INFLUENCE OF COPING BEHAVIOUR ON PSYCHOLGICAL DISTRESS AMONG INFORMAL CAREGIVERS OF ORTHOPAEDIC INPATIENTS IN BENUE NORTH WEST- NIGERIA

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***Abstract*—This study investigated the Influence of Coping Behavior on Psychological Distress among Informal Caregivers of Orthopaedic Inpatients in Benue North West-Nigeria. A cross sectional survey design was adopted for the study. A total of 320 informal caregivers of orthopaedic inpatients consisting of 151 (47 2%) males and 169 (52 8%) females took part in the study. Coping Strategy Indicator (CSI) and Psychological Distress scale were used for data collection. Multiple linear regressions were used to test the research hypothesis. The result from the Hypothesis shows that; there is a significant influence of coping behaviour on psychological distress and its dimensions among informal caregivers of orthopaedic inpatients. Based on these findings the study recommended that, informal caregivers of orthopaedic impatient should be trained and encouraged by qualified clinicians on the use of appropriate adaptive coping behavior to reduce their psychological distress.**

***Index Terms*—Coping Behaviour, Psychological Distress, Informal Caregivers**

I. Introduction

All over the world, 200 to 500 million major amputations are performed each year and approximately 70,000 new major Amputations are performed annually in the united state (walted, Burges Romeno & Zettle, 2003). While as at 2001, there were 132 Amputees per 1000 of the total population in the United Kingdom (Adegoke, Kehinde, Akosil & Oyeyemi, 2013). Data from Nigeria is Spares (Edomwonyi & Onuminya, 2014).

Amputation causes physical, psychological and emotional dysfunction (Dougherty McFarland, Smith & Reiber, 2014), necessitating informal caregiver's support for rehabilitation and general care. Many Studies associated amputation care with psychological burden. (Ramachandran & cobb, 2011), financial burden (Lim & Zebrack, 2004), physical and mental stress on family and social relationship (Moradi, Mohammed & mohamad, 2015).

An informal caregiver is a non-professional who provides help, care and support to people who are sick, infirm and disabled. According to Brouwer (2008), Informal caregiver is an unpaid or paid member of a person's social network who helps them with activities of daily living. Some of the role of care giving includes helping patient in taking their baths, washing their clothes, taking their prescribed drugs and feeding patients, cleaning up Patient when they Soil their bed Spread, clothes, or body with urine, faeces, or with vomits (Kurland, 2003). Others include helping patient to toilet, Providing buckets where patient will pass out their urine or faces (especially for patients who are unable to stand up from their bed), Staying awake at night to monitor the progress of patient etc.

This excessive responsibility may adversely affect social, cultural, Professional lives, Physical and psychological health of caregivers (Grootenhuis & Bronner, 2009) by Placing a great deal of burden on caregivers leading ton psychological distress which is manifested through expression of sadness, distraction and at times, symptoms like talking to self, Wanting to be alone, crying out easily, aggressiveness, sadness etc Psychological Distress refers to a state of emotional suffering characterized by symptoms of depression (i.e feeling of hopelessness, loss of interest in activities, sadness etc) and anxiety (excessive feeling of tension and apprehension, lack of concentration, restlessness, lack of energy, headache, insomnia etc) that cause some significant distress and affect functioning (Mirowsky & Ross, 2002).

Coping behavior is another variable in this study. Coping behavior is an active effort to master, reduce or tolerate the demands created by stress. Coping can be conceptualized as the cognition , behaviours that people use to regulate distressing situation (Folkman & Moskowitz,2000).

Coping could be manifested inform of problem –focused, seeking social support and emotional-focused. Problem-focused/task oriented coping involves an attempt in which the individual makes to improve his/her concrete situation. Seeking social support which is manifested through a process of actively turning to others for comfort, help and advice while emotionally-focused refers to thoughts or actions taken to relieve the emotional toil of the stressful event, yet does not actually remove the condition. Other forms of coping include defence mechanisms such as denial, which may help a person keep from feeling overwhelmed. Unfortunately, denial can also result in an avoidance (physical and/or psychological withdrawal) from their care receivers.

In reacting to distress, caregivers adopt several coping strategies. However, the researcher is interested in problem solving, seeking of social support and avoidance coping of caregivers of orthopedic inpatients in Benue-North West Nigeria.

II. Statement of the Problem

Global statistics revealed an increasing trend in the distress associated with providing care for people with orthopedic conditions. According to Cuijpers (2005), 22% of European orthopedic patients caregivers experience clinical depression and 75% experience symptoms of depression and anxiety. In Turkey, Ozbas et al (2018) reported that 7.85% of orthopedic patients relatives experience anxiety while 7.42% experience depression. The situation in Nigeria however remains unknown.

