

Vol. 19, May 2013, Issue 1.

**NIGERIAN JOURNAL
OF CLINICAL AND
COUNSELLING
PSYCHOLOGY**

ISSN: 1118 - 4035



Nigerian Journal
of
Clinical and Counselling Psychology

*Vol. 19, May*2013, Issue 1.*

ISSN: 1118 – 4035

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Nigerian Journal of Clinical and Counselling Psychology

Vol. 19 May 2013, Issue 1. ISSN: 1118 – 4035;

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Psychosocial Variables Influencing Depression Tendency and Quality of Life of Stroke Patients

Aide S. Okhakhume

Department of Psychology

University of Ibadan

Email: okhasly2004@yahoo.com

Abstract

Adaptation to stroke may require complex long-term change in stroke patients' lives. This study examined the psychosocial variables influencing depression tendency and quality of life among stroke patients. The independent variables are personality traits and demographic variables while the dependent variables are depression and quality of life. Data were collected on stroke patients using a cross-sectional design and standardized questionnaires. A total of 112 stroke survivors took part in the study in which 57 (50.9%) were males and 55 (49.1%) were females with a mean age of 50.63 and standard deviation of 8.657 with age ranging from 30 to 74 years. Four hypotheses were tested using the multiple regression analysis and t-test for independent measures. The first hypothesis shows that jointly, agreeableness, conscientiousness, extraversion, openness to experience and neuroticism significantly predicted Quality of life among the stroke patients in the study. The result revealed that conscientiousness and extraversion independently predicts Quality of life of Stroke patients while agreeableness, openness to experience and neuroticism did not independently predict Quality of life. The second hypothesis predicted that agreeableness, conscientiousness, extraversion, openness to experience and neuroticism significantly and jointly predicted depression among stroke patients. The result also demonstrated that there was independent influence of agreeableness, openness to experience and neuroticism on the level of depression in Stroke patients while conscientiousness and extraversion did not independently predict depression among stroke patients. The result shows that male stroke patients were more depressed than female stroke patients.

However, female stroke patients have better quality of life than male stroke patients.

The results were discussed exhaustively in relation to the existing literature and it was concluded that efforts should be made to consider personality factors such as agreeableness, openness to experience, neuroticism, conscientiousness and extraversion as a prerequisite in conducting rehabilitation programs among stroke patients this will go a long way to boost their recovery and increase their level of wellbeing. Rehabilitation programs for this group of people (stroke survivors) would be more effective if they are based upon a holistic approach.

Keywords: Big Five Personality, Socio Economics Characteristics, Depression, Quality of life, Stroke patients.

Introduction

Stroke, which can also be called cerebra vascular accident (CVA) can be defined as the stoppage of blood flow to the brain or, it is a sudden blockage or rupture of a blood vessel in the brain resulting in loss of consciousness, partial loss of movement or loss of speech.

According to the World Health Organization, stroke is defined as rapidly developing clinical signs of focal or global disturbance of cerebral function, lasting more than 24hours, or leading to death, with no apparent cause other than vascular origin. Stroke is the brain damage caused by a lack of blood flow to part of the brain. In order to perform its many functions and direct activities throughout the body from walking to seeing to reasoning, the brain requires a constant supply of energy, provided by the oxygen and nutrients that are delivered by the flowing blood. If blood flow is restricted or cut off at any point between the heart and the brain, portions of the brain relying on blood from the obstructed blood vessel become deprived of oxygen. Brain cells are extremely sensitive to such oxygen deprivation, and if they are deprived of oxygen and nutrients for more than several minutes, they, in effect, starve to death. A stroke results in permanent damage to the brain tissue and in many cases, permanent disability for the patient. For example, a patient who has had a stroke may develop paralysis on one or both sides of the body; have

difficulty with walking, eating, or other daily activities; or lose the ability to speak or understand speech.

