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Roles of personality traits, educational level, and duration of illness in illness behaviour among hypertensive patients in Anambra State, Nigeria.

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ABSTRACT

This study evaluated the roles of personality traits, educational level, and duration of illness in illness behaviour among hypertensive patients in Anambra State. Three hundred and sixteen patients were drawn from three Government hospitals in the State. The participants comprised of 160 males and 156 females with ages ranging from 18 to 70 years (Mean age = 46.27, SD = 16.93). Two instruments were used in the study: Illness Behaviour Questionnaire and Big Five Personality Inventory (BFI). Pearson Product Moment Correlation and hierarchical multiple regression were used for data analysis. It was found that educational level, duration of illness, extraversion, conscientiousness and openness to experience positively predicted illness behaviour such that these factors were associated with more positive behaviours. Agreeableness and neuroticism negatively predicted illness behaviour, reflecting that these personality traits were associated with negative illness behaviours among hypertensive patients. Based on the findings, it is recommended that clinical intervention should be encouraged in order to take care of medical and psychosocial factors that precipitate illness behaviour of hypertensive patients.

Introduction

In recent years, the burden of hypertension appears to be rapidly increasing among the Nigeria populace where the health services have focused on treating infectious diseases such as malaria, tuberculosis and typhoid (World Health Organisation, WHO, 2013). Hypertension is the major cause of stroke, heart failure, myocardial infarction, and renal failure, and is responsible for an estimated 45% of deaths due to heart disease and 51% of deaths due to stroke (WHO, 2011). Globally, it is estimated that hypertension affects about one billion people all over the world and it is the leading risk factor for many other cardiovascular diseases (Adeloye, Basquill, Aderemi, Thompson, & Obi, 2015; Beaglehole, Bonita, Alleyne, Horton, Li & Lincoln, 2011; World Bank Nigeria, 2013; WHO, 2013). Hypertension, also known as high or raised blood pressure (BP), is a chronic medical condition in which the BP in the arteries is elevated beyond normal physiological range - systolic blood pressure (SBP) of 100-139Mm HG (millimeter mercury) and or diastolic blood pressure (DBP) of 60-89Mm Hg (Ike, 2014; Onwubere, 2013; WHO, 2013). It is popularly known as the "silent killer," because it has no specific signs and symptoms in the initial stage (Marshall, Wolfe, & McKevitt, 2012). With relative lack of symptoms, most people with hypertension face many challenges such as late diagnosis and life style adjustments such as modification of diet, withdrawal from smoking, increase in physical activity/exercise and decrease weight (Hoel & Howard, 2017; Khatib & El-Guindy, 2015). Consequently, many who live with high blood pressure end up in health facilities with cardiovascular complications including strokes, heart attacks, ischemic heart disease, heart failure and kidney failure, all of which are major causes of death in the adult population (Oga, Adebiyi, Oladapo, Adekunle, Oyebowale, & Falase, 2012).

The way these hypertensive patients perceive, evaluate, and react to their illness has attracted much attention and this clinical pertinence rests with the speculation that apart from the self-evident somatic factors of illness, how patients react to their illness also contributes to the process of recovery and rehabilitation (Lloyd, 2017). This is the concept of illness behaviour. Illness behaviour refers to the way in which symptoms are perceived, evaluated, and acted upon by a person who recognizes some pain, discomfort or other signs of organic malfunction (Mechanic & Volkart, 1960). It is also referred to as varying ways in which individuals interpret and respond to their body sensations and internal states, define and interpret symptoms, make attributions, and take action through informal and formal care (Mechanic, 1995; Risor, 2006). It is believed that illness behaviour is critical and a determinant of clinical outcomes especially in conditions such as hypertension where major life adjustments in diet, exercise, and general attitude to living are conditional for effective recovery.

