

BURDEN EXPERIENCED BY FAMILY CAREGIVERS OF PATIENTS WITH MENTAL DISORDERS AT SELECTED HOSPITALS IN EKITI STATE, NIGERIA.

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ABSTRACT: *Introduction: The shift towards community care for patients with mental disorders has resulted in transferring of the day –to-day care of patients to their family members resulting in psychosocial burdens hence; this result was to assess the burden of family care-givers of patients with mental disorders in Ekiti State. Methodology: The study employed descriptive design using 138 respondents as sample size using Leshie Kish formula. Apart from the demographic information designed by the researchers, three (3) standardized instruments were used to collect information from the respondents. General Health Questionnaire (GHQ) and Zarit Burden Inventory (ZBI) were used to collect information from the family caregivers. Two research questions were answered and only one hypothesis was tested using statistical product and service solution (spss) version 21. Results: The result revealed 37.0% of the respondents' experienced mild burden while 31.1% experienced moderate burden. High burden was associated with the amount of time spent caring for the relative, finance and trying to meet other responsibilities. Conclusion: It was concluded that majority of family care-givers experienced a considerable amount of burden and therefore a coping mechanism should be made available by nurses.*

KEYWORDS: Caregiver, Family caregiver, Mentally Ill and Psychiatric unit

INTRODUCTION

The advent of deinstitutionalization of the mentally ill initiated interest in caregiver burden globally. Generally in the developed Western Countries, psychiatric asylums are no longer operating and the number of hospital beds has gradually reduced in number with the aim of re-integrating patients with mental disorder into the society (Flyckt, Löthman, Jörgensen, Rylander & Koernig 2013). Deinstitutionalization has therefore led to increased burden on the patients' closest relatives in many countries. Clement, Gerber & McGuire (1995) observed that approximately 60% to 85% of the mentally disabled or impaired individuals are cared for by their family members. The caregiver is usually responsible for providing assistance to the patients in performing their activities of daily living which include; bathing, eating, cooking, dressing; taking medications, and hospital follow-up attendance. However, Imas & Wandee (2011) stated that the longer the duration of providing care particularly for patients with schizophrenia, the likelihood that the family caregiver will experience significant burden that can lead to adverse consequences. The shift towards community care for patients with mental disorders has resulted in transferring the responsibilities of the day-to-day care of patients to their family members, which has led to profound psychosocial, physical and financial burdens

on patients' families (Abdulkareem, Folorunsho & Akinsola, 2009). The World Health Organization (2008) stated that in developing countries, the family members cater for their patients which according to Abdulkareem et al (2009) is in the context of inadequate mental health facilities. However, recent changes in family structures and rapid economic decline in these countries are threatening the support available to patients with chronic mental illness (Abdulkareem et al., 2009).

According to Sahoo, Brahma & Mohapatra (2010), the subject of burden has become significantly important with the emergence of deinstitutionalization and the practice of community psychiatry. The effects of stressors on the family members resulting from providing care for physically and mentally ill patients has been referred to as caregiver's burden. There is no doubt that the families of patients with mental disorders and other chronic medical illnesses are adversely affected by the health condition of their loved ones. The changes in the organization of mental health care services have made the role of the family even more important in caring for patients with mental disorders. Providing care for an ill relative may have serious consequences for family members, with a great impact on their quality of family life (Sahoo et al., 2010).

Caregiver's burden is a multi-dimensional concept reflecting physical, psycho-emotional, social and financial consequences arising from caring for an impaired family member (Sahoo et al., 2010). Several descriptions of the concept of caregiver burden have been attempted. Treudley (as cited in Sahoo et al., 2010) referred to it as burden arising as a consequence of being in close contact with a severely ill psychiatric family member. Piatt (1985) presented a more elaborate definition of burden as the presence of problems, difficulties or adverse events that affect the lives of psychiatric patients. Dillehay & Sandys stated that caregiver burden is a psychological state that appears as a combination of physical and emotional work, social pressure, and financial restrictions which are consequences of taking care of a patient. Alejandra et al., (2011) were of the opinion that this construct is better understood as any potentially verifiable and observable disturbance in the life of the caregiver that is caused by the patient's disease and which appears as a result of supervision and stimulation tasks. Caregiver burden in mental illness can either be objective or subjective. The objective burden includes the effects of care on the caregiver's health status, finances and the time devoted to care, whereas the subjective burden deals with how the informal caregiver perceives the burden of care (Flyckt et al., 2013). The latter may be further split into positive and negative experiences of caregiving. Both of these aspects of caregiver burden are important to assess in order to get a broad picture of the situation (Flyckt et al., 2013).

The methods of exploring informal care-giving in chronic mental disorders vary widely between studies, thus rendering comparisons somewhat difficult. Regarding the assessment of subjective burden, there is lack of consistency among studies in the choice of scales, while objective burden is often merged into the category 'indirect costs', reducing the possibility for further exploration (Awad & Voruganti, 2008). The money spent on informal caregiving is easier to assess but the time spent, is most often based on recall, which may yield unstable results as indicated by the wide variation among studies; in a European study it was estimated that family members spent six to nine hours per day on informal caregiving, whereas in an American study the corresponding figure was about two to three hours (Flyckt et al., 2013). This disparity is probably attributable to methodological differences. A diary method with a prospective assessment of time and money spent for caregiving has been found to provide more

reliable results compared to a retrospective recall method in a heterogeneous sample of disorders (Flyckt et al., 2013).

Although the entire family experiences the burden of the illness, the responsibility of caring is often shouldered by one "primary caregiver" who experiences physical and emotional burden. From this perspective, the caregiver according to Alejandra et al., (2011) is conceptualized as an individual belonging to the patient's informal support system (a relative or friend) who takes responsibility for the main care tasks and who is perceived within the family as the person in charge of the patient, without being financially rewarded for this work. This person is usually referred to as the 'main caregiver', the one who dedicates most of his/her time (number of hours per day) to caring for the patient. For patients with severe mental disorders the role of "main caregiver" has usually been performed by their relatives. The psychological distress perceived by caregivers is related to multiple factors, such as the caregiver's personality, the patient's symptoms, and the availability of social support and financial resources (Alejandra et al., 2011). According to Zegwaard, Aartsen, Grypdonck and Cuijpers (2013), many, often aged, caregivers become involved in long-term caregiving which may interfere with numerous aspects of their daily life and exceed the boundaries of usual informal care. They invest a significant amount of time and energy in long-term caregiving, involving tasks that may be unpleasant. Altogether, these increase their risk of becoming burdened which can severely impair their quality of life and potentially lead to withdrawal from the caregiving situation.

Mental disorders weave a web of doubt, confusion and chaos around the family. Unwittingly, the person with the mental disorder can dominate the entire family through control, fear or helplessness and incapacity (Sandhya, 2010). Instability, separation, divorce and abandonment are frequent family outcomes of mental illnesses (Sandhya, 2010). Studies on burden experienced by family caregivers of patients with mental disorder and their coping strategies are few in developing countries and generalizing the findings of studies in developed countries to developing countries like Nigeria may be inappropriate due to culturally based factors that may influence the attitude and method of caregiving provision in our environment. Hence there is the need to further explore this concept in our environment.

Statement of the problem

With the advent of deinstitutionalization in the advance world, family caregivers have increasingly assumed greater responsibility for the care of their mentally ill relatives. The family members equally play a major role in the care of their mentally ill relatives in Nigeria where the community mental health services is either non existence or inadequate. According to Panayiotopoulos, Pavlakis & Apostolou (2013), the caregiver is usually a relative of the ill patient and the care giving is invariably indefinite. The primary caregiver often has additional responsibilities in the family and many of the care recipients do not acknowledge or even recognize the assistance and help received. The caregiving is as a result of emotional bonding, duty, guilt and/or the lack of other available services in the community. Recently, changes in family structures and rapid economic decline in our environment however are threatening to weaken the support available to patients with chronic mental illness.