Stroke is a major cause of disability among many elderly Nigerians and therefore presents a major social challenge. It is often a catastrophic event affecting all aspects of an individual's life. Current stroke outcome assessments are often limited to the resulting neurological impairment and functional disability, neglecting to evaluate the total influence of the event on a patient's well-being. In the last four decades, advances in medicine and technology, improved quality of care and increased emphasis on health promotion have contributed to a reduction in the incidence of stroke. However, despite this decline, improved survival rates and an aging population contribute to a growing number of elderly stroke survivors living (Duncan, 2004).

Stroke is a major health issue. The impact of stroke on an individual is usually unanticipated, and its effect can be devastating. There are different types of stroke some of which are the right and left hemiplegia stroke, partial and total stroke, ischemic stroke among others. Depending on the severity and type of stroke, a stroke can leave a person with residual impairment of physical, psychological and social functions. The severity of disability depends on the level of mobility, communication skills or the degree to which the behavioral and personality changes or cognitive deficit affect each individual. The occurrence of a stroke often has several negative consequences for the stroke survivor and the long-term consequences of stroke have been recognized in recent years. Some of these include increased dependency on others for activities of daily living, alteration in mood, and disruption in social interaction with family members. Stroke is a very well recognized cause of physical disability, with one in three stroke survivors enduring paralysis and physical impairments and almost two in three requiring assistance with mobility.

Even though previous studies have shown that rehabilitation can help a stroke patient regain and maintain physical function, therapeutic interventions that focus on physical restoration in isolation from the context of a person's psychosocial environment are not sufficient to improve quality of life following disability. Traditionally, epidemiological stroke studies focused on morality and recurrence, but not on

quality of life (QOL) issues. Some aspects of quality of life (QOL) considered important by the patients have been studied infrequently; also less well recognized is the significant incidence of co morbid psychiatric symptoms and disorders that may accompany stroke.

Quality of life is the degree of well-being felt by an individual or group of people. Unlike standard of living, quality of life is not a tangible thing, and so cannot be measured directly. It consists of two components: physical and psychological. The physical aspects include things such as health, diet and protection against pain and disease. The psychological aspects include stress, worry, pleasure and other positive or negative emotional states.

Quality of life is a descriptive term that refers to people's emotional, social and physical wellbeing, and their ability to function in the ordinary tasks of living. Quality of life analyses are particularly helpful for investigating the social, emotional and physical effects of treatment or disease processes on people's daily lives; analyzing the effects of treatment or disease from the patient's perspective; and determining the need for social, emotional and physical support during illness. Possibilities result from the opportunities and limitations each person has in his or her life and reflect the interaction of personal and environmental factors.

Quality of life measures can therefore help to decide between different treatments, inform patients about the likely effects of treatment, and monitor the success of treatment from the patient's perspective, and to plan and coordinate care packages, the degree to which a person enjoys the important possibilities of his or her life. Quality of life (QOL) assessment include at least four dimensions; physical, functional, psychological and social health. The physical health dimension refers to disease related symptoms. The functional health comprises self-care, mobility, and the capacity to perform various families and work roles. Psychological dimension includes cognitive and emotional functions (e.g. vascular dementia and post stroke depression) and subjective perception of health and life satisfaction. Social dimension includes social and family contacts. The multidimensional approaches of perceived health status in

stroke patients have received attention only in the last few years.

Stroke survival has been connected to mood disturbances, including depression by a number of studies but there have been few findings on actual rates of depression and drug therapy in this group. As many half of all the people who suffer stroke become clinically depressed, it is certainly understandable that a person's outlook would be directly connected to how much he or she has lost. After having stroke, people can experience full or partial paralysis of the muscles in their faces or limbs. They can also lose the ability to speak, significantly jeopardizing their connection to the rest of the world.

Depression is a mental illness in which a person experiences deep, unshakable sadness and diminished interest in nearly all activities. People use the term depression to describe the temporary sadness, loneliness, or blues felt. In contrast to normal sadness, severe depression, also called major depression, can dramatically impair a person's ability to function in social situations and at work. People with major depression often have feelings of despair, hopelessness, and worthlessness, as well as thoughts of committing suicide.