Surprisingly, for long, attention of researchers, psychotherapist, clinicians and social workers have focused more on psychological distress experienced by patients thereby paying less attention to psychological distress by their caregivers. This has created a big service and information gap on psychological distress experienced by caregivers. Also, few researchers have studied caregivers psychological distress on the Nigerian population as available studies are mostly done in the western countries. Again, there is an identified gap as no research has been found that studied influence of coping behaviour on psychological distress among informal caregivers of orthopedic inpatients in Benue North-West Nigeria. It is against this background that motivates this study.

III. Aim and objective of the study

The study aim to investigate the influence of coping behaviour on psychological distress among informal caregivers of orthopedic inpatients in Benue Northwest.
The specific objective include:

1. Investigate the influence of coping behaviour (problem-solving, seeking social support and avoidance) on psychological distress and its dimensions among informal caregivers of orthopaedic inpatients in Benue Northwest.

IV. Research Question

The study seeks to answer the following research question:

1. What is the influence of coping behaviour (problem-solving, seeking social support and avoidance) on psychological distress and its dimensions among informal caregivers of orthopaedic inpatients in Benue Northwest.

V. Conceptual Review

Coping Behaviour

According to folkman (2000), coping is a cognitive and behavioural efforts to master, reduce or tolerate demands. It makes no difference whether the demands are imposed from outside (by family, friend, job, school, etc) or from inside (while wrestling with an emotional conflict or setting impossibly high standards etc). Coping seeks in some way to soften the impact of demands. Coping may be defined as any effort, healthy or unhealthy, conscious or unconscious, to prevent, eliminate or weaken stress or to tolerate their effects in the least hurtful manner.

Copying may be inform of problems focused, seeking social support and avoidance (Amirkhan 2000). Problem focused copying involves an attempt in which the individual makes to improve his or her concrete situation. Seeking social support is manifesting through the process of actively turning to others for comfort, help and advice and avoidance copying which is the physical or psychological withdrawal.

Copying plays an important role in a person's adjustment to stress, this is because, there is a psychological and biological evidence to associate copying with psychological adjustment. Problem focused styles of copying are generally related to positive effect with a lower level of burden in cares whereas avoidance evasive copying strategies were related to high level of burden and lower level of life satisfaction. Seeking of social support style of copying is a process of turning to others for comfort, help and advice. This strategy can help to manage emotions. It is aimed at reducing or managing the emotional distress that is associated with the situation.

Psychological Distress

Hudon, Baylis, Soublin, and Lapoint (2007) defines psychological distress as an uneasy feeling of anxiety or depression in response to physical, spiritual or emotional demand or combination of multiple demands that result in temporary or permanent harm.

Psychological distress refers to a state of emotional suffering characterized by symptoms of depression (i.e feeling of hopelessness, loss of interest in activities, sadness etc) and anxiety (excessive feeling of tension and apprehension, lack of concentration, restlessness, lack of energy, headache, insomnia etc) that cause some significant distress and affect functioning (Mirowsky and Ross, 2002) .

1. Depression

Depression is a psychological state that is usually marked by high level of sadness and apprehension, feeling of worthlessness, helpless, and hopeless, irritable or restless, loss of interest in activities or hobbies once enjoyable, feeling of tiredness all the time, difficulty concentrating, remembering details or making decisions, difficulty falling asleep or staying asleep or sleeping all the time, loss of appetite, thoughts of death and suicide or suicide attempts, ongoing aches and pains, headaches, cramps or digestive problems that do not ease with treatment (DSM-5, 2013)

2. Anxiety

Anxiety is marked by feelings of uneasiness, tension and apprehension. Its physical signs and symptoms may include increased heart rate, blood pressure, and respiratory rate, sweating, difficulty swallowing, dizziness and chest pain. Barlow (2002) noted that, anxiety disorder is characterized by emotional,

physical and behavioural symptom accompanied by unpleasant feelings such as fear, worry, increased breathing rate, blood pressure, fatigue, headaches, muscle ache, tension, difficulty in swallowing, trembling, irritability, racing thought, and feeling of impending doom.