Irrespective of the level of development of a country; caregivers experience high levels of burden (Dada, Okewole, Ogun & Bello-Mojed, 2011). The effects of being a family caregiver, though sometimes with benefits to the care; are generally negative, with high rates of burden and psychological morbidities. The primary care givers may also experience social isolation, physical ill-health, and financial hardship. Caregivers vulnerable to adverse effects can be

identified, as well as the factors which can ameliorate or exacerbate burden and strain (Dada et al., 2011). Brodaty & Donkin (2009) stated that strain due to medical costs; missed work and patients' economic dependency are considerable and are linked to both objective and subjective burden. These findings have been reported across different cultures. Chronic mental disorders are stressful, not only to the patients, but also to their family members. Because individuals with a severe mental illness frequently live at home with family members rather than in institutions, it becomes a significant family concern. According to Saunders (2003) numerous studies have demonstrated that family caregivers of individuals with a severe mental illness suffer from significant stresses, experience moderately high levels of burden, and often receive inadequate assistance from mental health professionals. The affected patients' families are already confronted with a range of day-to-day social difficulties that affect all aspects of their lives; a family member with a severe mental disorder may therefore have an additional significant impact on the entire family system. Recognizing that caregivers' burden is a global issue, the World Federation of Mental Health (2010) issued a report stating that caring for those with a chronic condition requires tireless effort, energy, and empathy which unarguably greatly impacts the daily lives of caregivers. As caregivers struggle to balance occupation, family, and caregiving, their own physical and emotional health is often ignored. In combination with the lack of personnel, financial and emotional resources, many caregivers often experience tremendous stress, depression, and/or anxiety in the years after care giving begins (Chan, Yip, Tso, Cheng & Tam, 2009) In Nigeria there is a dearth of studies exploring caregiver's burden in the context of chronic mental disorders despite the topic having been extensively researched in developed countries. Therefore this research was to assess the burden experienced by family caregivers of patients with mental disorders.

Objectives

The specific objectives of this study are to

1. Assess the level of burden on family caregivers of patients with mental disorders
2. Determine the association between caregivers' burden and patients illness related characteristics

Significance of the study

An understanding of the burden experienced by the caregivers of patients with chronic mental disorders may help identify areas of priorities that can be incorporated into psychosocial intervention programs which can complement the efforts of mental health agencies, providers, policymakers, educators, and others in ameliorating the burden. The findings in this study might help to categorize and classify caregivers' burden and identify the coping methods they adopt. The study assumes significant relevance because of the needed emphasis on developing community mental health services under the primary health care which involve community participation.

Delimitation of the study

This study was delimited to the family caregivers of mentally ill patients attending psychiatric outpatient clinics of two tertiary hospitals in Ekiti State.

Research questions

1. What is the level of burden experienced by family care givers of patients with mental illness?
2. What is the association between caregivers burden and patients illness related characteristics?

LITERATURE REVIEW/ THEORETICAL UNDERPINNING

History of Mental Illness

Mental illness has been found to be most common with over a third of people in most countries reporting sufficient occurrence at some point in their lives. (WHO) reported in 2005 that about 450million people worldwide suffer from some form of mental disorder or brain condition and that one in four people meet criteria at some point in life. Mental illnesses are increasingly recognized as a leading cause of disability worldwide, with neuropsychiatric conditions accounting for 11.5% of the global disease burden (WHO, 2009). The estimated lifetime prevalence of having one or more of the disorder varies widely from 47.7% in the United States to 12% in Nigeria (WHO, 2005).

The origins of most of psychiatry's concepts begin with prehistoric times, when primitive people believed spirits possessed the body and had to be driven out to effect a cure. Before the 5th century BC, the Greeks, Romans, and Arabs believed that emotional disorders were an organic dysfunction of the brain. Hippocrates (460–375 BC) described a variety of personalities, or temperaments, and proposed that mental illness was a disturbance of four body fluids, or "humors." Aristotle (382–322 BC) concluded that the mind was associated with the heart, whereas Galen (130–200 AD), a Greek physician, stated that emotional or mental disorders were associated with the brain. Treatment approaches during this time frame included the use of sedation, good nutrition, good physical hygiene, music, and recreational activities such as riding, walking, and listening to the sounds of a waterfall.

During the middle ages, humane treatment of mentally ill people suffered a setback as mentally ill individuals were excluded from society and confined in asylums or institutions. Various theories pertaining to demonic possession also were advanced. Specifically, persons who displayed abnormal behavior were considered lunatics, witches, or demons possessed by evil spirits. Superstition, mysticism, magic, and witchcraft prevailed as patients were locked in asylums, flogged, starved, tortured, or subjected to bloodletting. Beheading, hanging, and burning at the stake were common occurrences. Exorcism was practiced in some monasteries.

The 18th century is regarded as an era of reason and observation. In 1843, there were approximately 24 hospitals available for the treatment of mental illness. Phenothiazines and other major tranquilizers were introduced in the United States between 1952 and the 1960s to treat the major symptoms of psychoses, enabling clients to be more responsive to therapeutic care. During this time, open-door policies were implemented in large mental institutions, allowing clients to leave the units or wards while under supervision.

Mental illness is now believed to be a maladaptive response to stressors from internal and external environment evidenced by thoughts, feelings and behaviours that are incongruent with

local and cultural norms and interferes with individuals social, occupational and/or physical functioning (Townsend, 2005). Mental illness is a disorder characterised by a malfunctioning of the mind, which is due to both constitutional and environmental factors and which impairs the sufferer's social, psychological, occupational and/or physical activities on degree appropriate to type and severity (Asabor, 2006).

Mental illness in the general term refers to a group of illnesses in the same way that heart disease refers to the group of illnesses and disorders affecting the heart. A mental illness is a health problem that significantly affects how a person feels, thinks, and interacts with other people. It is diagnosed according to standardised criteria. The term disorder is also used to refer to these health problems.

Historical Overview of Caregiver Burden

Deinstitutionalization which is the closure of asylums and institutions with resultant movement of patients into the community gained attention in the 1960's according to Hinshaw & Cicchetti (2000). The use of medications to treat mental disorders also resulted in a drastic reduction in the number of patients receiving in-patient care in psychiatric hospitals. Although there were many benefits of the deinstitutionalization process, a major problem with this movement is that many of the patients were not prepared to function independently in the community because they had resided in institutions for most of their lives (Zartaloudi & Madianos, 2010). They therefore constituted a source of burden to their family members. Family members play important roles in the lives of their relatives with chronic mental disorders, they often report feeling overwhelmed, frustrated, lonely, thirsty for practical knowledge, and abandoned by people from whom they usually seek support (Dixon et al, 2004).

The origin of modern scholarly interest in family caregiving can be traced back to the 1960s, when Shanas and Streib's groundbreaking examination of the "myth of the abandoned elderly" showed that earlier predictions about the "demise of the extended family" were greatly exaggerated (Scharlach, Li & Dalvi, 2007). Families were not abandoning their older members, but many were experiencing substantial challenges in providing care for their relatives. The changes in family composition, community support networks, and labor force participation all reduced the capacity of families and other informal support systems to provide the assistance needed (Scharlach et al., 2007)

Therefore scholars and clinicians began to be of the opinion that patients' care constituted a crisis for families that led to "caregiver burden," a construct that has framed much of the caregiving research over the past 40 years (Scharlach et al., 2007). The interest continues to expand till the development of caregiver-burden measurement tools such as the widely used Zarit Burden Interview (Zartaloudi & Madianos, 2010). Caregiving research has continued to evolve with the development of increasingly sophisticated analytic tools to address complex conceptual models (Zartaloudi & Madianos, 2010). The advances gained in understanding have led to family caregiving now being viewed as a complex process that is affected by gender, culture, socioeconomic status, and lifespan developmental processes (Zartaloudi & Madianos, 2010).

Caregiver's Perception of Burden

According to Srivastava (2005), evidence suggests that family members experience significant stress in coping with a relation with mental disorder. Caregivers' perceptions of burden refer to various ways informal caregivers of patients with chronic mental disorders describe and rank

their caregiving experience as challenging (Turkoglu & Kilic 2012). The patient's relatives experience feelings of loss and grief and they are often confronted with uncertainty and emotions of shame, guilt and anger. They feel equally stigmatized and socially isolated just like the patient. Their lives may be disrupted by providing more care than would be necessary in normal circumstances for someone of the patient's age. Srivastava (2005) stated that in cases where the reciprocity between family members is out of balance, normal care changes to caregiving and the addition of the caregiving role to the already existing family role may become stressful, both psychologically and economically.

Caregiving on its own comes with several challenges and occasional distress, as the role of caring affects every aspect of the caregivers' life, this consequence is formally known as "caregiver burden". Caregiver burden is complex and has been found to include several areas such as activities in daily life, worry and social strain (Oshodi, Adeyemi, Aina, Suleiman, Erinfolami & Umeh 2012).

