PERSONALITY TRAITS, SEX DIFFERENCE, AND PSYCHOLOGICAL DISTRESS AMONG CAREGIVERS OF STROKE PATIENTS AT FEDERAL MEDICAL CENTER, MAKURDI

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Abstract

The study examines personality traits, sex differences and psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi. Survey design and convenience sampling technique were adopted for the study. 378 participants took part in the study and responded to the Big Five Personality Inventory (BFI), and Depression, Anxiety, and Stress Scale (DASS 21) to measure personality traits and psychological distress respectively. Hypotheses were tested using multiple regression analysis and independent t test. The results of the study indicate that, there is a significant joint influence of personality traits on psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi (R = .610 = R^2 = .372 (F (5,391) = 44.109, t = 5.631, *p*? .05). Independently, agreeableness and conscientiousness negatively and significantly contributed to psychological distress. While, openness to experience, neuroticism, and extraversion positively and significantly contributed to psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi. (β = -.111, *p*? .05; β = -.091, *p*? .05; β = .181, *p*? .05; β = .328, *p*? .05; β = .428, *p*? .05). The results also indicate that, there is no significant difference between male and female caregivers of stroke patients on psychological distress at Federal Medical Centre Makurdi (t (376) = .423, p >.05). It was concluded that personality traits influenced psychological distress but, sex difference has no influence on psychological distress. Therefore, it is stated among other recommendations that, clinical psychological services is an important aspect of hospital services that should not be limited to the patients alone but, be extended to the caregivers of patients to help them cope with the stress of caregiving especially for stroke patients in the hospital.

Keywords: Personality traits, Sex difference, Psychological distress, Caregivers

INTRODUCTION

Psychological distress is a term used by psychologists to describe unpleasant feelings or emotions that impact peoples' level of functioning in the society. In other words, it is an unpleasant state or experience of psychological discomfort that interferes with the daily activities and life of individuals going through stressful experiences. Wheaton (2007) defines psychological distress as an emotional disturbance that may impact on the social functioning and day-to-day living of individuals in the society. Mirowsky and Ross (2002) defines psychological distress as a state of emotional suffering that is characterized by symptoms of depression (like loss of interest in everyday activities; sadness; hopelessness, and fatigue among others) and anxiety symptoms (like restlessness; and feeling tense).

Psychological distress could occur as a poor or maladaptive response to a stressful situation when external events or stressors place demands upon people that they are unable to cope with. For example, an individual may struggle to accept that a loved one is dead and as a result, become sad and have trouble getting out of bed, finds it difficult to focus at work thereby, affecting their work performance. People who are psychologically distressed may also lose interest in social activities. Mason, Fauerbach and Haythornthwaite (2010) observed that, students who experience psychological distress may find it hard to focus on their schoolwork or in class, especially if they are experiencing hallucinations or delusions. Therefore, suffices to say that a person who is psychologically distressed might exhibit behaviours characterized by symptoms of mental illness like anxiety, confused emotions, hallucinations, rage, without actually being mentally ill in a medical sense.

Psychological distress affects people in different ways. It affects the way the mind works (for example, poor memory, and short attention span) and the ways the body functions (for example, immune system, and digestion); it can also worsen other medical conditions like blood pressure, and glucose control among others (Taylor, 2009). Psychological distress can also interfere with recovery from burn in many ways, such as making pain and itching feel even worse, reducing burn patient's effort and persistence in participating in rehabilitation therapies and wound care, making communication with burn team members difficult, reducing patient's interest and pleasure in daily activities and disrupting sleep (Smith, Klick, Kozachik, Edwards, Holavanahalli, Wiechman, Blakeney, Lezotte, & Fauerbach, 2008).