Empirical Review

Coping Behaviour and Psychological Distress

Klum (2012) linked coping style and caregivers psychological distress. In a study using caregivers of family members with traumatic brain injury in New Zealand. Quality of life questionnaire and Brief cope questionnaire were responded by participants. Findings indicated that emotion-focused coping was related to higher levels of depression and problem-focused coping to lower level of depression and anxiety. Moreover, seeking social support was related to higher levels of anxiety. Furthermore, findings showed that depression and anxiety were negatively related to quality of life. Emotion-focused coping was positively related to quality of life.

Wageeh, Ikram, Amira and Nadia (2011) investigated coping style and caregivers' psychological distress. Participants comprises of one hundred caregivers of schizophrenia patients from psychiatry department of Assiut University Hospital. Participants age range from 17-60 years. 20% of them were males and 75.0% of them were female, 59.0% were from rural areas, 50% were single, 35% were married, 62% were illiterate and 67.0% were house wives. Caregiver burden self-reported questionnaire and ways of coping questionnaire were used for data collection. Results revealed that level of burden reported by caregivers of schizophrenic patients were self-controlling, positive reappraisal and escape avoidance. Burden was negatively and non-significantly correlated with confrontative coping, distancing, seeking social support and positive re-appraisal; coping strategies. Moreover, Burden was positively and non-significantly correlated with self controlling, accepting responsibility, escape-avoidance and painful problem solving.

Hypothesis

The hypothesis tested for this study is:

(i.) There will be a significant influence of coping behaviour (problem-solving, seeking social support and avoidance) on psychological distress and its dimensions among informal caregivers of orthopaedic inpatients in Benue North-West.

Method

Design

The study adopted a cross sectional survey to assess the influence of coping behaviour on psychological distress among informal caregivers of orthopaedic inpatients in Benue Northwest.

Setting

The study was carried out in Benue North West-Nigeria. Benue North West comprises of Seven Local Governments namely: Gboko, Tarka, Buruku, Guma, Makurdi, Gwer and Gwer-West. The total number of orthopaedic hospitals in all of these Local Governments are four namely: Federal Medical Centre, Makurdi, NKST Rehabilitation Hospital, Gboko and Penuel Orthopeadic Hospital, Gboko.

The reason for the choice of this setting is that, there are larger hospitals that treat orthopaedic patients with corresponding care-givers.

Participants

The participants for this study comprises of 320 informal caregivers drawn from the population of 1624 caregivers in Benue North-West. In terms of their characteristics, 151(47.2%) were males and 169 (62.8%) were females.

Sampling

All the hospitals were conveniently selected while purposive sampling technique was used in selecting caregivers in the various hospitals.

Sample Size Determination

The pre-study information obtained from the hospitals under study revealed that there are 1624 informal caregivers of orthopeadic inpatients in Benue North-West. Thus, based on this population, a sample size using Taro Yemana formula for sample size determination was used to determine the appropriate sample for participating as provided below:

$n= N/(1+Ne)^2$

$n=1624/1 + 1624 (0.05)^2$

n= 320 caregivers

Using quota system, the total of 320 informal caregivers were further apportioned proportionately to hospitals as follows

BSUTH = 415/1624 X 320 = 81

FMC = 206/1624 X 320 = 41

NKSTRH = 584/1624 X 320 = 115

POH = 18/1624 X 320 = 83

Instrument

A structured questionnaire containing standardized instruments was used to collect data in this study. The questionnaire was divided into three sections. Section A measured demographic variables. Section B contains the coping strategy indicator (CSI) developed by Amirkhan (1990) and section C contains the psychological distress scale developed by Kessler (2003).

Statistical Analysis

The stated hypothesis was subjected to statistical analysis using SPSS. The hypothesis was tested using multiple linear regressions.

Hypothesis: There will be a significant influence of coping behaviour on psychological distress and its dimensions among informal caregivers of orthodpeaedic inpatients in Benue North-west. This hypothesis was tested using multiple linear regressions and the result is presented below.

Multiple Linear Regression Showing Result for the Influence of Coping Behaviour on Psychological Distress and its Dimensions among Informal Caregivers

DV	Variable	R	R^2	df	F	ß	t	sig
Overall Dv	Constant	.708	.502	3,318	105.699		5.208	.000
	Problem Solving					.034	.844	.399
	Seeking social support					-.44	-1.089	.277
	Avoidance					.706	17.626	.000
Depression	Constant	.382	.146	3,318	17.986		9.921	.000
	Problem Solving					.133	2.520	.012
	Seeking Social Support					-.024	-453	.651
	Avoidance					.347	6.619	.000
Anxiety	Constant	.699	.489	3,318	100.569		-.520	.000
	Problem Solving					-.030	-.730	.466
	Seeking Social Support					-.042	-.1.0411	.299
	Avoidance					.703	17.345	.000

Source: SPSS output, 2026

The result in the above table indicated a significant influence of coping behavior on overall psychological distress among informal caregivers of orthopedic inpatient (R=.708), R^2=502, F (3,318) = 105.699, P<.010).