Srivastava (2005) assessed perception of burden in a sample of caregivers of 34 patients with schizophrenia and found a low although positive correlation between age less than 30 years and the physical and mental health of the caregiver. The result also revealed a low positive correlation between caregiver burden and area of residence as well as a low positive correlation between caregiver burden and support for the patient.

Chan et al. (2009) evaluated a psychoeducation program for Chinese clients with schizophrenia and their family caregivers. The result of their study revealed that many family caregivers reported not having the knowledge and skills necessary to take on the responsibilities of caregiving for these relatives. Thus, they are unable to cope with a considerable amount of the caring roles and responsibilities.

Family Experience of Burden

The role of caregiving can be associated with negative experiences which include: stigma, worry, shame and guilt. There are also some positive aspects which are caregiver rewards like social support and benefits given in certain societies (Szmukler, Burgess, Herrman, Benson, Colusa & Bloch, 1996). These caregivers have been found to worry a lot about the display of difficult behaviors, negative symptoms, and attempts by patients to harm themselves and worry by the caregivers that they could have contributed to their relatives' illnesses (Oshodi et al, 2012).

According to Szmukler et al. (1996), caregivers of mentally ill patients experience both subjective and objective types of burden. Subjective burdens refer to psychological consequences on the family such as the relatives' personal appraisal of the situation, and its perceived severity. Objective burden refers to outwardly measurable demands placed on family members. These include financial difficulties, strain on interpersonal relationships, reduction in social support, physical violence, and disruption in routines of caregivers and in households of relatives as well as leisure time. The evaluation of burden was based on how the caregivers interpret the demands of the ill person and how the caregivers can organize and use available resources. Therefore the concept of burden should involve the subjective perception of caregivers. In other word, burden is better assessed through the caregiver's subjective perception.

Going by Panayiotopoulos et al. (2013), the early conceptualization of burden of care into two distinct components (objective and subjective) has guided research efforts until the present

time. Panayiotopoulos et al. (2013) opined that experiencing burden of care is a complex construct that challenges simple definition, and that it is frequently criticized for being broad and generally negative. Frequently, burden of care is more defined by its impacts and consequences on caregivers. In addition to the emotional, psychological, physical and economic impact, the concept of burden of care involves subtle, but distressing notions such as shame, embarrassment, feelings of guilt and self-blame.

According to Kuipers as cited in Alejandra et al. (2011), caregivers are more likely to face restrictions in their social activities, thereby reducing their own social networks; they may therefore remain isolated in their homes with few social contacts. Alejandra et al. (2011) reported that between a fifth and a third of family members showed concern and maintained distant relationships with the rest of the family and friends because of the mentally disturbed relative. Families are forced to acknowledge the stark reality of having a member with mental illness and to mourn the loss of unfulfilled expectations. Moreover, as a result of the chronic stress associated with the task of caring, the family may experience a series of marital conflicts between parents or differences in relation to the other siblings. Thus, it is common for families to have emotional responses such as anxiety, fear, guilt, stigma, frustration, anger, sadness and other vices. Furthermore, these family conflicts contribute to the stress experienced by its members. Families may also develop other behavioural responses, such as adapting to the situation as if it were normal, resorting to prayer, finding meaning in the patient's communications, ignoring the patient's behaviour, or taking on additional responsibilities, and this can sometimes lead to overprotection (Alejandra et al. 2011).

Studies showed that middle-aged and older women who provided care for an ill spouse or a spouse with disability were almost six times as likely to have depressive or anxious symptoms as were those who had no caregiving responsibilities (World Federation of Mental Health, 2010).

Lasebikan and Ayinde (2013) observed that despite reports of substantial social support for mentally ill in developing nations, the burden of care of schizophrenic patients on their caregivers is enormous in Nigeria. They observed that this could be adduced to a number of reasons including inadequate access to formal mental health service and poor health service profile of the country including serious dearth in number of mental health professionals. They equally observed that since family burden may be influenced by differences in mental health service provisions, social network, and other cultural factors, it may be erroneous to generalize the concept of family burden on the fallout of de-institutionalization on which most reports from the western countries are based (Lasebikan & Ayinde, 2013)

Panayiotopoulos et al. (2013) in their study carried out in Cyprus to examine the burden that the family members experienced while caring for their relatives reported that 63.7% of the caregivers is concerned about the economic situation of the family members in the event caregivers will no longer be able to offer their support, the financial burden is low for majority of the caregivers as only 15% of them reported financial burden in the study.

In a South-American study, Alejandra et al. (2011) assessed the relationship between the attitudes of 41 caregivers and the burden they experience. They reported that attitude measures differed significantly according to socio-demographic variables, with parents (mainly mothers) exhibiting a more negative attitude towards the environment than the rest of the family ($t = 4.04$; $p = 0.000$). This was also the case for caregivers with a low educational level ($t = 3.27$; $p < 0.003$), for the oldest caregivers ($r = 0.546$; $p = 0.000$) and for those who had spent more time

with the patient ($r = 0.377$; $p = 0.015$). They also observed that attitudes had significant association with burden with a modest explanatory power ($R^2 = .104$, $F = 4$, 55 ; $p = .039$). They suggested that burden levels can change over time, are influenced by the nature of the patient's symptoms, and will probably not decrease without specific interventions

In a cross sectional descriptive study by Oshodi et al. (2012), which assessed burden and psychological effects on 53 caregiver relatives of patients diagnosed with a psychiatric illness were assessed using the General Health questionnaire version 12 and an Adapted Burden of Care (BOC scale). They reported that almost half of the relatives had psychological distress (43.8%) and most of which (63%) had significant burden. Almost half (45.3%) of the relatives were experiencing more than average burden of care. It was also concluded that there is a significant level of burden and psychological distress experienced by the caregivers.

Care Rendered by Family Caregivers

Papastavrou, Charalambous, Tsanari and Karayiannis (2010), stated that community care for patients with mental illness relies heavily on the informal care provided by their family caregiver, which supplements the shortage of medical, occupational and residential resources. Gutiérrez-Maldonado and Caqueo-Urizar (2007) did opine that the idea that patients remain with their families has become an end in itself, regardless of its viability. At all events, there is renewed interest in the role played by the family in the community management of mental disorders, and specifically in the way that families deal with caregiving (Alejandra et al., 2011). Many studies have provided evidence about the impact of caregiving on the families of patients with mental disorders, especially among those who assume the role of main caregiver (Flyckt et al., 2013)

Alejandra et al. (2011) reported that Mexican American caregivers are less critical, less hostile and show more warmth towards their relatives with mental disorder than do Anglo-American caregivers. They observed that Latin Americans generally show high levels of engagement with their ill relatives and usually understand and empathize with their problems. Caregivers who show more tolerant, non-intrusive and supportive attitudes towards patients help them to achieve better social functioning.

Socio-Demographic Factors Related to Burden on Family Caregivers

Studies have been conducted on the relationship between burden and caregivers' demographics and patients' symptoms (Flyckt et al., 2011). In this regard, some recent studies have suggested that a minor role should be attributed to the socio-demographic and psychosocial factors that influence burden.

Chan et al., (2009) observed that relationships between socio-demographic and cultural characteristics of families and burden have been studied in many countries. Juvang, Lambert & Lambert (2007) in their study to investigate relationship between demographic characteristic of caregivers' burden in China found age and time spent providing care for their relatives to be positively correlated to burden of caregiver. They observed that older caregivers were worried about who will take care of their ill family member in the future. They also opined that income may have direct impact on the burden of caregiver as those with higher income are better able to pay for hospitalization and other services to assist in caring for a family member with mental disorder. Older caregivers according to Fujino and Okamura (2009) also cannot provide adequate care to the ill member. In addition, younger age of caregiving was correlated with increasing sense that life is not worth living.

Men and women may experience burden differently (Imas & Wandee, 2011) and globally women were more likely to be caregivers. For example, in the United Kingdom, about 58% of the caregivers were women while studies in Asian countries found about 70% of family caregivers to be females (Chan et al., 2011). The World Federation of Mental Health had estimated that globally, about 80% of the caregivers are women who could be the mother, wife, or daughter of the clients and are usually within the low income bracket. Schneider, Steele, Cadell and Hemsworth (2010) also conducted a study in Canada to determine gender difference in 273 parents caring for children with life-timing illness. Results showed that there was a significant difference in gender in term of their burden with women having higher score in caregiving, depression and burden compared with men. This may be explained in terms of social role where women are predominant in caregiving. In other words women spent more time in caregiving than men. Hormonal influence can also explain the higher depressive symptoms in relation to caregiving as the hormone oxytocin also contributed to distress and women's need to nurture. Juvang et al. (2007) findings also showed that education level has negative correlation with caregiver's burden. It was assumed that the higher the level of education, the higher the salary will be. High salary would decrease financial problem related to providing care for the ill family member. Caregivers with higher level of education also tend to have more knowledge to deal with the stressful event.

