1991). These psychosocial stressors are presumably more prevalent in cities as compared with rural environment (Dressler, Santos and Viteri 1987). In addition to the prevalence of these stressors, factors that are known to cushion the effect of stress such as extended family bond are virtually absent in cities. Compliances to prescribed drugs

(Chemotherapy) by the physicians are one of the ways to reduce the ravaging effect of hypertension among people. But the most efficacious measure is adherence to cognitive behaviour change among the victim of hypertension.

In conclusion, it is obvious that in the etiology and treatment of hypertension, the influence of demographic and psychosocial factors cannot be over emphasized. Consequently, since physicians are not by their training adequately prepared to handle the demographic and psychosocial problems of their patients, our health Ministries through the various governmental and private health management boards should engage the services of behavioural scientist, such as Clinical Psychologist to handle the issue of psychological treatment of patients suffering of hypertension. In future studies, other variables of interest, other than the ones tested will be introduced to ascertain its prediction on hypertension among the middle aged adults.

RECOMMENDATIONS

The following recommendation arises from this study;

1. People who are in the middle age category should be involved in periodic checking of their blood pressure in order to regulate it and take medication when necessary.
2. People who are suffering of hypertension should avoid unnecessary stress in their various environments. They should periodically go on vacation to non stressful environment.
3. They should avoid verbal confrontation with people in their places of work, and they should also avoid verbal and physical confrontation with their spouses and children.
4. The hypertensive patients should regulate their alcohol intake and avoid too much salt in their diets.
5. People that are hypertensive should try as much as possible to be visiting theatre and opera houses where they will be entertainment with the aim of reducing stress and frustration in life brought about by demographic and psychosocial variables as predictors. This will go a long way in reducing the intensity of their systolic and diastolic blood pressure, and ensure an adequate level of blood pressure.

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