Depression is a commonly reported complication of the recovery from stroke and the rehabilitation period may occur due to the location of the brain damage caused by the stroke, family history, or the mental and physical difficulties associated with stroke recovery. It is not unusual for the sufferers of serious injuries or illness to experience depression; such events are listed by numerous experts as one of the common precipitating factors of clinical depression. Common symptoms of depression include feelings of worthlessness and hopelessness, lack of motivation to do basic life tasks, mental and physical fatigue, sleep disturbance, memory and cognitive difficulties and weight and appetite changes. For those recovering from any serious medical setback, such symptoms can make the process of recovery go more slowly, or possibly seem daunting or even insurmountable in spite of positive prognoses about the original medical problem.

More holistic treatment can be recommended for patients after stroke as depressive disorders occur frequently

following stroke with prevalence estimates ranging from one in five to approximately one half of all stroke patients. Nevertheless, depressive disorders commonly remain undetected or are regarded to as understandable reactions to a catastrophic life event. In recent years, a number of studies have examined the etiology; clinical course and the treatment of post-stroke depression. The evidence from these studies suggests that post-stroke depression is a heterogeneous group of disorders of multifactorial etiology and differing clinical presentations.

A number of predictors for post-stroke depression have been identified and they are factors related to the stroke itself and it's sequelae, as well as risk factors for major depression in general. Greater cognitive impairment and physical disability following stroke have generally been shown to predict post-stroke depression. A number of studies have shown that post-stroke depression share risk factors in common with major depression occurring in other circumstances, including female gender and the past personal and family history of depression (Gall, 2001).

Personality traits is defined as the pattern of thoughts, feelings and behavior, individual differences in how people actually think, feel, and act; and not on how people want to think, feel and act. Personality can also be defined as somebody's set of characteristics: the totality of somebody's attitudes, interests, behavioral patterns, emotional responses, social roles, and other individual traits that endure over long periods of time.

Furthermore, personality is a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions motivations and behavior in various situations (Ryckman, 2004). Personality is a key determinant in human social interactions. A direct relationship between personality and behavior has long been recognized.

The Big Five Personality traits will be examined in this study. There are five broad factors (dimensions) of personality traits and they include;

- Extraversion (sometimes called Surgency): The broad dimension of extraversion encompasses such more

specific traits such as talkativeness, energetic, and assertive.

- Agreeableness: Include traits like sympathetic, kind and affectionate.
- Conscientiousness: Include traits like organized, thorough.
- Neuroticism (sometimes reversed and called Emotional Stability): Include traits like tense, moody, and anxious.
- Openness to Experience (sometimes called Intellect or Intellect/Imagination): Include traits like having wide interests, and being imaginative and insightful.

Morris indicated that, to a personality psychologist, the behaviors of greatest importance are those that are relatively pervasive in the person's lifestyle in that they show some consistency across situations; relatively stable in the person's lifestyle across time, and indicative of the uniqueness of the person.

Each of the Big Five factors is quite broad and consists of a range of more specific traits. The Big Five structure was derived from statistical analyses of which traits tend to co-occur in people's descriptions of themselves or other people. The underlying correlations are probabilistic, and exceptions are possible. For example, talkativeness and assertiveness are both traits associated with extraversion, but they do not go together by logical necessity: you could imagine somebody that is assertive but not talkative (the "strong, silent type"). However, many studies indicate that people who are talkative are usually also assertive (and vice versa), which is why they go together under the broader extraversion factor.

Statement of Problem

Depression is a commonly reported complication of the recovery from stroke and studies have shown that a significant number of stroke patients with little or no physical problems still experience a deterioration in their quality of life over an extended period of time as stroke is a major cause of disability among many elderly Nigerians and therefore presents a major social challenge. This study is looking beyond physical symptoms but examining psychological

symptoms and personality characteristics to evaluate quality of life. Individual characteristics of persons with mild to moderate stroke may be important to consider in developing comprehensive, targeted interventions designed to maximize recovery and improve quality of life. Studies have suggested that in addition to neurobiological factors, psychological factors deserve further exploration. With reference to a recent publication on the effect of psychological distress on the risk of suffering a fatal stroke (May et al, 2002). Carney and Freedland (2002) discussed several mechanisms through which psychological distress and stroke are related but did not include the role which personality trait play in the development of depression in stroke patients.