Studies found caregivers' burden score was negatively correlated with their household income. Families with lower socioeconomic status experienced higher level of burden (Sally, 2011). The problem of lower socioeconomic status is further compounded by the fact that most countries do not provide financial support for the care services and that families are solely responsible for providing financial support for their mentally ill relative (World Federation of Mental Health, 2010). The poor financial status in the family may further increase the risk or vulnerability for perceiving burden and the resulting distress and negative consequences such as mental health problems. Andren and Elmstahl (2007) conducted a study in Sweden to examine relationship between income, subjective health and caregiver's burden in people with dementia. Their finding showed that low income was associated with a higher degree of burden on the caregivers. Lower income was a stressor that influence stress feeling when providing care for ill family member.

The best predictor of the caregiver's burden is the individual's health status and self perception toward health condition. Caregivers with good health status experienced lower levels of subjective stress burden. Time spent for caregiving per day is related to burden. Chii, Hsing-Yi, Pin and Hsiu (2009) in their study of relationship between received social support and caregiver burden in 315 caregivers in Taiwan found out that there was a significant positive correlation between hours of care per day and caregiver burden. The higher the number of hours spent on providing cares per day, the greater is the caregiver's burden. Juvang et al. (2007) also observed that there was a positive correlation between the amounts of times that caregiver spent with their family member and objective burden faced by them. The more the time spent with ill family member, the more will be the objective burden felt by the caregiver. When caregiver spent more time with their ill family member, they may have less time for themselves.

There are evidences suggesting that culture could have an influence on the expression of needs of culturally diverse family members caring for a relative with acute mental illnesses. Chan et al., (2011) observed that Latin American families place particular emphasis on encouraging open expression of needs and feelings. On the contrary, in Asian countries where traditional

Confucian and Buddhist concepts dominate, there is a belief in keeping secret something that is unfortunate or degrading to the family name (Tseng, Lu, & Yin as cited in Chan et al., 2011). Spurlock (2005), conducted a study about relationship between spiritual well being and caregiver burden in 148 Alzheimer's caregivers (71 African American and 77 Caucasians). Their result showed that there was significant difference in spiritual well being and burden between African Americans and Caucasians. The Caucasians tend to be more stressed in caregiving than the African Americans. The African Americans employed prayer as a coping strategy, but the Caucasians were more likely to seek professional assistance.

There was correlation between patient age and subjective stress burden and subjective demand burden according to a study conducted by Juvang et al. (2007) in China involving 96 caregivers. The caregivers felt burdened when they take care of the younger patients over a long time period. It has also been shown that caregivers who had patient with schizophrenia also displayed a very high degree of burden, especially while taking care of younger patients (Imas & Wandee 2011). The younger patients may require more caregiving that have more consequences on caregivers. Clinical symptoms also have an influence on caregivers' burden. One of the factors affecting burden of caregiving is the severity of patient symptoms. Symptoms caused by disease were associated with impaired health functions which influence the patient's behaviour and capability to carry out daily activities. These result in patients' dependence on the caregiver. Moreover in case of severe disease, caregiver may feel burdened due to characteristic of the illness of the patient and the disease which tend to need long term care.

Patients' disability in daily life or community function was associated with burden on caregiver. The patients' impairment of social function was associated with severity of illness, such as disturbance in patients' behavior and long term illness that result in dependency of patients on caregiver to carry out their daily activities, thus resulting in limited time, energy and attention of caregiver (Fujino & Okamura, 2009)

Lasebikan & Ayinde, (2013) recruited 368 patient-caregiver dyads in their study on family burden in caregivers of schizophrenia patients: prevalence and socio-demographic correlates. The respondents age ranges from 18 to 82 with a mean of 58.1 years (SD=19.6), median was 51 years. The mean number of years of living with the patient was 11.7 (SD=7.4) and the mean duration of care giving was 2.2 years (SD=1.4). The average number of hours per week in contact with the patient was 73.7 (SD=39.6), while 51.1% of the caregivers scored ≥ 3 on GHQ. Significant factors that were associated with caregivers' burden were: Age in the domains of effect on physical health of others and effect on mental health of others, $P < 0.01$, $P = 0.02$ respectively; years of education, $P = 0.01$ in the domain of disruption of routine family activities; occupation of caregiver $P = 0.03$ in the domain of disruption of family leisure, and relationship of caregiver to patient on items domain of effect on physical health of others and effect on mental health of others, $P = 0.04$, $P < 0.01$, respectively. Oshodi et al. (2012) conducted a cross-sectional study on burden and psychological effects on family caregivers. The result showed that there was a significant level of burden and psychological distress experienced by caregivers.

Mental Health Service Utilization and Burden Experience

A comparative study conducted by Roick et al. (2007) compared burden experienced by caregivers caring for schizophrenic in Germany and Britain. Their findings showed that British caregivers reported more burden than German caregivers. They observed that Germany has on

average 7.5 psychiatric beds per 10,000 populations; whereas Britain has only 5.8. The differences in the provision of mental health service accounted for the differences in caregiver burden experience because the unmet needs seem to be higher among the people with mental disorders and their families in Britain. Roick et al. (2007) concluded that the utilization of community health service decreases the caregivers' burden and the mentally ill patients who visited community health service routinely showed significant increase in their health function. Patients with improving health function would increase their capability in carrying out their daily activities. Therefore, improved health function is related to decreased caregivers' burden.

Chii et al. (2009) also reported that the perceived social support and perceived family function had a negative correlation with burden of caregiver. In a study conducted on 301 caregivers in Taiwan to examine correlation between caregiver's burdens and perceived social support. They observed that better family function had an impact on better adaptation that is associated with effective coping. Utilization of formal support had a positive correlation with burden. Chii et al. (2009) stated that caregivers' burden increased when informal support could not meet caregivers' need and supporters could reduce the burden if they fulfil unmet need of caregiver.

The Neuman Systems Model

Betty Neuman developed the Neuman Systems Model in 1970 to provide a comprehensive, flexible, holistic, and systems-based perspective for nursing. This conceptual model of nursing focuses attention on the response of the client system to actual or potential environmental stressors, and the use of primary, secondary, and tertiary nursing preventive interventions for retention, attainment, and maintenance of optimal client system wellness (Neuman, 1996). A system as a pervasive order that holds together its parts (Neuman, 1995). The complete whole structure is maintained by interrelationships among identifiable smaller wholes or parts through regulations that evolve out of the dynamics of the open system.

Client-Client System

The client-client system consists of the flexible line of defense, the normal line of defense, lines of resistance, and the basic structure energy resources. Five client variables—physiological, psychological, socio-cultural, developmental, and spiritual—occur and are considered simultaneously in each concentric circle that makes up the client-client system (Neuman, 1995).

The flexible line of defense represents the outer concentric ring (broken line) and which acts as a buffer system for the client's normal state (Neuman, 1995). Stressors must penetrate the flexible line of defense before they are capable of penetrating the rest of the client system. Neuman described this line of defense as an accordion like mechanism that acts like a protective buffer system to help prevent stressor invasion of the client system. The effectiveness of the buffer system can be reduced by single or multiple stressors. The flexible line of defense can be rapidly altered over a relatively short time period (Neuman, 1995).

The normal line of defense according to Neuman (1995) is the solid line that lies between the flexible line of defense and the internal lines of resistance. It represents the client's usual wellness level or steady state. When the normal line of defense is penetrated by stressors, a degree of reaction, or signs and/or symptoms, will occur. The nurse should determine the client's usual level of wellness in order to recognize a change in the level of wellness (McEwen & Wills, 2011). Neuman also considers the normal line of defense dynamic because of its ability to become and remain stabilized with life stresses over time

The line of resistance is represented by inner concentric circles (broken rings) and it contains the internal and external resource factors which help protect the client against a stressor (Neuman, 1995). Lines of resistance are activated following invasion of the normal line of defense by environmental stressors. Each line of resistance contains known and unknown internal and external resource factors. These factors support the client's basic structure and the normal line of defense, resulting in protection of system integrity (McEwen & Wills, 2011). When the lines of resistance are ineffective, energy depletion and death occur.