Available literature has shown that there are so many stressful situations that could cause psychological distress. King (2011) observed that situations like death of loved ones, divorce, rape, domestic violence,

flooding, wildfire, earthquake, and tsunami. Furthermore, medical conditions like cancer, infertility, mental illness, adverse work and school experiences, as well as loss of job all causes psychological distress. Similarly, Goldberg (2000) observed that major life transitions like starting a new school or a new job, moving to a new environment or graduating from college can be sources of psychological distress if, the individuals cannot cope with the demands of these transitions. People do not react in the same way to stressful situations no matter their exposure, therefore they do not manifest psychological distress in similar ways. The severity of psychological distress manifested by an individual is dependent upon the situation and how it is perceived by the individual.

Since no two individuals experience psychological distress in the same way, it then means that, psychological distress might be a function of individual's personality. Oladimeji (2011) defines personality as the total quality of an individual's behaviour as it is revealed in his habits of thought, of expression, his attitudes and interests, his manner of acting, and his personal philosophy of life. Personality is the unique set of enduring characteristics and patterns of behaviour (including thoughts and emotions) that influence the way a person adjusts to his or her environment (Worchel & Shebilske, 1995). In a simpler term, personality *is* the characteristic ways that people differ from one another.

Personality is made up of traits; identifiable and relatively stable characteristics that set each individual person apart from others. Personality trait is an enduring pattern of perceiving, relating to, and thinking about the environment and oneself that is exhibited in a wide range of important social and personal contexts. According to Kassin (2003) personality traits are habitual patterns of behaviour, thought, and emotion. Traits are relatively stable over time, differ across individuals and influence behaviour.

Proponents of the traits model of personality view personality based on inherited traits and analyzed behaviour from the individualistic perspective. According to trait psychologists, there are a limited number of these dimensions (dimensions like Extraversion, Conscientiousness, Agreeableness, Openness to experience, or Neuroticism), and each individual falls somewhere on each dimension, meaning that they could be low, medium, or high on any specific trait. These personality traits are implicated in behaviours and might influence how humans react to stressful situations. Afshar, Hamidreza, Hassanzadeh-Keshteli, Sharbafchi, Feizi, and Peyman (2015) assessed the prevalence of personality traits and their relation with psychological factors like depression, anxiety, and psychological

distress. The result shows that high levels of neuroticism and low levels of agreeableness and extraversion were associated with being depressed or anxious, or having high psychological distress.

The relationships between psychological distress, pain duration, neuroticism, extraversion, pain severity, and functional impairment were examined by BenDebba, Torgerson, and Long (1997). The results indicated that levels of psychological distress are related to the patients' personalities. Patients who scored high on neuroticism reported higher levels of psychological distress than patients who scored low on this trait.

Similarly, Aaseth, Grande, Leiknes, Benth, Lundqvist, and Russell (2011) explored the relationship between chronic tension-type headache (CTTH) and psychological factors (personality traits and psychological distress) in a population-based sample and to determine the influence of headache frequency and medication days. The results indicated that persons with CTTH had a significantly higher neuroticism score and a significantly higher level of psychological distress than the general population. Headache or medication days per month had no significant influence on the neuroticism and lie scores or the level of psychological distress score. It was concluded that persons with CTTH have a high level of neuroticism and psychological distress.

Sex difference is another important factor found to be implicated in psychological distress. Sex refers to the properties of a person that determine his or her classification as male or female (King, 2011). Scientists use the physical structure of the human bodies to classify people as either male or female. Abbo, Ekblad, Waako, Okello, Muhwezi, and Musisi (2008) observed that sex difference is implicated in the feeling of psychological distress. In their study of psychological distress and associated factors among caregivers in Jinja and Iganga district, Eastern Uganda found that of the 400 caregivers interviewed, 70% of male were more psychologically distressed than the female counterpart.