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Health challenges arise throughout the life course and how an individual perceives and reacts to a particular illness will influence the way the individual will respond to the treatment of that illness. The desired illness behavior is responding to an illness by seeking advice and cooperating with relevant health professionals in providing care. Unfortunately, many hypertensive individuals may neither be aware of their condition given the asymptomatic nature of hypertension at onset nor seek help. As a result, they often seek medical attention late or when they have developed complications such as strokes, heart attacks, heart failures and kidney failures (Son, P., Quang, N., Viet, N., Khai, P., Wall, S., Weinehell, L.,… Byass, P. 2012). For this reason, hypertensive patients are faced with challenges of recovery and rehabilitation because of psychological and health care issues involved with the illness. This may include guilt feeling for late diagnosis with associated negative attitude and demotivation. In some cases, patients may perceive themselves as defenseless against their illness and adopt a passive illness behaviour and negative emotions which may offer little resistance to the course of their illness or even demotivate them in the course of treatment. On the surface, it may seem that the nature and severity of an illness would be the sole determinants of an individual's response, and for very severe illnesses, this is to some extent may apparently look true. But many people fail to see a physician, report late to health facility, or even break treatment protocol such as drug regimen fidelity in spite of the presence of serious symptoms. Despite the fact that people are expected to do what is right in all situations to protect life, many do the opposite deliberately. This paper therefore investigates the roles of personality traits, educational level, and duration of illness in illness behaviour among hypertensive patients in Anambra State.

Literature (e.g., Hewitt & Flett, 1996; McCrae & Costa, 1996) suggests that certain personality characteristics may be linked to health and illness through overt behaviours. Specifically, the recognition of health threats and the decision-making process at individual level to respond to different health problems represent a possible behavioral pathway where personality may influence the initiation, course, and final outcome of one's illness (Contrada & Goyal, 2004). Personality refers to the pattern of thoughts, feelings, social adjustments, and behaviours consistently exhibited over time that strongly influences one's expectations, self-perceptions, values, and attitudes (Srivastava & Mishra, 2016). An individual's personality has been found to predict how that person responds to illness, how he articulates and solves problems and how he is affected by stressful events in his environment (McCrae & Costa, 1996). Some trait theorists (Smith, 1967; Goldberg, 1981; McCrae & Costa 1987) in psychology using factor analysis identified five personality traits they called the big five personality traits. They argued that these five traits represent the core of personality. The five traits are: agreeableness, neuroticism, extraversion, openness to experience and conscientiousness.

Openness in the context of the big five refers more specifically to Openness to Experience, or openness to considering new ideas. Openness to experience describes a person's tendency to think abstractly. Those who are high in openness tend to be creative, adventurous, and intellectual. They enjoy playing with ideas and discovering novel experiences. Those who are low in openness tend to be practical, predictable, traditional, and focused on the concrete. They tend to avoid the unknown, dislikes change and follow traditional ways (John & Srivastava, 1999). Conscientiousness describes a person's level of goal orientation and persistence (Grohol, 2019). Those who are high in conscientiousness are organized and determined, achievement striving and self-disciplined. Those who are low in this trait are impulsive, incompetent, careless, procrastinates and easily sidetracked (John & Srivastava, 1999). Extraversion describes a person's inclination to seek stimulation from the outside world, especially in the form of attention from other people. Extroverts engage actively with others to earn friendship, admiration, power, status, excitement, and romance. Introverts, on the other hand, conserve their energy, dislikes being the center of attention, prefer solitude and do not work as hard to earn these social rewards (John & Srivastava, 1999).

Agreeableness describes the extent to which a person prioritizes the needs of others over their own needs. Unlike extraversion which consists of the pursuit of relationships, agreeableness focuses on people's orientation and interactions with others (Ackerman, 2017). People who are high in agreeableness experience a great deal of empathy and tend to get pleasure out of serving and taking care of others. People who are low in agreeableness tend to experience less empathy, demanding, stubborn, sceptical and put their own concerns ahead of others (John & Srivastava, 1999). Neuroticism describes a person's tendency to respond to stressors with negative emotions including fear, sadness, anxiety, guilt, and shame (Barrick & Mount, 1991). This trait can be thought of as an alarm system. People experience negative emotions as a sign that something is wrong in the world. Fear is a response to danger, guilt a response to having done something wrong. However, not everyone has the same reaction to a given situation. High neuroticism scorers are more likely to react to a situation with strong negative emotions. Low neuroticism scorers are more likely to brush off their misfortune and move on.

These five traits have been linked to various characteristics of individuals and have been associated with health-related behaviours. For example, in the case of stress-related psychopathology, Hewitt and Flett (1996) suggested that the role personality traits like agreeableness, extraversion, conscientiousness, neuroticism and openness to experience play can be seen in how people cope with illness and stress associated with it, which, in turn, affects the degree to which they experience maladaptive outcomes with consequences for clinical prognosis.