Basic Structure: The basic structure or central core structure consists of basic factors that are common to all organisms. Neuman offered the following examples of basic survival factors: normal temperature range, genetic structure, response pattern, organ strength or weakness and ego structure.

Five Client Variables: Neuman identified five variables that are contained in all client systems: *Physiological, Psychological, Socio-cultural, Developmental* and *Spiritual* (McEwen & Wills, 2011).

Environment

The second concept identified by Neuman is the environment. It is a key concept which affects the client system. Neuman defined environment broadly as "all internal and external factors or influences surrounding the identified client or client system" (Neuman, 1995, p. 30).at any given time. This environment is divided into internal, external, and created environment

The internal environment includes influences internal to the boundaries of the client system. This is where intrapersonal factors or stressors (something that occurs within the person) arise. The external environment contains all influences and forces that exist outside the client system. This is where the interpersonal (something that occurs between people) and extrapersonal (something that occurs outside the person) factors or stressors arise. (Neuman, 1995) The created environment acts as an open system that exchanges energy with the internal and external environment. This environment is unconsciously created to help maintain the integrity of the system and is viewed as a symbol of system wholeness. This environment acts as an insulator that helps to change the response of the client to stressors. Thus, the objective of the created environment is to stimulate the health of the client (Neuman, 1995)

Health

Health is the third concept in Neuman's model. Neuman believes that wellness and illness are on opposite ends of the continuum. Health/wellness is the condition in which all parts and subparts (variables) are in harmony with the whole of the client. Wellness exists when more energy is built and stored than expended, whereas death occurs when more energy is needed than is available to support life (McEwen & Wills, 2011).

Nursing

Nursing is the fourth concept in Neuman's model and its major concern is to keep the client system stable. Nursing's major concern is to keep the client system stable by (1) accurately assessing the effects and possible effects of environmental stressors and (2) assisting client adjustments required for optimal wellness. Nursing actions, which she labels as prevention by intervention, are initiated to keep the system stable. Neuman has created a typology for her

prevention by intervention nursing actions. They include primary prevention by intervention, secondary prevention by intervention, and tertiary prevention by intervention. All of these actions are initiated to best retain, attain, and maintain optimal client health or wellness. Neuman (1995) believes the nurse creates a linkage among the client, the environment, health, and nursing in the process of keeping the system stable.

Primary prevention as intervention involves the nurse's use of interventions that promote client wellness by stressor prevention and reduction of risk factors. These interventions can begin at any point a stressor is suspected or identified, before a reaction has occurred. They protect the normal line of defense and strengthen the flexible lines of defense. The goal of these interventions is to "attain" optimal client-system stability, or wellness, and energy conservation.

Secondary prevention includes actions taken to attain stability. It occurs after the system reacts to a stressor and is provided by establishing priorities and treatment plans for identified symptoms. It focuses on preventing damage to the central core by strengthening the internal lines of resistance and/or removing the stressor.

Tertiary prevention offers support to the client and attempts to add energy to the system or reduce energy needed in order to facilitate reconstitution. It involves actions taken to maintain stability. Tertiary prevention tends to lead back toward primary prevention in a circular fashion. Neuman pointed out that one or all three of these prevention modalities give direction to or may be used for nursing action with possible synergistic benefits (Neuman, 1995).

Adaptation of Model to the Study

Incessantly, human beings are besieged by a host of internal and external environmental stimuli. The client system which include the basic structure, line of resistance, normal line of defense and flexible line of defense represent the caregivers' resources for maintenance of equilibrium. These include their resilience and genetic make-up which may become penetrated as a result of stress of caring experienced by the family caregivers.

A stressor is any phenomenon in the caregivers' environment that may penetrate both the Flexible line of defence and Normal line of defence, resulting in either a positive or negative outcome. Environments of the caregivers are either internal or external factors or influences surrounding them at any given time. The internal environmental stressors are forces within the caregivers' system while external environment are forces outside the caregiver's system. Environmental stressors in this study refer to anything that constitute burden to the family caregivers and may be physical, mental, social or economical. These environmental stimuli either threaten or enhance the caregivers' ability to adapt.

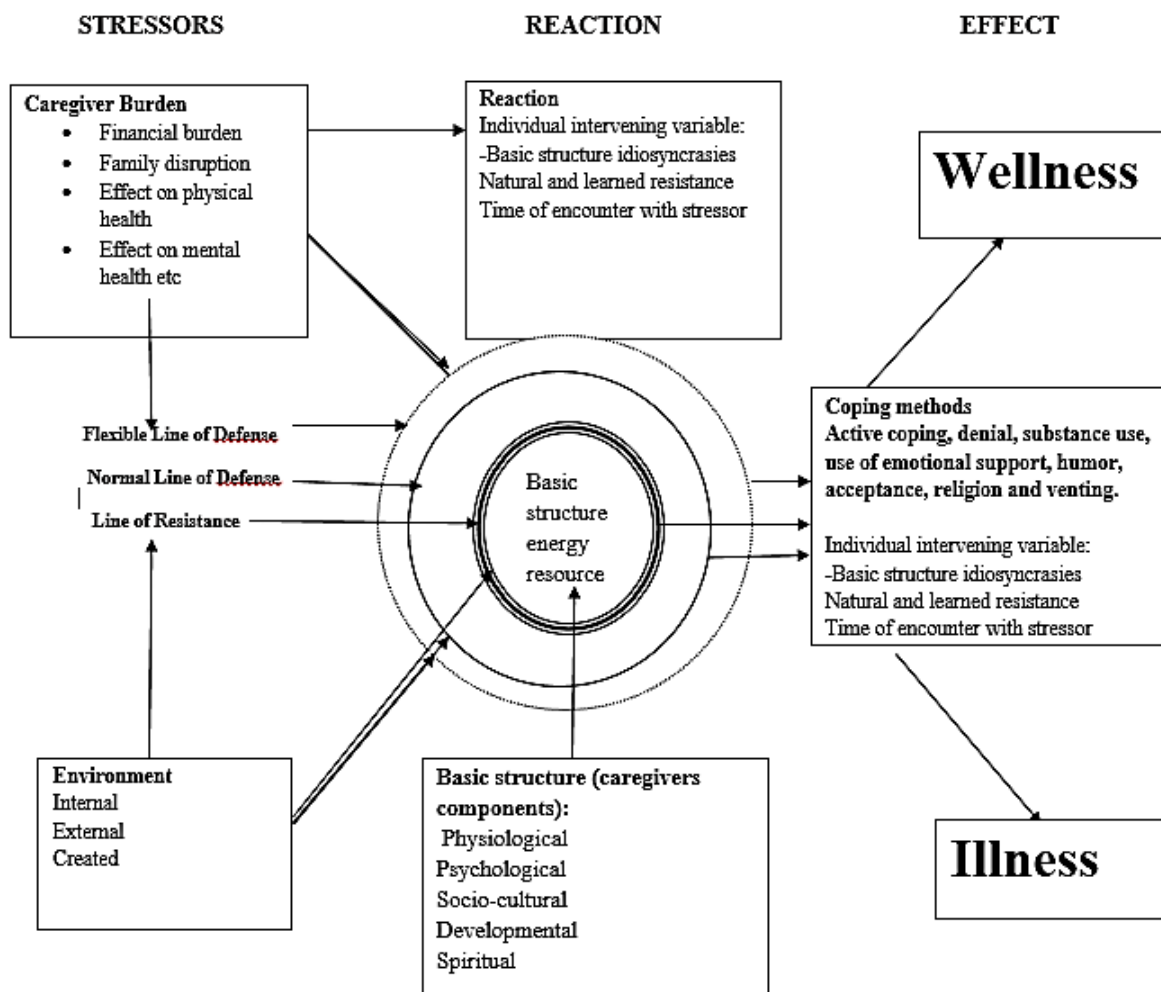


Fig 1: Betty Neuman System Model, adapted from McEwen & Wills (2011)

The flexible line of defense of the caregivers can be rapidly altered over a relatively short time period and this may results in the caregivers experiencing states of emergency or short-term conditions such as loss of sleep, poor nutrition, anxiety or depression. If these are not arrested in time the stressors can penetrate the rest of the client system (see diagram on next page)

The normal line of defense represents what the caregivers have become over time, or their usual state of wellness. Neuman also considers the normal line of defense dynamic because of its ability to become and remain stabilized with life stresses over time. When the normal line of defense is penetrated by stressors, a degree of reaction, or signs and/or symptoms, will occur.