Matud, Bethencourt, and Ibanez (2014) examined gender differences in psychological distress by analyzing the relevance of stress, coping styles, social support and the time use with a sample of 1,337 men and 1,251 women from the Spanish general population. The result indicated that women had more psychological distress than men. Although, psychological distress in the women and men groups have some common correlates such as more stress, more emotional and less rational coping and social support. However, the researchers found some gender differences among which work role dissatisfaction was more associated with distress in the men than in the women group. In addition, women's distress was

associated with more daily time devoted to childcare and less to activities they enjoy, and men's distress was associated with more time devoted to housework and less to physical exercise. The researchers concluded that social roles traditionally attributed to women and men and the differences in the use of time that such roles entail are relevant in gender differences in psychological distress.

In another study of sex differences on psychological distress, Cleary and Mechanic (1983) examined the influence of various factors, including role responsibilities and satisfaction, on depressive mood. Various competing hypotheses concerning the factors related to depression are explored using data from a study of psychological distress in a representative sample of a Midwestern community. Although women reported more distress than men, the largest difference among married people was between employed married men and housewives. Employed married women experienced slightly less distress than housewives, but having minor children in the household was especially stressful for these women and counteracted the advantage of employment. The effects of children in the household on distress were strongest among working women with lower family incomes. These data support the hypothesis that the strain of working and doing the majority of the work associated with raising children increases distress among married women.

In Nigeria, family members and friends both male and female are saddled with the responsibility of taking care of their patients both in public and private hospitals. In many Nigerian hospital settings, it is mandatory for family members of a sick person to provide a caregiver that will be responsible for the day to day needs of the sick person before the sick person is admitted into the hospital ward. This caregiving responsibility especially for stroke patients causes a lot of stress to so many due to the nature of the illness (stroke). The stress experienced by caregivers of stroke patients is mostly due to the general stress of caring for stroke patients who in most cases, are bedridden and cannot do anything by themselves.

The caregivers of stroke patients often times are responsible for wheeling patients on wheel chairs and/or stretchers to radiology unit and laboratory for x-rays, scanning and laboratory investigations especially, where there are no porters vested with this responsibility. The caregivers also feed the patients, bath and clean the patients when the patients soiled themselves. These could act as serious sources of stress to the caregivers of stroke patients.

The stress of caregiving for stroke patients is heightened especially when the caregivers have other responsibilities like, caring for the general well-being of other

family members as well as, meeting up with occupational responsibilities; coupled with environmental factors like bad stench or odour in the hospital, lack of good sanitary system, unavailability of basic amenities/facilities like water for use in the hospital, going outside the hospital to buy drugs/medications when such drugs/medications are not available within the hospital, and sleeping on chair or bare floors among others. This is made worse when the caregivers lack resources to properly care for the stroke patients, and/or see their loved ones in a helpless situation and has nothing to do to salvage the situation, as well as see other stroke patients die in the ward making them apprehensive about the outcome of their patients conditions.

In view of the above, many of the caregivers of stroke patients see the act of caring for stroke patients as challenging while, other do not. Therefore, the researchers became interested in knowing why some see the act as challenging while others do not. Available literature shows that personality traits and sex differences are implicated in psychological distress. Therefore, based on that, the researchers sought to find out the influence of personality traits and sex differences on psychological distress among the caregivers of stroke patients at Federal Medical Centre Makurdi.

Aim and Objectives of the Study

The aim of this research basically is to ascertain the influence of personality traits and sex differences on psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi.

The objectives include:

i. To ascertain the influence of personality traits on psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi.
ii. To examine if there are sex differences on psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi.

Hypotheses

i. There will be a significant influence of personality traits on psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi.
ii. Sex differences will significantly influence psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi.

METHOD

Design

The study adopted survey research design. This research design was adopted because there were no manipulations of the research variables; the participants only responded to the items on the instruments as it applied to them. Convenience sampling technique was used to sample participants for the

study. The reason for choosing this sampling technique was to allow participants who were caregivers of stroke patients at Federal Medical Centre Makurdi to volunteer their participation in the study.