Furthermore, the personality trait of neuroticism contributes to mental health outcome in stroke patients. However, other personality traits of the big five such as conscientiousness and agreeableness is yet to be included as they have been linked to mental health outcome among stroke patients. There is the need to take personality into consideration as a potential vulnerability factor for decreased (QOL) quality of life because cognitive functions is an important determinant of quality of life associated with coping style.

Purpose of Study

This study examined the psychosocial variables influencing depression and quality of life of stroke patients. This emphasizes the fact that there is a great need for adequate quality of life attention on this category of people.

Specifically, the study will try to investigate;

1. The relationship between personality types and quality of life after stroke among stroke patients;
2. The personality trait that will predict better quality of life of stroke patients
3. The personality trait that will predict stroke patients' level of depression
4. The contributions of other demographic variables to quality of life outcome among patients with stroke.
5. The influence of the patients' socio economic characteristics on patients depression outcome
6. The level of the stroke patient's quality of life.

Significance of Study

Stroke is a common event with major implications for functional loss of the patient, family, and society. Very little can be done medically or surgically to enhance neurological function, so rehabilitation on functional ground becomes paramount. It is very difficult to predict if a patient will benefit from rehabilitation on neurological grounds; thus any stroke patient can cooperate, pay attention and learn this by being at alert so as to be offered a stroke rehabilitation program as soon as he is able to participate in it.

The information is useful for determining the optimal target population, intensity, and duration of therapy and the necessary sample size for a larger trial. Studies in stroke are necessary due to the increasing incidence of this disease which represents a significant cause of death and invalidity in adults and young adults and produces important hospital and social spending, and for which patients must be treated in specialized units (stroke units).

The principal cost-determining factors in most studies are those generated by hospital admission (principally hospital stay). Other cost-determining factors include severity, stroke subtype or the fate of patients on discharge. Future health policies aimed at optimizing economic resources must be directed towards reducing hospital stay and minimizing patient disability.

There is wide variation in the care given to people with stroke. These characteristics are important in planning rehabilitation and targeting an intervention to help improve quality of life. Individual characteristic of persons with mild to moderate stroke may be important to consider in developing comprehensive, targeted interventions designed to maximize recovery and improve quality of life.

Hypotheses

The following hypotheses shall be put to test in the study:

1. There would be a joint and independent influence of agreeableness, conscientiousness, extraversion, openness to experience and neuroticism on stroke patients' quality of life.
2. There would be a joint and independent influence of agreeableness, conscientiousness, extraversion,

openness to experience and neuroticism on depression in stroke patients'

3. There will be a significant difference between male and female stroke patients on depression.
4. There will be a significant difference between male and female stroke patient's quality of life.

Method

This section considers the explanation of the research design, the setting and subject descriptions, instruments, procedure for the study and analysis is used. The research design for this study is the survey research design. This is because the researcher did not carry out any active manipulation of the independent variables in the study; rather, the variables were measured as they occurred. The independent variables are the psychosocial variables grouped into personality characteristics, (extraversion, neuroticism, openness to experience, agreeableness, and consciousness traits) and the socio-demographic characteristics of sex, age, marital status, educational status, religion, economic status, occupation and job status. The dependent variables are depression and quality of life.

Setting

The study was conducted in a selected government hospital. The hospital is The Lagos State University Teaching Hospital, Ikeja, Lagos. The stroke unit (SU) of this hospital was used. The stroke survivors were given the questionnaires to fill on their clinic days strictly Tuesdays and Fridays. This was done consecutively for a month

Participants

A total of 112 participants who were stroke patients were sampled from the Stroke Unit in the Lagos State Teaching Hospital, Lagos using the purposive sampling technique. In this study, stroke survivors made up of 57 (50.9%) males and 55 (49.1%) females with a mean age of 50.63 and standard deviation of 8.657 with age ranging from 30 to 74 years. On marital status, 5 (4.5%) of the survivors are single, 73 (65.2%) survivors are married 15 (13.4%) are divorced and 19 (17.0%) are widows. In terms of educational status, 31 (27.7%) of the

survivors are Ordinary National Diploma/National Certificate Education (OND\NCE) holders, 44 (39.3%) survivors are B.Sc/ HND holders, 6 (5.4%) survivors are MSC/MBA holders and 11(9.8%) survivors are less than WASC/SSCE holders and 20 (17.9%) survivors were WASC/GCE holders.