Lines of resistance are activated following invasion of the normal line of defense by environmental stressors. There is a decrease in the signs or symptoms, or a reversal of the reaction to stressors, when the lines of resistance are effective. In other words, a caregiver with an effective line of resistance will be able to curtail the stress arising from the caregiving situation. This can be achieved through effective coping strategies. When the lines of resistance are ineffective, energy depletion result and death may occur.

The primary nursing intervention is prevention which focuses on keeping stressors and the stress response from having a detrimental effect on the caregivers. It includes primary prevention by intervention, secondary prevention by intervention, and tertiary prevention by intervention.

Wellness is the condition in which all system parts and subparts are in harmony with the whole system of the client. Following a disruption in the informal caregivers system from stressors, reconstitution may occur with adequate intervention commensurate with the degree of reaction leading to a return and maintenance of the caregivers' system stability. This may result in a higher or lower level of wellness.

Hypotheses

There is no significant association between caregivers' burden and the patients' illness related factors

METHODOLOGY

Research Design

The study adopted a descriptive cross-sectional survey to examine the perceived burden of care of the family caregivers (patients' relatives) of mentally ill individuals attending psychiatric outpatient clinics of the tertiary hospitals in Ekiti state

Study Population

The target population for this study was family caregivers of patients with mental disorders in the psychiatric outpatient departments of EKSUTH Ado-Ekiti and FTH Ido-Ekiti.

Study Setting

This study was conducted in the two tertiary health institutions in Ekiti state (Ekiti State University Teaching Hospital, Ado-Ekiti and Federal Teaching Hospital, Ido-Ekiti). These centers were specifically chosen because they are referral institutions with facilities to care for the mentally ill and with an extensive geographical catchment area

Ekiti State University Teaching Hospital Ado Ekiti (EKSUTH): The hospital was formally known as the State Specialist Hospital Ado Ekiti, but was upgraded to a Teaching Hospital in January 2008. The hospital is situated centrally in Ado-Ekiti, the state capital which is in Ekiti Central Senatorial District. Special services rendered in the hospital include: Intensive care services, Urology, Nephrology with renal dialysis facilities, Cardiology, Ophthalmology, Psychiatry, Pediatric, etc. The psychiatric unit is located behind the chest clinic which is a few meters away from the hospital's main entrance. An average of 15 to 20 patients attends the outpatients clinic which is run twice weekly on Tuesdays and Thursdays. This gives a total of about 120-160 patients in a month. The unit has three (3) consultant psychiatrists, three (3) registrars and 16 nurses.

Federal Teaching Hospital (FTH) Ido-Ekiti: The hospital was established in July 1998 as an offshoot of the then Ido General Hospital. The Ido General Hospital was established in 1954. Apart from EKSUTH, it is also a referral center for all the other health institutions (specialist

hospitals, general hospitals, comprehensive health centers) in Ekiti state. Initially the center comprised of six departments at inception which had since been increased to 28 departments out of which eighteen are in the clinical services while the rest are administrative and supportive services. The hospital is situated at Alapo area of Ido-Ekiti in Ido-Osi Local Government Area in the North Senatorial District of Ekiti state. The hospital has 280 beds and has a psychiatric unit for the care of mentally ill patients. The hospital was later upgraded to a federal teaching hospital in 2014. The hospital has five (5) consultant psychiatrists, two (2) senior registrars, six (6) registrars and 36 nurses.

Sample Size Determination and Sampling Technique

A total dyad of 138 caregivers and patients will be recruited for the study based on caregiver burden prevalence rate of 80% Lasebikan and Ayinde ³¹

using $Z^2 pq$

d^2 (Leshie Kish formula),

where $Z^2 = 1.96$, $d = 5\%$, $p = 80\%$ and $q = 1 - p$, with attrition rate of 5%

$$= \frac{1.96 \times 0.8 \times (1-0.8)}{(0.05)^2}$$

$$= \frac{1.96 \times 0.8 \times 0.2}{0.0025}$$

$$= \frac{0.3136}{0.0025}$$

$$= 125$$

$$5\% \text{ (attrition rate) of } 125 = 6$$

$$125 + 6 = 131$$

A total of 131 patients and caregivers each (dyads) was used for the study

A convenience sampling technique was adopted for this study. The participants were consecutively recruited until the required sample size (131) is completed.

Procedure For Data Collection

The researcher trained three research assistants who were involved with the collection of data. The researcher also solicited the cooperation and assistance of the health personnel in the hospitals (Nurses in particular) to facilitate data collection. Informed consent was obtained from each of the subjects after the purpose of the study have been explained to them. The data collection took five months.

Inclusion Criteria

Inclusion criteria for caregivers are:

1. Adults age 18 years and above
2. Caregivers taking care of a relative who is receiving treatment for chronic mental disorders such as schizophrenia, depression and bipolar disorder
3. The patient has been diagnosed for a period not less than 6 months
4. The caregiver is an immediate family relative

Exclusion Criteria

The caregiver will be ineligible for this study if he/she

1. Is less than 18 years of age
2. Is having a chronic physical illness such as hypertension, diabetes etc or past/current history of psychiatric illness
3. Is taking care of more than one chronically ill person within the family
4. Is caring for a patient with co-morbidity
5. Is unwilling to participate in the study

Research Instruments

Three instruments were used to collect information from respondents: General Health Questionnaire, Zarit Burden Interview Inventory

Caregivers Data Collection Tools

Demographic data sheet: This was designed by the researchers to collect general information about the family care givers. The information from the family care givers will include gender, age, level of education, income, average time spend in caring for the patient per day and presence of any physical illness.

General Health Questionnaire (GHQ-12): The 12-item General Health Questionnaire (GHQ-12) is a self-report measure of psychological morbidity, intended to detect "psychiatric disorders in community settings and non-psychiatric settings". It is widely used in clinical practice, epidemiological research and psychological research. The GHQ-12 itself comprises six items that are positive descriptions of mood states and six that are negative descriptions of mood states. These are referred to as 'positively phrased items' (PP items) and 'negatively phrased items' (NP items) respectively Respondents were asked to rate on a 4-point Likert scale the frequency with which they have experienced the 12 indicators of psychological morbidity. The caregivers completed either the English version or the validated Yoruba version.

Zarit Burden Interview (ZBI): The ZBI was employed to assess caregiver burden in relatives of patients with mental disorder. The ZBI is a self administered scale comprising 22 items that explore the negative effects of burden on caregivers in different areas of their life (physical, mental, social and economic). It comprises three subscales:

Burden, which refers to the subjective impact of caring on the caregiver's life;

Rejection, which includes items related to feelings of rejection/hostility towards the patient; and **Competence**, which is related to caregivers' self-assessment about their ability to maintain the relationship of care.

Each statement was scored on a five-point Likert scale. The total score was calculated by summing the responses to all items (score ranges from 0 to 88).

Validity and Reliability Of The Instruments

The Global Assessment of Functioning was derived from the Global Assessment Scale (GAS) which has established psychometric properties. It has a good internal consistency (Cronbach's alpha 0.82 to 0.93) and has been validated in Nigeria. Gureje & Obikoya as cited in Lasebikan and Ayinde³¹. The Zarit Burden Interview scale has satisfactory internal consistency⁹. It is widely used to assess burden in relation to other disorders because of its ability to characterize the socio-cultural dynamics of the population to which it is applied. It has been used in some studies conducted in Nigeria⁴³ and the reliability coefficient of the instrument is reported to be satisfactory (Cronbach's α 0.994).

The Simplified Coping Style Questionnaire was developed by Xie Yanin in 1998. The test-retest correlation coefficient of SCSQ is 0.89, α coefficient is 0.90. α coefficient of positive and negative coping style scale are 0.89 and 0.78 respectively (Cheng et al., 2011)

Reliability analysis of the general health questionnaire (GHQ-12) showed satisfactory result with Cronbach's alpha coefficient = 0.87 Ali, Amir, Mohammad, Gholamreza, Mehdi & Abolfaz⁴⁴. It has been used extensively by many researchers in Nigeria and has been found to be a reliable screening tool²⁸ Scores of 2 and above on the GHQ 12 were suggestive of psychiatric morbidity.