Participants

The participants were strictly caregivers of stroke patients on admission at Federal Medical Centre Makurdi irrespective of the nature or type of stroke. They were people who had stayed for at least two weeks in the hospital caring for the stroke patients. Three hundred and seventy-eight (378) caregivers participated in the study and they include both male and female caregivers of stroke patients on admission. Their age ranged between 18 and 60 years; 18-25 year old constitutes 51% and 26 above constitutes 49% of the participants. 193 (51%) were males while 185 (49%) were females. 76 (20%) were of the high income class, 165 (43%) were of the average income class while, 137 (36%) of the participants were of the low income class. 245 (69%) were Christians, 99 (26%) were Muslims, and 33 (9%) practice traditional religion respectively.

Instruments

The instruments used for data collection include the Big Five Personality Inventory (BFI), and Depression, Anxiety, and Stress Scale (DASS).

The Big Five Personality Inventory (BFI) is a 44-item inventory developed by John, Donahue and Kentle (1991) to measure personality from a five-dimensional perspective. The five dimensions or subscales of BFI are:

a. Extraversion: High energy and activity level, dominance, sociability, expressiveness, and positive emotions.
b. Agreeableness: Prosocial orientation, altruism, tender mindedness, trust, and modesty.
c. Conscientiousness: Impulse control, task orientation, goal directedness.
d. Neuroticism: Anxiety, sadness, irritability, and nervous tension.
e. Openness: It exemplifies the breadth, depth, and complexity of an individual's mental and experiential life.

John *et al*. (1991) provided the original psychometric properties for American samples while, Umeh (2004) provided the properties for Nigerian samples. The coefficients of reliability provided by John *et al*. (1991) are .80 and a three month test-retest of .85. BFI has mean convergent validity coefficients of .75 and .85 with the Big Five Instruments authored by Costa & McCrae (1992) and Goldberg (1992) respectively. The divergent validity coefficients obtained by Umeh (2004) with University Maladjustment Scale (Kleinmuntz, 1961) are Extroversion .05, Agreeableness .13, Conscientiousness .11, Neuroticism .39, Openness .-24.

Depression, Anxiety, and Stress Scales – 21 (DASS-21) is a set of three self-report scale developed by Lovibond and Lovibond (1995) to measure the negative emotional states of depression, anxiety, and stress. The DASS-21 was constructed not merely as another set of scales to measure conventionally defined emotional states, but to further the process of defining, understanding, and measuring the ubiquitous and clinically significant emotional states usually described as depression, anxiety and stress.

Each of the three DASS-21 scales contains 7 items, divided into subscales with similar contents. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty in relaxing, nervous arousal, and been easily upset/agitated, irritable/over-reactive, and impatient.

Procedure for Administration

Before the instruments were administered, the ethical principles of psychological research with human participants were strictly considered and adhered. The consent of the caregivers was sought and granted after detailed explanations of the purpose of the study; the confidentiality of their responses was also guaranteed. They were made to understand that, they have the right to discontinue, decline or refuse to participate or respond to the instruments anytime they feel like before the completion of their responses to the instruments. The instruments were administered to the participants individually by the researchers and other research assistants or confederates engaged to assist in the administration of the instruments. The research assistants were engaged after proper training on how to administer the instruments.

The instruments were administered and collected within 48 hours of the administration since there is no fixed time limit for the administration and collection of the instruments. The instructions on the instruments were simple and straight-forward for the respondents to understand what they were expected to do. The researchers provide answers and explanations to the respondents on questions and issues that arose from the instruments.

Data Analysis

The data were analyzed using inferential statistics. The researcher used independent t-test to test the sex differences in psychological distress, and Multiple Regression Analysis to test the influence of personality traits on psychological distress.

RESULTS

Hypothesis one states that personality traits will significantly predict psychological distress among caregivers of stroke patients. This hypothesis was tested using Multiple Regression Analysis and the results are tabulated and interpreted as shown in Table 1.