A study done by Armon and Toker (2012) using the Five-Factor Model of personality found that conscientiousness, extroversion and openness to experience predicted health maintenance behaviour, (while an association was found between neuroticism and health maintenance behaviours). In a similar study, Sinaj (2015) examined the connections between the five-factor model of personality and health behaviours among adults in Albania ($N = 275$).

The results suggest that personality traits were closely related to the practice of health behaviours and that these individual features were superior in relation to social variables.

Another study by Cauchi and DeGiovanni (2015) examined the relationship between personality traits and health-related behaviours among Maltese university students. Using the Five-Factor Model of personality, the study discovered significant differences between high medium and low levels of personality traits and their relationship to health-related behaviours. It was observed that conscientiousness and agreeableness were related to health-promoting behaviours such as reduced binge drinking and drug use. Also, extraversion and openness were related to increased fruit and vegetable consumption. However, neuroticism was linked to drug use and lack of exercise among the health-deterring behaviours observed such as drinking and driving, as well as unsafe sexual practices. Hajek, Bock and König (2017) examined the role of personality in health care use in a longitudinal study in Germany. They measured personality by using the GSOEP Big Five Inventory (BFI-S). Number of physician visits in the last 3 months and hospital stays in the last year were used as measures of health care use. The study revealed that physician visits increased with increasing neuroticism, whereas extraversion, openness to experience, agreeableness and conscientiousness, did not affect physician visits in a significant way.

Furthermore, the decision to seek help could be subject to the level of education of an individual as well as the level of concern about the symptom and its duration (Amaghionyeodiwe, 2008). Education is the process of acquiring knowledge, skills of reasoning, values, and capacities through formal and experiential learning. Education leads to the acquisition of diverse knowledge and capacity that aids individual daily life choices and chances. Education offers opportunities to learn more about health and health risks, both in the form of health education in the school curriculum and by giving individuals the health literacy to draw on, later in life, and absorb messages about important lifestyle choices to prevent or manage diseases. Education creates understanding that aims to influence individual lifestyle decisions and raises awareness of the determinants and risk factors of health, and encourages individuals to adopt positive health and illness behaviours.

Mishra, Mohapatra and Kumar (2019) assessed health seeking behaviour among caregivers of under-five children in an urban slum of Bhubaneswar, Odisha. Using a community based cross-sectional design, among 260 caregivers, in the field practice area of Urban Health and Training Centre of a medical college undertaken from September 1, 2016 to February 28, 2017, a pretested semi-structured questionnaire was used after obtaining a list of under-five children from the female health worker. The result showed that significant association was found between educational status of the mother and appropriate treatment seeking behaviour during an episode of acute illness. Adam and Aigbokhaode (2018) investigated the factors associated with the health care seeking behaviour of heads of households in a rural community in Southern Nigeria. The study showed that level of education predicted health care seeking behaviour. However, while the foregoing studies looked at health care seeking behavour as a dependent variable, the current work looked at possible relationship between education and illness behaviour in general.

Duration of illness is another factor that may have significant role on illness behaviour. This refers to the length of time that sickness lasts or continues in a patient. This can be brief or extended depending on the nature, pathophysiology and symptomatology of the illness, the kind of attention given to the illness and the patient's perception of the condition. Oluwasanmi (2017) found that duration of illness was an independent significant predictor of health seeking behaviour among out-patient of Federal Neuropsychiatric Hospital Yaba Lagos, Nigeria.

From the foregoing, it is suspected that personality traits, educational level and duration of illness may likely have some significant roles in the illness behaviour of hypertensive patients. Understanding these relationships may assist clinical psychologists in assessment, treatment planning and psychotherapeutic intervention in patients with hypertension as regards their illness behaviour. This invariably may aid in reduction of negative illness behaviour and lack of awareness usually witnessed among these patients. Most of the available studies reviewed focused on health seeking bahaviour. While recognizing health seeking behaviour as a possible positive component of illness behaviour, there may also be negative health behaviour. The implication of this view is that health seeking behaviour does not mean the same as illness behavoiur which is the main dependent variable of this study.