Ethical Consideration

The proposal for the study was submitted to the ethical committees of the two tertiary hospitals in Ekiti state for approval. After granting the approval, all the participants were informed clearly about the study as well as the data collection procedure. The caregivers were allowed to voluntarily participate in the study if they meet the inclusion criteria. They were also allowed to withdraw at any time without consequences if they so wish. The participants' anonymity and confidentiality was respected. This study did not ask for the participants' name as only code numbers on the data sheets was used. All the information collected by the researcher was kept safe and protected.

Method of Data Analysis

All the data collected were coded and analyzed with the use of Statistical Product and Service Solution (SPSS) version 21. The caregivers and patients' socio-demographic and illness-related characteristics were depicted using descriptive statistics. Frequencies and percentages were calculated for the categorical variables while means and standard deviations were calculated for continuous variables.

The normality of data distribution was examined to determine whether to employ parametric or non-parametric statistical techniques. The caregivers were categorized according to severity of burden. Correlation analysis, t-test and ANOVA test were used to determine the association between caregiver burden and the patients' illness-related characteristics. They were also used

to determine the association between caregiver burden and their coping, as well as caregiver coping and their socio-demographic characteristics. Logistic regression analysis was performed to determine the predictors of burden among the caregivers. All tests were 2 tailed and significant P value was set at < 0.05 .

RESULT/FINDINGS

TABLE 1: Socio-demographic Characteristics of the Caregivers (N=138)

Variables	N (%)		
Gender			
Male	33 (23.9)		
Female	105 (76.1)		
Marital Status			
Single	13 (9.4)		
Married	113 (81.9)		
Divorced/Separated	3 (2.2)		
Widow/Widower	9 (6.5)		
Religion			
Christianity	122 (88.4)		
Islam	16 (11.6)		
Employment Status			
Employed	117 (84.8)		
Unemployed	21 (15.2)		
Relationship to Patient			
Parent	51 (37.0)		
Spouse	33 (23.9)		
Sibling	20 (14.5)		
Child	30 (21.7)		
Uncle/Aunt	4 (2.9)		
Awareness of relative's diagnosis			
Yes	69 (50)		
No	69 (50)		
Variables	Minimum	Maximum	Mean (SD)
Age	22	80	49.43
Years of education	(13.02)		
Average monthly income	0	19	11.94
Duration of care (months)	(5.57)		
Average hours spent per day	5000	500000	68547.00
	(79053.94)		
	6	180	43.92
	(33.32)		
	1	15	4.81
	(2.71)		

With reference to table 1 above, it showed that socio-demographic characteristics of the caregivers. The table showed that majority (76.1%) of the caregivers are female while the remaining 23.9% are male. Most of the caregivers are married (81.9%) while the 18.1% are share among being single (9.4%), divorced/separated (2.2%), and widow/widower (6.5%). The table also showed that 88.4% are Christians while 11.6% are Muslims. 84.8% are employed while 15.2% are not. The caregivers' relationship to the patients revealed that 37.0% of were parents, 23.9% were spouses, 21.7% were children, 14.5% were siblings while 2.9% were either uncles or aunties. Fifty percent (50%) were aware of their relatives' diagnoses. The table equally showed that the maximum age of the caregiver is 80 years while the minimum age is 22 years with a mean age of 49.43 as well as SD of 13.02. Years of education of the caregivers ranges from 0 to 19 years with a mean of 11.94 and SD of 5.57. Their average monthly income ranges from 5000 naira to 500000 naira with a mean of 68547.00 and SD of 79053.94. The duration of care is from 6 months to 180 months with a mean of 43.92 and a SD of 33.32 while the caregivers spent 1 to 18 hours caring for their ill relatives with a mean of 4.81 and SD of 2.71.

TABLE 2: The Distribution of the Mean and Standard Deviation of Zarit Burden Scale (N=138)

S/N	Variables	Mean	SD
1	Do you feel that your relative asks for more help than he or she needs?	1.81	1.25
2	Do you feel that, because of the time you spend with your relative, you don't have enough time for yourself?	2.46	1.18
3	Do you feel stressed between caring for your relative and trying to meet other responsibilities for your family or work?	2.36	1.14
4	Do you feel embarrassed about your relative's behaviour?	1.82	1.30
5	Do you feel angry when you are around your relative?	1.27	1.11
6	Do you feel that your relative's condition currently affects your relationship with other family members?	1.67	1.33
7	Are you afraid about what the future holds for your relative?	2.17	1.49
8	Do you feel that your relative is dependent upon you?	1.88	1.27
9	Do you feel strained when you are around your relative?	1.31	1.08
10	Do you feel that your health has suffered because of your involvement with your relative's care?	1.34	1.17
11	Do you feel that you don't have as much privacy as you would like, because of your relative?	2.17	1.18
12	Do you feel that your social life has suffered because you are caring for your relative?	2.23	1.22
13	Do you feel uncomfortable having your friends over because of your relative?	1.72	1.26
14	Do you feel that your relative seems to expect you to take care of him or her, as if you were the only one he or she could depend on?	1.48	1.23
15	Do you feel that you don't have enough money to care for your relative, in addition to the rest of your expenses?	2.25	1.27
16	Do you feel that you will be unable to take care of your relative much longer?	1.67	1.17

17	Do you feel that you have lost control of your life since your relative's illness?	2.04	1.29
18	Do you wish that you could just leave the care of your relative to someone else?	1.82	1.27
19	Do you feel uncertain about what to do about your relative?	2.34	1.12
20	Do you feel that you should be doing more for your relative?	1.77	0.95
21	Do you feel that you could do a better job in caring for your relative?	1.83	1.02
22	Overall, how burdened do you feel in caring for your relative?	2.32	1.11
23	Total mean score (total score=88)	41.73	17.38

The distribution of the mean and standard deviation of Zarit burden scale of the caregivers were depicted in the above table. The table revealed the mean score of ZBI of not having enough time for self because of time spent on the patient as the highest mean score 2.46 ± 1.18 . This is followed by stressed between caring for relative and trying to meet other responsibilities 2.36 ± 1.14 . Uncertainty about future of relative, lack of enough money to take care of relative and suffered social life are next in that order with scores of 2.34 ± 1.12 , 2.25 ± 1.27 and 2.23 ± 1.22 respectively. The table also revealed that fear of relative's future and lack of privacy have the same mean score of 2.17 with SD of 1.49 and 1.18 respectively.

Feeling angry when around the patient has the least score 1.27 ± 1.11 , next to it is feeling strained when around the patient 1.31 ± 1.08 , followed by suffered health 1.34 ± 1.17 . The total mean score of burden among the caregivers was 41.73 ± 17.38

TABLE 3: The Level of Burden in Family Caregivers of Patients according to Burden Category (N=138)

Extent of Burden	N (%)
little burden (0-20)	21 (15.2)
Mild burden (21-40)	51 (37.0)
Moderate burden (41-60)	43 (31.1)
Severe burden (60-88)	23 (16.7)
Total	138 (100)

From table 4.4 above, it was observed that 15.2% of the caregivers experienced little burden, 37.0% experienced mild burden, 31.1% experienced moderate burden, while 16.7 % experienced severe burden.

TABLE 4: Association between Caregivers Burden and Patient Illness related Characteristics (N=138)

	Variables	1	2	3	4	5	6	7	8	9	10	11	12
1	ZBI caregivers	1											
2	Age at onset of illness	-0.022 0.797	1										
3	Previous no of episode	0.177* 0.038	0.097 0.258	1									
4	Previous no of admission	0.174* 0.041	0.107 0.211	0.806** 0.000	1								
5	Length of last admission	0.079 0.356	0.195* 0.022	0.174* 0.041	0.250** 0.003	1							
6	Duration of illness	0.168* 0.048	0.216* 0.011	0.697** 0.000	0.588** 0.000	0.310** 0.000	1						
7	GAF	-0.227** 0.008	-0.011 0.894	-0.532** 0.000	-0.535** 0.000	0.109 0.204	-0.325** 0.000	1					
8	PANSS +VE	0.326** 0.005	0.042 0.727	0.518** 0.000	0.569** 0.000	0.065 0.590	0.377** 0.001	-0.747** 0.000	1				
9	PANSS -VE	0.271* 0.021	-0.017 0.890	0.291* 0.013	0.262* 0.026	0.000 0.997	0.118 0.324	-0.518** 0.000	0.467** 0.000	1			
10	PANSS GEN	0.164 0.170	0.098 0.412	0.395** 0.001	0.451** 0.000	0.043 0.721	0.245* 0.038	-0.584 0.000	0.667** 0.000	0.605** 0.000	1		
11	HRSD	0.399* 0.012	0.077 0.641	0.263 0.105	0.604** 0.000	-0.128 0.439	0.168 0.307	-0.807** 0.000					
12	YMRS	0.195 0.329	0.048 0.813	-0.014 0.943	0.099 0.623	-0.051 0.799	-0.393* 0.043	-0.208 0.298					