In respect of economic status, 18(16.1%) of the survivors are low on economic status, 24(21.4%) are high economic status and 70(62.5%) are on the medium level in the economic status. In terms of their religion, 70(62.5%) survivors are Christians, 39(34.8%) are Muslims and 3(2.7%) are traditionalists.

Also, 12(10.7%) of the stroke survivors have the right hemiplegia stroke, 8 (7.1%) have the left hemiplegia stroke, 11 (9.8%) have hemiplegia type of stroke, 2 (1.8%) have paraplegia, 65(58.0%) have partial stroke and 7(6.3%) have total stroke. 17(15.2%) survivors are traders, 23(20.5%) are on business, 6 (5.4%) of them are teachers, 4(3.6%) are artisans, 8 (7.1%) are security guards, 2(1.8%) are clergies 15(13.4%) are civil servants and 9 (8.0%) of them are bankers; as 1(0.9%) patient is a professor 1(0.9%) of the patient is a student, 21 (18.8%) of the patients are retirees, and 5(4.5%) are insurance brokers. 77(68.8%) patients are no more working and only 35 (31.3%) patients still manage to work. The stroke patients who are still managing to work have a minimum of #18,000 and maximum of #84,000 as their monthly allowance.

Instruments

The study utilized a self-report questionnaire and a well structured questionnaire for data collection made up of four sections; A, B, C, D:

Section A: It measured the socio-demographic information of the survivors for the study.

Section B: The Big Five Inventory (BFI) by Oliver P. John 1991 which consists of 44 items was used and it assessed the personality characteristics of extraversion, neuroticism, agreeableness, openness to experience and conscientiousness. The extraversion subscale was made up of 8 items (items 1, 6, 11, 16, 21, 26, 31, 36); the agreeableness subscale was made

up of 9 items (items 2, 7, 12, 17, 22, 27, 32, 37, 42); the conscientiousness subscale was made up of 9 items (items 3, 8, 13, 18, 23, 28, 33, 38, 43); the neuroticism subscale was made up of 8 items (items 4, 9, 14, 19, 24, 29, 34, 39); and the openness subscale was made up of 10 items (items 5, 10, 15, 20, 25, 30, 35, 40, 41, 44). The scale was made to have a response format of strongly disagree (1) disagree (2) undecided (3) agree (4) strongly agree (5). Guttman Split-Half Coefficient is 0.906; Cronbach alpha of 0.840 was reported. High scores on the dimension in the scale reflect high level of personality trait while low scores reflect low level of each personality trait.

Section C: The Self-Rating Depression Scale (SDS) which is a 20-item self rating instrument was used to assess depression and it addresses itself to the same category as the Depression Status Inventory and, responses are given on a 5 point scale of A little of the time (1) Sometimes (2) Good part of the time (3) most times (4) all the time (5). High scores in the scale reflect moderate severity, mild and none occurrence in terms of duration. Cronbach Alpha of 0.83 and Guttman Split Half Coefficient of 0.85 were reported.

Section D: It measured the stroke survivor's quality of life using the Stroke Impact Scale. It is a 26 item scale. In items 1 and 2, responses are given on a 5-point scale and 4-point scale of (1) Very poor (2) Poor (3) Neither (4) Good (5) Very good; and (1) Very dissatisfied (2) Dissatisfied (3) Neither Satisfied (4) Very satisfied; respectively. In items 3-14, responses are given on a 5-point scale of (5) an extreme amount (4) very much (3) a moderate amount (2) A little amount (1) not at all; in items 15-25 responses are given on a 5-point scale of (1) Very poor (2) Poor (3) Neither (4) Good (5) Very good; also, in item 26, responses are given on a 5-point scale of (1) Never (2) Seldom (3) Quite often (4) Very often (5) Always. High scores in the scale reflect high level of quality of life while low scores reflect low level of quality of life.