Table 1: Multiple Regression Analysis showing the influence of personality traits on psychological distress among caregivers of stroke patients

Variables	*R*	R^2	*F*	*ß*	*t*	*Sig*
Constant	.610	.372	44.109		5.631	.000
Agreeableness				-.111	-2.65	.008
Openness				.181	4.14	.000
Neuroticism				.328	7.55	.000
Extraversion				.428	10.25	.000
Conscientiousness				-.091	-2.16	.032

Criterion Variable: Psychological Distress

The results presented in table 1 showed that there was a significant joint influence of personality traits on psychological distress among caregivers of stroke patients (R = .610 = R^2 = .372 (F (5, 391) = 44.109, t = 5.631, p< .05). This means that all the five dimensions of personality jointly contributed 37.2% variation in psychological distress. With regards to the individual dimensions of personality traits, the results clearly showed that agreeableness significantly and negatively related to psychological distress (*ß*= -.111, p<.05). This means that caregivers who are high on agreeableness are less likely to suffer psychological distress. Openness to experience on the other hand made a significant positive contribution to psychological distress among caregivers (*ß* = .181, p <.05). This means that caregivers predominantly open to experience are likely to suffer psychological distress. The third aspect of personality trait which is neuroticism significantly made strong unique positive contribution to psychological distress among caregivers (*ß* = .328, p<.05). This implies that the higher the level of neuroticism, the greater the chances of suffering from psychological distress. Similarly, extraversion made a unique positive contribution to psychological distress among caregivers (*ß* = .428, p<.05). This implies that extraverted caregivers are likely to suffer psychological distress. Finally, conscientiousness made a unique weak negative contribution to psychological distress (*ß* = -.091, p<.05). This means that conscientious caregivers are less likely to suffer psychological distress. Therefore, the hypothesis that

personality traits will predict psychological distress has been confirmed.

Hypothesis two states that there will be a significant difference between male and female caregivers on psychological distress. This hypothesis was tested using independent t-test and the result is tabulated and interpreted as shown in table 2.

Table 2: Independent t test showing difference between male and female caregivers of stroke patients on psychological distress.

	Sex	*N*	Mean	*SD*	*df*	*t*	*Sig*
Psychological Distress	Male	193	11.14	1.78	376	.423	.673
	Female	185	11.06	1.66			

The result presented in Table 2 indicates that there was no significant difference between male and female caregivers on psychological distress (t (376) = .423, p >.05). This means that both male and female caregivers of stroke patients suffer almost same level of psychological distress. It therefore means that gender is not a likely determinant of psychological distress among caregivers of stroke patients. Thus, the research hypothesis has been rejected and the null hypothesis accepted for lack of statistical support.

DISCUSSION

This study examined the influence of personality traits and sex differences on psychological distress among caregivers of stroke patients in Makurdi. With regards to this, two hypotheses were formulated and tested. Hypothesis one, which stated that there will be a significant influence of personality traits on psychological distress among caregivers of stroke patients, was tested and confirmed. This indicates that there is a significant influence of personality traits on psychological distress among caregivers of stroke patients. This study tallies with a study by Afshar *et al*., (2015) on the prevalence of personality traits and their relation with psychological factors in the general population. The researchers found that, in depressed and anxious subjects and subjects with high psychological distress, the score of neuroticism was higher, but the scores of other factors were significantly lower. The researchers concluded that, high levels of neuroticism and low levels of agreeableness and extraversion were associated with being depressed or anxious, or having high psychological distress. This implies that these personality traits have a significant influence on psychological distress experienced by the general population.

The result of a related study of the relationship between chronic tension-type

headache (CTTH) and personality factors (personality traits and psychological distress) by Aaseth *et al*., (2011) also support the finding of this study. The researchers found that those who had CTTH scored higher on neuroticism and psychological distress than the general population. This implies that, personality trait (neuroticism) significantly influence the psychological distress in the participants through the expression of CTTH. The finding of this study and the findings of other studies on personality traits and psychological distress reported here are necessary and are pointing to the fact that, personality traits irrespective of the traits whether neuroticism, extroversion, agreeableness, openness to experience, and conscientiousness each has its own contributions to psychological distress especially, when caring for patients with stroke in the hospital.