Accordingly, this paper is guided by the following hypotheses:

1. Educational level will significantly predict illness behaviour of hypertensive patients in Anambra State.

2. Illness duration will significantly predict illness behaviour of hypertensive patients in Anambra State.

3. Extraversion will significantly predict illness behaviour of hypertensive patients in Anambra State.

4. Agreeableness will significantly predict illness behaviour of hypertensive patients in Anambra State.

5. Conscientiousness will significantly predict illness behaviour of hypertensive patients in Anambra State.

6. Neuroticism will significantly predict illness behaviour of hypertensive patients in Anambra State.

7. Openness to experience will significantly predict illness behaviour of hypertensive patients in Anambra State.

Method

Participants

Participants in this study were three hundred and sixteen patients, selected through convenient sampling technique from three State Government established hospitals in the three senatiorial zones in Anambra State. The hospitals are Ekwulobia General Hospital, Onitsha General Hospital, and Enugwu-

Ukwu General Hospital all in Anambra State. The participants comprised of 160 males and 156 females with ages ranging from 18 to 70 years, with the mean age of 49.59 (SD = 19.77).

Instruments

Two instruments were used in the study: Illness Behaviour Questionnaire and Big Five Personality Inventory (BFI).

Pilowsky and Spence (1981) designed the Illness Behaviour Questionnaire (IBQ), a self-report inventory that assesses an individual's ideas, affects, and attributions of clinical symptoms. The IBQ is a 62-item questionnaire with a dichotomous yes/no response scale that yields scores on seven subscales measuring an individual's attitudes toward illness. The IBQ is primarily used to detect abnormal illness behaviours and to identify physical complaints that are manifestations of psychosomatic disorders. The scale has 7 subscales namely: General hypochondriasis (anxious health related concern), disease conviction (belief that a "real" disease is present), psychological versus somatic functioning (tendency to somaticize), denial (tendency to attribute life stress to physical problems), affective inhibition (inability to express personal feelings to others), affective disturbance (anxiety, depression), and irritability (anger, friction). Factor analyses have provided some support for the construct validity of the seven subscales in the instrument (Pilowsky et al., 1994; Zonderman, Heft, & Costa, 1985). Some studies have established the concurrent validity of the IBQ with various measures of anxiety and depression (Grassi, Rosti, Albierti, & Marangolo, 1989; Harkins, Price, & Braith, 1989; Pilowsky et al., 1994). Pilowsky et al., (1994) reported moderate to high stability coefficients over a 1 to 12 week test-retest period ranging from .87 to .67, with a mean coefficient of .80.

The second instrument is the Big Five personality Inventory (BFI) developed by John, Donahue and Kentle (1991) and validated for use with Nigeria sample by Umeh (2004). The instrument contains 44 items designed to measure personality from a five (5) dimensional perspective. The five (5) dimension or subscales of BFI are extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. Direct scoring is used for all the items. It is scored on a 5-point Likert pattern ranging from 1-5, where 1- Disagree strongly, 2-Disagree a little, 3- Neither agree nor disagree, 4-Agree a little and 5-Agree strongly. Values of the numbers shaded are added to obtain the clients scores in each of the subscales. A Cronbach's alpha co-efficient of .80 and a test-retest reliability of .85, on 3-month interval were obtained by John et al. (1991). In addition, the big five inventory has a mean convergent validity coefficient of .75 and .85 with the big five instrument authored by Costa and McCrae (1992) and Goldberg (1992), respectively. The divergent validity coefficients obtained by Umeh (2004) by correlating the BFI with university maladjusted scale (Kleinmunt, 1961) are extraversion (.05), agreeableness (.13), conscientiousness (.11), neuroticism (.39) and openness (.24). Higher scores indicate that the individual manifests the specific personality trait.

Procedure

Letter of introduction was obtained from the Department of Psychology, Nnamdi Azikiwe University, Awka. The letter aided the researcher to secure approval from Anambra State Hospitals Management Boards. After the approvals were obtained, the approved letters were handed over to the Chief Medical Officers in-Charge of Ekwulobia General Hospital, Onitsha General Hospital, and Enugwu-Ukwu General Hospital, who then referred the researcher to the heads of out-patients wards where the potential participants were drawn from. Research assisitants were trained in each hospital to assit the research in the data collection. Respondents who were available and willing to be part of the study on each clinic day (Mondays and Wednesday at Enugwu-Ukwu; Tuesdays and Thursday at Onitsha; Wednesdays and Thursday at Ekwulobia General Hospital) participated in the study. The respondents were made to sign consent forms attached to the questionnaires before filling the questionnaires. The essence and nature of the study was explained to the hypertensive patients that participated in the study and they were also reassured of the confidentiality of their responses. Each participant was given enough time to complete the questionnaire. Thereafter, data collected was subjected to SPSS version 23 for data analysis.