Procedure

The study being a survey research approached a well-known government hospital in Lagos. The hospital was chosen in Ikeja (General Hospital) Lagos. In the hospital, a letter of

introduction from the Department of Psychology, University of Ibadan was given to the Central Medical Director (CMD) of the hospital and, a letter of approval was given by the management for the continuity of the research. The letter was shown to the matrons, nurses and doctors on duty and the questionnaires were given to those patients who willingly agreed to collect the questionnaires, making up a total of 150 questionnaires for the selected hospital. The selected patients' participants participated voluntarily in the study. Out of the distributed 150 questionnaire, a total of 112 copies were retrieved. The remaining 38 copies were wrongly, poorly and partly filled, while some were not even returned. The study actually lasted for one month and the adequately filled questionnaires were taken for analysis.

Statistical Analysis

Different statistical techniques were employed to test the hypothesis. Hypotheses one and two were analyzed using the multiple regression analysis and hypotheses three and four were tested using the t-test of independence statistical analysis.

Results

After all the data collected have been collated, statistical analysis was done and this chapter present the analysis of the data gathered. The statistical analysis was done and represented in two parts: descriptive and inferential. The descriptive statistics was done to show the characteristics of participants including the mean, standard deviation and their frequency distribution. Inferential statistics was used to test the stated hypotheses. Four hypotheses were tested in this study.

The first hypothesis which states that there would be a joint or independent influence of agreeableness, conscientiousness, extraversion, openness to experience and neuroticism on stroke patients' quality of life was tested using multiple regression analysis. The result is presented in table 4.1.

Table 4.1: Summary of Multiple Regression Analysis Showing The Influence of Agreeableness, Conscientiousness, Extraversion, Openness to Experience and Neuroticism on Quality of Life.

Predictors	R	R ²	B	T	T	Df	F	p
Agreeableness	.562	.316	-	-	>.5	4	9.793	<.01
			.248	1.836				
Conscientiousness			.472	3.902	<.05			
Extraversion			.265	2.761	<.05			
Openness to experience			-.039	-.283	>.05			
Neuroticism	.015	.118	>.05					

The result in table 4.1 shows that jointly agreeableness, conscientiousness, extraversion, openness to experience and neuroticism significantly predicted Quality of life among the Stroke patients in the study. The result shows that jointly, the variables accounted for 32% change observed in the reported Quality of life of the Stroke patients ($R^2 = 0.316$, $F = 9.793$, $p < .01$).

The result further shows that conscientiousness ($\beta = .265$, $p < .05$), extraversion ($\beta = .472$, $p < .05$) were predictors of Quality of life of Stroke patients while agreeableness ($\beta = -.248$, $p > .05$), openness to experience ($\beta = -.039$, $p > .05$) and neuroticism ($\beta = .015$, $p > .05$) were found not to independently predict Quality of life among the stroke patients. These findings suggest that stroke patients who were conscientious; or orderly, self restrained; extroverted; or outgoing have better quality of life while agreeableness, neuroticism and openness to experience did not predict Quality of life in Stroke patients. This hypothesis is therefore, partially supported.

The second hypothesis which states there would be joint and independent influence of agreeableness, conscientiousness, extraversion, openness to experience and neuroticism on depression in stroke patients' was tested using multiple regression analysis. The result is presented in table 4.2;

Table 4.2: Summary of Multiple Regression Analysis Showing the Influence of Agreeableness, Conscientiousness, Extraversion, Openness to Experience and Neuroticism on Depression.