*P < 0.05 (correlation is significant at the 0.05 level)

**P < 0.01 (correlation is significant at the 0.01 level)

The above table presents the association between caregivers' burden and patients illness related characteristics. The table showed that there is a slight negative correlation ($r=-0.022$) between the age at onset of illness of the patient and caregivers' burden; there is higher burden experience in caregiver with earlier onset of illness in patient. There is a slight positive correlation ($r=0.177$) between previous number of episodes of illness in patients and caregivers' burden; the burden experience in caregivers increases with increase number of episodes or re-occurrence of patients' illness. The table also revealed a slight positive correlation ($r=0.174$) between previous number of admission and caregivers' burden; this shows an increase level of caregiver burden with increase number of admissions. There is a slight positive correlation ($r=0.079$) between length of time of last admission and caregivers' burden; there is an increase level of caregiver burden with longer period of last admission. A small positive correlation ($r=0.168$) was also observed between the duration of illness and the burden in caregiver; this means that the longer the duration of illness, the higher the burden in caregiver. From the table, there is a definite but small negative correlation ($r=-0.227$) between functioning of the patients and burden experienced by the caregivers; higher level of burden in the caregivers is associated with decrease function in patient. Caregiver burden is positively correlated with schizophrenic patients PANSS score. The burden experienced has a positive association with PANSS positive ($r=0.326$), PANSS negative ($r=0.271$) and PANSS general score ($r=0.164$). This implies that a higher level of burden is associated with increase presence and severity of symptoms in the patients. The last part of the table shows a positive correlation ($r=0.399$) between caregivers' burden experience and the HRSD for depressed patients as well as a positive correlation ($r=0.195$) between YMRS for bi-polar affective disorder patients; increase caregiver burden is positively associated with increase signs and symptoms in depressed and bi-polar disorder patients.

DISCUSSION

Social-demographic Characteristics

The socio-demographic characteristics of the caregivers in table 1 revealed that their age ranges from 22 years to 80 years. The mean age of the caregivers falls within the productive age group of 49.43 years. This is consistent with the findings of other authors who had conducted studies involving caregivers of patients with chronic mental disorders. Abdulkareem et al. (2009) in Nigeria; Ashraf, Yasser & Al-Sayed (2010) in the Kingdom of Saudi Arabia and Adeosun (2008) in Nigeria found the mean age of the caregivers in their studies to be 45, 39 and 44 respectively. Females constituted the majority (76.1%) of the caregivers in the present study. Dada et al. (2011), Adeosun (2008) and Lasebikan & Ayinde (2013) reported similar results concerning gender distribution among the caregivers in their studies. This is in line with the culture of the South-western part of Nigeria where female relatives commonly engage in caregiving. The majority (81.9%) of the caregivers in the present study were married and similar observations regarding caregiver marital status was reported among Chinese family caregivers caring for family members with chronic mental disorders.

Regarding the caregivers' relationship to the patients, this study found that 37.0% of the caregivers were parent, a finding that is consistent with the results of Kali et al., (2014) who reported that 38.8% of their caregivers were parents. In this study, the number of years of education of the caregivers ranges from 0 to 19 years and their average monthly income ranges from 5,000 naira to 500,000 naira. The duration of caregiving in this study ranges from 6 months to 180 months.

In this study the patients' age distribution ranges from 19 years to 82 years with a mean age of 43.90. This observation is contrary to what was observed by Lasebikan & Ayinde (2013) in which the patients' mean age was reported to be 29.7 but consistent with Grandon, Jenaro, & Lemos (2008) who reported mean age of 40.7. More than half (52.2%) of the patient population in this study were on treatment for Schizophrenia, an observation similar to what Ali & Farshad (2008) reported in their study. This may be associated with the fact that schizophrenia is one of the common mental disorders for which the patients and their caregivers seek medical intervention. The caregiver burden score showed no statistically significant differences based on the patients' diagnosis ($p=0.124$) similar to the observation reported by Abdulkareem et al. (2009) in their study involving patients belonging to similar diagnostic group.

Some studies such as Ashraf et al. (2010), Dada et al. (2011), and Ali & Farshad (2008) reported higher number of male patients compared to female patients which is in contrast to the present study where 47.1% of the patients were males while 52.9% were females. Flyckt et al. (2013) made similar observation. In this study 40.6% of the patients were unemployed compared to 76% unemployed in Grandon et al. (2008). As observed by Dada et al. (2011), this study found no significant difference in the caregivers total burden score and the patients' gender ($p=0.485$).

In this study, the age at onset has a non significant negative association with caregiver burden which is in congruent with the findings of Abdulkareem et al. (2009) and Dada et al. (2011). In line with expectation, age at onset has a negative correlation with the caregiver total burden score. Providing care for a patient with an earlier onset of illness tends to result in high burden which may be due to the lengthy period of caring.

In this study, there were no significant associations between caregiver burden and patients' duration of illness, a finding that is consistent with that of Abdulkareem et al. (2009) and Dada et al. (2011).

Level of Burden on Caregivers of Patients with Mental Disorder

The caregivers in this study were observed to have mild (37.0%) to moderate (31.1%) level of burden. This is consistent with the result of Sahoo et al.(2010) it was reported that 36.7% mild and 46.9% moderate level of burden. However, result was inconsistent with Dada et al(2011) who reported 33.5% mild and 22.0% moderate level of burden among their caregivers. Higher levels of burden were reported in factors related to *time spent on caring for relative* (2.46 ± 1.18); *caring and trying to meet other responsibilities* (2.36 ± 1.14); *economic insufficiency* (2.25 ± 1.27); and *suffered social life* (2.23 ± 1.22). Abdulkareem et al. (2009) reported lower total mean caregiver burden score of 39.27 and 26.40 respectively using the Zarit Burden Inventory while Lasebikan & Ayinde (2013) reported a mean of 22.69. The above findings showed that the level of burden among caregivers in this study is considerably high.

IMPLICATIONS FOR NURSING PRACTICE

This study reveals the need to initiate nursing interventions that will ameliorate the burden of caregivers while providing nursing care to mentally-ill patients. Nurses being in direct contact with the patients and their caregivers need to constantly give education, advise, information, counseling, and motivation to the caregivers. This will help prevent real danger to the physical and mental health of the caregivers. Nurse should provide caregivers with information on how to balance the important caregiving role with their own health and wellbeing.

Nurses should also advocate for implementation of community mental health to bridge the gap between inpatients and outpatients services and to bring services closer to the people and ensure adequate supervision to prevent recurrence and relapse. Nursing interventions that will be mindful of the role of the caregiver and the impact of illness on their wellbeing should be ensured, thus providing a comprehensive service that addresses caregivers' concerns as well as linking them to services that will improve their own health and lead to better health outcomes for the caregivers.

CONCLUSION

The caregivers in this study experienced a considerable high level of burden as a result of caring for their ill relatives. Factors contributing to burden arise from patients' illness-related characteristics as well as caregivers' socio-demographic characteristics. Only positive symptoms predicted and explained 10.4% of burden while other variables explored did not predict burden in the caregivers.

RECOMMENDATION /FUTURE RESEARCH

Based on the findings of this study, the following recommendations are made in order to ameliorate burden experienced by relatives of mentally ill patients.

- Establishment and thorough supervision of mental health agencies, providers, policymakers, and educators to provide service, monitoring, supervision and support for the mentally ill individuals and their caregivers.
- There is need for development of community mental health services under the primary health care which will aim at focusing not only on the treatment of the patients, but also to meet the needs of the caregivers.
- The community mental health service should provide family focus programs where community mental health nurses can intervene to ameliorate the sufferings of the patients and their relatives
- Locally based family support groups should be created for assisting caregivers and advocating for the promotion of their well-being in society.

Suggestions for Future Research

- Further researches are needed to investigate caregiver resources on decreasing burden, such as social support
- Further studies are needed to develop interventions targeted at alleviating the burden on caregivers of patients with mental illness
- This study was limited to only two tertiary hospitals/settings, it is therefore recommended that this study be replicated in broader settings and with a larger sample size, for better generalization of the results.
- There is also the need to compare caregivers of clients in the urban and rural community.

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