It was also hypothesized that there will be a significant difference between male and female caregivers on psychological distress. The hypothesis was tested and the result indicates no significant difference between male and female caregivers of stroke patients on psychological distress ($t(376) = .423, p > .05$). This means that, male and female caregivers of stroke patients experience psychological distress in similar ways. This finding, contradicts the finding of the study done by Matud *et al*., (2014), who examined gender differences in psychological distress by analyzing stress, coping styles, social support and the time use found that women had more psychological distress than men. Nevertheless, the researchers observed that, there existed some similar characteristics in the symptoms of psychological distress experienced by the two groups. These include more emotional stress, less rational coping, as well as perceived lack of social support.

However, the researchers cited reasons that may have accounted for this gender differences in psychological distress and concluded that, social roles traditionally attributed to women and men and the differences in the use of time that such roles entail are relevant in gender differences in psychological distress. However, in this study, the responsibility of caregiving for stroke patients was performed by both the male and female participants and they were all exposed to similar stress of caregiving for their patients without, any specific social role responsibility based on gender. Therefore, this may have accounted for why both the male and female caregivers have experienced psychological distress in similar ways.

In correlating the result of this hypothesis to the study of sex differences on psychological distress by Cleary and Mechanic (1983) who examined the influence of various factors, including role responsibilities and satisfaction, on depressive mood also found gender

differences in psychological distress. This means that, the results of their research contradicted the finding of this study on sex differences and psychological distress. The researchers also noted that, women reported more distress than men. However, the largest difference among married people was between employed married men and housewives. In this study of psychological distress among caregivers of stroke patients, both males and females who participated in the study were people who were meaningfully engaged and married but, left other things such as work, businesses as well as their family to care for their patients in the hospital. These could also serve as sources of worry and stress and, when combined with the responsibilities of caregiving to stroke patients could lead to psychological distress. This also may have accounted for why they experienced psychological distress in similar ways.

Conclusion/ Recommendations

The study examined the influence of personality traits and sex differences on psychological distress among caregivers of stroke patients at Federal Medical Centre Makurdi. The results of the study indicated that personality traits of caregivers are implicated in psychological distress experienced by the caregivers of stroke patients in the hospital. This imply that the personality of caregivers are factors that contributed to the level of psychological distress experienced by caregivers when taking care of their ill loved ones in the hospital. Meanwhile, the result of the second hypothesis indicates that there existed no sex differences on psychological distress experienced by the caregivers of stroke patients when taking care of their patients in the hospital. This implies that both sexes caring for stroke patients all experienced psychological distress in similar ways.

With regards to the findings of this study, the researchers therefore recommended that clinical psychologists working in the hospitals providing psychological interventions for stroke patients, should take cognizance of the fact that personality traits have significant influence on the level of psychological distress experienced by caregivers of stroke patients, and as such, make adequate arraignments to include the caregivers of these stroke patients in their interventions to alleviate them of the psychological distress experienced while taking care of their loved ones with stroke in the hospital.

It was also recommended that the caregivers of stroke patients in the hospital should seek psychological help when they become distress when taking care of their loved ones with stroke in the hospital. This would be a step in the right direction towards maintaining good health and taking good care of their loved ones with stroke in the hospital.

The management of Federal Medical Centre' Makurdi and other hospitals in Makurdi and Nigeria, should as a matter of necessity improve their services to cover day-to-day nursing care for all in-patients in line with global best practices. This will help to prevent family members from staying in the hospital and taking care of their patient as well as the stress of caregiving. It will also help relatives of patients to attend to other important things like, their job that suffers when caring for their patients in the hospital, as well as work to raise money to pay the hospital bill of their patients.

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