Predictors	R	R ²	β	T	T	df	F	p	
Agreeableness	.890	.792	.149	-	<.05	4	80.855	<.01	
					1.836				
Conscientiousness			-.018	3.902	>.05				
Extraversion			-.014	2.761	>.05				
Openness to experience			.334	4.458	<.05				
Neuroticism			.628	9.102	<.05				

The result in table 4.2 demonstrates that jointly agreeableness, conscientiousness, extraversion, openness to experience and neuroticism significantly predicted depression among the Stroke patients in the study. The result shows that jointly the variables accounted for 79.2% change observed in the reported Depression in Stroke patients ($R^2 = 0.792$, $F = 80.855$, $p < .01$).

The result further shows that there was independent influence of agreeableness ($\beta = .149$, $p < .05$), openness to experience ($\beta = .628$, $p > .05$) and neuroticism ($\beta = .334$, $p > .05$) on the level of depression in Stroke patients while conscientiousness ($\beta = -.018$, $p > .05$), extraversion ($\beta = -.014$, $p > .05$) were found not to independently predict depression among the stroke patients.

These findings suggests that stroke patients who were low on openness to experience, but high on neuroticism and were extroverted that is; outgoing patients have higher levels of depression while conscientiousness and agreeableness did not predict the Stroke patients' depression. This hypothesis is therefore partially supported.

The third hypothesis states that male patients will significantly report depression than female patients. This hypothesis was tested using t-test for independence and the result was presented in table 4.4.

Table 4.3 Summary of t-test of Independence Showing the Influence of Gender on the Level of Depression among Stroke Patients

Dependent	Gender	N	Mean	S.D	df	t	P
Depression	Male	50	43.82	8.35	102	4.070	<.001
	Female	54	37.42	7.67			

The result in table 4.3 the result shows that there was significant difference between the male and female stroke patients' mean scores on depression ($t(102) = 4.070, p < .001$). The male patients ($x = 43.82$) significantly reported more scores on the depression scale than female stroke patients ($x = 37.42$). Thus the hypothesis is accepted.

Table 4.4: Summary of t-test for independence showing the influence of gender on the quality of life among stroke patients

Dependent	Gender	N	Mean	S.D	df	t	P
Quality of life	MALE	50	34.64	5.95	102	1.268	>.05
	FEMALE	54	33.20	5.60			

The result in table 4.4 shows that there was no significant difference between the male and female stroke patients' scores in quality of life. The male patients ($x = 34.64$) mean scores on the depression scale was not significantly different from that of the female stroke patients ($x = 33.20$) ($t(102) = .1.268 p > .05$). Thus, the hypothesis is rejected.

Discussion

This study has looked into the psychosocial variables influencing depression and quality of life of stroke patients. This study has also provided some interesting findings based on the four hypotheses tested which, the first and second hypotheses were partially confirmed, the third hypothesis was significant and the fourth hypothesis was not significant.

The first hypothesis which states that there would be joint and independent influence of agreeableness, conscientiousness, extraversion, openness to experience and neuroticism on stroke patients' Quality of life was tested using multiple regression analysis. The findings suggest that stroke patients who were conscientious; orderly, self-restrained; and extroverted or outgoing have better quality of life while agreeableness, neuroticism and openness to experience did not predict quality of life among stroke patients. This finding is in line with the study of Robinson and Morris (1995) who found out that depressed patients had higher neuroticism scores than non-depressed patients. Neuroticism was correlated positively with depressive symptomatology. Extroversion was not associated with depression diagnosis or depressive symptomatology.

The second hypothesis which states there would be joint and independent influence of agreeableness, conscientiousness, extraversion, openness to experience and neuroticism on depression in stroke patients' was partially supported. The result demonstrated that stroke patients who are low on openness to experience, but high on neuroticism and were extroverted or outgoing have higher levels of depression while conscientiousness and agreeableness did not predict the Stroke patients' depression. This finding is in line with the findings of Jylhä, Melartin, Rytysälä Isometsä. (2009) which confirms that, neuroticism scores declined and extraversion scores increased with recovery during follow-up among depressive patients. The scores were not influenced by a recurrence of depression between measurements. In logistic regression, patients had higher neuroticism and lower extraversion than the general population.