Design and Statistics

The study adopted a correlational design while Pearson's correlations and hierarchical multiple regression were used for data analyses.

Results

Table 1 shows the correlation among the study variables. Older age was associated with being male ($r = .22, p<.001$), higher educational level, ($r = .46, p<.001$) and longer duration of illness, ($r = .17, p<.01$) but older age was associated with lower extraversion ($r = -.2214$ $p<.05$), conscientiousness, ($r = -.16$, $p<.01$) and openness to experience ($r = -.35$, $p<.001$). Educational level correlated negatively with duration of illness ($r = -.17$, $p<.01$), extraversion ($r = -.16$, $p<.01$) and openness to experience ($r = -.46$, $p<.001$) but correlated positively with agreeableness ($r = .16$, $p<.01$) and conscientiousness ($r = .20$, $p<.001$). Duration of illness was positively associated with extraversion ($r = .30$, $p<.001$), agreeableness ($r = .20$, $p<.001$), neuroticism ($r = .23$, $p<.001$) and illness behaviour ($r = .41$, $p<.001$) but was associated negatively with conscientiousness ($r = -.23$, $p<.001$). Extraversion associated positively with agreeableness ($r = .38$, $p<.001$), conscientiousness ($r = .16$, $p<.01$), neuroticism, ($r = .42$, $p<.001$), openness to experience ($r = .27$, $p<.001$) and illness behaviour ($r = .33$, $p<.001$). Agreeableness correlated positively with conscientiousness ($r = .40$, $p<.001$), neuroticism ($r = .27$, $p<.001$) and openness to experience ($r = .34$, $p<.001$). Conscientiousness correlated positively with neuroticism ($r = .17$, $p<.01$), openness to experience, ($r = .15$, $p<.01$) and illness behaviour ($r = .20$, $p<.001$). Neuroticism positively associated with openness to experience ($r = .50$, $p<.001$) and illness behaviour ($r = .32$, $p<.001$). Openness to experience associated positively with illness behaviour ($r = .25$, $p<.001$).

Table 1: Pearson's correlations of demographic variables, extraversion, agreeableness, conscientiousness, neuroticism, openness to experience, educational level, duration of illness and illness behaviour among hypertensive patients in Anambra, Nigeria

Variables	Mean	*SD*	1	2	3	4	5	6	7	8	9
Age	46.27	16.93	-								
Gender	-	-	.22***	-							
Educational level	-	-	.46***	-.36***	-						
Illness Duration	1.42	.494	.17**	.86***	-.17**	-					
Extraversion	14.26	4.45	-.14*	.22***	-.16**	.30***	-				
Agreeableness	16.52	4.47	-.03	.08	.16**	.20***	.38***	-			
Conscientiousness	16.97	4.48	-.16**	-.26***	.20***	-.23***	.16**	.40***	-		
Neuroticism	12.46	2.60	.08	.11	.09	.23***	.42***	.27***	.17**	-	
Openness	17.27	4.21	-.35***	.07	-.46***	.02	.27***	.34***	.15**	.50***	-
Illness Behaviour	82.98	7.18	.09	.38***	-.00	.41***	.33***	.04	.20***	.32***	.25***

Note. ***p<.001; **p<.01; *p<.05. Gender was coded 0 = Male and 1 = Female

Table 2: Hierarchical multiple regression predicting illness behaviour by educational level, duration of illness and personality with age and gender as control variables

Predictors	Step 1			Step 2		
	B	B	*t*	*B*	β	*t*
Age	-.03	-.08	-1.11	.03	.07	1.33
Gender	3.30	.23	1.87	2.97	.21	2.16***
Educational level	1.37	.16	2.13*	4.40	.50	7.17***
Duration of illness	3.71	.26	2.36*	6.72	.46	5.11***
Extraversion				.51	.32	6.48***
Agreeableness				-.95	-.59	-10.80***
Conscientiousness				.65	.41	8.58***
Neuroticism				-.62	-.22	-3.76***
Openness to Experience				1.11	.65	9.59***
R^2	.19			.53		
ΔR^2	.19			.35		
F	17.65 (4, 311)***			39.04 (9, 306)***		
ΔF	17.65 (4, 311)***			45.93 (5, 306)***		