The result further indicated that coping behavior accounted for 50.2% of the total variance in psychological distress of informal caregivers. Independently, only avoidance (ß=.706, p<.01) significantly and positively contributed to psychological distress. This implies that score on avoidance coping result to higher experience of psychological distress. Problem solving (ß=.034, p>.05) and seeking social support (ß=.044,p>.o5) did not make a significant contribution to the model.

Exploration of the dimensions of psychological distress revealed that there was a significant influence of coping behavior on depression (R=.382,R^2 =.146, F(3,318)=17.986 p<.01). The result further revealed that coping behavior accounted for 14.6% of the variance in psychological distress among informal care givers of orthopedic inpatients in Benue North West. Independently, problem solving (ß=.33, p<, 05) and avoidance (ß=.347,p<.01) had significant and positive relationship with depression among informal caregivers of orthopedic inpatients. This means that the more an individual employs problems solving and avoidance approaches, the more depressed Informal caregivers of orthopedic inpatients. While seeking social support (ß=.024,p>.o5) did not make significant contribution to depression among informal caregivers of orthopedic inpatients. Based on this result the hypothesis A was conformed for problems solving and avoidance for depression.

The result also indicated that there is a significant influence of coping behavior on anxiety among informal caregivers of orthopedic inpatients F(3,318)=100.569,P<.01. Further observation shows coping behavior accounted for 48. 9% of the variance in anxiety among informal caregivers of orthopedic inpatients. Individually, only avoidance (ß=.703,p<.01) made significant and positive contribution to anxiety. This shows that the more informal caregiver uses avoidance copying behavior, the more their anxiety increases. While problem solving (ß=-.030, p>.05) and seeking social support (ß=-.042,P>.05) did not have significant contribution to psychological distress among informal caregivers of orthopedic inpatients in Benue north-west. Based on this finding, hypothesis B was confirmed for avoidance.

VI. Discussion

The present study focused on influence of copying behavior on psychological distress among informal caregivers of orthopedic inpatients in Benue Northwest. The hypothesis tested was that, there will be a significant influence of copying behavior on psychological distress among informal caregivers of orthopedic inpatients. The result shows a significant influence of copying behavior o n psychological distress among informal caregivers of orthopedic inpatients. The result further demonstrated that copying behavior accounted for 50.2% of the variance in psychological distress among caregivers. Individual, only avoidance significantly and positively influenced psychological distress. This means that the more caregivers use avoidance copying behavior, the more the psychological distress they experience.

An exploration of copying behavior on the dimensions of psychological distress indicated that problem solving and avoidance significantly and positively influence depression. It implies that the higher the caregivers obtain on problem solving and avoidance, the higher the score on depression. However, only avoidance that significantly and positively influenced anxiety among informal care givers of orthopedic inpatients. This shows that the more caregivers uses avoidance copying in dealing with their stressful experience of providing care, the more the feeling of anxiety they experience.

The result is in line with previous finding by Klum (2012) who found that emotion- focused coping was related to higher level of depression and problem focused copying to lower level of depression and anxiety. Moreover, seeking social support was related to higher levels of anxiety. Also, the result concurred with the finding by Ong, Ibrahim and wahab (2016) who reported in their study on the correlation between perceived stigma and coping and psychological distress, as well as determine the predictors of psychological distress among caregivers. The result showe , that 31.5% of the studied care givers experienced psychological

distress. Similarly, the findings of this study is supported by Bachanas, Kullgren, Schwartz, Mc Daniel, Smith & Nesheim (2011) who reported that stress and coping style were significantly predictors of caregivers psychological adjustment.

VII. Conclusion

Psychological distress is a compromised state of health of human resulting to the experienced of depression and anxiety. This condition of health can inhibit proper functioning in daily living of any individual. This study concludes that coping behavior influences psychological distress among caregivers of orthopedic inpatients. Therefore, coping should be given priority attention for improved functioning.

VIII. Recommendations

Based on the study findings, it is recommended that.

(i) Informal caregivers of orthopedic inpatients should be trained and encourage by qualified clinicians on the use of appropriate adaptive coping behavior to reduce their psychological distress.

(ii) Informal caregivers of orthopedic inpatients should be given assessment by trained clinicians and those who uses avoidance coping behavior be given more attention as they are more prone to experience psychological distress.

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