The third hypothesis verified the difference between male and female stroke patients' level of depression. The result indicated that the hypothesis was confirmed. The result

showed that males rather females were prone depression. This may be as result of masculine attributes as men are known to react to disability and dependency on others negatively. This findings is in line with findings of Nichols-Larsen, Clark, Zeringue, Greenspan and Blanton, (2005) who found that age, gender, educational level, stroke type, concordance (paretic arm=dominant hand), upper extremity motor function (Wolf Motor function Test), and comorbidities were associated across SIS domains were associate with poor mental health. Poorer health related quality of life in the physical domain was associated with age, nonwhite race, and more comorbidity and reduced upper-extremity function. Stroke survivors with more comorbidities reported poorer health related quality of life in the area of memory and thinking, and those with an ischemic stroke and concordance poorer communication.

In the fourth hypothesis, the difference between male and female stroke patients was investigated. The result revealed that there was no significant difference between the male and female stroke patients in their quality of life. This findings contrast with the findings of Nichols-Larsen, et al (2005) who demonstrated that age, gender, educational level, stroke type, and comorbidities were associated with poorer health related quality of life in the stroke patients Studies indicated that stroke has a significant impact on the quality of life of survivors, but some individuals find ways to adapt to their functional disabilities and report a high quality of life especially among the female folks.

Conclusion

The study examined the role of psychosocial variables in stroke patients quality of life and mental health, based on the findings the study conclude that;

Jointly, agreeableness, conscientiousness, extraversion, openness to experience and neuroticism significantly predicted Quality of life among the Stroke patients.

Conscientiousness, extraversion were predictors of Quality of life of Stroke patients while agreeableness, openness to experience and neuroticism were found not to

independently predict Quality of life among the stroke patients.

Jointly, agreeableness, conscientiousness, extraversion, openness to experience and neuroticism significantly predicted depression among the Stroke patients in the study. There was independent influence of agreeableness, openness to experience and neuroticism on the level of depression in Stroke patients while conscientiousness and extraversion were found not to independently predict depression among the stroke patients.

There was a significant difference between the male and female stroke patients' level of depression that is, male stroke patients are more depressed than female stroke patients.

There was no gender difference between the male and female stroke patients' quality of life.

Implication of findings

The study has pointed out that some personality characteristics can provide good explanation for understanding depression and quality of life. Based on this study, it was revealed that 79.2% change observed in the reported depression in Stroke patients and 32% change observed in the reported Quality of life of the Stroke patients. Also, the probability of stroke increases as people get older, with those over age 65 at greatest risk. The incidence of stroke in males and females is about equal, although females are more likely to die from stroke than males.

This reflects that efforts should be taken to consider personality factors of agreeableness, openness to experience, neuroticism, conscientiousness and extraversion as a prerequisite in conducting rehabilitation programs among stroke patients so as to boost their recovery and level of wellbeing.

Finally, rehabilitation programs which can help restore lost functions for this group of people would be more effective if they are based upon better and more holistic approach.

Limitations

The study cannot be said to have no limitation. The sample used for this study is a group of stroke survivors in the Lagos

State Teaching Hospital and whose medical status, cognitive and communication abilities permitted participation in the interview methods employed.

The generalizability of the study results from this small, relatively homogeneous sample is reduced by the entry criteria employed. Furthermore, the validity of the study results is affected by the refusal of large number of eligible stroke survivors to participate in the study. Comparisons of socio-demographic variable between participants and non-participants at discharge could have helped to detect any bias. However, socio-demographic information on non-participants could not be retrieved from the hospital records due to confidentiality regulations. Because of the approach to data collection, the causal nature of some relationships observed in this study is not clear. In particular, poor quality of life may cause depression as opposed to the reverse.

Another limitation of the study is in the area of generalization of findings. The study was actually centered on the stroke survivors of a government hospital in Lagos State; so, it would be difficult generalizing the findings to other government and private hospitals in other states.

Also, there was a limitation in the area of visiting other popular government hospitals; as the procedure of administering the questionnaire to the survivors took a very long process and rules which the management gave.

Finally, the participants for the study were mostly reluctant and very saucy and so, they were pleaded to by their nurses before taking part in the study.

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