Note. ***p<.001; **p<.01; *p<.05

Results of the hierarchical multiple regression for the test of the hypotheses is shown in Table 2. In Step 1, age, gender, educational level and duration of illness were added as control variables. Age was not a significant predictor of illness behaviour, β = -.08. Gender was not a significant predictor of illness behaviour, β = .23. Educational level was a significant positive predictor of illness behaviour, β = .16, p<.05. The *B* showed that for each one unit rise in educational level, illness behaviour increases by 1.37 units. Therefore, the first hypothesis was accepted. Similarly, duration of illness positively predicted illness behaviour, β = .26, p<.05. The *B* showed that for each one unit rise in duration of illness, illness behaviour increases by 3.71 units. Therefore, the second hypothesis was accepted. The model was significant, $F\Delta$ (4, 311) = 17.65, R^2 = .19. The R^2 of .19 indicated that 19% of the variance in illness behaviour among hypertensive patients were explained by the control variables.

Step 2 indicated that extraversion was a significant positive predictor of illness behaviour among hypertensive patients, β = .32, p<.001. The *B* showed that for each one unit rise in extraversion, illness behaviour among hypertensive patients increases by .51 units. The third hypothesis was therefore accepted. Agreeableness negatively predicted illness behaviour, β = -.59, p<.001. The *B* showed that for each one unit rise in agreeableness, illness behaviour decreases by -.95 units. Therefore, the fourth hypothesis was rejected. Conscientiousness was a significant positive predictor of illness behaviour, β = .41, p<.001. The *B* showed that for each one unit rise in conscientiousness, illness behaviour among hypertensive patients increases by .65 units. The fifth hypothesis was therefore confirmed. Neuroticism was a significant negative predictor of illness behaviour, β = -.22, p<.001. The *B* showed that for each one unit rise in neuroticism, illness behaviour among hypertensive patients increases by -.62 units. Therefore, the sixth hypothesis was rejected. Openness to experience was a significant positive predictor of illness behaviour, β = .65, p<.001. The *B* showed that for each one unit rise in openness to experience, illness behaviour among hypertensive patients increases by 1.11 units. The seventh hypothesis was therefore accepted. The model was significant, F (5, 306) = 45.93, $R^2\Delta$ = .35. The $R^2\Delta$ of .35 indicated that the five facets of personality explained 35% of the variance in illness behaviour among hypertensive patients. All the variables in the regression model explained 53% of the variance in illness behaviour among hypertensive patients.

Discussion

The primary goal of this study was to examine the roles of personality traits, educational levels, and duration of illness in illness behaviour among hypertensive patients in Anambra, Nigeria. Based on the findings, educational level significantly predicted illness behaviour among hypertensive patients in Anambra State. This finding is in consonance with the study of Adam and Aigbokhaode (2018) that identified the factors associated with the health care seeking behaviour of heads of households in a rural community in Southern Nigeria. The results of the study indicated that predictors of health care seeking behaviour included marital status, level of education and income. This finding also is in consonance with the study of Mishra, Mohapatra, and Kumar (2019) that assessed health seeking behaviour among caregivers of under-five children in an urban slum of Bhubaneswar, Odisha. The result showed that significant association was found between educational status of the mother and appropriate treatment seeking behaviour during an episode of acute illness.

The reason for this outcome could be that educational level which was seen as an important determinant of illness behaviour in the previous studies is also necessary to the hypertensive patients in the study. These patients were more likely to be conscious of their health behaviours and had better health behavior conceptions. Those with more years of schooling tend to have better understanding that aims to influence individual lifestyle decisions and raises awareness of the determinants and risk factors of health, and encourages individuals to adopt positive health and illness behaviours.

The result also showed that duration of illness significantly predicted illness behaviour among hypertensive patients in Anambra State. This finding is in tandem with the result of Oluwasanmi (2017) who examined personality traits and religiosity as predictors of health seeking behaviour among out-patients of Federal Neuropsychiatric Hospital Yaba Lagos. His findings showed that duration of illness independently and significantly predicted health seeking behaviour. A plausible reason for this outcome may have resulted from the fact that the burden of the illness which maybe tiresome and worrisome influenced the patient's decision to seek help.

The result showed that extraversion was a significant positive predictor of illness behaviour among hypertensive patients in Anambra State. This finding is in line with Sinaj (2015) that examined the connections between the five factor model of personality and health behaviours among adults in Albania. The study showed that there was a statistically significant positive correlation between extraversion and general health condition. The positive prediction observed could be as a result of the strength associated with high extraversion traits like optimistic, assertive and active behaviours which are actually what one with hypertension may need in order to experience positive behavioural outcome.

The result also showed that agreeableness negatively predicted illness behaviour among hypertensive patients in Anambra State. This finding also is totally in line with the finding made by Hajek et al., (2017) that determined the role of personality in health care use in Germany. The study revealed that agreeableness did not affect physician visits in a significant way. A plausible reason for this outcome could be because of weakness associated with low agreeableness traits like rude, irritable, uncooperative, and suspicious of others which deprived such people of social benefits that they could have gotten from others in connection with their illness. The findings of the study showed that Conscientiousness was a significant positive predictor of illness behaviour among hypertensive patients in Anambra State. This finding is in line with Armon and Toker (2012) that examined which personality traits predicted health maintenance behaviours using the Five-Factor Model of personality. The study showed that conscientiousness predicted health maintenance behaviour. The positive relationship may have resulted from the fact that highly conscientious individuals tend to live longer, reflecting their tendency to engage in healthy behaviours (e.g., exercising, maintaining a healthy diet) and avoid risky behaviours (e.g., smoking, substance abuse, criminal behavior).

The findings of the study also showed that neuroticism was a significant negative predictor of illness behaviour among hypertensive patients in Anambra State. However, this finding is not totally in line with the finding made by Hajek et al., (2017) that determined the role of personality in health care use in Germany. The study revealed that physician visits increased with increasing neuroticism, whereas extraversion, openness to experience, agreeableness and conscientiousness did not affect physician visits in a significant way. A plausible reason for this outcome may be because neuroticism traits are negatively associated with subjective well-being and psychological health.

Finally, this study found that Openness to experience was a significant positive predictor of illness behaviour among hypertensive patients in Anambra State. This finding concurs with Armon and Toker (2012) study that examined which personality traits predicted health maintenance behaviours, using the Five-Factor Model of personality. The study showed that openness to experience predicted health maintenance behaviour. Openness to experience, being a personality trait where individuals high on this trait tend to have high level of thoughtfulness, insightful, imaginative, curious and they are not afraid to take risk in order to navigate the illness.

Implications of the Study

The findings of this study will aid scholars in understanding the interplay between personality traits, educational level, duration of illness, and illness behaviour of the hypertensive patients. More so, the hypertensive patients through these findings will know how their personality traits (like extraversion, conscientiousness, openness to experience), educational level and duration of illness increases their illness behaviour, and how personality traits like agreeableness and neuroticism do not increase their illness behaviour. Furthermore, through this study, the general public will know the relationship between personality traits, educational level, duration of illness and illness behaviour. Based on that, they will know how to get ready for what lies ahead in

terms of managing illness behaviour in connection with hypertensive disease.

Recommendations

Based on the findings of this study, it is recommended that there is need for clinical intervention by clinical psychologists for the hypertensive patients. This is because clinical interventions are performed to bring about modification in people's behaviour, emotional state, or feelings in order to promote good mental health and prevent mental disorder among hypertensive patients. Though these interventions might not be geared towards treating a condition, but designed to foster healthy emotions, attitudes and illness behaviour of hypertensive patients. Experts' collaborating in finding solutions to hypertensive patients is needed to take care of other psycho-social factors that precipitate illness behaviour of the patient.

Conclusion

The work examined the roles of personality traits, educational level, and duration of illness in illness behaviour among hypertensive patients in Anambra state. A survey was conducted among three hundred and sixteen hypertensive patients from three Government established hospitals in the three senatorial zones in Anambra State. The findings showed that personality traits (extraversion, conscientiousness, and openness to experience), educational level and duration of illness were significant predictors of illness behaviour among hypertensive patients in Anambra State. However, the findings revealed that agreeableness and neuroticism did not predict illness behaviour among hypertensive patients in Anambra State.

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